



TRUCKEE MEADOWS WATER AUTHORITY
Board of Directors

AGENDA

Wednesday, February 20, 2019 at 10:00 a.m.
Sparks Council Chambers, 745 4th Street, Sparks, NV

Board Members

Chair Vaughn Hartung	Member Kristopher Dahir
Member Jenny Brekhus	Member Jeanne Herman
City of Reno Representative – Currently vacant	Member Naomi Duerr
Member Paul Anderson	

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 January 16, 2019 meeting of the TMWA Board of Directors **(For Possible Action)**
6. Discussion and action on nomination and election of Vice Chairman of TMWA Board of Directors and request for Board adoption of Resolution No. 273 appointing a Vice Chair for the remainder of Fiscal Year 2019 to fill position vacated by Vice Chair Ron Smith — Mark Foree **(For Possible Action)**
7. Water Supply Update — Bill Hauck*
8. Discussion and action on nomination and appointments of Trustee(s) to the Western Regional Water Commission (WRWC) from the TMWA Board of Directors for the following positions to fill vacancies ending March 31, 2019 and for a new two year term April 1, 2019 to March 31, 2021:
 - A) Pursuant to Sec.25(3)(b) of the WRWC Act from the following list of qualified persons: Paul Anderson.
 - B) Pursuant to Sec.25(3)(c) of the WRWC Act from the following list of qualified persons: Jeanne Herman.
 - C) Pursuant to Sec. 25(4) of the WRWC Act representing TMWA as successor to South Truckee Meadows General Improvement District from the following list of qualified persons: Jenny Brekhus, Oscar Delgado, Bonnie Webber, Neoma Jardon, Hillary Schieve, Marsha Berkbigler, Bob Lucey, Kitty Jung, Charlene Bybee, and Ed Lawson.— Mark Foree **(For Possible Action)** *(continued from January Meeting)*
9. Discussion and action on appointment of two TMWA Board members to the Legislative Subcommittee for participation in the 2019 Legislative Session — John Zimmerman **(For Possible Action)** *(continued from January Meeting)*
10. Discussion and possible action and direction to staff regarding 2019 legislative activities, current bills, and TMWA recommended positions on legislative proposals— John Zimmerman and Steve Walker, Walker & Associates **(For Possible Action)**
11. Discussion and possible action, and direction to staff regarding selection of Eide Bailly as TMWA’s external auditor for fiscal years 2019, 2020, and 2021 — Matt Bowman **(For Possible Action)**
12. Presentation of financial performance for the fiscal year first half ended December 31, 2018 — Matt Bowman*
13. Discussion and action, and possible direction to staff regarding approval of funding TMWA’s share of the Regional Category A+ Reclaimed Water Feasibility Study Program Coordination efforts with Nevada Water Innovation Institute (NWII) to obtain professional services from a qualified consultant, including project management, in an amount not to exceed \$120,000 over four fiscal years, FY 2019 through FY 2022 — John Enloe **(For Possible Action)**

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14. Discussion and action, and possible direction to staff regarding the status of Acquisition of the West Reno Water System and Final Closing Documents, the possible approval or modification of the Fourth Amendment to Acquisition Agreement, and the authorization to the General Manager to execute the Fourth Amendment and Final Closing Documents and proceed with closing — John Zimmerman and John Enloe (**For Possible Action**)
15. General Manager's Report*
16. Public comment — limited to no more than three minutes per speaker*
17. Board comments and requests for future agenda items*
18. Adjournment (**For Possible Action**)

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TRUCKEE MEADOWS WATER AUTHORITY
MINUTES OF THE JANUARY 16, 2019
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Wednesday, January 16, 2019, at Sparks Council Chambers., 745 4th Street, Sparks, Nevada. Chair Hartung called the meeting to order at 10:04 a.m.

1. ROLL CALL

Members Present: David Bobzien, Jenny Brekhus, Kristopher Dahir, Naomi Duerr, Vaughn Hartung, and Ron Smith.

Member Absent: Bob Lucey

A quorum was present.

2. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Member Bobzien.

3. PUBLIC COMMENT

Neoma Jardon, City of Reno Councilwoman and former TMWA Board of Director, expressed gratitude for having served on the TMWA Board of Directors for several years, which she described as the most functional board in the community with great staff making it a great company.

4. APPROVAL OF THE AGENDA

Chair Hartung requested to move agenda items 7 and 8 to the next meeting and, per Member Brekhus' request, agenda item 14 to a future meeting.

Upon motion by Member Bobzien, second by Member Dahir, which motion duly carried four to two with Members Brekhus and Duerr dissenting, the Board approved the amended agenda.

5. APPROVAL OF THE MINUTES OF THE DECEMBER 13, 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 December 13, 2018 minutes.

6. RECOGNITION OF TMWA BOARD MEMBER NEOMA JARDON FOR HER YEARS OF SERVICE

Chair Hartung presented Ms. Jardon with a gift thanking her for six years of serving on the TMWA Board of Directors.

Ms. Jardon stated it has been a pleasure to serve on the TMWA Board and the progress they have made to move forward in protecting the community and resources with the establishment of the Rate Stabilization Fund. She expressed the desire to return in the future.

Board Members and the General Manager expressed the pleasure of having worked with Ms. Jardon.

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

Continued to the next meeting.

8. DISCUSSION AND ACTION ON APPOINTMENT OF ADDITIONAL BOARD MEMBER TO THE LEGISLATIVE SUBCOMMITTEE FOR PARTICIPATION IN THE 2019 LEGISLATIVE SESSION

Continued to the next meeting.

9. PRESENTATION ON PROPOSED BILLS FOR THE 2019 LEGISLATIVE SESSION AND DISCUSSION AND POSSIBLE ACTION ON TMWA LEGISLATIVE POSITION RECOMMENDATIONS

John Zimmerman, TMWA Water Resources Manager, and Steve Walker, TMWA's Legislative Lobbyist, presented the staff report of proposed bills with staff recommendations for Board approval.

After discussion regarding the proposed bills, Board Members agreed with staff's recommendations.

Upon motion by Member Duerr, second by Vice Chair Smith, which motion duly carried by unanimous consent of the members present, the Board approved staff's recommendations for positions on proposed bills for the 2019 Legislative Session.

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, TMWA Human Resources Manager, presented the proposed changes to the OPEB plan.

Upon motion by Member Brekhus, second by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board approved the revisions to Other Post Employment Benefits Trust (OPEB) Plan.

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

Ms. Atkinson presented the staff report.

Upon motion by Member Brekhus, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved to the refer the General Manager's appointment of four trustees (Michele Sullivan, Juan Esparza, James Weingart, Steve Enos) to the §501.C-9 Post-Retirement Medical Plan & Trust for a two-year term from January 1, 2019 through December 31, 2020.

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 VAN HOOZER

Ms. Atkinson 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 approved the General Manager's appointment of four trustees (Michele Sullivan, Sandra Tozi, Charles Atkinson, Randy Van Hoozer) to the §115 Other Post-Employment Benefits Plan & Trust for a two-year term from January 1, 2019 through December 31, 2020.

13. PUBLIC HEARING ON RATE AMENDMENT

A. PUBLIC COMMENT

There was no public comment

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

Mr. Zimmerman discussed the amendments to, and purpose of, Rule 7 Meter Retrofit Fee program which had been presented to the Board on first reading in December.

Upon motion by Member Duerr, second by Member Brekhus, which motion duly carried by unanimous consent of the members present, the Board adopted Resolution No. 272: A resolution to adopt amendments to Rule 7 regarding modification of the purpose and amount of the Meter Retrofit Fee.

CLOSE PUBLIC HEARING

14. PRESENTATION ON STONEGATE DEVELOPMENT AND POTENTIAL WATER SYSTEM FACILITY (WSF) CHARGES APPLICABLE TO STONEGATE ANNEXATION INTO TMWA'S SERVICE AREA

Continued to a future meeting.

15. PRESENTATION OF TRUCKEE RIVER FUND ACTIVITIES FOR CALENDAR YEAR 2018

John Enloe, TMWA Director of Natural Resources & Planning, presented the staff report. TMWA funded 13 projects, approximately \$700k, proposed by the Truckee River Fund. Included in the report was a request by Member Brekhus of a summary of programs/projects that have been funded over the years. The projects are focused on education and improving water quality of the water supply that serves TMWA customers.

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, TMWA Customer Service Manager, presented the staff report.

Upon motion by Member Brekhus, seconded by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board approved authorization for the General Manager to renew the Ombudsman Contract with Tami Fruhwirth for Calendar Year 2019.

17. GENERAL MANAGER'S REPORT

Mr. Foree stated that snowpack was just below normal for this time of year and will most likely be ahead of normal after the next storm and provided an update on the activities around the West Reno Water Company water system acquisition: The Third Amendment was signed in December, which extended the closing date to February 27, 2019; and staff is still waiting on comments from other parties on the closing documents.

Member Brekhus thanked staff on the work continuing to be done to close the acquisition of the West Reno Water Company water system in Verdi; discussed management of staging areas; and ask for an update on California Avenue water main break to which Mr. Foree replied it was an old cast iron pipe that failed.

18. PUBLIC COMMENT

Eaton Dunkelberger, Sierra Nevada Journeys CEO, thanked the Board for their continued support and provided updated information on their programs (see attached).

19. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

Chair Hartung announced this meeting will be Vice Chair Smith's last meeting and wished him well.

20. ADJOURNMENT

With no further discussion, Chair Hartung adjourned the meeting at 11:38 a.m.

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

Sonia Folsom, Recording Secretary



The Truckee River Fund and Sierra Nevada Journeys

Fostering more than 8,500 engaged, informed, and connected river stewards

The Truckee River Fund has enabled 8,500 students and over 320 local teachers to learn about, experience and build a connection with the Truckee River through Sierra Nevada Journeys' (SNJ) Watershed Education Initiative (WEI).



These students and teachers participated in a comprehensive Truckee River education program that included a trip to the river or one of its tributaries, several hands-on classroom lessons devoted to the science and conservation issues around the Truckee, as well as rigorous pre/post evaluation to ascertain the efficacy of the program.



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Water Quality • Riparian Habitat • Watershed Stewardship



Program Overview

Through in-class lessons and field trips, the Watershed Education Initiative empowers students to discover their local watershed, many for the first time. Students are given the opportunity to see the Truckee River in a new way – as scientists and caretakers. Sierra Nevada Journeys' credentialed educators introduce students to the concept of a watershed system, including where their drinking water comes from, and covers important natural resource topics like invasive species, erosion, riparian ecosystems, and environmental changes such as drought, urbanization, and wildfire.



"Don't litter. Tell people where that stuff goes. If you put it on the ground, tell them what you're putting on the ground is in the water you drink," – Fifth Grade Student, 2015

The Watershed Education Initiative has seen the following results:

- 90% of students demonstrate improved mastery of watershed concepts from pre to post
- 40% average gain score from pre to post, meaning students with 30% comprehension of watershed concepts emerge with 70% comprehension of watershed concepts.
- 95% of teachers report SNJ programs help improve student understanding of State Science Standards and help students build critical thinking skills about the environment.
- External evaluation by the University of Nevada's Center for Program Evaluation showed that in 2016, 5% more students at schools that participate in SNJ programming score at the proficient level on the State Science assessment than students at comparison schools.

During the field-day lesson, classrooms visit three main field sites: Truckee River at the McCarran Ranch Preserve, Galena Creek Regional Park, and Oxbow Nature Study Area. These locations are convenient and close to home for local students, increasing their sense of ownership, awareness and comfort with accessible natural areas in the watershed.

**"I love being outside because I learn so much more than staying on my phone all day."
– Hayley, Fourth Grade Student, 2018**

Our watershed programming in the Truckee River Watershed would not be possible without support from the Truckee River Fund, and we are thankful for the partnership.



Continuous Improvement

Because of the generous and continued funding Sierra Nevada Journeys has received from the Truckee River Fund, we have constantly evolved the Watershed Education Initiative since the conception.



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Restoring and protecting our water resources



“We participated in this same program two years ago. While I felt the previous learning (two years ago) was good, the changes made to the lessons only deepened and improved them. The pacing was right and the activities engaged thinking and debriefing. Our sessions went quickly (three weeks) and I will be using some of the extension activities to follow up student learning,” - Classroom Teacher, Spring 2016

Program improvements to date through the Truckee River Funds contributions:

- An invasive species case study on the Truckee River.
- The development of partnerships with local land agencies for the Truckee River field lesson, including with the Nature Conservancy and The Nevada Department of Wildlife.
- Hiring an evaluation consultant from the Nevada Department of Education to inform the improvement of student pre/post assessments used in the WEI.
- An online citizen science project for community members to report activity in the watershed.
- An internship program with the University of Nevada, Reno’s College of Education whereby student teachers were trained on Truckee River based science education.

Awareness

In 2015 (TRF #158), students were given a stark visual of the watershed because of extremely low water condition in the Truckee. This allowed educators to facilitate deeper student questioning around habitat change, drought, species interactions, the causes and effects of weathering and erosion, and invasive species. With the noticeably low river as a focal point of discussion, we were able to prompt students to think deeply about how an impacted Truckee River might affect the lives of the organisms, including humans, living in and around the watershed.



This pictures show student in Fall 2015, learning at the Truckee River

These discussions and the critical thinking that comes from it are not just beneficial to students, but our teachers, parent chaperones, and volunteers who walk away with a heightened sense of how to be better ambassadors of the river. To date, thanks to the funding from the Truckee River Fund, more than 944 parent chaperones and community volunteers have logged 5,700 hours of service and gained a better understanding of the role they play in their watershed.

Being able to be outdoors was amazing for my students. Many of them had never seen fish in the “wild” before,” - Fifth Grade Teacher, Spring 2014



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TRUCKEE RIVER FUND



Team and Partners

Sierra Nevada Journeys also employs the future teachers of our community. We have been successfully engaging more undergraduate and graduate students in our field internship program to support programming on the Truckee River. Our field interns come to Sierra Nevada Journeys as the precursor to their teaching careers and we give them an avenue to experience different classrooms while modeling behaviors from our credentialed and experienced full-time educators.



“Very informative, helpful and beneficial towards my future as an educator. I will make relations to real life and outdoor activities so that my students can be exposed to things they haven’t seen before,” – Classroom Teacher, Fall 2013

Sierra Nevada Journeys continues to build upon the strong partnerships within the Watershed Education Initiative. This year we renewed our MOU with The Nature Conservancy to offer programming at the Truckee River at McCarran Ranch. We are also working with the One Truckee River initiative as a partner in education. We continue to have support from the Nevada Department of Environmental Protection which funds watershed education programming in Northern Nevada.

We offer our McCarran Ranch Preserve as the on-site location for student field-study experiences through Sierra Nevada Journeys’ WEI program so that children have the opportunity to enjoy a direct experience with the Truckee River... To reconnect the community with the river and share the importance of conservation for our well-being TNC launched an education and outreach program. SNJ has been the main outreach arm for this education effort...We are excited to support and partner with SNJ to provide this innovative and immersive education experience for local school children,” - Mickey Hazelwood, Truckee River Project Director, The Nature Conservancy



Sustainability

Nevada public schools face funding challenges and our local teachers being spread thin. With help from the Truckee River Fund, we have been able to sustain and expand the Watershed Education Initiative and reach more underserved students.

As of September 2017, The Truckee River Fund had given more than \$12 million in funding to support local water initiatives. Sierra Nevada Journeys has received 2.7% of that funding and we are immensely grateful for the generous support. Beyond directly funding 8,500 students, Sierra Nevada Journeys has been able to leverage funding from the Truckee River Fund to provide more than 33,215 students with environmental education since 2011, when we received our first donation.



TO: Board of Directors
FROM: Mark Foree, TMWA General Manager
DATE: February 11, 2019
SUBJECT: **Discussion and action on nomination and election of Vice Chairman of TMWA Board of Directors and request for Board adoption of Resolution No. 273 appointing a Vice Chair for the remainder of Fiscal Year 2019 to fill position vacated by Vice Chair Ron Smith**

The Cooperative Agreement forming TMWA requires the Board to appoint a Vice Chairman to serve a one year term coinciding with the fiscal year. Said appointment would fill the position for the remainder of fiscal year 2019, ending June 30, 2019.

TRUCKEE MEADOWS WATER AUTHORITY

RESOLUTION NO. 273

A RESOLUTION TO APPOINT OFFICERS

WHEREAS, pursuant to the Truckee Meadows Water Authority Cooperative Agreement among the City of Reno, City of Sparks, and County of Washoe, the Board of Directors is required to appoint a vice chairman from its membership; and

WHEREAS, the officer appointed is to hold office for a period of one year commencing the first day of each fiscal year; and

WHEREAS, the last day of the current fiscal year is June 30, 2019, and the terms of the current officers will expire as of that date; and

WHEREAS, a vacancy has been created in the position of Vice Chairman, which vacancy needs to be filled for the remainder of the current fiscal year.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby appoints:

_____ to serve as its vice-chairman for the remainder of fiscal year 2019, ending June 30, 2019.

Upon motion of _____, second by _____, the foregoing Resolution was passed and adopted February 20, 2019, by the following vote of the Board:

Ayes: _____

Nays: _____

Abstain: _____

Absent: _____

Approved February 20, 2019

Chairman Vaughn Hartung
Truckee Meadows Water Authority

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

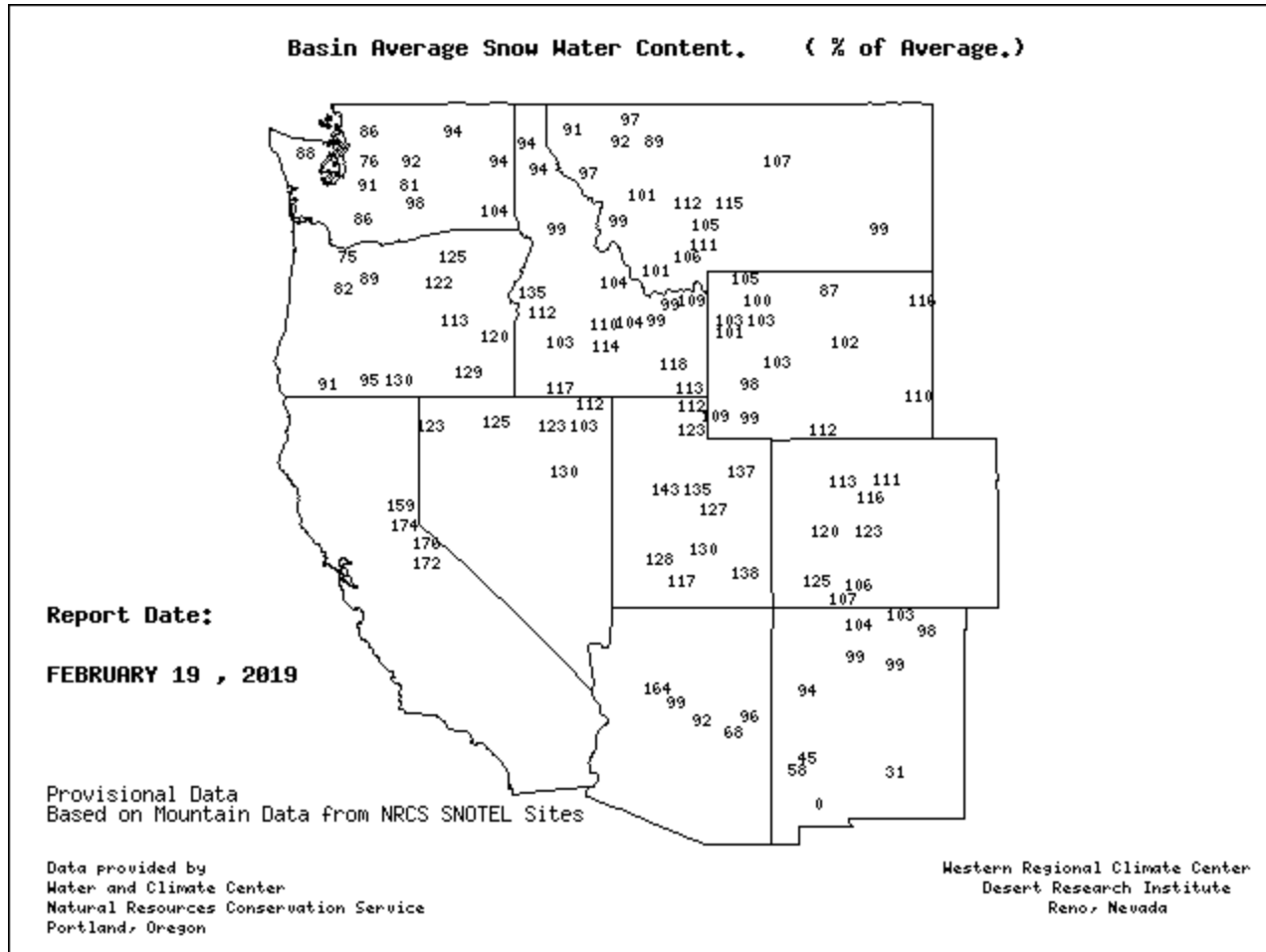
On this 20th day of February, 2019, Vaughn Hartung, Chairman of the Board of Truckee Meadows Water Authority, personally appeared before me, a Notary Public in and for said County and State, and acknowledged that he executed the above instrument freely and voluntarily and for the purposes therein mentioned.

