



TRUCKEE MEADOWS WATER AUTHORITY
Board of Directors

AGENDA

Wednesday, January 16, 2019 at 10:00 a.m.
Sparks Council Chambers, 745 4th Street, Sparks, NV

Board Members

Chair Vaughn Hartung
Member Jenny Brekhus
Member David Bobzien
Member Kristopher Dahir

Vice Chair Ron Smith
Member Bob Lucey
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), at <http://www.tmwa.com>, and State of Nevada Public Notice Website, <https://notice.nv.gov/>.
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 (775) 834-8002 at least 24 hours before the meeting date.
3. Staff reports and supporting material for the meeting are available at TMWA and on the TMWA website at <http://www.tmwa.com/meeting/> or you can contact Sonia Folsom at (775) 834-8002. Supporting material is made available to the general public in accordance with NRS 241.020(6).
4. 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.
5. Asterisks (*) denote non-action items.
6. 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.
7. 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**).
8. 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**)

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.

5. Approval of the minutes of the December 13, 2018 meeting of the TMWA Board of Directors **(For Possible Action)**
6. Recognition of TMWA Board Member Neoma Jardon for her years of service — Vaughn Hartung*
7. Appointment of Trustee to the Western Regional Water Commission (WRWC) pursuant to Sec.25(3)(a) of the WRWC Act from the following list of qualified persons to fill the remaining term ending March 31, 2019 vacated by Member Neoma Jardon: Jenny Brekhus and David Bobzien — Mark Foree **(For Possible Action)**
8. Discussion and action on appointment of additional Board member to the Legislative Subcommittee for participation in the 2019 Legislative Session — John Zimmerman **(For Possible Action)**
9. Presentation on proposed bills for the 2019 Legislative Session and discussion and possible action on TMWA legislative position recommendations — John Zimmerman and Michael Pagni, TMWA, and Steve Walker, Walker & Associates **(For Possible Action)**
10. Discussion and action, and possible direction to staff regarding request for approval of revisions to Other Post Employment Benefits Trust (OPEB) Plan — Jessica Atkinson **(For Possible Action)**
11. Discussion and action confirming General Manager's appointment of four trustees to the §501.C-9 Post-Retirement Medical Plan & Trust for a two-year term from January 1, 2019 through December 31, 2020 from the following list of individuals: Michele Sullivan, Juan Esparza, James Weingart and Steve Enos — Jessica Atkinson **(For Possible Action)**
12. Discussion and action confirming General Manager's appointment of four trustees to the §115 Other Post-Employment Benefits Plan & Trust for a two-year term from January 1, 2019 through December 31, 2020 from the following list of individuals: Michele Sullivan, Sandra Tozi, Charles Atkinson and Randy VanHoozer — Jessica Atkinson **(For Possible Action)**
13. PUBLIC HEARING ON RATE AMENDMENT
 - a. Public comment — limited to no more than three minutes per speaker*
 - b. Rate Amendment, Second Hearing and Adoption: Discussion and action on Resolution No. 272: A resolution to adopt amendments to Rule 7 regarding modification of the purpose and amount of the Meter Retrofit Fee — John Zimmerman and John Enloe **(For Possible Action)**

CLOSE PUBLIC HEARING

14. Presentation on Stonegate development and potential Water System Facility (WSF) charges applicable to StoneGate annexation into TMWA's Service Area — Scott Estes*

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15. Presentation of Truckee River Fund Activities for Calendar Year 2018 — John Enloe*
16. Report and discussion regarding Ombudsman activities for calendar year 2018 and request for Board direction and possible authorization for the General Manager to renew the Ombudsman Contract with Tami Fruhwirth for Calendar Year 2019 — Marci Westlake (**For Possible Action**)
17. General Manager's Report*
18. Public comment — limited to no more than three minutes per speaker*
19. Board comments and requests for future agenda items*
20. Adjournment (**For Possible Action**)

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TRUCKEE MEADOWS WATER AUTHORITY
DRAFT MINUTES OF THE DECEMBER 13, 2018
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Thursday, December 13, 2018, at Truckee Meadows Water Authority, 1355 Capital Blvd., Reno, Nevada. Chair Hartung called the meeting to order at 10:03 a.m.

1. ROLL CALL

Members Present: *Jenny Brekhus, Kristopher Dahir, Naomi Duerr, Neoma Jardon, Vaughn Hartung, **Bob Lucey, and Alternate Ed Lawson.

Member Absent: Ron Smith

A quorum was present.

**Member Brekhus was present via telephone at 10:04 a.m.*

***Member Lucey left at 10:25 a.m.*

2. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Alternate Member Lawson.

3. PUBLIC COMMENT

There was no public comment.

4. APPROVAL OF THE AGENDA

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

5. APPROVAL OF THE MINUTES OF THE OCTOBER 17, 2018 MEETING

Upon motion by Member Duerr, second by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board approved the October 17, 2018 minutes.

6. DISCUSSION AND ACTION ON ADOPTION OF RESOLUTION NO. 269: A RESOLUTION TO APPROVE THE IMPLEMENTATION AND/OR POSSIBLE DEFERRAL OF THE 2.5% CUSTOMER RATE INCREASES PREVIOUSLY ADOPTED IN RESOLUTION NO. 250 AND CURRENTLY SCHEDULED FOR IMPLEMENTATION IN 2019, 2020, AND 2021

Michele Sullivan, TMWA Chief Financial Officer, explained the reason for recommending the rate deferral is because TMWA is in a fiscally sound position and water sales are ahead due to the dry fall contributing to TMWA's cash balance. Ms. Sullivan stated this was presented to the TMWA Standing Advisory Committee (SAC) at their November meeting and the SAC endorsed the deferral.

Upon motion by Member Duerr, second by Member Lucey, which motion duly carried by unanimous consent of the members present, the Board adopted Resolution No. 269: A resolution adopting the deferral of the 2.5% customer rate increases previously adopted in Resolution No. 250 and currently scheduled for implementation in 2019, 2020, and 2021.

7. DISCUSSION AND ACTION ON ADOPTION OF RESOLUTION NO. 270: A RESOLUTION TO APPROVE THE CLOSURE OF THE §501-C-9 POST RETIREMENT MEDICAL AND LIFE INSURANCE PLAN AND TRUST TO FUTURE EMPLOYEES

Ms. Sullivan recommended closing the §501-c-9 Post Retirement Medical and Life Insurance plan and Trust to future employees; all current employees would not be affected. Ms. Sullivan informed the Board that this was presented to the SAC at its November meeting with great discussion; the SAC voted to endorse staff's recommendation with two dissenting votes.

Upon motion by Member Dahir, second by Member Lucey, which motion duly carried by unanimous consent of the members present, the Board adopted Resolution No. 270: A resolution to approve the closure of the §501-c-9 Post Retirement Medical and Life Insurance plan and Trust to future employees.

8. DISCUSSION AND ACTION ON ADOPTION OF RESOLUTION NO. 271: A RESOLUTION TO APPROVE THE COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEAR ENDED JUNE 30, 2018

Matt Bowman, TMWA Financial Controller, presented the Comprehensive Annual Financial Report for Fiscal Year ended June 30, 2018. The audit was completed by Eide Bailly, dealt with a few new GASB 75 (OPEB) and 82 (pension), and new disclosures; audit went well with no findings or adjustments.

Chair Hartung noted the higher hydroelectric revenues and lower operating expenses, requesting a feasibility study on a hydrogeneration plant on the Highland Canal.

Upon motion by Member Jardon, second by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board adopted Resolution No. 271: A resolution to approve the Comprehensive Annual Financial Report for Fiscal Year ended June 30, 2018.

9. DISCUSSION AND ACTION ON ESTABLISHING A LEGISLATIVE SUBCOMMITTEE FOR THE 2019 LEGISLATIVE SESSION, APPOINTMENT OF BOARD MEMBERS TO SUBCOMMITTEE AND ESTABLISHING THE PROCESS TO REVIEW LEGISLATIVE ACTIVITIES

John Zimmerman, TMWA Water Resources Manager, and Steve Walker, TMWA's Legislative Lobbyist, presented the staff report to set up a Legislative Subcommittee, stating in the past the Chair, Vice Chair and another member have been appointed.

Board Members agreed to appoint Chair Hartung and Vice Chair Smith, but to hold to appoint the third member until January as there may be changes to appointments to the TMWA Board from the City of Reno Council.

Upon motion by Member Jardon, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved the appointment of Chair Hartung and Vice Chair Smith to the TMWA Legislative Subcommittee and to defer appointing a third Board Member to the January meeting.

10. UPDATE REGARDING RECOMMENDATION TO BROADEN THE PURPOSE OF THE METER RETROFIT FEE, SUMMARY OF PUBLIC OUTREACH REGARDING THE SAME, AND POSSIBLE DIRECTION TO STAFF

Mr. Zimmerman presented the staff report and recommendation to broaden Rule 7, the Meter Retrofit Fee, and change the amount charged to developers from \$1830 to \$1600 per acre foot of demand.

Discussion followed regarding the remaining properties that could potentially be retrofitted. These are the most difficult to retrofit and TMWA cannot force any one customer to do so, but the funds, \$5.5M, are in reserves for future retrofits.

Upon motion by Member Duerr, second by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board approved the staff recommendation to broaden the purpose of the Meter Retrofit Fee and to move forward with the First Reading.

11. PUBLIC HEARING ON RATE AMENDMENT

A. PUBLIC COMMENT

There was no public comment.

B. INTRODUCTION AND FIRST READING OF AMENDMENTS TO RULE 7 REGARDING MODIFICATION OF THE PURPOSE AND AMOUNT OF THE METER RETROFIT FEE

Mr. Zimmerman recommended the TMWA Board refer to the proposed amendments to Rule 7 to a second reading to be held at the January 16, 2019 Board meeting.

Upon motion by Member Jardon, second by Alternate Lawson, which motion duly carried by unanimous consent of the members present, the Board approved to refer the amendments to Rule 7 regarding modification of the purpose and amount of the meter retrofit fee to a second reading.

CLOSE PUBLIC HEARING

12. DISCUSSION AND ACTION, AND POSSIBLE DIRECTION TO STAFF REGARDING THE STATUS OF ACQUISITION OF THE WEST RENO WATER SYSTEM AND DUE DILIGENCE OBJECTIONS AND CURE ACTIVITIES, AND POSSIBLE AUTHORIZATION TO GENERAL MANAGER TO TERMINATE OR AMEND ACQUISITION AGREEMENT AND/OR PROCEED WITH CLOSING

Mr. Zimmerman informed the Board that West Reno Water Co. signed the third amendment to the acquisition agreement today, which was included in the staff report, and recommended the Board approve the third amendment and authorize the GM to sign. He reported on the status of due diligence and closing conditions and requirements to protect TMWA requiring West Reno to: (1) fix their Boomtown Hotel/Casino private water line issues; (2) line the stormwater detention basin next to Well #10 as TMWA is concerned about water quality from stormwater run-off; and (3) ensure they correct the backflow violation issue for which the Health District cited them for so TMWA does not own the violation. The agreement requires West Reno to pay for pre-closing improvements, however, TMWA will pay West Reno \$35k instead of the original \$757k and TMWA will construct the post-closing improvements.

The Board expressed concern with TMWA paying for the improvements upfront with current rate payer funds, but TMWA's standard practice has been to make regional improvements that benefit both existing and future customers, pay for the new improvements and utilize the Water System Facility Charges (Rate Schedule WSF) which are collected from new development as reimbursement for those improvement costs; the WSF charges are evaluated periodically.

Discussion followed regarding risks involved with expanding TMWA's service in the region, but it also being normal business practice to expand service area; it being the Board's charge to manage the regions water resources and WSF charges allow TMWA to build infrastructure without putting undue burden on

current rate-payers; the possibility of moving forward with a special assessment district (SAD); West Reno's request for City of Reno to be provider of last resort and the City of Reno responsibility regarding issuing Certificates of Occupancy; Nevada Department of Environmental Protection (NDEP) requiring West Reno to obtain a community water system permit; and extension of the closing date to January 31, or February 27, 2019; and the potential to collect up to \$100k of legal fees TMWA has incurred in the \$2.7M to be collected from Reno Land Development projects.

Michael Pagni, TMWA General Counsel, pointed out the three items Mr. Zimmerman listed in his summary with respect to closing contingencies are outside of TMWA's control and could possibly extend the scheduled closing date if not timely satisfied.

Public Comment

ML Belli, who lives in Belli Ranch, stated his concern about the water level in his wells decreasing over the years and expressed concern about the new development adding to the problem.

Pam McNeil, Reno resident, read Ms. Adrain Argyris' letter into public comment (please see attached).

Bill Maggiora, Reno resident, expressed his concern regarding the development of Meridian 120 North and asked when would TMWA be ready to service Meridian 120 South.

Alice House, Reno resident, provided public comment (please see attached).

End of Public Comment

Mr. Pagni clarified with respect to public comment regarding past litigation that the 2004 litigation involved disputes between property owners, the City of Reno, Washoe County, and the Regional Government Board over requests to annex Verdi properties into the City of Reno. Part of the result of that litigation was a settlement and ILA between the County and TMWA which involved a compromise on the water service to such properties. Mr. Pagni clarified that the ILA was amended in 2014 as part of the merger between the County and TMWA which eliminated essentially all provisions of the ILA and provided citizens in Verdi an ability to apply to TMWA for service. Mr. Pagni clarified that nothing in the ILA requires TMWA to provide water service, but rather it provides that TMWA may provide service, if requested, in accordance with TMWA Rules.

For the record, Member Duerr requested that TMWA conduct a scientific analysis based on its processes in providing water and provide a memorandum explaining conjunctive use so that the community understands how it operates and to dispel any misunderstandings. Mr. Enloe replied that staff can report on the improvements made on the Mt. Rose-Galena Fan and explain the conjunctive use strategy TMWA has implemented of providing a combination of both groundwater and surface water to customers.

Mark Foree, TMWA General Manager, explained next steps after the close of the agreement, more improvements would be necessary, which would go into connection fees (approximately \$757k (post-closing costs); the improvements could take approximately a year to complete, but will not affect operations. Mr. Foree added TMWA has received bids to extend the main from West Meadows to the Riverbelle Mobile Home Park; TMWA is proceeding with the design of a water main extension under the railroad tracks and a pump station to tie into the Boomtown system; and the Washoe County School District (WCSD) is working on design of the water main extension to the Verdi Elementary School. He

added that it has been a difficult process, but the Board and City of Reno have made it clear the direction they wanted to go, and everyone collaborated to achieve a positive outcome, including Reno Land Development company, because they originally would not have had to pay the \$2.7M in connection fees but are now paying it.

Discussion followed regarding TMWA's plans to recharge the aquifer through conjunctive use in Verdi which will benefit the residents by allowing the wells to rest and improve the groundwater levels (very similar to what is being done on the Mt. Rose-Galena Fan area); how TMWA decides the best course of action to provide water service; clarifying that implementing conjunctive use may mitigate the need for domestic well owners to connect to TMWA's system; the deadline for West Reno to complete the preclosing improvements (January 31, 2019), and outside closing date of February 27, 2019 for all pre-closing items to be satisfied, and if they are not, TMWA can terminate unless staff returns to the Board to negotiate another extension; agreements are in place with River Oak and Riverbelle for TMWA to begin building the surface water connection to the Boomtown system and the timeline is approximately 2 years; the importance of stabilization the water system and managing the asset regionally; and to consider land use, monitoring the growing areas, and plan the community in Verdi for future growth accordingly.

Upon motion by Member Duerr, second by Member Jardon, which motion duly carried by unanimous consent of the members present, the Board authorized the General Manager to execute the third amendment to West Reno Water System acquisition agreement.

Chair Hartung requested Mr. Pagni to work with the constituents who expressed concerns today.

13. DISCUSSION AND ACTION, AND POSSIBLE DIRECTION TO STAFF REGARDING THE REAPPOINTMENT OF JOHN ENLOE TO REPRESENT TMWA ON THE CARSON-TRUCKEE WATER CONSERVANCY DISTRICT BOARD

Mr. Foree presented the staff report.

Upon motion by Member Dahir, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board reappointed John Enloe to represent TMWA on the Carson-Truckee Water Conservancy District Board.

14. DISCUSSION AND ACTION, AND POSSIBLE APPROVAL OR DIRECTION TO STAFF REGARDING RENO-SPARKS CHAMBER APPOINTMENT OF ANN SILVER AS PRIMARY REPRESENTATIVE TO THE STANDING ADVISORY COMMITTEE TO FILL THE VACANCY IN THE RENO-SPARKS CHAMBER APPOINTEE POSITION, FOR TERM ENDING DECEMBER 31, 2019

Sonia Folsom, TMWA Standing Advisory Committee Liaison, presented this agenda item.

Upon motion by Member Duerr, second by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board approved the Reno-Sparks Chamber appointment of Ann Silver as primary representative to the Standing Advisory Committee to fill the vacancy in the Reno-Sparks Chamber appointee position, for term ending December 31, 2019.

15. DISCUSSION AND ACTION, AND POSSIBLE APPROVAL OR DIRECTION TO STAFF REGARDING APPOINTMENTS TO THE STANDING ADVISORY COMMITTEE TO FILL VACANCIES IN EXISTING POSITIONS WHOSE TERMS EXPIRE DECEMBER 31, 2018, SUCH APPOINTMENTS TO BE MADE FOR NEW TERMS FROM JANUARY 1, 2019 TO DECEMBER 31, 2020 FROM THE FOLLOWING LIST OF CANDIDATES: (1) NEIL MCGUIRE, PRIMARY REPRESENTATIVE, IRRIGATION CUSTOMER; (2) MIKE SCHULEWITCH, PRIMARY REPRESENTATIVE, MULTI-FAMILY CUSTOMER; (3) DONALD KOWITZ, PRIMARY REPRESENTATIVE, COMMERCIAL CUSTOMER; (4) BRUCE GESCHIEDER, ALTERNATE REPRESENTATIVE, COMMERCIAL CUSTOMER; (5) ROBERT CHAMBERS, PRIMARY REPRESENTATIVE, SENIOR CITIZEN CUSTOMER; (6) KARL KATT, ALTERNATE REPRESENTATIVE, SENIOR CITIZEN CUSTOMER; (7) KEN MCNEIL, PRIMARY REPRESENTATIVE, AT-LARGE 1 CUSTOMER; (8) KEN BECKER, ALTERNATE REPRESENTATIVE, AT-LARGE 1 CUSTOMER; (9) JORDAN HASTINGS, PRIMARY REPRESENTATIVE, AT-LARGE 2 CUSTOMER; (10) CAROL LITSTER, PRIMARY REPRESENTATIVE, RESIDENTIAL 1 CUSTOMER; (11) DALE SANDERSON, ALTERNATE REPRESENTATIVE, RESIDENTIAL 1 CUSTOMER; (12) HARRY CULBERT, PRIMARY REPRESENTATIVE, RESIDENTIAL 2 CUSTOMER; (13) FRED ARNDT, ALTERNATE REPRESENTATIVE, RESIDENTIAL 2 CUSTOMER; (14) JERRY WAGER, PRIMARY REPRESENTATIVE, RESIDENTIAL 3 CUSTOMER; AND (15) SCOT MUNNS, ALTERNATE REPRESENTATIVE, RESIDENTIAL 3 CUSTOMER

Ms. Folsom presented the list of TMWA's Standing Advisory Committee (SAC) members whose terms are set to expire on December 31, 2018.

Member Brekhus inquired whether the SAC Members had term limits as she saw several of them who have served for over 10 years as she is aware of a number of people who would be interested in participating. Ms. Folsom replied no, there are no term limits, but staff accepts any letters of interest at any time and when there is a vacancy, present it to the Board. Per Member Brekhus, staff will bring back to the Board to discuss the prospect of creating term limits.

Upon motion by Member Dahir, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved the appointments of: (1) Neil McGuire, primary representative,

irrigation customer; (2) Mike Schulewitch, primary representative, multi-family customer; (3) Donald Kowitz, primary representative, commercial customer; (4) Bruce Gescheider, alternate representative, commercial customer; (5) Robert Chambers, primary representative, senior citizen customer; (6) Karl Katt, alternate representative, senior citizen customer; (7) Ken McNeil, primary representative, at-large 1 customer; (8) Ken Becker, alternate representative, at-large 1 customer; (9) Jordan Hastings, primary representative, at-large 2 customer; (10) Carol Litster, primary representative, residential 1 customer; (11) Dale Sanderson, alternate representative, residential 1 customer; (12) Harry Culbert, primary representative, residential 2 customer; (13) Fred Arndt, alternate representative, residential 2 customer; (14) Jerry Wager, primary representative, residential 3 customer; and (15) Scot Munns, alternate representative, residential 3 customer to the Standing Advisory Committee to fill vacancies in existing positions whose terms expire December 31, 2018, such appointments to be made for new terms from January 1, 2019 to December 31, 2020.

16. DISCUSSION AND ACTION ON SCHEDULING REGULAR BOARD MEETING DATES AND TIMES FOR THE CALENDAR YEAR 2019

Ms. Folsom presented the TMWA Board of Directors 2019 meeting calendar and noted a few new proposed dates due to scheduling and/or Nevada Revised Statute (NRS) for the budget hearing in May.

Upon motion by Alternate Lawson, seconded by Member Brekhus, which motion duly carried by unanimous consent of the members present, the Board approved the regular board meeting dates and times for the Calendar Year 2019.

17. GENERAL MANAGER'S REPORT

Mr. Foree stated the reservoir storage is at two-thirds capacity and the snowpack is ahead of 100% at this time.

18. PUBLIC COMMENT

There was no public comment.

19. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

Member Brekhus, in reference to the annexation update in the General Manager's report, requested a staff report on the StoneGate development.

Member Jardon expressed pleasure in having served on the TMWA Board of Directors these last few years; all the incredible work the board does, provides great service to the community, establishing the reserve fund, and great staff. Chair Hartung thanked Member Jardon for her contribution over the years.

20. ADJOURNMENT

With no further discussion, Chair Hartung adjourned the meeting at 11:50 a.m.

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

Sonia Folsom, Recording Secretary

****Member Brekhus was present for agenda items 3 thru 21 only.***

*****Member Lucey was present for agenda items 1 thru 10 only.***

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that the developers proposing these high density tracks be held responsible for the infrastructure to support the population. After all they are the ones to make huge profits, they must make sure they community they are proposing is going to be safe and healthy. It is the correct and moral thing to do. Our city and county councils are elected in place to make sure the developers are held accountable, that our lands are developed in a suitable, safe and healthy manner.

The only way for any development to go forward in the Verdi area is if TWMA is 100 percent in place to manage and supply the the water. There are problems already with West Reno Water supplying what is currently being built. There is evidence all over the Reno area that small water companies have tried to supply water to new large developments and have failed horribly. Drying up existing wells and leaving people in terrible situations.

Our wells in the Verdi area are rapidly degrading with all the construction now, the more new business and homes that are being approved and put in, the more they pump the West Reno Water Co. commercial wells. That water is coming out of our already highly diminished Verdi aquifer. The more land that is covered by homes, business,warehousing,parking lots,roadways etc. the less water can restore and replenish the aquifer. Call it over population or global warming or whatever you like the water is not there. We the residents in Verdi, on wells, are the ones to pay the price. No water in our wells our homes are worth nothing.

I thank you for your time today and want to wish everyone a Merry Christmas and have a Happy and Healthy New Year!

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Good Morning. My name is Alice House. My husband and I live in the Belli Ranch Subdivision. We have resided there for 30 plus years. Some of you already know the history of my 2 wells. I want to go over it once again, it's important to all the new development that is going on in the Verdi area. When we put our first well in it was approximately 340 feet gave us about 30 gpm. We had beautiful landscaping, grass and trees all around the home. After a about 8-10 years that well stopped producing enough water to sustain the landscaping and our house. So we downsized the yard, took out over 50 percent of the lawns, that helped only for a short time. That well stopped producing altogether. It's a terrifying feeling to wake up to find that there is absolutely no water in your home. After a huge process of obtaining permits. We put in our second well at just over 600 feet. It started out with about 28 gpm with a rapid recovery rate. We bought more water rights so that we could put in a cistern to keep our downsized landscape alive and have enough water to maintain the house. That did not last. After a few years the recovery rate was slowing and the well could not keep up, so once again we made the very hard and arduous decision to get rid of almost all of our lawns. We have only one very small lawn remaining. We have now taken out 90 percent of our landscape and replaced it with high desert landscape "rocks and astroturf". The well produces between 8-10 gpm and has a very slow recovery rate. The water quality is very poor. We have 3 different water treatment systems in our house just to make the water useable. I have talked with many of my friends and neighbors they also have very bad water and are experiencing many of my same problems with their wells. Many of my neighbors will not drink their water. I have a lot of friends in lower Verdi with the same poor water quality and are having problems with the production in their wells. My point to all of this is the Verdi aquifer is disappearing there is not enough water remaining to support the growth incroching in our high desert community. The natural artesian springs that watered our beautiful wildlife are now gone. Much of the water has been sold off for profit. We must insure

December 12, 2018

The Truckee Meadows Water Authority's Board meeting, scheduled for December 13, 2018, has a status update on the acquisition of the West Reno Water system at agenda item #12,

The use of this system was "approved" by the City of Reno on January 13, 2016 for the Meridian 120 North development.

The water system is a ground- water- only system that has been limited to 100 afa by the Nevada Division of Water Resources (NDWR) because of the uncertainty of its sustainability and the effect on the area's domestic wells.

The approval by the State Engineer's office was granted PRIOR to their knowledge of the RMC for the Mortensen-Garson (MG) properties and the court agreement for TMWA.

The system is not in compliance with RMC for "surface water as the primary source of water" and the requirement to "follow the Plan".

The system is against a court agreement where TMWA is to supply the MG properties.

TMWA's absorption of Washoe County's water system did NOT invalidate the court agreement - which is binding and in effect until the properties are built out.

Of concern in the status update is West Reno Water's pursuit to obtain the necessary authorizations to become a "regulated public utility and community water system."

I have been in contact with Cindi Turiczek at the Public Utilities Commission.

The community will intervene at the time the application for the Certificate of Public Conveyance (CPC) is filed.

I am in the process of contacting Ellen Messinger-Patton at the Washoe County Health Department to see what protest can be filed with the health department.

Discussions with NDWR have revealed no more maps will be signed until there is clarification on the RMC/court agreement.

West Reno Water needs to know the community will fight at every level possible to prevent their becoming a "community water system".

This would be to the detriment of the domestic wells in the area and would go against agreements made through the courts when the MG properties were annexed.

I will also be contacting Bates Construction letting them know of the community's intent to fight at all levels - which will further delay the ARGOS development.

An error was made when the system was approved and it needs to be remedied - not compounded.

It is time for the City of Reno to correct the error.

The City needs to tell Reno Land Development and West Reno Water that the acquisition by TMWA is the only way to remedy the water issue and the only way the ARGOS development can go forward.

I will point out that Reno Land Development, Wood Rogers, and the City's planning staff knew about the RMC for water at the time Meridian 120 North was submitted to the City for approval.

I point this out because Reno Land and the City created a problem and both need to fix it.

I do not know at this time if I will be able to attend tomorrow's TMWA Board meeting to voice my concerns.

Thank you,

Adrian Argyris

775-343-2959



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: January 7, 2019
SUBJECT: **Appointment of Trustee to the Western Regional Water Commission (WRWC) pursuant to Sec.25(3)(a) of the WRWC Act from the following list of qualified persons to fill the remaining term ending March 31, 2019 vacated by Member Neoma Jardon: Jenny Brekhus and David Bobzien**

RECOMMENDATION

It is recommended that the TMWA Board appoint a member to the Western Regional Water Commission to serve the remaining term ending March 31, 2019 vacated by Member Neoma Jardon:

1. One TMWA Board member who is a member of the City of Reno Council.

DISCUSSION

During the 2007 legislative session, SB487 was enacted to create the Western Regional Water Commission (effective date April 1, 2008), a governing board to oversee water resources planning and management in Washoe County. The Western Regional Water Commission Act, Chapter 531, Statutes of Nevada, Section 25, provides for appointments to the Board of Trustees as follows:

Sec. 25. 3. The Board of Directors of the Truckee Meadows Water Authority or its successor shall appoint from its membership, for initial terms of 3 years:

- (a) One trustee who is a member of the City Council of the City of Reno;
- (b) One trustee who is a member of the City Council of the City of Sparks; and
- (c) One trustee who is a member of the Board of County Commissioners of Washoe County.

➡ The trustees appointed pursuant to this subsection must be different persons than those appointed pursuant to subsection 2.

4. The Board of Trustees of the Sun Valley General Improvement District or its successor and the Board of Trustees of the South Truckee Meadows General Improvement District or its successor shall each appoint one trustee from its membership for an initial term of 3 years.

5. The owners of the Truckee Meadows Water Reclamation Facility or its successor shall jointly appoint one trustee for an initial term of 2 years.

6. After the initial terms, each trustee who is appointed to the Board serves for a term of 2 years. A trustee may be reappointed.

7. All trustees must be elected officials. No trustee may serve beyond his term of office.

8. The position of a trustee must be considered vacated upon his loss of any of the qualifications required for his appointment, and in such event, the appointing authority shall appoint a successor to fill the remainder of the unexpired term.

The current appointees to the Western Regional Water Commission Board are as follows:

Appointing Body	Trustee
City of Reno	Councilmember Naomi Duerr
City of Sparks	Councilmember Donald Abbott
Washoe County	Commissioner Vaughn Hartung
TMWA (Section 3 - from TMWA Board):	Councilmember Ron Smith (Sparks)
	Vacant
	Councilmember Bob Lucey (Washoe County)
Truckee Meadows Water Reclamation Facility	Kristopher Dahir
Sun Valley General Improvement District	SVGID Trustee Sandra Ainsworth
TMWA (Section 4 – as successor to STMGID)	Commissioner Jeanne Herman



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Water Resources Manager
DATE: 8 January 2019
SUBJECT: **2019 Legislative Update Report**

SUMMARY

As of the date of this report, there are 88 Assembly Bills and 89 Senate Bills along with 970 Bill Draft Requests. Staff, General Counsel Michael Pagni, and TMWA lobbyist Steve Walker have reviewed the bills and attached is a list of bills we recommend TMWA monitor and the proposed positions. The TMWA Legislative Subcommittee has not yet held a meeting to review and discuss the bills or staff's recommendations. The Session begins February 4th and staff anticipates holding the first Subcommittee meeting on February 1st. Michael Pagni and Steve Walker will be available at the Board meeting to briefly review the list of bills and answer any questions.

RECOMMENDATION

The Board should take action on the list of bills and recommended positions or refer the matter to the Subcommittee for the initial decision.

Key 2019 Legislative Deadlines:

February 4-----Session Begins
February 11----Legislators' BDR Requests
March 18-----Legislators' Bill Introductions
March 25-----Committees' Bill Introductions
April 12-----Committee Passage (1st House)
April 23-----First House Passage
May 17-----Committee Passage (2nd House)
May 24-----Second House Passage
June 3-----Session Ends

Status Of Legislation - 80th (2019) Session					
Name	Description	Sponsor	Status	Tags	Staff Recommendation
AB1	Revises provisions governing the adoption of certain regulations by the State Environmental Commission or a local air pollution control board. (BDR 40-360)	Committee on Natural Resources, Agriculture, and Mining	First Reading	Open Meeting, Records, Boards, Elections	12/26/18 WATCH
AB5	Revises provisions governing the amendment of the land use plan of the master plan by local government planning commissions. (BDR 22-462)	Committee on Government Affairs	First Reading	Governance, Property	12/26/18 WATCH
AB30	Revises provisions governing the appropriation of water. (BDR 48-214)	Committee on Natural Resources, Agriculture, and Mining	First Reading	Water Rights (WR-rights, resources, conservation)	12/26/18 WATCH
AB32	Revises provisions governing workforce development. (BDR 18-329)	Committee on Taxation	First Reading	Human Resources	12/26/18 WATCH
AB51	Revises provisions governing the management of water. (BDR 48-213)	Committee on Natural Resources, Agriculture, and Mining	First Reading	Water Rights (WR-rights, resources, conservation)	12/26/18 WATCH
AB62	Revises provisions related to water. (BDR 48-215)	Committee on Natural Resources, Agriculture, and Mining	First Reading	Water Rights (WR-rights, resources, conservation)	12/16/18 WATCH, OPPOSE
AB68	Revises provisions governing apprenticeships. (BDR 53-181)	Committee on Commerce and Labor	First Reading	Human Resources	12/26/18 WATCH
AB70	Revises provisions governing the Open Meeting Law. (BDR 19-421)	Committee on Government Affairs	First Reading	Open Meeting, Records, Boards, Elections	12/26/18 WATCH
AB73	Provides for additional sources of funding for services and affordable housing for persons who are homeless or indigent. (BDR 32-461)	Committee on Taxation	First Reading	Property	12/26/18 WATCH
AB75	Revises provisions governing public employees' retirement. (BDR 23-466)	Committee on Government Affairs	First Reading	PERS, PEBS	12/26/18 WATCH
AB86	Revises provisions relating to governmental purchasing. (BDR 27-182)	Committee on Government Affairs	First Reading	Financial, Risk Management	12/26/18 WATCH, SUPPORT

Status Of Legislation - 80th (2019) Session					
Name	Description	Sponsor	Status	Tags	Staff Recommendation
SB27	Revises provisions governing the Public Employees' Deferred Compensation Program. (BDR 18-233)	Committee on Government Affairs	First Reading	Human Resources, PERS, PEBS	12/26/18 WATCH
SB35	Creates the Nevada Resilience Advisory Committee. (BDR 19-357)	Committee on Government Affairs	First Reading	Emergency Mgmt, Safety, Motor Vehicles	12/26/18 WATCH
SB36	Revises provisions governing the purchase, sale or lease of real property by a board of county commissioners. (BDR 20-489)	Committee on Government Affairs	First Reading	Property	12/26/18 WATCH
SB40	Revises provisions governing penalties for violating occupational safety laws. (BDR 53-222)	Committee on Commerce and Labor	First Reading	Emergency Mgmt, Safety, Motor Vehicles, Human Resources	12/26/18 WATCH
SB54	Revises provisions governing the annual reporting requirements of the Tahoe Regional Planning Agency. (BDR 22-205)	Committee on Natural Resources	First Reading	Governance	12/26/18 WATCH
SB58	Revises provisions relating to relations between local governments and certain public employees. (BDR 23-465)	Committee on Government Affairs	First Reading	Human Resources	12/26/18 WATCH
SB69	Revises provisions relating to emergencies and cybersecurity. (BDR 19-350)	Committee on Government Affairs	First Reading	Emergency Mgmt, Safety, Motor Vehicles, Information Tech	12/26/18 WATCH, SUPPORT
SB83	Revises provisions governing the dissemination of information and data of the Public Employees' Retirement System. (BDR 23-467)	Committee on Government Affairs	First Reading	Human Resources	12/26/18 WATCH



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Jessica Atkinson, Human Resources Manager
Michele Sullivan, CFO
DATE: December 27, 2018
SUBJECT: Discussion and action, and possible direction to staff regarding request for approval of revisions to Other Post Employment Benefits Trust (OPEB) Plan

Recommendation

TMWA Staff recommends that the TMWA Board accept the revisions to the OPEB Plan document.

Summary

- TMWA's OPEB plan document has been revised by our trust attorney at the request of Trustees to allow Tier II beneficiaries to either elect to use their benefit to remain on those group health/medical plans, group prescription plans, and/or group vision plans offered to active employees or, request reimbursement for procurement of qualified individual policies or plans.
- Additionally, the OPEB plan document has been revised to add definitions, to clear up ambiguities, to clarify areas related to statutory requirements and clean up formatting, language and references.
- Revisions do not increase TMWA's financial obligations for post-retirement benefits under this trust.

Background

To support the transfer of affected employees in connection with the merger between Truckee Meadows Water Authority (TMWA) and Washoe County Water Utility Division (WCUD), the TMWA Board adopted resolution No. 220 approving the §115 Other Post-Employment Benefit Trust (§115 Trust) for eligible incoming Washoe County Employees and adopted the current OPEB Trust Document.

The §115 Trust provides benefits for those former employees of WCUD who were hired by Washoe County on or before September 16, 1997 and who became employees of TMWA as a result of the merger (classified as Tier I retirees) and for those former employees of WCUD who were hired by Washoe County after September 16, 1997 and before July 1, 2010 and who became employees of TMWA as a result of the merger (classified as Tier II retirees).

Tier I retirees are eligible to receive a percentage, based on combined years of service with Washoe County and/or TMWA toward the retiree portion of the premium attributable to group health/medical plans, group prescription plans, and/or group vision plans, and must remain on the plan(s) offered to active employees. Upon attainment of age 65 and following years, Tier 1 retirees must enroll in and pay the cost of Medicare coverage, which becomes their primary coverage and TMWA plans become secondary.

Tier II retirees who have not attained age 65 are eligible to receive a “Subsidy” from the §115 Trust towards the retiree portion of their group health/medical plans, group prescription plans, and must remain on the plan(s) offered to active employees. The “Subsidy” amount is to the same as the “Subsidy” amount identified by the State of Nevada Public Employee’s Benefit Program (PEBP).

Tier II retirees who have attained age 65, receive the equivalent of the State of Nevada’s Medicare Exchange Retiree HRA contribution subsidy based on the combined number of years of service with Washoe County and/or TMWA and must enroll in and pay the cost of Medicare. Medicare coverage then becomes their primary coverage and TMWA plans become secondary.

Discussion

Currently the OPEB Trust document only provides for a “Subsidy” to Tier II retirees if they stay on the plans offered by TMWA. As eligible employees have begun retiring and requesting benefits from the §115 Trust, it was brought to the attention of Trustees that even after applying the subsidy amount to the cost of TMWA coverage, retirees were paying more to stay on the TMWA plan than if they were to purchase their own private plan. Therefore, Tier II retirees are faced with a difficult dilemma of either paying more for health coverage to stay on the TMWA plans or walking away from their benefit to purchase a private plan or Medicare Advantage Plan.

TMWA and the §115 Trustees recognize the importance of this benefit and want to ensure the intended benefit is available in a meaningful manner to eligible retirees. TMWA also recognizes the cost impact on TMWA and the City or Reno Plans associated with forcing retirees to stay on plans offered to active employees.

Trustees consulted with the Trust’s attorney and verified that the OPEB Trust document could be amended to allow Tier II beneficiaries to either elect to use their benefit to remain on those group plans offered to active employees or, request reimbursement for procurement of qualified individual policies or plans without jeopardizing the tax exempt status of the Trust.

Additionally, TMWA’s actuaries performed an analysis and concluded that allowing for a reimbursement equal to the same “Subsidy” amount that would have been applied to their TMWA coverage, creates no additional liability or financial obligation on TMWA and ultimately could be beneficial to the financial position of the insurance plans.

TMWA already has a process in place to facilitate the reimbursement of trust benefits as a similar provision is in effect for the §501-c-9 Trust. Therefore, there will be no additional administrative impact in allowing for reimbursements to Tier II retirees of the §115 Trust.

In July of 2018, Trustees directed the Trust attorney to make revisions to the OPEB Document that would allow for Tier II retirees to request reimbursements equal to their eligible “Subsidy” amount for the procurement of their own private qualified insurance plans. In October, the §115 Trustees approved these revisions as well as a number of other clarifications and refinements that were deemed necessary to clear up ambiguities, to clarify areas related to statutory requirements and also to clean up language, formatting and references.

**TRUST AGREEMENT
FOR
TRUCKEE MEADOWS WATER AUTHORITY
OPEB TRUST FUND
RESTATED JANUARY 16, 2019**

ARTICLE I

Purpose of the Trust

The Truckee Meadows Water Authority OPEB Trust Fund was originally established January 1, 2015. The Trust is now being amended and restated to make certain changes thereto. This Trust is intended to provide the means to fund all or a portion of the post-retirement benefits to be provided to those former employees of Washoe County, Nevada who became employees of Truckee Meadows Water Authority as a result of the merger of water utility services between Washoe County, Nevada and Truckee Meadows Water Authority which became effective on January 1, 2015. The Trust is intended to qualify as a governmental trust established to provide an essential governmental function under Section 115 of the Internal Revenue Code of 1986, as amended, and is created pursuant to Nevada Revised Statutes § 287.017. The name of this Trust shall be the Truckee Meadows Water Authority OPEB Trust Fund.

ARTICLE II

Definitions

When used in this Trust, the following words shall have the following meanings, unless the context clearly indicates otherwise:

2.1 “Benefit Plans” mean the following:

(i) For those Participants classified as Tier I Retirees, the term “Benefit Plans” are to include and be limited to those benefit plans described in Exhibit A-1 attached hereto; and

(ii) For those Participants classified as Tier II Retirees, the term “Benefit Plans” are to include and be limited to those benefit plans described in Exhibit A-2 attached hereto.

The Benefit Plans described in Exhibits A-1 and A-2 may be amended from time to time pursuant to the terms of this Trust.

2.2 “Benefits” mean the following:

(i) For those Participants classified as Tier I Retirees, the term “Benefits” mean those premiums described in Exhibit D-1 attached hereto that are required to be paid or reimbursed by TMWA on behalf of Tier I Retirees to provide such Tier I Retirees with coverage under one or more of the Benefit Plans described in Exhibit A-1; and

(ii) For those Participants classified as Tier II Retirees, the term “Benefits” mean those premiums described in Exhibit D-2 attached hereto that are required to be paid or reimbursed by TMWA on behalf of Tier II Retirees to provide such Tier II Retirees with coverage under one or more of the Benefit Plans described in Exhibit A-2.

2.3 “CBA” means the current collective bargaining agreement entered into between TMWA and the bargaining unit referred to as Local #1245 of the International Brotherhood of Electrical Workers (IBEW), together with any future amendments and successor agreements thereto.

2.4 “Code” means the Internal Revenue Code of 1986, as amended.

2.5 “Effective Date” means the Effective Date of this Trust, which is January 1, 2015.

2.6 “Investment Plan” means an investment plan developed by the Trustees pursuant to NRS 287.017(2)(g) and NAC 287.788(2).

2.7 “NAC” means the Nevada Administrative Code, as amended from time to time.

2.8 “NRS” means the Nevada Revised Statutes, as amended from time to time.

2.9 “Participant” means a Retiree who is entitled to receive Benefits from this Trust pursuant to Section 3.1. and elects to receive such Benefits in accordance with the procedures adopted by the Trustees from time to time. A Participant shall not include any spouse and/or dependents of a Retiree, even if such spouse and/or dependents are covered under one or more of the Benefit Plans.

2.10 “Plan Year” means the calendar year.

2.11 “Retiree” means a Tier I Retiree or Tier II Retiree who separates from service or retires from TMWA, and under the terms of this Trust, and the CBA or resolutions adopted by TMWA, is eligible to receive Benefits from this Trust.

2.12 “TMWA” means the Truckee Meadows Water Authority, a local government agency within the meaning of NRS 354.474, and an entity the income of which is excluded from gross income under Code Section 115.

2.13 “Tier I Retirees” and “Tier II Retirees” mean the following:

(i) “Tier I Retirees” mean those Retirees who were former employees of Washoe County, who were hired by Washoe County on or before September 16, 1997, and who became employees of TMWA as a result of the merger of water utility services between Washoe County and TMWA which became effective on January 1, 2015; and

(ii) “Tier II Retirees” means those Retirees who were former Employees of Washoe County, who were hired by Washoe County after September 16, 1997 and before July 1, 2010, and who became employees of TMWA as a result of the merger of water utility services between Washoe County and TMWA which became effective on January 1, 2015.

2.14 “Trust” and “Trust Fund” means the Trust established and administered under this Trust Agreement, together with all subsequent amendments thereto.

2.15 “Trust Year” means the year beginning on January 1 of each calendar year and ending on December 31 of the same calendar year.

2.16 “Trustees” collectively mean the persons appointed under Article VII who have accepted the position as Trustees, and any duly appointed and qualified successor Trustees. “Trustee” means any one of the Trustees. The Trustees shall constitute the “board of trustees” as that term is used in NRS 287.017(2)(e).

2.17 “Washoe County” means Washoe County, Nevada, a political subdivision of the State of Nevada.

2.18 Words used in the singular shall include the plural, words used in the plural shall include the singular, and words of one gender shall include other genders when the context so requires.

ARTICLE III.

Eligibility and Participation

3.1 Eligibility and Commencement of Coverage. Each Tier I Retiree entitled to coverage under a Benefit Plan described in Exhibit A-1 and each Tier II Retiree entitled to coverage under a Benefit Plan described in Exhibit A-2 who satisfies the eligibility requirements set forth in Exhibit “B” attached hereto shall be entitled to receive Benefits from this Trust.

3.2 Termination of Participation. A Participant’s right to receive Benefits under this Trust is to terminate upon the occurrence of the earliest event described in Exhibit “C” attached hereto.

ARTICLE IV.

Benefits Payable by the Trust

The Benefits to be paid and/or reimbursed by this Trust on behalf of a Participant are to include and be limited to (i) the actual share of the total premiums attributable to Benefits required to be paid and/or reimbursed by the Trust on behalf of a Participant classified as a Tier I Retiree as set forth in Exhibit “D-1” attached hereto, and (ii) the actual share of the total premiums attributable to Benefits required to be paid and/or reimbursed by the Trust on behalf of a Participant classified as a Tier II Retiree as set forth in Exhibit “D-2” attached hereto. If the amount of the Benefits required to be paid and/or reimbursed by the Trust is modified by the CBA or resolutions adopted by TMWA, then Exhibits “D-1” and “D-2” are to be amended to reflect such changes. All Benefits required to be paid by this Trust for coverage of a Participant under a Benefit Plan will be paid (i) to the company or institution that issues or administers the Benefit Plan, or (ii) to the Participant to reimburse the Participant for his or her payment of the Benefits required to be paid by the Trust. The Trustees of this Trust may fund additional Benefits through this Trust, after amending the Trust, but only if such Benefits are authorized under the CBA and/or resolutions

adopted by TMWA, and are Benefits which may be funded by a trust described in NRS Section 287.017.