Notary Public

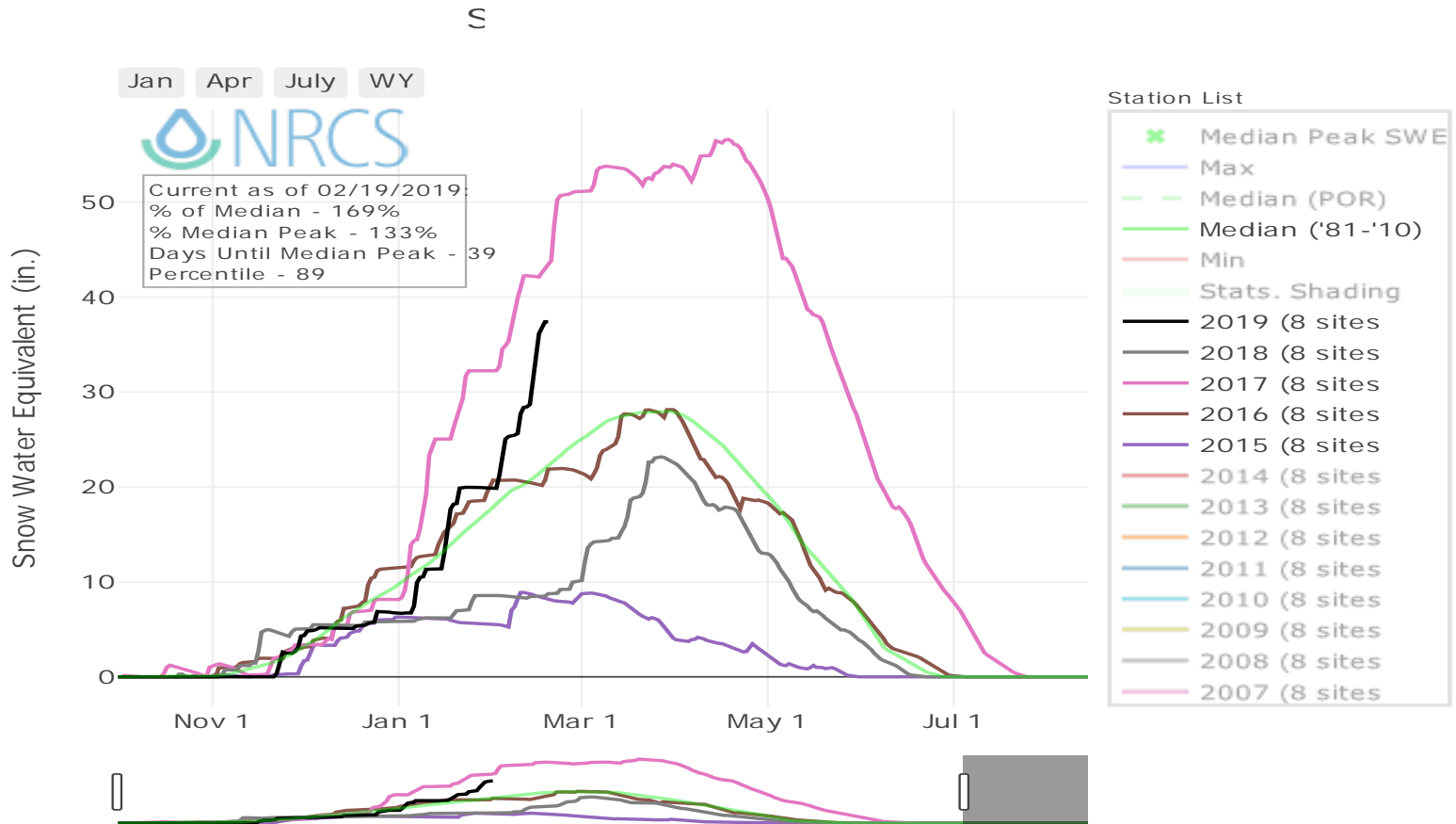




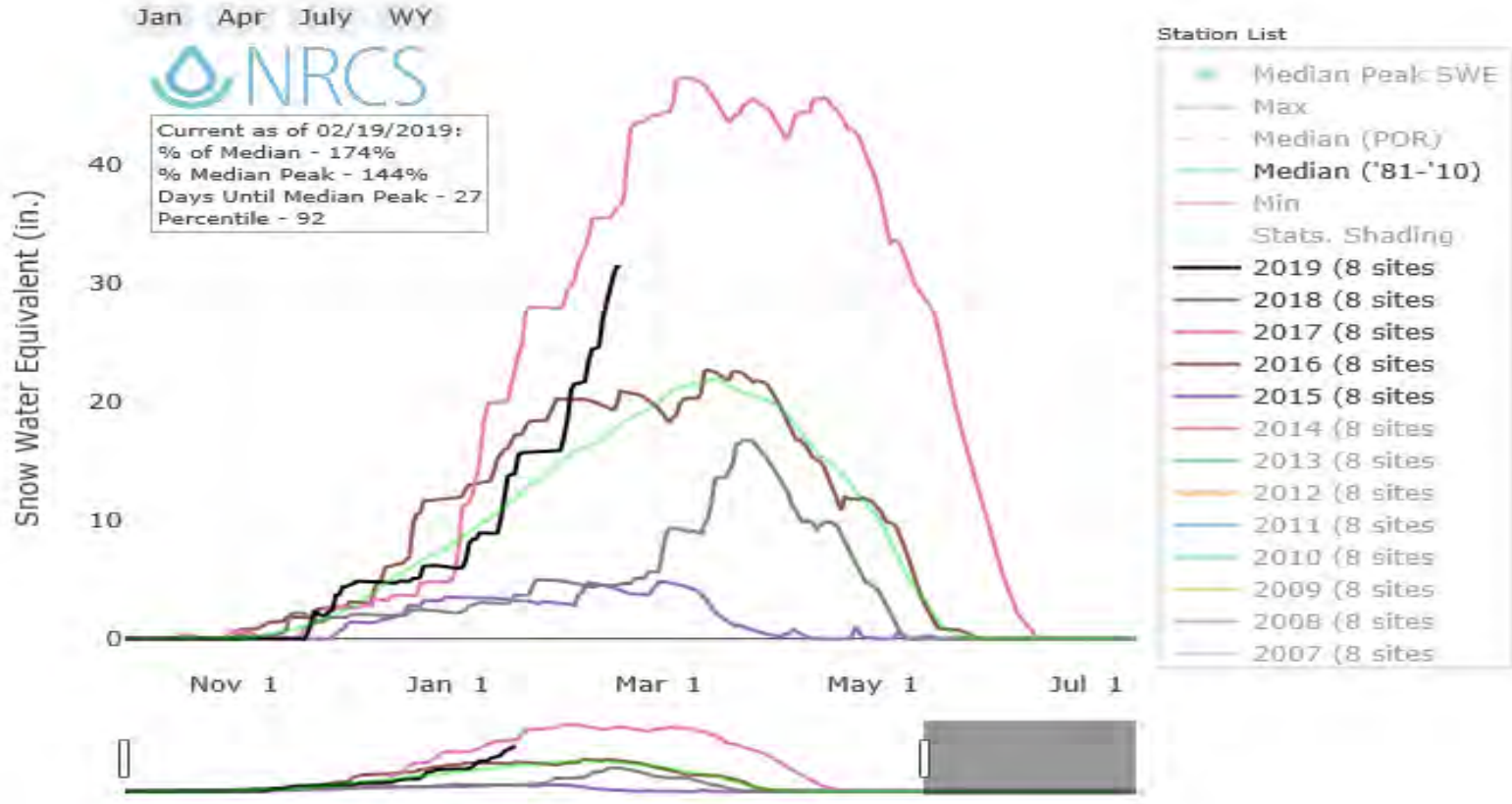
NRCS River Basin Snow Water Content



Truckee River Basin Snow Water Equivalent



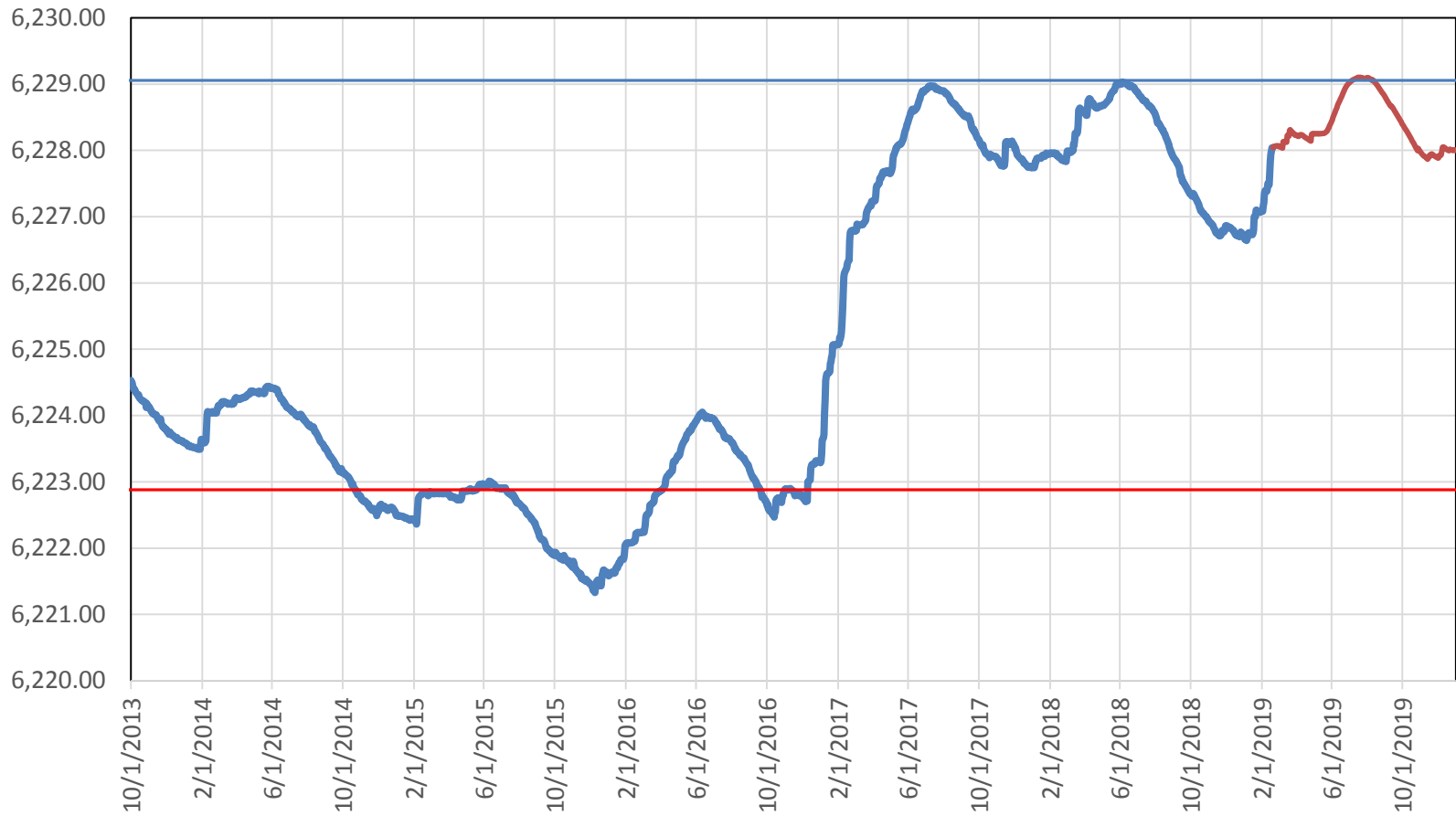
Lake Tahoe Basin Snow Water Equivalent



Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th Percentiles.

For more information visit: [30 year normals calculation description.](#)

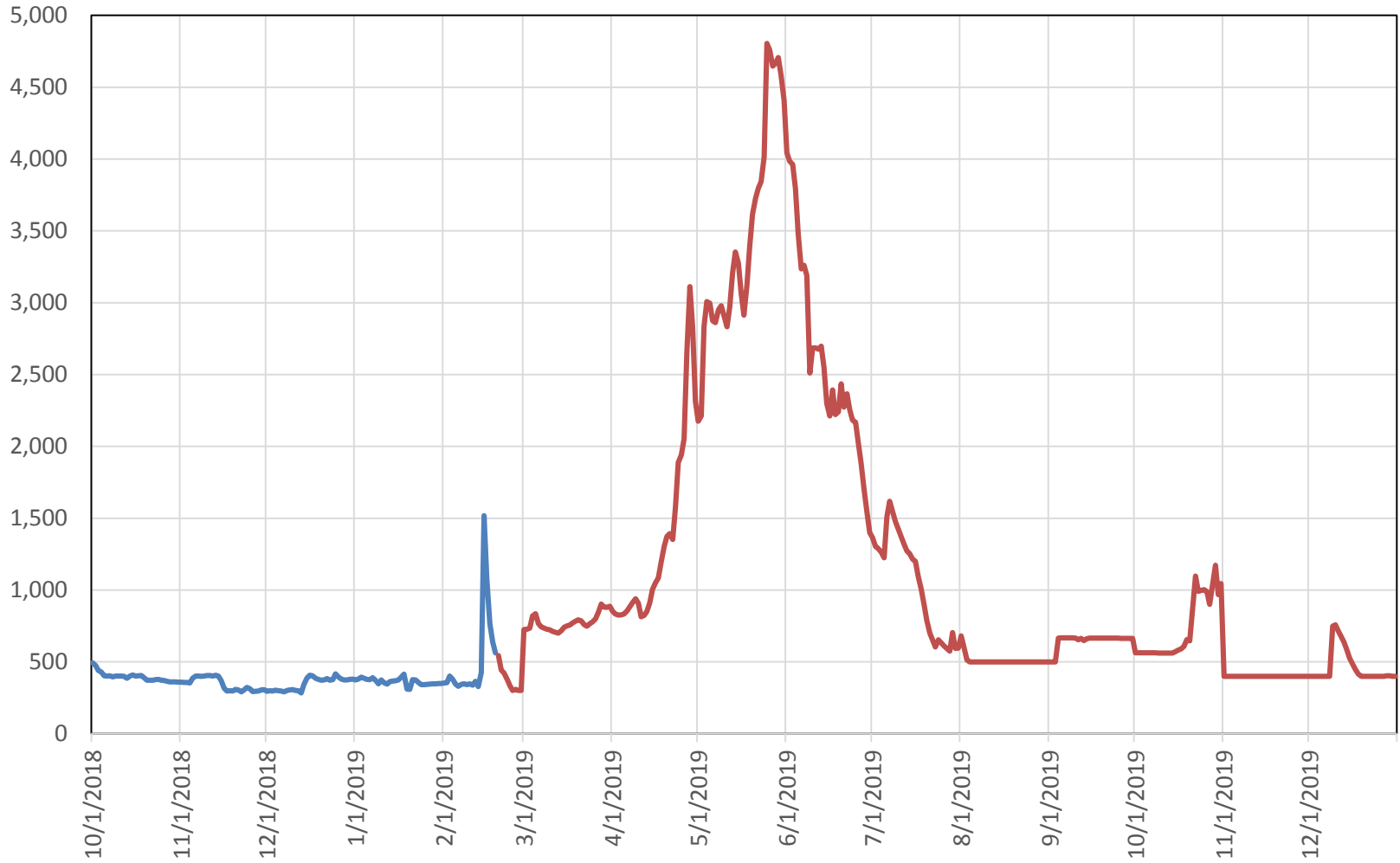
Lake Tahoe Elevation (actual and projected through 2019)



The Truckee River System



Truckee River at Farad (actual and projected through 2019)



Lake Tahoe, Truckee River and TMWA's Storage Under TROA

(February 20, 2019):

	Current (KAF)	Last Year (KAF)	Capacity (KAF)	Current % Capacity
Lake Tahoe	614,200	595,800	744,600	82.5%
Boca Reservoir	12,188	32,240	40,870	29.8%
Stampede Reservoir	192,468	204,241	226,000	85.0%
Prosser Reservoir	8,645	9,225	29,800	29.0%
Donner Lake	4,213	3,312	9,500	44.0%
Independence Lake	15,094	14,560	17,500	86.3%
	846,808	859,378	1,068,270	
System Percent of Capacity	79.3%	80.4%		
TMWA (TROA)	36,753			

TMWA's Reservoir Storage under TROA (2/20/2019)

RESERVOIR	FirmMICred	NonFirmMICred	WAPOSW	WAEDS	TOTAL STORAGE (acre-feet)
Lake Tahoe	0	5,755	0	0	5,755
Donner	0	0	2,721	0	2,721
Martis	0	0	0	0	0
Prosser	0	0	0	0	0
Boca	0	1,484	742	0	2,226
Stampede	2,000	1,457	0	7,500	10,957
Independence	0	0	15,094	0	15,094

Sum (acre-feet)



Donner
Summit
ELEV 7239





Thank you!
Questions?



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: February 11, 2019
SUBJECT: **Discussion and action on nomination and appointments of Trustee(s) to the Western Regional Water Commission (WRWC) from the TMWA Board of Directors for the following positions to fill vacancies ending March 31, 2019 and for a new two year term April 1, 2019 to March 31, 2021:**
A) Pursuant to Sec.25(3)(b) of the WRWC Act from the following list of qualified persons: Paul Anderson.
B) Pursuant to Sec.25(3)(c) of the WRWC Act from the following list of qualified persons: Jeanne Herman.
C) Pursuant to Sec. 25(4) of the WRWC Act representing TMWA as successor to South Truckee Meadows General Improvement District from the following list of qualified persons: Jenny Brekhus, Oscar Delgado, Bonnie Webber, Neoma Jardon, Hillary Schieve, Marsha Berkbigler, Bob Lucey, Kitty Jung, Charlene Bybee, and Ed Lawson.

RECOMMENDATION

It is recommended that the TMWA Board appoint two members to the Western Regional Water Commission to serve the remainder of a two-year term ending March 31, 2019, and commencing a two-year term April 1, 2019 to include:

1. One TMWA Board member who is a member of the Sparks City Council
2. One TMWA Board member who is a member of the Washoe County Board of County Commissioners
3. One member designated by the TMWA Board as South Truckee Meadows General Improvement District (STMGID) successor

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. 1. The Regional Water Commission must be directed and governed by a Board of Trustees composed of the following nine members appointed pursuant to this section:

- (a) Two members of the City Council of the City of Reno;
 - (b) Two members of the City Council of the City of Sparks;
 - (c) Two members of the Board of County Commissioners of Washoe County;
 - (d) One member representing the Truckee Meadows Water Reclamation Facility or its successor;
 - (e) One member designated by the Board of Trustees of the South Truckee Meadows General Improvement District or its successor; and
 - (f) One member of the Board of Trustees of the Sun Valley General Improvement District or its successor.
2. The City Council of the City of Reno, the City Council of the City of Sparks and the Board of County Commissioners of Washoe County shall each appoint one trustee from their membership for an initial term of 2 years.
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):	Sparks Council Member – Vacant
	Reno Council Member – Vacant
	Washoe County Commissioner – Vacant
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, Manager of Water Resources
DATE: February 20, 2019
SUBJECT: **Discussion and possible action and direction to staff regarding 2019 legislative activities, current bills, and TMWA recommended positions on legislative proposals**

This is a standing item on the Board's monthly agenda while the 2019 Legislature is in session. Attachment 1 lists all new bills reviewed by staff, TMWA lobbyist Steve Walker, and General Counsel Michael Pagni, and their recommendations. Attachment 2 lists all bills the Board has already reviewed and adopted a position on. Mr. Walker will describe the new bills and staff's recommendations and also update the Board regarding any relevant new information regarding the session and existing bills.

Staff requests the Board provide direction regarding TMWA's position on, and possible action regarding, the new legislation described in Attachment 1 and any changes to TMWA's position regarding the legislation described in Attachment 2.

Key 2017 Legislative Deadlines:

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

STATUS OF REVIEWED/EXISTING BILLS

AB1 Revises provisions governing the adoption of certain regulations by the State Environmental Commission or a local air pollution control board. (BDR 40-360)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Natural Resources, Agriculture, and Mining	Natural Resources, Agriculture, and Mining			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)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs	Assembly Committee on Government Affairs 2/11/2019 9:00 AM Mentioned not agendized		Governance, Property	12/26/18 WATCH
AB30 Revises provisions governing the appropriation of water. (BDR 48-214)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Natural Resources	Natural Resources,			Water Rights (WR-rights,	12/26/18 WATCH
AB32 Revises provisions governing workforce development. (BDR 18-329)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Taxation	Taxation	Joint Meeting of the Senate Committee on Revenue and Economic Development and Assembly Committee on Taxation 2/12/2019 4:00 PM Mentioned Not Agendized		Human Resources	12/26/18 WATCH
AB51 Revises provisions governing the management of water. (BDR 48-213)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Natural Resources, Agriculture, and Mining	Natural Resources, Agriculture, and Mining			Water Rights (WR-rights, resources, conservation)	12/26/18 WATCH
AB62 Revises provisions related to water. (BDR 48-215)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Natural Resources, Agriculture, and Mining	Natural Resources, Agriculture, and Mining			Water Rights (WR-rights, resources, conservation)	12/26/18 WATCH, OPPOSE

STATUS OF REVIEWED/EXISTING BILLS

AB68 Revises provisions governing apprenticeships. (BDR 53-181)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Commerce and Labor	Commerce and Labor	Assembly Committee on Ways and Means 2/11/2019 8:00 AM Mentioned no jurisdiction		Human Resources	12/26/18 WATCH
AB70 Revises provisions governing the Open Meeting Law. (BDR 19-421)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs			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)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Taxation	Taxation	Assembly Committee on Government Affairs 2/11/2019 9:00 AM Mentioned no jurisdiction		Property	12/26/18 WATCH
AB75 Revises provisions governing public employees' retirement. (BDR 23-466)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs			PERS, PEBS	12/26/18 WATCH
AB86 Revises provisions relating to governmental purchasing. (BDR 27-182)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs	Assembly Committee on Government Affairs 2/6/2019 9:00 AM Mentioned not agendized		Financial, Risk Management	12/26/18 WATCH, SUPPORT

STATUS OF REVIEWED/EXISTING BILLS

SB27 Revises provisions governing the Public Employees' Deferred Compensation Program. (BDR 18-233)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs		Senate Committee on Government Affairs 2/20/2019 1:00 PM	Human Resources, PERS, PEBS	12/26/18 WATCH
SB35 Creates the Nevada Resilience Advisory Committee. (BDR 19-357)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs			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)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs	Senate Committee on Government Affairs 2/6/2019 1:30 PM Heard, No Action		Property	12/26/18 WATCH
SB40 Revises provisions governing penalties for violating occupational safety laws. (BDR 53-222)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Commerce and Labor	Commerce and Labor	Senate Committee on Commerce and Labor 2/6/2019 1:30 PM Heard. No Action		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)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Natural Resources	Natural Resources			Governance	12/26/18 WATCH
SB58 Revises provisions relating to relations between local governments and certain public employees. (BDR 23-465)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs			Human Resources	12/26/18 WATCH
SB69 Revises provisions relating to emergencies and cybersecurity. (BDR 19-350)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs			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)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Board Position
Committee on Government Affairs	Government Affairs			Human Resources	12/26/18 WATCH

**NEW BILLS APPROVED BY THE TMWA
BOARD OF DIRECTORS**

AB18	Authorizes certain local governments to install and maintain ramps on certain public easements and rights-of-way. (BDR 21-433)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Government Affairs	Government Affairs			Property	2/7; WATCH	
AB95	Revises provisions relating to water. (BDR 48-504)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Natural Resources, Agriculture, and Mining	Natural Resources, Agriculture, and Mining			Water Rights (WR-rights, resources, conservation)	2/1; WATCH	
AB101	Authorizes a private plaintiff to bring an action for a declaratory judgment regarding a violation of state law or a local ordinance by certain governmental entities. (BDR 3-26)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Daly	Judiciary	Assembly Committee on Judiciary 2/14/2019 8:00 AM Heard		Financial, Risk Management, Open Meeting, Records,	2/7; OPPOSE	
AB103	Makes certain changes relating to collective bargaining. (BDR 23-251)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Wheeler	Government Affairs			Human Resources	2/1; WATCH	
AB127	Revises provisions governing testimony before governmental bodies. (BDR 19-272)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Cohen, Fumo, Backus, Swank and Watts	Government Affairs			Governance, Open Meeting, Records,	2/13; WATCH	
AB135	Revises provisions governing easements. (BDR 22-545)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Carrillo	Government Affairs			Property	2/14; WATCH	

**NEW BILLS APPROVED BY THE TMWA
BOARD OF DIRECTORS**

AB136 Makes various changes relating to public construction. (BDR 28-145)						
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Frierson, Benitez-Thompson, Carlton, McCurdy, Daly, Assefa, Backus, Bilbray-Axelrod, Carrillo, Cohen, Duran, Flores, Fumo, Gorelow, Jauregui, Martinez, Miller, Monroe-Moreno, Munk, Neal, Nguyen, Peters, Spiegel, Sprinkle, Swank, Thompson, Torres, Watts and Yeager	Government Affairs			Public Works	2/14; WATCH, OPPOSE	
AB138 Revises provisions governing workers' compensation. (BDR 53-708)						
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Sprinkle, Carrillo, Flores, Monroe-Moreno, Frierson, Assefa, Backus, Benitez-Thompson, Bilbray-Axelrod, Cohen, Daly, Duran, Fumo, Gorelow, Martinez, Miller, Munk, Neal, Nguyen, Peters, Swank and Yeager	Printer			Human Resources	2/14; WATCH	
AB163 Revises provisions governing water conservation. (BDR 48-798)						
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Assemblymen Watts, Cohen, Nguyen, Peters and Swank; Senators Brooks and Scheible Assemblymen Brooks, Frierson, Yeager, McCurdy II, Watkins and Fumo; Senators Cancela, Parks and Spearman	Printer Document Clerk			Water Rights (WR-rights, resources, conservation) Energy	2/15; WATCH	
AB403* Revises various provisions relating to governmental administration. (BDR 18-573)						
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Assemblymen Daly, Frierson, Diaz, Benitez-Thompson, Araujo, Brooks, Carrillo, McCurdy II and Monroe-Moreno	Document Clerk			Governance	2/4; WATCH	

**NEW BILLS APPROVED BY THE TMWA
BOARD OF DIRECTORS**

SB42	Repeals provisions requiring certain fleets of motor vehicles to use alternative fuels, clean vehicles or vehicles that use alternative fuels. (BDR 43-361)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Growth and Infrastructure	Growth and Infrastructure	Senate Committee on Growth and Infrastructure 2/7/2019 1:30 PM Heard, No Action		Emergency Mgmt, Safety, Motor Vehicles	2/7; WATCH, SUPPORT	
SB67	Revises provisions governing local emergency management. (BDR 36-355)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Government Affairs	Government Affairs			Emergency Mgmt, Safety, Motor	2/4; WATCH	
SB96	Creates a grant program to award grants of money to certain organizations applying for federal funds to finance certain projects related to public lands. (BDR 26-510)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Natural Resources	Natural Resources			Water Rights (WR-rights, resources,	1/25; WATCH	
SB111	Revises provisions governing collective bargaining by local government employers. (BDR 31-651)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Government Affairs	Government Affairs			Financial, Risk Management, Human	2/1; WATCH	
SB127	Increases the number of members on the board of county commissioners in certain counties. (BDR 20-855)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Parks	Government Affairs			Open Meeting,	2/1; WATCH	
SB129	Makes various changes relating to ethics in government. (BDR 23-191)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Legislative Operations and Elections	Legislative Operations and Elections			Governance	2/1; WATCH	

**NEW BILLS APPROVED BY THE TMWA
BOARD OF DIRECTORS**

SB132	Limits the manner in which the Board of Regents of the University of Nevada is allowed to use certain property or the proceeds and rents from certain property. (BDR 34-80)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Goicoechea and Settelmeyer	Education			Property, Water	2/13; WATCH	
SB136	Revises the provisions of the Tahoe Regional Planning Compact. (BDR 22-736)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Government Affairs	Natural Resources			Governance	2/8; WATCH	
SB140	Revises provisions relating to the appropriation of water in certain basins. (BDR 48-541)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Committee on Natural Resources	Natural Resources			Water Rights (WR- rights, resources,	2/11; WATCH	
SB150	Revises provisions relating to land use planning. (BDR 22-775)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Senators Goicoechea, Settelmeyer, Hardy and Hansen; Assemblyman Ellison	Government Affairs			Water Rights (WR- rights, resources, conservation)	2/13; WATCH	
SB153	Revises provisions relating to collective bargaining. (BDR 23-405)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Atkinson	Government Affairs			Human Resources	2/14; WATCH	
SB163	Revises provisions relating to technology used by certain business entities. (BDR 7-877)					
Sponsor	Status / Location	Last Meeting and Action	Next Meeting	Tags	Staff Recommendation	
Kieckhefer	Printer			Information Tech	2/14; WATCH	



TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer
 Matt Bowman, Financial Controller
DATE: February 11, 2019
SUBJECT: Discussion and possible action, and direction to staff regarding selection of Eide Bailly as TMWA’s external auditor for fiscal years 2019, 2020, and 2021

Recommendation

Staff recommends that the Board of Directors appoint Eide Bailly LLP as TMWA’s external financial auditor for fiscal years ending June 30, 2019, 2020 and 2021. Following the appointment of external auditors, TMWA staff will notify the Nevada Department of Taxation of this decision as required by NRS 354.

Background

Since TMWA’s inception it has engaged Eide Bailly (formerly Kafory, Armstrong, & Co) to perform TMWA’s annual financial statement audit. Eide Bailly has a strong understanding of TMWA’s financial processes and continues to perform the audit in a professional, efficient and cost effective manner. Eide Bailly has proposed the below audit fees for the next three fiscal year end audits. Audit fees for the completed fiscal year 2018 audit were \$59,630.

Professional Services & Fees	2019	2020	2021
Truckee Meadows Water Authority Annual Audit	\$59,600	\$61,400	\$63,200

Should TMWA require a Single Audit (audit over federal awards) there would be an additional cost of \$5,500 for each Major Program.

In addition to accepting a fee proposal from Eide Bailly, TMWA staff accepted a fee proposal from the CPA firm Piercy Bowler Tayler & Kern (PBTk). In addition to accepting a proposal, TMWA staff interviewed PBTk. While PBTk is a qualified audit firm, it is recommended that remaining with Eide Bailly is the most appropriate action due to the efficiency gains that have occurred during TMWA’s relationship with Eide Bailly throughout the years.



TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer
 Matt Bowman, Financial Controller
DATE: February 11, 2019
SUBJECT: Presentation of financial performance for the fiscal year first half ended December 31, 2018

Summary

Please refer to Attachments A-1 and A-2 for full Statements of Revenues, Expenses and Changes in Net Position for both actual to budget and year-over-year comparisons as discussed in the report below.

Budget to Actual

	Actual YTD 2019	Budget YTD 2019	Variance \$	Variance %
CHANGE IN NET POSITION	28,274,468	19,284,370	8,990,098	47%

Change in net position (or overall P&L) for the first half of fiscal year 2019 (1H 2019) was \$9.0m more than budget. This was due mostly to higher than budgeted capital contributions caused by continued growth in the service area. Also contributing to the higher than budget change in net position was higher operating revenues (\$1.6m), lower operating expenses (\$2.1m), and lower non-operating expenses (\$1.1m). These variances are all discussed below.

Year over Year

	Actual YTD 2019	Actual YTD 2018	Variance \$	Variance %
CHANGE IN NET POSITION	28,274,468	23,796,776	4,477,693	19%

Year over year, change in net position was \$4.5m more in the first half FY 2019 compared to the same period in FY 2018. This is due mostly to higher capital contributions which were \$3.2m more. Additionally, operating revenues were \$4.2m higher, offset by higher operating expenses of \$3.8m, leading to a net year over year increase in operating income of \$0.4m. Lastly, nonoperating expenses were \$0.9m lower in 1H 2019 compared to the prior year.

Cash Position

At December 31, 2018, total cash on hand was \$207.7m or \$14.3m higher than at the beginning of the fiscal year. Of the total cash on hand, \$162.7m was unrestricted to be used to meet upcoming and future operating/maintenance expenses, principal/interest payments and construction project payments. The remaining \$45.0m was restricted to pay for scheduled bond principal and interest payments as well as maintaining required reserves as stipulated in our bond covenants.

Revenue

Budget to Actual

	Actual YTD 2019	Budget YTD 2019	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	\$ 63,236,126	\$ 61,218,991	\$ 2,017,135	3%
Hydroelectric Sales	1,354,168	1,863,756	(509,588)	-27%
Other Operating Sales	1,825,660	1,717,000	108,660	6%
Total Operating Revenues	66,415,954	64,799,747	1,616,207	2%

Operating revenue was \$1.6m higher than budget driven by higher water sales offset by lower hydroelectric sales. Water sales were higher due to increased usage by existing services and slightly more services added during the period than expected. Water usage is budgeted using a three year average and in the late summer/early fall of 2018, we saw slightly hotter and drier conditions than the average of the last three years which led customers to maintain irrigation longer than expected. Additionally, revenue is budgeted assuming a rate of growth (services added) and actual services added slightly outpaced the budgeted/projected growth. Hydroelectric sales are under budget due mostly to major maintenance at the Fleish plant where a section of flume is currently being replaced.

Year over Year

	Actual YTD 2019	Actual YTD 2018	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	\$ 63,236,126	\$ 58,467,387	\$ 4,768,738	8%
Hydroelectric Sales	1,354,168	1,937,694	(583,526)	-30%
Other Operating Sales	1,825,660	1,778,341	47,319	3%
Total Operating Revenues	66,415,954	62,183,422	4,232,532	7%

The 3% rate increase in May 2018 along with additional service connections has led to an increase in water sales of 8% over prior year. Hydroelectric sales are lower than prior year due to the maintenance at Fleish discussed above.

Operating Expenses

Budget to Actual

	Actual YTD 2019	Budget YTD 2019	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and Wages	10,633,632	10,617,972	15,660	0%
Employee Benefits	4,648,236	5,063,064	(414,827)	-8%
Services and Supplies	14,915,108	15,853,224	(938,116)	-6%
Total Operating Expenses Before Depreciation	30,196,976	31,534,259	(1,337,284)	-4%
Depreciation	16,196,368	16,931,238	(734,870)	-4%
Total Operating Expenses	46,393,344	48,465,497	(2,072,153)	-4%

Total operating expenses are \$2.1m under budget. \$0.7m of this is non-cash depreciation. The remaining \$1.3m of the variance is caused by employee benefits and services and supplies costs coming in under budget. Employee benefit costs are under budget by \$0.4m, however this will likely increase in the second half of the fiscal year after the annual PERS adjustment at the end of the fiscal year. Services and supplies costs are \$0.9m under budget due primarily to lower electric power costs than budget by \$0.6m. This is attributable to timing as total power costs for the year are expected to be in line with budget. Additionally, we have not experienced any large unexpected maintenance expenses during the first six months.

Year over Year

	Actual YTD 2019	Actual YTD 2018	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and Wages	10,633,632	9,301,042	1,332,590	14%
Employee Benefits	4,648,236	4,208,741	439,495	10%
Services and Supplies	14,915,108	12,027,081	2,888,027	24%
Total Operating Expenses Before Depreciation	30,196,976	25,536,864	4,660,112	18%
Depreciation	16,196,368	17,030,751	(834,383)	-5%
Total Operating Expenses	46,393,344	42,567,615	3,825,729	9%

Operating expenses in 1H 2019 were \$3.8m more than prior year. Increases in salaries and wages and employee benefits were caused by additions to headcount along with step and cost of living increases. Employee headcount has risen by approximately 10% since December 2018, much of which is temporary increases to backfill upcoming expected retirements where training is required. Services and supplies were higher due to several occurrences including general price increases in supplies and labor and also additional workload caused by continued growth in the service area. Large increases year over year include the Donner Lake outlet channel dredging project which continued into the first half incurring costs of \$0.9m (no costs in first half FY

2018), increased contribution to the Truckee River Fund of \$850k in FY 2019 compared to \$450k in FY 2018 and higher chemical costs of approximately \$300k due principally to price increases.

Non-Operating Expenses

Budget to Actual

	Actual YTD 2019	Budget YTD 2019	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	2,026,855	1,416,774	610,081	43%
Net Increase (Decrease) in FV of Investments	606,107	-	606,107	-
Gain (Loss) on Disposal of Assets	22,539	-	22,539	-
Amortization of Bond/note Issuance Costs	(125,608)	(107,874)	(17,734)	16%
Interest Expense	(6,619,609)	(6,718,260)	98,651	-1%
Other Nonoperating Revenue	19	-	19	-
Other Nonoperating Expense	(185,844)	-	(185,844)	-
Total Nonoperating Revenues (Expenses)	(4,275,541)	(5,409,360)	1,133,819	-21%

Nonoperating expenses are \$1.1m more than budget due mostly to higher investment earnings than budgeted. Higher than budgeted investment earnings are the result of more maturities at increased rates than budgeted. Due to the expected continued rise in rates, and the flat yield curve, TMWA has focused recent investment strategy on short term maturity bonds to allow for flexibility in cash flow and investment options. Regarding increase in the fair value of investments (or unrealized gains) TMWA has taken advantage of increased rates in the middle part of the first half, with ten year treasury rates passing 3%. As these rates have fallen in the recent months, TMWA recognizes unrealized gains by holding investments at rates higher than market. These unrealized gains, can fluctuate as rates increase or decrease and may not result in actual cash gains.

Year over Year

	Actual YTD 2019	Actual YTD 2018	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	2,026,855	921,265	1,105,590	120%
Net Increase (Decrease) in FV of Investments	606,107	(312,289)	918,396	-294%
Gain (Loss) on Disposal of Assets	22,539	20,764	1,775	9%
Amortization of Bond/note Issuance Costs	(125,608)	(238,340)	112,731	-47%
Interest Expense	(6,619,609)	(5,561,145)	(1,058,464)	19%
Other Nonoperating Revenue	19	-	19	-
Other Nonoperating Expense	(185,844)	-	(185,844)	-
Total Nonoperating Revenues (Expenses)	(4,275,541)	(5,169,745)	894,204	-17%

Nonoperating expenses are lower than prior year by \$0.9m due to several factors. First, both realized and unrealized investment income increased by \$2.0m due primarily to the reasons

discussed above. This is offset by more interest expense incurred following the bond refunding in April 2018 (see Agenda Item 7 from May 2018 BOD Meeting for additional information on the Refunding). This bond refunding decreased the principal of commercial paper which is effectively variable rate debt, while increasing principal on fixed rate debt. While this transaction increased interest expense in the short term, it reduced risk by fixing a portion of the debt at a reasonable rate and limiting exposure to interest rate fluctuations in future years.

Capital Contributions

Budget to Actual

	Actual YTD 2019	Budget YTD 2019	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	331,116	850,000	(518,884)	-61%
Water Meter Retrofit Program	926,425	338,010	588,415	174%
Developer Will-serve Contributions (Net of Refunds)	3,044,558	1,735,116	1,309,442	75%
Developer Capital Contributions - Other	3,414,231	2,961,000	453,231	15%
Developer Facility Charges (Net of Refunds)	4,811,069	2,475,354	2,335,715	94%
Net Capital Contributions	12,527,400	8,359,480	4,167,920	50%

Capital contributions were \$4.2m more than budget in the first half. This was driven by higher water rights sales and higher developer contributions offset by lower grant revenue. Grant revenue is less than budget due to timing of expenses incurred and reimbursement from both FEMA and non-FEMA federal awards. The remaining line items are each over budget and reflect the continued pace of growth and development in the service area. These items each have predictable rates, but volume is difficult to predict as it's tied to development projects in the service area which can fluctuate period to period. Budgets are generally conservative as is the case for FY 2019.

Year over Year

	Actual YTD 2019	Actual YTD 2018	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	331,116	19,377	311,739	1609%
Water Meter Retrofit Program	926,425	859,077	67,348	8%
Developer Will-serve Contributions (Net of Refunds)	3,044,558	2,505,776	538,782	22%
Developer Capital Contributions - Other	3,414,231	2,911,868	502,364	17%
Developer Facility Charges (Net of Refunds)	4,811,069	3,015,271	1,795,799	60%
Contributions from Others	-	39,345	(39,345)	-100%
Net Capital Contributions	12,527,400	9,350,713	3,176,686	34%

Year over year, capital contributions are \$3.2m more in the first half of FY 2019 compared to FY 2018. Overall, contributions other than grants were consistent with *second half* FY 2018, with \$12.2m in the first half compared to \$12.7m in the second half FY 2018. The largest increase between second half FY 2018 and first half FY 2019 came in developer facility charges due to

timing of large projects. For example, one project alone in July, yielded facility charges of \$1.7m. This increase was offset by decreases across the other categories.

Capital Spending

Spending on capital outlays and construction projects during the first half of FY 2019 was approximately \$17.1m. Top 5 project spend during the first half were: Paloma PRS & Pipeline Improvements (\$1.8m), Arrowcreek BPS and Main (\$1.5m), Chalk Bluff Pump Building Air Handler (\$1.4m), Fleish Flume Reconstruction (\$1.2m) and Mt. Rose Water Treatment Plant (\$1.1m). Total capital spend is estimated to be between \$35m and \$40m for FY 2019.

TRUCKEE MEADOWS WATER AUTHORITY
Comparative Statements of Revenues, Expenses and Changes in Net Position
For the six months ended December 31, 2018

	Actual YTD 2019	Budget YTD 2019	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	\$ 63,236,126	\$ 61,218,991	\$ 2,017,135	3%
Hydroelectric Sales	1,354,168	1,863,756	(509,588)	-27%
Other Operating Sales	1,825,660	1,717,000	108,660	6%
Total Operating Revenues	66,415,954	64,799,747	1,616,207	2%
OPERATING EXPENSES				
Salaries and Wages	10,633,632	10,617,972	15,660	0%
Employee Benefits	4,648,236	5,063,064	(414,827)	-8%
Services and Supplies	14,915,108	15,853,224	(938,116)	-6%
Total Operating Expenses Before Depreciation	30,196,976	31,534,259	(1,337,284)	-4%
Depreciation	16,196,368	16,931,238	(734,870)	-4%
Total Operating Expenses	46,393,344	48,465,497	(2,072,153)	-4%
OPERATING INCOME	20,022,610	16,334,250	3,688,360	23%
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	2,026,855	1,416,774	610,081	43%
Net Increase (Decrease) in FV of Investments	606,107	-	606,107	-
Gain (Loss) on Disposal of Assets	22,539	-	22,539	-
Amortization of Bond/note Issuance Costs	(125,608)	(107,874)	(17,734)	16%
Interest Expense	(6,619,609)	(6,718,260)	98,651	-1%
Other Nonoperating Revenue	19	-	19	-
Other Nonoperating Expense	(185,844)	-	(185,844)	-
Total Nonoperating Revenues (Expenses)	(4,275,541)	(5,409,360)	1,133,819	-21%
Gain (Loss) Before Capital Contributions	15,747,068	10,924,890	4,822,179	44%
CAPITAL CONTRIBUTIONS				
Grants	331,116	850,000	(518,884)	-61%
Water Meter Retrofit Program	926,425	338,010	588,415	174%
Developer Will-serve Contributions (Net of Refunds)	3,044,558	1,735,116	1,309,442	75%
Developer Capital Contributions - Other	3,414,231	2,961,000	453,231	15%
Developer Facility Charges (Net of Refunds)	4,811,069	2,475,354	2,335,715	94%
Net Capital Contributions	12,527,400	8,359,480	4,167,920	50%
CHANGE IN NET POSITION	28,274,468	19,284,370	8,990,098	47%

TRUCKEE MEADOWS WATER AUTHORITY
Comparative Statements of Revenues, Expenses and Changes in Net Position
For the six months ended December 31, 2018

	Actual YTD 2019	Actual YTD 2018	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	\$ 63,236,126	\$ 58,467,387	\$ 4,768,738	8%
Hydroelectric Sales	1,354,168	1,937,694	(583,526)	-30%
Other Operating Sales	1,825,660	1,778,341	47,319	3%
Total Operating Revenues	66,415,954	62,183,422	4,232,532	7%
OPERATING EXPENSES				
Salaries and Wages	10,633,632	9,301,042	1,332,590	14%
Employee Benefits	4,648,236	4,208,741	439,495	10%
Services and Supplies	14,915,108	12,027,081	2,888,027	24%
Total Operating Expenses Before Depreciation	30,196,976	25,536,864	4,660,112	18%
Depreciation	16,196,368	17,030,751	(834,383)	-5%
Total Operating Expenses	46,393,344	42,567,615	3,825,729	9%
OPERATING INCOME	20,022,610	19,615,807	406,802	2%
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	2,026,855	921,265	1,105,590	120%
Net Increase (Decrease) in FV of Investments	606,107	(312,289)	918,396	-294%
Gain (Loss) on Disposal of Assets	22,539	20,764	1,775	9%
Amortization of Bond/note Issuance Costs	(125,608)	(238,340)	112,731	-47%
Interest Expense	(6,619,609)	(5,561,145)	(1,058,464)	19%
Other Nonoperating Revenue	19	-	19	-
Other Nonoperating Expense	(185,844)	-	(185,844)	-
Total Nonoperating Revenues (Expenses)	(4,275,541)	(5,169,745)	894,204	-17%
Gain (Loss) Before Capital Contributions	15,747,068	14,446,062	1,301,006	9%
CAPITAL CONTRIBUTIONS				
Grants	331,116	19,377	311,739	1609%
Water Meter Retrofit Program	926,425	859,077	67,348	8%
Developer Will-serve Contributions (Net of Refunds)	3,044,558	2,505,776	538,782	22%
Developer Capital Contributions - Other	3,414,231	2,911,868	502,364	17%
Developer Facility Charges (Net of Refunds)	4,811,069	3,015,271	1,795,799	60%
Contributions from Others	-	39,345	(39,345)	-100%
Net Capital Contributions	12,527,400	9,350,713	3,176,686	34%
CHANGE IN NET POSITION	28,274,468	23,796,776	4,477,693	19%



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: John Enloe, Director Natural Resources
DATE: February 7, 2019
SUBJECT: **Discussion and action, and possible direction to staff regarding approval of funding TMWA’s share of the Regional Category A+ Reclaimed Water Feasibility Study Program Coordination efforts with Nevada Water Innovation Institute (NWII) to obtain professional services from a qualified consultant, including project management, in an amount not to exceed \$120,000 over four fiscal years, FY 2019 through FY 2022**

Recommendation: Staff proposes that the Board approve the NWII Proposal for the Regional A+ Reclaimed Water Program Coordination, and funding in an amount not to exceed \$120,000 for FY 2019 through FY 2022 (March 2019 through February 2022).

Summary: OneWater Nevada is a high-priority regional collaborative effort that has come about through the shared vision and leadership of local governing bodies, the NNWPC, the Regional Effluent Management Team (“REMT”), and the Nevada Water Innovation Institute (“NWII”).

OneWater Nevada leadership and project management have come from the REMT; however, recent and upcoming changes in the REMT participants have raised concerns regarding the continuity of leadership and project management going forward. Notably, Rick Warner, Washoe County Senior Engineer, intends to retire from Washoe County employment in February 2019. Mr. Warner is a key REMT participant, having shown leadership in initiating and continuing to drive Regional A+ Reclaimed Water feasibility studies and related efforts. His retirement from Washoe County will create a significant shortfall in the ongoing Regional A+ Reclaimed Water efforts and project management.