ARTICLE V

Contributions

5.1 Determination of Contribution:

(a) This Trust shall be funded with contributions by Participants and/or TMWA, and all such contributions to the Trust, and any earnings on such contributions, shall be irrevocable and shall become and remain the property of the Trust.

(b) Contributions to this Trust shall be made in accordance with, and in amounts prescribed by, the Benefit Plans and this Trust.

(c) TMWA shall annually commission actuarial studies that estimate its obligations and liabilities to provide Benefits under the Benefit Plans in accordance with applicable law and with generally accepted accounting principles. TMWA shall annually notify the Trustees of the level of funding it expects to contribute to the Trust Fund.

5.2 **Funding Policy:** The policy of TMWA is that this Trust shall be funded by Participants' and/or TMWA's contributions. Such funding shall be determined pursuant to NAC 287.786(1) in a manner consistent with the Code and any other applicable laws and regulations, in accordance with generally accepted accounting principles, and on a sound actuarial basis.

5.3 **To Whom Contributions are to be Paid:** Contributions shall be paid to the Trustees and shall become a part of the Trust Fund. All contributions to the Trust Fund and any earnings thereon shall be used only to:

(a) Provide Benefits to Participants in accordance with the terms of the CBA, resolutions adopted by TMWA, this Trust, and the Benefit Plans; and

(b) Pay the reasonable administrative expenses incident to the provision of those Benefits and expenses incurred in the administration of the Trust.

5.4 **Corpus of Trust:** The Trust shall consist of contributions made to the Trust, together with investments and reinvestments of the proceeds thereof, and all earnings and profits thereon, if any, less any losses, and less any expenses charged and distributions made pursuant to the terms of the Trust.

5.5 Investment of Trust:

(a) In accordance with the purpose of the Trust Fund stated in NRS 287.017(2)(a), the Trust Fund shall invest monies for the purpose of funding all or a portion of the unfunded actuarial accrued liabilities associated with providing future Benefits for Participants covered by the Benefit

Plans. The Trust Fund may also be used to pay Benefits to current Participants under the Benefit Plans.

(b) The investment of the assets of the Trust Fund shall be limited to the Retirement Benefits Investment Fund established pursuant to NRS 355.220 and authorized pursuant to NRS 287.017(2)(g)(1); provided however, that the Trustees may direct that the assets of the Trust Fund be invested on a short-term basis in any investment described in NRS 355.170 and authorized pursuant to NRS 287.017(2)(g)(2).

(c) All interest, earnings, dividends and distributions with respect to the investment of the Trust Fund, less any expenses charged with respect to such investments, must be deposited in the Trust Fund.

(d) The Trust Fund shall be maintained as a separate account and no other funds shall be co-mingled with the funds in the Trust Fund, except to the extent otherwise permitted by NRS 287.017(2)(h) and NAC 287.790(5).

(e) Trust Fund monies and assets shall not be used to finance the debt of TMWA and shall not be available for loans to other funds of TMWA.

ARTICLE VI

Payments From Trust

6.1 Payments Directed by TMWA: The Trustees must transfer funds from the Trust Fund to the account designated by TMWA upon the request of TMWA's governing body in accordance with the requirements of the Retiree Benefits Investment Board pursuant to NRS 355.220. The request must include:

(a) An explanation of how the proposed transfer will be used to fulfill the requirements of the Benefit Plans;

(b) A copy of TMWA's approved budget reflecting the authorization of retirement Benefits;

(c) Minutes of the meeting of TMWA's governing body during which the transfer was proposed; and

(d) The signature of the chairperson of the TMWA's governing body.

If the request and supporting documentation do not meet the criteria of this Section 6.1, the Trustees may delay transfer until TMWA's governing body corrects the request. Payments from the Trust may be made only to the extent that the Benefits for which such payment is made are benefits permitted under the NRS.

6.2 Trust for Exclusive Benefit of Participants; Reversion Prohibited: This Trust has been established for the exclusive benefit of those Retirees who are entitled to receive Benefits from this Trust pursuant to Article III. Under no circumstances shall any funds contributed to or held by the Trustees at any time revert to the benefit of TMWA, except upon termination of the Trust as provided in Article IX.

6.3 Transfer of Trust Assets Permitted: Notwithstanding Section 6.2 above, TMWA's governing body may amend the Benefit Plans to reserve the classification of Participants eligible for Benefits under the Trust, and terminate such Participants' participation in the Trust or transfer their coverage to another trust complying with the provisions of NRS 287.017, but only to the extent permitted under the CBA, or resolutions adopted by TMWA, and Code Section 115. In the event a classification of Participants is transferred to another such trust, the Trustees may determine the allocable portion of assets held by the Trust attributable to such transferred Participants and authorize such portion of Trust assets to be transferred to the new trust. Any such transferred Trust assets shall be used exclusively for the purpose of providing Benefits to the Participants so transferred and similarly situated Participants. Upon the transfer of such Participants, any and all rights of such Participants under this Trust shall terminate, except as provided in the Benefit Plans, to the extent not inconsistent with the terms of this Trust, and except as otherwise required by law.

ARTICLE VII.

Trustees - Appointment, Resignation, and Removal

7.1 Appointment Of Trustees: The Trust shall be administered by at least three, but not more than five, Trustees who shall be selected by the General Manager of TMWA and confirmed and approved by TMWA's governing board, and such Trustees are to act in a fiduciary capacity for the beneficiaries of the Trust pursuant to NRS 287.017(2)(e) and NAC 287.778(1)(a). No member of TMWA's governing body may be appointed as a Trustee. By signing this Trust, each Trustee hereby accepts his or her trusteeship and agrees to receive and hold the Trust solely for the uses and purposes set forth herein and solely in accordance with the terms hereof.

(a) Pursuant to Section 5.5(b), assets of the Trust Fund shall be invested in the Retirement Benefits Investment Fund established pursuant to NRS 355.220; provided, however, that the Trustees may direct that the assets of the Trust Fund be invested in investments established pursuant to NRS 355.170. As a result, TMWA's governing body shall appoint at least three but no more than five Trustees who must include:

- (i) At least one member who has a combination of education and experience of at least 5 (five) years in finance or economics;
- (ii) A public officer or employee of TMWA who manages its fiscal affairs; and
- (iii) A beneficiary of the Trust.

(b) A person appointed as a Trustee shall not have a substantial financial interest in the ownership or negotiation of securities or other financial instruments in which monies in the Trust Fund are invested.

(c) Each Trustee shall be appointed for a term of at least two years but not to exceed four years. However, TMWA's governing body may renew the term of any Trustee.

7.2 Resignation, Removal and Substitution of Trustees:

(a) **Resignation and Removal:** Any Trustee may resign at any time upon thirty days' written notice to TMWA's governing body. Any Trustee may be removed with or without cause at any time by TMWA's governing body upon thirty days' written notice to such Trustee. TMWA's governing body may remove a Trustee if the Trustee fails to attend two consecutive meetings or three meetings during a calendar year. Upon resignation or removal of any Trustee, TMWA's governing body shall appoint a successor Trustee who shall have the same powers and duties as are conferred upon the Trustees appointed under this Trust. TMWA's governing body may reappoint a Trustee and may alter the composition of the Trustees if required pursuant to Section 7.1.

(b) **Successors' Liability:** No successor Trustee shall be liable or responsible for any acts or defaults of his or her predecessor or any predecessor co-Trustees, or for any losses or expenses resulting from or occasioned by anything done or neglected to be done in the administration of the Trust prior to his or her appointment as Trustee, nor shall a successor Trustee be required to inquire into or take any notice of the prior administration of the Trust.

7.3 Organization and Operation of Offices of Trustees:

(a) The Trustees may adopt such procedures and regulations as they deem desirable for the conduct of their affairs.

(b) The Trustees shall select a Chairman and Vice Chairman from among their membership.

(c) The Chairman shall preside at all meetings of the Trustees. In case of the absence of the Chairman from any meeting of the Trustees or in case of the inability of the Chairman to act, the Vice Chairman shall perform the duties and acts authorized or required by the Chairman to be performed, as long as the inability of the Chairman to act may continue.

(d) TMWA's governing body shall provide the staff necessary to organize and notice meetings of the Trustees, take the minutes of the meetings, receive and disseminate financial reports of financial managers to the Trustees, and prepare financial reports and budgets for the Trustees.

(e) The Trustees shall meet quarterly or at the call of the Chairman whenever business is presented.

- (f) A majority of the Trustees shall constitute a quorum of the Trustees for all purposes.
- (g) All action by the Trustees at a meeting (and such meeting may be in person or a telephonic meeting) at which a quorum is present shall be by a majority of those present.
- (h) Any action to be taken without a meeting (either in person or telephonically) of the Trustees must be approved in writing by all of the Trustees.
- (i) Any action of the Trustees must be in writing.
- (j) No item of business shall be considered at a meeting of the Trustees unless it shall first have been entered upon the agenda for that meeting, provided, however, that items not appearing on the agenda may be taken up with the approval of a majority of the Trustees present when it has been determined that the matter is an emergency as permitted under NRS Chapter 241.
- (k) No member of the Trustees can bind the Trustees by word or action unless the Trustees have designated such member as the Trustees' agent for some specific purpose and for that purpose only.
- (l) In the event of a deadlock in any vote of the Trustees with respect to the operation or administration of the Trust, then the matter at issue shall remain in status quo until the next meeting of the Trustees. If the Trustees do not resolve such deadlock among themselves prior to the next meeting of Trustees, the question or matter shall again be presented at such next meeting. If at such next meeting the Trustees shall still be deadlocked and remain so until such meeting is adjourned, then, upon written notice of any Trustee to the other Trustees, the Trustees shall, within thirty days after receipt of such notice by the Trustees, appoint an independent fiduciary solely for the purpose of deciding upon the deadlocked matter. Such independent fiduciary shall render its decision on the matter, which decision shall be implemented as if decided at a meeting of the Trustees.
- (m) Any member of the Trustees may request a roll call vote of the Trustees, which shall be recorded in the minutes of the meeting.

ARTICLE VIII.

Trustees – Duties and Powers

8.1 Duties and Powers of Trustees--In General: Subject to the requirements imposed by law, the Trustees shall be fiduciaries who shall have all powers necessary or advisable to carry out the provisions of this Trust and all inherent, implied, and statutory powers now or subsequently provided by law and shall be subject to the duties imposed on fiduciaries under applicable law. The Trustees shall be responsible for the management and control of the Trust Fund. The Trustees shall formulate and execute appropriate investment policies to govern the Investment Plan of the Trust Fund consistent with the requirements of NRS 287.017 and Section 5.5 of this Trust. The Trustees shall decide all questions arising in the administration, interpretation, and application of the Trust, except as may be reserved under this Trust to TMWA. In addition:

(a) As required by NRS 287.017(2)(e)(1), the Trust shall be administered in accordance with generally accepted accounting principles and actuarial studies applicable to the future provision of Benefits to Participants;

(b) To the extent required by NRS 287.017(2)(f)(3) or any similar applicable regulation, the Trustees shall cause the Trust to be audited each Trust Year by an independent certified public accountant, and the results of such audit shall be reported to TMWA's governing body;

(c) As permitted by NRS 287.017, the Trust Fund assets may be pooled for the purposes of investment with the assets of any other employer and of any other trust fund established pursuant to NRS 287.017; provided, however, that each employer's interest in such pooled assets (1) is to be accounted for separately from the interest of any other employer, (2) is to be used to provide benefits only to the participants covered by the plan or plans of such employer; and (3) is not to be subject to the liabilities of any other employer.

(d) In accordance with NRS 287.017 and NAC 287.786(2), the Trustees shall annually submit a tentative budget to TMWA's governing body for its consideration, approval and inclusion in the tentative and final budgets of the TMWA's governing body. The tentative budget submitted by the Trustees must incorporate the amount of contributions to the Trust determined pursuant to NAC 287.786(1). TMWA's governing body may modify the Trustees' tentative budget at its discretion.

8.2 Duties and Powers of Trustees--Investment: To the extent permitted under NRS 287.017, the Trustees shall have the power to invest and/or reinvest any and all money or property of any description at any time held by them and constituting a part of the Trust, without previous application to, or subsequent ratification of, any court, tribunal, or commission, or any federal or state governmental agency, in such investments as are permitted under the express terms of this Trust.

None of the earnings of the Fund shall inure to the benefit of any Trustee or any private person, except that a Trustee or other individual may be a beneficiary of the Trust through participation in a Benefit Plan. A Trustee shall not be interested, directly or indirectly, as principal, partner, agent or otherwise, in any contract or expenditure created by the Trustees, or in the profits or results thereof.

In addition, to the extent permitted under NRS 287.017 and as provided in NAC 287.790(1)(a), the Trustees shall have the following specific powers:

(a) To invest Trust assets in the "Retirement Benefits Investment Fund" established pursuant to NRS 355.220 and authorized pursuant to NRS 287.017(2)(g)(1) and Section 5.5(b); provided, however, that the Trustees may direct that the Trust assets be invested in investments established pursuant to NRS 355.170 and authorized pursuant to NRS 287.017(2)(g)(2) and Section 5.5(b).

(b) To collect and receive any and all money and other property of whatsoever kind or nature due or owing or belonging to the Trust Fund.

(c) To cause any securities or other property to be registered in, or transferred to, the individual names of the Trustees or in the name of one or more of their nominees, or to retain them in unregistered form, but the books and records of the Trust shall at all times show that all such investments are a part of the Trust Fund.

(d) To settle, compromise or submit to arbitration any claims, debts or damages due or owing to or from the Trust; to commence or defend suits or legal proceedings whenever, in its judgment, any interest of the Trust requires it; and to represent the Trust in all suits or legal proceedings in any court of law or equity or before any other body or tribunal, insofar as such suits or proceedings relate to any property forming part of the Trust Fund or to the administration of the Trust Fund.

(e) Generally, to do all acts, whether or not expressly authorized, which the Trustees deem necessary, but acting at all times according to the provisions of Nevada law to the extent permitted under NRS 287.017(2)(e), which provides the Trustees with all powers and duties that may be exercised by a nonprofit corporation under Nevada laws, but prohibits the Trust from borrowing money.

(f) To file any tax returns required of the Trust.

Notwithstanding the above, the Trustees may not deposit the assets of the Trust Fund in the Retirement Benefits Investment Fund established pursuant to NRS 355.220, unless the Trustees obtain an opinion from TMWA's legal counsel that the investment of those Trust assets will not violate the provisions of Section 10 of Article 8 of the Constitution of the State of Nevada. Fiduciary responsibility for assets of the Trust Fund invested in the Retirement Benefits Investment Fund remains with the Trustees and not with the Retirement Benefits Investment Board. In addition, the Trustees have no authority to negotiate or otherwise determine the Benefits afforded the Participants of the Trust Fund pursuant to the Benefit Plans.

8.3 Valuation of Trust Fund: As of the last day of each Trust Year, the Trustees shall determine the fair market value of all assets of the Trust Fund.

8.4 Advice and Assistance to Trustees: The Trustees may employ such staff and may contract for the provision of such management, investment and other services, including without limitation, the services of accountants, actuaries and investment managers, as the Trustees determine necessary for the administration of the Trust. In addition, the Trustees may retain and consult with legal counsel, who may be counsel for TMWA or the Trustees' own counsel with respect to the meaning or construction of the Trust or the Trustees' obligations or duties. The Trustees shall be protected from any responsibility with respect to any action taken or omitted by them in good faith pursuant to the advice of such counsel, to the extent permitted by law.

8.5 Records and Accounts of the Trustees: The Trustees shall keep a record of all the Trustees' proceedings and shall keep all such books of account records, and other data as may be

necessary in the administration and conduct of this Trust, including records to reflect the affairs of this Trust, to determine the amount of the respective Participants' interests in the Trust Fund, and to determine the amount of all Benefits payable under this Trust. Subject to the requirements of law, any person dealing with the Trustees may rely on, and shall incur no liability in relying on, a certificate or memorandum in writing signed by the Trustees as evidence of any action taken or resolution adopted by the Trustees. The Trustees' records and accounts shall be open to inspection by TMWA's governing body at all reasonable times during business hours. The books and records of the Trust shall be kept in accordance with generally accepted accounting principles and the end of the fiscal year of the Trust shall be the Trust Year. After the close of each year of the Trust, the Trustees shall render a statement of assets and liabilities of the Trust Fund for such year.

8.6 Fees and Expenses: The Trustees may be paid such reasonable compensation as provided pursuant to NAC 287.784. In addition, the Trustees shall be reimbursed for any necessary and reasonable expenses, including reasonable counsel and accounting fees, as well as the expense of the audit required pursuant to NRS 287.017 and Section 8.1(b) of this Trust, incurred by the Trustees in the administration of the Trust Fund. Such compensation and expenses may be paid from the Trust Fund. All taxes of any kind that may be levied or assessed under existing or future laws upon, or in respect of, the Trust Fund or the income thereof shall be paid by the Trustees from the Trust Fund.

ARTICLE IX.

Continuance, Termination, and Amendment of Trust

9.1 Termination of Trust: This Trust shall continue in full force and effect for such time as may be necessary to accomplish the purposes for which it is created. The expectation of TMWA is to continue this Trust indefinitely, but the continuance of the Trust is not assumed as a contractual obligation by TMWA. TMWA's governing body reserves the right to terminate this Trust in whole or in part at any time, including the termination of its participation in this Trust.

9.2 Disposition of Trust Upon Termination: Upon the termination of the Trust, to the extent that the Trust assets are not transferred to a successor trust pursuant to Section 6.3, the Trustees shall hold the Trust Fund until it is completely exhausted by paying those Benefits provided under the Benefit Plans and paying the reasonable expenses of the Trust, including expenses incurred in the termination and liquidation of the Trust; provided, however, that upon the complete satisfaction of all obligations under the Benefit Plans and the satisfaction of all liabilities of the Trust, any remaining Trust Fund assets may be transferred to TMWA as determined by the Trustees and to the extent permitted by applicable law.

9.3 Amendments to Trust: Subject to the provisions of NRS 287.017, NAC 287.760 through NAC 287.792, inclusive, and other laws applicable to this Trust, TMWA's governing body may amend this Trust for any purpose by delivering to the Trustees signed copies of such amendment. Such amendment shall be effective as of the date specified by TMWA's governing body, or if no date is specified, then on the first day of the next succeeding Trust Year.

ARTICLE X.

Miscellaneous

10.1 Trust Not Subject to Creditors' Claims: No assignment of any Benefits under the Trust will be recognized or permitted; nor shall any such Benefits or any assets of the Trust Fund be subject to attachment, garnishment or the claims of any creditors of TMWA or any Participant or beneficiary of the Trust.

10.2 Text to Control: The headings of articles and sections are included solely for convenience of reference. If any conflict between any heading and the text of this Trust exists, the text shall control.

10.3 Severability: If any provision of this Trust is illegal, invalid or unenforceable for any reason, such illegality, invalidity or unenforceability shall not affect the remaining provisions. On the contrary, such remaining provisions shall be fully severable, and this Trust shall be construed and enforced as if such illegal, invalid or unenforceable provisions never had been inserted in the agreement.

10.4 Applicable Law: All questions, disputes or other issues relating to the Trust including but not limited to the interpretation, administration, operation and/or application of the Trust or its provisions shall be governed by the laws of the State of Nevada.

10.5 Changes in Governing Law: To the extent any provision in this Trust is included in compliance with the requirements of the NRS or the NAC, if any change to such requirement is made in the NRS or the NAC, this Trust Agreement shall be deemed to be amended to the extent required to reflect the corresponding change in the NRS or the NAC, provided that such deemed amendment does not cause the Trust to violate Code Section 115.

10.6 Execution in Counterparts. This Trust may be executed in two or more counterparts, each of which will be deemed an original, but all of which taken together will constitute one and the same agreement (and all signatures need not appear on any one counterpart), and this Trust will become effective when one or more counterparts has been signed by each party and delivered to the other party.

This Trust has been executed this ____ day of _____, 201__.

TRUCKEE MEADOWS WATER AUTHORITY

By: _____

Title: _____

Date: _____

TRUSTEES

Printed Name: _____

Signature: _____

Date: _____

Printed Name: _____

Signature: _____

Date: _____

Printed Name: _____

Signature: _____

Date: _____

Printed Name: _____

Signature: _____

Date: _____

EXHIBIT A-1

BENEFIT PLANS FUNDED THROUGH TRUST FOR TIER I RETIREES

The Benefit Plans that Tier I Retirees may elect to participate in under the Trust are to include and be limited to the following:

1. Those group health/medical policies or plans (other than dental policies or plans) offered to active employees of TMWA from time to time.
2. Those group prescription drug policies or plans offered to active employees of TMWA from time to time.
3. Those group visions policies or plans offered to active employees of TMWA from time to time.
4. Those group life insurance policies or plans offered to Tier I Retirees from time to time who enroll in a group health/medical plan described in paragraph 1. above. The amount of life insurance coverage currently available to a Tier I Retiree varies according to the Tier I Retiree's age as indicated below:

For Tier I Retirees –

Under age 70 – the maximum life insurance benefits available to a Tier I Retiree is equal to 1 times the Tier I Retiree's "Basic Annual Earnings" at the time of his or her retirement (as defined in the life insurance plan rounded to the next highest \$1,000), if not already a multiple of \$1,000, with a maximum benefit of \$175,000.

Ages 70 to 74 – the maximum life insurance benefits available to a Tier I Retiree is equal to 50% of the Tier I Retiree's Basic Annual Earnings at the time of his or her retirement (as defined in the life insurance plan rounded to the next highest \$1,000), if not already a multiple of \$1,000.

Ages 75 or older – the maximum life insurance benefits available to a Tier I Retiree is equal to \$2,000.

Although a Tier I Retiree may elect coverage for himself or herself, the spouse and/or other qualified dependents of a Tier I Retiree under TMWA's group dental policies and plan(s), and may also elect coverage for his or her spouse and/or other qualified dependents under TMWA's group health/medical policies or plans, group prescription policies or plans, group vision policies or plans, and group life insurance policies or plans described above, the Tier I Retiree is to be responsible for 100% of the premiums attributable to such coverages. Accordingly, the Trust does not fund any portion of the premiums attributable to the coverages described in this paragraph.

EXHIBIT A-2

BENEFIT PLANS FUNDED THROUGH TRUST FOR TIER II RETIREES

The Benefit Plans that Tier II Retirees may elect to participate in under the Trust are to include and be limited to the following:

1. The health/medical, prescription, and/or vision Benefit Plans offered to Tier II Retirees will vary depending upon whether a Tier II Retiree has attained Medicare Eligibility Age (currently age 65) as discussed below:

a. Health/medical, prescription, and/or vision Benefit Plans Available to Tier II Retirees who have not Attained Medicare Eligibility Age (currently age 65). The following health/medical, prescription, and/or vision Benefit Plans are available to Tier II Retirees who have not attained Medicare Eligibility Age (currently age 65): (i) those group health/medical policies or plans (other than dental policies or plans), group prescription drug policies or plans, and/or group vision policies or plans offered to active employees of TMWA from time to time, (ii) those individual policies or plans that are procured by a Tier II Retiree that provide medical, dental, prescription, and/or vision coverage to a Tier II Retiree, and (iii) those group policies or plans offered by an employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree (other than TMWA) that provide medical, dental, prescription, and/or vision coverage to a Tier II Retiree. Tier II Retirees who have not attained Medicare Eligibility Age (currently age 65) may elect coverage under any of the plans described in this paragraph 1.a. Notwithstanding anything contained in this subparagraph 1.a. to the contrary, the term “Benefit Plans” shall not include a policy or plan offered by the employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree to the extent that the premiums are paid by such employer on a “pre-tax” basis, including, without limitation, a policy or plan offered by an employer under a Code Section 125 plan (commonly referred to as a “Cafeteria Plan”).

At the time a Tier II Retiree attains Medicare Eligibility Age (currently age 65), and assuming that the Tier II Retiree continues to be eligible to receive Benefits under this Trust, the Tier II Retiree will then be eligible to participate in the Benefit Plans described in subparagraph 1.b. below. If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

b. Health/medical, prescription, and/or vision Benefit Plans Available to Tier II Retirees who have Attained Medicare Eligibility Age (currently age 65). The following health/medical, prescription, and/or vision Benefit Plans are available to Tier II Retirees who have attained Medicare Eligibility Age (currently age 65): (i) those group health/medical policies or plans (other than dental plans), group prescription policies or plans, and/or group vision policies or plans offered to active employees of TMWA from time to time, (ii) those individual policies or plans that are procured by a Tier II Retiree that provide health/medical, dental, prescription, and/or vision coverage to a Tier II Retiree, (iii) those Medicare Plans Part B and Part D, Medicare Supplemental Plans, Medicare Advantage Plans, and/or Medicare Gap Plans that provide health/medical, dental, prescription and/or vision coverage for a Tier II Retiree, together with any current and future plans available to individuals eligible for Medicare coverage that are approved

and authorized by the United States Department of Health and Human Services or its successor, and (iv) those group policies or plans offered by an employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree (other than TMWA) that provide health/medical, dental, prescription, and/or vision coverage to a Tier II Retiree. Tier II Retirees who have attained Medicare Eligibility Age (currently age 65) may elect coverage under any of the plans described in this subparagraph 1.b. Notwithstanding anything contained in this subparagraph 1.b. to the contrary, the term “Benefit Plans” shall not include a policy or plan offered by the employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree to the extent that the premiums are paid by such employer on a “pre-tax” basis, including, without limitation, a policy or plan offered by an employer under a Code Section 125 plan (commonly referred to as a “Cafeteria Plan”). If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

2. The group life insurance policies or plans offered to Tier II Retirees from time to time who enroll in a group health/medical plan offered by TMWA described in clause (i) of subparagraph 1.a or 1.b. above, as the case may be. The amount of life insurance coverage available to a Tier II Retiree varies according to the Tier II Retiree’s age as indicated below:

For Tier II Retirees –

Under age 70 – the maximum life insurance benefits available to a Tier II Retiree is equal to 1 times the Tier II Retiree’s “Basic Annual Earnings” at the time of his or her retirement (as defined in the life insurance plan rounded to the next highest \$1,000), if not already a multiple of \$1,000, with a maximum benefit of \$175,000.

Ages 70 to 74 – the maximum life insurance benefits available to a Tier II Retiree is equal to 50% of the retiree’s Basic Annual Earnings at the time of his or her retirement (as defined in the life insurance plan rounded to the next highest \$1,000), if not already a multiple of \$1,000.

Ages 75 or older – the maximum life insurance benefits available to a Tier II Retiree is equal to \$2,000.

Although a Tier II Retiree may elect coverage for his or her spouse and/or other qualified dependents under the Benefit Plans described in this Exhibit A-2, the Tier II Retiree is responsible for 100% of the premiums attributable to coverages elected for a spouse and/or a qualified dependent of a Tier II Retiree. Accordingly, the Trust does not fund any portion of the premiums attributable to coverage for any spouse and/or qualified dependent of a Tier II Retiree.

EXHIBIT B

ELIGIBILITY REQUIREMENTS FOR RETIREE TO RECEIVE BENEFITS

To be eligible to become a Participant and receive Benefits from the Trust, a Retiree must meet all the following requirements:

1. The Retiree must be a Tier I Retiree or Tier II Retiree (as defined in Section 2.13 of Article II of the Trust),
2. The Retiree must receive monthly retirement payments under the Public Employees Retirement System ("PERS") of Nevada, and
3. The Retiree must complete such forms to enroll for Benefits from the Trust as the Trustees may require from time to time.

In addition, a Retiree who separates from service from TMWA prior to his or her retirement may receive Benefits from the Trust if TMWA was the Retiree's last public employer, the Retiree satisfies the requirements described in paragraphs 1. through 3. above, and the Retiree meets any requirements of NRS Section 287.045, but only to the extent that NRS Section 287.045 is applicable to Benefits provided by the Trust.

EXHIBIT C

EVENTS CAUSING TERMINATION OF BENEFITS

A Participant's Benefits received from the Trust shall cease upon the occurrence of the earliest of the following events:

1. The death of the Participant,
2. The date the Participant's coverage under the Benefit Plans is cancelled for any reason whatsoever, including, without limitation, the failure of the Participant to pay his or her share of the premiums for coverage under the Benefit Plans, or the execution of an instrument permanently waiving coverage under the Benefit Plans and/or the Benefits from the Trust, or
3. The date this Trust is terminated.

In addition to the events causing termination of Benefits described above, for "Tier II Retirees" only (as defined in Section 2.13 of this Trust), Benefits under this Trust will be terminated if the Tier II Retiree becomes employed by another public employer in the State of Nevada.

EXHIBIT D-1

BENEFITS TO BE PAID TO PARTICIPANTS
CLASSIFIED AS TIER I RETIREES

The Benefits to be paid by the Trust to or on behalf of Participants classified as Tier I Retirees shall be as follows:

1. For a Tier I Retiree with at least ten (10) years of combined full-time employment with Washoe County and/or TMWA, but less than fifteen (15) years of combined full-time employment with Washoe County and/or TMWA, the maximum Benefits payable by the Trust will be 50% of the premiums attributable to the coverage elected by such Tier I Retiree under the Benefit Plans described in Exhibit A-1.

2. For a Tier I Retiree with at least fifteen (15) years of combined full-time employment with Washoe County and/or TMWA, but less than twenty (20) years of combined full-time employment with Washoe County and/or TMWA, the maximum Benefits payable by the Trust will be 75% of the premiums attributable to the coverage elected by such Tier I Retiree under the Benefit Plans described in Exhibit A-1.

3. For a Tier I Retirees with twenty (20) or more years of combined full-time employment with Washoe County and/or TMWA, the maximum Benefits payable by the Trust will be 100% of the premiums attributable to the coverage elected by such Tier I Retiree under the Benefit Plans described in Exhibit A-1.

The foregoing Benefits will be provided to a Tier I Retiree in accordance with and are subject to all applicable laws in effect at the time of the retirement of the Tier I Retiree.

NOTE:---For those Tier I Retirees who were hired by Washoe County on or after January 13, 1981, in order to receive the Benefits described in this Exhibit A-1, the Tier I Retiree must have been an employee of TMWA immediately prior to receiving Benefits from the Trust.

NOTE----In order for Tier I Retirees to be eligible to receive the Benefits listed in this Exhibit A-1, Tier I Retirees who have attained Medicare Eligibility Age (currently age 65) during a Trust's Plan Year must enroll in and pay the cost of Medicare Part "A" and Medicare Part "B," or Medicare Part "C" coverage, and the TMWA plans will become the secondary payer regardless of whether the Tier I Retiree enrolls in the Medicare program or not. If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

EXHIBIT D-2

BENEFITS TO BE PAID TO PARTICIPANTS
CLASSIFIED AS TIER II RETIREES

The Benefits to be paid by the Trust to or on behalf of Participants classified as Tier II Retirees shall be as follows:

1. Benefits for Tier II Retirees who have not Attained Medicare Eligibility Age. The maximum Benefits to be paid by the Trust to a Tier II Retiree who has not attained Medicare Eligibility Age (currently age 65) is to be the same amount as the premium paid for group health coverage by an employer for coverage of non-state employees under the Nevada State Public Employee Benefit Plan ("PEBP") Retiree Health Insurance Plan. If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

By way of background, the 2003 Nevada Legislature passed legislation (AB286) that afforded public employees of Nevada political subdivisions the opportunity to enroll, upon their retirement, in the PEBP Retiree Health Insurance Plan. The 2003 legislation also obligated public employers of said retirees who enrolled in the plan to pay a portion of the medical premium on the retiree's behalf (the "Subsidy"). Tier II Retirees are entitled to receive this same Subsidy from the Trust towards their coverage under the Benefit Plans described in Exhibit A-2 rather than the PEBP Retiree Health Insurance Plan.

2. Benefits for Tier II Retirees who have Attained Medicare Eligibility Age. Tier II Retirees who have attained the Medicare Eligibility Age (currently age 65) or older will instead receive Benefits equal to the equivalent of the State of Nevada's Medicare Exchange Retiree HRA Contribution Subsidy based upon the combined number of years of service with Washoe County and/or TMWA and must elect Medicare. If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65. In order to receive the Benefits described in this paragraph 2., the Tier II Retiree must be an employee of TMWA immediately prior to receiving his or her Benefits under the Trust.

NOTE: The PEBP non-State retiree Subsidy described in paragraph 1. above and the Medicare Exchange Retiree HRA Contribution Subsidy described in paragraph 2. above are revised annually by the State of Nevada. In the event that either or both of these Subsidies are discontinued by the State of Nevada, then a Tier II Retiree shall continue to receive a Benefit under this Trust equal to the Subsidy that he or she was entitled to receive during the last year that such Subsidy remained in effect.

**TRUST AGREEMENT
FOR
TRUCKEE MEADOWS WATER AUTHORITY
OPEB TRUST FUND
~~EFFECTIVE JANUARY 1, 2015~~
RESTATED _____, 2019**

ARTICLE I

Purpose of the Trust

The Truckee Meadows Water Authority OPEB Trust Fund was originally established January 1, 2015. The Trust is now being amended and restated to make certain changes thereto. This Trust is intended to provide the means to fund all or a portion of the post-retirement benefits to be provided to those former employees of Washoe County, Nevada who became employees of Truckee Meadows Water Authority as a result of the merger of water utility services between Washoe County, Nevada and Truckee Meadows Water Authority which ~~is to be~~ became effective on ~~or about~~ January 1, 2015. -The Trust is intended to qualify as a governmental trust established to provide an essential governmental function under Section 115 of the Internal Revenue Code of 1986, as amended, and is created pursuant to Nevada Revised Statutes § 287.017. The name of this Trust shall be the Truckee Meadows Water Authority OPEB Trust Fund.

ARTICLE II

Definitions

When used in this Trust, the following words shall have the following meanings, unless the context clearly indicates otherwise:

2.1 “Benefit ~~Plan~~” ~~means each of~~ Plans” mean the ~~post-employment welfare~~ following:

(i) For those Participants classified as Tier I Retirees, the term “Benefit Plans” are to include and be limited to those benefit plans maintained by TMWA that are listed on described in Exhibit A-1 attached hereto, which, and

(ii) For those Participants classified as Tier II Retirees, the term “Benefit Plans” are to include and be limited to those benefit plans described in Exhibit A-2 attached hereto.

The Benefit Plans described in Exhibits A-1 and A-2 may be amended from time to time pursuant to the terms of this Trust.

2.2 “Benefits” mean the following:

(i) For those Participants classified as Tier I Retirees, the term “Benefits” mean those premiums ~~paid~~ described in Exhibit D-1 attached hereto that are required to be paid or reimbursed by TMWA on behalf of Tier I Retirees to provide such Tier I Retirees with coverage under one or more of the Benefit Plans described in Exhibit A-1; and

(ii) For those Participants classified as Tier II Retirees, the term “Benefits” mean those premiums described in Exhibit D-2 attached hereto that are required to be paid or reimbursed by the Trust ~~TMWA~~ on behalf of a Participant (as more fully described in Article IV below) for the purpose providing the Participant with post retirement benefits Tier II Retirees to provide such Tier II Retirees with coverage under one or more of the Benefit Plans described in Exhibit A-2.

2.3 “CBA” means the current collective bargaining agreement entered into between TMWA and the bargaining unit referred to as Local #1245 of the International Brotherhood of Electrical Workers (IBEW), together with any future amendments and successor agreements thereto.

2.4 “Code” means the Internal Revenue Code of 1986, as amended.

2.5 “Effective Date” means the Effective Date of this Trust, which ~~shall be~~ is January 1, 2015.

2.6 “Investment Plan” means an investment plan developed by the Trustees pursuant to NRS 287.017(2)(g)(~~+~~) and NAC 287.788(2).

2.7 “NAC” means the Nevada Administrative Code, as amended from time to time.

2.8 “NRS” means the Nevada Revised Statutes, as amended from time to time.

2.9 “Participant” means a Retiree who is entitled to receive Benefits from this Trust pursuant to Section 3.1. and elects to receive such Benefits in accordance with the procedures adopted by the Trustees from time to time. A Participant shall not include any spouse and/or dependents of a Retiree, even if such spouse and/or dependents are covered under one or more of the Benefit Plans.

2.10 “Plan Year” means the calendar year.

2.11 “Retiree” means a ~~Transferred Employee~~ Tier I Retiree or Tier II Retiree who separates from service or retires from TMWA, and under the terms of this Trust, and the CBA or resolutions adopted by TMWA, is eligible to receive Benefits from this Trust.

2.12 “TMWA” means the Truckee Meadows Water Authority, a local government agency within the meaning of NRS 354.474, and an entity the income of which is excluded from gross income under Code Section 115.

2.13 “~~Transferred Employees~~ Tier I Retirees” and “Tier II Retirees” mean the following:

____ (i) “Tier I Retirees” mean those Retirees who were former ~~Employees~~ employees of Washoe County, who were ~~either~~ hired by Washoe County (~~+~~) on or before September 16, 1997, ~~or and who became employees of TMWA as a result of the merger of water utility services between Washoe County and TMWA which became effective on January 1, 2015; and~~

____ (ii) “Tier II Retirees” means those Retirees who were former Employees of Washoe County, who were hired by Washoe County after September 16, 1997 and before July 1, 2010, and who became employees of TMWA as a result of the merger of water utility services between Washoe County and TMWA which ~~is effective on or about January 1, 2015. For purposes of this Trust, those Transferred Employees described in clause (i) of the preceding sentence are~~

~~sometimes referred to as “Tier I Retirees,” and those Transferred Employees described in clause (ii) of the preceding sentence are sometimes referred to as “Tier II Retirees.”~~became effective on January 1, 2015.

2.14 “Trust” and “Trust Fund” ~~mean~~means the Trust, ~~as set forth in~~ established and ~~by~~administered under this ~~document and~~Trust Agreement, together with all subsequent amendments thereto.

2.15 “Trust Year” means the year beginning on January 1 of each calendar year and ending on December 31 of the same calendar year.

2.16 “Trustees” collectively mean the persons appointed under Article VII ~~and accepting who have accepted~~ the position as Trustees, and any duly appointed and qualified successor Trustees. “Trustee” means any one of the Trustees. The Trustees shall constitute the “board of trustees” as that term is used in NRS 287.017(2)(e).

2.17 “Washoe County” means Washoe County, Nevada, a political subdivision of the State of Nevada.

2.18 Words used in the singular shall include the plural, words used in the plural shall include the singular, and words of one gender shall include other genders when the context so requires.

ARTICLE III.

Eligibility and Participation

3.1 Eligibility and Commencement of Coverage. Each ~~(+)Tier I Retiree who is covered~~entitled to coverage under a Benefit Plan ~~and described in Exhibit A-1 and each Tier II Retiree entitled to coverage under a Benefit Plan described in Exhibit A-2~~ who satisfies the eligibility requirements set forth in Exhibit “B” attached hereto shall be entitled to receive Benefits from this Trust.

3.2 Termination of Participation. A Participant’s right to receive Benefits under this Trust is to terminate upon the occurrence of the earliest event described in Exhibit “C” attached hereto.

ARTICLE IV.

Benefits Payable by the Trust

The Benefits to be paid and/or reimbursed by this Trust ~~are to include the payment of all or a portion of the premiums that are required to be paid by TMWA on behalf of a Participant who is covered under one~~ are to include and be limited to (i) the actual share of the total premiums attributable to Benefits required to be paid and/or more of reimbursed by the Benefit Plans. The actual share of the total premiums required to be paid by TMWA Trust on behalf of a Participant

~~is~~classified as a Tier I Retiree as set forth in Exhibit “D-1” attached hereto, and (ii) the actual share of the total premiums attributable to Benefits required to be paid and/or reimbursed by the Trust on behalf of a Participant classified as a Tier II Retiree as set forth in Exhibit “D-2” attached hereto. If the amount of the ~~premiums~~Benefits required to be paid and/or reimbursed by ~~TMWA~~the Trust is modified by the CBA or resolutions adopted by TMWA, then ~~Exhibit~~Exhibits “D-1” and “D-2” are to be amended to reflect such changes. ~~Unless the Trustees determine otherwise, all premiums~~All Benefits required to be paid by this Trust for coverage of a Participant ~~in~~under a Benefit Plan will be paid ~~directly~~(i) to the company or institution that issues or administers the Benefit Plan, or (ii) to the Participant to reimburse the Participant for his or her payment of the Benefits required to be paid by the Trust. The Trustees of this Trust may fund additional Benefits through this ~~Plan, without Trust, after amending this Plan~~the Trust, but only if such Benefits are authorized under the CBA and/or resolutions adopted by TMWA, and are ~~benefits~~Benefits which may be funded by a trust described in NRS Section 287.017.

ARTICLE V

Contributions

5.1 Determination of Contribution:

(a) This Trust shall be funded ~~by~~with contributions by Participants and/or TMWA, and all such contributions to the Trust, and any earnings on such contributions, shall be irrevocable and shall become and remain the property of the Trust.

(b) Contributions to this Trust shall be made in accordance with, and in amounts prescribed by, the Benefit Plans and this Trust.

(c) TMWA ~~may~~shall annually commission actuarial studies that estimate ~~the~~its obligations and liabilities ~~of~~to provide Benefits under the Benefit Plans in accordance with applicable law and with generally accepted accounting principles. TMWA shall annually notify the Trustees of the level of funding it expects to contribute to the Trust Fund.

5.2 **Funding Policy:** The policy of TMWA is that this Trust shall be funded by ~~Participant~~Participants’ and/or ~~TMWA~~TMWA’s contributions. Such funding shall be determined pursuant to NAC 287.786(1) in a manner consistent with the Code and any other applicable laws and regulations, in accordance with generally accepted accounting principles, and on a sound actuarial basis.

5.3 **To Whom Contributions are to be Paid:** Contributions shall be paid to the Trustees and shall become a part of the Trust Fund. All contributions to the Trust Fund and any earnings thereon shall be used only to:

(a) Provide ~~for~~Benefits to Participants in accordance with the terms of the CBA, resolutions adopted by TMWA, this Trust, and the Benefit Plans; and

(b) Pay the reasonable administrative expenses incident to the provision of those Benefits and expenses incurred in the administration of the Trust.

5.4 Corpus of Trust: The Trust shall consist of contributions made to the Trust, together with investments and reinvestments of the proceeds thereof, and all earnings and profits thereon, if any, less any losses, and less any expenses charged and distributions made pursuant to the terms of the Trust.

5.5 Investment of Trust:

(a) In accordance with the purpose of the Trust Fund stated in NRS 287.017(2)(a), the Trust Fund shall invest monies for the purpose of funding all or a portion of the unfunded actuarial accrued liabilities associated with providing future ~~retirement welfare benefits~~ Benefits for Participants covered by the Benefit Plans. The Trust Fund may also be used to pay Benefits to current ~~retirement welfare benefits~~ Participants under the Benefit Plans.

(b) The investment of the assets of the Trust Fund shall be limited to the Retirement Benefits Investment Fund established pursuant to NRS 355.220 and authorized pursuant to NRS 287.017(2)(g)(1); provided however, that the Trustees may direct that the assets of the Trust Fund be invested on a short-term basis in any investment described in NRS 355.170 and authorized pursuant to NRS 287.017(2)(g)(2).

(c) All interest, earnings, dividends and distributions with respect to the investment of the Trust Fund, less any expenses charged with respect to such investments, must be deposited in the Trust Fund.

(d) The Trust Fund shall be maintained as a separate account and no other funds shall be co-mingled with the funds in the Trust Fund, except to the extent otherwise permitted by NRS 287.017(2)(h) and NAC 287.790(4~~5~~).

(e) Trust Fund monies and assets shall not be used to finance the debt of TMWA and shall not be available for loans to other funds of TMWA.

ARTICLE VI

Payments From Trust

6.1 Payments Directed by TMWA: The Trustees must transfer funds from the Trust Fund to the account designated by TMWA upon the request of TMWA's governing body in accordance with the requirements of the Retiree Benefits Investment Board pursuant to NRS 355.220. The request must include:

(a) An explanation of how the proposed transfer will be used to fulfill the requirements of the Benefit Plans;

(b) A copy of TMWA's approved budget reflecting the authorization of retirement ~~benefits~~ Benefits;

(c) Minutes of the meeting of TMWA's governing body during which the transfer was proposed; and

(d) The signature of the chairperson of the TMWA's governing body.

If the request and supporting documentation do not meet the criteria of this Section 6.1, the Trustees may delay transfer until TMWA's governing body corrects the request. Payments from the Trust may be made only to the extent that the ~~Benefit Plan benefits~~ Benefits for which such payment is made are benefits permitted under the NRS.

6.2 Trust for Exclusive Benefit of Participants; Reversion Prohibited: This Trust has been established for the exclusive benefit of those Retirees ~~and their Dependents~~ who are entitled to receive Benefits from this Trust pursuant to Article III. Under no circumstances shall any funds contributed to or held by the Trustees at any time revert to the benefit of TMWA, except upon termination of the Trust as provided in Article IX.

6.3 Transfer of Trust Assets Permitted: Notwithstanding Section 6.2 above, TMWA's governing body may amend the Benefit Plans to reserve the classification of Participants eligible for Benefits under the Trust, and terminate such Participants' participation in the Trust or transfer their coverage to another trust complying with the provisions of NRS 287.017, but only to the extent permitted under the CBA, or resolutions adopted by TMWA, and Code Section 115. In the event a classification of Participants is transferred to another such trust, the Trustees may determine the allocable portion of ~~reserves~~ assets held by the Trust attributable to such transferred Participants and authorize such portion of Trust assets to be transferred to the new trust. Any such transferred Trust assets shall be used exclusively for the purpose of providing ~~health and welfare benefits~~ Benefits to the Participants so transferred and similarly situated ~~participants~~ Participants. Upon the transfer of such Participants, any and all ~~right~~ rights of such Participants ~~and their beneficiaries~~ under this Trust shall terminate, except as provided in the Benefit ~~Plan~~ Plans, to the extent not inconsistent with the terms of this Trust, and except as otherwise required by law.