The REMT has requested local governing bodies to each consider providing partial funding for a contract with NWII to obtain professional services from a qualified consultant, for a period of three years, March 2019 through February 2022, to provide for continuity of the Regional A+ Reclaimed Water feasibility study efforts, including OneWater Nevada guidance and project management support. The scope of work and budget are included in the attached “NWII Regional A+ Reclaimed Water Program Coordination Proposal.”

Direction and management of the consultant on the performance of tasks will be provided by TMWA because of its increasing role and responsibility in the field scale A+ demonstration projects. Updates will be provided periodically to the TMWA Board, to the local/regional governing bodies and at Regional Effluent Management Team meetings.

Fiscal Impact: The required funding will be provided through a combination of contributions for partial funding, not to exceed \$40,000 each, per year, from the Truckee Meadows Water Authority, WRWC, the City of Reno, Washoe County and private sector participants. If approved, the fiscal impact will not exceed \$120,000 over four Fiscal Years (“FY”): FY 2019 (March-June), FY 2020, FY 2021 and FY 2022 (July-February). Adequate budget authority exists in the FY 2019 budget.

Proposed Motion: I recommend the Board approve the NWII Proposal for the Regional A+ Reclaimed Water Program Coordination, in an amount not to exceed \$120,000 for FY 2018–2019 through FY 2021-2022.

Attachment: Nevada Water Innovation Institute, Regional A+ Reclaimed Water Program Coordination Proposal



University of Nevada, Reno

Nevada Water Innovation Institute Regional A+ Reclaimed Water Program Coordination Proposal

BACKGROUND

UNR's *Nevada Water Innovation Institute ("NWII")* is currently assisting the regional entities with several key initiatives: developing the treatment technologies to produce Category A+ reclaimed water suitable for groundwater recharge; developing a triple-bottom-line analysis for considering the benefits of developing Category A+ reclaimed water; developing regional effluent management master plan-level strategies; developing nitrogen control strategies for the Truckee Meadows Water Reclamation Facility ("TMWRF"); and developing storm water management programs with the Nevada Department of Transportation ("NDOT"), in conjunction with other Northern Nevada agencies.

The continued strength of these efforts and regional success can be enhanced by ensuring continuity of leadership as senior-level staff retire from employment at the regional entities. NWII, and its participating agencies and local governing bodies have expressed a desire to obtain professional services from a qualified consultant to continue providing leadership, strategic direction, agency coordination, outreach, and project management services for the regional efforts in the following:

- ***Regional Category A+ Reclaimed Water Feasibility Study Leadership and Development, and other critical issues, such as efforts supporting nitrogen control, stormwater management, and managed aquifer recharge.***

PROPOSAL

NWII requests that local governing bodies each consider providing funding for obtaining professional services from a qualified consultant, for the above purposes, for a period of three years. The required funding would be provided by local/regional governing bodies, and possibly private sector participants. The basis of the level of effort and budget is as follows:

Regional A+ Reclaimed Water Leadership, Development and Program Management – 16 hours per week; 832 hours annually.

- Starting approximately February 22nd, 2019 for a period of up to 3 years.
- Fee basis for consulting services is \$135 per hour in CY2019, with a 3% increase in each CY2020 and CY2021.
- This rate includes incidentals and any local travel related costs.

- UNR will contract with a qualified consultant selected by NWII, provided that consultant is named as the professional service provider in the contract(s) between UNR and the local/regional governing bodies providing funding.

Item	2019	2020	2021
Annual Cost - consulting services at \$135/hour and 16 hours/week (0.4 FTE)	\$112,320	\$115,690	\$119,160
UNR Facilities & Administration Costs (26%)	\$29,203	\$30,080	\$30,982
Funds Needed from Regional Agencies	\$141,523	\$145,770	\$150,142

Total Funds Needed from Local/Regional Governing Bodies for 3 Years = \$437,435

Local/regional governing bodies and private sector participants that have tentatively agreed to provide required partial funding, subject to Board approval as necessary, include: Truckee Meadows Water Authority (“TMWA”), Western Regional Water Commission, Washoe County, City of Reno, and Switch.

Task Description: Regional A+ Reclaimed Water Leadership, Development and Program Management

Task Objectives

- Leadership position to guide regional A+ development and success. This is particularly crucial as the current A+ feasibility study is progressing from “technology pilot studies” to field scale demonstration projects.
- Enhance the regional team’s leadership, credibility, legitimacy, inspiration, and project/program management capacities.
- Act as one of the A+ leaders and general program spokespersons as directed by regional agencies.
- Provide **OneWater Nevada** sector recognition, through engagement with professional organizations such as the Water Environment Federation, The Water Research Foundation, and WateReuse Association.
- Pursue outside funding on behalf of UNR and the regional participants from sources such as Bureau of Reclamation Construction Grants Program, The Water Research Foundation, National Science Foundation, and State of Nevada.
- Provide project management ensuring regional efforts are well coordinated, communicated, and documented. This includes development of communication plans, schedules, budgets, contract coordination, staff resource sharing agreements, and external communications.
- Assist agencies procure, construct, coordinate, operate, test, monitor, and report results for the field scale A+ demonstration projects.
- Under direction, represent agencies relative to A+ development with Nevada Division of Environmental Protection (“NDEP”), Health District and other regulatory agencies.
- Create a fully developed action plan and “A+ engineering report” for approval of NDEP.

Task Direction

- Direction and management of consultant on the performance of tasks will be provided by TMWA because of its increasing role and responsibility in field scale A+ demonstration projects. Periodic updates will be provided to representatives of the local/regional governing bodies at Effluent Management Team meetings. The agreements for funding by TMWA and other regional/local governing bodies shall contain the above condition.

Task Scope Examples

- Project Management
 - Monthly
 - Attend Regional Effluent Team Meetings (provide written updates, establish coordination, briefing on schedule, etc.).
 - Meet each regional agency staff for specific coordination and communication planning. Provide meeting agendas and written action items/responses.
 - Provide agencies with updated schedules, budgets, communication plans, and presentation calendars.
 - Provide a brief narrative on each major feasibility study task element (e.g. communications, regulatory, demonstrations, etc.). Prepare agendas, presentations, follow-up as needed.
 - Quarterly
 - Attend Regional “Effluent Directors Briefing”. Prepare agendas, presentations, follow-up as needed.
 - Provide agencies with updated schedules, budgets, communication plans, and presentation calendars.
 - Provide a brief narrative on each major feasibility study task element (e.g. communications, regulatory, demonstrations, etc.)
 - Every 4-6 months
 - In collaboration with agency staff, prepare and deliver A+ feasibility study presentations at regional agency councils, commissions, citizen/neighborhood boards, etc.
 - In collaboration with agency staff, update Washoe County Health District and NDEP staff. Prepare agendas, presentations, follow-up as needed.
- Technical Support
 - Assist agencies plan, specify, procure, set-up, test, monitor, and operate demonstration scale tests. Develop staffing plans for pilot and demonstration scale tests.
 - Assist City of Reno staff to plan and operate the RSWRF 2019 demonstration project.
 - Develop testing and monitoring plans with regional agencies, NDEP, Health District, agency/private laboratories, and UNR.
 - Assist agencies and UNR in developing staffing plans for demonstration-scale projects.
 - Support agencies in conceptual A+ implementation plans, for example, American Flat and Cold Springs.
- Communications Support

- Assist Data Instincts and regional staff develop effective and timely external communication materials.
- Assist regional agencies deliver key updates to public agencies and citizen groups.
- Regulatory Support
 - Organize, prepare materials, participate, and produce follow-up material and correspondence for Independent Expert Panel participation. Note: These will likely be needed about every 6 months as the regional agencies develop the field trials at RSWRF and CSWRF.
- Funding Support
 - Develop 2-3 external funding strategies coordinated with agencies. Examples include Water Commission, The Water Research Foundation, Bureau of Reclamation, NSF, etc.
 - Coordinate with local agencies for shared-resources plans including staffing and direct financial support.
 - Include funding strategies in project management reporting.
- Project Rationale Support
 - Assist agencies and UNR with continuous development of project rationale and opportunity statements.
 - Example: currently there is recognition that **OneWater Nevada**, in addition to the A+ focus, could provide more examples of other sustainable water practices in the Truckee Meadows, including excellence of TMWRF operation and positive economic/environmental/regional impact.



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Enloe, Natural Resources Director, John Zimmerman, Water Resources Manager
DATE: February 15, 2019
SUBJECT: **Discussion and action, and possible direction to staff regarding the status of Acquisition of the West Reno Water System and Final Closing Documents, the possible approval or modification of the Fourth Amendment to Acquisition Agreement, and the authorization to the General Manager to execute the Fourth Amendment and Final Closing Documents and proceed with closing.**

SUMMARY

Staff has negotiated another amendment to the Acquisition Agreement with West Reno Water Company and seeks Board approval of that amendment (*Attachment 1*). Additionally, staff has finalized the ancillary and annexation agreements with the relevant property owners: SJP Reno Property, Reno Land Development Company, BT South, and Bates Stringer-Reno and seeks approval of those agreements as well (*Attachment 2*). Lastly, staff seeks Board authorization to close the transaction according to the Acquisition Agreement, as amended, the ancillary agreements, and all other closing documents. A list of all closing documents is attached (*Attachment 3*).

I. PROPOSED FOURTH AMENDMENT

West Reno signed the Fourth Amendment subject to TMWA Board approval. It changes the prior amendment terms by allowing the deal to close before West Reno (1) regrades and lines the stormwater detention basin next to well 10 and (2) completes the private waterline improvements within the Boomtown hotel/casino/RV park. West Reno and the above entities requested this as a “lifeline” because they did not believe they could complete the above work by February 27, 2019—the closing deadline under the prior amendment—and West Reno and Reno Land were under pressure from Bates to close the transaction with TMWA so that it could obtain more than 10 certificates of occupancy for its Meridian 120 North subdivision.¹ Accordingly, in an effort to save the acquisition and potentially avoid litigation among the parties, staff proposed

¹ To serve more than 25 full-time residents West Reno needs a community water system permit from NDEP. West Reno does not have that permit and the City of Reno is reluctant to issue more than 10 certificates of occupancy to avoid going above the 25-person threshold.

the Fourth Amendment. The intent behind the Fourth Amendment was to allow the transaction to close without requiring TMWA to shoulder more risk or costs. If the Board does not approve the Fourth Amendment, then the acquisition will most likely terminate because the parties will not be able to complete the pre-closing requirements by February 27th, the deadline under the prior amendment.

Fourth Amendment Key Terms

1. Detention Basin Work. By February 25th, West Reno must deposit \$340,000 into an escrow account to pay for the detention basin regrading and lining. West Reno, Reno Land, and BT South have a separate agreement among themselves regarding how much each of them must contribute to this escrow. The escrow agent may not disburse any funds to West Reno until TMWA inspects and approves the work. If the work is not completed by West Reno and approved by TMWA by May 14, 2019, then TMWA will get all remaining funds and may use them to complete any unfinished work on the basin and keep the excess as liquidated damages. The estimated cost of regrading and lining the basin is \$140,000, and thus, those parties have a \$200,000 incentive to complete the work to TMWA's requirements and on time. Also, Bates owns the detention basin land and must grant TMWA an easement at closing so that TMWA will have the right to enter the property and complete the work if necessary.

2. Hotel/Casino Work. By February 25th, West Reno must deposit \$312,500 into an escrow account to pay for the Boomtown hotel/casino/RV park private water facility improvements required by TMWA (metering, valve, backflow, and pipeline improvements). Similar to the basin work, the escrow agent may not disburse any funds to West Reno until TMWA inspects and approves the work. Likewise, if the work is not completed by West Reno and approved by TMWA by May 14, 2019, then TMWA will get all remaining funds and may use them to complete any unfinished work and keep any excess as liquidated damages. The estimated cost of completing these improvements is \$250,000, and therefore, West Reno has a \$62,500 incentive to complete the work on time. SJP owns the hotel/casino/RV park property and must grant TMWA an easement at closing so that TMWA will have the right to enter the property and complete the work if necessary.

3. Extended Closing Deadline. The Fourth Amendment extends the closing deadline to March 22, 2019. If the Board approves the Fourth Amendment, then staff will work to complete the closing as soon as possible, however, based on the number of closing documents and parties involved, that is not likely to occur by the current deadline of February 27th. Staff cannot provide a date certain for when closing will occur, but believes it can be accomplished on or before March 22nd.

4. TMWA Legal Fees. The Fourth Amendment requires West Reno and Reno Land to pay TMWA's legal fees incurred in connection with negotiating and drafting the Fourth Amendment and related documents. Payment of these fees is due at closing. All other TMWA legal fees will be collected as part of the modified connection fee described below.

5. Purchase Price. Under the prior amendment, the purchase price was reduced to \$35,835 because of the estimated \$757,500 in water system improvements that TMWA identified during due diligence and agreed to complete post-closing.

II. ANCILLARY AGREEMENTS AND ANNEXATIONS

➤ SJP

SJP is under common ownership with West Reno and owns the property underlying the Boomtown hotel/casino/RV park. The SJP ancillary agreement requires SJP to grant easements to TMWA for water facility assets, terminate the water system CC&Rs, and convey certain water rights to TMWA to be used in case actual water usage exceeds existing commitments. The SJP agreement obligates TMWA to annex all of SJP's property into TMWA's service territory and provide 65 gallons/minute (gpm) of capacity credits that will not be subject to TMWA's water facility fees and can be used for future developments on most of SJP's property at Boomtown (excluding two parcels).

The SJP annexation agreement is based on TMWA's standard form and also describes the water system infrastructure improvements that may be needed in the near future to expand water service beyond existing demands to serve future developments on SJP's property. The annexation also specifically allows TMWA to impose a special charge on existing customers and future SJP developments if groundwater quality deteriorates below drinking water standards and requires some form of mitigation to resolve.

➤ RENO LAND/BT SOUTH

The Reno Land/BT South ancillary agreement requires them to pay TMWA at least \$2,668,335 in connection fees for development on BT South's property across I-80 from Boomtown. Part of this amount, \$491,400, will be paid by Bates through connection fees on its 273-unit residential subdivisions as described below. The connection fees are to reimburse TMWA for the following:

Water System Book Value	\$700,000
Reimbursable West Reno PUC Costs	\$93,335
Well improvements (5 wells)	\$1,540,000
Tanks/parcel improvements (2 tanks)	\$135,000
TMWA Legal Fees	\$100,000
River Casing (already acquired)	\$100,000
<u>Total Modified Connection Fee Amount</u>	<u>\$2,668,335</u>

Because TMWA has agreed to complete the additional improvements identified during due diligence the purchase price at closing will be \$35,835 (less TMWA's legal fees related to the Fourth Amendment). This amount equals the book value plus PUC costs which equal

\$793,335 less the \$757,500 in post-closing improvements identified during due diligence, which are in addition to the improvements described above.

BT South must also convey the property on which the two water tanks are located to TMWA and grant several easements for waterlines, a monitoring well, and access to the tanks parcel. Also, as a condition of future development on BT South's property, they must replace the existing bridge across Steamboat ditch, which is used to access the tanks parcel. TMWA will agree to annex BT South's property into its retail service area, accept BT South's groundwater rights for commitment (so long as the State Engineer has not issued any adverse decision regarding those rights), and provide up to 140 gpm of capacity to a certain portion of BT South's property (the, "Lower Zone Property"). To develop the Lower Zone Property, shown on Exhibit C to the Reno Land ancillary agreement, BT South must pay TMWA a modified connection fee of \$15,550/gpm for a total of \$2,177,000. This amount, combined with Bates' connection fee, equals the modified connection fee amount of \$2,668,335. Importantly, if the actual costs exceed this amount, then the agreements provide that the fee will be increased so that TMWA is reimbursed for all actual costs. Lastly, if the total amount is not paid by 2026, then TMWA's carrying cost on that amount will be added to the fee.

➤ **BATES**

This annexation is also TMWA's standard form, however, it includes a modified connection fee of \$1,800/home within Bates' 273-unit subdivision.² This is part of the modified connection fee amount described above. In the annexation, TMWA agrees to meet the estimated water capacity of Bates' subdivisions and not impose TMWA's standard connection fees. This annexation includes the same conditions as the other annexations regarding future infrastructure improvements and special water quality mitigation charge.

III. FINAL DUE DILIGENCE FINDINGS AND PRE-CLOSING REQUIREMENTS

1. Tank Improvements

WCHD has notified staff that the treatment technique violation and all other deficiencies associated with the existing tank have been completed.

2. Land and Access Road for Tanks

At closing, BT South will record a map separating the tanks parcel from its other property and convey that land and all necessary easements to TMWA. The map has been signed by all necessary agencies and entities except TMWA, which will sign at closing.

3. TMWA must obtain written confirmation from the WCHD and NDEP that they will not require TMWA to extend the sanitary seal of a few of the wells from 50 ft. to 100 ft.

² As required by the Acquisition Agreement, West Reno has collected this fee from Bates and Reno Land for any homes connected to the water system since June 2018 and those fees will be paid to TMWA at closing.

NDEP has provided a letter confirming that it approves TMWA's proposed well improvements, West Reno's wells can be "grandfathered" under state regulations, and it will not require TMWA to reconstruct the wells to make them comply with current well construction standards. WCHD confirmed in writing that it concurs with NDEP's letter.

4. *WCHD and NDEP must confirm that West Reno is in full compliance with all of their requirements and any violations have been cured.*

NDEP and WCHD have previously outlined the specific deficiencies that must be addressed as a result of their sanitary survey inspection. TMWA has monitored West Reno's responses and confirmed with WCHD and NDEP that the conditions have been satisfied. Staff will continue to monitor West Reno compliance with WCHD and NDEP requirements through closing.

5. *West Reno must be in compliance with all water quality sampling and reporting requirements without any pending or issued violations.*

Staff tested the water from all five production wells and it meets all current drinking water standards and did not exceed any maximum contaminant levels (MCLs). Staff also monitored West Reno's NDEP-required water quality sampling and reporting and has confirmed that West Reno has complied with all sampling and reporting requirements to date and there are no current or reasonably foreseeable water quality violations. Staff will continue to monitor water quality testing results through closing.

6. *The stormwater detention basin next to well 10 must be lined to minimize the risk of groundwater quality degradation in the future.*

The Fourth Amendment provides a significant amount of incentive for the parties to complete this work and provides protections for TMWA in case they fail to do so. Accordingly, staff recommends this condition be modified to allow it to be done post-closing. As stated above, West Reno and Reno Land must complete the regrading and liner according to TMWA's requirements. WCHD has approved the liner construction requirements, which is a condition NDEP stated in prior correspondence.

7. *The land TMWA requires around well 10 must be parceled and leveled to allow reasonable access for operation, maintenance, and repair purposes.*

Part of the liner work described above will be to regrade the proposed well 10 parcel according to TMWA's requirements and approval. At closing, Bates will convey land to TMWA for well 10. That parcel will not include the detention basin, which will remain in Bates' ownership and eventually be transferred to the applicable homeowners association. The map for the well 10 parcel has been signed by all necessary agencies and entities except TMWA, which will sign at closing.

8. *DP Clark must agree to convey land to TMWA for a booster pump station.*

DP Clark has consented to a parcel map for the future booster pump station and will record it at closing and convey the parcel to TMWA.

9. *West Reno must obtain all necessary approvals from Steamboat Ditch Company for all facilities (two waterlines, two tank drain lines, and a tank access road bridge crossing).*

West Reno and Reno Land are reviewing the form licenses issued by Steamboat for the waterlines and access bridge. Staff expects those licenses to be issued relatively soon, however, they remain a pre-closing condition and TMWA must approve them. TMWA will be assigned the waterline license, but not the bridge license. The bridge and license must be owned and held by BT South as TMWA does not want to assume any liability for the bridge or license. It is contemplated that when the BT South property is developed, a more-permanent bridge will be constructed by the developer and at that time the existing bridge may be removed.

10. *SJP and West Reno must agree to complete pre-closing, or reimburse TMWA for the cost of completing post-closing, certain improvements related to existing water facilities within the Boomtown development.*

Under the proposed Fourth Amendment, TMWA will allow this work to be done post-closing so long as West Reno and SJP agree to escrow the estimated cost to complete the work, plus 25%, and finish it by May 14, 2019. Again, this is a significant incentive for SJP to complete the work and provides adequate protections for TMWA in case they do not.

IV. TMWA FUTURE SURFACE WATER CONNECTION

Staff has secured agreements from the River Oak Homeowners Association and Riverbelle Properties, LLC to grant the necessary access easements to TMWA to connect the West Reno water system to TMWA's surface water system. TMWA has also annexed Riverbelle Properties, LLC into its retail service area. Reno Land also needs to grant TMWA an easement across its property and has agreed to do so at closing. TMWA also needs access authorization from the Union Pacific Railroad Company, which process could take a year or more to obtain. Lastly, as stated above, DP Clark has agreed to convey to TMWA the land needed for a future booster pump station. Staff is targeting to obtain all authorizations and complete construction of the necessary improvements within two years.

RECOMMENDATIONS

Staff seeks Board approval of the Fourth Amendment and the ancillary and annexation agreements. Additionally, staff requests Board authorization to proceed to close the transaction according to the terms of those agreements and the closing documents.

ATTACHMENT 1

**FOURTH AMENDMENT TO
AGREEMENT FOR WATER SYSTEM ACQUISITION**

THIS FOURTH AMENDMENT TO AGREEMENT FOR WATER SYSTEM ACQUISITION (this "Amendment"), is dated as of the date last executed by the Parties below (the "Effective Date"), and is entered into by and among WEST RENO WATER COMPANY, INC. a Maryland corporation ("West Reno"), and TRUCKEE MEADOWS WATER AUTHORITY, a joint powers authority created pursuant to NRS Chapter 277 by the Cities of Reno and Sparks, and Washoe County ("TMWA"). West Reno and TMWA may be referred to herein individually as a "Party" and collectively as the "Parties".

RECITALS

WHEREAS, TMWA and West Reno entered into that certain Agreement for Water System Acquisition dated June 20, 2018, as amended by that certain First Amendment to Agreement for Water System Acquisition dated October 15, 2018, that certain Second Amendment to Agreement for Water System Acquisition dated November 19, 2018 and that certain Third Amendment to Agreement for Water System Acquisition dated December 13, 2018 (as amended, the "Agreement"), in connection with the purchase and sale of certain assets in a retail water delivery system as defined in the Agreement.

WHEREAS, West Reno has requested additional time to complete portions of the West Reno Pre-Closing Improvements after the Closing, and the parties desire to amend the Agreement to provide West Reno additional time on the terms and conditions as set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Capitalized and Conflicting Terms; Continued Effect; Captions. Capitalized terms not otherwise defined in this Amendment shall have the meanings ascribed to them in the Agreement. To the extent the provisions of this Amendment conflict with any of the terms and conditions of the Agreement the provisions of this Amendment shall control. The parties acknowledge and agree that, except as specifically modified hereby, each of the terms and conditions of the Agreement shall remain in full force and effect and are enforceable in accordance with its respective terms.

2. Defined terms. Section 1 of the Agreement is hereby amended by amending and restating the definition in Section 1.51 and adding a new Section 1.54 as follows:

1.51 "West Reno Pre-Closing Improvements" shall mean that portion of the West Reno System Modifications described as items #11 through 12, 29 through 31, 34 and 35 in Schedule 5.8.6.

1.54 "West Reno Post-Closing Improvements" shall mean the Well 10 Work and the Boomtown System Improvements.

1.55 "Well 10 Work" shall mean that portion of the West Reno System Modifications

described as items #1 and 2 in Schedule 5.8.6.

1.56 “Boomtown System Improvements” shall mean that portion of the West Reno System Modifications describes as items # 6 through 10 in Schedule 5.8.6.

3. West Reno System Modifications. Section 5.8.6 of the Agreement is amended and restated in its entirety to read as follows:

5.8.6 West Reno System Modifications. As a result of its Due Diligence inspections, TMWA is requiring performance of the West Reno System Modifications. The West Reno System Modifications shall be performed as follows:

(a) TMWA Post-Closing Improvements. TMWA shall be responsible for performing the TMWA Post Closing Improvements at TMWA’s cost. To the extent the actual cost incurred by TMWA to complete the West Reno System Modifications exceeds \$757,500, such amount shall be added to and included in the connection fees referenced in Section 5.17.

(b) West Reno Pre-Closing Improvements. No later than five (5) days prior to the Closing Date, West Reno shall, at its sole cost and expense, cure the Treatment Technique Violation issued by Washoe County Health District on or about October 30, 2018, publish and distribute the 2018 Water Quality Report (aka Consumer confidence report) to West Reno customers in accordance with EPA requirements (and to the extent required by law), provide TMWA with written notice from Washoe County Health District confirming that the Treatment Technique violation has been fully resolved, and complete and/or satisfy the West Reno Pre-Closing Improvements in accordance with TMWA construction standards. TMWA shall have the right to inspect and approve the completion of the West Reno Pre-Closing Improvements, which West Reno Pre-Closing Improvements must be completed, in service and approved by TMWA no later than five (5) days before the Closing Date. Failure of West Reno to complete the West Reno Pre-Closing Improvements shall constitute a default by West Reno and any such failure shall entitle TMWA to terminate this Agreement.

(c) Well 10 Work. No later than May 14, 2019, West Reno shall, at its sole cost and expense, construct and complete the Well 10 Work in accordance with TMWA approved plans. TMWA shall have the right to inspect and approve the completion of the Well 10 Work, which must be completed by West Reno and approved by TMWA no later than May 14, 2019. As a condition of Closing, West Reno shall deliver to TMWA no later than February 25, 2019 a construction escrow agreement substantially in the form attached hereto as Exhibit B (the “Well 10 Escrow Agreement”) duly executed by West Reno, BT South, RLD and Escrow Holder. As a condition of Closing, West Reno shall deposit or cause BT South and/or RLD to deposit no later than February 25, 2019 \$340,000 in cash or other immediately available funds (“Well 10 Escrow Funds”) into an escrow account established with Escrow Holder. Failure to deliver a fully-executed Escrow Agreement or deposit the funds with Escrow Holder by February 25, 2019 shall cause this Amendment to automatically terminate in which case the Third Amendment shall control. The Well 10 Escrow Funds shall be held for the benefit of TMWA as security for the full and timely completion of the Well 10 Work, and except when disbursed to TMWA shall be used only for the construction of the Well 10 Work and may not be withdrawn or used for any other

purpose until that work is completed and approved by TMWA. Upon timely completion of Well 10 Work, the Well 10 Escrow Funds shall be released to West Reno, BT South, or RLD as set forth in the Well 10 Escrow Agreement. If the Well 10 Work is not completed and approved by TMWA by May 14, 2019, regardless of cause and regardless of how far construction may have progressed by that date, the Well 10 Escrow Funds shall be paid to TMWA and TMWA shall have the right, but not the obligation, to step in and complete the Well 10 Work. The Parties agree TMWA shall use the Well 10 Escrow Funds for payment of TMWA costs to complete the Well 10 Work, and TMWA shall be entitled to retain any excess funds as liquidated damages for West Reno's failure to timely complete the Well 10 Work. The rights and obligations set forth in this Section shall survive Closing.

(d) Boomtown System Improvements. No later than May 14, 2019, West Reno shall, at its sole cost and expense, construct and complete the Boomtown System Improvements in accordance with TMWA construction standards. TMWA shall have the right to inspect and approve the completion of the Boomtown System Improvements, which must be completed by West Reno and approved by TMWA no later than May 14, 2019. As a condition of Closing, West Reno shall deliver to TMWA no later than February 25, 2019 a construction escrow agreement substantially in the form attached hereto as Exhibit C (the "Boomtown System Escrow Agreement") duly executed by West Reno and Escrow Holder. As a condition of Closing, West Reno shall deposit no later than February 25, 2019 \$312,500.00 in cash or other immediately available funds ("Boomtown System Escrow Funds") into an escrow account established with Escrow Holder. Failure to deliver a fully-executed Escrow Agreement or deposit the funds with Escrow Holder by February 25, 2019 shall cause this Amendment to automatically terminate in which case the Third Amendment shall control. The Boomtown System Escrow Funds shall be held for the benefit of TMWA as security for the full and timely completion of the Boomtown System Improvements, and except when disbursed to TMWA shall be used only for the construction of the Boomtown System Improvements and may not be withdrawn or used for any other purpose until that work is completed and approved by TMWA. Upon timely completion of Boomtown System Improvements, the Boomtown System Escrow Funds shall be released to West Reno as set forth in the Boomtown System Escrow Agreement. If the Boomtown System Improvements are not completed and approved by TMWA by May 14, 2019, regardless of cause and regardless of how far construction may have progressed by that date, the Boomtown System Escrow Funds shall be paid to TMWA and TMWA shall have the right, but not the obligation, to step in and complete the Boomtown System Improvements. The Parties agree TMWA shall use the Boomtown Escrow Funds for payment of TMWA costs to complete the Boomtown System Improvements, and TMWA shall be entitled to retain any excess funds as liquidated damages for West Reno's failure to timely complete the Boomtown System Improvements. The rights and obligations set forth in this Section shall survive Closing.

Notwithstanding the foregoing, it shall be the responsibility of any applicant for water service seeking new or modified service to property located south of Interstate 80 to complete the Tank Access road bridge replacement work described in Section 5.8.6, and TMWA shall have no obligation to provide water service to any property located south of Interstate 80 unless and until the Tank Access road bridge is replaced as described in Section 5.8.6.

4. Closing Date and Outside Closing Date. Section 3.2 of the Agreement is hereby amended and restated in its entirety as follows:

3.2 Closing Date. Escrow shall close on or before the date (the "Closing Date") which is the later of: i) March 22, 2019; ii) fifteen (15) days after Final Governmental Approval of the BLA/Parcel Map(s), except as otherwise provided in Section 5.10; iii) fifteen (15) days after receipt of all necessary Lender Consents and Owner Consents; or iv) five (5) days after the completion of the West Reno Pre-Closing Improvements. In no event will the Closing occur later than March 22, 2019 (the "Outside Closing Date"). If Close of Escrow has not occurred by the Outside Closing Date, this Agreement shall automatically terminate and neither party shall have any rights or obligations hereunder (except such obligations that survive termination of the Agreement according to its terms). For purposes of this Agreement, the term "Close of Escrow" shall mean the time when Escrow Holder shall have recorded all of the instruments to be recorded with respect to the closing on the Assets.

5. Bates Easement. As a condition of Closing, and no later than February 13, 2019, West Reno shall secure and deliver to Escrow Holder a temporary access and construction easement substantially in the form and substance attached hereto as Exhibit D ("Well 10 Construction Easement") duly executed by Bates Stringer Reno LLC with notary acknowledgement.

6. SJP License. As a condition of Closing, and no later than February 13, 2019, West Reno shall secure and deliver to Escrow Holder a temporary access and construction license substantially in the form and substance attached hereto as Exhibit E ("Boomtown License") duly executed by SJP Reno Property, LLC, with notary acknowledgement.

7. RLD/BT South Payment of Fees. As a condition precedent to the terms and conditions of this Amendment, West Reno shall secure from RLD and BT South an agreement to reimburse TMWA at the Closing, one-half of TMWA's attorneys' fees incurred in connection with the negotiation and drafting of this Amendment and related documents. Such agreement may be included in the Well 10 Escrow Agreement. Timely payment of such TMWA attorneys' fees shall be a condition of Closing.

8. Purchase Price. For and in consideration of TMWA extending the completion date of the Well 10 Work and Boomtown System Improvements, West Reno shall pay the other one-half of TMWA's attorneys' fees incurred in connection with the negotiation and drafting of this Amendment and related documents and the Purchase Price is hereby reduced and Section 2.2 of the Agreement is hereby amended and restated in its entirety as follows:

2.2 Purchase Price. The purchase price for the Assets ("Purchase Price") shall be Thirty Five Thousand Eight Hundred Thirty Five Dollars (\$35,835.00), less West Reno's one-half of TMWA's attorneys' fees incurred in connection with the negotiation and drafting of this Amendment and related documents. TMWA will provide Escrow Holder and West Reno with the final Purchase Price on or before the Closing.

9. Conditions Precedent. Section 8 of the Agreement is hereby amended and restated in its entirety as follows:

8. CONDITIONS PRECEDENT. The following shall be conditions precedent to the Closing for the benefit of TMWA, all of which must be satisfied, or waived in writing by TMWA, as the case may be, prior to Closing:

8.1 No Breach or Default. As of the Closing Date and at all times prior thereto, there shall be no material breach or default by West Reno of any of its covenants, obligations or responsibilities under this Agreement.

8.2 Status of Representations and Warranties. As of the Closing Date, all of West Reno's representations and warranties set forth in this Agreement shall be true and correct.

8.3 PUC Approval. To the extent required by applicable law, the Nevada PUC has approved the consummation of the purchase on the terms set forth in this Agreement or such other terms acceptable to TMWA in its sole and absolute discretion.

8.4 Health Authority Approval. To the extent required by applicable law, the Washoe County Health District has approved the consummation of the purchase on the terms set forth in this Agreement or such other terms acceptable to TMWA in its sole and absolute discretion.

8.5 Title Policy. Title Company is prepared to issue an ALTA standard policy of title insurance to TMWA for the Tank Site, Well 10 parcel (on the Bates-Stringer property), and BPS Parcel (on the DP Clark Garson property).

8.6 BLA or Parcel Map(s). The City of Reno has approved the BLA or Parcel Map(s) with conditions reasonably agreeable to West Reno and TMWA and all appeal periods have expired for the Tank Site parcel (on BT South property), Well 10 parcel (on the Bates-Stringer property), and BPS Parcel (on the DP Clark Garson property).

8.7 Third-Party Approvals. All Owner Consents, Annexation Agreements, Water Facilities Easements, Additional Easements, Lender Consents, NDOT Consents, and System Improvement Funding to the extent necessary, fully executed by all necessary third parties (collectively, the "Third-Party Approvals") shall have been secured and delivered to Escrow.

8.8 West Reno Pre-Closing Improvements. West Reno shall have completed the West Reno Pre-Closing Improvements.

8.9 RLD Agreement. TMWA shall have approved the terms and conditions of the RLD Agreement and all ancillary agreements related thereto, and RLD and BT South, LLC shall have delivered a duly executed copy of the RLD Agreement and any other funds and deliverables required thereunder to Escrow Holder, and the consummation of all

transactions contemplated thereunder to close on the Closing Date are in a position to close.

8.10 SJP Agreement. TMWA shall have approved the terms and conditions of the SJP Agreement and all ancillary agreements related thereto, and SJP shall have delivered a duly executed copy of the SJP Agreement and any other funds and deliverables required thereunder to Escrow Holder, and the consummation of all transactions contemplated thereunder to close on the Closing Date are in a position to close.

8.11 Meridian North Connection Fees. West Reno has timely collected and deposited into Escrow all Meridian North Connection Fees due from and after the Effective Date through the Closing Date.

8.12 West Reno Deliverables. West Reno shall have executed and acknowledged (where applicable) and delivered to Escrow Holder the deliverables set forth in Section 9.1 and Schedule 9.1.

8.13 TMWA Deliverables. TMWA shall have executed and acknowledged (where applicable) and delivered to Escrow Holder the deliverables set forth in Section 10.1

8.14 Sanitary Survey. West Reno shall have completed the Groundwater Monitoring Plan Work and all work required under the sanitary survey and to the satisfaction of the applicable agency with jurisdictional review over such work and TMWA shall have received written verification from Washoe County Health District that the all such work has been completed.

8.15 Sanitary Seal Improvements. TMWA shall have received written verification from NDEP and the Washoe County Health District that sanitary seal improvements will not be required on any of the West Reno well facilities post-Closing.

8.16 Treatment Technique Violation. West Reno shall have completed all work required to cure the Treatment Technique Violation to the satisfaction of the applicable agency with jurisdictional review over such work and TMWA shall have received written verification from Washoe County Health District that the Treatment Technique Violation is resolved and any required noticing of jurisdictional agencies and customers has been completed.

8.17 BPS Parcel. DP Clark Garson has agreed to convey a parcel for a booster pump station on the DP Clark Garson property.

8.18 Well 10 Parcel. Bates Stringer-Reno LLC has agreed to convey a parcel for Well 10 on the Bates Stringer property and has delivered a duly executed deed to such parcel to Escrow.

8.19 Steamboat Encroachments. West Reno shall have secured necessary encroachment licenses and approvals necessary from Steamboat Canal and Irrigation

Company for the Water Facilities and access road to the Tank Site.

8.20 Well 10 Escrow Agreement. West Reno shall have delivered the Well 10 Escrow Agreement to Escrow Holder, duly executed by West Reno, BT South, RLD and Escrow Holder, and the Well 10 Escrow Funds have been deposited with Escrow Holder.

8.21 Boomtown System Escrow Agreement. West Reno shall have delivered the Boomtown System Escrow Agreement to Escrow Holder, duly executed by West Reno and Escrow Holder, and the Boomtown System Escrow Funds have been deposited with Escrow Holder.

10. West Reno's Deliveries. Schedule 9.1 attached hereto and incorporated herein by reference is added to the Agreement:

9.1 West Reno's Deliveries. On or before the Closing, West Reno shall deliver all of the items set forth in Schedule 9.1 to Escrow Holder.

Failure of West Reno to deliver any of the items set forth in Schedule 9.1 or the failure of any other condition precedent shall not constitute a default by West Reno and any such failure shall entitle to TMWA to either terminate this Agreement or waive the condition and Close Escrow.

11. Binding Effect. This Amendment shall be binding upon and inure to the benefit of Buyer and Seller and their respective permitted successors and assigns.

12. Authorization. The undersigned, by their signatures, represent and warrant that they are authorized agents of their respective entities and are authorized to execute this Amendment.

13. Governing Law. This Amendment shall be governed by the law of the State of Nevada regardless of any conflicts of laws or rules that would require the application of the laws of another jurisdiction.

14. Counterparts and E-Mail Signatures. This Agreement may be executed in counterparts, each of which will be considered an original and all of which together will constitute one and the same agreement. Facsimile or e-mailed transmission of any signed original document, and retransmission of any signed facsimile or e-mailed transmission, will be the same as delivery of an original. At the request of any party, the parties will confirm facsimile or e-mailed transmitted signatures by signing an original document.

[Signature Page Follows]

[Signature Page to Fourth Amendment to Acquisition Agreement]

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first written above.

TMWA” TRUCKEE MEADOWS WATER AUTHORITY	“WEST RENO” WEST RENO WATER COMPANY, INC., a Maryland corporation
By: _____	By: _____
Its: _____	Its: _____
Dated: _____	Dated: _____

Exhibit "B"
Well 10 Escrow Agreement
[To be attached]

Exhibit "C"
Boomtown System Escrow Agreement
[To be attached]

Exhibit "D"
Well 10 Construction Easement
[To be attached]

Exhibit "E"
Boomtown License
[To be attached]

Schedule 9.1
West Reno's Deliveries

Except as provided in the Fourth Amendment, on or before the Closing, West Reno shall deliver all of the following to Escrow Holder. All documents shall be in a form reasonably acceptable to TMWA:

(a) A Termination of Declaration of Covenants, Restrictions and Easements fully executed by West Reno, BT South, RLD, SJP, DP Clark Garson Road 1, LLC, DP Clark Garson Road 2, LLC, Bates Stringer-Reno, LLC, and QUEST-RENO, LLC, a Nevada limited liability company

(b) with notary acknowledgment.

(c) West Reno Documents. The following documents fully executed by West Reno, with notary acknowledgment where applicable:

- i) A Grant, Bargain and Sale Deed and Bill of Sale with respect to the Assets owned by West Reno.
- ii) A Water Rights Deed with respect to all Water Resources owned by West Reno.
- iii) One or more Bill(s) of Sale and General Assignment conveying the Private Water Facilities and Private Fire Facilities to the owner of the property on which they are located.
- iv) An Assignment of Water Facilities Easements conveying all Water Facilities easements held by West Reno.
- v) Two (2) original counterparts of an Assignment of Assumed Contracts, fully executed by West Reno, in the form of Exhibit 9.1(d) attached hereto (the "Contracts Assignment").

(d) SJP Documents. The following documents fully executed by SJP Reno Property, LLC, with notary acknowledgment where applicable:

- i) The SJP Ancillary Agreement.
- ii) A Water Rights Deed with respect to all Water Resources owned by SJP required to be conveyed to TMWA.
- iii) A Bill of Sale and General Assignment assigning any interest of SJP in the Assets.
- iv) A Grant of Water Facilities Easements conveying easements for Water Facilities across SJP property.
- v) A Grant of Easement for Water Wells, Access Road and Drainage Facilities (Well 9 and Well 12).
- vi) An Assignment of Water Facilities Easements conveying all Water Facilities easements held by SJP.
- vii) The SJP Retail Service Area Annexation Agreement.
- viii) A Termination of Relocatable Tank Easement with respect to the easement referenced in Document No. 4590427.

(e) RLD Documents. The following documents fully executed by Reno Land Development Company, LLC, with notary acknowledgment where applicable:

- i) The RLD/BT Ancillary Agreement.

- ii) A Bill of Sale and General Assignment assigning any interest of RLD in the Assets.
- iii) A Grant of Water Facilities Easement conveying easements to Water Facilities across RLD property.
- iv) A Termination of Water Line Easement with respect to the easement under Document No. 4590425.
- v) A Quitclaim Deed with respect to rights reserved under Document No. 4584663.
- vi) A Release of Memorandum of Post Closing Obligations with respect to Document No. 4584673.

(f) BT South Documents. The following documents fully executed by BT South, LLC, with notary acknowledgment where applicable:

- i) The RLD/BT Ancillary Agreement.
- ii) The BT South Retail Service Area Annexation Agreement
- iii) A Grant Bargain and Sale Deed for the tank site parcel.
- iv) A Bill of Sale and General Assignment assigning any interest of BT South in the Assets.
- v) A Grant of Water Facilities Easement conveying easements for access and Water Facilities across BT South property.
- vi) Parcel Map creating Tank Site (if not recorded prior to Closing).

(g) Bates-Stringer Documents. The following documents fully executed by Bates-Stringer Reno, LLC, with notary acknowledgment where applicable:

- i) A Grant Bargain and Sale Deed for the Well 10 Parcel.
- ii) A Grant of Water Facilities Easement conveying easements for access and Water Facilities across Bates Stringer property.
- iii) A Grant of Temporary Water Facilities Easement.
- iv) The Bates Stringer Retail Water Service Area Annexation Agreement.
- v) A Declaration of Deannexation from Declaration of Covenants, Conditions and Restrictions releasing the Well 10 parcel.
- vi) A Release of Memorandum of Post Closing Obligations with respect to Document No. 4584673.
- vii) Parcel Map creating Well 10 parcel (if not recorded prior to Closing).

(h) DP Clark Garson Road Documents. The following documents fully executed by DP Clark Garson Road, LLC, with notary acknowledgment where applicable:

- i) A Subordination and Notice of Deannexation of Declaration of Covenants, Conditions and Restrictions releasing the water facilities easements and BPS parcel.

(i) DP Clark Garson Road 1 Documents. The following documents fully executed by DP Clark Garson Road 1, LLC, with notary acknowledgment where applicable:

- i) A Grant of Water Facilities Easement conveying easements for access and Water Facilities across DP Clark property.

(j) DP Clark Garson Road 2 Documents. The following documents fully executed by DP Clark Garson Road 2, LLC, with notary acknowledgment where applicable:

- i) A Grant Bargain and Sale Deed for the BPS Parcel.

- ii) A Grant of Water Facilities Easement conveying easements for access and Water Facilities across DP Clark property.
- iii) Parcel Map creating BPS parcel (if not recorded prior to Closing)
- (k) Cabela's Documents. The following documents fully executed by Cabela's, with notary acknowledgment where applicable:
 - i) Grant of Easement for Water Facilities, Underground Electric and Communication Facilities across Cabela's property.
 - ii) A subordination of Declaration of Covenants, Conditions and Restrictions with respect to the water facilities easements.
- (l) PNK Documents. The following documents fully executed by PNK (Reno), LLC, with notary acknowledgment where applicable:
 - i) A Subordination of Option Agreement with notary acknowledgment.
 - ii) A Termination of Easement with respect to the easement in Document No. 3410826.
- (m) Lender Consents. The following documents fully executed by the appropriate lender, with notary acknowledgment:
 - i) A request for partial reconveyance, fully executed by Umpqua Bank with notary acknowledgment, with respect to the SJP water rights being conveyed to TMWA.
 - ii) A deed of partial reconveyance fully executed by Umpqua Bank with notary acknowledgment, with respect to the SJP water rights being conveyed to TMWA.
 - iii) A Subordination fully executed by Umpqua Bank with notary acknowledgment, with respect to SJP water facilities easements.
 - iv) A subordination and partial release agreement with respect to the equity participation agreement, fully executed by Arcus Secured Loan Fund, with notary acknowledgment.
 - v) A substitution of trustee and deed of partial reconveyance, fully executed by Mountain West with notary acknowledgment, with respect to BT South water rights and the tank site.
 - vi) A Subordination fully executed by Mountain West with notary acknowledgment, with respect to BT South water facilities easements.
 - vii) A substitution of trustee and deed of partial reconveyance, fully executed by BOFK, NA with notary acknowledgment, with respect to DP Clark BPS Parcel and water rights.
 - viii) A Subordination fully executed by BOKF, NA with notary acknowledgment, with respect to DP Clark water facilities easements.
- (n) NDOT Documents.
 - i) NDOT Consents, fully executed by NDOT with notary acknowledgment, where applicable, with respect to the assignment of NDOT permits.
 - ii) New Occupancy permit for Water Facilities in the Exit 4 right of way, duly executed by NDOT.