ARTICLE VII.

Trustees - Appointment, Resignation, and Removal

7.1 Appointment Of Trustees: The Trust shall be administered by at least three ~~or, but not more than five~~. Trustees who shall be selected by the General Manager of TMWA and confirmed and approved by ~~the~~ TMWA's governing board, and such Trustees are to act in a fiduciary capacity for the beneficiaries of the Trust pursuant to NRS 287.017(2)(e) and NAC 287.788 ~~778~~ (1)(a). No member of TMWA's governing body may be appointed as a Trustee. By signing this Trust, each Trustee hereby accepts ~~the~~ his or her trusteeship and agrees to receive and

hold the Trust solely for the uses and purposes set forth herein and solely in accordance with the terms hereof.

(a) Pursuant to Section 5.5(b), assets of the Trust Fund shall be invested in the Retirement Benefits Investment Fund established pursuant to NRS 355.220; provided, however, that the Trustees may direct that the assets of the Trust Fund be invested in investments established pursuant to NRS 355.170. As a result, TMWA's governing body shall appoint at least three but no more than five Trustees who must include:

- (i) At least one member who has a combination of education and experience of at least 5 (five) years in finance or economics;
- (ii) A public officer or employee of TMWA who manages its fiscal affairs; and
- (iii) A beneficiary of the Trust.

(b) A person appointed as a Trustee shall not have a substantial financial interest in the ownership or negotiation of securities or other financial instruments in which monies in the Trust Fund are invested.

(c) Each Trustee shall be appointed for a term of at least two years but not to exceed four years. However, TMWA's governing body may renew the term of any Trustee.

7.2 Resignation, Removal and Substitution of Trustees:

(a) Resignation and Removal: Any Trustee may resign at any time upon ~~30~~thirty days' written notice to TMWA's governing body. Any Trustee may be removed with or without cause at any time by TMWA's governing body upon ~~30~~thirty days' written notice to such Trustee. TMWA's governing body may remove a Trustee if the Trustee fails to attend two consecutive meetings or three meetings during a calendar year. Upon resignation or removal of any Trustee, TMWA's governing body shall appoint a successor Trustee who shall have the same powers and duties as are conferred upon the Trustees appointed under this Trust. TMWA's governing body may reappoint a Trustee and may alter the composition of the Trustees if required pursuant to Section 7.1.

(b) Successors' Liability: No successor Trustee shall be liable or responsible for any acts or defaults of his or her predecessor or any predecessor co-Trustees, or for any losses or expenses resulting from or occasioned by anything done or neglected to be done in the administration of the Trust prior to his or her appointment as Trustee, nor shall a successor Trustee be required to inquire into or take any notice of the prior administration of the Trust.

7.3 Organization and Operation of Offices of Trustees:

(a) The Trustees may adopt such procedures and regulations as they deem desirable for the conduct of their affairs.

(b) The Trustees shall select a Chairman and Vice Chairman from among their membership.

(c) The Chairman shall preside at all meetings of the Trustees. In case of the absence of the Chairman from any meeting of the Trustees or in case of the inability of the Chairman to act, the Vice Chairman shall perform the duties and acts authorized or required by the Chairman to be performed, as long as the inability of the Chairman to act may continue.

(d) TMWA's governing body shall provide the staff necessary to organize and notice meetings of the Trustees, take the minutes of the meetings, receive and disseminate financial reports of financial managers to the Trustees, and prepare financial reports and budgets for the Trustees.

(e) The Trustees shall meet quarterly or at the call of the Chairman whenever business is presented.

(f) A majority of the Trustees shall constitute a quorum of the Trustees for all purposes.

(g) All action by the Trustees at a meeting (and such meeting may be in person or a telephonic meeting) at which a quorum is present shall be by a majority of those present.

(h) Any action to be taken without a meeting (either in person or telephonically) of the Trustees must be approved in writing by all of the Trustees.

(i) Any action of the Trustees must be in writing.

(j) No item of business shall be considered at a meeting of the Trustees unless it shall first have been entered upon the agenda for that meeting, provided, however, that items not appearing on the agenda may be taken up with the approval of a majority of the Trustees present when it has been determined that the matter is an emergency as permitted under NRS Chapter 241.

(k) No member of the Trustees can bind the Trustees by word or action unless the Trustees have designated such member as the Trustees' agent for some specific purpose and for that purpose only.

(l) In the event of a deadlock in any vote of the Trustees with respect to the operation or administration of the Trust, then the matter at issue shall remain in status quo until the next meeting of the Trustees. If the Trustees do not resolve such deadlock among themselves prior to the next meeting of Trustees, the question or matter shall again be presented at such next meeting. If at such next meeting the Trustees shall still be deadlocked and remain so until such meeting ~~be is~~ adjourned, then, upon written notice of any Trustee to the other Trustees, the Trustees shall, within ~~30~~thirty days after receipt of such notice by the Trustees, appoint an independent fiduciary solely for the purpose of deciding upon the deadlocked matter. Such independent fiduciary shall render its decision on the matter, which decision shall be implemented as if decided at a meeting of the Trustees.

(m) Any member of the Trustees may request a roll call vote of the Trustees, which shall be recorded in the minutes of the meeting.

ARTICLE VIII.

Trustees – Duties and Powers

8.1 **Duties and Powers of Trustees--In General:** Subject to the requirements imposed by law, the Trustees shall be fiduciaries who shall have all powers necessary or advisable to carry out the provisions of this Trust and all inherent, implied, and statutory powers now or subsequently provided by law and shall be subject to the duties imposed on fiduciaries under applicable law. The Trustees shall be responsible for the management and control of the Trust Fund. The Trustees shall formulate and execute appropriate investment policies to govern the Investment Plan of the Trust Fund consistent with the requirements of NRS 287.017 and ~~Sections~~Section 5.5**~~(b) or (e)~~** of this Trust. The Trustees shall decide all questions arising in the administration, interpretation, and application of the Trust, except as may be reserved under this Trust to TMWA. In addition:

(a) As required by NRS 287.017(2)(e)(1), the Trust shall be administered in accordance with generally accepted accounting principles and actuarial studies applicable to the future provision of ~~benefits~~Benefits to Participants;

(b) To the extent required by NRS 287.017(2)(f)(3) or any similar applicable regulation, the Trustees shall cause the Trust to be audited each Trust Year by an independent certified public accountant, and the results of such audit shall be reported to TMWA's governing body;

(c) As permitted by NRS 287.017, the Trust Fund assets may be pooled for the purposes of investment with the ~~asset~~assets of any other employer and of any other trust fund established pursuant to NRS 287.017; provided, however, that each employer's interest in ~~the Trust~~such pooled assets (1) is to be accounted for separately from the interest of any other employer, (2) is to be used to provide benefits only to the participants covered by the plan or plans of such employer; and (3) is not to be subject to the liabilities of any other employer.

(d) In accordance with NRS 287.017 and NAC 287.786(2), the Trustees shall annually submit a tentative budget to TMWA's governing body for its consideration, approval and inclusion in the tentative and final budgets of the TMWA's governing body. The tentative budget submitted by the Trustees must incorporate the amount of contributions to the Trust determined pursuant to NAC 287.786(1). TMWA's governing body may modify the Trustees' tentative budget at its discretion.

8.2 **Duties and Powers of Trustees--Investment:** To the extent permitted under NRS 287.017, the Trustees shall have the power to invest and/or reinvest any and all money or property of any description at any time held by them and constituting a part of the Trust, without previous application to, or subsequent ratification of, any court, tribunal, or commission, or any federal or state governmental agency, in such investments as are permitted under the express terms of this Trust.

None of the earnings of the Fund shall inure to the benefit of any Trustee or any private person, except that a Trustee or other individual may be a beneficiary of the Trust through participation in ~~the~~ Benefit Plan. A Trustee shall not be interested, directly or indirectly, as principal, partner, agent or otherwise, in any contract or expenditure created by the Trustees, or in the profits or results thereof.

In addition, to the extent permitted under NRS 287.017 and as provided in NAC 287.790(1)(a), the Trustees shall have the following specific powers:

(a) To invest Trust assets in ~~a~~the “Retirement Benefits Investment Fund” established pursuant to NRS 355.220 and authorized pursuant to NRS 287.017(2)(g)(1) and Section 5.5(b); provided, however, that the Trustees may direct that the Trust assets be invested in investments established pursuant to NRS 355.170 and authorized pursuant to NRS 287.017(2)(g)(2) and Section 5.5(b).

(b) To collect and receive any and all money and other property of whatsoever kind or nature due or owing or belonging to the Trust Fund.

(c) To cause any securities or other property to be registered in, or transferred to, the individual names of the Trustees or in the name of one or more of their nominees, or to retain them in unregistered form, but the books and records of the Trust shall at all times show that all such investments are a part of the Trust Fund.

(d) To settle, compromise or submit to arbitration any claims, debts or damages due or owing to or from the Trust; to commence or defend suits or legal proceedings whenever, in its judgment, any interest of the Trust requires it; and to represent the Trust in all suits or legal proceedings in any court of law or equity or before any other body or tribunal, insofar as such suits or proceedings relate to any property forming part of the Trust Fund or to the administration of the Trust Fund.

(e) Generally, to do all acts, whether or not expressly authorized, which the Trustees deem necessary, but acting at all times according to the provisions of Nevada law to the extent permitted under NRS 287.017(2)(e), which provides the Trustees with all powers and duties that may be exercised by a nonprofit corporation under Nevada laws, but prohibits the Trust from borrowing money.

(f) To file any tax returns required of the Trust.

Notwithstanding the above, the Trustees may not deposit the assets of the Trust Fund in the Retirement Benefits Investment Fund established pursuant to NRS 355.220, unless the Trustees obtain an opinion from TMWA’s legal counsel that the investment of those Trust assets will not violate the provisions of Section 10 of Article 8 of the Constitution of the State of Nevada. Fiduciary responsibility for assets of the Trust Fund invested in the Retirement Benefits Investment Fund remains with the Trustees and not with the Retirement Benefits Investment Board. In

addition, the Trustees have no authority to negotiate or otherwise determine the ~~benefits~~Benefits afforded the ~~beneficiaries~~Participants of the Trust Fund pursuant to the Benefit Plans.

8.3 Valuation of Trust Fund: As of the last day of each Trust Year, the Trustees shall determine the fair market value of all assets of the Trust Fund.

8.4 Advice and Assistance to Trustees: The Trustees may employ such staff and may contract for the provision of such management, investment and other services, including without limitation, the services of accountants, actuaries and investment managers, as the Trustees determine necessary for the administration of the Trust. In addition, the Trustees may retain and consult with legal counsel, who may be counsel for TMWA or the Trustees' own counsel with respect to the meaning or construction of the Trust or the Trustees' obligations or duties. The Trustees shall be protected from any responsibility with respect to any action taken or omitted by them in good faith pursuant to the advice of such counsel, to the extent permitted by law.

8.5 Records and Accounts of the Trustees: The Trustees shall keep a record of all the Trustees' proceedings and shall keep all such books of account records, and other data as may be necessary in the administration and conduct of this Trust, including records to reflect the affairs of this Trust, to determine the amount of the respective Participants' interests in the Trust Fund, and to determine the amount of all ~~benefits~~Benefits payable under this Trust. Subject to the requirements of law, any person dealing with the Trustees may rely on, and shall incur no liability in relying on, a certificate or memorandum in writing signed by the Trustees as evidence of any action taken or resolution adopted by the Trustees. The Trustees' records and accounts shall be open to inspection by TMWA's governing body at all reasonable times during business hours. The books and records of the Trust shall be kept in accordance with generally accepted accounting principles and the end of the fiscal year of the Trust shall be the Trust Year. After the close of each year of the Trust, the Trustees shall render a statement of assets and liabilities of the Trust Fund for such year.

8.6 Fees and Expenses: The Trustees may be paid such reasonable compensation as provided pursuant to ~~Section NAC 287.784 of the NAC~~. In addition, the Trustees shall be reimbursed for any necessary and reasonable expenses, including reasonable counsel and accounting fees, as well as the expense of the audit required pursuant to NRS 287.017 and Section 8.1(b) of this Trust, incurred by the Trustees in the administration of the Trust Fund. Such compensation and expenses may be paid from the Trust Fund. All taxes of any kind that may be levied or assessed under existing or future laws upon, or in respect of, the Trust Fund or the income thereof shall be paid by the Trustees from the Trust Fund.

ARTICLE IX.

Continuance, Termination, and Amendment of Trust

9.1 Termination of Trust: This Trust shall continue in full force and effect for such time as may be necessary to accomplish the purposes for which it is created. The expectation of TMWA is to continue this Trust indefinitely, but the continuance of the Trust is not assumed as a

contractual obligation by TMWA. TMWA's governing body reserves the right to terminate this Trust in whole or in part at any time, including the termination of its participation in this Trust.

9.2 Disposition of Trust Upon Termination: Upon the termination of the Trust, to the extent that the Trust assets are not transferred to a successor trust pursuant to Section 6.3, the Trustees shall hold the Trust Fund until it is completely exhausted by paying those ~~benefits~~ Benefits provided under the Benefit Plans and paying the reasonable expenses of the Trust, including expenses incurred in the termination and liquidation of the Trust; provided, however, that upon the complete satisfaction of all obligations under the Benefit Plans and the satisfaction of all liabilities of the Trust, any remaining Trust Fund assets may be transferred to TMWA as determined by the Trustees and to the extent permitted by applicable law.

9.3 Amendments to Trust: ~~At any time~~ Subject to the provisions of NRS 287.017, NAC 287.760 through NAC 287.792, inclusive, and other laws applicable to this Trust, TMWA's governing body may amend this Trust for any purpose by delivering to the Trustees signed copies of such amendment. Such amendment shall be effective as of the date specified by TMWA's governing body, or if no date is specified, then on the first day of the next succeeding Trust Year.

ARTICLE X.

Miscellaneous

10.1 Trust Not Subject to Creditors' Claims: No assignment of any ~~benefit~~ Benefits under the Trust will be recognized or permitted; nor shall any such ~~benefit~~ Benefits or any assets of the Trust Fund be subject to attachment, garnishment or the claims of any creditors of TMWA or any Participant or beneficiary of the Trust.

10.2 Text to Control: The headings of articles and sections are included solely for convenience of reference. If any conflict between any heading and the text of this Trust exists, the text shall control.

10.3 Severability: If any provision of this Trust is illegal, invalid or unenforceable for any reason, such illegality, invalidity or unenforceability shall not affect the remaining provisions. On the contrary, such remaining provisions shall be fully severable, and this Trust shall be construed and enforced as if such illegal, invalid or unenforceable provisions never had been inserted in the agreement.

10.4 Applicable Law: All questions, disputes or other issues relating to the Trust including but not limited to the interpretation, administration, operation and/or application of the Trust or its provisions shall be governed by the laws of the State of Nevada.

10.5 Changes in Governing Law: To the extent any provision in this Trust is included in compliance with the requirements of the NRS or the NAC, if any change to such requirement is made in the NRS or the NAC, this Trust Agreement shall be deemed to be amended to the extent required to reflect the corresponding change in the NRS or the NAC, provided that such deemed amendment does not cause the Trust to violate Code Section 115.

10.6 Execution in Counterparts. This Trust may be executed in two or more counterparts, each of which will be deemed an original, but all of which taken together will constitute one and the same agreement (and all signatures need not appear on any one counterpart), and this Trust will become effective when one or more counterparts has been signed by each party and delivered to the other party.

This Trust has been executed this ____ day of _____, 201__.

TRUCKEE MEADOWS WATER AUTHORITY

By: _____
Title: _____
Date: _____

TRUSTEES

Printed Name: _____
Signature: _____
Date: _____

Printed Name: _____
Signature: _____
Date: _____

Printed Name: _____
Signature: _____
Date: _____

Printed Name: _____
Signature: _____
Date: _____

EXHIBIT A-1

BENEFIT PLANS FUNDED THROUGH TRUST FOR TIER I RETIREES

The Benefit Plans that ~~are to be funded by the Trust~~ are to initially include the following:

~~1. Those group health plans currently offered to active employees of TMWA, which include a self-funded group health plan offered through the City of Reno, Nevada, and an exclusive provider organization group health plan offered through Hospital Health Plan. Tier I~~ Retirees may elect coverage to participate in under either of the plans described in the preceding sentence. Both plans have full coordination of benefits integration with Medicare. the Trust are to include and be limited to the following:

~~2.1. The group prescription drug plan currently~~ Those group health/medical policies or plans (other than dental policies or plans) offered to active employees of TMWA- from time to time.

~~2. The~~ Those group vision plan currently prescription drug policies or plans offered to active employees of TMWA from time to time.

~~3.~~ 3. Those group vision policies or plans offered to active employees of TMWA from time to time.

~~4. The~~ 4. Those group life insurance plans offered to retirees of TMWA who enroll in either of the group health policies or plans offered to Tier I Retirees from time to time who enroll in a group health/medical plan described in paragraph 1. above. The amount of life insurance coverage currently available to Retirees currently a Tier I Retiree varies according to the Tier I Retiree's age as indicated below:

For Tier I Retirees –

Under age 70 – the maximum life insurance benefits available to a Tier I Retiree ~~are~~ is equal to 1 times the ~~retiree's Tier I Retiree's~~ "Basic Annual Earnings," ~~at the time of his or her retirement~~ (as defined in the life insurance plan) ~~rounded to the next highest \$1,000,~~ if not already a multiple of \$1,000, with a maximum benefit of \$175,000.

Ages 70 to 74 – the maximum life insurance benefits available to a Tier I Retiree ~~are~~ is equal to 50% of the ~~retiree's Tier I Retiree's~~ Basic Annual Earnings, ~~at the time of his or her retirement (as defined in the life insurance plan)~~ rounded to the next highest \$1,000, ~~if~~ if not already a multiple of \$1,000.

Ages 75 or older – the maximum life insurance benefits available to a Tier I Retiree ~~are~~ is equal to \$2,000.

Although ~~Retirees~~ a Tier I Retiree may elect coverage for ~~themselves~~ himself or herself, the spouse and ~~their/or other~~ qualified dependents of a Tier I Retiree under TMWA's group dental ~~plans, policies and plan(s)~~, and may also elect coverage for his or her spouse and/or other qualified dependents under ~~the~~ TMWA's group health/medical policies or plans, group prescription policies or plans, group vision policies or plans, ~~group vision plans,~~ and group life insurance policies or plans described above, the ~~Retirees are currently~~ Tier I Retiree is to be responsible for 100% of ~~these~~ the premiums attributable to such coverages. Accordingly, the Trust does not ~~currently~~ fund any portion of the premiums attributable to ~~these types of coverage~~ the coverages described in this paragraph.

EXHIBIT ~~B~~A-2

BENEFIT PLANS FUNDED THROUGH TRUST FOR TIER II RETIREES

The Benefit Plans that Tier II Retirees may elect to participate in under the Trust are to include and be limited to the following:

1. The health/medical, prescription, and/or vision Benefit Plans offered to Tier II Retirees will vary depending upon whether a Tier II Retiree has attained Medicare Eligibility Age (currently age 65) as discussed below:

a. Health/medical, prescription, and/or vision Benefit Plans Available to Tier II Retirees who have not Attained Medicare Eligibility Age (currently age 65). The following health/medical, prescription, and/or vision Benefit Plans are available to Tier II Retirees who have not attained Medicare Eligibility Age (currently age 65): (i) those group health/medical policies or plans (other than dental policies or plans), group prescription drug policies or plans, and/or group vision policies or plans offered to active employees of TMWA from time to time, (ii) those individual policies or plans that are procured by a Tier II Retiree that provide medical, dental, prescription, and/or vision coverage to a Tier II Retiree, and (iii) those group policies or plans offered by an employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree (other than TMWA) that provide medical, dental, prescription, and/or vision coverage to a Tier II Retiree. Tier II Retirees who have not attained Medicare Eligibility Age (currently age 65) may elect coverage under any of the plans described in this paragraph 1.a. Notwithstanding anything contained in this subparagraph 1.a. to the contrary, the term "Benefit Plans" shall not include a policy or plan offered by the employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree to the extent that the premiums are paid by such employer on a "pre-tax" basis, including, without limitation, a policy or plan offered by an employer under a Code Section 125 plan (commonly referred to as a "Cafeteria Plan").

At the time a Tier II Retiree attains Medicare Eligibility Age (currently age 65), and assuming that the Tier II Retiree continues to be eligible to receive Benefits under this Trust, the Tier II Retiree will then be eligible to participate in the Benefit Plans described in subparagraph 1.b. below. If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

b. Health/medical, prescription, and/or vision Benefit Plans Available to Tier II Retirees who have Attained Medicare Eligibility Age (currently age 65). The following health/medical, prescription, and/or vision Benefit Plans are available to Tier II Retirees who have attained Medicare Eligibility Age (currently age 65): (i) those group health/medical policies or plans (other than dental plans), group prescription policies or plans, and/or group vision policies or plans offered to active employees of TMWA from time to time, (ii) those individual policies or plans that are procured by a Tier II Retiree that provide health/medical, dental, prescription, and/or vision coverage to a Tier II Retiree, (iii) those Medicare Plans Part B and Part D, Medicare Supplemental Plans, Medicare Advantage Plans, and/or Medicare Gap Plans that provide health/medical, dental, prescription and/or vision coverage for a Tier II Retiree, together with any current and future plans available to individuals eligible for Medicare coverage that are approved

and authorized by the United States Department of Health and Human Services or its successor, and (iv) those group policies or plans offered by an employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree (other than TMWA) that provide health/medical, dental, prescription, and/or vision coverage to a Tier II Retiree. Tier II Retirees who have attained Medicare Eligibility Age (currently age 65) may elect coverage under any of the plans described in this subparagraph 1.b. Notwithstanding anything contained in this subparagraph 1.b. to the contrary, the term "Benefit Plans" shall not include a policy or plan offered by the employer of a Tier II Retiree or an employer of a spouse of a Tier II Retiree to the extent that the premiums are paid by such employer on a "pre-tax" basis, including, without limitation, a policy or plan offered by an employer under a Code Section 125 plan (commonly referred to as a "Cafeteria Plan"). If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

2. The group life insurance policies or plans offered to Tier II Retirees from time to time who enroll in a group health/medical plan offered by TMWA described in clause (i) of subparagraph 1.a or 1.b. above, as the case may be. The amount of life insurance coverage available to a Tier II Retiree varies according to the Tier II Retiree's age as indicated below:

For Tier II Retirees –

Under age 70 – the maximum life insurance benefits available to a Tier II Retiree is equal to 1 times the Tier II Retiree's "Basic Annual Earnings" at the time of his or her retirement (as defined in the life insurance plan rounded to the next highest \$1,000), if not already a multiple of \$1,000, with a maximum benefit of \$175,000.

Ages 70 to 74 – the maximum life insurance benefits available to a Tier II Retiree is equal to 50% of the retiree's Basic Annual Earnings at the time of his or her retirement (as defined in the life insurance plan rounded to the next highest \$1,000), if not already a multiple of \$1,000.

Ages 75 or older – the maximum life insurance benefits available to a Tier II Retiree is equal to \$2,000.

Although a Tier II Retiree may elect coverage for his or her spouse and/or other qualified dependents under the Benefit Plans described in this Exhibit A-2, the Tier II Retiree is responsible for 100% of the premiums attributable to coverages elected for a spouse and/or a qualified dependent of a Tier II Retiree. Accordingly, the Trust does not fund any portion of the premiums attributable to coverage for any spouse and/or qualified dependent of a Tier II Retiree.

EXHIBIT B

ELIGIBILITY REQUIREMENTS FOR RETIREE TO RECEIVE ~~TRUST~~ BENEFITS

To be eligible to become a Participant and receive ~~benefits~~Benefits from the Trust, a Retiree must meet all the following requirements:

1.- The Retiree must be a ~~Transferred Employee~~Tier I Retiree or Tier II Retiree (as defined in Section 2.13 of Article II of the Trust~~;~~).

2.- The Retiree must receive monthly retirement payments under the Public Employees Retirement System ("PERS") of Nevada, and

3.- The Retiree must complete such forms to enroll for Benefits from the Trust as the Trustees may require from time to time.

In addition, a Retiree who ~~separated~~separates from service from TMWA prior to his or her retirement may receive ~~benefits~~Benefits from the Trust if TMWA was the Retiree's last public employer, the Retiree satisfies the requirements described in paragraphs 1. through 3. above, and the Retiree meets any requirements of NRS Section 287.045, but only to the extent that NRS Section 287.045 is applicable to Benefits provided by the Trust.

EXHIBIT C

EVENTS CAUSING TERMINATION OF ~~TRUST~~ BENEFITS

A Participant's ~~benefits~~Benefits received from the Trust shall cease upon the occurrence of the ~~earlier~~earliest of the following events:

1. The death of the Participant,

2. The date the Participant's coverage under the Benefit Plans is cancelled for any reason whatsoever, including, without limitation, the failure of the Participant to pay his or her share of the premiums for coverage under the Benefit Plans, or the execution of an instrument permanently waiving coverage under the Benefit Plans and/or the Benefits from the Trust, or

3. The date this Trust is terminated.

In addition to the events causing termination of ~~benefits~~Benefits described above, for "Tier II Retirees" only (as defined in Section 2.13 of this Trust), ~~benefits~~Benefits under this Trust will be terminated if the Tier II Retiree becomes employed by another public employer in the State of Nevada.

EXHIBIT D-1

~~TRUST~~ BENEFITS TO BE PAID TO PARTICIPANTS
CLASSIFIED AS TIER I RETIREES

The Benefits ~~payable to Participants under this Trust will vary depending upon whether the Participant is classified as a "Tier I Retiree" or a "Tier II Retiree," as those terms are defined in Section 2.13 of this Trust.~~

A. ~~Benefits for Tier I Retirees. The maximum Benefits~~ to be paid by the Trust to or on behalf of Participants classified as Tier I Retirees shall be as follows:

1. For a Tier I ~~Retirees~~ Retiree with at least ten (10) years of combined full-time employment with Washoe County and/or TMWA, but less than fifteen (15) years of combined full-time employment with Washoe County and/or TMWA, the maximum Benefits payable by the Trust will be 50% of the ~~premium~~ premiums attributable ~~for to the~~ coverage ~~of~~ selected by such ~~Retirees~~ Tier I Retiree under the Benefit Plans described in Exhibit A-1.

2. For a Tier I ~~Retirees~~ Retiree with at least fifteen (15) years of combined full-time employment with Washoe County and/or TMWA, but less than twenty (20) years of combined full-time employment with Washoe County and/or TMWA, the maximum Benefits payable by the Trust will be 75% of the ~~premium~~ premiums attributable ~~for to the~~ coverage ~~of~~ selected by such ~~Retirees~~ Tier I Retiree under the ~~-~~Benefit Plans described in Exhibit A-1.

3. For a Tier I Retirees with twenty (20) or more years of combined full-time employment with Washoe County and/or TMWA, the maximum Benefits payable by the Trust will be 100% of the ~~premium~~ premiums attributable ~~for to the~~ coverage ~~of~~ selected by such ~~Retirees~~ Tier I Retiree under the Benefit Plans described in Exhibit A-1.

The ~~payments specified in subparagraphs A.1., A.2., and A.3. above~~ foregoing Benefits will be ~~made~~ provided to a Tier I Retiree in accordance with and are subject to all applicable laws in effect at the time of the retirement of the Tier I Retiree.

NOTE:---For those Tier I Retirees who were hired by Washoe County on or after January 13, 1981, ~~the provisions listed in paragraph A. above, are applicable except that in in~~ order to receive ~~such the~~ Benefits described in this Exhibit A-1, the Tier I Retiree must have been an employee of TMWA immediately prior to receiving Benefits from the Trust.

NOTE---In order for Tier I Retirees to be eligible to receive the Benefits listed in ~~paragraph~~this Exhibit A-~~above~~ 1, Tier I Retirees who have attained ~~the~~ Medicare Eligibility Age (currently age 65) during a Trust's Plan Year must enroll in and pay the cost of Medicare Part "A" and Medicare Part "B," or Medicare Part "C" coverage, and ~~they must enroll in and pay the cost of Medicare Part "A" and Medicare Part "B" coverage or, Medicare Part "C" coverage, and~~ the TMWA plans will become the secondary payer regardless of whether the ~~retiree~~Tier I Retiree enrolls in the Medicare program or not. If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

EXHIBIT D-2

BENEFITS TO BE PAID TO PARTICIPANTS CLASSIFIED AS TIER II RETIREES

The Benefits to be paid by the Trust to or on behalf of Participants classified as Tier II Retirees shall be as follows:

~~B.~~ 1. Benefits for Tier II Retirees- who have not Attained Medicare Eligibility Age. The maximum Benefits to be paid by the Trust to a Tier II Retiree who ~~have~~has not attained Medicare Eligibility Age (currently age 65) is to be the same amount ~~of~~as the premium paid for group health coverage by an employer for coverage of non-state employees under the Nevada State Public Employee Benefit Plan ("PEBP") Retiree Health Insurance ~~plan~~Plan. If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65.

By way of background, the 2003 Nevada Legislature passed legislation (AB286) that afforded public employees of Nevada political subdivisions the opportunity to enroll, upon their retirement, in the ~~(PEBP)~~ Retiree Health Insurance Plan.~~-~~ The 2003 legislation also obligated public employers of said retirees who enrolled in the plan to pay a portion of the medical premium on the retiree's behalf (the "Subsidy"). ~~-~~Tier II Retirees are entitled to receive this same Subsidy from the Trust towards their coverage under the Benefit Plans described in Exhibit A-2 rather than the PEBP Retiree Health Insurance Plan.

2. Benefits for Tier II Retirees who have Attained Medicare Eligibility Age. Tier II Retirees who have attained the Medicare Eligibility Age (currently age 65) or older will instead receive Benefits equal to the equivalent of the State of Nevada's Medicare Exchange Retiree HRA ~~contribution subsidy~~Contribution Subsidy based upon the combined number of years of service with Washoe County and/or TMWA and must elect Medicare. ~~At that time, Medicare then becomes the primary carrier, and the Benefit Plans funded by this Trust are to become secondary.~~

If the Medicare Eligibility Age is revised, the revised age is to be substituted for the current Medicare Eligibility Age of 65. In order to receive the Benefits described in this paragraph, ~~2.~~ the Tier II Retiree must be an employee of TMWA immediately prior to ~~drawing~~receiving his or her ~~retirement~~ ~~benefits.~~
Benefits under the Trust.

NOTE: The PEBP non-State retiree ~~subsidy~~Subsidy described in paragraph 1. above and the Medicare Exchange Retiree HRA Contribution ~~subsidy amounts~~Subsidy described in paragraph 2. above are revised annually by the State of Nevada. In the event that either or both of these ~~benefits~~Subsidies are discontinued by the State of Nevada, then a Tier II ~~Retirees~~Retiree shall continue to receive ~~the same premium amount~~a Benefit under this Trust equal to the Subsidy that ~~they were~~he or she was entitled to receive during the last year that ~~these benefits~~such Subsidy remained in effect.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Jessica Atkinson, Human Resources Manager
DATE: December 27, 2018
SUBJECT: **Discussion and action confirming General Manager's appointment of four trustees to the §501.C-9 Post-Retirement Medical Plan & Trust for a two-year term from January 1, 2019 through December 31, 2020 from the following list of individuals: Michele Sullivan, Juan Esparza, James Weingart and Steve Enos**

Recommendation

Staff recommends that the Board of Directors confirm the reappointments of Michele Sullivan and Juan Esparza to represent TMWA Management, Professional, Administrative and Technical (MPAT) employees and James Weingart and Steve Enos to represent IBEW Local Union #1245 bargaining unit employees as trustees to the TMWA Post-Retirement Medical Plan Trust (§501-c-9 Trust).

Summary

- Current trustee appointments expired on December 31, 2018
- Seeking Board confirmation of trustee appointments for new two-year term

Discussion

The §501-c-9 Trust document approved by the Board of Directors requires the Employer to appoint four individuals to serve as Trustees (two from the MPAT classification and two from IBEW). The two Trustees who are appointed from TMWA management are to be appointed by the Employer at the direction of the General Manager and the two Trustees who are appointed from IBEW are to be appointed by the Employer at the direction of IBEW Local 1245.

As the current Trustee's terms expired on December 31, 2018, appointments have been made consistent with the Trust provisions pending final confirmation by the Board.



STAFF REPORT

TO: TMWA Board of Directors
THRU: Mark Foree, General Manager
FROM: Jessica Atkinson, Human Resources Manager
DATE: December 27, 2018
SUBJECT: **Discussion and action confirming General Manager's appointment of four trustees to the §115 Other Post-Employment Benefits Plan & Trust for a two-year term from January 1, 2019 through December 31, 2020 from the following list of individuals: Michele Sullivan, Sandra Tozi, Charles Atkinson and Randy VanHoozer**

Recommendation

Staff recommends that the Board of Directors confirm the reappointments of Chief Financial Officer, Michele Sullivan; Senior Accountant, Sandra Tozi; Trust Beneficiary (Tier II), Charles Atkinson; and confirm the appointment of Trust Beneficiary (Tier I), Randy VanHoozer as trustees to the TMWA Post-Retirement Medical Plan Trust (§115 Trust).

Summary

- Current trustee appointments expired on December 31, 2018
- Seeking Board confirmation of trustee appointments for new two-year term

Discussion

The §115 Trust document approved by the Board of Directors requires the General Manager to select and appoint at least (3) three but no more than (5) five Trustees who must include:

1. At least one member who has a combination of education and experience of at least 5 (five) years in finance or economics;
2. A public officer or employee of TMWA who manages its fiscal affairs; and
3. A beneficiary of the Trust.

As the current Trustee's terms expired on December 31, 2018, appointments have been made consistent with the Trust provisions pending final confirmation by the Board.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Water Resources Manager
John Enloe, Natural Resources Director
DATE: January 7, 2019
SUBJECT: **Rate Amendment, Second Hearing and Adoption: Discussion and action on Resolution No. 272: A resolution to adopt amendments to Rule 7 regarding modification of the purpose and amount of the Meter Retrofit Fee**

SUMMARY

In December, the Board approved changing the Meter Retrofit Fee under TMWA Rule 7 as shown on the attached Exhibit A and proceeded with the required First Reading of the necessary rate amendment to effectuate the change. The Board also directed staff to proceed with the required Second Reading at this month's Board meeting. In summary, the rate amendment would broaden the fee purpose to support projects such as expanded conjunctive use, aquifer storage and recovery, demonstration and validation of exceptional quality reclaimed water uses, future water resource identification and acquisition, and other projects that enhance water resource sustainability and drought resiliency. The proposed amendment would also reduce the cost to applicants for new or modified service from \$1,830 to \$1,600 per acre-foot (AF) of water demand. As discussed in previous Board reports, staff has conducted extensive public outreach regarding the proposed rule change including presenting to the TMWA Standing Advisory Committee and Builders Association of Northern Nevada and holding a public workshop.

RECOMMENDATION

Staff recommends the Board proceed with the Second Reading and adopt the attached Resolution 272.

TRUCKEE MEADOWS WATER AUTHORITY
(TMWA)

RESOLUTION NO. 272

A RESOLUTION TO ADOPT AMENDMENTS TO RULE 7 REGARDING
MODIFICATION OF THE PURPOSE AND AMOUNT OF THE METER RETROFIT FEE

WHEREAS, upon its formation, the Truckee Meadows Water Authority (“the Authority”) adopted Rules of Service on March 28, 2001, and such Rules have been modified and revised subsequent to the formation of TMWA; and

WHEREAS, the Authority’s Board desires to amend the Authority’s Rule 7 to clarify the application of said Rule; and

WHEREAS, after conducting a review of its Rule, the Authority has revised and amended the Rule to meet the needs of its business environments by ensuring support of projects that enhance water resource sustainability and drought resiliency; and

WHEREAS, proper notice has been given and a public hearing conducted on the proposed change; and

WHEREAS, the Rules of Service set forth in Exhibit 1 attached hereto and incorporated herein are appropriate and justified.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Truckee Meadows Water Authority that the revision to Rule 7 as set forth in Exhibit 1 is approved and adopted, effective the date of adoption of this resolution.

Upon motion of _____, seconded by _____, the foregoing Resolution was passed and adopted on January 16, 2019 by the following vote of the Board:

Ayes: _____

Nays: _____

Abstain: _____ Absent: _____

Approved: _____

Vaughn Hartung, Chairman

Truckee Meadows Water Authority
Resolution 272 (continued)

STATE OF NEVADA,)
 : ss.
COUNTY OF WASHOE.)

On this 16th day of January, 2019, Vaughn Hartung, 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

Truckee Meadows Water Authority

RULE 7

REQUIREMENTS FOR WILL-SERVE COMMITMENT LETTERS

2. Fees for Issuance of Will-Serve Commitment letter. In addition to any other fees in this Rule, Applicants shall pay fees provided in Rate Schedule BSF to prepare the documents necessary to issue each Will-Serve Commitment letter.
3. Water ~~Resource Sustainability~~~~Meter-Retrofit~~ Fund Fees. Applicants for New or Modified Service within the TMRA relying on any water right other than the conversion of domestic well, imported water sources or groundwater rights for a Will-Serve Commitment letter will pay to the Authority's water ~~resource sustainabilitymeter-retrofit~~ fund the sum of \$1,600,830.00 per AF of Demand related to the new Service or Modified Service and to Deficit Demand prior to the issuance of the Will-Serve Commitment letter. Funds collected under this fee must be used for projects that improve the Authority's drought resiliency and water resource sustainability.
4. The Applicant is responsible for delivery of the Authority-issued Will-Serve Commitment letter and accompanying documentation to appropriate government entities.
5. Banking Water Rights. The Authority may, in its sole discretion, allow any Person to bank water rights with the Authority for future use by any Person. In the event an individual, any joint venture, partnership, corporation or other entity desires to dedicate water rights to the Authority for the Authority to hold or bank for the future use by the Applicant, or Applicant's designated successor, for a Will-Serve Commitment letter, the Applicant, or Applicant's designated successor, will pay applicable fees set forth in this Section and execute a banking agreement with the Authority. The Applicant, or Applicant's designated successor, shall be billed by the Authority for any fees such as Extension of Time associated with maintaining banked water rights in good standing with the Nevada Division of Water Resources.
6. Issuance of Will-Serve Commitment Letter After Dedication of Water Rights. After the Applicant has satisfied the requirements of Section F and paid the fees under Section H, and the Authority has accepted the Dedicated Water Resource, the Authority shall:
 - a. Prepare the necessary documentation to deed the Dedicated Water Resource to the Authority or Local Government;
 - b. Record such deed at the County Recorder; and
 - c. Upon execution of such deed and acceptance of the Dedicated Water Resource by the Authority, issue a Will-Serve Commitment letter to the Applicant for new Service or Modified Service at the location requested by Applicant.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
DATE: January 8, 2019
SUBJECT: **Presentation on Stonegate development and potential Water System Facility (WSF) charges applicable to StoneGate annexation into TMWA's Service Area**

Summary:

- Stonegate is a Planned Unit Development (PUD) consisting of 3,755 single family residential units, 1,325 multi-family residential units, commercial areas and three schools located on five parcels totaling 1,706 acres in the Cold Springs area.
- The TMWA Board approved the annexation of the project into the TMWA retail water service area at the October 2018 Board Meeting. The annexation agreement was executed on November 27, 2018.
- Per the terms and conditions of the annexation agreement and TMWA's Rules, Stonegate will pay for all on- and off-site improvements needed to provide water service to their development. In addition, Stonegate will pay TMWA's Area 10 Fee for all water demand as metered services are added. Stonegate will not pay TMWA's Supply-Treatment Fee since it will dedicate Fish Springs resources for the project.
- Upon successful completion and acceptance of the new facilities, TMWA will own, operate and maintain the facilities. The cost of operation, maintenance and ultimately replacement of the facilities is paid through customer water rates.

Background:

Exhibit B of the Annexation Agreement is attached to this staff report for your review. Exhibit B lists all the major on- and off-site water system facilities that Stonegate will need to construct or pay for including the Area 10 Fees.