- (n) A License Agreement duly executed by Steamboat Canal and Irrigation Company with respect to water facilities and access road encroachments.
- (o) NV Energy Exclusive Easement Consent consenting to TMWA non-exclusive use of NV Energy easement areas.
- (p) The Customer Information.
- (q) All Meridian North Connection Fees collected after the Effective Date.
- (r) The Well 10 Escrow Agreement duly executed by West Reno, BT South, RLD and Escrow Holder.
- (s) The Boomtown System Escrow Agreement duly executed by West Reno and Escrow Holder, and the deposit of the Boomtown System Escrow Funds with Escrow Holder.
- (t) The Well 10 Construction Easement, duly executed by Bates Stringer Reno LLC, with notary acknowledgement.
- (u) The Boomtown License, duly executed by SJP Reno Property, LLC.
- (v) Such other funds, documents, and instruments required under this Agreement or reasonably requested by TMWA to consummate the purchase and sale of the Assets contemplated under this Agreement.

ATTACHMENT 2

SJP RENO PROPERTY, LLC

ANCILLARY AND ANNEXATION

AGREEMENTS

**AGREEMENT REGARDING
WEST RENO WATER SYSTEM ACQUISITION
(SJP)**

THIS AGREEMENT REGARDING WEST RENO WATER SYSTEM ACQUISITION (this “Agreement”), is dated as of the date last executed by the Parties below (the “Effective Date”), and is entered into by and among SJP RENO PROPERTY, LLC, a Maryland limited liability company (“SJP”) and TRUCKEE MEADOWS WATER AUTHORITY, a joint powers authority created pursuant to NRS Chapter 277 by the Cities of Reno and Sparks, and Washoe County, Nevada (“TMWA”).

RECITALS

- A. TMWA is a public purveyor of domestic water service in the greater Reno-Sparks area.
- B. TMWA and West Reno Water Company, Inc., a Maryland corporation (“West Reno”), have entered into that certain Agreement for Water System Acquisition dated June 20, 2018, as amended by that certain First Amendment to Agreement for Water System Acquisition dated October 15, 2018, that Second Amendment to Agreement for Water System Acquisition dated November 19, 2018 and that Third Amendment to Agreement for Water System Acquisition dated December 13, 2018 (“West Reno Agreement”), pursuant to which West Reno has agreed to sell and TMWA has agreed to purchase certain water system facilities and assets in connection with the operation of a retail water sale and delivery system in or near Verdi, Nevada (the “Water Business”) which has a service territory consisting of approximately 880.16 acres more particularly described in the West Reno Agreement (“WR Service Area”). As used in this Agreement, the term “West Reno Closing” shall mean the date upon which the closing of the transactions contemplated under the West Reno Agreement occurs. A true and correct copy of the West Reno Agreement is attached to this Agreement as Exhibit “A”.
- C. SJP owns certain groundwater rights permitted for diversion through the West Reno Water Facilities (“SJP Water Rights”).
- D. SJP is a party to that certain Declaration of Covenants, Restrictions and Easements recorded on June 26, 2012 as Document No. 4125499, Official Records Washoe County, as amended by Amendment No. 1 thereto recorded on August 27, 2014 as Document No. 4386643, as amended by Amendment No. 2 thereto recorded on December 17, 2015 as Document No. 4542990, and as amended by Amendment No. 3 thereto recorded on February 29, 2016 as Document No. 4564761, and as amended by the Assignment and Assumption of Water Facilities recorded on February 27, 2017 as Document No. 4683003 (the “CC&Rs”).
- E. SJP owns certain developed real property in the WR Service Area described as APN 038-430-02, 03, 04, 24, 51 and 52, and APN 038-870-13 (collectively, “SJP Developed Property”) and certain undeveloped real property in the WR Service Area described as APN 038-870-19, 038-870-20, 038-870-25, 038-430-53 and 038-430-54 (collectively, “SJP Vacant Property”, together with the Developed SJP Property referred to as the “SJP Property”) upon some of which certain Water Facilities (as defined below) are located and all of which will benefit from TMWA’s acquisition of the Water Business.
- F. SJP will benefit from TMWA’s acquisition of the Water Business, and the ability of the SJP Property to receive retail water service from TMWA.
- G. As conditions precedent to TMWA’s acquisition of the Water Business, the West Reno Agreement requires SJP to enter this Agreement and provide for i) the conveyance of certain easements and water facilities on the SJP Property and assignment of other property interests SJP may have with

respect to the Water Business; ii) the termination of the CC&Rs; and iii) the release of TMWA from any water service related agreements with West Reno.

AGREEMENT

NOW, THEREFORE, in consideration of the above recitals and mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which all parties acknowledge, the parties hereto agree as follows:

1. **DEFINED TERMS**. In addition to the capitalized terms defined elsewhere in this Agreement, the following terms, when used in this Agreement, shall have the meanings set forth below:

1.1 “CC&R’s” shall have the meaning ascribed to it in the recitals above.

1.2 “Escrow” means the escrow opened to consummate the transactions contemplated in the West Reno Agreement.

1.3 “SJP True-Up Water Rights” means that portion of the SJP Water Rights which are not otherwise committed for existing or future water services or encumbered as described in Exhibit “B”.

1.4 “SJP Developed Property” shall have the meaning ascribed to it in the recitals above.

1.5 “SJP Property” shall have the meaning ascribed to it in the recitals above.

1.6 “SJP Vacant Property” shall have the meaning ascribed to it in the recitals above.

1.7 “Water Facilities” means all water supply, distribution and storage assets, including all mains, markers, conduits, pipes, pump stations, valve boxes, meters, fixtures, pipes, service lines, backflow prevention equipment, tanks, wells, and any other facilities or appurtenances used or intended to be used in connection with the operation of the Water Business and distribution system of West Reno.

1.8 “Well Sites” means collectively the two (2) production well sites, located on APN 038-870-19 (well nos. 9 and 12) upon which West Reno currently operates groundwater wells, each of which sites shall be a maximum of 100 ft. by 100 ft. or in such other configuration as approved by TMWA, but not to exceed a total of 10,000 square feet.

1.9 “West Reno Closing” shall mean the date upon which escrow closes in the West Reno Agreement as evidenced by the recordation by the escrow holder of all instruments to be recorded in connection with the closing of the assets under the West Reno Agreement.

1.10 “West Reno Customers” shall have the meaning ascribed to it in the West Reno Agreement.

1.11 “Will Serve Commitment” shall have the same meaning as a “commitment for water service” as defined in NAC 445A.6577.

1.12 “WR Service Area” shall have the meaning ascribed to it in the West Reno Agreement.

2. **SJP OBLIGATIONS**

2.1 **Termination of CC&R's.** Conditional upon the consummation of the West Reno Closing, and the Termination of the CC&Rs substantially in the form attached hereto as Exhibit 2.1 ("CC&R Termination") being duly executed by the requisite number of property owners subject thereto with notary acknowledgments, SJP shall deliver the CC&R Termination, duly executed by SJP with notary acknowledgement, to Escrow on or before the West Reno Closing. SJP's obligation to execute the CC&R Termination is also contingent upon the satisfactory replacement of the Billboard Easement provided for in the CC&Rs with a standalone easement for the benefit of SJP, which SJP shall secure at its sole cost and expense.

2.2 **Conveyance of Water Facilities.** Conditional upon the consummation of the West Reno Closing, SJP shall dedicate and convey to TMWA, at no cost, all right, title and interest, if any, of SJP in and to the Water Facilities owned as of the date thereof by SJP. SJP shall convey the Water Facilities at the West Reno Closing by a General Assignment and Bill of Sale substantially in the form attached hereto as Exhibit 2.2 ("SJP Bill of Sale") without further representation or warranty of any kind or nature from SJP; provided, SJP shall assign to TMWA any third-party warranties applicable to the Water Facilities. SJP shall deliver the SJP Bill of Sale, duly executed by SJP, to Escrow on or before the West Reno Closing.

2.3 **Conveyance of Water Rights/Demand True Up.** Conditional upon the consummation of the West Reno Closing, SJP shall convey to TMWA the SJP True Up Water Rights at the West Reno Closing by deed substantially in the form attached hereto as Exhibit 2.3.A ("Water Rights Deed"). SJP shall deliver the Water Rights Deed, duly executed by SJP with notary acknowledgment, to Escrow on or before the West Reno Closing. The SJP True Up Water Rights shall be conveyed to TMWA free and clear of any monetary liens, mortgages, pledges, security interests, rights of third parties, encumbrances or other charges of any kind. No later than forty-two (42) months after the West Reno Closing, TMWA shall determine the annual quantity of water delivered to the SJP Developed Property based upon three (3) years of continuous metered water use data for such SJP Developed Property collected by TMWA after the West Reno Closing (the "Actual Usage"). To the extent the Actual Usage for the SJP Developed Property or any portion thereof exceeds the will serve commitment demand identified in Exhibit 3.3, TMWA shall apply the SJP True Up Water Rights in accordance with TMWA Rule 7 to satisfy such deficit demand and the will serve commitment(s) will be adjusted to reflect the Actual Usage. Any excess SJP True Up Water Rights remaining after satisfying any deficit demand on the SJP Developed Property as set forth above shall be reconveyed by TMWA to SJP or its assignee. To the extent the Actual Usage for the SJP Developed Property or any portion thereof is less than the will serve commitment demand identified in Exhibit 3.3, the owner of the service property shall receive a will serve adjustment and water resource credit in accordance with TMWA Rule 7.I.2.c.

2.4 **Easements.** Conditional on the consummation of the West Reno Closing, SJP shall convey to TMWA at the West Reno Closing easements across the SJP Property for access and operation of the Water Facilities (including the Well Sites), which easements shall be substantially in the form attached hereto as Exhibit 2.4 and as otherwise reasonably agreed by TMWA and SJP ("Water Facilities Easements"), and which easements shall be sufficient to provide rights of access and operation for all Water Facilities being conveyed to TMWA hereunder (if any) and in connection with the West Reno Agreement. TMWA shall identify the specific location of all Water Facilities Easements prior to the West Reno Closing for SJP's review and approval, which shall not be unreasonably withheld, delayed or conditioned, and SJP shall cooperate with TMWA as necessary to identify the location of all Water Facilities. SJP shall have no

responsibility for the costs of all surveying, mapping and document preparation for the Water Facilities Easements. In addition to the foregoing, SJP shall convey and assign to TMWA at the West Reno Closing easements, if any, held by SJP across third party properties for purposes of operating and maintaining water facilities in connection with the Water Business, including without limitation water facilities easements conveyed pursuant to Subdivision Tract Maps 5205 and 5227.

2.5 Lender Consents. The Water Facilities Easements and SJP True Up Water Rights shall be conveyed to TMWA free and clear of any monetary liens, mortgages, pledges, or security interests of any kind, any rights of third parties (but with respect to the Water Facilities Easements, rights of third parties to the extent in conflict with such Water Facilities Easements), encumbrances or other charges of any kind that would interfere with TMWA's use and enjoyment of such easements or the ownership thereof, and SJP shall secure, at its sole cost and expense, secure agreements in such form reasonably agreeable to TMWA releasing or subordinating any such monetary liens and encumbrances to the rights being granted to TMWA (collectively, the "Lender Consents"). SJP has disclosed to TMWA that an affiliate of SJP ("Affiliate Lender") has provided financing on a portion of the SJP Vacant Property, and represents and warrants to TMWA that Affiliate Lender has no encumbrance or other right, title or interest in the SJP Vacant Property and SJP shall indemnify and hold harmless TMWA from any claim Affiliate Lender may have or assert in the SJP Vacant Property. The provisions of this Section 2.5 shall survive Closing.

2.6 Cooperation with Water Facility Improvements. SJP shall cooperate in good faith with TMWA, at no expense to SJP, in connection with the installation of any backflow prevention facilities and/or meter installations or modifications to Water Facilities providing water service to the SJP Developed Property to the extent any are required by TMWA in connection with the West Reno Closing.

3. TMWA OBLIGATIONS.

3.1 Annexation of SJP Property Into TMWA Retail Service Area. Conditional upon the consummation of the West Reno Closing and the timely performance of all of SJP's obligations under this Agreement, TMWA shall annex the SJP Developed Property into TMWA's retail service area pursuant to the West Reno Agreement and TMWA shall annex the SJP Vacant Property into TMWA's retail service area pursuant to the Annexation Agreement substantially in the form attached hereto as Exhibit 3.1.

3.2 Modified Connection Fees for Portion of Future Development of SJP Property. Conditional upon the consummation of the West Reno Closing and the timely performance of all of SJP's obligations under this Agreement, TMWA agrees that in lieu of WSF Fees otherwise applicable under TMWA Rules, no TMWA WSF connection fees shall apply to the first 65 GPM of demand (in total) from new or modified service to any portion of the SJP Developed Property or the portion of the SJP Vacant Property described as APN 038-870-25, 038-870-20, and/or 038-870-19 ("Modified Connection Fee"). It is further agreed that except as otherwise set forth in this Section 3.2, new or modified water service to the SJP Property shall be governed exclusively by this Agreement, TMWA Rules and other written agreements between TMWA and SJP, and except as provided herein any applications for new or modified water service to any project shall be processed under and in accordance with TMWA Rules and shall be subject to all fees and charges, including WSF Charges, applicable to new development under TMWA Rules. The Modified Connection Fee is appurtenant to, and may only be used in connection with development on, the SJP Developed Property and APN 038-870-25, 038-870-20 and 038-870-19, shall not exceed 65 GPM in the aggregate, and is not transferrable or assignable for use on any other property. The obligations in this Section 3.2 shall survive the West Reno Closing.

3.3 Will Serve Commitments. Conditional upon the consummation of the West Reno Closing and the timely performance of all of SJP's obligations under this Agreement, TMWA agrees to issue Will Serve Commitments in the amount and to the service properties on the SJP Developed Property as described

in Exhibit 3.3. SJP agrees TMWA shall have no liability or obligation with respect to any Will Serve Commitments to the SJP Developed Property except as disclosed on Exhibit 3.3.

4. RELEASE

Conditional on the consummation of the West Reno Closing, SJP, for itself and any assignees or successors in interest, hereby releases and agrees to hold harmless TMWA from and against any and all claims, liabilities, losses, damages, actions, or causes of action (in law or equity) of any kind or nature whatsoever, relating to or arising directly or indirectly from or incident to any agreements between SJP and West Reno, PNK (Reno) LLC, or any of their predecessors in interest in connection with water supply and water service to SJP or any SJP Property. The foregoing release and hold harmless shall not apply to agreements (including will serve commitments) expressly assumed by TMWA in the West Reno Closing.

5. REPRESENTATIONS AND WARRANTIES

5.1 SJP Representations. As a material inducement for TMWA to enter into this Agreement, SJP represents and warrants to TMWA, as of the Effective Date and through the West Reno Closing, that:

5.1.1 Good Standing. SJP is a limited liability company duly organized, validly existing, and in good standing under the Laws of the State of Maryland and is duly qualified to do business in the State of Nevada. SJP has taken all necessary corporate and other action to authorize and approve the execution, delivery, and performance of this Agreement and the transactions contemplated hereby.

5.1.2 No Violations; Proper Authority; No Required Consents. The execution, delivery and performance by SJP of this Agreement is not inconsistent with and will not violate or contravene any Law applicable to SJP; does not and will not contravene any provision of, or constitute a default under any contract to which SJP is a party. SJP has taken or will obtain prior to the West Reno Closing all necessary approvals required of its Board and members under all applicable Laws to consummate the transactions contemplated hereunder. There are no consents necessary which will not be obtained prior to the Closing from any person, association, entity, or governmental authority necessary to render the transactions contemplated hereby lawful, effective in accordance with the terms of this Agreement, and in compliance with any requirements by which SJP or the Assets (as defined in the West Reno Agreement) are bound, other than the execution of the CC&R Termination by the third party property owners thereto. SJP has the power, authority, and legal right to execute, deliver, and perform this Agreement. When executed and delivered, this Agreement and all other documents and instruments hereunder shall constitute legal, valid, and binding obligations of SJP enforceable against SJP in accordance with their respective terms.

5.1.3 Freedom from Restrictions. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, and the fulfillment of the terms hereof by SJP, conditioned upon SJP's receipt of the Lenders Consents, do not violate or conflict with, and will not result in a breach or default, or in any occurrence that, with a lapse of time or action by a third party or both, could result in a breach or default with respect to any contract to which SJP is a party.

5.1.4 Marketable Title to Water Resources. To the best of its knowledge, SJP holds good and marketable title to the SJP True Up Water Rights described in Exhibit "B" free and clear of all liens, mortgages, pledges, security interests, rights of third parties, encumbrances or other charges of any kind, except i) with respect to commitments for water service with respect to the SJP Dedicated Water Rights; and ii) as expressly disclosed in this Agreement or in writing to TMWA and as approved in writing by TMWA. Subject to receipt of the Lender Consents, SJP has a valid and enforceable right to assign and transfer the SJP True Up Water Rights to TMWA without obtaining the consent or approval of any third party, including any governmental authority.

5.1.5 Ownership of Assets; Good Title. At the West Reno Closing, SJP shall convey to TMWA good and marketable title to the SJP True Up Water Rights, Water Facilities Easements, and all right, title and interest, if any, of SJP to the Water Facilities, subject to no liens, mortgages, pledges, security interests, rights of third parties, encumbrances or other charges of any kind, except as expressly disclosed in this Agreement or in writing to TMWA and as approved in writing by TMWA. Except to the extent previously conveyed to West Reno, SJP has not disposed of, nor taken any steps to dispose of, the SJP True Up Water Rights or Water Facilities and is not under any commitment to dispose of it in whole or in part.

5.1.6 Resource Commitments Liabilities Schedule. Schedule 3.3 fairly and accurately reflects all Will Serve Commitments, agreements, or obligations of West Reno to provide, sell, transfer, convey or make available water rights, water resources, or water resource allocation to the SJP Property. There are no Will Serve Commitments, obligations, or other agreements by West Reno or its predecessor with respect to the commitment, transfer or sale of water resources to the SJP Property except as disclosed on Schedule 3.3.

5.1.7 Material Contracts. Other than the CC&R's, SJP is not a party to, or bound by, any contract, understanding, commitment or agreement related to the Water Facilities or Water Business or which would be applicable to or binding upon TMWA in connection with TMWA's operation of the Water Business after the West Reno Closing.

5.1.8 Compliance With Laws; Suits and Proceedings. SJP is not now (nor has it been within the past twelve (12) months) in violation of any Laws related to the SJP True Up Water Rights or (to the extent owned by SJP) the Water Facilities. To the best of SJP's knowledge, there are no actions, suits, proceedings, investigations or claims pending or, to the knowledge of SJP, currently threatened against SJP with respect to the SJP True Up Water Rights and/or Water Facilities, at law or in equity, before or by any federal, state, municipal or any other governmental court, department, commission, agency or instrumentality, domestic or foreign; nor to the knowledge of SJP is there any basis for any such claim, suit, proceeding or investigation.

5.1.9 Survival of Representations, Warranties, and Indemnities. The representations, warranties and indemnities of the parties set forth in this Agreement shall survive the Closing Date for a period of one (1) year.

5.1.10 Limitation of Damages. In no case shall any party be responsible or liable to the other party under any indemnity set forth in this Agreement or default hereunder for consequential or punitive damages, including, without limitation, lost Water Business profits, and each party's right to recover from the other thereunder shall be limited to such recovering party's direct, actual damages. SJP's liability for any breach(es) of its obligations, representations, warranties and indemnities hereunder shall not exceed in the aggregate One Hundred Thousand Dollars (\$100,000).

6. CLOSING

6.1 Escrow Instructions. The transfers contemplated herein shall be consummated through the Escrow to be established at Western Title Company, Attn: Patti Hanson, with an address of 5390 Kietzke Lane Ste. 101, Reno, Nevada 89511 ("Escrow Holder" or "Title Company") pursuant to the West Reno Agreement. SJP and TMWA agree to execute and deliver to Escrow Holder such additional and supplemental instructions as Escrow Holder may require in order to clarify Escrow Holder's duties under this Agreement; provided, however, that in the event of any conflict or inconsistency between this Agreement and any other instructions delivered to Escrow Holder, the terms of this Agreement shall govern the duties of Escrow Holder and the rights and obligations of SJP and TMWA.

6.2 Closing Costs. Except as provided in this Section 6.2, SJP shall not be responsible for any closing costs. All Escrow Holder fees and costs, transfer taxes (if any), recording fees, escrow fees, closing costs and expenses shall be born and allocated between TMWA and West Reno pursuant to the West Reno Agreement.

6.3 Closing Duties of Escrow Holder. Upon receipt of all of the documents, instruments and funds required to be delivered to Escrow Holder pursuant to this Agreement, Escrow Holder shall proceed as soon thereafter as reasonably possible to but concurrently with the West Reno Closing to record any deed for the SJP True Up Water Rights, the Water Facilities Easements, CC&R Termination and Lender Consents in the Official Records, Washoe County, and delivering the fully executed original SJP Bill of Sale to TMWA.

6.4 Termination. If the West Reno Closing fails to occur on or before December 31, 2018 or the West Reno Agreement is terminated for any reason, this Agreement shall automatically terminate and be of no further force or effect.

7. NOTICES.

All notices or demands required or desired to be given under this Agreement shall be in writing and shall be validly given or made only if (i) personally delivered, (ii) mailed by United States mail, certified or registered, postage prepaid, return receipt requested, (iii) delivered by reputable overnight delivery service, such as FedEx, (iv) sent by facsimile if the sender's facsimile machine prints confirmation records showing the date sent, the recipient's facsimile number, and the completed status of the transmission, or (v) sent by email to the email address listed below with receipt confirmation requested, and shall be addressed as follows:

To SJP:	SJP Reno Property, LLC P.O. Box 399 Verdi, Nevada 89439 Attn: Rob Medeiros Email: rmedeiros@btreno.com
With a copy to:	Allison MacKenzie, Ltd. P.O. Box 646 Carson City, Nevada 89702 Attn: James R. Cavilia, Esq
To TMWA:	Truckee Meadows Water Authority 1355 Capital Blvd. Reno, Nevada 89502 Attn: Mark Foree Email: mforee@tmwa.com
With a copy to:	McDonald Carano Wilson LLP P.O. Box 2670 Reno, Nevada 89505 Attn: Michael A.T. Pagni, Esq. Email: mpagni@mcdonaldcarano.com

Delivery of any such notice or demand shall be conclusively deemed made upon receipt if personally delivered or delivered by overnight delivery service, upon the date of delivery or attempted delivery shown on the return reply card if delivered by United States Mail, or upon the date of transmission shown on the sender's fax confirmation page or email receipt confirmation.