Attachments:

Exhibit B of the Stonegate Annexation Agreement

EXHIBIT B
ANNEXATION AGREEMENT FOR HEINZ RANCH LAND CO., LLC
SUMMARY OF OFF SITE & MAJOR FACILITY REQUIREMENTS AND
APPROXIMATE COSTS PAID OR TO BE PAID BY OWNER/DEVELOPER

Major Offsite Facilities					
Description	Quantity	Unit	Unit Cost	Cost Opinion	Comments
Initial					
BPS with Standby Generator	1	EA	\$1,500,000	\$1,500,000	
16" Main in N Virginia	20,500	LF	\$320	\$6,560,000	From 9550 N Virginia to Stonegate
Equalization/Surge Tank	100,000	Gal	\$3	\$300,000	At high point of pipeline, site TBD
12" Eq/Surge Tank piping	350	LF	\$240	\$84,000	From N Virginia to the Eq/Surge Tank
Eq/Surge Tank Bore & Jack RR ROW	100	LF	\$1,000	\$100,000	RR ROW= 100'
12" Eq/Surge Tank Valve Box	1	EA	\$150,000	\$150,000	Check valve and Reg Valve
8" Bypass Valve at Silver Lake Xfer BPS	1	EA	\$200,000	\$200,000	Flow Control Valve to facilitate recovery of Silver Lake Tank level
Initial Subtotal				\$8,894,000	
Buildout					
Description	Quantity	Unit	Unit Cost	Cost Opinion	Comments
Buildout, 16" main	12,700	LF	\$320	\$4,064,000	From Lemmon Dr to 9950 N Virginia Street
BPS1 Upgrade	1	EA	\$500,000.0	\$500,000	Additional pumps and Surge Tank
Buildout Subtotal				\$4,564,000	

TOTAL OFF-SITE \$13,458,000 Does Not Include Area 10 Fees

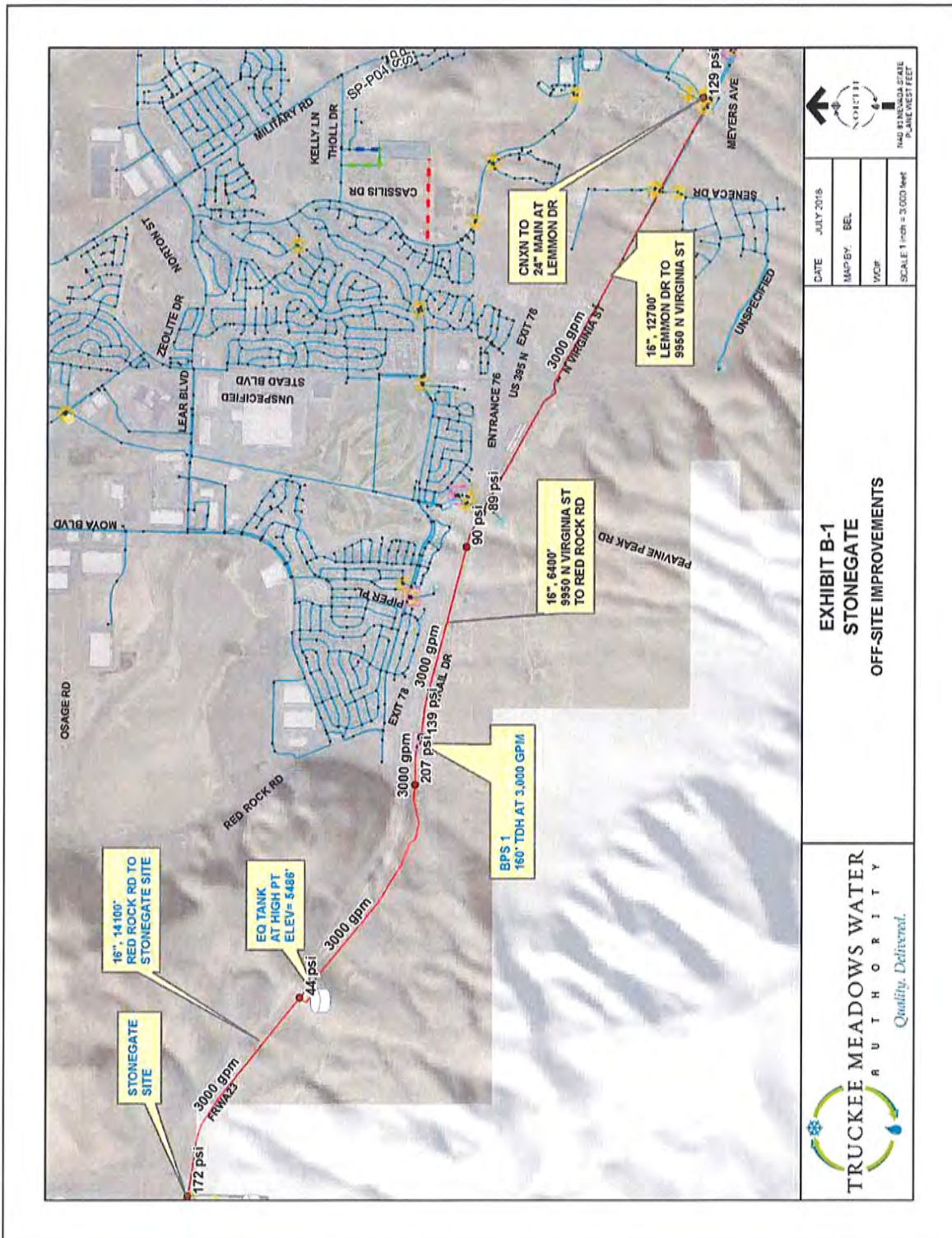
Backbone Onsite Facilities (through Phase 2)					
Description	Quantity	Unit	Unit Cost	Cost Opinion	Comments
16" main	7,800	LF	\$256	\$1,996,800	Onsite backbone mains for Ph 1 and Ph 2
Pressure Reducing Station	1	EA	\$150,000	\$150,000	PRS controlled to fill tank 1
Pressure Reducing Station	1	EA	\$150,000	\$150,000	PRS to maintain the level of the high point Eq tank. SCADA controlled
Well Equipping including a Standby Generator	2	EA	\$1,250,000	\$2,500,000	Onsite wells capable of supplying 1 ADD each. Cost does not include the well drilling and construction.
Lower Tanks	2,100,000	GAL	\$1	\$2,100,000	Total volume of both tanks Phase 1 and 2 Storage Volume.
Area 10 Fee	1533	GPM	\$5,057 per GPM	\$7,752,381	
Subtotal				\$14,649,181	

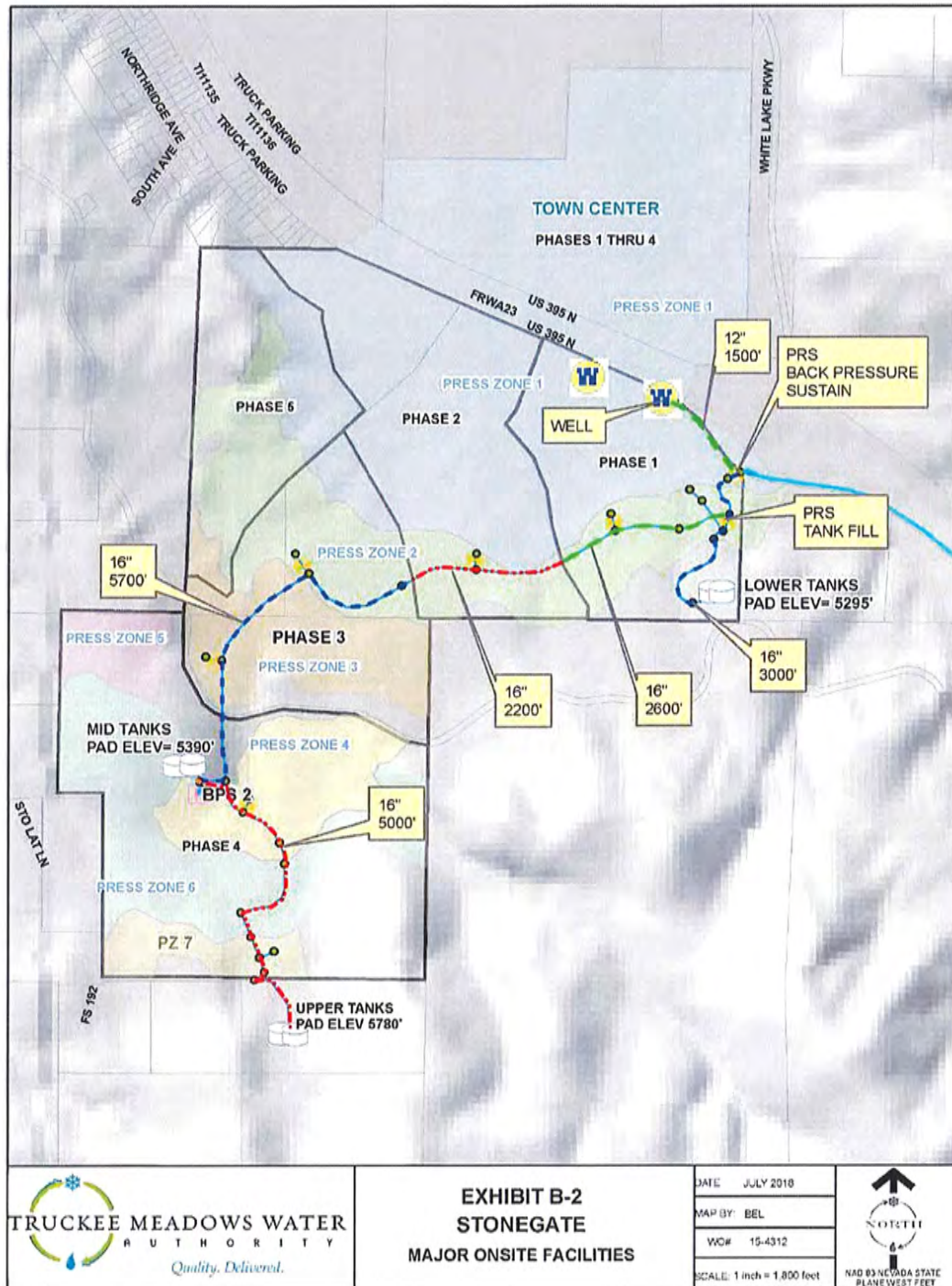
Backbone Onsite Facilities (Phase 3 through Phase 5)					
Description	Quantity	Unit	Unit Cost	Cost Opinion	Comments
16" main	5,700	LF	\$320	\$1,824,000	Onsite, Phase 3 Main
Middle Tank A	350,000	GAL	\$1.5	\$525,000	
Middle Tank B	350,000	GAL	\$1.5	\$525,000	
BPS 2 with Standby Generator	1	EA	\$1,250,000	\$1,250,000	Design Point of 400 gpm at 400' TDH
Upper Tank A	300,000	GAL	\$1.50	\$450,000	
Upper Tank B	300,000	GAL	\$1.50	\$450,000	
Area 10 Fee	1394	GPM	\$5,057 per GPM	\$7,049,458	
			Subtotal	\$12,073,458	
Total On-Site Backbone				\$26,722,639	

Notes to Exhibit B:

1. Owner may elect to phase the construction of the backbone water main extension required to provide water service at buildout if it provides adequate financial assurances acceptable to Authority in the form of a bond or irrevocable letter of credit in the amount of 100 percent of the cost to design and construct the future water main depicted on Exhibit B1. Major water facilities including pipelines, surge/equalization tank, booster pump stations and on-site wells must be complete, accepted by Authority, and in-service before Authority is obligated to provide any water service to any portion of Owner's Property.
2. The Owner will be responsible for design-build-dedication of water storage tanks and appurtenances including, but not limited to tank site geotechnical investigation; tank site parceling, property acquisition and transfer; permitting, design, pad excavation, tank erection and coating, feeder main, drain line, electric and telecom, landscaping, access road, fencing, easements, etc.
3. The Owner will be responsible for developing at least two on-site groundwater wells as described in the Annexation Agreement including, but not limited to hydrogeological investigations, testing and sampling of test wells, construction and testing of production wells, site geotechnical investigation; well site parceling, property acquisition and transfer; and extension of electric and telecom to the sites.
4. A preliminary water facility plan (including the major facilities listed above) was developed based on conceptual development plans and service elevations furnished by the Owner. Changes in the development plan including, but not limited to type of development, location, elevation, densities and required fire flows can significantly alter the water facility plan and the facilities required to provide water service to the property. The facilities listed above do not include on-site "subdivision" water facilities.
5. Pumping facilities (wells and booster pumps) and storage tanks must be constructed and placed into service prior to Authority setting any water meters and/or providing water service to any portions of the development to be served by new pumping stations. This includes extending facilities (phone, electric, pipelines) to remote tank and well sites. Pumping facilities will be designed, bid and constructed by Authority at the sole cost of the Owner.

6. Supply-Treatment Facility Charges and Area 10 Fees (currently \$4,163 per GPM and \$5,057 per GPM, respectively) are determined based on the maximum day demand (MDD) of the development. The actual MDD will be determined at the time final development plans are submitted with a formal application for water service. All facilities listed above are preliminary and are subject to change during the final planning/design process. The water facility plan must be reviewed and approved by the health authority. If Fish Springs (Vidler) resources are dedicated for the project, the Supply-Treatment Facility Charge is zero (0).
7. Facility Charges and Area Fees are subject to change. The actual charges and fees will be based on the charges and fees in effect when the Applicant executes the Authority's Water Service Agreement, which requires, amongst other things, a final subdivision map and a final approved water system design, including all major facilities required to provide the water service such as pump stations, tanks and regulating stations.







STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Enloe, TMWA Director of Natural Resources
DATE: January 8, 2019
SUBJECT: **Presentation of Truckee River Fund Activities for Calendar Year 2018**

Summary

- Since the 2005 Fund inception, 160 Projects Approved by TMWA Board for Funding (By Resolution) -- Total Resolution Amount to Date: \$13.0 million
- Total Match from Grantees: \$21.5 million
- Project Status and Tracking: *See attached TRF Project Spreadsheet – Attachment 1*

Purpose

The purpose of this report is to provide the TMWA Board of Directors a summary of Truckee River Fund program (the Fund) activities from its 2005 inception, including a detailed summary of 2018 activities. This report will also be helpful to new Board members in getting familiar with the purpose and workings of the Truckee River Fund.

TMWA and the Board should be proud of this program and the outstanding contributions the Fund has made for the community, region, and the Truckee River watershed. Over the years, the Truckee River Fund Advisory Committee has developed a prudent and rigorous approach to the evaluation of proposals, to ensure that those recommended for approval by the TMWA Board have tangible and measurable outcomes and meet the objectives of the Fund. Through the able assistance of the Community Foundation of Western Nevada, all project proponents are required to account for funds dispersed and to provide reports on project status, success metrics and completion.

Program Background

As the Board may recall, the Fund was conceived and established in 2005 with the intent of supporting water quality and watershed protection projects that TMWA could not pursue on its own. Since inception, the program has evolved into an important component of TMWA's overall

water quality protection program, funding projects which have directly or indirectly improved water quality or the watershed of the Truckee River.

Financially, the Fund provides significant financial leverage for watershed and source water protection projects that TMWA could not ordinarily implement or afford. To date, the Fund has collaborated with other non-profit groups and governmental agencies to support 160 projects, with a \$13.0 million contribution from the Fund (via TMWA) being matched by \$21.5 million from its partners.

On a macro basis, the Fund has supported important water quality and watershed improvement projects in the following areas:

- **Invasive Species:** The introduction and proliferation of invasive species, both land-based (terrestrial) and aquatic, is a major concern for TMWA. As such, TMWA has supported projects to mitigate terrestrial and aquatic invasive plants and has funded the development and implementation of watercraft inspection programs at Lake Tahoe and nearby reservoirs to prevent the introduction of aquatic invasive species, including the quagga and zebra mussel into the waters of Lake Tahoe and nearby reservoirs, and control efforts to remove Eurasian watermilfoil from the Truckee River.
- **Urbanization of the Local Watershed:** Development in the foothill areas has led to degradation of local tributaries to the Truckee River via irrigation run-off and storm water discharges. Local tributaries upstream of TMWA's primary water treatment plants have been adversely impacted causing increased sediment, total dissolved solids (TDS) and turbidity loading. Because of this concern, the Fund has supported projects and programs that have helped to mitigate these problems.
- **Wildfires and Forest Thinning:** Wildfires have taken their toll on the Truckee River watershed, thereby increasing the likelihood of additional sediment and turbidity loading to the river. In response to the fires and watershed damage, TMWA has provided grants towards recovery and rehabilitation efforts. TMWA, through the Fund, has supported forest thinning efforts designed to reduce potential of forest fires that, as a result of sediment run-off, impact the Truckee River, tributary creeks and water storage reservoirs.
- **Erosion due to Past Logging Operations:** Some areas of the bi-state Truckee River watershed have been impacted by past logging practices that neglected reforestation and erosion control. As a result, some of these areas have experienced erosion of old logging roads and incising of tributary creeks, which have impacted the River with increased sediment, suspended solids, and TDS loading. TMWA, through the Fund, has supported projects designed and constructed to restore the watershed forest to its natural state.
- **Impaired Sections of the Truckee River and its Tributaries:** In conformance with the requirements of the Clean Water Act, both the State of Nevada and State of California have developed water quality standards for the River taking into account an analysis of beneficial uses. As an outgrowth of these standards, both States have identified impaired

sections of the River through establishment of 303d lists. TMWA, again through the Fund, has supported improvement projects targeting impaired sections of the River.

2018 Grants

In 2018 the Fund, with Board approval, provided grants to 13 projects or programs.

1. **Project #195: Watershed Education Initiative (WEI)**, Sierra Nevada Journeys (SNJ). Grant Amount: \$46,376; Match: \$12,707 of cash and \$15,385 of in-kind services. To continue implementing the Watershed Education Initiative (WEI) in Washoe County schools.
2. **Project #196: Mount Rose Noxious Weed Monitoring and Treatment #6**, Friends of Nevada Wilderness. Grant Amount: \$32,998; Match: \$2,610 of cash and \$10,440 of in-kind services. To remove noxious weeds which contribute to soil erosion, degrade plant and animal habitat.
3. **Project #199: Cold Stream Meadow Road Decommissioning and Restoration Project**, Truckee Donner Land Trust (TDLT). Grant Amount: \$65,000; Match: \$17,800 of cash and \$2,200 of in-kind services. The restoration will close five miles of former logging roads to motorized vehicle trespass on TDLT land, and mitigate erosion impacts to Cold Stream Meadow
4. **Project #200: Truckee Meadows Restoration Project- Phase 2 Construction**, Truckee River Watershed Council. Grant Amount: \$30,000; Match: \$47,750 of cash. Construction will slow surface water within the upstream meadow, enhancing habitat and attenuating high flows.
5. **Project: #201: Perazzo Meadows Watershed Restoration & Erosion Control Project**, National Forest Foundation. Grant Amount: \$148,000; Match: \$41,998.98 of in-kind services. Improve water quality (reduce erosion & sediment loading), increase water storage in the upper Truckee River watershed (restore the floodplain & hydrologic function), and improve riparian and aquatic habitat for sensitive species.
6. **Project #203: One Truckee River: Watershed Management and Source Protection Plan & OTR Partnership Support**, One Truckee River (through Nevada Land Trust (NLT)). Grant Amount: \$173,580; Match: \$99,780 of cash and \$144,000 of in-kind services. Funding was used to contract a part-time OTR Coordinator, advance 2018 priorities with OTR working groups, informing stakeholders and reporting of progress toward goals.
7. **Project #204: 2018 Spring Invasive Weed Pull**, Keep Truckee Meadows Beautiful (KTMB). Grant Amount: \$31,640; Match: \$14,500 of cash and \$83,272 of in-kind services. Volunteers removed invasive weeds along the Truckee River and its tributaries; provided key messaging to the public about responsible river recreation and keeping the river clean; and presented to local stakeholder groups.
8. **Project #205: Watershed Education Initiative**, Sierra Nevada Journeys. Grant Amount: \$36,207; Match: \$2,917 of cash and \$12,238 of in-kind services. Continue with their

watershed education programs which serves 875 K-8th grad students in 32 classrooms throughout northern Nevada.

9. **Project #206: Truckee Meadows Nature Study Area Project: Planning Phase**, Truckee Meadows Parks Foundation. Grant Amount: \$38,400; Match: \$74,968 of cash. Repurpose the former Rosewood Lakes Golf Course into the Truckee Meadows Nature Study Area: a wetland habitat that will serve as an outdoor learning laboratory and public recreational park.
10. **Project #207: Second Truckee River Cleanup Crew**, City of Reno. Grant Amount: \$23,472; Match: \$9,405 of cash and \$500 of in-kind services. To provide for a second dedicated crew to remove trash, debris, noxious weeds and overgrowth from the banks of the Truckee River and direct tributaries within City of Reno. This will expand current efforts from 4 days to 7 days per week.
11. **Project #208: Truckee River Watershed Forest Restoration**, The Nature Conservancy (TNC). Grant Amount: \$57,826.09; Match: \$57,152.28 of cash. To support TNC staff time spent working with the Forest Service to expend a portion of a \$1.3 million federal grant to implement forest restoration projects in the Truckee River watershed.
12. **Project #209: Restoration Projects: Donner Creek & Dry Creek Meadow**, Truckee River Watershed Council (TRWC). Grant Amount: \$92,000; Match: \$192,000 of cash. Funding closed the critical funding gaps on two projects: one in the design phase, the Donner Creek Restoration Project and the other in implementation, Dry Creek Meadow Restoration. Once the restoration designs are completed, Caltrans will fund project implementation completely, which is estimated at \$900,000.
13. **Project #210: Truckee River Water Quality Monitoring Program**, Truckee River Watershed Council (TRWC). Grant Amount: \$25,000; Match: \$32,675 of in-kind. To monitor physical, chemical and biological parameters to determine health of the Middle Truckee River and its tributaries. This project supports the Truckee River TMDL by identifying areas with degraded water quality and areas where water quality improvements should be implemented.

Long-Term Funded Projects and/or Programs

GRANTEE	DATE RANGE	TOTAL PROJECTS	FUNDING AMOUNT
City of Reno	2005 – 2018	26	\$2.8M
Keep Truckee Meadows Beautiful	2006 – 2018	15	\$670k
Sierra Nevada Journeys	2011 - 2018	14	\$361k
The Nature Conservancy	2008 – 2018	11	\$700k
Truckee River Watershed Council	2006 – 2018	21	\$1.4M

See Attachment 2 for more information.

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
1		Dec-05	Champions of the Truckee River	Living River Flood Alternative Community Education and Outreach	1	\$24,000.00	\$1,007,684.00	\$7,200.00	\$12,000.00	\$19,200.00
2		Dec-05	City of Reno	Chalk Creek TDS Loading to Truckee River Study: Possible TDS mitigation and pollution trade for TMWRF on Truckee River TDS TMDL. (Weir)	2	\$25,000.00	\$100.00		\$8,216.00	\$8,216.00
3		Dec-05	City of Reno	Watershed Coordination and Education Outreach for Storm Water Permits program	no					
4		Dec-05	Environmental Leadership	Truckee River Clean-up Day	3	\$9,402.50		\$3,167.50	\$0.00	\$3,167.50
5		Dec-05	Nature Conservancy / Truckee River Yacht Club	Truckee River Science to Policy and Forum Phases 1 & 2	no					
6		Dec-05	Rainshadow Community Charter High School	Students Follow the River: Truckee River Restoration and Documentation Project	4	\$7,500.00		\$0.00	\$2,160.00	\$2,160.00
7		Dec-05	University of Nevada, Reno	Snapshot Day 2006	no					
8		Dec-05	University of Nevada, Reno	The Intermountain Regional Research Facility Project	no					
9		Dec-05	University of Nevada, Reno	Glendale Diversion Fish Passage Assessment - Phase 1 Project	no					
10		Jun-06	City of Reno	Watershed protection for the drinking water source of the Chalk Bluff Water Treatment Plant	5	\$211,000.00	\$150.00	\$35,000.00	\$26,500.00	\$61,500.00
11	B	Jun-06	City of Reno	Lower Steamboat Creek Restoration/Stabilization	6	\$86,000.00	\$50.00	\$80,000.00	\$35,000.00	\$115,000.00
12	D	Jun-06	City of Reno	Reach "Y" Tree Planting	no	\$0.00				
13	B	Jun-06	City of Reno	Urban Storm Water Quality Improvements	7	\$66,000.00		\$150,000.00	\$0.00	\$150,000.00
14		Jun-06	Great Basin Institute/Nevada Conservation Corps	Truckee River Invasive Plant Mapping and Eradication Project	no					
15		Jun-06	Keep Truckee Meadows Beautiful	Truckee River Clean-up Day	8	\$13,175.00		\$6,627.60	\$24,367.50	\$30,995.10
16		Jun-06	Recreation Education Outdoors	Tahoe-Truckee Pyramid Regional Education Project	no					
17		Jun-06	Recreation Education Outdoors	Truckee River Recreational Access Project	no					
18		Jun-06	Truckee River Watershed Council	This Drains to the Truckee River Storm Drain Stenciling Pilot Project	9	\$9,300.00		\$0.00	\$3,380.00	\$3,380.00
19		Jun-06	Truckee River Yacht Club as Fiscal Agent for Nevada Dept. of Conservation and Natural Resources	Snapshot Day 2006	10	\$6,605.00		\$4,100.00	\$15,342.00	\$19,442.00
20		Jun-06	U.S. Fish & Wildlife Service	Assessment of Petroleum Impacts to the Truckee River from Direct Stormwater Discharges	11	\$30,840.00		\$0.00	\$14,750.48	\$14,750.48
21	C	Jun-06	University of Nevada, Reno	Low Impact Development (LID) Demonstration and Storm Water Retention for the New Student Union at UNR	12	\$34,483.00		\$0.00	\$15,517.00	\$15,517.00
22		Jun-06	Washoe County	McCarran Ranch: Outdoor Education and Interpretive Signage Site Planning	no					

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
23		Jul-06	Ecosystem Sciences Foundation	Truckee River Education and Ourreach Program	no					
24		Jul-06	Placer County Department of Public Works	Interstate Storm Water Flow Mitigation Project at Brockway/Crystal Bay	no					
25	C	Jul-06	University of Nevada, Reno	Bioavailability of dissolved organic nitrogen originating from natural sources and wastewater in effluent in the Truckee River	13	\$81,093.00	\$250.00	\$20,334.00	\$0.00	\$20,334.00
26		Nov-06	Great Basin Institute/Nevada Conservation Corps	Truckee River White Top Eradication Project at Mogul and Steamboat Creeks	14	\$13,692.70		\$5,428.80	\$325.00	\$5,753.80
27		Nov-06	Keep Truckee Meadows Beautiful	Truckee River Clean-Up Day 2007	15	\$24,730.00		\$8,248.70	\$24,405.00	\$32,653.70
28	A	Nov-06	City of Reno Public Works	Restoration of Riparian Vegetation in a Channel at Sapphire Ridge in the Chalk Creek Sub Watershed	16	\$18,375.00			\$6,125.00	\$6,125.00
29	D	Feb-07	City of Reno Public Works	Chalk Creek Watershed Management for Water Quality to minimize Non-Point Source Pollution from Reaching the Truckee River	17	\$250,000.00	\$1,000,000.00		\$62,500.00	\$62,500.00
30	B	Feb-07	City of Reno Public Works	Downtown Eco-Channel Construction	18	\$370,000.00		\$0.00	\$0.00	\$0.00
31		Feb-07	Truckee River Yacht Club as fiscal sponsor for Wallace-Kuhl & Associates	Chalk Creek NPS Abatement	no					
32		Jun-07	Champions of the Truckee River	Truckee River Flood Management Project - Living River EIS Review	19	\$35,850.00	\$2,289.00			
33	A	Jun-07	Great Basin Institute/Nevada Conservation Corps	Rancho San Rafael Wetland Enhancement and Water Quality Enhancement	20	\$15,963.45		\$8,373.60	\$279.40	\$8,653.00
34		Jun-07	Pyramid Lake Paiute Tribe	Truckee River Noxious Weed Control Program	21	\$11,600.00	\$1,871.26			
35		Jun-07	Rainshadow Community Charter High School	The Rainshadow Effect: Water Issues - Local to Global	22	\$10,000.00		\$1,000.00	\$5,418.85	\$6,418.85
36	F	Jun-07	Tahoe Regional Planning Agency	Invasive Aquatic Species Integrated Management Strategy	23	\$50,000.00			\$12,500.00	\$12,500.00
37	D	Jun-07	Washoe County Department of Water Resources	Truckee River Water Quality Protection and Enhancement Project through connection of the River Oaks Subdivision to the Lawton-Verdi Wastewater Interceptor	24	\$292,495.00		\$589,600.00		\$589,600.00
38	F	Aug-07	Nevada Land Conservancy	Hawken Fire Restoration Effort	25	\$100,000.00		\$85,000.00	\$7,508.00	\$92,508.00
39	F	Sep-07	Nevada Land Conservancy	Hawken Fire Restoration Effort	26	\$189,989.00		\$135,111.00	\$7,508.00	\$142,619.00
40	E	Nov-07	Keep Truckee Meadows Beautiful	Truckee River Cleanup Day 2008	27	\$25,604.85		\$4,244.15	\$32,205.00	\$36,449.15
41	D	Nov-07	Great Basin Institute/Nevada Conservation Corps	Truckee River Invasive Plant Eradication & Restoration Demonstration Project	28	\$134,396.00			\$68,360.00	\$68,360.00
42	F	May-08	Nevada Land Conservancy	Hawken Fire Weed Monitoring, Treatment, and Reseeding	29	\$28,900.00		\$7,271.00		\$7,271.00
43	A	Jun-08	Washoe County Sheriff's Office	Washoe County Sheriff's Office Community Work Program Inmate and community service work crews cleaning, maintaining, and providing specified services within Washoe County on public property.	no		\$500.00	-	-	-

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
44	D	Jun-08	Washoe County Department of Water Resources	Mayberry Ranch Estates River Water Quality Improvement Project Use grants acquired from TRF to encourage homeowners to connect to the existing sewer and abandon their septic systems.	30	\$229,500.00	\$100.00	\$895,163.91		\$895,163.91
45	F	Jun-08	City of Sparks	Pioneer Dam Modification City of Sparks as lead agency for modification of existng facility to mitigate negative impacts of Pioneer Dam diversion struction and enhance water resources of the Truckee River.	31	\$250,000.00		\$294,000.00	\$60,000.00	\$354,000.00
46	A	Jun-08	Nevada Land Conservancy	2008-09 Weed Treatments & Revegetation: Truckee River & Tributaries Facilitate weed control in Truckee Meadows as identified by Truckee Meadows Cooperative Weed Management Group's 2008 Action Plan; improving stabilization and decreasing erosion and sediment by protecting native habitat and restoring riparian areas.	32	\$112,500.00	\$1,050,000.00	\$30,000.00	-	\$30,000.00
47	E	Jun-08	Truckee Donner Land Trust	TDLT Truckee River Riparian Parcel Conservation Improvements and restoration specifically to riparian parcels held under a permanent conservaiton easement--general cleanup, debris removal, slope stabilization, signage.	33	\$7,500.00	\$1,050,000.00	-	\$16,100.00	\$16,100.00
48	D	Jun-08	City of Reno Public Works	Truckee River Watershed Map Web Tool Create inspired new Web-based watershed pages to compliment existing web efforts, in describing local watershed, and interconnectedness within and reliance upon the watershed.	34	\$80,000.00		-	\$20,000.00	\$20,000.00
49	A,C,D	6/1/2008; resubmitted 8/1/2008	Washoe-Storey Conservation District	Crane Ditch Cleanup Demonstration Project--Curti Ranch LID & PCSC Retrofit addresses known problems in and around the segment of Crane Ditch that travels through and around Curti Ranch Units 3-9 between Highway 342 and Steamboat Ditch.	35	\$50,000.00			\$27,375.00	\$27,375.00
50	A	Jun-08	The Nature Conservancy	Independence Lake Forest Management Planning Develop a forest management plan.--supports land management actions to protect lake quality against threat of catastrophic forest fires and resulting erosion.	36	\$39,668.00	\$1,080,000.00	-	\$14,760.00	\$14,760.00
51	C	Jun-08	The Nature Conservancy	Independence Lake Public Access Management Planning Develop compatible public access management plan--support land management actions that will protect Indepondence Lake quality against threat of incompatible public use and recreation of lake and lands.	37	\$45,510.00		-	\$26,445.00	\$26,445.00
52	A	Aug-08	City of Reno	Oxbow Park Bank Stabilization Pursue restoration and protection of the Truckee River within the City's Oxbow Park property	38	\$207,750.00		\$69,250.00		\$69,250.00
53	A	Nov-08	Pyramid Lake Paiute Tribe	Aleck Streambank Restoration Improvements to streambank adjacent to agricultural lands. To protect banks from shearing from future flooding. Implementation: January 2009.	39	\$75,000.00		\$130,000.00		\$130,000.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
54		Nov-08	Nevada Department of Conservation and Natural Resources	9th Annual Snapshot Day (2009) Snapshot Day monitors 119 sites within the Tahoe Basin & Truckee River watersheds. Water quality samples are taken; site locations are selected to gain information on restoration projects.	no					
55		Nov-08	Truckee River Watershed Council	Adopt-A-Stream: Keeping an Eye on the Truckee River Continuation of existing Adopt-A-Stream program in 2009 by supporting program manager, equipment and supplies, lab analysis, and volunteer retention/recruitment/training.	no					
56	D	Nov-08	Tahoe Regional Planning Agency	Invasive Aquatic Species Integrated Management Strategy Funding for approximately 8 boat inspectors to staff boat ramp facilities, and funding to install gates at three public boat ramps.	40	\$118,000.00		\$28,000.00	\$1,500.00	\$29,500.00
57		Nov-08	Board of Regents NSHE	Identifying Non-Point Sources of Nutrients to the Truckee River from Groundwater in the Verdi/Mogul Area Project seeks to identify potential non-point sources of nutrients in groundwater by evaluating a large spatial array of monitoring wells for nutrient concentrations. Data will be used to help delineate hydraulic connectedness and mixing of groundwater in the Verdi/Mogul area with Truckee River surface water.	no	-				
58	A	Nov-08	Washoe County Sheriff's Office	WCSO Community Work Program-Truckee River Restoration Projects-Weed Control Provide inmate and community service work crews 30-40 hours per week for 8 weeks in Sprin g2009 to The Nature Conservancy for revegetation and weed control.	41	\$12,280.00		-	\$3,600.00	\$3,600.00
59	B,D	Nov-08	City of Reno Public Works	Chalk Creek Watershed TDS/Sulfate Reducing Wetland Pilot Project Pilot project to model, design, construct, and monitor a small-scale sulfate-reducing bioreactor wetland system. Project provides opportunity to evaluate efficiency at treating TDS, phosphorus, nitrogen, and selenium from Chalk Creek Watershed.	42	\$163,000.00			\$50,000.00	\$50,000.00
60	B,D	Nov-08	City of Reno Public Works	McKinley Arts & Cultural Center LID Demonstration Project and Installation Training Retrofitting McKinley building with rain gutters to take water away from the building and solve current problems with moisture and irrigation spray; includes steps to protect the Truckee River watershed by providing key examples on stormwater treatment using natural systems.	43	\$115,500.00		\$300.00	\$55,009.00	\$55,309.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
61	E	Nov-08	Keep Truckee Meadows Beautiful	Truckee River Cleanup Day 2009 Scheduled for Sept. 26, 2009; designed to raise awareness about the importance of a clean, healthy river while engaging residents in keeping the River clean.	44	\$26,975.00		-	\$47,599.00	\$47,599.00
62	F	Nov-08	City of Sparks	Construction of Pioneer Dam Modification Funding will go to costs associated with construction activities for improvements identified in the previous grant for this project.	45	\$500,000.00		\$608,000.00	\$50,000.00	\$658,000.00
63		Nov-08	The Nature Conservancy	Independence Lake - Forest and Wildfire Management Funding for forest and wildfire management at Independence Lake. Funding is for part of a \$2,371,108 endowment for perpetual management of the forest at Independence Lake.	46	\$237,110.00		-	\$153,052.00	\$153,052.00
64		Nov-08	Nevada Tahoe Conservation District	Best Management Practices Education & Outreach for the Truckee River Watershed in Washoe & Storey Counties Project will demonstrate that programs such as the successfully implemented Backyard Conservation Program could assist landowners with implementing conservation strategies within urban residential communities; also propose to develop a "Living in the Truckee River Watershed" publication that will provide references for the community to manage their property in ways that benefit the human and natural resources of the watershed.	no	-				
65		Nov-08	Washoe Storey Conservation District	Double Diamonds Wetland 5 & 6: LID & Engineered Wetland Rehabilitation Rehabilitation of a 404 permitted wetland, including site survey, updating and engineering the design for US Army Corps of Engineers approval, permitting and planning, design and construction of LID into the drainage plan, and construction/revegetation of wetland with a low flow channel.	no	-				
66		Jun-09	Nevada Land Conservancy	Scope of Work for Truckee River Ecosystem Restoration Coordination: Creation of a 5-year Weed Control and Restoration Plan for the Truckee River	47	\$10,000.00			\$2,500.00	\$2,500.00
67		Sep-09	Desert Research Institute	Cloud Seeding Project for Tahoe and Truckee Basins for WY2010	48	\$165,151.00	\$838,000.00	\$52,674.00		\$52,674.00
68	D	Nov-09	AlpenGroup (proposal submitted by U.S. Army Corps of Engineers, Martis Creek Lake)	Eurasian milfoil removal from Martis Creek Lake. Eradicate Eurasian milfoil by using black cloth barrier method. Plan calls for treating approximately 80% of the lake area in 2010 season.	49	\$20,550.00		\$4,450.00	\$2,400.00	\$6,850.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
69	A,C,D	Nov-09	Washoe County Sheriff's Office	WCSC Community Work Program-Truckee River Restoration Projects-Weed Control. Provide supervision of inmate and community service work crews 30-40 hours per week for 8 to 32 weeks in Winter/Spring 2010 to The Nature Conservancy for revegetation and weed control.	50	\$68,962.34			\$25,600.00	\$25,600.00
70	A,B,D	Nov-09	Nevada Land Conservancy	2010 Weed Treatments & Revegetation: Truckee River & Tributaries. Facilitate weed control and restoration in Truckee Meadows as identified by Truckee Meadows Weed Coordinating Group's 2010 Action Plan--Verdi and upstream in NV.	51	\$125,000.00		\$30,000.00	\$1,250.00	\$31,250.00
71	D	Nov-09	Tahoe Resource Conservation District	Watercraft Inspection Program for the Truckee River Watershed. Initiate a coordinated, multi-party planning effort specifically intended to accelerate regional prevention and control efforts of aquatic invasive species.	52	\$231,123.00		\$5,000.00	\$75,340.00	\$80,340.00
72	A,C,D	Nov-09	Keep Truckee Meadows Beautiful	Truckee River Cleanup 2010. Expanding the annual Cleanup Day to include a spring and fall cleanup.	53	\$42,050.00		\$14,185.00	\$52,830.00	\$67,015.00
73	B,C	Nov-09	City of Reno	Livestock Events Center Drainage Treatment System. Design and construction of a storm water structural control that will minimize pollutants by runoff before it enters the offsite public storm drainage system.	54	\$75,000.00		\$10,000.00	\$15,000.00	\$25,000.00
74	E	May-10	The Nature Conservancy	Independence Lake Woody Fuels Reduction for Fire Resilience. Implementation of actions that reduce the risk of catastrophic fire and subsequent erosion of sediment into the lake.	55	\$50,000.00		\$91,492.00		\$91,492.00
75	A,B,C	May-10	Truckee River Watershed Council	Truckee Wetlands Restoration Project-Phase 2. Develop a hydrologic analysis, restoration plan and design and phasing and obtain needed permits for restoration.	56	\$40,000.00		\$10,000.00	\$10,000.00	\$10,000.00
76	A,C	Oct-10	Truckee River Watershed Council	Coldstream Canyon Floodplain Restoration Project. Creek and floodplain restoration in the lower reaches of Coldstream Canyon.	57	\$135,000.00	\$1,120,000.00	\$521,260.00		\$521,260.00
77	C,E	Oct-10	Board of Regents NSHE	BMP Installation and Maintenance Training. Provides field training for developers, planners, contractors, installers, inspectors, and government employees in correct selection, installation, maintenance, and inspection of construction site Best Management Practices and structural controls.	58	\$21,269.00		\$5,318.00		\$5,318.00
78	E	Oct-10	The Nature Conservancy	Independence Lake Woody Fuels Reduction for Fire Resilience - Year 3. Forest thinning on 80 acres surrounding Independence Lake for reduction of woody fuels.	59	\$60,000.00		\$32,000.00		\$32,000.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
79	D	Oct-10	Tahoe Resource Conservation District	Truckee Regional Aquatic Invasive Species Prevention Program. Continuation of necessary development of a sustainable long-term Watercraft Inspection and Decontamination Program serving at-risk water bodies in the headwaters of the Truckee River Watershed.	60	\$296,013.00		\$5,000.00	\$69,200.00	\$74,200.00
80	A,C,D	Oct-10	Washoe County Sheriff's Office	Washoe County Sheriff's Office Community Work Program - Weed Control. Supplies to effectively meet the needs of the community and the various clean up efforts performed throughout the year.	61	\$12,695.00			\$3,600.00	\$3,600.00
81	E	Oct-10	Desert Research Institute	Cloud Seeding Project for Tahoe and Truckee Basins for WY2011	62	\$155,876.00		\$63,969.00		\$63,969.00
82	C,D	Oct-10	Keep Truckee Meadows Beautiful	Truckee River Cleanup 2011. litter prevention and removal and community education and removal of invasive weeds along Truckee River watersheds.	63	\$42,900.00		\$17,700.00	\$63,040.00	\$80,740.00
83	B,C	Feb-11	City of Reno	Livestock Events Center Drainage Treatment System Phase 2. Design and construction of a second storm water structural control that will minimize pollutants by runoff before it enters the offsite public storm drainage system.	64	\$97,500.00		\$12,500.00	\$20,000.00	\$32,500.00
84	E	Feb-11	Sierra Nevada Journeys	Watershed Education Initiative	65	\$10,000.00		\$6,000.00	\$560.00	\$6,560.00
85		Feb-11	North Tahoe Public Utility District	Secline Sewer Pump Station Rehabiitation Project. Modify current condiitons of tfacility, extend useful life, ensure pump station meets standards.	no			\$209,723.00		
86	A,B	Feb-11	River Partners	Restoration plan for UNR. Develop a habitat restoration plan for the 1,000 acre UNR Main Station Field Laboratory property.	66	\$23,989.99		\$6,001.00		\$6,001.00
87		Jun-11	Desert Research Institute	Integrated Water Quality Monitoring on the Truckee River. four basic components: 1) review of historic river data collected on the mainstem Truckee; 2) monthly "grab" samples at 13 locations on the mainstem of the Truckee River; 3) maintenance of one continuous monitoring site at Marble Bluff Dam; and, 4) quarterly field collection of benthic macroinvertebrates at four sites on the mainstem.	67	\$318,012.00		\$80,000.00	\$75,062.00	\$155,062.00
88	D	Sep-11	The Nature Conservancy	Preventing Aquatic Invasive Species at Independence Lake. Primary measurable outcome will be the successful deterrence of future intoriductions of AIS into Independence Lake.	68	\$28,290.00	\$1,026,000.00	\$20,135.00		\$20,135.00
89		Sep-11	Keep Truckee Meadows Beautiful	Truckee River Cleanup 2012. Continue focus on litter prevention and removal and community education and removal of invasive weeds along the Truckee River.	69	\$44,950.00		\$17,350.00	\$75,500.00	\$92,850.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
90	A,B,D	Sep-11	Nevada Land Conservancy	Weed Treatments & Revegetation: Truckee River & Tributaries: implement 1,125 acres and 10 trail miles of weed control and restoration as directed by the Truckee Meadows Cooperative Weed Group.	70	\$127,500.00		\$40,000.00	\$25,440.00	\$65,440.00
91	C,D,E	Sep-11	Washoe County Sheriff's Office	Community Work Program--Pollution & Weed Control: provide full time Inmate Work Program Leader to supervise inmate and community service work crews.	71	\$71,860.00			\$19,460.35	\$19,460.00
92		Sep-11	Desert Research Institute	Cloud Seeding Project for Tahoe & Truckee Basins for WY2012: Enhance snowfall from winter storms and increase snowpack through wintertime cloud seeding technology.	72	\$154,815.00		\$115,691.00		\$115,691.00
93		Sep-11	Truckee Donner Land Trust	Webber Lake & Lacey Meadows Acquisition & Restoration: funding to maintain a healthy water system in the upper Truckee River watershed.	no			\$2,700,000.00		
94	C,E	Sep-11	Board of Regents, NSHE	BMP Installation & Maintenance Field Training & Classes: offer free field training to developers, planners, contractors, installers, inspectors, and government employees in 2012.	73	\$19,375.00		\$4,844.00		\$4,844.00
95	D	Sep-11	Tahoe Resource Conservation District	Truckee Regional Aquatic Invasive Species Prevention Program: funding for further development of an mandatory AIS prevention program, increased public outreach and enhanced environmental monitoring.	74	\$267,627.00		\$5,000.00	\$66,200.00	\$71,200.00
96	E	Sep-11	Sierra Nevada Journeys	Watershed Education Initiative: in-class lessons and after-school programs that tie directly to field-based experiences within the Truckee River watershed.	75	\$10,010.00		\$1,872.00	\$1,600.00	\$3,472.00
97		Sep-11	Washoe-Storey Conservation District	Weed Abatement Program: Education, Training, Removal, & Maintenance: education & training for homeowners, developers, planners, contractors, district employees, and maintenance employees in proper identification and removal of noxious and invasive weeds.	no			\$16,000.00	\$28,000.00	
98		Sep-11	Great Basin Land & Water	Truckee River Instream Flow & Water Quality Enhancement: acquire roughly 900 acre-feet of Truckee River Claim 3 water rights and appurtenant lands.	no	withdrawn		\$5,300,000.00		
99	A,D	Dec-11	Nevada Land Conservancy	Caughlin Fire Emergency Watershed Stabilization & Restoration Effort	76	\$219,856.00			\$150,850.00	\$150,850.00
100	A,C	Feb-12	Truckee River Watershed Council	Negro Canyon Restoration: Reduce Erosion to Donner Lake and the Truckee River by up to 175 tons annually.	77	\$25,000.00		\$253,868.00	\$6,000.00	\$259,868.00
101		Feb-12	Bureau of Land Management	Truckee River Restoration: small tracts of land along bank of TR managed by BLM.	no				\$85,810.00	
102		Feb-12	BOR NSHE for DRI	Watershed Based Planning Tool for the Truckee River Basin: develop a useful and efficient watershed based planning tool that will identify impaired sections of the TR and assist TRF advisors in prioritizing future projects.	no	withdrawn		\$67,155.00		