8. MISCELLANEOUS PROVISIONS.

8.1 Entire Agreement. This Agreement constitutes the entire agreement between the parties pertaining to the subject matter hereof and supersedes all prior agreements, oral or written, express or implied, and all undertakings, negotiations or discussions of the parties, whether oral or written, all of which are integrated herein to the extent agreed upon by the parties. This Agreement may not be amended, changed, waived, terminated or modified unless the same shall be in writing and signed by or on behalf of the party to be charged. No waiver of any provision of this Agreement shall be valid unless in writing and signed by the party against whom it is sought to be enforced.

8.2 Attorneys Fees; Governing Law and Venue. In the event of any action for breach of, to enforce the provisions of, or otherwise involving this Agreement, the court in such action shall award reasonable attorneys' fees to the prevailing party in the action. This Agreement shall be governed by the Laws of the State of Nevada.

8.3 Construction; Headings. In the event of any dispute regarding any provision of this Agreement, the terms of this Agreement shall be construed neutrally and shall not be construed against or in favor of either party, notwithstanding the fact that one party may have been responsible for drafting the initial form of this Agreement. The parties acknowledge that they have each participated equally in the negotiation and drafting of this Agreement prior to execution and each have been represented by legal counsel of their choice in connection therewith. The headings of the sections and paragraphs of this Agreement are for convenience only and in no way define, limit or affect the scope of substance of any section or paragraph of this Agreement.

8.4 Severability. If any provisions or part of a provision in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, the same shall not affect any other provision or part of a provision, but, to the fullest extent possible without defeating the parties' intentions hereunder, this Agreement shall be reformed and construed as if such invalid or illegal or unenforceable provision or part of a provision had never been contained herein.

8.5 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

8.6 Relationship of Parties. Nothing contained in this Agreement is intended to nor shall be deemed to create any partnership, joint venture, agency, fiduciary duty or other relationship between SJP and TMWA other than with respect to their contractual obligations contained herein.

8.7 Third-Party Beneficiaries. There are no express or implied third-party beneficiaries to this Agreement, or any obligation, claim, or right arising under this Agreement, and no other person or entity who is not a signatory to this Agreement shall have any obligation, claim, right, or remedy hereunder.

8.8 Days. If the date for performance of any provision of the Agreement is a Saturday, Sunday, or legal holiday (in the State of Nevada), the date for performance shall be extended until the next day that is not a Saturday, Sunday or banking holiday. The phrase "Business days" in this Agreement means consecutive days excluding Saturday, Sunday and any such legal holiday.

8.9 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

8.10 Recitals, Exhibits and Schedules. The recitals at the beginning of this Agreement and the following Exhibits and Schedules attached to this Agreement are incorporated herein by this reference and made a part hereof as if set forth in full herein.

[Signature Page Follows]

IN WITNESS WHEREOF, SJP and TMWA have executed this Agreement effective the latest date written below.

“TMWA”
TRUCKEE MEADOWS WATER AUTHORITY

By: _____

Its: _____

Dated: _____

“SJP”
SJP RENO PROPERTY, LLC, a Maryland limited liability company

By: _____

Its: _____

Dated: _____

Exhibits and Schedules

- Exhibit A: West Reno Agreement
- Exhibit B: SJP True Up Water Rights
- Exhibit 2.1: Form of CC&R Termination
- Exhibit 2.2: Form of SJP Bill of Sale
- Exhibit 2.3A: Form of Water Rights Deed
- Exhibit 2.4: Form Water Facilities Easements
- Exhibit 3.1: Form of Annexation Agreement
- Exhibit 3.3: SJP Developed Property Will Serve Commitments

APN: APN 038-870-19, 038-870-20, 038-870-25,
038-430-53 and 038-430-54

When Recorded, Return to:

Truckee Meadows Water Authority
Attn: Amanda Duncan, ARWP, Land Agent
P O Box 30013
Reno, NV 89520-3013
TMWA WO: West Reno System Acquisition

RETAIL WATER SERVICE AREA ANNEXATION AGREEMENT
(West Reno System)

THIS AGREEMENT, entered into as of the date last executed by the parties below ("Effective Date"), by and between **TRUCKEE MEADOWS WATER AUTHORITY** (the "Authority"), a Joint Powers Authority entity created pursuant to a cooperative agreement among the cities of Reno, Nevada, Sparks, Nevada and Washoe County, Nevada pursuant to N.R.S. Chapter 277, and **SJP RENO PROPERTY, LLC**, a Maryland limited liability company, (referred to as "Developer" or "Owner" in this Agreement and exhibits attached hereto, and together with Authority collectively hereinafter referred to as "Parties");

WITNESSETH:

WHEREAS, Owner owns certain real property more particularly described on Exhibit "A" and depicted on Exhibit "A-1" attached hereto and incorporated herein by this reference and comprised collectively of APN 038-870-19, 038-870-20, 038-870-25, 038-430-53 and 038-430-54 ("Property" or "Owner's Project"), located outside of Authority's current retail water service area.

WHEREAS, on June 20, 2018 Authority entered into an Agreement for Water System Acquisition (as amended, "West Reno Agreement") with West Reno Water Company ("West Reno") pursuant to which the Authority acquired and agreed to annex into the Authority system the water facilities assets of West Reno (the "West Reno System"), which system is located near or on portions of the Owner's Property.

WHEREAS, Owner desires the Authority to expand its retail water service area to provide water service to the Property.

WHEREAS, on _____, 2019, Authority entered into an Agreement Regarding West Reno System Acquisition with Owner ("WR Ancillary Agreement"), pursuant to which Owner agreed to convey certain property and easements utilized in connection with the West Reno System.

WHEREAS, Authority has determined it is willing to provide water service to the Property, and accordingly, Owner's Property may be annexed into Authority's retail water service area, on the terms and conditions set forth herein.

WHEREAS, the West Reno System together with interconnections into and enhancements to TMWA's surface water system, when constructed, can be utilized by Authority as part of an integrated system to provide capacity for water service to residential and commercial development in the former West

Reno service area and to Owner's Property. Without improvements to and interconnection into TMWA's surface water system, the West Reno System will have limited capacity for new services.

WHEREAS, for and in consideration of the performance of obligations under the WR Ancillary Agreement, Authority is willing to expand its retail water service area to include water service to the Property, and Owner agrees to the expansion of Authority's retail water service area upon the terms and conditions set forth in this Agreement, subject to and on the express condition that Owner fully and completely perform the terms and conditions set forth in this Agreement and the WR Ancillary Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and conditions herein contained, the Parties agree as follows:

1. Expansion of Water Service area. Authority agrees to expand its retail water service area as set forth in Exhibit "A" attached hereto to provide water service for the Property; provided, however, that such expansion of the Authority's retail water service area is specifically conditioned upon execution of this Agreement by Owner and the Authority, and the complete and satisfactory performance of the terms and conditions in Section 2 herein. Owner agrees, for itself and its successors and assigns, that water service to and on the Property and Authority's obligations to provide new or modified water service to and on the Property shall be governed exclusively by this Annexation Agreement, Authority Rules, the WR Ancillary Agreement and other written agreements between Authority and Owner. Except as expressly provided otherwise herein, applications for new or modified water service to any project on the Property shall be processed solely under Authority Rules. Provided that Authority performs its covenants and obligations in accordance with this Agreement and the WR Ancillary Agreement and except for the Will-Serve commitments provided for in Section 3 of the WR Ancillary Agreement, Owner agrees that Authority shall have no liability, obligation or responsibility under any entitlements or any other agreements between West Reno or its predecessors, on one hand, and Owner and/or its predecessors, on the other, with respect to water service to the Property and, subject to the foregoing, Owner hereby releases and agrees to hold harmless Authority from and against any and all claims, liabilities, losses, damages, actions, or causes of action (in law or equity) of any kind or nature whatsoever, relating to arising directly or indirectly from or incident to any such agreements in connection with water service to the Property.

2. Conditions to Annexation. The Authority has determined that improvements and/or modifications to its Water System Facilities and/or certain conditions are required to expand its retail water service area to include the Property, and the following conditions in this Section 2 must be satisfied before water service is provided by Authority.

2.1 West Reno System Capacity Reservation and Intertie Facilities Improvements. Owner acknowledges that the West Reno System provides a finite capacity, the exact amount of which has not been determined by Authority and of which 488 GPM of maximum day demand ("MDD") is committed to existing or future West Reno Customers as set forth in Schedule 2.1 attached hereto and incorporated by this reference. Authority has agreed to reserve the first 140 GPM of MDD capacity in excess of the 488 GPM referenced above remaining in the West Reno System, to the extent such capacity exists, for service to owned by BT South, LLC, as described in that certain Annexation Agreement between Authority and BT South, LLC, of even date herewith. The balance of available capacity in excess of 628 GPM of MDD within the West Reno System, if any, shall be available on a first come, first served basis to applicants for water service connecting into the West Reno System. Except as otherwise provided in Section 2.5, Authority's obligation to provide water service to the Property shall be limited to and in no event exceed the sustainable capacity of the West Reno System, whether through existing groundwater wells and/or in conjunction with constructed, in-service Intertie Facilities Improvements or constructed, in-service Backbone Facilities Improvements, to produce water supply which meets or exceeds Authority's water quantity and quality requirements as determined in Authority's reasonable discretion. For purposes of this

Agreement, i) the term “Intertie Facilities Improvements” means interconnections into Authority’s surface water supply system intended to provide limited off-peak conjunctive use capacity, such improvements generally consisting of approximately 1,800 linear feet of 16” water main between Riverbelle mobile home park and the West Reno water system, a booster pump station and jack and bore under the UP railroad; and ii) the term “Backbone Facilities Improvements” means improvements to Authority’s water system facilities intended to provide full design capacity to the Verdi area and provide a fully operational water distribution system, such improvements generally consisting of a 24” main across the Truckee River at Mayberry, expanded capacity at the existing US 40 Pump Station, approx. 6,600 feet of 16” main from Mesa Park/Mae Anne to Mogul, the Verdi Pump Station at Mogul, approx. 9,750 feet of 18” discharge main from the Verdi Pump Station to the Riverbelle Mobile Home Park including utilization of an existing casing under the Truckee River between River Oak and Riverbelle MHP and the proposed 1.5 MG Lower Verdi Tank including approx. 4,400 feet of 18” feeder main. Owner acknowledges and agrees that the water quality, quantity and capacity of the West Reno System must be tested and accepted by Authority, and developed and capable of being placed into service prior to and as a condition precedent of Authority entering any Water Service Agreement for an application for new water service to any portion of Owner’s Property.

2.2 Additional Conditions Regarding Property. The Authority has determined that additions, improvements and/or modifications to the West Reno System and Authority’s water system facilities are required to expand its retail water service area to provide service to the Property in excess of the available capacity of the West Reno System, the specific details of which have yet to be identified but which may include the Intertie Facilities and Backbone Facilities Improvements (collectively such additions, improvements and/or modifications referred to as the “West Reno Expansion Facilities”). In addition to the other conditions set forth in this Agreement, Authority’s obligation to provide water service to the Property for demand in excess of the sustainable capacity of the West Reno System shall be conditional upon the following: 1) the West Reno Expansion Facilities necessary for service, as determined by Authority in its discretion, shall be completed, dedicated and in service prior to execution of a Water Service Agreement for new service to or on the Property; 2) development of the Property shall be subject to, and all applicants for new service on the Property shall pay, all applicable Authority WSF Water System Facility Charges, including without limitation the Area 7 Facility Charge and/or special improvement district assessments, if any, in effect at the time of execution of a Water Service Agreement; 3) the Property shall be subject to and all applicants for new service to the Property shall be required to pay at the time of execution of a Water Service Agreement a prorated share of the West Reno Expansion Facilities, if any are needed; and 4) Owner shall dedicate to Authority such easements and other property located on the Property necessary for the construction and operation of the West Reno Expansion Facilities, such dedications to be made in accordance with Authority’s Rules.

2.3 WR Ancillary Agreement. Owner and SJP shall each have fully and timely performed all obligations required of each of them under the WR Ancillary Agreement.

2.4 Additional Conditions Regarding Authority’s Water System Facility Charges (“WSF Charges”). Subject to Section 2.3 and 2.5 of this Agreement, Authority agrees that in lieu of WSF Fees otherwise applicable under Authority Rules, no TMWA WSF connection fees (“Modified Connection Fee”) shall apply to the first 65 GPM of MDD demand (“GPM Limit”) from new or modified service to the portion of the Property described as APN 038-870-20, 038-870-19, 038-430-02, 03, 04, 24, 51 and 52, and 038-870-13 and 25 (“Modified Fee Parcels”). The Modified Connection Fee is appurtenant to, and may only be used in connection with development on the Modified Fee Parcels, and is not transferrable or assignable for use on any other property. Any new or modified service on the Modified Fee Parcels which in the aggregate exceeds the GPM Limit, and any new or modified service on all other portions of the Property, shall be subject to all fees and charges, including WSF Charges, applicable to new development under Authority Rules.

2.5 Special Charges for Water Quality Mitigation. Notwithstanding any provision herein to the contrary, Authority shall be entitled to impose against the Property and collect from all owners of property served by the West Reno System, including the Owner(s) of the Property, as such Owner(s) apply for new Service from Authority or as customers of the Authority, and on such allocable basis determined by Authority consistent with this Section, special charges (“Special Charges”), to fund costs incurred to relocate or modify wells in the West Reno System necessary to mitigate adverse water quality conditions which arise within ten (10) years of the Effective Date and which impair or affect Authority’s ability to supply water from the West Reno System facilities in compliance with applicable laws. The amount of the Special Charges shall be adopted by the Authority Board through the normal public procedures for approving modifications to Authority Rules or rate tariffs and must be applicable to all real property served by the West Reno System. Authority shall allocate any modified Special Charges equally on a pro rata basis to all Service Properties and/or undeveloped property served by the West Reno System, such that the Owner of each Service Property and undeveloped property served by the West Reno System shall be responsible for paying the proportionate share of the total Special Charges as a condition of water service. Owner for itself and behalf of its successors and assigns to the Property, hereby covenants and agree to pay the Special Charges to the Authority, and agrees the Special Charges, together with interest thereon, late charges, costs, and reasonable attorneys’ fees for the collection thereof, are and shall be a charge against and a continuing lien upon the Property or applicable portion thereof against which such Special Charges are made until paid in full, and may, at TMWA’s election, be collected on TMWA’s behalf by the County Assessor through the property tax rolls assessed against the Property or applicable portion thereof in the same manner as property tax deficiencies.

2.6 Construction of Improvements/Dedication of Real Property. The Authority has determined that the dedication of certain real property in fee, or certain easements, rights of way or other interests in real property is required, and that certain improvements to such dedicated property are required, to expand its retail water service area to include the Property. The real property required for dedication in fee or by easement and the improvements required thereto is set forth on Exhibit “B” attached hereto and incorporated herein by this reference. Such property shall be conveyed free and clear of all liens and encumbrances (including any covenants, conditions and restrictions), and Owner shall obtain and provide Authority prior to dedication, at Owner’s expense, a preliminary title report for any property offered for dedication showing all matters of record affecting such property, except for such monetary liens and encumbrances for real property taxes that are not yet due and payable and such other nonmonetary liens and encumbrances that Authority, in its reasonable discretion in accordance with common utility practice, is willing to accept. Owner is solely responsible for obtaining all appropriate permits, licenses, construction easements, subordination agreements, consents from lenders, and other necessary rights from all necessary parties to dedicate property with title acceptable to Authority. Owner may not apply for, nor shall Authority shall have any obligation to issue or enter, a Water Service Agreement for service to any portion of the Property until such real property required hereunder is granted to Authority in such form, location, scope and condition of title satisfactory to Authority. Furthermore, unless such real property is granted to Authority no later than six (6) months from the Effective Date of this Annexation Agreement, this Annexation Agreement shall automatically terminate, and the Property shall be deemed de-annexed from the Authority retail service area.

3. Conditions of Water Service. Owner acknowledges and agrees that this Agreement merely addresses conditions required for the expansion of Authority’s retail water service area, and that Owner must independently comply with all applicable requirements in Authority’s Rules before the Authority has any obligation to provide water service to the Property, including without limitation (i) submitting and receiving approval from the Authority of appropriate applications for service; (ii) dedicating sufficient Water Resources to the Authority and receiving a Will Serve Commitment for service to the Property; (iii) in addition to any dedication requirements in Section 2 of this Agreement, dedicating appropriate easements

and other real property required for service; (iv) in addition to any dedication requirements in Section 2 of this Agreement, installing, constructing and dedicating subdivision or on-site water system facility additions, improvements or modifications or, except as otherwise provided in Section 2.1.1 above, further additions, improvements, extensions or modifications to Authority's Water System Facilities as necessary to provide the requested new service(s) or modification of service(s) to the Property (excluding, with respect to the first 65 GPM of MDD supply to the Modified Fee Parcels, the Intertie Facilities Improvements and Backbone Facilities Improvements); and (v) satisfying such other terms and conditions pursuant to the Authority's Rules and any requirements of any local governmental entity with jurisdiction over the Property as necessary to obtain a Will-Serve Commitment letter from the Authority for the delivery of water to the Property. Owner shall submit such applications and execute such other documents required by Authority's Rules and procedures prior to being eligible for the delivery of water to the Property. All such conditions, dedications, additions, improvements, extensions and modifications shall be made in accordance with the Authority's Rules and regulations in effect at the time Authority and Owner enter into any agreement or agreements for the specific dedication, additions, improvements or modifications required to provide water service to the Property.

4. General Terms

4.1 Owner acknowledges and agrees that it is entering this Agreement voluntarily, that the expansion of Authority's service area is specifically conditioned on Owner's performance of all terms and conditions contained herein, and that if any of the provisions of this Agreement are deemed unenforceable or if Owner fails to perform any of its obligations hereunder, Authority is under no obligation to expand its service area to include any portion of the Property for which the Authority has not previously entered an agreement to provide water service. Nothing in this paragraph shall be construed to grant Owner a right, and Owner specifically waives any right, if any exists, to dispute any of the terms and conditions of this Agreement under Rule 8 in Authority's Rules. Upon annexation of the Property, the Parties acknowledge and agree that both are bound by the terms and conditions of the rules and regulations adopted by Authority, as the rules and regulations may be amended from time to time, and as such rules may exist at the time service is applied for or requested for the Property or certain phases of the Property.

4.2. Any written notices or communications required hereunder shall be served by placing such notices in the U.S. Mail, postage prepaid, properly addressed to:

To: Authority	Attn. General Manager P.O. Box 30013 Reno, NV 89520-3013
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To: Owner	SJP Reno Property, LLC Attn: Rob Medeiros P.O. Box 399 Verdi, NV 89439
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4.3. This Agreement shall inure to and be binding upon the parties, their respective successors and assigns.

4.4. This Agreement shall not be modified except in writing, signed by all parties.

4.5. This Agreement represents the entire agreement between the Parties related to the expansion of the Authority's retail water service area and supersedes all prior representations and agreements whether written or oral with respect to the covenants and conditions provided herein; provided,

however, that the obligations set forth in this Agreement shall be in addition to, and do not supersede or replace, any obligations that may be imposed upon Owner under Authority's Rules.

4.6 This Agreement and terms and conditions herein shall run with the land and be binding upon and inure to the benefit and burden of the parties to the agreement and their heirs, successors and assigns and any future owners of the Property.

[Signature Page Follows]

[Signature Page to Annexation Agreement]

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement the day and year written below.

**TRUCKEE MEADOWS WATER
AUTHORITY**, a joint powers authority

SJP RENO PROPERTY, LLC,
a Maryland limited liability company

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Dated: _____

Dated: _____

[Notary page follows]

STATE OF NEVADA)
) ss
COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 20____, by
_____ as _____, TRUCKEE
MEADOWS WATER AUTHORITY, on behalf of said Joint Powers Authority therein named.

NOTARY PUBLIC

STATE OF NEVADA)
) ss
COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 20____, by
_____, as _____, of
_____ on behalf of said _____ therein named.

NOTARY PUBLIC

Exhibit "A" to Annexation Agreement
Description of Annexed Property

PARCEL 1

Parcel A of Parcel Map No. 4852, recorded in the office of the County Recorder of Washoe County, Nevada on November 1, 2007 as File No. 3590217.

APN: 038-870-19

PARCEL 2

Parcel B of Parcel Map No. 4852, recorded in the office of the County Recorder of Washoe County, Nevada on November 1, 2007 as File No. 3590217.

APN: 038-870-20

PARCEL 3

A parcel situate within the West Half of Section 16, Township 19 North, Range 18 East, M.D.M., being comprised of all of Parcel "B" as shown on the 2nd Parcel Map for PNK (RENO), LLC, Parcel Map 4851, File Number 3590216, recorded on November 1, 2007 in the Official Records of Washoe County, Nevada, together with a portion of the parcel described as the Boomtown Road Abandonment, Document Number 3798897, recorded September 3, 2009 in the Official Records of Washoe County, Nevada, and being more particularly described as follows:

BEGINNING at the Northeast corner of said Parcel "B", also being a point on the easterly right-of-way line of Cabela Drive, from which the West Quarter corner of said Section 16 bears South 59°57'00" West a distance of 2760.74 feet;

Thence along said right-of-way line from a tangent which bears North 33°19'09" East, along a circular curve to the left with a radius of 462.00 feet and a central angle of 08°00'09" an arc length of 64.53 feet to a point on the centerline of the abandonment parcel described in said Document Number 3798897;

Thence along said centerline from a tangent which bears South 01°59'49" West, along a circular curve to the left with a radius of 4000.00 feet and a central angle of 03°43'08" an arc length of 259.62 feet;

Thence continuing along said line South 01°43'19" East a distance of 695.76 feet;

Thence continuing along said line along a tangent circular curve to the left with a radius of 500.00 feet and a central angle of 14°54'02" an arc length of 130.03 feet;

Thence continuing along said line along a tangent circular curve to the right with a radius of 500.00 feet and a central angle of 23°29'07" an arc length of 204.95 feet;

Thence continuing along said line along a tangent circular curve to the left with a radius of 2500.00 feet and a central angle of 00°52'00" an arc length of 37.82 feet to the northeasterly right-of-way line of Boomtown Garson Road;

Thence along said line from a tangent which bears North 08°57'02" West, along a circular curve to the left with a radius of 699.00 feet and a central angle of 08°05'32" an arc length of 98.73 feet to the southeast corner of said Parcel "B";

Thence continuing along said line along a tangent circular curve to the left with a radius of 699.00 feet and a central angle of $02^{\circ}16'56''$ an arc length of 27.84 feet;

Thence continuing along said line North $19^{\circ}19'31''$ West a distance of 218.52 feet;

Thence continuing along said line along a tangent circular curve to the left with a radius of 699.00 feet and a central angle of $50^{\circ}56'46''$ an arc length of 621.53 feet to the southwest corner of said Parcel "B";

Thence along the westerly line of said Parcel "B" with a non-tangent line North $36^{\circ}51'42''$ East a distance of 30.81 feet;

Thence continuing along said line along a tangent circular curve to the left with a radius of 50.00 feet and a central angle of $90^{\circ}00'00''$ an arc length of 78.54 feet;

Thence continuing along said line North $53^{\circ}08'18''$ West a distance of 34.78 feet to the easterly right-of-way line of Cabela Drive;

Thence along said right-of-way line from a tangent which bears North $26^{\circ}22'34''$ East, along a circular curve to the right with a radius of 398.00 feet and a central angle of $34^{\circ}39'51''$ an arc length of 240.79 feet;

Thence continuing along said line North $61^{\circ}02'25''$ East a distance of 153.58 feet;

Thence continuing along said line along a tangent circular curve to the left with a radius of 462.00 feet and a central angle of $27^{\circ}43'16''$ an arc length of 223.53 feet to the Point of Beginning.