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects		* Projects not approved for funding								
103		Feb-12	American Rivers, with Truckee River Watershed Council and Sierra Watch	Martis Solutions Initiative: to promote informed and sensible solutions to the threat of Martis Creek Dam.	no			\$52,400.00	\$4,800.00	
104		Feb-12	Nevada Land Conservancy	Washoe Drive Emergency Watershed Stabiization & Restoration Effort: erosion control and emergency watershed protection measure in three priority areas.	78	\$115,000.00			\$38,530.00	\$38,530.00
105	A,E	Feb-12	Truckee River Watershed Council	Lacey Creek and Meadow Assessment: recommend restoration projects and management practices in the headwaters of the Little Truckee River.	79	\$50,000.00		\$8,500,000.00		\$8,500,000.00
106	E	Aug-12	The Nature Conservancy	Independence Lake Woody Fuels Reduction for Fire Resilience--Yr 3 Supplemental Funding: implement forest thinning and woody fuels reduction on 80 acres surrounding Indeependces Lake Preserve.	80	\$30,000.00		\$43,740.00		\$43,740.00
107	A,C	Aug-12	Truckee River Watershed Council	Phase 2 Coldstream Canyon Floodplain Restoration: reduce erosion to the Truckee River through restoring a stream reach of Coldstream Canyon	81	\$196,000.00		\$772,760.00		\$772,760.00
108		Aug-12	Truckee River Watershed Council	Negro Canyon Restoration: Reduce Erosion to Donner Lake and the Truckee River by up to 175 tons annually.	no			\$253,868.00	\$6,000.00	
109		Aug-12	League to Save Lake Tahoe	Pipe Keepers/Storm Drain Monitoring & Marking Project: group of volunteers coordinated by Americorp members; will monitor water flowing out of storm drains unfiltered into Lake Tahoe.	no			\$32,646.00	\$40,000.00	
110	C,D,E	Aug-12	Washoe County Sheriff's Office	Community Work Program--Pollution & Weed Control	82	\$68,250.00			\$21,600.00	\$21,600.00
111	D	Aug-12	Friends of Nevada Wilderness	Mt Rose Noxious Weed Monitoring & Treatment: treat approximately 50 acres of noxious weeds on Humbolt-Toiyabe National Forest lands	83	\$13,225.00		\$7,020.00	\$4,250.00	\$11,270.00
112	E	Aug-12	Sierra Nevada Journeys	Watershed Education Initiative: deliver educational programs to youth in the Reno area to inspire students to learn about their local Watershed and emplover them to protect/enhance river quality.	84	\$12,690.00		\$3,422.00	\$600.00	\$4,022.00
113		Aug-12	Pyramid Lake Paiute Tribe	Fellnagle Fish Passage Improvement Project: improve fish passage from Fellnagle dam and irrigation diversion by stabilizing streambank and decreasing erosion/pollution.	no			\$445,000.00	\$5,000.00	
114		Aug-12	Town of Truckee	Truckee Storm Water System Retrofit Project: install structural and/or LID improvements to treat storm water runoff in high priority drainages.	no			\$32,500.00	\$30,000.00	
115	C,D	Aug-12	Keep Truckee Meadows Beautiful	Truckee River Cleanup Day 2013	85	\$46,450.00		\$16,250.00	\$77,450.00	\$93,770.00
116	D	Aug-12	Tahoe Resource Conservation District	Truckee Rgional Aquatic Invasive Species Prevention: support TRCD's efforts to prevent AIS infestation in Truckee Regional walters	86	\$179,455.00	\$851,000.00	\$70,000.00	\$54,200.00	\$124,200.00
117	E	Feb-13	The Nature Conservancy	Reduce woody fuel loading and reduce risk of severe wildfire around Independence Lake.	87	\$41,300.00		\$20,650.00		\$20,650.00
118	A,C	Feb-13	Truckee River Watershed Council	Middle Martis Wetland Restoration-planning & design.	88	\$120,000.00		\$60,000.00	\$200,000.00	\$260,000.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects	* Projects not approved for funding									
119	A,E	Feb-13	City of Reno	Hazardous tree removal at Oxbow Park	89	\$32,250.00			\$16,531.00	\$16,531.00
120	A,E	Feb-13	City of Reno	Truckee River bank stabilization at Crooked Mile	90	\$30,615.00		\$18,175.00	\$2,988.00	\$21,163.00
121	D	Feb-13	BoR NSHE for UNR Cooperative Extension	Aquatic Invasive Species Education and Outreach for Nevada	no			\$23,581.00	\$3,000.00	
122	A,C	Feb-13	Truckee River Watershed Council	Truckee River Big Chief Corridor-Implementation	91	\$11,000.00		\$344,000.00		\$344,000.00
123	A,C,E	Feb-13	The Nature Conservancy	Truckee River Restoration Project-Hoss Property Acquisition	no			\$35,500.00		
124	D	Feb-13	Tahoe Resource Conservation District	Truckee River Eurasian Watermilfoil Removal	92	\$43,062.00		\$13,855.00	\$3,500.00	\$17,355.00
125	E	Feb-13	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	93	\$16,050.00		\$4,594.00	\$1,000.00	\$5,594.00
126	C, D, E	Aug-13	Keep Truckee Meadows Beautiful	Truckee River Youth Education/Invasive Weed Pull/Cleanup 2014	94	\$57,050.00		\$47,330.00	\$77,210.00	\$124,540.00
127	C, D	Aug-13	Washoe County Sheriff's Office	Community Work Program - Pollution & Weed Control	no	withdrawn			\$13,440.00	
128	A,C	Aug-13	Truckee River Watershed Council	Truckee River Big Chief Corridor-Restoration	95	\$150,000.00		\$355,000.00	\$25,000.00	\$380,000.00
129	A,D	Aug-13	Nevada Land Trust	Weed Treatments & Revegetation: Truckee River & Tributaries:	96	\$65,050.00		\$20,000.00	\$5,000.00	\$25,000.00
130	D	Aug-13	Friends of Nevada Wilderness	Mt. Rose Noxious Weed Monitoring & Treatment	97	\$10,896.00		\$6,600.00	\$4,250.00	\$10,850.00
131	E	Aug-13	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	98	\$24,200.00		\$7,050.00	\$1,600.00	\$8,650.00
132	A	Aug-13	Town of Truckee	Trout Creek Restoration-Lower Reach 1	no			\$897,504.00		
133	D	Aug-13	Tahoe Resource Conservation District	Truckee Regional Aquatic Invasive Species Prevention Program	99	\$115,000.00		\$16,546.00	\$55,780.00	\$72,326.00
134	E	Aug-13	City of Reno	Reducing non-point source pollution to the Highland Canal	100	\$400,000.00	\$845,000.00	\$243,000.00	\$20,000.00	\$263,000.00
135	D	Aug-13	Nevada Department of Wildlife	New Zealand Mud Snail & Aquatic Invasive Species Outreach for the Truckee River	101	\$45,413.00			\$11,355.00	\$11,355.00
136	C,D	Feb-14	Washoe County Sheriff's Office	Community Work Program - Pollution & Weed Control	102	\$62,885.00			\$20,400.00	\$20,400.00
137	C	Feb-14	Nevada Land Trust	Alum Creek Water Quality Improvement	103	\$60,000.00		\$3,360.00	\$30,984.16	\$34,344.00
138	E	Feb-14	The Nature Conservancy	Truckee River Watershed Restoration - Forest Thinning at Independence Lake Preserve 2014	no			\$50,000.00		
139	D	Feb-14	Town of Truckee	Town of Truckee Watercraft Inspection Program	104	\$10,000.00		\$20,000.00		\$20,000.00
140	E	Feb-14	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	105	\$23,750.00		\$8,150.00	\$2,000.00	\$6,150.00
141	D	Feb-14	Tahoe Resource Conservation District	Truckee River Eurasian Watermilfoil Survey and Removal	106	\$59,860.00			\$44,635.00	\$44,635.00
142	A,B,C	Feb-14	Truckee River Watershed Council	Truckee Wetlands Restoration Project-Phase 3,4&5 - Design	107	\$50,000.00			\$19,000.00	\$19,000.00
143	A,C,D	Aug-14	Washoe-Storey Conservation District	Tenaya Creek-Wetland Restoration and Enhancement: Weed Abatement; Flood Attenuation, Education, Training	no			\$25,000.00	\$86,940.79	
144	B,C	Aug-14	City of Reno	Reducing non-point source pollution to the Highland Canal	108	\$329,000.00	\$800,000.00	\$250,000.00	\$20,000.00	\$270,000.00
145	E	Aug-14	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	109	\$23,900.00		\$3,938.00	\$6,840.00	\$10,088.00
146	E	Aug-14	Tahoe Pyramid Bikeway	Graffiti and trash removal along Truckee River	110	\$4,660.00			\$1,570.00	\$1,570.00
147	E	Aug-14	The Nature Conservancy	Optimizing Restoration Investments in the Truckee Watershed	111	\$50,000.00		\$58,075.00		\$58,075.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects			* Projects not approved for funding							
148	B,C	Aug-14	Truckee River Watershed Council	Donner Basin Watershed Assessment	112	\$70,000.00		\$25,000.00		\$25,000.00
149	D	Aug-14	League to Save Lake Tahoe	Eyes on the Lake Truckee River Watershed Volunteer Invasive Species Monitoring	113	\$18,000.00		\$11,400.00	\$2,750.00	\$14,150.00
150	C,D	Aug-14	Tahoe Resource Conservation District	Truckee River Native and Non-native Aquatic Plant and Trash Survey	114	\$49,000.00			\$15,000.00	\$15,000.00
151	B,C,E	Aug-14	City of Reno	Virginia Lake Water Quality Improvement Project Monitoring and Public Education	115	\$18,820.00		\$32,000.00	\$48,301.00	\$78,301.00
152	A,C	Aug-14	National Forest Foundation	Alder Creek Trail Watershed Rehabilitation Project	no			\$50,000.00	\$154,800.00	
153	D	Aug-14	Friends of Nevada Wilderness	Mount Rose Noxious Weed Monitoring and Treatment #3	116	\$15,807.00		\$12,800.00	\$3,700.00	\$16,500.00
154	C,D,E	Aug-14	Keep Truckee Meadows Beautiful	Watershed Youth Education, Invasive Weed Pull & River Cleanup 2015	117	\$46,000.00		\$23,800.00	\$92,740.00	\$116,540.00
155	D	Aug-14	Great Basin Institute	Nevada Conservation Corps Truckee River Eurasian Watermilfoil Removal	no				\$8,560.00	
156	C	Feb-15	Keep Truckee Meadows Beautiful	Truckee River Corridor Management Plan	118	\$90,000.00		\$22,000.00	\$1,500.00	\$23,500.00
157	C	Feb-15	City of Reno	Truckee River Cleanup Crew	119	\$104,235.00			\$38,094.00	\$38,094.00
158	E	Aug-15	Sierra Nevada Journeys	Watershed Education Initiative	120	\$28,484.00	\$850,000.00	\$6,250.00	\$7,200.00	\$13,450.00
159	A,C	Aug-15	National Forest Foundation	Alder Creek Trail Watershed Restoration Project	no				\$210,400.00	
160	A,C	Aug-15	Truckee River Watershed Council	Johnson Canyon Westside Restoration	121	\$25,000.00		\$79,000.00	\$6,000.00	\$85,000.00
161	C	Aug-15	TRI General Improvement District	Preliminary Design Report & Engineering-TMWRF at TRI	no					
162	D	Aug-15	Nevada Tahoe Conservation District	Rosewood & Third Creeks Invasive Weed Removal	122	\$7,350.00		\$9,850.00	\$2,500.00	\$12,350.00
163	D	Aug-15	Tahoe Resource Conservation District	Truckee River Watershed AIS Prevention & Control	123	\$112,000.00		\$50,000.00		\$50,000.00
164	A,B,C	Aug-15	City of Reno	Cemetery Drain Water Quality, Erosion Control/Drainage	124	\$77,500.00		\$37,971.00	\$15,000.00	\$52,971.00
165	C,D	Aug-15	Keep Truckee Meadows Beautiful	Truckee River Cleanup/Invasive weeds 2016	125	\$48,325.00		\$40,500.00	\$68,500.00	\$109,000.00
166	B,C	Aug-15	City of Reno	Virginia Lake Water Quality Improvements	126	\$100,000.00		\$150,000.00	\$47,420.00	\$197,420.00
167	E	Feb-16	Sierra Nevada Journeys	Watershed Education Initiative	127	\$33,041.00		\$7,250.00	\$10,440.00	\$17,690.00
168	D	Feb-16	Friends of Nevada Wilderness	Mount Rose Noxious Weed Monitoring and Treatment #4	128	\$21,002.00		\$6,000.00	\$8,640.00	\$14,640.00
169	C	Feb-16	City of Reno	Truckee River Cleanup Crew Yr. 2	129	\$47,787.00		\$46,187.00	\$22,782.00	\$68,969.00
170	A,B,C	Feb-16	Mountain Area Preservation Foundation	Trout Creek Pocket Park & Restoration Initiative	130	\$25,000.00		\$168,750.00	\$5,500.00	\$168,750.00
171	A,C	Feb-16	Truckee River Watershed Council	Johnson Canyon Westside Restoration-Construction	131	\$67,000.00		\$79,000.00	\$6,000.00	\$85,000.00
172	E	Feb-16	Truckee Donner Land Trust	Webber Lake Little Truckee Headwaters Timber Management	no			\$18,750.00		
173	C,E	Feb-16	Tahoe Fund	Take Care-Truckee River	132	\$9,354.00			\$6,465.00	\$6,465.00
174	E	Feb-16	Truckee Ranger District	Prosser WUI Fuels Reduction Project	no				\$67,700.00	
175	C	Aug-16	Desert Research Institute	Modeling, Monitoring, and Social Assessment of Water Quality in Upper Truckee River Basin	no				\$26,657.00	
176	C,D	Aug-16	Keep Truckee Meadows Beautiful	2017 Spring Invasive Weed Pull & Fall Cleanup	133	\$60,625.00		\$15,000.00	\$104,300.00	\$119,300.00
177	A,B,C	Aug-16	Truckee River Watershed Council	Donner Creek Bank Stabilization Downstream of Railroad Culvert--final design	134	\$90,000.00		\$260,000.00	\$600.00	\$260,600.00

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*Completed Projects		* Projects not approved for funding								
178	A,B,C	Aug-16	Truckee River Watershed Council	Donner Creek Concept Design	135	\$40,000.00		\$640,000.00	\$9,000.00	\$649,000.00
179	E	Aug-16	Sierra Nevada Journeys	Watershed Education Initiative	136	\$28,446.00		\$6,250.00	\$9,000.00	\$15,250.00
180	A,D,E	Aug-16	Nevada Land Trust	One Truckee River Phase 1 Implementation	137	\$98,534.00		\$14,604.00	\$12,000.00	\$26,604.00
181	E	Aug-16	Truckee Donner Land Trust	Webber Lake Little Truckee Headwaters Management	138	\$75,000.00		\$18,750.00		\$18,750.00
182	A,D	Aug-16	Nevada Tahoe Conservation District	Rosewood & Third Creeks Invasive Weed Removal, phase 2	no			\$32,600.09	\$3,000.00	
183	C	Feb-17	City of Reno	Truckee River Cleanup	139	\$28,694.00		\$59,554.00	\$17,491.00	\$77,045.00
184	E	Feb-17	Sierra Nevada Journeys	Watershed Education Initiative	140	\$32,998.00		\$2,610.00	\$10,440.00	\$13,050.00
185	D	Feb-17	Friends of Nevada Wilderness	Mount Rose Noxious Weed Monitoring and Treatment #5	141	\$22,405.40		\$12,232.00	\$8,640.00	\$20,872.00
186	E	Feb-17	Sierra Business Council	Lake Tahoe Water Trail Educational Wayfinding Interpretive Signage	no					
187	A,C,E	Feb-17	The Nature Conservancy	Landscape Conservation Forecasting for the Truckee River Watershed	142	\$60,000.00		\$25,000.00	-	\$25,000.00
188	A,C, E	Feb-17	Nevada Land Trust	One Truckee River Phase 1 Action	143	306,220 W/\$50k contingent on raising add'l \$50k		\$75,614.00	\$27,500.00	\$103,114.00
189	A,B, C	Feb-17	Truckee River Watershed Council	Big Chief: F4M Restoration Culvert Outflows	144	\$50,000.00		-	\$15,000.00	\$15,000.00
190	E	Aug-17	Sierra Nevada Journeys	Watershed Education Program	145	\$35,065.00		\$2,700.00	\$10,200.00	\$12,900.00
191		Aug-17	City of Reno	Invasive Weed Removal - Reno Park Property	no					
192	A,B,C	Aug-17	Truckee River Watershed Council	Truckee River Tributaries Sediment Reduction Project	146	\$165,000.00		\$41,250.00	\$900.00	\$42,150.00
193	C,D	Aug-17	Keep Truckee Meadows Beautiful	2018 Spring Invasive Weed Pull & Fall Truckee River Cleanup	147	\$69,760.00		\$15,000.00	\$29,932.00	\$44,932.00
194		Aug-17	Sierra Nevada Alliance	Sierra Nevada Americorps Partnership (SNAP)	no					
195	E	Feb-18	Sierra Nevada Journeys	Watershed Education Initiative	148	\$46,376.00		\$12,707.00	\$15,385.00	\$28,092.00
196	D	Feb-18	Friends of Nevada Wilderness	Mount Rose Noxious Weed Monitoring & Treatment #6	149	\$23,500.00		\$6,761.00	\$8,400.00	\$15,161.00
197	C,E	Feb-18	Truckee Meadows Park Foundation	Doggie Ambassador Program	no					
198	D	Feb-18	Desert Research Institute	Determining the role of signal crayfish in the Truckee River foodweb	no					
199	A,B,C	Feb-18	Truckee Donner Land Trust	Cold Stream Meadow Road Decommissioning & Restoration Project	150	\$65,000.00		\$17,800.00	\$2,200.00	\$20,000.00

Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
*Completed Projects	* Projects not approved for funding									
200	A,B,C	Feb-18	Truckee River Watershed Council	Truckee Meadows Restoration Project- Phase 2 Construction	151	\$30,000.00		\$47,750.00	-	\$47,750.00
201	A,B,C	Feb-18	National Forest Foundation	Perazzo Meadows Watershed Restoration & Erosion Control Project	152	\$148,000.00		-	\$51,526.00	\$51,526.00
202	E	Feb-18	Mountain Area Preservation Foundation	Trout Creek Pocket Park Stewardship & Service Learning Program	no					
203	A,C,E	Feb-18	Nevada Land Trust	One Truckee River: Watershed Management & Source Protection Plan & OTR Partnership Support	153	\$173,580.00		\$99,780.00	\$144,000.00	\$243,780.00
204	C,D	Aug-18	Keep Truckee Meadows Beautiful	2019 Spring Invasive Weed Pull & Fall Truckee River Cleanup	154	\$31,640.00		\$14,500.00	\$83,272.00	\$97,772.00
205	E	Aug-18	Sierra Nevada Journeys	Watershed Education Initiative	155	\$36,207.00		\$2,917.00	\$12,238.00	\$15,155.00
206	D,E	Aug-18	Truckee Meadows Parks Foundation	Truckee Meadows Nature Study Area Project: Planning Phase	156	\$38,400.00		\$74,968.00	-	\$74,968.00
207	C	Aug-18	City of Reno	2nd Truckee River Cleanup Crew	157	\$23,472.00		\$9,405.00	\$500.00	\$9,905.00
208	E	Aug-18	The Nature Conservancy of Nevada	Truckee River Watershed Forest Restoration	158	\$57,826.00		\$57,152.28	-	\$57,152.28
209	A,B,C	Aug-18	Truckee River Watershed Council	Restoration Projects: Donner Creek & Dry Creek Meadow	159	\$92,000.00		\$192,000.00	-	\$192,000.00
210	C,E	Aug-18	Truckee River Watershed Council	Truckee River Water Quality Monitoring Program	160	\$25,000.00		-	\$32,675.00	\$32,675.00
211	C,D	Sep-18	Tahoe Resource Conservation District	Truckee River Watershed AIS Survey and Control, and Trash Removal	no					
212	B,C	Sep-18	Nevada Tahoe Conservation District	Burnt Cedar Beach Water Quality Improvement Project	no					
213	A,B,C	Sep-18	City of Reno	Chalk Creek Restoration Project, Sapphire Ridge and Royal Vista Way	no					
				TOTAL FUNDING AMOUNT:		\$12,981,126.32				\$21,506,430.32

	A	B	C	D	E	F	G	H	L	M	N
1	Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
2	*Completed Projects										
3	2		Dec-05	City of Reno	Chalk Creek TDS Loading to Truckee River Study: Possible TDS mitigation and pollution trade for TMWRF on Truckee River TDS TMDL. (Weir)	2	\$25,000.00	\$100.00		\$8,216.00	\$8,216.00
4	10		Jun-06	City of Reno	Watershed protection for the drinking water source of the Chalk Bluff Water Treatment Plant	5	\$211,000.00	\$150.00	\$35,000.00	\$26,500.00	\$61,500.00
5	11	B	Jun-06	City of Reno	Lower Steamboat Creek Restoration/Stabilization	6	\$86,000.00	\$50.00	\$80,000.00	\$35,000.00	\$115,000.00
6	13	B	Jun-06	City of Reno	Urban Storm Water Quality Improvements	7	\$66,000.00		\$150,000.00	\$0.00	\$150,000.00
7	52	A	Aug-08	City of Reno	Oxbow Park Bank Stabilization Pursue restoration and protection of the Truckee River within the City’s Oxbow Park property	38	\$207,750.00		\$69,250.00		\$69,250.00
8	73	B,C	Nov-09	City of Reno	Livestock Events Center Drainage Treatment System. Design and construction of a storm water structural control that will minimize pollutants by runoff before it enters the offsite public storm drainage system.	54	\$75,000.00		\$10,000.00	\$15,000.00	\$25,000.00
9	83	B,C	Feb-11	City of Reno	Livestock Events Center Drainage Treatment System Phase 2. Design and construction of a second storm water structural control that will minimize pollutants by runoff before it enters the offsite public storm drainage system.	64	\$97,500.00		\$12,500.00	\$20,000.00	\$32,500.00
10	119	A,E	Feb-13	City of Reno	Hazardous tree removal at Oxbow Park	89	\$32,250.00			\$16,531.00	\$16,531.00
11	120	A,E	Feb-13	City of Reno	Truckee River bank stabilization at Crooked Mile	90	\$30,615.00		\$18,175.00	\$2,988.00	\$21,163.00
12	134	E	Aug-13	City of Reno	Reducing non-point source pollution to the Highland Canal	100	\$400,000.00	\$845,000.00	\$243,000.00	\$20,000.00	\$263,000.00
13	144	B,C	Aug-14	City of Reno	Reducing non-point source pollution to the Highland Canal	108	\$329,000.00	\$800,000.00	\$250,000.00	\$20,000.00	\$270,000.00
14	151	B,C,E	Aug-14	City of Reno	Virginia Lake Water Quality Improvement Project Monitoring and Public Education	115	\$18,820.00		\$32,000.00	\$48,301.00	\$78,301.00
15	157	C	Feb-15	City of Reno	Truckee River Cleanup Crew	119	\$104,235.00			\$38,094.00	\$38,094.00
16	164	A,B,C	Aug-15	City of Reno	Cemetery Drain Water Quality, Erosion Control/Drainage	124	\$77,500.00		\$37,971.00	\$15,000.00	\$52,971.00
17	166	B,C	Aug-15	City of Reno	Virginia Lake Water Quality Improvements	126	\$100,000.00		\$150,000.00	\$47,420.00	\$197,420.00
18	169	C	Feb-16	City of Reno	Truckee River Cleanup Crew Yr. 2	129	\$47,787.00		\$46,187.00	\$22,782.00	\$68,969.00
19	183	C	Feb-17	City of Reno	Truckee River Cleanup	139	\$28,694.00		\$59,554.00	\$17,491.00	\$77,045.00
20	207	C	Aug-18	City of Reno	2nd Truckee River Cleanup Crew	157	\$23,472.00		\$9,405.00	\$500.00	\$9,905.00
21	28	A	Nov-06	City of Reno Public Works	Restoration of Riparian Vegetation in a Channel at Sapphire Ridge in the Chalk Creek Sub Watershed	16	\$18,375.00			\$6,125.00	\$6,125.00

	A	B	C	D	E	F	G	H	L	M	N
1	Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
2	*Completed Projects										
22	29	D	Feb-07	City of Reno Public Works	Chalk Creek Watershed Management for Water Quality to minimize Non-Point Source Pollution from Reaching the Truckee River	17	\$250,000.00	\$1,000,000.00		\$62,500.00	\$62,500.00
23	30	B	Feb-07	City of Reno Public Works	Downtown Eco-Channel Construction	18	\$370,000.00		\$0.00	\$0.00	\$0.00
24	48	D	Jun-08	City of Reno Public Works	Truckee River Watershed Map Web Tool Create inspired new Web-based watershed pages to compliment existing web efforts, in describing local watershed, and interconnectedness within and reliance upon the watershed.	34	\$80,000.00		-	\$20,000.00	\$20,000.00
25	59	B,D	Nov-08	City of Reno Public Works	Chalk Creek Watershed TDS/Sulfate Reducing Wetland Pilot Project Pilot project to model, design, construct, and monitor a small-scale sulfate-reducing bioreactor wetland system. Project provides opportunity to evaluate efficiency at treating TDS, phosphorus, nitrogen, and selenium from Chalk Creek Watershed.	42	\$163,000.00			\$50,000.00	\$50,000.00
26	60	B,D	Nov-08	City of Reno Public Works	McKinley Arts & Cultural Center LID Demonstration Project and Installation Training Retrofitting McKinley building with rain gutters to take water away from the building and solve current problems with moisture and irrigation spray; includes steps to protect the Truckee River watershed by providing key examples on stormwater treatment using natural systems.	43	\$115,500.00		\$300.00	\$55,009.00	\$55,309.00
27	15		Jun-06	Keep Truckee Meadows Beautiful	Truckee River Clean-up Day	8	\$13,175.00		\$6,627.60	\$24,367.50	\$30,995.10
28	27		Nov-06	Keep Truckee Meadows Beautiful	Truckee River Clean-Up Day 2007	15	\$24,730.00		\$8,248.70	\$24,405.00	\$32,653.70
29	40	E	Nov-07	Keep Truckee Meadows Beautiful	Truckee River Cleanup Day 2008	27	\$25,604.85		\$4,244.15	\$32,205.00	\$36,449.15
30	61	E	Nov-08	Keep Truckee Meadows Beautiful	Truckee River Cleanup Day 2009 Scheduled for Sept. 26, 2009; designed to raise awareness about the importance of a clean, healthy river while engaging residents in keeping the River clean.	44	\$26,975.00		-	\$47,599.00	\$47,599.00
31	72	A,C,D	Nov-09	Keep Truckee Meadows Beautiful	Truckee River Cleanup 2010. Expanding the annual Cleanup Day to include a spring and fall cleanup.	53	\$42,050.00		\$14,185.00	\$52,830.00	\$67,015.00
32	82	C,D	Oct-10	Keep Truckee Meadows Beautiful	Truckee River Cleanup 2011. litter prevention and removal and community education and removal of invasive weeds along Truckee River watersheds.	63	\$42,900.00		\$17,700.00	\$63,040.00	\$80,740.00
33	89		Sep-11	Keep Truckee Meadows Beautiful	Truckee River Cleanup 2012. Continue focus on litter prevention and removal and community education and removal of invasive weeds along the Truckee River.	69	\$44,950.00		\$17,350.00	\$75,500.00	\$92,850.00
34	115	C,D	Aug-12	Keep Truckee Meadows Beautiful	Truckee River Cleanup Day 2013	85	\$46,450.00		\$16,250.00	\$77,450.00	\$93,770.00

	A	B	C	D	E	F	G	H	L	M	N
1	Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
2	*Completed Projects										
35	126	C, D, E	Aug-13	Keep Truckee Meadows Beautiful	Truckee River Youth Education/Invasive Weed Pull/Cleanup 2014	94	\$57,050.00		\$47,330.00	\$77,210.00	\$124,540.00
36	154	C,D,E	Aug-14	Keep Truckee Meadows Beautiful	Watershed Youth Education, Invasive Weed Pull & River Cleanup 2015	117	\$46,000.00		\$23,800.00	\$92,740.00	\$116,540.00
37	156	C	Feb-15	Keep Truckee Meadows Beautiful	Truckee River Corridor Management Plan	118	\$90,000.00		\$22,000.00	\$1,500.00	\$23,500.00
38	165	C,D	Aug-15	Keep Truckee Meadows Beautiful	Truckee River Cleanup/Invasive weeds 2016	125	\$48,325.00		\$40,500.00	\$68,500.00	\$109,000.00
39	176	C,D	Aug-16	Keep Truckee Meadows Beautiful	2017 Spring Invasive Weed Pull & Fall Cleanup	133	\$60,625.00		\$15,000.00	\$104,300.00	\$119,300.00
40	193	C,D	Aug-17	Keep Truckee Meadows Beautiful	2018 Spring Invasive Weed Pull & Fall Truckee River Cleanup	147	\$69,760.00		\$15,000.00	\$29,932.00	\$44,932.00
41	204	C,D	Aug-18	Keep Truckee Meadows Beautiful	2019 Spring Invasive Weed Pull & Fall Truckee River Cleanup	154	\$31,640.00		\$14,500.00	\$83,272.00	\$97,772.00
42	84	E	Feb-11	Sierra Nevada Journeys	Watershed Education Initiative	65	\$10,000.00		\$6,000.00	\$560.00	\$6,560.00
43	96	E	Sep-11	Sierra Nevada Journeys	Watershed Education Initiative: in-class lessons and after-school programs that tie directly to field-based experiences within the Truckee River watershed.	75	\$10,010.00		\$1,872.00	\$1,600.00	\$3,472.00
44	112	E	Aug-12	Sierra Nevada Journeys	Watershed Education Initiative: deliver educational programs to youth in the Reno area to inspire students to learn about their local Watershed and empower them to protect/enhance river quality.	84	\$12,690.00		\$3,422.00	\$600.00	\$4,022.00
45	125	E	Feb-13	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	93	\$16,050.00		\$4,594.00	\$1,000.00	\$5,594.00
46	131	E	Aug-13	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	98	\$24,200.00		\$7,050.00	\$1,600.00	\$8,650.00
47	140	E	Feb-14	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	105	\$23,750.00		\$8,150.00	\$2,000.00	\$6,150.00
48	145	E	Aug-14	Sierra Nevada Journeys	Sierra Nevada Journeys' Watershed Education Initiative	109	\$23,900.00		\$3,938.00	\$6,840.00	\$10,088.00
49	158	E	Aug-15	Sierra Nevada Journeys	Watershed Education Intiative	120	\$28,484.00	\$850,000.00	\$6,250.00	\$7,200.00	\$13,450.00
50	167	E	Feb-16	Sierra Nevada Journeys	Watershed Education Initiative	127	\$33,041.00		\$7,250.00	\$10,440.00	\$17,690.00
51	179	E	Aug-16	Sierra Nevada Journeys	Watershed Education Initiative	136	\$28,446.00		\$6,250.00	\$9,000.00	\$15,250.00
52	184	E	Feb-17	Sierra Nevada Journeys	Watershed Education Initiative	140	\$32,998.00		\$2,610.00	\$10,440.00	\$13,050.00
53	190	E	Aug-17	Sierra Nevada Journeys	Watershed Education Program	145	\$35,065.00		\$2,700.00	\$10,200.00	\$12,900.00
54	195	E	Feb-18	Sierra Nevada Journeys	Watershed Education Initiative	148	\$46,376.00		\$12,707.00	\$15,385.00	\$28,092.00
55	205	E	Aug-18	Sierra Nevada Journeys	Watershed Education Initiative	155	\$36,207.00		\$2,917.00	\$12,238.00	\$15,155.00
56	50	A	Jun-08	The Nature Conservancy	Independence Lake Forest Management Planning Develop a forest management plan.--supports land management actions to protect lake quality against threat of catastrophic forest fires and resulting erosion.	36	\$39,668.00	\$1,080,000.00	-	\$14,760.00	\$14,760.00

	A	B	C	D	E	F	G	H	L	M	N
1	Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
2	*Completed Projects										
57	51	C	Jun-08	The Nature Conservancy	Independence Lake Public Access Management Planning Develop compatible public access management plan--support land management actions that will protect Indepondence Lake quality against threat of incompatible public use and recreation of lake and lands.	37	\$45,510.00		-	\$26,445.00	\$26,445.00
58	63		Nov-08	The Nature Conservancy	Independence Lake - Forest and Wildfire Management Funding for forest and wildfire management at Independence Lake. Funding is for part of a \$2,371,108 endowment for perpetual management of the forest at Independence Lake.	46	\$237,110.00		-	\$153,052.00	\$153,052.00
59	74	E	May-10	The Nature Conservancy	Independence Lake Woody Fuels Reduction for Fire Resilience. Implementation of actions that reduce the risk of catastrophic fire and subsequent erosion of sediment into the lake.	55	\$50,000.00		\$91,492.00		\$91,492.00
60	78	E	Oct-10	The Nature Conservancy	Independence Lake Woody Fuels Reduction for Fire Resilience - Year 3. Forest thinning on 80 acres surrounding Independence Lake for reduction of woody fuels.	59	\$60,000.00		\$32,000.00		\$32,000.00
61	88	D	Sep-11	The Nature Conservancy	Preventing Aquatic Invasive Species at Independence Lake. Primary measurable outcome will be the successful deterrence of future intoriductions of AIS into Independence Lake.	68	\$28,290.00	\$1,026,000.00	\$20,135.00		\$20,135.00
62	106	E	Aug-12	The Nature Conservancy	Independence Lake Woody Fuels Reduction for Fire Resilience--Yr 3 Supplemental Funding: implement forest thinning and woody fuels reduction on 80 acres surrounding Indepondences Lake Preserve.	80	\$30,000.00		\$43,740.00		\$43,740.00
63	117	E	Feb-13	The Nature Conservancy	Reduce woody fuel loading and reduce risk of severe wildfire around Independence Lake.	87	\$41,300.00		\$20,650.00		\$20,650.00
64	147	E	Aug-14	The Nature Conservancy	Optimizing Restoration Investments in the Truckee Watershed	111	\$50,000.00		\$58,075.00		\$58,075.00
65	187	A,C,E	Feb-17	The Nature Conservancy	Landscape Conservation Forecasting for the Truckee River Watershed	142	\$60,000.00		\$25,000.00	-	\$25,000.00
66	208	E	Aug-18	The Nature Conservancy of Nevada	Truckee River Watershed Forest Restoration	158	\$57,826.00		\$57,152.28	-	\$57,152.28
67	18		Jun-06	Truckee River Watershed Council	This Drains to the Truckee River Storm Drain Stenciling Pilot Project	9	\$9,300.00		\$0.00	\$3,380.00	\$3,380.00
68	55		Nov-08	Truckee River Watershed Council	Adopt-A-Stream: Keeping an Eye on the Truckee River Continuation of existing Adopt-A-Stream program in 2009 by supporting program manager, equipment and supplies, lab analysis, and volunteer retention/recruitment/training.	no					

	A	B	C	D	E	F	G	H	L	M	N
1	Project #	Category	Proposal Date	Grantee	Grant Description	Funded	Resolution Amount	Gift Received to Fund	Match - Monetary	Match - In Kind	Match total
2	*Completed Projects										
69	75	A,B,C	May-10	Truckee River Watershed Council	Truckee Wetlands Restoration Project-Phase 2. Develop a hydrologic analysis, restoration plan and design and phasing and obtain needed permits for restoration.	56	\$40,000.00		\$10,000.00	\$10,000.00	\$10,000.00
70	76	A,C	Oct-10	Truckee River Watershed Council	Coldstream Canyon Floodplain Restoration Project. Creek and floodplain restoration in the lower reaches of Coldstream Canyon.	57	\$135,000.00	\$1,120,000.00	\$521,260.00		\$521,260.00
71	100	A,C	Feb-12	Truckee River Watershed Council	Negro Canyon Restoration: Reduce Erosion to Donner Lake and the Truckee River by up to 175 tons annually.	77	\$25,000.00		\$253,868.00	\$6,000.00	\$259,868.00
72	105	A,E	Feb-12	Truckee River Watershed Council	Lacey Creek and Meadow Assessment: recommend restoration projects and management practices in the headwaters of the Little Truckee River.	79	\$50,000.00		\$8,500,000.00		\$8,500,000.00
73	107	A,C	Aug-12	Truckee River Watershed Council	Phase 2 Coldstream Canyon Floodplain Restoration: reduce erosion to the Truckee River through restoring a stream reach of Coldstream Canyon	81	\$196,000.00		\$772,760.00		\$772,760.00
74	118	A,C	Feb-13	Truckee River Watershed Council	Middle Martis Wetland Restoration-planning & design.	88	\$120,000.00		\$60,000.00	\$200,000.00	\$260,000.00
75	122	A,C	Feb-13	Truckee River Watershed Council	Truckee River Big Chief Corridor-Implementation	91	\$11,000.00		\$344,000.00		\$344,000.00
76	128	A,C	Aug-13	Truckee River Watershed Council	Truckee River Big Chief Corridor-Restoration	95	\$150,000.00		\$355,000.00	\$25,000.00	\$380,000.00
77	142	A,B,C	Feb-14	Truckee River Watershed Council	Truckee Wetlands Restoration Project-Phase 3,4&5 - Design	107	\$50,000.00			\$19,000.00	\$19,000.00
78	148	B,C	Aug-14	Truckee River Watershed Council	Donner Basin Watershed Assessment	112	\$70,000.00		\$25,000.00		\$25,000.00
79	160	A,C	Aug-15	Truckee River Watershed Council	Johnson Canyon Westside Restoration	121	\$25,000.00		\$79,000.00	\$6,000.00	\$85,000.00
80	171	A,C	Feb-16	Truckee River Watershed Council	Johnson Canyon Westside Restoration-Construction	131	\$67,000.00		\$79,000.00	\$6,000.00	\$85,000.00
81	177	A,B,C	Aug-16	Truckee River Watershed Council	Donner Creek Bank Stabilization Downstream of Railroad Culvert--final design	134	\$90,000.00		\$260,000.00	\$600.00	\$260,600.00
82	178	A,B,C	Aug-16	Truckee River Watershed Council	Donner Creek Concept Design	135	\$40,000.00		\$640,000.00	\$9,000.00	\$649,000.00
83	189	A,B, C	Feb-17	Truckee River Watershed Council	Big Chief: F4M Restoration Culvert Outflows	144	\$50,000.00		-	\$15,000.00	\$15,000.00
84	192	A,B,C	Aug-17	Truckee River Watershed Council	Truckee River Tributaries Sediment Reduction Project	146	\$165,000.00		\$41,250.00	\$900.00	\$42,150.00
85	200	A,B,C	Feb-18	Truckee River Watershed Council	Truckee Meadows Restoration Project- Phase 2 Construction	151	\$30,000.00		\$47,750.00	-	\$47,750.00
86	209	A,B,C	Aug-18	Truckee River Watershed Council	Restoration Projects: Donner Creek & Dry Creek Meadow	159	\$92,000.00		\$192,000.00	-	\$192,000.00
87	210	C,E	Aug-18	Truckee River Watershed Council	Truckee River Water Quality Monitoring Program	160	\$25,000.00		-	\$32,675.00	\$32,675.00



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Services
DATE: January 16, 2019
SUBJECT: **Report and Discussion regarding Ombudsman activities for calendar year 2018 and request for Board direction and possible authorization for the General Manager to renew the Ombudsman Contract with Tami Fruhwirth for Calendar Year 2019**

Summary

The Board of Directors has asked Staff to bring the Ombudsman contract back to them for review annually. Ms. Fruhwirth started her role as TMWA's Ombudsman in January of 2017. Staff recommends continuation of her contract with TMWA to provide Ombudsman services.

Background

On November 1, 2005, pursuant to Board direction, Truckee Meadows Water Authority entered into a Professional Services Agreement with Don Rhoden to provide Ombudsman services for TMWA customers. This contract was renewed annually, until Mr. Rhoden's resignation in late 2008. In December of 2008, TMWA entered in to a contract with Joanne Stralla, following Ms. Stralla's appointment to the Ombudsman position by the Board in November, 2008. With Ms. Stralla's passing in November of 2016, staff recommended Tami Fruhwirth as a possible candidate for the Ombudsman position. In February of 2017, the Board approved the appointment of Tami Fruhwirth as TMWA's Ombudsman. A copy of her contract is ***Attachment #1*** to this report.

Over the past 12 months TMWA has paid Ms. Fruhwirth \$2,700 for services rendered. This is a minimal expenditure for the advantage to our customers of having an independent Ombudsman to assist them.

AGREEMENT FOR SERVICES
(NRS 332 Service Providers)

THIS AGREEMENT FOR SERVICES ("**Agreement**") is made this 16 day of February, 2017, by and between **Tried and True Projects, NV** (hereinafter referred to as "**Contractor**") and Truckee Meadows Water Authority (hereinafter referred to as "**TMWA**").

RECITALS

WHEREAS, TMWA is authorized to engage the services of persons as independent contractor pursuant to NRS Chapter 332; and

WHEREAS, Contractor has represented it is duly qualified and licensed in the State of Nevada and Washoe County for the purposes of performing the Scope of Work herein;

WHEREAS, TMWA wishes to retain Contractor to perform certain services for TMWA and Contractor is willing to perform these services in accordance with the terms and provisions of this Agreement

1. **DEFINITIONS.** "TMWA" means the Truckee Meadows Water Authority, its directors, officers, employees and immune contractors (other than Contractor) as defined in NRS 41.0307.

2. **SCOPE OF WORK**

2.1. **Description of Work.** Contractor shall provide and perform the services set forth in the Scope of Work attached hereto as Exhibit A and incorporated herein by reference for and on behalf of TMWA (collectively the "Services") during the term of the Agreement.

2.2. **Competence to Perform Services.** Contractor represents that it and/or the persons it may employ possess all skills and training necessary to perform the Services described herein and required hereunder. Contractor shall perform the Services faithfully, diligently, in a timely and professional manner, and to the best of its ability, and in such a manner as is customarily performed by a person who is in the business of providing such services in similar circumstances. Contractor represents that neither the execution and delivery of this Agreement, nor the rendering of services by the Contractor hereunder, will violate the provisions of, or constitute a default under, any other contract or agreement to which the Contractor is a party or by which the Contractor is bound, or which would preclude the Contractor from performing the services required of the Contractor hereunder, or which would impose any liability or obligation upon TMWA for accepting such services. Contractor shall be responsible for the professional quality and technical accuracy of all Services furnished by Contractor to TMWA.

2.3 Time of Completion. This contract continues until either party gives notice as provided for in Section 6 of this Agreement.

2.4 Permits and Regulations. Before commencing with the performance of any work under this Agreement, the Contractor shall obtain all necessary permits and licenses as may be necessary. Before and during the progress of work under this Agreement, the Contractor shall give all notice and comply with all the laws, ordinances, rules and regulations of every kind and nature now or hereafter in effect promulgated by any Federal, State, County, or other Governmental Authority, relating to the performance of work under this Agreement. If the Contractor performs any work that is contrary to any such law, ordinance, rule or regulation, he shall bear all the costs arising therefrom. Contractor agrees to obtain all appropriate business licenses and provide a copy to TMWA prior to commencing work.

3. TMWA RESPONSIBILITIES. TMWA shall:

- a. Make available to the Contractor all technical data that is in TMWA's possession, reasonably required by the Contractor relating to the Contractor's Services.
- b. Provide access to and make all provisions for the Contractor to enter upon public and private lands, to the fullest extent permitted by law, as reasonably required for the Contractor to perform the Services under this Agreement.
- c. Examine all reports, correspondence, and other documents presented by the Contractor upon request of TMWA, and render, in writing, decisions pertaining thereto within a reasonable time so as not to delay the work of the Contractor.

4. TERM. This Agreement shall commence on the date first written above and shall terminate upon the completion of the Services, unless sooner terminated by either party as specified in Section 6.

5. COMPENSATION.

5.1 Amount. As compensation for all of Contractor's Services hereunder, TMWA agrees to pay Contractor compensation based upon time and materials and the attached fee schedule or compensation based upon a lump sum amount as provided for in the attached Scope of Work(s) hereinafter called the "**Contract Sum**". The Contract Sum represents full and adequate compensation for the completed work, and includes the furnishing of all materials, and all labor, equipment, tools, and appliances, and all expenses, direct or indirect, connected with the proper execution of the work

5.2 Payment. Payment by TMWA for services rendered by Contractor shall be due within thirty days upon receipt of invoices. If payment is not made in a timely manner, Contractor may, in the event TMWA fails to cure the deficiency after seven days

written notice from Contractor, suspend the services under this Agreement until Contractor has been paid in full. TMWA does not agree to and will not reimburse Contractor for expenses unless specifically provided otherwise in this Agreement.

5.3 Funding Out Clause. TMWA reasonably believes that funds can be obtained sufficiently to make all payments during the term of this agreement. If the TMWA does not allocate funds to continue the function performed by the Contractor obtained under this Agreement, this Agreement shall be terminated when appropriated funds expire.

6. TERMINATION.

6.1. Termination Without Cause. This Agreement may be terminated by TMWA without cause upon ten (10) days written notice to Contractor. If this Agreement is so terminated, Contractor shall be paid for all services satisfactorily rendered and expenses incurred to the date of receipt of notice of termination.

6.2 Cause Termination for Default or Breach. 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 Contractor 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 any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or
- (iii). If Contractor becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or
- (iv). If TMWA materially breaches any material duty under this Agreement and any such breach impairs Contractor's ability to perform; or
- (v). If it is found by TMWA that any quid pro quo or gratuities in the form of money, services, entertainment, gifts, or otherwise were offered or given by Contractor, or any agent or representative of Contractor, to any officer or employee of the State of Nevada with a view toward securing a contract or securing favorable treatment with respect to awarding, extending, amending, or making any determination with respect to the performing of such contract.

6.3. Opportunity to Cure. Termination upon a declared default or breach may be exercised only after service of formal written notice as specified in Section 6.2, 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.

6.4 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:

- (i). 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. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination;
- (ii). Contractor shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if so requested by TMWA;
- (iii). Contractor shall execute any documents and take any actions necessary to effectuate an assignment of this Agreement if so requested by TMWA;
- (iv). Contractor shall promptly deliver to TMWA possession all proprietary information in accordance with Section 16.

7. INSPECTION & AUDIT.

7.1 Books and Records. Contractor agrees to keep and maintain under general accepted accounting principles (GAAP) full, true and complete records, contracts, books, and documents as are necessary to fully disclose to TMWA, the State of Nevada or United States Government, or their authorized representatives, upon audits or reviews, sufficient information to determine compliance with all state and federal regulations and statutes.

7.2. Inspection & Audit. Contractor agrees that the relevant books, records (written, electronic, computer related or otherwise), papers, including, without limitation, relevant accounting procedures and practices of Contractor or its subcontractors, financial statements and supporting documentation, and documentation related to the work product shall be subject, at any reasonable time, to inspection, examination, review, audit, and copying at any office or location of Contractor where such records may be found, with or without notice by TMWA Auditor, or its contracted examiners, representatives of Washoe County, or any of their authorized representatives. Such records shall include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this

Agreement. Contractor shall require all subcontractors, insurance agents, and material suppliers to comply with the provisions of this Section. Contractor will cooperate fully and will cause all of Contractor's subcontractors to cooperate fully in furnishing or in making available to TMWA from time to time all such information, materials and data whenever requested. All subcontracts shall reflect requirements of this paragraph.

7.2.1 Recovery of Costs. If an audit inspection or examination in accordance with this section, discloses overcharges of any nature by the Contractor to TMWA in excess of one-half of one percent (0.5%) of the total contract billings, the reasonable actual cost of TMWA's audit shall be reimbursed to TMWA by the Contractor. Any adjustments and/or payments which must be made as a result of any such audit or inspection of the Contractor's invoices and/or records shall be made within a reasonable amount of time (not to exceed 90 days) from presentation of TMWA's findings to Contractor.

7.3 Period of Retention. All books, records, reports, and statements relevant to this Agreement must be retained a minimum three years. The retention period runs from the date of payment for the relevant goods or services by TMWA, or from the date of termination of the Agreement, whichever is later. Retention time shall be extended when an audit is scheduled or in progress for a period reasonably necessary to complete an audit and/or to complete any administrative and judicial litigation which may ensure.

8. INDEPENDENT CONTRACTOR. Contractor is associated with TMWA only for the purposes and to the extent specified in this Agreement, and in respect to performance of the contracted services pursuant to this Agreement, Contractor is and shall be an independent contractor and, subject only to the terms of this Agreement, shall have the sole right to supervise, manage, operate, control, and direct performance of the details incident to its duties under this Agreement. Nothing contained in this Agreement shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for TMWA whatsoever with respect to the indebtedness, liabilities, and obligations of Contractor or any other party. Contractor shall be solely responsible for, and TMWA shall have no obligation with respect to: (1) withholding of income taxes, FICA or any other taxes or fees; (2) industrial insurance coverage; (3) participation in any group insurance plans available to employees of TMWA; (4) participation or contributions by either Contractor or TMWA to the Public Employees Retirement System; (5) accumulation of vacation leave or sick leave; (6) unemployment compensation coverage provided by TMWA. Contractor shall indemnify and hold TMWA harmless from, and defend TMWA against, any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising or incurred because of, incident to, or otherwise with respect to any such taxes or fees. Neither Contractor nor its employees, agents, or representatives shall be considered employees, agents, or representatives of TMWA. TMWA and Contractor shall evaluate the nature of services and term negotiated in order to determine "independent contractor" status and shall monitor the work relationship throughout the term of the Agreement to ensure that the independent contractor relationship remains as such.

9. **INDEMNIFICATION BY CONTRACTOR.** To the fullest extent permitted by law, Contractor shall indemnify, hold harmless and defend, not excluding TMWA's right to participate, TMWA 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 Contractor, its officers, employees and agents, excepting therefrom any liability arising out of the sole negligence of TMWA.

10. **LIMITED LIABILITY.** TMWA will not waive and intends to assert available NRS chapter 41 liability limitations and other liability limitations available at law in all cases. Contract liability of both parties shall not be subject to punitive damages. Liquidated damages shall not apply unless otherwise specified in this Agreement or any incorporated attachments. Damages for any TMWA breach shall never exceed the amount of funds appropriated for payment under this Agreement, but not yet paid to Contractor, for the fiscal year budget in existence at the time of the breach. Contract damages for any Contractor breach shall not exceed 150% of the contract maximum "not to exceed" value. Contractor's tort liability shall not be limited. Neither party shall be responsible for the negligent acts of the other party in the performance of this Agreement.

11. **INSURANCE.**

11.1 **By Contractor.** Unless expressly waived in writing by TMWA, Contractor, as an independent contractor and not an employee of TMWA, must obtain and maintain policies of insurance in amounts specified in this Section 11 and pay all taxes and fees incident hereunto. TMWA shall have no liability except as specified in this Agreement. Contractor shall, at Contractor's sole expense, procure, maintain and keep in force the following insurance conforming to the minimum requirements specified below. Unless specifically specified herein or otherwise agreed to by TMWA, the required insurance shall be in effect prior to the commencement of work by Contractor.

11.2 **Form of Coverage.** Any insurance or self-insurance available to TMWA shall be excess of and non-contributing with any insurance required from Contractor. Contractor's insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by TMWA, Contractor shall provide TMWA with renewal or replacement evidence of insurance no less than thirty (30) days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by the Agreement, an insurer or surety shall fail to comply with the requirements of this Agreement, as soon as Contractor has knowledge of any such failure, Contractor shall immediately notify TMWA and immediately replace such insurance or bond with an insurer meeting the requirements.

11.2.1. **Additional Insured:** By endorsement to all liability policies, except Worker's Compensation and Professional Liability, evidenced by Contractor, TMWA, its officers, employees and immune Contractors as defined in NRS 41.0307, if any, shall be named as additional insureds for all liability arising from the Agreement.

11.2.2. Waiver of Subrogation: Each liability insurance policy shall provide that the insurance company waives all right of recovery by way of subrogation against TMWA, its officers, employees and immune contractors in connection with damage covered by any policy.

11.2.3. Deductibles and Self-Insured Retentions: Insurance maintained by Contractor shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by TMWA. Such approval shall not relieve Contractor from the obligation to pay any deductible or self-insured retention. Any deductible or self-insured retention shall not exceed \$5,000 per occurrence, unless otherwise approved by TMWA.

11.2.4. Approved Insurer: Each insurance policy shall be (i) issued by insurance companies authorized to do business in the State of Nevada or eligible surplus lines insurers acceptable to TMWA and having agents in Nevada upon whom service of process may be made, and (ii) currently rated by A.M. Best as "A-VII" or better.

11.3 Policies Required.

11.3.1 Workers' Compensation and Employer's Liability Insurance. Contractor shall provide proof of worker's compensation insurance as required by NRS 616B.627 or proof that compliance with the provisions of Nevada Revised Statutes, Chapters 616A-D and all other related chapters is not required.

11.3.2 Commercial General Liability Insurance. Contractor shall procure and maintain, during the term of this Agreement, occurrence comprehensive general liability insurance for limits of not less than One Million Dollars (\$1,000,000) for bodily injury and property damages, per occurrence, Two Million Dollars (\$2,000,000) products and completed operations aggregate, and Two Million Dollars (\$2,000,000) general aggregate. Coverage shall be on an occurrence basis and shall cover liability arising from premises, operations, independent contractors, completed operations, personal injury, products, civil lawsuits, Title VII actions and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

11.3.4 Professional Liability/Errors & Omissions Insurance. Not Required for Contractor Construction Contracts. Contractor shall procure and maintain, during the term of this Agreement, professional liability/errors and omissions insurance in the amount of not less than One Million Dollars (\$1,000,000) per claim. The policy shall have a retroactive date prior to commencement of the performance of this Agreement and a discovery period at least three (3) years after the later of termination or the date of substantial completion of the project.

11.3.5 Business Automobile Liability Insurance. Contractor shall procure and maintain, during the term of this Agreement, business automobile liability insurance in the amount of not less than One Million Dollars (\$1,000,000) per occurrence for bodily injury and property damage. Coverage shall be for "any auto", including owned, non-owned and hired vehicles.

11.4 Evidence of Insurance. Prior to the start of any Work, Contractor must provide the following documents to TMWA, Attention: Purchasing & Contracts, P.O. Box 30013, Reno, NV 89520-3013:

11.4.1 Certificate of Insurance. Contractor must provide a Certificate of Insurance form to TMWA to evidence the insurance policies and coverage required of Contractor.

11.4.2 Additional Insured Endorsements. An original Additional Insured Endorsement, signed by an authorized insurance company representative, must be submitted to TMWA, by attachment to the Certificate of Insurance, to evidence the endorsement of TMWA as additional insured.

11.4.3 Policy Cancellation Endorsement. Except for ten days notice for non-payment of premium, each insurance policy shall be endorsed to specify that without thirty (30) days prior written notice to TMWA, the policy shall not be cancelled, non-renewal or coverage and/or limits reduced or materially altered, and shall provide that notices required by this paragraph shall be sent by certified mailed to the address specified above. A copy of this signed endorsement must be attached to the Certificate of Insurance.

Compliance with the insurance requirements of this Agreement shall not limit the liability of Contractor or its sub-contractors, employees or agents to TMWA or others, and shall be in addition to and not in lieu of any other remedy available to TMWA under this Agreement or otherwise. TMWA reserves the right to request and review a copy of any required insurance policy or endorsement to assure compliance with these requirements.

12. GOVERNMENT OBLIGATIONS. Contractor shall be responsible for all applicable federal, state, and local government obligations. Contractor will be responsible to pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are the responsibility of Contractor in accordance with NRS Chapter 361. Contractor warrants that it has a valid business license. Contractor agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Agreement. TMWA may set-off against consideration due any delinquent government obligation.

13. ACCEPTANCE BY TMWA. It is expressly understood and agreed that all work done by the Contractor shall be subject to inspection and acceptance by TMWA and approval of work shall not forfeit the right of TMWA to require correction, and nothing contained herein shall relieve the Contractor of the responsibility of the work required

under the terms of this Contract until all work has been completed and accepted by TMWA

14. NOTICE. All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other party as indicated on Page 12 of this agreement.

15. TMWA OWNERSHIP OF PROPRIETARY INFORMATION. Any reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer code (which is intended to be consideration under the Agreement), or any other documents or drawings, prepared or in the course of preparation by Contractor (or its subcontractors) in performance of its obligations under this Agreement shall be the exclusive property of TMWA and all such materials shall be delivered into TMWA possession by Contractor upon completion, termination, or cancellation of this Agreement. Contractor shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of Contractor's obligations under this Agreement without the prior written consent of TMWA. Notwithstanding the foregoing, TMWA shall have no proprietary interest in any materials licensed for use by TMWA that are subject to patent, trademark or copyright protection.

16. PUBLIC RECORDS. Pursuant to NRS 239.010, information or documents received from Contractor may be open to public inspection and copying. TMWA will have the duty to disclose unless a particular record is made confidential by law or a common law balancing of interests. Contractor may clearly label individual documents as a "trade secret" or "confidential" provided that Contractor thereby agrees to indemnify and defend TMWA for honoring such a designation. The failure to so label any document that is released by TMWA shall constitute a complete waiver of any and all claims for damages caused by any release of the records. If a public records request for a labeled document is received by TMWA, TMWA will notify Contractor of the request and delay access to the material until seven working days after notification to Contractor. Within that time delay, it will be the duty of Contractor to act in protection of its labeled record. Failure to so act shall constitute a complete waiver.

17. CONFIDENTIALITY. Contractor shall keep confidential all information, in whatever form, produced, prepared, observed or received by Contractor to the extent that such information is confidential by law or otherwise required by this Agreement.

18. MISCELLANEOUS.

18.1 Force Majeure. Neither party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including, without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the

fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of the Agreement after the intervening cause ceases.

18.2 Remedies. Except as otherwise provided for by law or this Agreement, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages, and to a prevailing party reasonable attorneys' fees and costs.

18.3 Waiver of Breach. Failure to declare a breach or the actual waiver of any particular breach of the Agreement or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other breach.

18.4 Severability. If any provision contained in this Agreement is held to be unenforceable by a court of law or equity, this Agreement shall be construed as if such provision did not exist and the non-enforceability of such provision shall not be held to render any other provision or provisions of this Agreement unenforceable.

18.5 Assignment. Contractor shall neither assign, transfer nor delegate any rights, obligations or duties under this Agreement without the prior written consent of TMWA.

18.6 Proper Authority. Each party represents that all required authorizations have been obtained to execute this grant and for the compliance with each and every term hereof. Each person signing this Agreement warrants and represents to the other party that he or she has actual authority to execute this Agreement on behalf of the party for whom he or she is signing.

18.8 Arbitration. Any controversy of claim arising out of or relating to this Agreement, or the breach thereof, provided both parties agree, may be settled by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association and judgment upon the award rendered by the Arbitrators(s) may be entered in any court having jurisdiction thereof.

18.9 Jurisdiction. This Agreement and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada. Contractor consents to the jurisdiction of the Nevada district courts for enforcement of this Agreement. In the event the arbitration award is challenged, or the controversy proceeds to litigation instead of arbitration, any action or proceedings seeking to do so must be brought in the courts of the State of Nevada, County of Washoe, or if a party can acquire subject-matter jurisdiction, in the United States District Court for the District of Nevada. Each of the parties consents to the personal jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to venue laid therein.

18.10 No Unfair Employment Practices. In connection with the performance of work under this Agreement, Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation or age. Such Agreement shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of these provisions by Contractor shall constitute a material breach of contract. As used in this Article, sexual orientation means having or being perceived as having an orientation for heterosexuality, homosexuality or bi-sexuality.


18.11 Entire Contract and Modification. This Agreement and its integrated attachment(s) constitute the entire agreement of the parties and such are intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed consistent with the terms of this Agreement. Unless otherwise expressly authorized by the terms of this Agreement, no modification or amendment to this Agreement shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto.

The signature page follows this page.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed and intend to be legally bound thereby. All required insurance must be provided before this agreement is fully executed. This agreement becomes effective once all parties have signed.

CONTRACTOR

Company Name: Tried and True Projects
Address: 5401 Longley Ln #40, Reno NV
89511
Cont: Tami Fruhwirth
Phone: 775-420-5300
FAX
E-mail:
Tami.triedandtrueprojects@gmail.com

By: 

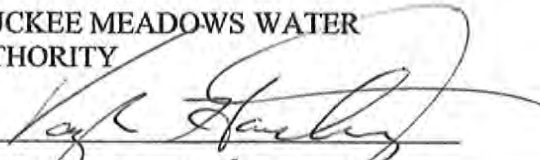
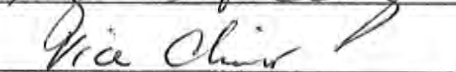
Printed Name: Tami Fruhwirth
Title: Consultant/President
Dated: February 16, 2017
Business License #: 040248-B1602156
Expires: 5-31-2017

This agreement was requested:

By: _____

TMWA

TRUCKEE MEADOWS WATER
AUTHORITY

By: 
Its: 

Dated: 2-15-17

Correspondence Address:

TMWA
P.O. Box 30013
Reno, NV 89520-30013
Attention: Maria Dufur
Purchasing & Contracts Administrator
Ph: 775-834-8056
Fax: 775-834-8153

Exhibit A
Services – Scope of Work

The Ombudsman is to act as an additional avenue of escalation for customer concerns and complaints, and as an independent advocate for TMWA customers. The Ombudsman will respond in a timely manner to any customer concerns, and will work with TMWA staff and within TMWA rules and guidelines in attempting to resolve any customer issues. The Ombudsman will provide a yearly summary of any customer contacts and their resulting resolutions.

TWWA Ombudsman									
Date	Time	Name of Person	Phone Number	Question	Solution		Follow-Up		Follow-Up Date
1/4/18	8:04 AM	Customer		Called regarding a question on her bill	Emailed to Customer Service				
1/4/18	9:00 AM	Unknown		Called and left no message	Emailed to Customer Service				
1/4/18	9:49 AM	Customer		Called and left name and number	Emailed to Customer Service	1/4/2018	Customer Service is following up with Customer		
1/18/18	9:38 AM	no message							
1/19/18	11:39 AM	no message							
1/19/18	1:17 PM	no message							
1/21/18	3:36 PM	no message							
1/22/18	9:36 AM	Unknown		Message would not play	Emailed to Customer Service	1/22/2018	Ombudsman Called and left a message	1/22/2018	Customer called back and said the problem was resolved
2/12/18	11:25 AM			No message					
2/12/18	11:14 AM			Customer -upset about water tech shutting off water	Emailed to Customer Service		XXX will resolve any issue.		
2/16/18	4:52 AM			Customer-number not in the system	Emailed to Customer Service	2/16/2017	Ombudsman called back-rang like a fax number		
2/20/18	5:02 AM			No message					
2/27/18	10:21 AM			Customer wanted a call back	Emailed to Customer Service- called Customer and left message				
2/28/18	9:30 AM			No message					
2/28/18	11:30am			Customer wanted a call back	Emailed to Customer Service	2/28/2018	Spoke to Customer -appreciated TMWA professionalism and rates		
3/2/18	11:00 AM			Customer wants to make payments by the phone	Emailed to Customer Service		No account information/left return message and no answer from customer		
3/11/18	4:10 PM			Customer wanted a TMWA Rep to speak at an AARP presentation	Emailed to Customer Service		XXXXXX call her back and set it up		
3/21/18	10:53 AM			Called twice with no message					
3/26/18	12:29 PM			No message					
3/27/18	9:38 AM			customer issues with Bill payment system changing	Returned her call-no answer-left message				
3/29/18	10:41 AM			customer issues with Bill payment system changing	Emailed to Customer Service		Customer Service had a rep help her through the system		
3/29/18	3:55 PM			Spoke to Customer she was worried about the bill insert not matching the news report on TV regarding the drought numbers-wanted to let TMWA know	Emailed to Customer Service				
					Emailed to Customer Service				

TWWA Ombudsman									
Date	Time	Name of Person	Phone Number	Question	Solution		Follow-Up		Follow-Up Date
4/2/18	9:19 AM			customer had issues but were resolved by customer service he called back to say how great the crew was	Customer Service followed through with field team and resolved				
4/2/18	9:27 AM			no message					
4/2/18	2:10 AM			no message					
4/3/18	9:57 AM			customer wanted move in	Customer Service followed through with team				
4/4/18	9:18 AM								
4/13/18	10:39 AM								
4/14/18	8:19 AM			hard to hear message about damage to driveway due to main leak	Emailed to Customer Service				
4/23/18	3:31 AM			no message					
4/24/18	2:21 AM			driveway damage due to leak	Emailed to Customer Service				
5/2/18	10:24 AM			no message					
5/19/18	3:52 PM			no message					
5/25/18	10:15AM			Customer called about her bill.	Emailed to Customer Service				
5/25/18	11:56AM			no message					
5/29/18	10:30AM			no message					
6/1/18	10:06 AM			no message					
6/4/18	10:31 AM			no message					
6/27/18	2:07 PM			customer mentioned sand in the water	TMWA made visit and determined it was a sprinkler system issue				
7/3/18	10:34 AM			no message					
7/10/18	9:45 AM			customer-water leak at rental-feels its TMWA leak	Field investigation-adjustment on leak				
7/10/18	2:55 PM			no message					
7/12/18	8:47 AM			no message					
7/13/18	9:42 AM			Customer called regarding meter	Emailed to Customer Service				
7/25/18	8:06 AM			no message					

TWWA Ombudsman									
Date	Time	Name of Person	Phone Number	Question	Solution		Follow-Up		Follow-Up Date
7/26/18	1:59: PM			no message					
8/9/18	10:29 AM			customer-water leak at rental-feels its TMW leak-wanted an adjustment for his tenant					
8/9/18	11:39 AM			Customer	Customer Service adjusted.				
8/13/18	1:52 PM			no message					
8/17/18	8:40 AM			Customer	Tours-called her back and gave her the number.				
8/17/18	8:57 AM			no message					
8/17/18	12:33 PM			Customer	Called him back and left a message				
8/22/18	9:32 AM			Customer	Senior deposit too high on his fixed income				
8/24/18	9:52 AM			Customer					
8/27/18	9:01 AM			Customer					
8/28/18	2:35PM			Customer	Customer Service adjusted it.				
9/4/18	8:48 AM			no message					
9/4/18	3:00 PM			left message					
9/6/18	4:36 PM			called back left message					
9/7/18	10:52 AM			no message					
9/7/18	3:16 PM			left another message with customer-no return call					
9/24/18	11:24AM			no message					
9/25/18	10:14 AM			no message					
9/30/18	12:07 PM			no message					
10/1/18	11:20 AM			no message					
10/2/18	12:17 PM			several bills needing to be consolidated	Customer Service handled it				
10/2/18	12:29 PM			no message					
10/4/18	1:33 PM			Customer from a home owner association needed to know about rate increase next year	returned information to her voicemail				
10/15/18	11:53 AM			Customer-needed deposit waived-wife died	Customer Service put him on autopay				
10/23/18	11:48 AM			no message					
11/16/18	9:20 AM			no message					
12/18/18	3:38 AM			Customer left a message	She wanted a return call-she vented about a phone call to Nebraska and wanted the calls answered locally. I listened. She said her issue was resolved.				



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: January 8, 2019
SUBJECT: General Manager's Report

Attached please find the written reports from the Management team including the Operations Report (*Attachment A*), the Water Resource and the Annexation Activity Report (*Attachment B*), and the Customer Services Report (*Attachment C*).

Also, included in your agenda packet are press clippings from December 6, 2018 through January 9, 2019.

At the December Board meeting, the Board approved the Third Amendment to the West Reno Water Company purchase agreement. The Third Amendment extended the closing date to no later than February 27, 2019. The extension was needed to give the parties more time to finalize the closing documents and to give West Reno time to complete the mandatory pre-closing work related to the well 10 detention basin lining and Boomtown hotel/casino's private water facilities. Staff is working with the parties to finalize all closing documents and is making progress, but has not received comments back from all parties on the closing documents. Staff is also working with the parties to ensure the work related to the detention basin and Boomtown's private water facilities is completed in accordance with TMWA's requirements. Lastly, staff is working to finalize the ancillary agreements with Reno Land and St. John Properties and is waiting for comments on drafts back from those parties. Staff intends to bring all final closing documents and the ancillary agreements to the Board for review and approval before closing the transaction. At this time, staff believes the above-described work could be completed prior to the February 27, 2019 closing deadline, however, there are a number of actions to be taken by third parties and other circumstances beyond TMWA's control that could delay closing and require another extension should the Board desire to do so.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
BY: Bill Hauck, Senior Hydrologist
DATE: January 9, 2019
SUBJECT: January 2019 Operations Report

Summary

- Customer demands are at wintertime lows
- Lake Tahoe is 61% of maximum storage capacity
- Combined upstream reservoir storage is still in great shape at 64% of capacity
- Snowpack is on solid footing at about 90% of normal in both basins
- The overall water supply status for the region as of January 01 is very good
- Hydro revenue for December 2018 was an estimated \$109,000

(A) Water Supply

- **River Flows** - Truckee River flow at the CA/NV state line is just slightly below normal for this time of year at 360 cubic feet per second (CFS) due to TROA Credit Storage operations. The median flow for January 9th based on 109 years of record is 398 CFS.
- **Reservoir Storage** - The elevation of Lake Tahoe is currently 6226.75 feet, up by about 1/10th of a foot due to the wintry weather experienced last weekend. Tahoe is now 2.35' below its legal maximum storage elevation of 6229.10' but is still just about 2/3rd full (@ 61% of capacity). Overall, Truckee River reservoir system storage is in very good shape as well at 64% (almost 2/3) of maximum capacity. Storage values for each reservoir as of 1/9 are as follows:

Reservoir	Current Storage (Acre-Feet)	% of Capacity (Percent)
Tahoe	456,300	61%
Boca	6,005	15%
Donner	3,142	33%
Independence	13,870	79%
Prosser	6,131	21%
Stampede	194,358	86%

Besides the 16,597 acre-feet of storage in Donner and Independence reservoirs, TMWA has 18,929 acre-feet of water stored between Tahoe, Boca and Stampede reservoirs under the terms of TROA. TMWA's combined upstream reservoir storage is approximately 36,526 acre-feet as of this morning.

- **Snowpack** - The regional water supply is on solid footing at about 1/3rd of the way through the traditional snowpack building season. December was not a great month as far as winter precipitation was concerned. But a nice series of winter storms over this past weekend has snowpack at about 90% of normal in both the Lake Tahoe and Truckee River basins.

(B) Water Production

Demand - Customer demand is at wintertime lows. Consumption averaged 36 million gallons per day (MGD) last week. Surface water from the Chalk Bluff water treatment plant provided 97% and groundwater the other 3% of the supply required to meet demand. Customer demands should remain quite constant over the next couple of months.

(C) Hydro Production

Generation - Average Truckee River flow at Farad (CA/NV state line) for the month of December averaged 345 cubic feet per second (CFS). TMWA's Fleish plant was off-line the entire month of December for scheduled maintenance. The Verdi plant was brought back on-line on December 5th after being down for scheduled maintenance in November. And the Washoe plant was off-line between 12/11 and 12/20 for scheduled maintenance. Statistics for the month are as follows:

Hydro Plant	Days On-Line	Generation (Megawatt hours)	Revenue (Dollars)	Revenue (Dollars/Day)
Fleish	0	0	\$ 0	\$ 0
Verdi	27	1,019	\$ 73,185	\$ 2,361
Washoe	21	488	\$ 35,424	\$ 1,143
Totals	48	1,507	\$ 108,609	\$ 3,504



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager, Water Resources
DATE: 8 January 2019
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	4,713.99 AF
Purchases of water rights	0.00 AF
Refunds	0.00 AF
Sales	– 34.12 AF
Adjustments	0.10 AF
Ending Balance	4,679.97 AF

Price per acre foot at report date: \$7,600

FISH SPRINGS RANCH, LLC GROUNDWATER RESOURCES

Through the merger of Washoe County's water utility, TMWA assumed a Water Banking and Trust Agreement with Fish Springs Ranch, LLC (FSR), a subsidiary of Vidler. Under the Agreement, TMWA holds record title to the groundwater rights for the benefit of FSR. FSR may sell and assign its interest in these groundwater rights to third parties for dedication to TMWA for a will-serve commitment in Charge Areas where TMWA can deliver groundwater from the Fish Springs groundwater basin. Currently, Area 10 (Stead-Silver Lake-Lemmon Valley) is the only Charge Area where TMWA can deliver Fish Springs groundwater. The following is a summary of FSR resources, which staff will continue to provide to the Board through this report.

Beginning Balance	8,000.00 AF
Committed water rights	92.98 AF
Ending Balance	7,907.02 AF

Price per acre foot at report date: \$35,000¹

¹ Price reflects avoided cost of Truckee River water right related fees and TMWA Supply & Treatment WSF charge.

WATER SERVICE AREA ANNEXATIONS

There have been no annexations since the date of the last report.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: January 16, 2019
SUBJECT: **December Customer Service Report**

The following is a summary of Customer Service activity for December 2018.

Ombudsman

- Customer called to complain that call center calls are not answered locally, after she was done she had no further issues.

Communications

Customer outreach in December included:

- TMWA employees participated in Reno Rodeo Denim Drive and collected approximately enough clothing for 20 kids.
- TMWA employees had an internal bake sale and raised \$759.00 to donate to the Camp Fire Evacuation Relief Fund being administered by the North Valley Community Foundation.
- TMWA employees participated in the Be a Santa to a Senior Project and filled 40 tags for local Senior Citizens.

Conservation (January 1 – December 31)

- 6,053 Water Watcher Contacts
- 2,401 Water Usage Reviews

Customer Calls – December

- 7,318 phone calls handled
- Average handling time – 4 minutes, 22 seconds per call
- Average speed of answer – 18 seconds per call

Billing – December

- 128,930 bills issued
- 5(<.1%) corrected bills
- 18,321 customers (14.0%) have signed up for paperless billing to date.

Service Orders –December (% is rounded)

- 6,129 service orders taken
- 2,976 (49%) move-ins / move-outs
- 824 (14%) cut-out-for-non-payment and cut-in after receiving payments, including deposits and checks for tamper
- 512 (8%) zero consumption meter checks
- 457 (7%) re-read meters
- 582 (9%) new meter sets and meter/register/ERT exchanges and equipment checks
- 350 (6%) problems / emergencies, including cut-out for customer repairs, dirty water, no water, leaks, pressure complaints, safety issues, installing water meter blankets, etc.
- 115 (2%) high-bill complaints / audit and water usage review requests
- 313 (5%) various other service orders

Remittance – December

- 32,359 mailed-in payments
- 25,578 electronic payments
- 30,428 payments via RapidPay (EFT)
- 36,569 one-time bank account payments
- 6,339 credit card payments
- 744 store payments
- 2,004 payments via drop box or at front desk

Collections –December

- 14,166 accounts received a late charge
- Mailed 7,837 10-day delinquent notices, 6.1% of accounts
- Mailed 1,727 48-hour delinquent notices, 1.3% of accounts
- 302 accounts eligible for disconnect
- 238 accounts were disconnected (including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection)
- 0.16% write-off to revenue

Meter Statistics – Fiscal Year to December 31

- 0 Meter retrofits completed
- 548 Meter exchanges completed
- 824 New business meter sets completed
- 125,839 Meters currently installed



TMWA Board Meeting

Wednesday, January 16, 2019

Press Clippings

December 5, 2018 – January 9, 2019



Winter Wonderland, Downtown Reno

Cloud seeding off to a strong start for 2018-19 winter season

December 10, 2018 | By: Jay Adams

Denver Water and Colorado River partners happy for fresh powder now, and extra water later.

Ask any skier or snowboarder and they'll tell you there's lots of fresh powder in the mountains this fall.

While the wave of snow-bearing storms has been welcomed by ski resorts, the storms also have been good news for Colorado's cloud-seeding operations.

Cloud seeding is a weather modification technique used across western Colorado to enhance snowfall, boosting mountain snowpack.

"Cloud seeding doesn't make clouds, it's about getting more snow out of a storm," said Joe Busto, cloud seeding program manager with the [Colorado Water Conservation Board](#). "We need good, [juicy](#) storms for the process to work effectively."

The [technique](#) uses a propane-fired generator to send tiny particles of silver iodide into the sky. Winds lift the particles into the clouds where they attract water vapor, grow, and fall as snowflakes. Silver iodide is the industry standard material used in cloud seeding, and independent scientific studies have shown it to be environmentally [safe to use](#) for seeding operations.



Eric Hjermstad, field operations director at Western Weather Consultants, lights a cloud seeding generator north of Silverthorne, Colorado.

"There are storm clouds that blow through Colorado that may have plenty of liquid, but not enough particles to form snowflakes," Busto said. "What we're doing is adding more particles into the clouds and using natural processes to harvest that water vapor and squeeze more snow out of a storm. Silver iodide is essentially a dust particle for cloud vapor to bond to."

Cloud seeding is most effective in average-to-wet winters, when multiple storms loaded with moisture come through.

"The dry winters are when everyone hopes cloud seeding can help with the snow, but unfortunately that's not how it works," Busto said. "We gauge success by looking at snow totals over the years, not single seasons."

The state Department of Natural Resources has permitted [seven cloud-seeding programs](#) in Colorado. Around 40 organizations typically spend roughly \$1 million a year on the programs.

Since 2012, the Front Range Water Council has helped fund one of those programs: the Central Colorado Mountains River Basin Cloud Seeding Program.

The council includes Denver Water, Aurora Water, Board of Water Works of Pueblo, Colorado Springs Utilities, Northern Water, Southeastern Colorado Water Conservancy District and Twin Lakes Reservoir & Canal Company. Other partners in the program include the [Colorado Water Conservation Board](#), the [Colorado River Water Conservation District](#), Breckenridge, Keystone and Winter Park ski areas, and water utilities in Arizona, southern California and Nevada.

The partners pay for the operation and maintenance of four high-elevation remote control generators and more than 20 manually operated generators. The machines seed the clouds that pass over high-elevation portions of Eagle, Grand, Pitkin and Summit counties.

The generators are placed in strategic locations to boost snowpack in the Upper Colorado River Basin.

Before cloud seeding can begin, specific weather conditions must be met, such as which way the wind is blowing, as well as the temperature and height of the clouds. Operators also focus on storms carrying large amounts of moisture. All operations are monitored and regulated by the state of Colorado.



A remote-operated cloud seeding generator in Grand County, Colorado, is operated by Desert Research Institute and seeds clouds north of Winter Park Ski Resort. Critics have questioned the effectiveness of cloud seeding in the past, but Busto points to [independent scientific studies](#) that show when conditions are right, cloud seeding can boost snowfall by [5 to 15 percent](#). That's roughly equal to getting an extra inch of snow out of a 10-inch snowstorm.

"You can't seed every storm," he said. "Only about 10 to 14 storms that pass through the state each winter meet the criteria."

The dry winter of 2017-18 is an example of how dependent cloud seeding is on the existing weather conditions.

"Last winter, we planned to run generators for 2,000 hours in the target region. But, unfortunately, conditions were only favorable to seed for 1,200 hours," said Dave Kanzer, deputy chief engineer at the Colorado River District and manager of the Central Colorado Mountains River Basin Cloud Seeding Program.

This season's winter is off to a better start, according to Kanzer.

“We’ve already had six seedable storms this season and approximately 272 hours of seeding operations, so we’re above average for this time of year, and we are optimistic that we can make a positive difference for water suppliers, skiers and riders,” he said.

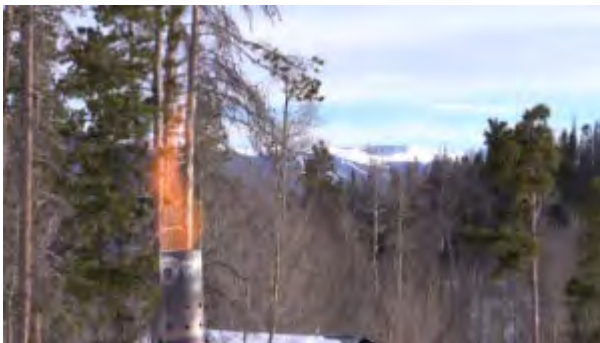
[Desert Research Institute](#) and Western Weather Consultants are the contractors for the operational seeding activities of the program. They also estimate the impact of the seeding operations using [automated snow monitoring sites](#), ski resort data and weather models.

And it’s worked, according to reports prepared by Western Weather Consultants.

They say during years when conditions are ripe for cloud seeding, their operations have added an average of [60,000 acre-feet](#) of water to the target area in the Upper Colorado River Basin.

“A couple inches here and there add up,” said Eric Hjermsstad, field operations director at Western Weather. “If you consider 1 inch of extra snow spread across 300 square miles, that’s a big boost to the water supply.”

Denver Water participated in cloud-seeding programs in the early 1950s and 1980s and picked up again following the 2002-03 drought.



A manually operated cloud seeding generator north of Silverthorne, Colorado. The machine boosts snowpack in the Upper Colorado River Basin, but also enhances snow at Keystone Ski Resort seen in the distance. “Mountain snowpack provides 80 percent of our water supply,” said Dave Bennett, director of water resource strategy at Denver Water. “While it’s tough to pinpoint the exact impact of cloud seeding, Denver Water, the ski areas and our partners in the Front Range Water Council feel there is enough benefit to support the program.”

Since cloud seeding’s early days back in the mid-1900s, advancements in technology have dramatically improved cloud-seeding efforts, according to Busto.

One of the biggest advancements is the development of remote control cloud-seeding generators. Those machines can be placed at higher elevations, where they are closer to the clouds and thus more effective. They also don’t require someone to manually ignite hard-to-reach generators if a storm passes through in the middle of the night.

“This summer, two manually operated machines near Leadville and Beaver Creek were replaced with state-of-the art remote control generators,” Busto said. “Our goal is to continue adding more of these machines, so we can be more efficient with our seeding operations.”

Advancements in weather forecasting and monitoring have also improved.

New developments include high-resolution weather modeling, simulated weather balloon launches, ceilometers that measure cloud base, and radiometers that characterize super-cooled liquid water to help determine when to seed during a storm system.

“These advancements provide more up-to-date data,” Hjerstad said. “The more information we have about atmospheric conditions, the more efficient we can be about when to seed.”



Cloud seeding generators are located in Eagle, Grand, Pitkin and Summit counties. There are seven cloud seeding programs in Colorado. While cloud seeding benefits water supply, ski resorts also get a boost. That's why Breckenridge, Keystone and Winter Park ski areas help fund the program.

“We’ve been cloud seeding on and off over the past 30 years,” said Doug Laraby, planning director at Winter Park Ski Resort. “If we can add a few more inches, that’s great for skiers. And when the snow melts, it’s great for water supply.”

As cloud-seeding programs across the West advance, collaboration among Colorado River water users has grown. In 2018, Colorado, Arizona, California, Nevada, New Mexico, Utah and Wyoming have agreed to cooperatively fund cloud-seeding programs for at least another nine years.

That's because cloud seeding is an important element of the [Colorado River Basin Drought Contingency Plan](#), which aim to keep water levels as high as possible in drought-depleted lakes Powell and Mead and to help ensure the basin states remain in compliance with the [Colorado River Compact](#).

“The cloud-seeding partnerships have never been stronger,” said Kanzer, of the Colorado River District. “We have great synergy with complementary and diverse contributions from both sides of the Continental Divide in Colorado and from across the entire Colorado River Basin to help meet the regional water supply needs of the future.”

Great Basin Water Network Gets First Executive Director

December 9, 2018 ThisIsReno

The Great Basin Water Network's board of directors announced this week that it has hired Kyle Roerink as the organization's first executive director. The hiring comes as the organization continues to fight the Southern Nevada Water Authority's 300-mile, \$15 billion pipeline.



Image: Kyle Roerink.

Roerink, who worked for Rep. Dina Titus and the YES on Question 6 energy campaign, will lead the nonprofit as it fights legal battles in state and federal courts.

The group said that it defends the integrity of Nevada water law. Roerink will continue the organization's advocacy for smart conservation practices.

"For 13 years, the Water Network has been fueled by a volunteer army that has unflinchingly worked to defeat a project that will harm SNWA ratepayers, destroy our natural resources, and decimate local communities," said Abby Johnson, president of the Board. "We've worked to secure major victories in courts, the Legislature and in regulatory bodies. But, thanks to the ratepayer-funded war chest of SNWA, the battle is far from finished. The board and countless members of our community who have selflessly invested time, money and effort will remain committed, but we believe it's time to take this fight to the next level and bring on full-time staff."

Roerink said he was grateful for the new role.

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"For years, I have watched the Water Network and its legion of dedicated volunteers do what many thought was impossible: Stop the water grab in its tracks," he said. "(The Network) has united a coalition like no other in the state to advocate for sound water policies. It is a privilege to stand with the organization on the front lines as it continues to fight this costly boondoggle."

Sierra Snowpack Could Drop Significantly By End of Century

Berkeley Lab working with water managers to produce “actionable science”

News Release [Julie Chao](#) (510) 486-6491 • DECEMBER 11, 2018

A future warmer world will almost certainly feature a decline in fresh water from the Sierra Nevada mountain snowpack. Now a new study by the Department of Energy’s Lawrence Berkeley National Laboratory (Berkeley Lab) that analyzed the headwater regions of California’s 10 major reservoirs, representing nearly half of the state’s surface storage, found they could see on average a 79 percent drop in peak snowpack water volume by 2100.

What’s more, the study found that peak timing, which has historically been April 1, could move up by as much as four weeks, meaning snow will melt earlier, thus increasing the time lag between when water is available and when it is most in demand.



Berkeley Lab researchers analyzed the headwaters of these 10 major California reservoirs. (Credit: Berkeley Lab)

Published recently in the journal *Geophysical Research Letters*, [“The Changing Character of the California Sierra Nevada as a Natural Reservoir”](#) aims to answer when and how the snowpack and snow melt will change – including whether there are variations by region or elevation – by analyzing climate simulations at mid-century and the end of the century across five different regional climate models.

“This study is unique in that we’re sampling across a community of models so we can see if models disagree at mid-century and end of century across a number of different snowpack measures, such as peak timing, total water volume, and melt rate,” said [Alan Rhoades](#), a Berkeley Lab postdoctoral fellow and lead author of the study. “What we found is the models usually disagree more at mid-century, but by end century they are pretty much in unison with another that under a high-emissions scenario there will be a dramatic decline in Sierra Nevada snowpack by 2100.”

What was also distinctive about this research is that the scientists worked directly with water managers with the aim of producing “actionable science.” That included getting feedback from water managers on what metrics would be most useful for resource planning purposes.



Berkeley Lab researcher Alan Rhoades, lead author of a new study on the Sierra snowpack. (Courtesy Alan Rhoades)

"Water managers are constantly competing between how much flood risk can they handle with reservoir storage and how much supply they can provide for urban and agricultural users," Rhoades said. "We engage with them, and say, hey, is this a useful way to look at mountain snowpack issues?"

Mountain snowpack is a critical source of water for California, and much of it comes in a very narrow window. "Our precipitation is really intermittent and extremes-driven," Rhoades said. "We basically get 50 percent of our annual precipitation in five to 15 days, or one to two weeks. Our water demand is highest during the summer months when we don't get a lot of precipitation, so we really rely on mountain snowpack as a stopgap for our water supply."

Another notable feature of California storms is that they are relatively warm. "So as the world continues to warm, these storms will get even warmer and won't readily get to freezing, whereby you could have snowfall or snow accumulation and the persistence of snow on the surface," he said.

As a result, the amount of snow is projected to decrease while rain could increase, although this study did not look at rainfall.

For this study, Rhoades and his co-authors – Berkeley Lab climate scientist Andrew Jones and UC Davis Assistant Professor of Regional Climate Modeling Paul Ullrich – analyzed nine simulations across five different regional climate models that are part of the North American CORDEX, which is overseen by a group of scientists who coordinate their data protocols in order to be able to isolate and analyze cause and effect. The simulations were run at resolutions of 25 km and 50 km and assumed a high-emissions scenario, as defined by the U.N. Intergovernmental Panel on Climate Change.

The scientists analyzed snowpack upstream of 10 major reservoirs – three in Northern California, three in Central California, and four in Southern California. On average the climate models projected 79 percent less snowpack at peak timing by the end of the century compared with historical levels and peak timing shifted four weeks earlier. The peak timing is important to water managers as an indicator of the start of the melt season.

Another finding was a more dramatic decline in snowpack in Northern California, especially by mid-century, than in other parts of the state. The reason for that, Rhoades said, may be because mountains in the northern Sierras have lower average elevations than those in the central and southern Sierras and therefore are less capable of changing storm phase from rain to snow.

Additionally, the study also found that snow melt rates will decrease. So the total snow season, which includes both the accumulation and melt portion of the season, will decrease by 20 days at mid-century and 39 days by end century (primarily in the accumulation portion of the season). This is partly because future storm systems will produce less snow but also because with the peak timing shifting to earlier in the year, the days are shorter and less energy is available to melt the snow.

The recent National Climate Assessment reached similar conclusions about declining snowpack in a warmer world, with earlier peaks and slower melting. "The snowpack literature is converging pretty much to the same general conclusions at a continental-to-mountain region level in a warming future," Rhoades said. He added that the new Berkeley Lab study addresses some of the research gaps in the National Climate Assessment in three ways – by analyzing snowpack across multiple models, which allows them to look at the uncertainty associated with climate model choice; by analyzing the data in more water management relevant regions; and by integrating input from stakeholders to make the data more useful.

The study was funded by the [Hyperion Project](#) under the DOE Office of Science. Hyperion, led by Berkeley Lab and UC Davis, aims to understand and develop metrics for hydroclimate data for four water basins in the United States (California, Colorado, Susquehanna, and South Florida). This metric for the Sierra Snowpack might be useful for water managers and could enhance scientist-stakeholder engagement to interrogate climate model performance in new ways.

The scientists are currently in the process of evaluating other snow-dependent regions such as Colorado and Susquehanna associated with the Hyperion Project.

Supercomputers at the [National Energy Research Scientific Computing Center \(NERSC\)](#), a DOE Office of Science User Facility, were used to process the NA-CORDEX data.

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The City of Reno's plan for trash in the Truckee River

by Zachary Slotemaker
Monday, December 10th 2018

Reno, Nev. News 4 - Fox 11 — The City has recently received a \$23,472 from the Truckee River Fund at the Community Foundation of Western Nevada [to fund an additional crew to clean up the Truckee River](#).

Lately Reno locals have been noticing trash building up from Arlington Avenue to Lake Street along the river.

The city has decided to hire a handful of paid workers to focus on cleaning up downtown Reno as well as the Truckee River that runs through it.

The new cleaning crew will only work four days out of the week to make sure the river is clean.

This year, the Keep Truckee Meadows Beautiful program cleaned out over 24,000 lbs of trash and the year before that they cleaned out 30,000 lbs.

Nevada Department of Wildlife says that these plastics are extremely harmful to the local ecosystem that the Truckee river brings through downtown.

Both, bio-degradeable and non bio-degradeable are harming to the animals in the river. This includes: geese, ducks, pigeons, fish and others.

Plastics can choke or trap animals as well fill the stomachs of fish, causing their digestive tract to clog and die a very slow death, according to Nevada Department of Wildlife.

NDOW says that you can do your part by picking up trash when you see it or call the City when you see a buildup.

New climate model to be built from the ground up

Facing the certainty of a changing climate coupled with the uncertainty that remains in predictions of how it will change, scientists and engineers from across the country are teaming up to build a new type of climate model that is designed to provide more precise and actionable predictions.

Leveraging recent advances in the computational and data sciences, the comprehensive effort capitalizes on vast amounts of data that are now available and on increasingly powerful computing capabilities both for processing data and for simulating the Earth system.

The new model will be built by a consortium of researchers led by Caltech, in partnership with MIT; the Naval Postgraduate School (NPS); and the Jet Propulsion Laboratory (JPL), which Caltech manages for NASA. The consortium, dubbed the Climate Modeling Alliance (CliMA), plans to fuse Earth observations and high-resolution simulations into a model that represents important small-scale features, such as clouds and turbulence, more reliably than existing climate models. The goal is a climate model that projects future changes in critical variables such as cloud cover, rainfall, and sea ice extent more accurately — with uncertainties at least half the size of those in existing models.

“Projections with current climate models — for example, of how features such as rainfall extremes will change — still have large uncertainties, and the uncertainties are poorly quantified,” says Tapio Schneider, Caltech’s Theodore Y. Wu Professor of Environmental Science and Engineering, senior research scientist at JPL, and principal investigator of CliMA. “For cities planning their stormwater management infrastructure to withstand the next 100 years’ worth of floods, this is a serious issue; concrete answers about the likely range of climate outcomes are key for planning.”

The consortium will operate in a fast-paced, start-up-like atmosphere, and hopes to have the new model up and running within the next five years — an aggressive timeline for building a climate model essentially from scratch.

“A fresh start gives us an opportunity to design the model from the outset to run effectively on modern and rapidly evolving computing hardware, and for the atmospheric and ocean models to be close cousins of each other, sharing the same numerical algorithms,” says Frank Giraldo, professor of applied mathematics at NPS.

Current climate modeling relies on dividing up the globe into a grid and then computing what is going on in each sector of the grid, as well as how the sectors interact with each other. The accuracy of any given model depends in part on the resolution at which the model can view the Earth — that is, the size of the grid’s sectors. Limitations in available computer processing power mean that those sectors generally cannot be any smaller than tens of kilometers per side. But for climate modeling, the devil is in the details — details that get missed in a too-large grid.

For example, low-lying clouds have a significant impact on climate by reflecting sunlight, but the turbulent plumes that sustain them are so small that they fall through the cracks of existing models. Similarly, changes in Arctic sea ice have been linked to wide-ranging effects on everything from polar climate to drought in California, but it is difficult to predict how that ice will change in the future because it is sensitive to the density of cloud cover above the ice and the temperature of ocean currents below, both of which cannot be resolved by current models.

To capture the large-scale impact of these small-scale features, the team will develop high-resolution simulations that model the features in detail in selected regions of the globe. Those simulations will be nested within the larger climate model. The effect will be a model capable of “zooming in” on selected regions, providing detailed local climate information about those areas and informing the modeling of small-scale processes everywhere else.

“The ocean soaks up much of the heat and carbon accumulating in the climate system. However, just how much it takes up depends on turbulent eddies in the upper ocean, which are too small to be resolved in climate models,” says Raffaele Ferrari, a Cecil and Ida Green Professor of Oceanography at MIT.

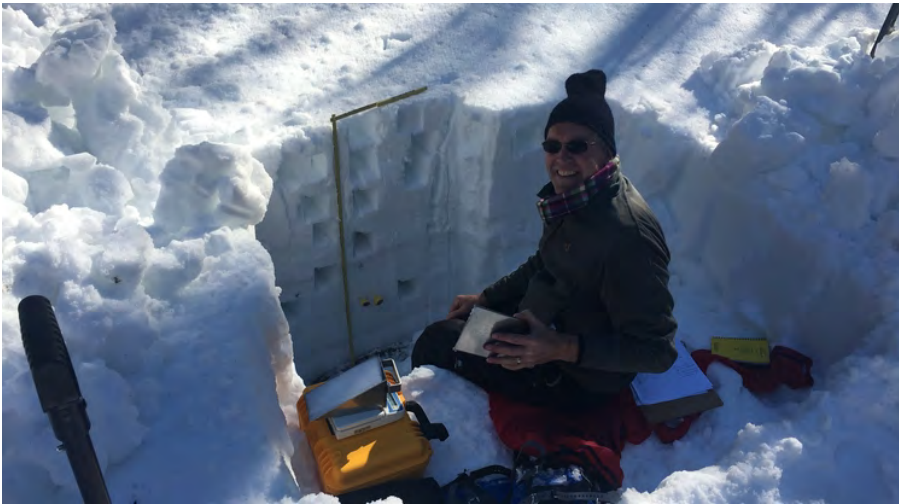
“Fusing nested high-resolution simulations with newly available measurements from, for example, a fleet of thousands of autonomous floats could enable a leap in the accuracy of ocean predictions.”

While existing models are often tested by checking predictions against observations, the new model will take ground-truthing a step further by using data-assimilation and machine-learning tools to “teach” the model to improve itself in real time, harnessing both Earth observations and the nested high-resolution simulations.

“The success of computational weather forecasting demonstrates the power of using data to improve the accuracy of computer models; we aim to bring the same successes to climate prediction,” says Andrew Stuart, Caltech’s Bren Professor of Computing and Mathematical Sciences.

Each of the partner institutions brings a different strength and research expertise to the project. At Caltech, Schneider and Stuart will focus on creating the data-assimilation and machine-learning algorithms, as well as models for clouds, turbulence, and other atmospheric features. At MIT, Ferrari and John Marshall, also a Cecil and Ida Green Professor of Oceanography, will lead a team that will model the ocean, including its large-scale circulation and turbulent mixing. At NPS, Giraldo will lead the development of the computational core of the new atmosphere model in collaboration with Jeremy Kozdon and Lucas Wilcox. At JPL, a group of scientists will collaborate with the team at Caltech’s campus to develop process models for the atmosphere, biosphere, and cryosphere.

Funding for this project is provided by the generosity of Eric and Wendy Schmidt (by recommendation of the Schmidt Futures program); Mission Control Earth, an initiative of Mountain Philanthropies; Paul G. Allen Philanthropies; Caltech trustee Charles Trimble; and the National Science Foundation.



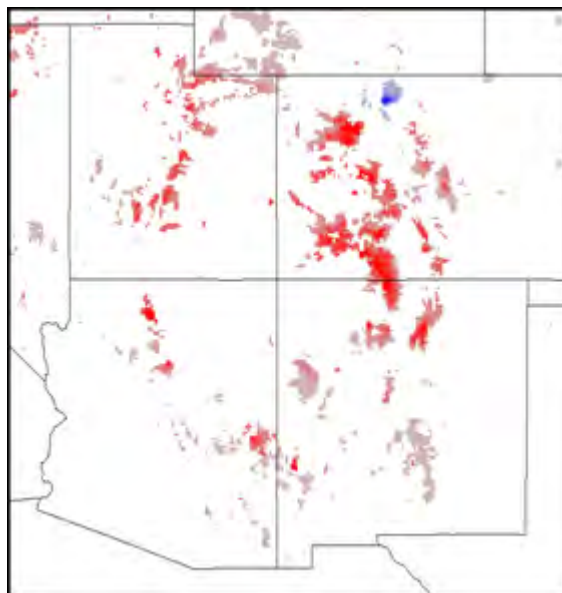
Willem van Leeuwen, a UA professor of natural resources and the environment, measures snowpack in a "snow pit" along Arizona's Mogollon Rim during a snow survey in 2017. (Photo: Patrick Broxton, ©2017)

Declining Snowpack over Western US Mapped at a Finer Scale

Since 1982, some parts of the West have had a 41 percent reduction in the yearly maximum mass of snow, according to new UA-led research.

Mari N. Jensen ,
UA College of Science
Dec. 12, 2018
Resources for the Media

The pink-to-red areas on this map of the Four Corners region shows statistically significant decreases in annual snow mass since 1982. Those areas correspond to many of the region's highest mountain ranges. Darker colors represent larger trends. (Image: Patrick Broxton, ©2018)
Researchers have now mapped exactly where in the Western U.S. snow mass has declined since 1982.



A University of Arizona-led research team mapped the changes in snow mass from 1982 to 2016 onto a grid of squares 2.5-miles on a side over the entire contiguous U.S.

A person could practically find the trend for their neighborhood, said first author **Xubin Zeng**, a UA professor of **hydrology and atmospheric sciences**. Grid size for previous studies was about 40 miles on a side, he said.

"This is the first time anyone has assessed the trend over the U.S. at the 2.5-mile by 2.5-mile pixel level over the 35-year period from 1982 to 2016," Zeng said. "The annual maximum snow mass over the Western U.S. is decreasing."

In the Eastern U.S., the researchers found very little decrease in snow mass.

Even in snowy regions of the West, most of the squares did not have a significant decrease in snow. However, some parts of the Western U.S. have had a 41 percent reduction in the yearly maximum mass of snow since 1982.

UA co-author **Patrick Broxton** said, "The big decreases are more often in the mountainous areas that are important for water supplies in the West."

Snow mass is how much water it contains, which is important in regions where winter snows and subsequent snow melt contribute substantially to water resources. Snow melt contributes to groundwater and to surface water sources such as the Colorado River.

Snow is also important for winter sports and the associated tourism, which is a multi-billion-dollar industry in the U.S.

If all the squares in the Western U.S. that had a 41 percent reduction in snow mass were added up, the combined area would be equal in size to South Carolina, said Zeng, who holds the Agnese N. Haury Chair in Environment. He and his team looked at the interannual and multidecadal changes in snow mass for the contiguous U.S.

Zeng's team also found over the period 1982-2016, the snow season shrank by 34 days on average for squares that, if combined, would equal the size of Virginia.

"The shortening of the snow season can be a late start or early ending or both," Zeng said.

"Over the Western U.S. an early ending is the primary reason. In contrast, in the Eastern U.S. the primary driver is a late beginning."

Temperature and precipitation during the snow season also have different effects in the West compared with the East, the researchers found.

In the West, the multidecadal changes in snow mass are driven by the average temperature and accumulated precipitation for the season. The changes in the Eastern U.S. are driven primarily by temperature.

The paper, "**Snowpack Change from 1982 to 2016 Over Conterminous United States**," by Zeng, Broxton and their co-author Nick Dawson of the Idaho Power Company in Boise, Idaho, was published in Geophysical Research Letters on Dec. 12.

Previous estimates of interannual-to-multidecadal changes in snow mass used on-the-ground, or point, measurements of snow height and snow mass at specific stations throughout the contiguous U.S.

One such network of data is the National Weather Service Cooperative Observer Program (COOP), in which more than 10,000 volunteers take daily weather observations at specific sites throughout the U.S.

The other is the U.S. Department of Agriculture's Snowpack Telemetry, or SNOTEL, network, an automated system that collects snowpack and other climatic data in the mountains of the Western U.S. However, for many locations, such measurements are unavailable.

Zeng and his colleagues used an innovative method to combine data collected by COOP and SNOTEL with a third data set called PRISM that gives temperature and precipitation data over all of the lower 48 states and is also based on on-the-ground measurements.

The result is a new data set that provides daily information about snow mass and snow depth from 1982 to the present for the entire contiguous U.S.

Developing the new dataset has allowed the UA-led research team to examine the changes in temperature, precipitation and snow mass from 1982 to 2016 for every 2.5-mile by 2.5-mile square in the contiguous U.S, as well as to study how snow can affect weather and climate.

"Snow is so reflective that it reflects a lot of the sunlight away from the ground. That affects air temperature and heat and moisture exchanges between the ground and the atmosphere," said Broxton, an associate research scientist in the **UA School of Natural Resources and the Environment**.

Zeng is now working with NASA to figure out a way to use satellite measurements to estimate snow mass and snow depth.

NASA and the UA's **Agnese Nelms Haury Program in Environment and Social Justice** funded the research.

Innovative Partnership Aims to Restore Sierra Nevada Forest Health



December 13, 2018

The French Meadows Forest Restoration Project, an innovative collaboration approved this week, aligns the expertise of the Sierra Nevada Research Institute at UC Merced, the U.S. Forest Service, the Nature Conservancy and other agencies and groups to focus on reducing wildfire risk in a critical municipal watershed.

The project covers 30,000 acres of public and private land west of Lake Tahoe and is a public-private partnership that can serve as a model for increasing the pace and scale of ecologically based forest management and fuels reduction throughout the Sierra Nevada.

The Sierra Nevada Research Institute is leading the project's research on the link between healthy forested watersheds and water supply.

"UC Merced researchers are developing information on the water-related benefits of forest treatments, which together with the reduced wildfire risk from forest thinning, is essential for developing local partnerships for treatment programs across Sierra Nevada forests," SNRI Director Professor Roger Bales said.

Hotter and drier conditions, decades of fire suppression and past logging practices have combined to make California's forests more vulnerable to high-severity wildfire. Massive tree die-offs due to years of drought and widespread insect infestations, year-round fire weather conditions, and overgrown young-growth forests, have all combined to create severe fire risks, particularly in the Sierra. The uptick in devastating megafires puts people and nature at risk. They can also damage vast expanses of forest habitat, threaten the lives of people and communities nearby, and threaten the source of water for millions of people.

The project involves clearing underbrush, thinning smaller trees, removing biomass to renewable energy facilities, reforestation, restoring meadows and prescribed fire. The goals are to promote forest resilience to stressors such as wildfire, insect and disease outbreaks and climate change, as well as protect and restore habitat for fish and wildlife and safeguard water supply and resources. Work is expected to begin as soon as the snow melts in late spring 2019.

Other partners in the project: the PlacerCounty Water Agency;Placer County; the American River Conservancy; and the Sierra Nevada Conservancy.

Trump proposes to roll back decades of water protections

By [ANNIE SNIDER](#)

12/11/2018 11:34 AM EST

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Acting EPA administrator Andrew Wheeler said the rollback will save regulatory costs for industries such as mining and homebuilding, while arguing it will have little impact on the health of the country's waters. | Cliff Owen/AP Photo

[Energy & Environment](#)

The Trump administration on Tuesday initiated the biggest rollback of Clean Water Act protections since shortly after the statute became law in 1972, proposing to remove federal pollution safeguards for tens of thousands of miles of streams and millions of acres of wetlands. The EPA's proposed rule would overwrite a stricter Obama-era regulation, in yet another attack on the legacy of President Donald Trump's predecessor. But the rollback would go much further than just erasing Barack Obama's work.

The Trump proposal represents the latest front in a decades-long battle over the scope of the landmark environmental law, whose requirements can impose major costs on energy companies, farmers, ranchers and real estate developers. Reversing Obama's water regulation was one of Trump's top environmental priorities — he signed an executive order directing the new rule barely a month after taking office, even as he repeatedly said he wanted "crystal clear water."

Geoff Gisler, an attorney with the Southern Environmental Law Center, called the proposal a "sledgehammer to the Clean Water Act."

"Out of all the anti-environmental attacks we have seen from this administration, this may be the most far-reaching and destructive," he said in a statement.

The new proposal embraces a view that industry groups have pushed for years: that the law should cover only major rivers, their primary tributaries and wetlands along their banks. Acting EPA Administrator Andrew Wheeler said this will save regulatory costs for industries such as mining and homebuilding, while arguing it will have little impact on the health of the country's waters.

At a ceremony unveiling the proposal, Wheeler criticized the Obama administration for contending that its version of the rule was about water quality. "It was really about power — power in the hands of the federal government over farmers, developers and landowners," he said.

The Trump administration's version will allow Americans to build homes and grow crops, Wheeler added.

The proposal won plaudits from the American Farm Bureau Federation, the National Mining Association, the National Rural Electric Cooperative Association, the National Association of Manufacturers and other industry groups.

"This new rule will empower farmers and ranchers to comply with the law, protect our water resources and productively work their land without having to hire an army of lawyers and consultants," Farm Bureau President Zippy Duvall said in a statement.

A cavalcade of Republican lawmakers also attended the ceremony at EPA headquarters to praise the rule. Among them were Senate Energy and Natural Resources Chairwoman Lisa Murkowski (R-Alaska) — who noted that her state's wetlands are larger than all of Texas — as well as Senate Agriculture Chairman Pat Roberts (R-Kan.), House Energy and Commerce Chairman Greg Walden (R-Ore.) and House Natural Resources Chairman Rob Bishop (R-Utah). But Democrats on Capitol Hill warned the proposal would undo improvements in cleaning up many waterways in recent decades — and they vowed to take a microscope to it when they take control of the House next year.

Rep. Peter DeFazio, who's expected to chair the Transportation and Infrastructure Committee told reporters he planned on holding "extensive oversight hearings and exposing how this would harm the majority of the people and interests in this country to favor a few polluting entities and a few rapacious developers."

Sen. Ben Cardin, a longtime advocate for cleaning up the streams and rivers that feed the Chesapeake Bay, said the effects of the weakened regulation would be far reaching. "They put politics over public health. The public has a right to expect safe drinking water," he said. "This proposed rule puts that in jeopardy. It puts our economy in jeopardy, from tourism to agriculture, the economy so much depends upon clean water."

The scale of the proposal's changes could be felt acutely across the country.

In the arid West, where the majority of streams [flow](#) only after rainfall or for part of the year, entire watersheds would be left unprotected from pollution. In Arizona, for instance, as much as 94 percent of its waters could lose federal protection under the new definition, depending on the how the agencies interpret key terms. Meanwhile, Arizona state law also prevents it from regulating waterways more stringently than the federal government requires.



Ellison Creek is a popular area in Tonto National Forest near Payson, Arizona.
| AP Photo/Clarice Silber, File

In North and South Dakota, the proposal would leave unprotected millions of acres of wetlands that were created when glaciers retreated at the end of the last ice age 10,000 years ago, leaving pockmarks on the landscape. Many of those “prairie potholes” have been drained to enable farming. The ones that remain can be far from the nearest river or stream, but help hold back floodwaters during heavy rains, filter fertilizer runoff and provide habitat to more than half of the country’s migratory ducks.

The Trump administration argues the new definition would return power to state governments, which it says are in a better position to set the pollution rules and protect the waterways within their own borders.

But environmentalists say a narrower federal regulation will create a race to the bottom and leave downstream states to bear the brunt of the harm.

Thirty-six states have laws on the books like Arizona’s, which prevent them from implementing stricter regulations than the federal government’s, according to a 2013 [report](#) by the Environmental Law Institute, meaning any waterways denied federal protection under the Trump administration proposal would be exempt from state regulation as well, unless state legislatures amend their laws.

State lawmakers have been trending in the opposite direction, though. In Wisconsin, one of a handful of states with more stringent wetland protections than the federal government’s, Gov. Scott Walker signed a law this spring dramatically reining in the additional protections.

Today, most of the country’s waterways are overburdened by pollution from farm fields, city streets and industrial facilities. More than two-thirds of the country’s lakes and ponds and more than half of the country’s rivers and streams are impaired, according to EPA’s latest figures. That includes roughly 1 in 4 of the rivers that serve as drinking water sources.

The new proposal to retract protections faces months of public comment and interagency review before it can be finalized, at which point it would likely face numerous lawsuits. Environmental groups that panned the rule said they were already planning those challenges. "Make no mistake: we will make use of the full strength of our nation’s bedrock environmental laws to protect families and communities from dangerous attacks like this. We will hold this administration accountable in court as we have from the start," said Earthjustice President Abigail Dillen.

EPA [estimates](#) that the new rule would save as much as \$164 million in regulatory costs compared to the Obama administration rule, while reducing as much as \$38 million in benefits. However, the Trump administration last year altered the agency’s approach to calculating the environmental benefits by removing consideration of the benefits that wetlands provide, like filtering pollution, holding back stormwater and providing habitat to fish and birds.

How far the Clean Water Act extends has been a source of controversy virtually since it became law. For years, EPA and the Army Corps of Engineers, which issues permits for filling in wetlands and streams, took an expansive view of their power, requiring that projects damaging even small, seasonal streams and patches of wetlands in an otherwise dry field receive permits. But in two Supreme Court decisions — the first in 2001 and later in 2006 — justices concluded that approach was overreaching.

The high court, however, failed to draw a clear line on where federal jurisdiction should end. In the 2006 case, *Rapanos v. United States*, the court issued a splintered 4-1-4 decision, with former Justice Anthony Kennedy joining conservatives but writing his own, stand-alone decision that set a separate test for which streams and wetlands should be federally protected. Appellate courts have largely ruled Kennedy's decision to be controlling.

Kennedy concluded that streams and wetlands with a "significant nexus" to downstream waters should fall under the scope of the law, but that legal test has led to mass confusion and inconsistency, with decisions left largely to regulators in the field. Industry and environmentalists alike asked Congress to intervene, but when lawmakers failed to act on the issue, the Obama administration in 2015 issued a regulation aimed at clarifying which waterways fell under federal power.

That rule, pegged to Kennedy's 2006 *Rapanos* opinion, cemented protections for small, headwater streams and wetlands that are connected to the larger tributary network. EPA [estimated](#) it would slightly increase federal authority, by less than 5 percent, compared to the agencies' previous approach.

But industry groups argued it would go far further, with the American Farm Bureau Federation contending it would regulate dry ditches and rain puddles.

Trump embraced that perspective in the executive order he [issued](#) in February 2017. It demanded the rule be repealed and replaced with a rule cementing a narrower definition of federal power that hewed to conservatives' opinion in the *Rapanos* case, drafted by the late Justice Antonin Scalia.

But the Trump administration has struggled just to overturn the Obama rule. The Supreme Court in January ruled the issue must first be heard by district courts, creating a regulatory patchwork. The Obama-era rule is now on hold in roughly half the states, which are covered by district court injunctions, and on the books in the other half, after a South Carolina court ruled this summer that the Trump administration's effort to delay it was illegal. After more than a year, the Trump administration has yet to finalize its effort to formally repeal the 2015 rule.

The legal battle over the replacement rule could prove even more arduous, meaning the policy battle may not change protections on the ground for years. But, if the issue again reaches the high court, it will face a different panel of justices. With Kennedy now retired, replaced by Justice Brett Kavanaugh, who casts a skeptical eye on any agency taking action outside a strict interpretation of authorities granted by Congress, the Trump rule could face better odds.

Alex Guillén and Eric Wolff contributed to this report.

SF, other cities consider lawsuits to head off water restrictions



Kurtis Alexander Dec. 14, 2018 Updated: Dec. 14, 2018 9:07 a.m.

The cities and towns hit this week with stiff demands to reduce water use, including San Francisco, say they'll work with state regulators to meet the charge, but they're also looking at the possibility of lawsuits.

The State Water Resources Control Board approved a far-reaching plan Wednesday to improve the health of California's rivers and fish by limiting the amount of water that dozens of communities take from four major waterways.

While the plan leaves room for negotiating the extent of the water reductions, the agencies that draw from the San Joaquin River and its tributaries say legal action may be a necessary backstop in case they're forced to cut more than they can afford.

"At the end of the day, we do serve our customers and we have to do what's best for the community," said Samantha Wookey, spokeswoman for the Modesto Irrigation District, one of the state's biggest water suppliers and now subject to restrictions on the Tuolumne River.

San Francisco, which also relies on the Tuolumne River and faces cutbacks, has begun evaluating whether a lawsuit is appropriate, according to the city attorney's office.

Under the state plan, San Francisco residents and businesses could face reductions of 40 percent or more during prolonged dry periods, according to estimates from the San Francisco Public Utilities Commission.

The aim of the state water board is to prevent the collapse of the Sacramento-San Joaquin River Delta. The sprawling estuary, which serves as a hub of state water supplies and is a vital conduit for threatened salmon, has suffered from too little water and too much contamination amid heavy pumping.

While the water board's plan would saddle water users with restrictions to boost flows into the delta, regulators introduced leniency Wednesday in an effort to head off litigation, which would result in years of delay in the plan's implementation. The board stipulated that it will attempt to integrate proposals by water agencies to trade habitat restoration for smaller water reductions.

It appears, though, the board's strategy may not have worked.

Ever since the water board began updating its plan a decade ago, it has had to maneuver a path between water users who don't want limits on their draws and fishermen and environmentalists who want substantial caps.

The conservation community also presents a threat for legal action, with many having committed to suing if the environmental safeguards approved Wednesday are weakened.

The Bay Delta Plan calls for maintaining an average of 40 percent of the natural flow of the San Joaquin River and its tributaries during peak spring runoff. Currently, the flows average 20 percent or less because of diversions. Sometimes the waterways dry up entirely.

The plan could change as the state looks at amendments pitched by water agencies.

For years, the state board has been urging suppliers to come up with their own ideas for fixing California's declining river system. At Wednesday's meeting, more than a dozen water departments, with help from the state Natural Resources Agency, laid out a framework for restoration that included money for habitat improvements and a commitment to less pumping. The board asked the agencies to flesh out their initiative by March.

Officials at the SFPUC, who are working on amendments, say they won't be able to hit the state's 40 percent flow target. But they say they're looking to leave more water in the Tuolumne River and restore salmon habitat in a plan they believe will meet the water board's conservation goal.

"There are other areas we can explore on how we do long-term management," said Michael Carlin, deputy general manager of the SFPUC. "That's where we're going to be spending our time over the next several months: to get something more detailed."

Still, the compromise plan probably would mean significant water cuts for San Francisco households. During a drought, customers may have to reduce water use by 30 percent, Carlin said.

Water rates would probably rise as the city develops new sources to make up for lost supplies

Water Authority Board Defers Rate Increase

December 13, 2018 ThisIsReno

The Truckee Meadows Water Authority Board of Directors today voted not to increase rates for water customers.

A 2.5 percent increase was on deck at today's board meeting. If approved, the increase would have started in May of 2019, but the board cited TMWA's financial condition as positive enough that an increase won't be considered again until 2020.



Washoe County Commissioner Vaughn Hartung.

"Given TMWA's positive financial position, the board can deliver some good news to our customers," said Vaughn Hartung, board chair and county commissioner. "Rate increases are necessary at times, but we are happy to announce that TMWA's forecasted financial conditions can accommodate this rate deferral."

TMWA officials said that increased water sales as a result of warm summers three years in a row helped. In addition, TMWA's hydroelectric plants operated at near capacity recently, contributing "an all-time high of \$3.7 million in ... power revenue which offset almost all of TMWA's power costs."

The board will be updated in the fall of 2019 as to possible future increases.

State engineer proposes legislation to update Nevada water law

reviving a debate over mitigation and the Las Vegas pipeline



[Daniel Rothberg](#)

December 16th, 2018 - 2:05am

Water is in short supply throughout the West, and in many areas of Nevada, the nation's driest state, there is simply not always enough water to go around.

And that creates conflicts.

The battles are always different, but they often revolve around the interpretation of three words: Western Water Law. In Nevada and the arid West, water rights are based on a system in which those with the earliest claim to water — those with “senior rights” — have a priority to water. No other water user with a later claim is allowed to water meant for users with senior rights.

The law is strict on this.

When a water user seeks permission from the state engineer to use water, they have to file an application. If it conflicts with an existing use — by drawing down a spring or diverting too much of a stream — a water user with senior rights can protest the application and effectively kill it.

If the state's top water regulator has his way, those protest rules could become harder.

With the Legislature convening in February, State Engineer Jason King is proposing three bills that he argues are needed to update Nevada water law for changing times and new science.

“There are things that need to be changed and these bills are part of that change,” said King, who is retiring in January before the legislative session.

But as is true with all things involving water, the legislation is already controversial. What state officials have cast as a modernization of Nevada law, others have criticized as an attempt to enable large-scale development and projects, including the Southern Nevada Water Authority's proposed rural pipeline, to the detriment of water users with longstanding historical claims to water.

Much of the debate is likely to center around [Assembly Bill 30](#).

Assembly Bill 30

As introduced, the legislation would allow the state engineer to consider mitigation plans to avoid or eliminate a conflict when weighing an application to use or claim water. One type of plan the bill would allow for is a 3M plan, short for “mitigation, management and monitoring.”

Such plans deal with conflicts through mitigation. If pumping groundwater dried up a spring, a 3M plan would mitigate the user reliant on the spring by providing replacement water or another type of mitigation. King said the plan is used in other states. The challenge in Nevada is that, because of its aridity, replacement water can be difficult to come by and hard to move. The concept would be to require mitigation that would keep users with senior rights whole.

For years, the 3M plan concept has been the subject of intense debate, including in the 2017 Legislative session. [Assembly Bill 298](#) received fierce criticism from ranchers, farmers, rural towns and environmentalists in part because the bill would have allowed 3M plans in statute. The state engineer has allowed 3M plans to be used in certain cases, although they have been the subject of much litigation. The water authority included a 3M plan [in its application to pump and pipe groundwater](#) about 250 miles from rural Eastern Nevada to Las Vegas as a future option to augment the Colorado River. Opponents of the project are challenging that in court.

And they plan to oppose the state engineer's legislative effort.

"AB30 threatens senior rights holders and assumes that there is excess water in the nation's driest state," Kyle Roerink, the executive director of the Great Basin Water Network, wrote in an email. "The words 'water grab' aren't in the bill, but the implications are written all over it."

King said 3M plans could be applicable in other cases, providing the office with more flexibility in resolving conflicts. King would not mention specific projects, but there are ongoing conflicts in Koebe Valley, the Humboldt River Basin and Coyote Springs where mitigation could be used.

"It's a tough issue," King acknowledged. "There are a lot of people on both sides of the issue."

Without the plans, he noted that protests can hamper the state's ability to issue new rights to pump groundwater out of aquifers where there is water available to appropriate.

"That is an issue that has come up in some pretty high-profile cases recently. Being the driest state in the nation, we feel that it is bad policy that perhaps one or two small water rights could hold an entire basin hostage for appropriating that water if it's there," King said.

A spokesperson for the water authority did not comment on the bill, but said the authority would support aspects of a water conservation bill proposed by incoming Democratic Assemblyman Howard Watts. Watts, a former spokesperson for the pipeline opponents, is pushing a bill that would update efficiency requirements for indoor water appliances and utility conservation plans.

"I'm glad to have their support," Watts said. "In my previous role with the water network, we have clashed, especially on 3M and other issues that have connections to the pipeline project. I'm happy to have an issue that we're able to work together with them on."

Assembly Bill 51

A second bill floated by the state engineer — [Assembly Bill 51](#) — recognizes modern hydrologic science, which increasingly views groundwater and surface water as connected resources. The idea is that groundwater pumping can affect the amount of water in springs, and the amount of water in streams can affect how much groundwater there is. Assembly Bill 51 would allow the state engineer to enact regulations to pursue the “conjunctive management” of aquifers and rivers as one resource. These regulations would allow the state engineer to come up with a conjunctive management program in basins and levy an assessment to fund mitigation.

“We are trying to harmonize the law with the science,” King said.

In most cases, conjunctive management recognizes the fact that there is not as much water to go around as hydrologists and politicians once thought when they issued water rights. The fact is there is more water on paper than there is actual water to go around. Those with senior rights often get their water from rivers, while those with junior rights often pump water from the ground.

Using a strict application of Western water law, junior rights — or groundwater users — would be cut off in times of shortage or amid a conflict. After Humboldt River farmers saw a decrease in surface water during the drought, they sued to curtail groundwater pumping in 19 aquifers. That would have potentially cut off businesses and even some cities from their water sources.

To avoid curtailment, King’s staff has begun [creating a conjunctive management program](#), whereby conflicts between groundwater users would be mitigated to keep surface water users whole. The bill would help the state engineer’s office continue pursuing that mitigation program, but King said in an interview that the regulations could have applications in other basins.

“The Humboldt is not the only basin where we are going to have to have this conversation,” he said.

Assembly Bill 62

Under Nevada law, water users are required to put their allocation to beneficial use for ranching, mining, drinking water or a long list of other permissible purposes. If a water user does not put its allocation to use, that user risks losing the claim. But in reality, many water rights are never used. They exist only on paper. And that’s because the statute provides for several exceptions.

The state engineer is hoping to close some of those loopholes.

[Assembly Bill 62](#), which is likely to stir controversy among many water rights holders, puts a limit on how many times the state engineer can extend the deadline for constructing projects —

like a well or a diversion — to put water to use. As introduced, the legislation would put a 15 year-limit on extensions for a construction deadline if it’s a municipal project and a 10 year-limit if it’s a big agricultural project. It would put a 5-year limit on extensions for all other projects.

“We need to get those people who are not beneficially using water to do it or not,” King said. “If not, get out of the way and let the next person [with rights] to use the water.”

He called the bill a step forward, adding that further changes might be needed in the future. The legislation would still allow the state engineer’s office to issue extensions for putting the water to beneficial use, potentially allowing for water users to sit on their rights if they meet certain statutory requirements. The concern is that might create opportunities for speculation.

“This is going to get a lot of attention and we thought we’d start [here],” he said.

Disclosure: Howard Watts III has donated \$500 to The Nevada Independent.

Smart Water Meters Coming To Bellevue

500 to 1,000 smart water meters will be installed around Bellevue as early as spring 2019.

By [Neal McNamara](#), Patch Staff | Dec 13, 2018 5:01 pm ET



BELLEVUE, WA - The City Council this week approved a \$20.2 million contract to install smart water meters at homes in the city. The meters are able to detect leaks and allow for remote meter reads, according to city officials.

In late spring 2019, up to 1,000 meters will be installed around the city as part of a pilot program. If all goes well, the meters will be rolled out citywide in fall 2019. The city wants to complete the entire project by 2020.

With the meters installed, the Bellevue Utilities Department will get hourly data on water usage in the city. Homeowners can also monitor this data and adjust usage accordingly.

Smart meter programs across the country have been met with skepticism and concern over data privacy. According to city officials, the water meter data will be encrypted on a network maintained by Cisco Systems. The city promises that no personally identifiable data will be transmitted from the smart meters (as a whole, the network is known as an "advanced metering infrastructure" or AMI).

The city's 20-year smart meter technology contract was awarded to the technology company Itron, which is based near Spokane.

Nevada receives a " C " grade on overall infrastructure

by Zachary Slotemaker
Wednesday, December 19th 2018

KRNVThumbnail

AA

Reno, Nev. News 4 - Fox 11 — The American Society of Civil Engineers released their quadrennial report card on infrastructure to Nevada today.

Nevada received a " C " rating overall. This is actually an increase from 2014, the previous grade was " C - ."

The A.S.C.E looks at 12 different categories of criteria when consolidating the state's overall data. They then take that data and sit down with each individual agency involved in those 12 categories and confirm all that information.

Our transportation category did well this year since 2014.

Here's where we have improved from 2014:

- Aviation went from a " C - " to a " C "
- Bridges jumped from a " C - " to a " B- "
- Roads increased from a " C - " to a " C "

Here's where we did not do well:

- Dams received a " D + ", which is the same as 2014
- Solid waste dropped from a " B - " to a " C "

The report card makes the point that Nevada's population size is growing and that funding is not following the growth, according to A.S.C.E.

The state faces a \$450 million backlog of road and bridge repairs, mostly due to needed repairs in rural areas," says A.S.C.E.

America's overall report card in 2017 received a grade of " D + ."

December 29th, 2018 - 2:00am

Nevada's infrastructure needs reflect the state's rural-urban divide

[Daniel Rothberg](#)

December 29th, 2018 - 2:00am



When it comes to infrastructure, there are two Nevadas.

[A report released](#) last week by the American Society of Civil Engineers gave the state's overall infrastructure a "C" grade, but said the mediocre grade only told half the story. Engineers who compiled the study found a stark divide between infrastructure in the state's concentrated urban areas and the sparsely populated rural areas, which comprise about 90 percent of the state.

"One thing we have to remember is we sort of have a tale of two states — where we have two vibrant areas with most of the population — and 15 rural counties without the same means of securing public revenue for their infrastructure," said Chuck Joseph, one of the lead authors.

The report came with several policy recommendations to raise the grade, urging rural counties to adopt fuel tax indexing, a tool to raise local revenue for road repairs by tying county-wide gasoline taxes to inflation. Voters in Clark County and Washoe County have already adopted fuel indexing, but a ballot measure to enact similar rules in rural counties failed in 2016.

Most of the state's \$450 million road repair backlog exists in rural areas that see less traffic, the report said. Even so, the engineers argued the disparity can have economic consequences.

"Adequate investment in our roads and bridges is critical to ensuring that freight move seamlessly throughout the state," said the study, which is released [with an infrastructure report card](#). "Tourists are easily able to access the parks, casinos and other forms of entertainment; and our rural citizens can enjoy the same quality of life as our urban residents."

The report also recommended that legislators fund the State Infrastructure Bank, which was authorized last year. The bank would provide local governments with the ability to obtain loans and grants that could fund infrastructure improvements. In the 86-page report, civil engineers also stressed that budgets should provide enough funding for operations and maintenance for new infrastructure, a preventative action that would defer more costly future improvements.

Of the 12 infrastructure categories examined by the report, dams scored the lowest on the report card, earning a "D+," which the rubric described as "Poor: At Risk."

Despite being the most arid state in the West, Nevada has more than 656 dams and regulators believe 154 of them have a "high hazard" potential, meaning a breach could lead to fatalities or property damage. Most of the state's dams are used for irrigation or flood control, though some impound mine tailings. Others play a role in supporting fish habitats and create hydropower.

As with roads, funding remains an issue in dam improvements.

The report floated the price tag of about \$40 million to fix critical dams, and the study noted that state funding and staffing for high hazard dams is about half of the national average.

“Additional funding is needed to bridge the gap between the state’s dam safety budget and the national average,” the report said. “This would allow for the state program to employ additional staff and provide additional services to the public and other entities.”

Part of the issue in repairing dams is that many of them are privately owned. Tanner Hartranft, an author who co-chaired the report card committee for the Nevada section, said that dynamic can make the state’s job difficult because it is left to give recommendations to private entities.

“The overall theme is there really is a lack of staffing and a lack of funding available for all the private owners to maintain and basically keep their dams up,” he said.

Hoover Dam, which is managed by the federal government, was not included in the report.

The report identified drinking water as another area where the state needed to improve. Citing the Environmental Protection Agency’s [6th Drinking Water Infrastructure Needs Survey](#), it noted that Nevada could need to invest \$5.3 billion in its water systems over the next two decades. A majority of that funding is required to keep up with growth by creating increased capacity.

On this issue, the report again illustrated a clear divide between rural and urban areas.

When state regulators reviewed 598 public water systems last year, 28 water systems were out of compliance with primary federal drinking water standards. They were all in rural Nevada.

“Most of these communities rely on well water with limited treatment, and the cost of treatment for some of these items can far exceed the budgets of small community public water systems,” the report noted.

The last civil engineer report for Nevada came out in 2014, where the state received a “C-” grade. The most recent report card’s grade of a “C” was an improvement for the state, reflecting gains in aviation, bridges, roads, transit and school infrastructure. The dams category stayed the same. Solid waste was the only area where engineers downgraded Nevada’s grade.

Solid waste received a “C” grade.

“Rural parts of the state, in particular, are faced with limited and expensive methods for managing municipal solid waste,” the report said. “We’re also falling short of our statewide goal to recycle 25 percent of municipal solid waste each year. Nevadans will need to recycle the equivalent of nearly 100 Olympic size swimming pools more worth of waste each year to meet this goal.”

Environmental study, project approved for Soquel Creek water recycling

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By [Jessica A. York](#) | jyork@santacruzsentinel.com | Santa Cruz Sentinel
December 19, 2018 at 5:22 pm

CAPITOLA — In the court of public opinion, Soquel Creek Water District's pursuit of treated water recycling plant project was nearly out of the ballpark this week.

The district's board of directors voted Tuesday night to approve the final environmental impact study for its Pure Water Soquel project after two and a half hours of discussion. District leaders directed its staff members to focus on a version of the plan that would send initially treated water to a new advanced purification plant, likely to be built on Chanticleer Avenue in Live Oak. On a parallel track, district officials were told to continue negotiating with the city of Santa Cruz on alternately locating the entire Pure Water Soquel treatment process at the project's water supply source: the city Wastewater Treatment Facility on California Street in Santa Cruz. Negotiations only will be allowed to continue, however, if they do not slow the project's progress down, board members said.

In preparing to vote to approve the environmental study and Pure Water Soquel project, board President Tom LaHue said he looked to the next generation of district water customers.

"When we're all gone and all the other people that are talking about this issue are gone in 30 years, I want to feel like we left them with the best possible situation where they have insurance against the drought and that our groundwater is protected," LaHue said. "I honestly feel like after a lot of studying, by myself and others, that this is the best way to do that."

Troubled waters

In addition to lingering public concerns about how clean the purified water will be before being pumped underground, one area of the project remained controversial through its final vote. Board director Rachél Lather voted against her peers, due only to the purification plant's proposed location.

"My concern is I don't particularly like the Chanticleer site — I have a problem with imposing our purification plant on someone else's neighborhood because the people

in our neighborhood don't want it," Lather said of a potential site at Chanticleer and Soquel avenues. "I have an ethical issue, maybe, with the idea of doing that just because we have people here who don't want it at the site that's next to our facility."

In refocusing its energies on obtaining the Chanticleer and Soquel avenues site for a treatment plant, however, the district won over a large group of its earliest and most vocal opponents, Soquel Village neighborhood residents who live in the streets around the district's Soquel Drive office. District-owned property known as the "West Annex" property, located adjacent to its offices, was an early favorite site for the treatment plant location. The project's only environmental impacts that cannot be mitigated to the point of insignificance, according to its study, are its construction noises.

Santa Cruz County Supervisor John Leopold, whose 1st district includes Live Oak and Soquel, said the water board's leadership did not include any Live Oak representation. He said the Chanticleer Avenue site was, in his opinion, "not in the interest of the County of Santa Cruz from an economic development standpoint." He said he was, however, generally supportive of the study and project.

"The newly proposed medical office building just down the street will significantly change the economic value of the property and the opportunities that we have for that property," Leopold said.

Packed house

More than 60 people turned out for the district's meeting at Capitola City Hall, with 20-plus speakers sharing their input.

Watsonville resident and Pajaro Valley Water Management Agency board director Mary Bannister, speaking as a private citizen, commended the district's water project efforts, comparing them to her agency's recycled water irrigation project.

"Being part of the neighbor to the south, I just want to tell you that we developed recycled water about 10 years ago and it saved our Central Coast farming, the Pajaro Valley farming and that area," Bannister said. "There were wells inundated with seawater and once they are, they're done, they were farmers that were not going to be able to farm."

Aptos resident Adele Gardner said water supply issues have been a problem for the district for decades and said the board incumbents' success in getting re-elected revealed voter support for the district to follow through on its plans and finally take action.

"Your job is to protect and preserve our aquifer for the future generations," Gardner said. "To me, this is the biggest environmental project and the biggest environmental

threat that the public faces and it's in your hands. It's your public trust. We are trusting you to do something."

Project goals

The supplemental water supply project, years in the making, is designed to help the district refill its overtaxed aquifers more quickly, while maintaining a fresh-water barrier against intruding coastal seawater that seeps in and contaminates the underground water source when the aquifer drops too low. The district has parallel ongoing water supply project investigations in process, including a multi-year pilot program to purchase the city of Santa Cruz's excess winter river water and pipe it directly to its customers, and investigation of how to ease the passage of stormwater runoff back underground.

In a counter-effort to the Pure Water Soquel project, a grassroots effort has sprung up to advocate for interagency water sharing with the city of Santa Cruz, which is mid-process in identifying its own long-term water supply options. In the environmental impact study, water transfers alone was not considered a viable alternative project to the Pure Water Soquel, due to problems with timeliness, source reliability during droughts, affordability and insufficient environmental benefit to surface waters.

Among those with project reservations, Aptos resident Becky Steinbruner said she had gathered 190 signatures on a petition that would require a public vote to approve the project. She, as with others who wrote to district officials, asked the district to offer more than 10 days to comment and review the final environmental study. The primary difference between the draft version of the study released this summer and the final version was the inclusion of more than 100 sets of public questions about the project's impacts, plus district response to each.

By Kat Kerlin on December 19, 2018 in [Environment](#)

How Climate Change Is Affecting Small Sierra Nevada Lakes Spring Snowpack a Bigger Predictor of Lake Warming Than Air Temperature



From his boat, Professor Steven Sadro collects samples of Emerald Lake in the Sierra Nevada mountains. (Kevin Skeen/UC Riverside)

Quick Summary

- Climate change is impacting small Sierra Nevada lakes
- Its effects are somewhat buffered by snowpack
- It's unclear what that means for the greater ecology of the area
- Scientists are exploring lakes throughout the Sierra Nevada for climate change impacts and possible solutions

Scientists at the University of California, Davis, are taking the temperature — and other measurements — of lakes of all sizes and shapes throughout the mountains of California to see how climate change is affecting them and what, perhaps, can be done about it.

A [study](#) published this month in the journal *Limnology and Oceanography Letters* shows that, despite rapidly warming air temperatures, spring snowpack is the biggest predictor of summer warming in small Sierra Nevada lakes.

The study examined more than 30 years of climate and lake temperature data at Emerald Lake, a long-term study site in Sequoia National Park. It was led by UC Davis with colleagues at UC Santa Barbara and UC Riverside.

High rates of warming air

The researchers found that summer air temperatures at Emerald Lake are warming at a rate of 1.0 degree Celsius, or 1.5 degrees Fahrenheit, per decade.

“That’s huge,” said lead author Steven Sadro, a UC Davis assistant professor in the Department of Environmental Science and Policy and a member of the Tahoe Environmental Research Center. “That’s as high a rate of warming as nearly anywhere on the planet. It’s also consistent with what you’d find in a lot of mountain regions, which are warming at rates as high as those seen in the Arctic, in many cases.”



Benthic chambers measure sediment metabolism at a small Sierra Nevada lake in August 2018.

(E. Suenaga)

Snow a buffer

Yet these small alpine lakes are somewhat buffered from the higher air temperatures because they respond primarily to variation in the snow. The amount of snow controls when the lake becomes free of ice and can absorb radiation from the sun, which heats the water.

“That’s not to say that there is no climate warming signal,” said Sadro. “In drought years, when the role of snow is small, we find a warming trend consistent with the rate of warming found in other lakes throughout the world.”

Climate affects phytoplankton, too

A [companion study](#) conducted at Emerald Lake and published in June in the journal *Water Resources Research* found that changes in snowpack also increased the abundance of phytoplankton in Emerald Lake. If droughts continue to be more frequent, high-elevation lakes in the Sierra are expected to become more productive. Researchers are not yet certain how that might affect the lakes. More phytoplankton could mean more food for lake organisms, but it could also impact lake clarity, which is often an indicator of ecosystem health.

Together, the papers show that yes, climate change is impacting these lakes and that its effects are somewhat buffered by snowpack. But what that means for the greater ecology of the area is still unclear.

A current project may provide additional answers.



Adrienne Smits, a NSF postdoctoral fellow at UC Davis, deploys a mooring in a Yosemite lake. (E. Suenaga)

Filling in the gaps

There are upwards of 14,000 small lakes in the Sierra Nevada. This past summer, UC Davis limnologists and colleagues began installing high-frequency instruments in nearly 20 of these lakes, which stretch from Castle Lake in Northern California to Emerald Lake in the southern Sierra.

The project is called the California Mountain Lake Observatory Network, and it's being conducted through Sadro's lab by Adrienne Smits, a National Science Foundation postdoctoral fellow at UC Davis.

As weather events occur, be they storm, drought, wildfire or clear skies, the instruments capture data about water temperature, dissolved oxygen, light levels and other factors. Data from these lakes will be used to develop models to help predict how all the other lakes in the Sierra are responding to changes in climate.

"Castle and Emerald lakes are both long-term study sites, and together they provide unique bookends to the entire Sierra Nevada mountain range," Sadro said. "We're trying to fill in everything in between to better predict how lakes across the Sierra are expected to change."

This ongoing research could help resource managers identify which lakes are most sensitive to climate impacts and target them for mediation.

The analysis for the two published studies was made possible because of long-term research support for Emerald Lake and the Tokopah watershed since the early 1980s from the National Science Foundation, National Oceanic and Atmospheric Association, National Aeronautics and Space Administration, and the California Air Resource Board.

Co-authors for both studies include John Melack of UC Santa Barbara, and James Sickman and Kevin Skeen of UC Riverside.

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In \$2.7 million deal, Reno-Tahoe Construction building new headquarters

NNBV staff report
December 20, 2018

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Courtesy

Fred Reeder, owner of Reno-Tahoe Construction.

RENO, Nev. — Reno-Tahoe Construction has established a new headquarters site at 465 Western Road in a ground-up project valued at \$2.7 million, officials announced Dec. 19.

The [Nevada State Development Corporation](#) helped facilitate financing for the project, in partnership with Plumas Bank, according to a news release provided on behalf of NSDC.

"As our business in serving clients in the public and private sectors continues to expand, building our new headquarters represents a major step forward for our firm, giving us an opportunity to better serve customers and paving the way for future growth," Fred Reeder, owner of Reno-Tahoe Construction, which was founded in 2000, said in a statement. "In addition to being an excellent location close to the majority of our work, the new site offers larger office, yard and shop facilities, all of which will greatly benefit the business."

Among other duties, [Reno-Tahoe Construction](#) provides construction services including site work, underground utility services, erosion control services, road construction services, demolition services and other general engineering construction services to the public sector.

According to the Dec. 19 release, the company has expansion plans to include new clients in the private sector.

The firm's primary geographic area includes Northern Nevada (Reno/Sparks/Incline Village), as well as Northern California (Truckee/Tahoe). Key customers include the cities of Reno and Sparks, [Truckee Meadows Water Authority](#), Washoe County and the Washoe County School District, Core Construction, UNR, TMCC, Granite Construction and Switch Data Center.

Urban counties contend with growth, development and environmental concerns

By



[Daniel Rothberg](#)

December 21st, 2018 - 2:10am

The pitches are the same: There is a housing crisis.

That's the argument frequently brandished by homebuilders to try to get massive development projects approved by local governments in Nevada's urban areas.

But with real estate development pushing up against the boundaries of Reno and Las Vegas, elected officials have been forced to contend with the tug-of-war between advocates of the natural environment and the need to keep up with population growth.

The regions, though different in topography, often face similar issues.

Both are weighing federal legislation that would allow the state's two urban areas to potentially expand out onto public land. And as developable land becomes more scarce and increasingly close to wilderness, elected officials in Reno and Las Vegas are being forced to weigh environmental constraints on growth in deciding whether to approve new developments.

"We want to prioritize growth in urbanized areas and minimize expansion in other areas," said Ron Krater, the lead consultant for [a decades-long effort to build a master-planned community](#) near Red Rock National Conservation Area in Las Vegas. "Within that conversation, you're always going to find a dynamic between local governments wanting economic growth — and their need to grow the development footprint — with the need to be environmentally sensitive."

That statement might come as a surprise to many conservationists.

A man rides a bicycle on the scenic loop at Red Rock Canyon National Conservation Area on Tuesday, May 9, 2017. Photo by Jeff Scheid.

For years, residents and environmentalists have pushed back against the effort to build in the hills near Red Rock, which draws in millions of climbers, hikers and campers each year. They believe development would destroy the canyon's character with thousands of new homes.



Krater sees it differently. He said the Red Rock project is environmentally responsible because the homes would replace an old gypsum mine, land he called completely “obliterated.” In his view, the debate over Red Rock became a [political football](#) during a heated election year.

In the past, Clark County officials have tended to agree with him, but the County Commission has appeared to take a tougher stance on the issue in the wake of an election where it was featured [in a primary attack ad](#) against Clark County Commission Chair and Gov.-elect Steve Sisolak.

Sisolak, who voted to approve the concept plan, [came out strongly against a request from the developer](#) to waive a requirement on obtaining a right-of-way a few weeks before the election.

“Our project is important in the sense that it has become political,” Krater said during an interview in November after the election. “I understand that. But the political conversations have moved away from the science and they have moved away from the professionals.”

His view represents that of many developers. Several have argued that their projects — in floodplains and butting up against faraway wilderness — are not only “environmentally sound” but necessary to solve the housing crisis. Yet over the past year, developers have had a mixed record convincing elected officials of that, often amid vocal pushback from constituents.

“I think there is an uncoordinated shift in local government toward leaders who are concerned about conservation issues and growth generally,” said Justin Jones, a newly elected Clark County commissioner and an attorney who led a lawsuit [over the Red Rock project](#).

Nowhere is this more acute than in Reno, where economic growth has fueled a housing crunch.

“What we’re seeing is that elected officials are starting to understand how complex these competing values are,” said Reno Councilman David Bobzien. “On the one hand, there is a desire to see more compact infill development as a way to cut down on auto emissions... And yet you have projects that are arguably closer into the core that then bump up against floodplain values and even sometimes scenic values. All these factors start to become complicated.”

Reno, NV. Public domain photo via Wikimedia.



In a 6-1 vote last month, [the Reno City Council turned down a 4,700-unit development](#) to construct homes in the metro's last natural floodplain. The developer for the project, known as Daybreak, argued that mitigation measures to offset flood risk would leave the land more protected.

"We're leaving it with more of a resource at the end of the day than exists out there currently," said Andy Durling, a consultant with Wood Rodgers, an engineering firm working on Daybreak.

After lengthy public comment, the City Council voted down the project because Reno's master plan discourages development in floodplains and because the plans relied on hydrologic assumptions that had not been updated by flood management planners for decades.

"I've seen them make really good decisions," Brian Beffort, Toiyabe Chapter Director for the Sierra Club, said of the Reno City Council's overall response to growth. "I've seen them make really bad decisions... Opposing Daybreak was an example of a wise move."

Beffort said an example of a bad decision was the approval of StoneGate, [a development project to bring about 5,000 homes to the northern edges](#) of Reno in the next two decades.

Councilwoman Jenny Brekhus, the lone vote against the StoneGate development, has appealed some StoneGate approvals, an action that is scheduled to be heard at a City Council on Jan. 9.

"It is textbook remarkably premature leapfrog development," Brekhus said. "It is so far out [of the city] that I think some of the reviewing agencies didn't even have the models to evaluate it."

Brekhus added that the faraway nature of the development could create more car pollution.

"For a region teetering on compliance with the Clean Air Act, it just boggles the mind," she said.

But the Reno City Council is not the only one with a say in where and what kind of development occurs in Truckee Meadows. The county, which stretches from Reno to the Nevada border with Oregon, is also a key player in how land is developed. Beffort said the Sierra Club is concerned county governments in Reno and in Las Vegas have been promoting too much sprawl.

"I think [the county commissions] are paying dangerously little attention to the environmental impacts of growth," he said. "And their inattention will come back to bite us."

For many politicians, Beffort argued that the state's landscape can be "deceptive."

"If you look out, it looks like there is lots of space," he added. "It looks like there is lots of room to grow. But if our only focus is expanding our footprint and growing out, we're making our communities less healthy and less enjoyable in many ways."

Most politicians — and many homebuilders — have said they support infill development but that pushing infill development alone could have some unintended consequences. Infill projects tend to be more expensive and less attractive to homebuilders, developers argue, because of more complex zoning rules, existing land disturbance and higher land prices.

But if Las Vegas and Reno want to grow outward, they are often blocked by the fact that most of the parcels on the edges of town are managed by the federal government as public land.

"Growth in Nevada in any of the cities often run up against public land," said Shaaron Netherton, executive director of Friends of Nevada Wilderness, which works on public lands legislation.

Earlier this year, Clark County approved a resolution requesting the congressional delegation to introduce a bill that would clear about 38,000 acres of public land for development, mostly along the I-15 corridor and potentially extending Las Vegas' boundary toward the California border.

For months, Washoe County officials have been working on a similar plan.



Native vegetation as seen about two miles north of Sloan Canyon National Conservation Area on Wednesday, May 9, 2018. (Jeff Scheid/The Nevada Independent)

Their proposed legislation would allow federal land managers to auction off about 120,000 acres of public land to developers within a defined boundary. The county has asked that the proceeds of selling federal public land go back to Nevada, but that might be a difficult ask for other members of Congress from other states who would have to approve the legislation.

“I know that the changes in the election will have an impact, but I don’t know how big of an impact that will be,” said Marsha Berkbiger, the chair of the Washoe County Commission.

Both counties had wanted legislation in Congress by the end of the year, but the counties faced pushback from environmental groups. In Clark County, many groups stayed neutral on the bill, but others, including the Sierra Club and Center for Biological Diversity, opposed the plan, arguing that it could harm protections for the threatened desert tortoise and create more sprawl.

In Washoe County, [environmentalists were concerned](#) the proposal could strip wilderness-style protections for about 250,000 acres of land that support an outdoor recreation economy.

“We’re still trying to work [with conservation groups] to find out what that happy medium is,” Jamie Rodriguez, the county’s government affairs manager who is working on the bill. “We want a level of consensus with all of the entities so we aren’t leaving anyone out.”

The Washoe County proposal comes as the region undergoes a more [comprehensive planning effort](#) to determine what form the Truckee Meadows area should take as planners prepare for more than 100,000 new residents over the next two decades. Jeremy Smith, a GIS Coordinator working on the planning effort for the Truckee Meadows Regional Planning Agency, said that the community, [through that process](#), has an opportunity to decide how the region should grow.

“We’re not necessarily looking to limit anything, but we’re looking to manage it in a reasonable fashion,” Smith said. “That’s the conversation that’s going to continue.”

The agency has come up with four potential growth patterns and is asking residents to weigh in on which option they prefer. At City Council and County Commission meetings, dozens of residents come out each week to comment on specific developments. But Bobzien said those constituents should also engage more closely with the high-level regional planning process.

“Those planning decisions are what’s really going to have the most impact on what the region looks like,” Bobzien said. “In so many ways, the battles and fights we are having right now, whether it’s StoneGate or Daybreak, are attached to decisions made over a decade ago.”

Researchers made 3D laser maps of Northern Nevada and the data is available to anyone online

[Benjamin Spillman](#), Reno Gazette Journal Published 10:07 a.m. PT Dec. 21, 2018 | Updated 10:35 a.m. PT Dec. 21, 2018

Researcher Seth Dee of University of Nevada explains how recently made LiDAR maps of Reno and Carson City will help Nevadans for years to come. Benjamin Spillman, bspillman@rgj.com



(Photo: Benjamin Spillman)
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Few people would have given much thought to a twin-engine Cessna taking off from the Minden-Tahoe Airport on Sept. 20, 2017.

And only the most diligent observer would have noticed the aircraft as it spent the better part of the next 40 days methodically flying 610 times over Carson City and Reno.

But the product of those flights could have a profound impact for people in Northern Nevada for decades to come.

That's because the aircraft was carrying a passenger operating a Leica ALS80 LiDAR sensor. LiDAR, or 3D laser scanning, is a technology that works similarly to radar.

MORE: [Don't delay wood smoke regulations, say Nevada health officials](#)

MORE: [Nevada researchers: Vaping leaves cancer-causing chemicals in lungs](#)

The operator used the device, mounted on the aircraft, to capture the most detailed topographic map to date of Carson City, Reno, portions of Storey and Lyon counties and the Carson Range.

That map, which captured features smaller than 20 inches square, is 10 to 20 times more detailed than previously available topographic data for the region.

[It's publicly available from the U.S. Geological Survey or Nevada Bureau of Mines and Geology for anyone](#), from backcountry skiers looking to map avalanche hazards to builders who wants to avoid earthquake faults or flood zones, to download.

Although the technology to make such maps has been available for years it hasn't been widely deployed in Nevada, at least not for the purpose of generating maps for the public domain.

Until the recent mapping, Nevada's public domain coverage was limited to a portion of the Humboldt River Basin near Elko and parts of Clark County near Las Vegas.

Part of the reason for the lack of coverage is the technology was leaping forward in the early part of the decade when the state was mired in a recession and cash to use for matching funds was in short supply.

"We didn't have the high resolution, publicly available data set for the Reno-Carson area," said Seth Dee, geologic mapping specialist for the Nevada Bureau of Mines and Geology. "This is something we've been advocating for and really wanted for research and for infrastructure and a bunch of other applications."

The project cost \$619,000, said Jim Faulds, director of the Nevada Bureau of Mines and Geology. The University of Nevada and USGS each contributed \$150,000, Faulds said. The Washoe County Regional Basemap Committee, U.S. Forest Service, cities of Reno and Sparks, Lyon and Storey counties and NV Energy also contributed.

There are already talks to expand the project further north in Washoe County and south into Douglas County, Faulds said.

"I think our goal is eventually have an annual proposal," he said. "So long as the economy stays decent and there are some funds available, we should be able to."

The data is an upgrade over previous LiDAR maps of the region which had a resolution of about 10 meters. The higher resolution allows people to see details they hadn't seen before.

In just a few months people have already used the data to discover more than two dozen previously unknown earthquake faults, better understand the age of landslide deposits at the mouth of Ophir Creek in Washoe Valley which helps analyze risk of future slides, find evidence of ancient lake shorelines in Lemmon Valley which helps for flood risk analysis and a better understanding of the size and history of ice age glaciers on Mt. Rose.

"It is like prescription glasses, you don't have them and finally you get them so you can see all kinds of nuanced detail," Dee said.

The maps are also an improvement over what's publicly available through satellite-based services such as Google Earth.

Unlike satellite photos, LiDAR can capture data in layers which gives people more options when using the data.

For example, ecologists or fire management officials could configure data into maps that depict vegetation coverage. Other users, such as geologists or land use planners, can filter out vegetation and get a "bare earth" view of the ground.

"That's what's kind of exciting," Dee said.

Water leak briefly shuts down northwest Reno road

By Staff |

Posted: Tue 8:40 AM, Dec 25, 2018 |

Updated: Wed 4:07 PM, Dec 26, 2018



[View Map](#)

RENO, Nev. (KOLO) - A Reno residential road is back open after a water pipe burst.



Tuesday December 25, 2018, water was reported leaking from underneath Downey Avenue, near West Seventh Street in northwest Reno.

The Reno Police Department, Reno Fire Department and other city crews were on scene and briefly closed off the roadway to the public.

The cause of the leak has not been determined.

Amarillo, Texas, Officials Explore Smart Water Meter Upgrade

Amarillo, Texas, city officials are working to modernize their utility services by adopting an automated advance metering infrastructure with the overarching goal of increasing efficiency and accuracy.

BY DOUGLAS CLARK, AMARILLO GLOBE-NEWS / DECEMBER 27, 2018



SHUTTERSTOCK

(TNS) — Amarillo, Texas, city officials are exploring the possibility of adopting an automated advance metering infrastructure to enhance water utility customer service and billing accuracy. St. Anthony, Minnesota-based SL-serco recently completed an automated metering case study specifically crafted for Amarillo, officials said, with the overarching goal of increasing efficiency.

"The city and SL-serco began this project through a very strategic, vision-based discussion surrounding how they would like to operate and serve the community," Jameson Allen, an SL-serco organization consultant, said. "We identified we would like to establish a bridge of trust between the city and its customers. Through that customers will experience enhancements in customer service and quicker responses and the water utility would be more effectively able to spend their resources and establish more equitable billing."

Allen said establishing a fixed network infrastructure would also increase transparency while improving customer engagement and

future performance, noting the base of the technology encompasses end points — sending data to the towers.

RELATED

Bloomington, Ind., Eyes Switch to Smart Water Meters
Independence, Mo., Moves Toward Honeywell for Smart Meters
Washington Utility Moves to Replace Failing Smart Meters

"And those end points can be controls, sensors, or in the case of this project, we're hoping to attach them to water meters to collect regular consumption data," he said. "This data is sent to collectors, which can collect all sorts of information for the city, pushing the information into a server or a head end system, delivering customer's data so they can better use city resources and understand what they're using. And it equips the city with analytics to better make decisions about the future. It's (a) digital service platform and water is a service on that platform."

City Finance Director Laura Storrs said there are multiple benefits to be derived from a fixed network infrastructure system.

"In the current state we're at, we're more reactive to things — to questions that come in, to concerns there might be a leak on a property," she said. "A system and technology like this helps us to be proactive and provide the customer with information to get something resolved faster and more efficiently. Also, as customers have more real-time information, they can make better decisions about their water consumption. We all know water is (a) precious resource and we can empower our customers to take hold of their information and work with it."

As it relates to billing, Storrs said with multiple (meter) readings coming in, the city would have the ability to ensure accurate readings each time with every bill — acknowledging there are

instances where inclement weather impacts the process of going out and reading meters.

"The system sends out radio frequencies that allow bills to be sent out every month and calculated each time correctly," she said, adding the overall cost for such an endeavor that includes infrastructure, towers, software and meters is just under \$30 million, with the up front cost being replacement of all water meters within the city limits and areas the city serves as water customers. "This covers everything to get us running. The other thing to keep in mind is the number they (SL-serco) provided us should be the overall amount if we don't find ways to utilize partnerships within the community. We would approach the Texas Water Development Board and apply for financing at very low interest rates. Other communities have been approved for projects like this. Resolution to submit an application."

Officials said the next steps involve the city council granting approval of a resolution to submit a Texas Water Development Board application, possibly next month, followed by another resolution six to nine months later to approve a loan agreement.

"This allows us to address two of the biggest problems we've got," City Manager Jared Miller said with regard to the automated advance metering infrastructure. "And that's lack of modernization, but also a way to address customer service and customer confidence challenges in the water utility. It's a huge bang for the buck. The billing will be more accurate."

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Mt. Rose Hwy open again after TMWA fixes water pipe

By Staff |

Posted: Thu 8:01 PM, Dec 27, 2018 |

Updated: Fri 10:20 PM, Dec 28, 2018



[View Map](#)

RENO, Nev. (KOLO) - One lane of the Mount Rose Highway was closed for several hours at Galena High School Thursday night as Truckee Meadows Water Authorities crews fixed a leak in a water pipe.

[Link to Video News Report w/ Interview](#)

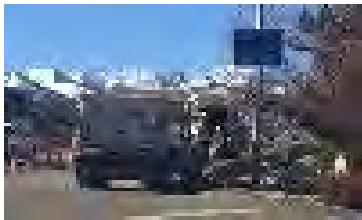


Sundance Drive photo

No customers have lost access to water because of the repair at the Mount Rose Highway and Sundance Drive, TMWA said.

Nearby Sundance Drive was coned off into Friday because of some water damage and muddy roads, with full cleanup expected by midday Friday.

The leak took place the night of December 27, 2018.



Sundance Drive photo

Can't see the images? [view AS](#)

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December 31,
2019



Dear Supporter,

As you think about your year-end giving, please consider the challenges we face in 2019:

Protecting the Ruby Mountains

...and other wild places from oil & gas exploration. The Sierra Club Toiyabe Chapter will continue to fight the Trump Administration's plans to lease your public lands in the Ruby Mountains for oil & gas exploration, as well as additional proposals to open an additional 900,000 acres of your public lands to more exploration. Some are right by Great Basin National Park and favored Nevada wilderness areas.

We need to move away from fossil fuels and invest in Nevada's home-grown, clean, renewable resources like solar and geothermal.

Your gift will speak clearly in opposition to this giveaway to fossil fuel companies that impacts watersheds, wildlife habitat, indigenous communities, public access and outdoor recreation.

Fighting the military expansions in Fallon and Desert National Wildlife Refuge.

The military plans to expand operations. Stillwater Wildlife Refuge, public access, bighorn sheep and outdoor recreation will pay the price. The Sierra Club is joining allies and communities from across the political spectrum to stop this unnecessary overreach of government power.

Your gift matters. [Please include the Toiyabe Chapter in your year-end giving.](#) All monies will stay right here, working for you in Nevada and the eastern Sierra.

Standing up to sprawl in Reno and Las Vegas.

In 2018, the Washoe County and Clark County commissions pursued legislation to sell off your federal public lands for development. Both proposals are a rush to sprawl, with little regard to sustainable planning, open space, air and water quality, wildlife habitat, transportation that makes sense, quality of life, or the additional burden on infrastructure and taxpayers.

These activities affect everyone living in and near Reno and Las Vegas. Your support will help us engage our community leaders to create walk-able neighborhoods, open space, trails, urban planning and transportation that cleans the air and improves quality of life for all.

100% Renewable Energy.

Climate disruption is happening. We must act now. The Toiyabe Chapter will work with environmental champions in Nevada's Legislature to move Nevada off toxic fossil fuels and toward 100% renewable energy. Let's stop spending \$1.3 billion each year for toxic fossil fuels drilled and piped from elsewhere, when we can invest instead in our abundant solar, geothermal, and the jobs and economic and environmental benefits they bring.

We must prioritize community solar and brownfield development to avoid destroying wild landscapes for cleaner energy.

Your gift to the Toiyabe Chapter will speak clearly for our environment, public lands, and healthy communities at the Nevada State Legislature and in Mammoth Lakes, Reno, Las Vegas, Lake Tahoe, Truckee and Carson City—everywhere decisions are made to improve air, water and public health through renewable energy.

[Donate Today!](#)

Saving Nevada's Water

The Sierra Club is fighting development that continues to destroy Lake Tahoe's precious clarity, and efforts to drain rural aquifers to support growth in Reno, Las Vegas and across the region.

It's a lot of work. We're up to the task. With your help, we can do it. Your gift makes us all stronger.

Donate today by clicking the button below.

Members, you can also return your check in the letter that arrived recently in the mail.

Or send your check, payable to "Toiyabe Chapter Sierra Club", to PO Box 8096, Reno NV 89507.

Together, we can make a difference. Your support makes life better throughout the eastern Sierra and Nevada.

Thank you!

Brian Beffort

Toiyabe Chapter Director



Will cute kids and critters inspire you to give? The Sierra Club Toiyabe Chapter will speak for those who don't have a voice.

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Donations via the above button are not tax-deductible. But they are very important, because they allow us to lobby lawmakers to enact better environmental policies. This is important for the 2019 Legislature.

Tax-deductible donations don't allow lobbying, but they do get kids out into nature, educate the public and policy makers, and support volunteers, scholarships and stewardship.

[To make a tax-deductible donation to the Toiyabe Chapter, click here.](#)

All gifts are helpful and appreciated.

Thank you!

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Nevada kicks off 2019 with healthy snowpack

[Benjamin Spillman](#), [Reno Gazette Journal](#) Published 5:47 p.m. PT Jan. 2, 2019

Nevada's snowpack is off to a strong start compared to last year. Benjamin Spillman, bspillman@rgj.com



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(Photo: Benjamin Spillman/RGJ)

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The new year is off to a strong start, at least in terms of snowpack in Northern Nevada.

Eight of 11 major watersheds are near or above normal in terms of snowpack, and the rest aren't far behind.

It's a great start compared to this day last year, when every basin was practically parched. For example, the Lake Tahoe Basin was 26 percent of normal in January 2018.

"The snowpack last year this time of year was really dismal so we're actually doing much better this year," said Jeff Anderson, a hydrologist for the Natural Resources Conservation Service. "So, that is the good news."

Anderson on Wednesday conducted the first snow survey of 2019 at the Mt. Rose SNOTEL, a device at the Mt. Rose Ski Tahoe resort on Slide Mountain that measures rain and snowfall.

Although the device is automated, Anderson checks the snow in person monthly during winter to make sure the real-life conditions match the automated readings.



Buy Photo

Hydrologist Jeff Anderson of the Natural Resources Conservation Service uses an aluminum tube to measure snowpack on Slide Mountain near Reno, Nev., on Jan. 2, 2019. (Photo: Benjamin Spillman/RGJ)

Snowpack in the Lake Tahoe Basin, which is important to Reno and Sparks because Lake Tahoe serves as a reservoir for the Truckee Meadows Water Authority, is at 79 percent of normal for the date. The Truckee River Basin is at 68 percent of normal. Last year those figures were 26 and 55, respectively.

"We are not quite where we want to be, perhaps, but we are doing better than last year," Anderson said.

MORE: [5 great snowshoe hikes near Lake Tahoe](#)

The news was even better throughout the rest of Northern Nevada.

Snowpack in the Carson River Basin is at 94 percent of normal and in the Walker River Basin it's at 91 percent. The Lower and Upper Humboldt, Clover Valley, Northern Great Basin and Owyhee River basins are all above 100 percent of normal snowpack for the date.

"This year the snow is pretty consistent at all elevations," Anderson said.

At the Slide Mountain SNOTEL, the snow was 30 inches deep with 7.9 inches of water content. Last year, the station measured 35 inches of snow with 11.2 inches of water content, about 80 percent of normal. Although the snowpack on Slide Mountain is slightly below last year, Northern Nevada overall has more snow now than it did on the same date last year.

"It has been a week since we had snow and we are walking around in powder," Anderson said. "So the snow quality is still really good; it is just the overall depth and water content is a little low."

Although water managers welcomed the strong start, it's too early to know whether the season will end with adequate snowpack.



[Buy Photo](#)

Charts show the difference in median snowpack in Northern Nevada on Jan. 1, 2018 and Jan. 1, 2019. The snowpack is much heavier in the 2019 chart at the top. (Photo: Benjamin Spillman/RGJ)

The outcome is important because Reno and Sparks get as much as 80 percent of their water supply from the snowpack, said David Wathen, chief deputy water master for the Truckee and Carson rivers.

Water levels in reservoirs lagging

Wathen said strong winters in recent seasons mean there's already enough water in storage to carry most communities through summer. .

But more snow this season would ensure those systems get replenished. Major reservoirs in the region have plenty of room to spare at the moment.

The top 6 feet of Lake Tahoe, the largest storage area for the Truckee Meadows, is at 61 percent of capacity compared to 78 percent on this date last year.

Reservoirs along the Truckee River, including Donner, Independence, Stampede, Boca and Prosser, are at 69 percent of capacity compared to 81 percent at this time last year.

Lahontan Reservoir near Fallon is at 36 percent of capacity compared to 68 percent at this time last year.

Cold temperatures hit at just the right time

The strong snowpack is at least partly due to good luck, said Dan McEvoy, regional climatologist at the Western Regional Climate Center.

Since October, the average temperature at Tahoe City has been more than a degree above normal, a situation that tends to favor rain over snow.

However, the moisture that has moved into the region happened to coincide with colder temperatures, which helped build a solid snowpack to start the year.

"I'd say we've been kind of lucky," McEvoy said.

The luck could continue into January. McEvoy said a moderate-size storm could bring snow to the region around Saturday.

"It actually looks really good starting about Saturday, at least going into the middle of next week," McEvoy said.



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Hydrologist Jeff Anderson of the Natural Resources Conservation Service prepares to use a large, aluminum tube to measure the snowpack on Slide Mountain near Reno on Jan. 2, 2019. *(Photo: Benjamin Spillman/RGJ)*

TMWA: tips to avoid frozen pipes this winter season

by News 4 & Fox 11 Digital Team

Thursday, January 3rd 2019



AA

Experts recommend several tips to keep your pipes working through freezing temperatures (Sinclair Broadcast Group)

RENO, Nev. (News 4 & Fox 11) — It is winter and overnight temperatures will continue to fall below freezing.

Truckee Meadows Water Authority would like to remind residents to protect their home from frozen pipes.

“We’ve received a lot of calls from customers requesting that their water be turned off because their pipes have burst,” said Marci Westlake, manager of customer service. “Please remember that the pipes around your home can freeze and burst if they are not winterized.”

Avoid the expense and trouble of frozen water pipes with these simple precautions to follow:

- If you have not already done so, shut off and drain your irrigation system. Disconnect and drain all outdoor hoses as well. A short video is available to guide you through the process at: www.tmwa.com/howto.
- Insulate pipes or faucets in unheated areas. If you have water pipes in an unheated garage or crawl space under the house, wrap them. Hardware and home improvement stores offer appropriate pipe-wrapping tape.
- Close the foundation or exterior vents around your house during the cold months to help keep cold air out of crawl spaces.

- Seal off access doors, air vents and cracks. Cold, winter winds whistling through overlooked openings can quickly freeze exposed water pipes. However, avoid plugging air vents that your furnace or water heater needs for safe ventilation. Keep garage doors closed if there are exposed water lines inside.
- During periods of hard freezes, or when you're away from your home for an extended period of time, keep your home thermostat at a temperature that will help protect your pipes from freezing, no lower than 55F.
- **Know the location of your master water shutoff valve.** In many homes, it's where the water line comes into your house from the street. If a pipe burst anywhere in the house -- kitchen, bath, basement or crawl space -- this valve turns off all water and will save your home from water damage. So, find it now and paint it a bright color or hang a tag on it. Be sure everyone in the family knows where it is.

For more tips on winterizing your home, please
visit: tmwa.com/conservation/winterize.

Washington Post

‘Not a problem you can run away from’: Communities confront the threat of unregulated chemicals in their drinking water



Tammy Cooper became an activist when a water crisis began this summer in Parchment, Mich., where she and her family live. She recently traveled to Washington for a Senate hearing on the chemicals involved. (David Kasnic/For The Washington Post)

By [Brady Dennis](#)



[Brady Dennis](#)

Reporter focusing on environmental policy and public health issues

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January 2

PARCHMENT, Mich. — The day this small town told its residents to stop drinking the water, life on Glendale Boulevard turned from quiet to alarming.

One couple decided to immediately put their house up for sale. Another fretted over their young son and the baby who would soon arrive. And up the street, one mom felt a rising indignation that would turn her into an activist to ban chemicals contaminating her family's drinking water -- and that of millions of other Americans.

That late July day, this town along the banks of the Kalamazoo River became the latest community affected by a ubiquitous class of compounds known as polyfluoroalkyl and perfluoroalkyl substances, or PFAS. For years, calls for the federal government to regulate the chemicals have been unsuccessful, and last year the Trump administration tried to block publication of a study urging a much lower threshold of exposure.

The man-made chemicals have long been used in a wide range of consumer products, including nonstick cookware, water-repellent fabrics and grease-resistant paper products, as well as in firefighting foams. But exposures have **been associated with** an array of health **problems**, among them thyroid disease, weakened immunity, infertility risks and certain cancers. The compounds do not break down in the environment.

In Parchment, where they were **once used** by a long-shuttered paper mill, tests found PFAS levels in the water system in excess of 1,500 parts per trillion — **more than 20 times** the Environmental Protection Agency's recommended lifetime exposure limit of 70 parts per trillion.

Local officials promptly alerted residents. Michigan officials declared a state of emergency. People started picking up free cases of bottled water at the high school. Within weeks, the town abandoned the municipal wells that had served 3,000 people and **began getting water** from nearby Kalamazoo.

"This is not a problem you can run away from," said Parchment resident Tammy Cooper, who has become an outspoken advocate for better regulation. "There are Parchments across the country."



Tammy Cooper sits with her 3-year-old daughter, Jillian, at their Parchment home. (David Kasnic/For The Washington Post)



A themed home along Riverview Drive, the town's main road. (David Kasnic/For The Washington Post)



A shuttered paper mill is a suspected source of the water contamination. (David Kasnic/For The Washington Post)

Harvard University researchers say public drinking-water supplies serving more than **6 million Americans** have tested for the chemicals at or above the EPA's threshold — which many experts argue should be far lower to safeguard public health. The level is only an agency guideline; the federal government does not regulate PFAS.

The compounds' presence has rattled communities from Hoosick Falls, N.Y., to Tucson. They have been particularly prevalent on or near military bases, which have long used PFAS-laden foams in training exercises.

Both houses of Congress held hearings on the problem last year, and lawmakers introduced bills to compel the government to test for PFAS chemicals nationwide and to respond wherever water and soil polluted by them are found. In late November, the head of the EPA vowed that the agency would soon unveil a "national strategy" to address the situation.

Affected communities are still waiting.

“There are some very real human impacts from this stuff,” said Erik Olson, a drinking-water expert for the Natural Resources Defense Council. “Most people have no idea they are being exposed.”

Michigan is one of the few states where officials are trying to determine the extent of PFAS contamination. Health officials undertook statewide tests this year across 1,380 public water supplies and at more than 400 schools that operate their own wells.

“When we look for it, we tend to find it,” said Eden Wells, the state’s chief medical executive. Yet detection raises difficult questions, given the lack of regulation involving PFAS in water and the evolving research on its long-term health effects.

“Many of our responses are outstripping the scientific knowledge we need,” Wells said.

More is known about two particular types of the chemicals, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), which companies phased out years ago amid growing evidence that both were ending up in the blood of nearly every American. But thousands of other PFAS chemicals remain in use — among the many threats, including arsenic and lead, to drinking water nationwide.

“From a policy perspective, what bothers me about all this is there are industries everywhere that don’t really have to report what they are using,” said Detlef Knappe, a North Carolina State University environmental engineer whose research [helped identify](#) another PFAS chemical, known as GenX, in Wilmington’s drinking water supply. “As a class, there are so many compounds . . . and it pops up in the most unexpected places.”



A view of the Kalamazoo River as it flows through Parchment.

(David Kasnic/For The Washington Post)



Scooter D's, a popular diner, scrambled to stay open during the town's water crisis.
(David Kasnic/For The Washington Post)



The diner served only canned sodas through the summer because its drink machine was hooked to a water line. (David Kasnic/For The Washington Post)

The Trump administration's focus on the problem has been inconsistent.

Politico [reported](#) in May that the White House and EPA sought to block publication of a federal health study on the nationwide effects of PFAS contamination after one administration aide warned in an email that it could result in a “public relations nightmare.” The [study](#) from the federal Agency for Toxic Substances and Disease Registry, which eventually was released, suggested that the EPA's existing, nonenforceable standard is inadequate to protect public health and should be much lower.

The same month, the EPA held a PFAS “summit” with industry representatives, public health groups, tribal leaders and officials from all levels of government. Then-administrator Scott Pruitt pledged action, saying, “There are concerns about these chemicals across the country because of their persistence, their durability, getting into the environment and impacting communities in an adverse way.”

Little has happened since then, however.

At a hearing in early fall, Sen. Thomas R. Carper (D-Del.) pressed the EPA's director of groundwater and drinking water on when the agency might announce its plans to regulate the chemicals and finalize a drinking-water standard. Peter Grevatt, an agency veteran who recently retired, responded that officials were continuing to visit communities and develop a long-term "management plan." He acknowledged that it could take the agency a "number of years" to put enforceable regulations in place — if it determined that the contaminants were surfacing in enough water systems to be considered a nationwide health concern.

"Is it a national standard that requires all the nation's systems to sample on some regular basis and has the tools to get treatment in place?" Grevatt said. "Or is it something that we'll address more locally?"

Environmental attorney Robert Bilott successfully sued DuPont on behalf of plaintiffs exposed to PFOA in Ohio and West Virginia, and this year he filed a class-action lawsuit against 3M, DuPont, Chemours and several other companies on behalf of all Americans with PFAS chemicals in their blood. Some states have taken aggressive steps on their own, with New Jersey the first to regulate certain types of PFAS chemicals in its drinking water.

Federal attention is long overdue, Bilott contends.

"It's a national issue that needs to be addressed in a national way," he said.

At least outwardly, a sense of normalcy has returned to Parchment.

Bottled water is no longer being handed out at the high school, though the town is still relying on water from Kalamazoo. Officials say their investigation is ongoing, with one likely culprit of the contamination being a local landfill once used by the now-closed paper mill.

Yet beneath the surface, many people continue to worry.

"In our minds, our water was safe," said Mayor Robert D. Britigan III, who noted that Parchment always had been in compliance with Michigan's drinking-water regulations. The city has since left the municipal water business. "We will never go back to those wells," he said.

On a sunny day this fall, customers lined up at the window of Twisters for the last ice cream cones of the season. The regulars sat in their usual spots inside Scooter D's, a popular diner off the main drag, where the waitresses call people "sweetheart" and the smell of hash browns hangs in the air.

"We lost a lot of business, primarily because of fear," said manager Carrie Klinger, whose father started the diner more than two decades ago. During the month-long water crisis, the family bought 80 pounds of bagged ice a day, made soups with bottled water and served canned sodas because the drink machine was hooked to a water line.



It's still not quite back to where it was," Klinger said. "I still have customers who say they'll never drink the water again."

Echoes of that distrust linger on Glendale Boulevard, where Jennifer and Justin Koehler lived in a tidy, white clapboard house until selling and moving away because of their fears.

"It made me so scared, because our kids are so little. And it made me angry," Jennifer Koehler said of the water problems in Parchment.

Their former neighbors, Tammy Cooper and her husband David, have wrestled with the same emotions. "What did this crisis do? It woke me up to what the government is and is not doing on many levels," she said.

Down the street, life for Sara and Matt Dean remains a mix of anxiety, resignation and doubt.

"We relocated here thinking it would be a really great life decision," Sara Dean said as her 2-year-old son, Patrick, played on the floor. "You're supposed to hear about this somewhere else. This is the most average of average communities that there could be. It's 'Leave It To Beaver' average. If it can happen here, it can happen anywhere."

The family spent thousands of dollars to install a top-notch water filter. Still, they hesitate to wash their vegetables or cook with tap water. "It's just this giant question mark," Matt Dean said. "Are we responsible staying here?"

But they are staying, for now. On Oct. 17, Sara gave birth to a second son, Britt. The next day, the family brought him home to Parchment.

Read more:

[In Detroit, one school leader's reaction to lead in the water: Shut off the taps](#)
[A father, a daughter and the search for answers in a toxic town](#)

Reno water main break repaired



A water main break has affected the intersection of California Avenue and Forson Drive.

By Staff |

Posted: Fri 9:42 AM, Jan 04, 2019 |

Updated: Sat 8:49 AM, Jan 05, 2019



[View Map](#)

RENO, Nev. (KOLO) - Water was bubbling up at several spots at the intersection of California Avenue and Forson Drive in Reno, due to a water main break Friday

As of 5:25 p.m. January 4, 2019, traffic on California Avenue was open in both directions after the intersection was closed several hours.

Truckee Meadows Water Authority says it is common with freezing temperatures this is the time of year for water pipes to break

Reno Brings Sustainability to the Wild West

New Leadership and Changing Demographics Turn the High Desert Green



Photo: City of Reno

Great Reno Balloon Race

The Great Reno Balloon Race is the largest free hot-air ballooning event in the world. From its humble beginnings in 1982 with just 20 balloons, the annual four-day event now boasts as many as 100 balloons. The 2019 event is slated for Sept. 6-8.





Lynne Barker is sustainability manager for the City of Reno, Nev.

Posted: Wednesday, January 2, 2019 2:33 pm | Updated: 11:18 am, Fri Jan 4, 2019.

Reno Brings Sustainability to the Wild West By Randy Rodgers
Publisher & Executive Editor

In a region with one of the highest concentrations of ski resorts in the U.S. and a water supply that depends on mountain snowpack, the climate trends in Reno, Nev., have not been promising.

“Reno is the fastest warming city in the nation,” said Lynne Barker, the city’s sustainability manager. “Our average annual temperature has increased more than five degrees over the past five decades.”

The hotter, dryer climate means longer and more severe droughts, less water for ranching and farming, and more frequent and intense wildfires, Barker warned in a recent report on the city’s resilience. As Reno begins to feel the increasingly dire impacts of climate change, a new administration buoyed by changing demographics in the electorate is coalescing around the principles of sustainability.

Barker is Reno’s first sustainability manager, hired after a new, more progressive administration took over city government in 2015. That year, the Reno City Council and newly elected Mayor Hillary Schieve voted unanimously to join the Compact of Mayors, now the [Global Covenant of Mayors](#), an international coalition of mayors and city officials committed to reducing local greenhouse gas emissions and promoting resilience to climate change. Among Barker’s first assignments was to meet the requirements of that covenant, starting with the city’s first greenhouse gas inventory, conducted in partnership with the University of Nevada-Reno, Washoe County Health District, and the Reno-Tahoe Airport Authority.

In 2017, Reno was ranked the 31st greenest city in America by [WalletHub](#) after a comparison of the top 100 cities. Later that year, the city was certified as a 3-STAR Community by [STAR Communities](#), a rating system that helps cities track their progress toward sustainability on a 5-point scale. Following the certification, Barker and her team drafted [Reno Resilience](#), the city’s 2017 Sustainability Report, which benchmarked current metrics and outlined the city’s evolution toward 44 objectives in STAR’s seven thematic goal areas.

Barker, who was director of the STAR Community Index project when it was being launched by ICLEI USA, the U.S. Green Building Council and the Center for American Progress from 2008 to 2011, said she's proud of the Reno Resilience report for its emphasis on outreach to the community.

"We really tried to communicate to residents and businesses what STAR Communities is, what it covers, why it's important and why they should care," Barker said. "...We worked really hard on telling that story." She said the report has received accolades from STAR Communities and has been emulated by other cities in the program.

The Reno Resilience report also identified the alignment between the STAR Communities goals and the goals in the city's newly adopted Master Plan, [ReImagineReno](#), which will guide Reno's development over the next 20 years.

Reno, with a population of just under 250,000, is part of the Reno-Sparks metropolitan area in western Nevada, home to about half a million people. The area's primary source of water is the Truckee River, which flows out of Lake Tahoe 22 miles south of the city. The region sits in the "rain shadow" of the Sierra Nevada Mountains, and therefore relies mostly on snowmelt for its water. The snow also helps fuel the economy, with more than a dozen ski resorts in the area. But, besides bringing hotter, dryer summers, climate change is also bringing more rain and less snow in winters, Barker said. That reduces the snowpack even more and causes dangerous flash floods.

Gaming and tourism dominated Reno's economy in the 20th Century, but in recent years the city has seen a boom in the technology sector with companies like Apple, Amazon, Rackspace, Blockchain and Switch bringing new distribution and data centers to the area. The [Tahoe Reno Industrial Center](#) is promoted as the largest industrial park in the world and is home to the 5.8-million-square-foot [Tesla Gigafactory](#) and Switch's [SuperNAP](#) campus, one of the largest data centers in the world. More than 100 companies operate warehouse, logistics and fulfillment centers in the industrial complex, including such companies as PetSmart, Home Depot, Walmart and others.

Reno's greenhouse gas inventory showed the city had already made progress, decreasing its carbon footprint by nearly 14 percent between 2008 and 2014, largely as a result of more fuel efficient vehicles, increased use of renewable energy and converting power plants from burning coal to cleaner natural gas. But, Nevada voters have demanded more: They approved a [ballot measure](#) in November that will require electric utilities in the state to acquire 50 percent of their electricity from renewable sources by 2030. If the measure is approved by voters again in 2020 the mandate will be written into the Nevada Constitution.

Barker said NV Energy, the state's primary electric utility, has remained neutral on the ballot measure, but has already committed to doubling its current renewable energy output by 2023 and plans to eventually become 100 percent renewable. It currently generates 24 percent of its electricity from renewable sources and only 8 percent from coal.

According to a 2017 [report](#), NV Energy says coal will no longer be in use in southern Nevada and will represent less than 3 percent of its generating capacity throughout the state by the end of 2019. In 2018, the utility announced plans to add more than 1,300 megawatts of solar energy to its existing portfolio, along with the state's first battery storage facility that will have the capacity to store up to 100 megawatts. The additions will bring NV Energy's total renewable energy portfolio – which includes geothermal, hydro, biomass, wind and solar facilities – to more than 3.2 gigawatts of power generation.

"Our community is very invested in sustainability. It's also a changing community," Barker said, describing a rapidly growing population with increasing numbers of university students, retirees and a Latino population that now accounts for nearly 25 percent of residents, up from 19 percent in 2000.

Reno, known since the 1920s as “the Biggest Little City in the World,” is beginning to experience some growing pains. The prospect of good jobs and relatively low housing costs have attracted newcomers from northern California, where an affordable housing crisis and recent wildfires have displaced many. Concerns over the “Californiacation” of the city have sparked debates about “gentrification, traffic and lifestyle changes,” according to the [Reno Gazette Journal](#).

“With big-city culture, comes more creative food, dining, shopping and recreation options, but also more expenses,” bemoaned City Life Reporter Mike Higdon. “Reno’s cost of living is already high while house and rental prices outpace wages.”

Barker said social equity is a growing concern for city officials. “Just this past year the mayor and city council adopted our first-ever diversity plan,” she said. The plan provides guidance on how the city can diversify its workforce and “address the issues of institutional racism to make sure that we are providing services and making investments that are equitable,” Barker said. The city now publishes its literature in both English and Spanish, and provides Spanish translators when citizens call for city services. She said the draft Sustainability & Climate Action Plan for 2018-2025 emphasizes the equitable allocation of resources, services and opportunities, specifically access to fresh, healthy foods, tree canopy and bikeshare services.

Barker credited the efforts of a workforce development coalition that includes the University of Nevada-Reno, the Washoe County School District and the Economic Development Authority of Western Nevada (EDAWN) for improving access to a quality education throughout the region. She said the school district’s [Every Child, By Name and Face, to Graduation](#) program was particularly instrumental in increasing Reno’s high school graduation rate from 66 percent in 2012 to 84 percent in 2017.

Barker said Reno is also a nationally recognized leader in community policing. The Reno Police Department trains its officers in [community-oriented policing](#) and problem solving, which involves partnering with neighborhood groups, schools, recreation centers and other groups to build strong relationships and help fix the source of criminal activity rather than just arresting and prosecuting offenders. The department has a community ride-along program, a downloadable mobile phone app, a Neighborhood Watch program and conducts regular presentations throughout the city. The mobile app contains staff profiles, news, incident reports, navigation tools to find the nearest station, police contact information, local crime statistics and information on how to engage with the department.

Barker said each of the city’s five wards has a citizen advisory board that meets regularly and provides input to city leadership and the police department.

According to Barker, Reno’s key sustainability priorities in the next few years will include:

- **Greening the Energy Supply** - Transition the local energy supply for both transportation and non-mobile sources toward the use of renewable, less carbon-intensive, and less toxic alternatives. Increase distributed, renewable energy generation 15 percent by 2025 through streamlined permits, reduced fees, and technical assistance.
- **Reducing Emissions through Energy Efficiency** - Convert 90 percent of streetlights and traffic signals to LED by 2025. Implement the city’s newly adopted [Building Energy Use Benchmarking and Transparency Policy](#) for large commercial, industrial and multifamily buildings.
- **Reducing Transportation Emissions** - Adopt form based code to improve predictability and quality of compact and complete, walkable, and mixed-use centers and corridors. Install bikeways, bicycle parking, lockers and shower facilities to encourage the use of bicycles for commuting. Reduce city fleet emissions 30 percent by 2025 by transitioning to electric or low emission vehicles where feasible.

- **Developing a Pathway to Zero Waste** - Increase the recycling rate from 30 percent to 50 percent by 2025 and 75 percent by 2050. Partner with industry to implement a construction and demolition waste recycling program, a local green waste and food waste recycling facility, and implement curbside collection of compostables.

- **Expanding Access to Healthy, Local Food** - Allow community gardens, demonstration gardens, small-scale agriculture, community supported agriculture (CSA), the raising of some animals for food purposes, and other efforts. Incentivize development of grocery stores in areas determined as food deserts, and allow for mobile food pantries for underserved communities.

- **Increasing Reno's Tree Canopy** - Expand the city's [ReLeaf Reno](#) program, which accepts donations from the public to plant and maintain trees on private and public property, especially in low-income neighborhoods. (Reno, which is in a "high desert" region of the country, currently has a tree canopy of only 5.2 percent.)

- **Reducing Water Consumption** - Promote the responsible use of water in partnership with Truckee Meadows Water Authority, the city's water utility. Enforce existing and implement new stormwater management practices and standards to protect water quality, including Low Impact Development (LID) standards for new development, green infrastructure, and sustainable, site development standards. Expand use of waste water for beneficial reuse.

Sustainable City Network will host a free, 1-hour webinar on Thursday, Jan. 24 on the sustainability initiatives of the city of Reno, Nev. Presented by Reno Sustainability Manager Lynne Barker, the presentation will describe the sustainability principles reinforced in citywide goals and policies adopted in the City of Reno Master Plan, as well as the more specific strategies identified in the city's Sustainability and Climate Action Plan. Register at <http://sCityNetwork.com/Reno>.

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