APN: 038-870-25

PARCEL 4

A parcel situate within the North Half of Section 16, Township 19 North, Range 18 East, M.D.M., being comprised of all of Parcel 2 as shown on the Parcel Map for S. Ross Mortensen and Irene Mortensen, Parcel Map 2038, File Number 1110476, recorded on October 22, 1986 in the Official Records of Washoe County, Nevada, together with a portion of the parcel described as the Boomtown Road Abandonment, Document Number 3798897, recorded on September 3, 2009 in the Official Records of Washoe County, Nevada, and being more particularly described as follows:

BEGINNING at the Northeast corner of said Parcel 2, from which the West quarter corner of said Section 16 bears South $65^{\circ}15'57''$ West a distance of 3309.40 feet;

Thence along the easterly line of said Parcel 2 South $06^{\circ}29'57''$ East a distance of 343.12 feet;

Thence continuing along said line South $25^{\circ}35'57''$ East a distance of 35.00 feet to the southeast corner of said Parcel 2;

Thence along the southerly line of said Parcel 2 North $88^{\circ}21'16''$ West a distance of 604.88 feet to the southeast corner of said Parcel 2;

Thence leaving said line and continuing North $88^{\circ}21'16''$ West a distance of 30.05 feet to a point on the centerline of the abandonment parcel described in said Document Number 3798897;

Thence along said centerline North 01°43'19" West a distance of 148.73 feet;

Thence continuing along said line along a tangent circular curve to the right with a radius of 4000.00 feet and a central angle of 03°37'17" an arc length of 252.82 feet;

Thence leaving said line with a non-tangent line South 85°23'10" East a distance of 30.03 feet to the northwest corner of said Parcel 2;

Thence along the northerly line of said Parcel 2 South 85°23'10" East a distance of 556.67 feet to the Point of Beginning.

APN: 038-430-53

PARCEL 5

A parcel situate within the North Half of Section 16, Township 19 North, Range 18 East, M.D.M., being comprised of all of Parcel "B" as shown on the 4th Parcel Map for PNK (RENO), LLC, Parcel Map 4853, File Number 3590218, recorded on November 1, 2007 in the Official Records of Washoe County, Nevada, together with a portion of the parcel described as the Boomtown Road Abandonment, Document Number 3798897, recorded on September 3, 2009 in the Official Records of Washoe County, Nevada, and being more particularly described as follows:

BEGINNING at the Northeast corner of said Parcel "B", from which the West Quarter corner of said Section 16 bears South 61°21'39" West a distance of 3553.37 feet;

Thence along the easterly line of said Parcel "B" South 41°49'03" West a distance of 198.38 feet;

Thence continuing along said line South 06°29'57" East a distance of 171.68 feet to the southeast corner of said Parcel "B";

Thence along the southerly line of said Parcel "B" North 85°23'10" West a distance of 556.67 feet to the southwest corner of said Parcel "B"

Thence leaving said line and continuing North 85°23'10" West a distance of 30.03 feet to a point on the centerline of the abandonment parcel described in said Document Number 3798897;

Thence along said centerline from a tangent which bears North 01°53'58" East, along a circular curve to the right with a radius of 4000.00 feet and a central angle of 00°05'51" an arc length of 6.80 feet to the easterly right-of-way line of Cabela Drive;

Thence along said line from a tangent which bears North 25°19'00" East, along a circular curve to the left with a radius of 462.00 feet and a central angle of 21°11'31" an arc length of 170.88 feet;

Thence continuing along said line North 04°07'29" East a distance of 267.21 feet to the northwest corner of said Parcel "B";

Thence along the northerly line of said Parcel "B" from a tangent which bears North 34°03'10" East, along a circular curve to the right with a radius of 30.00 feet and a central angle of 54°07'56" an arc length of 28.34 feet;

Thence continuing along said line North 88°11'06" East a distance of 35.12 feet;

Thence continuing along said line from a tangent which bears South 75°39'14" East, along a circular curve to the right with a radius of 5629.60 feet and a central angle of 06°08'49" an arc length of 603.97 feet to the Point of Beginning.

APN: 038-430-54

[Above referenced legal descriptions were referenced from that Preliminary Title Report from Western Title Company known as Order No. 093796-PAH dated as of March 15, 2018 at 07:30 am.]

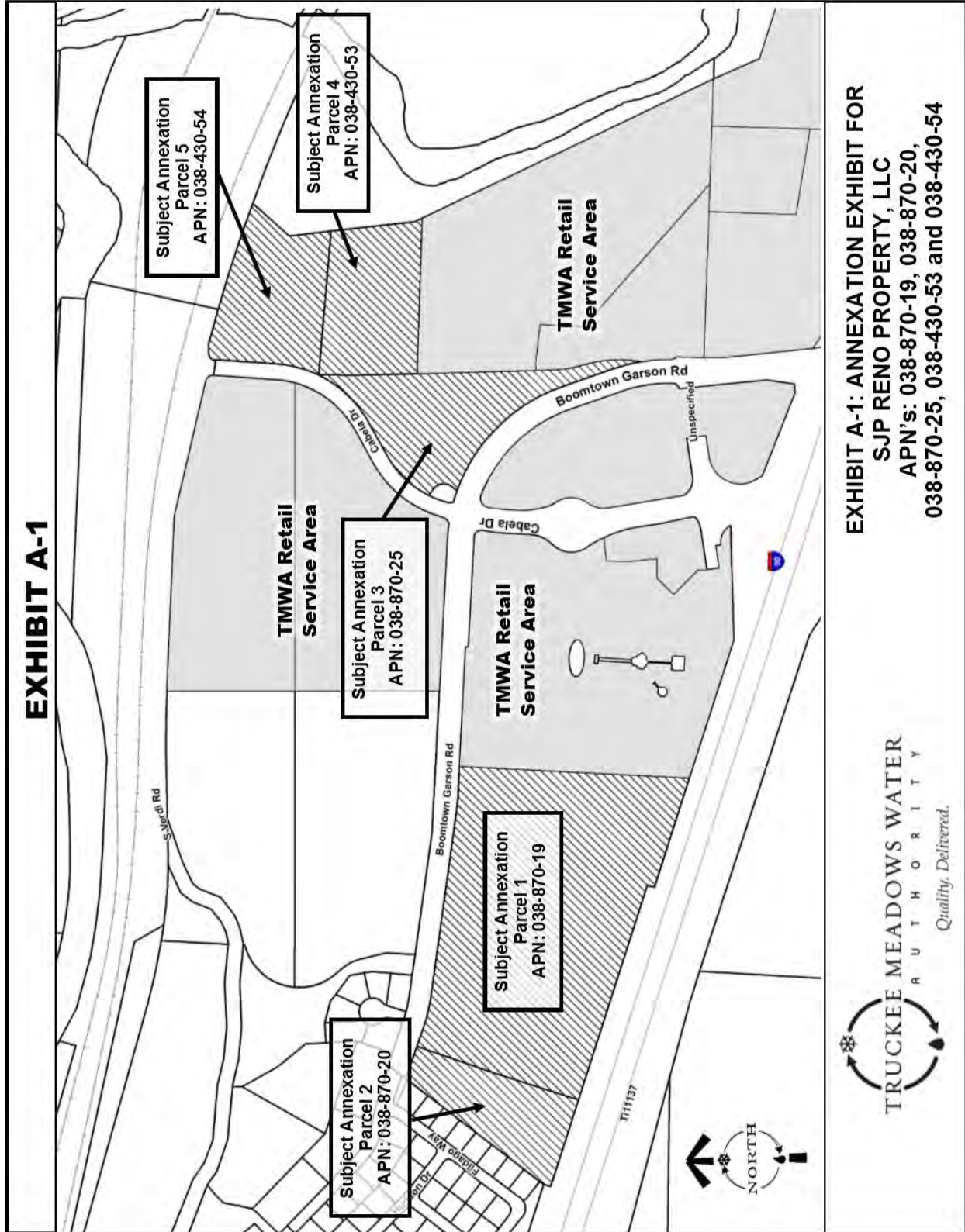


Exhibit "B" to Annexation Agreement
Improvements/Dedications

1. Dedicate and convey to Authority the water wells, pressure regulating station, and all water facilities comprising portions of the West Reno System located on the Property to the extent owned by Owner.
2. Convey to Authority Water Facilities Easements across the Property in form and substance agreeable to Authority for West Reno System water facilities located on the Property.
3. Convey to Authority exclusive easements for Well #12 and Well #9 located on a portion of the Property.
4. Install fencing around the perimeter of the Well #12 and Well #9.
5. Dedicate and convey in fee title approximately 0.25 acres for a pump station site located on a portion of the Property to the extent not dedicated by DP Clark Garson Road, LLC on property owned by DP Clark Garson Road, LLC.

**RENO LAND DEVELOPMENT
COMPANY**

&

BT SOUTH LLC

**ANCILLARY AND ANNEXATION
AGREEMENTS**

**AGREEMENT REGARDING
WEST RENO WATER SYSTEM ACQUISITION
(RLDC and BT South)**

THIS AGREEMENT REGARDING WEST RENO WATER SYSTEM ACQUISITION (this “Agreement”), is dated as of the date last executed by the Parties below (the “Effective Date”), and is entered into by and among RENO LAND DEVELOPMENT COMPANY, a Nevada limited liability company (“RLD”), BT SOUTH LLC, a Nevada limited liability company (“BT South”) and TRUCKEE MEADOWS WATER AUTHORITY, a joint powers authority created pursuant to NRS Chapter 277 by the Cities of Reno and Sparks, and Washoe County (“TMWA”).

RECITALS

- A. TMWA is a public purveyor of domestic water service in the greater Reno-Sparks area.
- B. TMWA and West Reno Water Company, Inc., a Maryland corporation (“West Reno”), have entered into that certain Agreement for Water System Acquisition dated June 20, 2018, as amended by that certain First Amendment to Agreement for Water System Acquisition dated October 15, 2018, that Second Amendment to Agreement for Water System Acquisition dated November 19, 2018 and that Third Amendment to Agreement for Water System Acquisition dated December 13, 2018 (“West Reno Agreement”), pursuant to which West Reno has agreed to sell and TMWA has agreed to purchase certain water system facilities and assets in connection with the operation of a retail water sale and delivery system in or near Verdi, Nevada (the “Water Business”) which has a service territory consisting of approximately 880.16 acres more particularly described in the West Reno Agreement (“WR Service Area”). As used in this Agreement, the term “West Reno Closing” shall mean the date upon which the closing of the transactions contemplated under the West Reno Agreement occurs. A true and correct copy of the West Reno Agreement is attached to this Agreement as Exhibit “A”.
- C. RLD owns certain groundwater rights permitted for diversion through the West Reno Water Facilities as more particularly described in Exhibit “B” attached hereto (“RLD Water Rights”).
- D. RLD is a party to that certain Declaration of Covenants, Restrictions and Easements recorded on June 26, 2012 as Document No. 4125499, Official Records Washoe County, as amended by Amendment No. 1 thereto recorded on August 27, 2014 as Document No. 4386643, as amended by Amendment No. 2 thereto recorded on December 17, 2015 as Document No. 4542990, and as amended by Amendment No. 3 thereto recorded on February 29, 2016 as Document No. 4564761 (the “CC&Rs”), and is obligated to construct and dedicate to West Reno certain water facilities and improvements described as the RLD Improvements in the CC&Rs. As used in this Agreement, the term “RLD Improvements” shall have the meaning ascribed in the CC&Rs.
- E. BT South, as successor to RLD, owns certain undeveloped real property in the WR Service Area described as APN 038-090-61, 038-120-03, 038-120-10, 038-120-12, 038-120-13, and 038-132-25 (collectively, “BT South Property”) upon which certain Water Facilities (as defined below) are located and which will benefit from TMWA’s acquisition of the Water Business.
- F. BT South owns certain groundwater rights permitted for diversion through the West Reno Water Facilities as more particularly described in Exhibit “B” attached hereto (“BT Water Rights”).
- G. RLD and BT South will each benefit from TMWA’s acquisition of the Water Business, and the ability of the BT South Property to receive retail water service from TMWA.

H. As conditions precedent to TMWA's acquisition of the Water Business, the West Reno Agreement requires RLD and BT South to enter this Agreement and provide for i) the conveyance of certain easements, fee property, and water facilities on the BT South Property; ii) the consent of TMWA's acquisition of the Water Business and termination of the CC&Rs; iii) the payment of at least \$2,668,335 in connection fees upon the development of the BT South Property and the Meridian North Lots (as defined below); iv) the completion and dedication of the RLD Improvements; v) the release of TMWA from any water service related agreements with West Reno, and other terms and conditions set forth herein.

I. Additional conditions precedent to TMWA's acquisition of the Water Business are set forth in the West Reno Agreement, including without limitation completion of the West Reno System Modifications, which conditions must be satisfied or waived in TMWA's sole discretion to consummate the West Reno Closing.

AGREEMENT

NOW, THEREFORE, in consideration of the above recitals and mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which all parties acknowledge, the parties hereto agree as follows:

1. **DEFINED TERMS**. In addition to the capitalized terms defined elsewhere in this Agreement, the following terms, when used in this Agreement, shall have the meanings set forth below:

1.1 "Elevation Map" means the map attached hereto as Exhibit "C".

1.2 "Escrow" means the escrow opened to consummate the transactions contemplated in the West Reno Agreement.

1.3 "Lower Zone Capacity Allocation" means the first 140 GPM of MDD supply sought or provided from the West Reno System to the Lower Zone Property and for which a corresponding will serve commitment has been issued on the RLD Water Rights and/or BT Water Rights dedicated in accordance with Section 4.3 of this Agreement.

1.4 "Lower Zone Property" means that portion of the BT South Property and that portion of the Santerra Parcel located below the mean sea level elevation of 5,066 feet as depicted on the Elevation Map..

1.5 "Meridian North Lots" means the 273 single family residential lots described as Lots 101 thru 198 in Subdivision Tract Map 5205, recorded May 15, 2017 as Document No. 4704095 and Lots 201 through 278 in Subdivision Tract Map 5227, recorded October 17, 2017 as Document No. 4754335, and Lots 301 through 397 in Meridian 120 North, Village 3, submitted to the City of Reno on or about November 30, 2017 and pending final approval as of the Effective Date of this Agreement.

1.6 "Monitoring Well" means the monitoring well site located on APN 038-120-10 upon which West Reno currently operates a monitoring well.

1.7 "RLD Improvements" shall have the meaning ascribed to it in the CC&Rs.

1.8 "RLD/BT Improvements" shall have the meaning ascribed to it in Section 2.1.

1.9 “Santerra Parcel” means that certain real property described as APN 038-120-04.

1.10 “Tank Site” means approximately 1.27 acres located on APN 038-120-03 currently owned by BT South, upon which a 500,000 gallon water tank and a 1,500,000 gallon water tank are located.

1.11 “Water Facilities” means all water supply, distribution and storage assets, including all mains, markers, conduits, pipes, pump stations, valve boxes, meters, fixtures, pipes, service lines, backflow prevention equipment, tanks, wells, and any other facilities or appurtenances used or intended to be used in connection with the operation of the Water Business and distribution system of West Reno, including the RLD/BT Improvements and Monitoring Well.

1.12 “West Reno Closing” shall mean the date upon which escrow closes in the West Reno Agreement as evidenced by the recordation by the escrow holder of all instruments to be recorded in connection with the closing of the assets under the West Reno Agreement.

1.13 “West Reno Customers” shall have the meaning ascribed to it in the West Reno Agreement.

1.14 “WR Service Area” shall have the meaning ascribed to it in the West Reno Agreement.

2. **RLD OBLIGATIONS**

2.1 **Bridge Replacement.** RLD and BT acknowledge and agreed that it shall be the responsibility of the first applicant for water service seeking new or modified service to the BT South Property or other property located south of Interstate 80 to construct and complete at the applicant’s sole expense the tank access road bridge replacement work described as Item #27 and 31 in Schedule 5.8.6 of the West Reno Agreement (“Bridge Replacement”) in accordance with plans and specifications reviewed and approved by TMWA. TMWA shall have no obligation to provide water service to the BT South Property or any other property located south of Interstate 80 unless and until the Bridge Replacement work is completed and approved by TMWA.

2.2 **Termination of CC&R’s.** To the extent required under the CC&Rs, RLD consents to the sale of the Water Business and West Reno water assets to TMWA under the West Reno Agreement. Conditional upon the consummation of the West Reno Closing, RLD shall execute a termination of the CC&Rs substantially in the form attached hereto as Exhibit 2.2 (“CC&R Termination”) at the West Reno Closing. RLD shall deliver the CC&R Termination, duly executed by RLD with notary acknowledgement, to Escrow on or before the West Reno Closing.

2.3 **Conveyance of Water Facilities.** Conditional upon the consummation of the West Reno Closing, RLD shall dedicate and convey to TMWA, at no cost, all right, title and interest, if any, of RLD in and to the Water Facilities owned as of the date thereof by RLD. RLD shall convey the Water Facilities at the West Reno Closing by a General Assignment and Bill of Sale substantially in the form attached hereto as Exhibit 2.3 (“RLD Bill of Sale”) without further representation or warranty of any kind or nature from RLD; provided, RLD shall assign to TMWA any third party warranties applicable to the Water Facilities. RLD shall deliver the RLD Bill of Sale, duly executed by RLD, to Escrow on or before the West Reno Closing.

2.4 Meridian North Connection Fees. Conditional upon the consummation of the West Reno Closing and the timely performance of all of RLD's and BT South's obligations under this Agreement, TMWA agrees that in lieu of WSF Fees otherwise applicable under TMWA Rules, a modified connection fee shall apply to any development of the Meridian North Lots equal to One Thousand Eight Hundred Dollars (\$1,800.00) per single family residential unit ("Meridian North Connection Fee"). RLD shall pay (or deliver to TMWA payment from the owner of the Meridian North Lots) the Meridian North Connection Fee no later than ten (10) days prior to the date a meter is to be installed for water service to the applicable Meridian North Lot, and the Meridian North Connection Fee must be paid prior to commencing any water service to the applicable Meridian North Lot. Prior to the West Reno Closing, RLD shall pay all Meridian North Connection Fees into Escrow with respect to meters set or requested to be set as of such date, which fees shall be deposited and held in Escrow and released to TMWA at the West Reno Closing. From and after the West Reno Closing, RLD shall pay all subsequent Meridian North Connection Fees directly to TMWA. In the event the West Reno Closing does not occur, all Meridian North Connection Fees shall be returned to RLD or such other person that paid them into Escrow. The obligations in this Section 2.4 shall survive the West Reno Closing.

3. BT SOUTH OBLIGATIONS

3.1 Tank Site. BT South shall parcel and convey the Tank Site to TMWA in fee at the West Reno Closing. TMWA and BT South acknowledge that a Parcel Map(s) or maps, merger and resubdivision map or boundary line adjustments that create the Tank Site as a legal parcel (individually or collectively, the "BLA or Parcel Map(s)") must be created and approved by appropriate governmental entities prior to and as a condition of transfer. TMWA shall prepare the BLA or Parcel Map(s) and such surveys and governmental applications necessary to create a separate parcel or parcels for the Tank Site in a form and setting the Tank Site boundaries reasonably acceptable to BT South, as provided below. As soon as practicable after the Effective Date, TMWA shall submit the BLA or Parcel Map(s) to BT South for review and approval, such approval not to be unreasonably withheld, delayed or conditioned. TMWA shall thereafter immediately seek and use its best efforts to secure all required Final Governmental Approvals prior to the West Reno Closing to subdivide and create a separate parcel comprised of the Tank Site consistent with the BLA or Parcel Map approved by BT South and to permit the recordations of the BLA or Parcel Map(s) and conveyance of the Tank Site to TMWA. BT South shall cooperate with TMWA to the extent reasonably necessary with respect to the preparation of the BLA or Parcel Map(s) and securing Final Governmental Approvals thereof. All costs for preparing, submitting and securing Final Governmental Approvals of the BLA or Parcel Map(s) shall be split equally between TMWA and BT South. As used in this Agreement, the term "Final Government Approvals" shall mean the final act by any governmental agency or entity with jurisdiction over such matters, not subject to appeal, granting approval of the BLA or Parcel Map(s) under applicable Laws for TMWA's intended use. If the net acreage, size, location or configuration of the Tank Site changes in any material respect from the final BLA or Parcel Map(s), as approved by TMWA, or mapping conditions impose material costs, delays or otherwise materially and negatively impact the property, TMWA's obligation to consummate the West Reno Closing shall be conditioned upon TMWA's approval of such changes, which approval shall not be unreasonably withheld. If Final Governmental Approvals are not secured by the West Reno Closing, TMWA may, in its sole discretion, elect to proceed with the West Reno Closing in which event 1) BT South shall grant TMWA at the West Reno Closing a temporary easement to access and operate facilities on the Tank Site until title is transferred to TMWA; 2) BT South shall convey the Tank Site to TMWA within five (5) days of the recordation of the BLA or Parcel Map(s).

3.2 Easements. BT South shall convey to TMWA at the West Reno Closing easements for access and operation of the Water Facilities (including the Monitoring Well and Tank Site), which easements shall be substantially in the form attached hereto as Exhibit 3.2 and as otherwise reasonably agreed by TMWA and BT South ("Water Facilities Easements"), and which easements shall be sufficient to provide rights of access and operation for all Water Facilities being conveyed to TMWA hereunder and

in connection with the West Reno Agreement. TMWA shall identify the specific location of all Water Facilities Easements prior to the West Reno Closing for BT South's review and approval, which shall not be unreasonably withheld, delayed or conditioned, and BT South shall cooperate with TMWA as necessary to identify the location of all Water Facilities. BT South shall have no responsibility for the costs of all surveying, mapping and document preparation for the Water Facilities Easements. BT South shall be solely responsible for the costs of relocating any Water Facilities Easements and/or Water Facilities and providing replacement easements to TMWA in accordance with TMWA Rules if such relocation is required in connection with the development of the BT South Property.

3.3 Termination of CC&R's. To the extent required under the CC&Rs, BT consents to the sale of the Water Business and West Reno water assets to TMWA under the West Reno Agreement. Conditional upon the consummation of the West Reno Closing, BT South shall execute the termination of the CC&Rs as set forth in the CC&R Termination at the West Reno Closing. BT South shall deliver the CC&R Termination, duly executed by BT South with notary acknowledgement, to Escrow on or before the West Reno Closing.

3.4 Conveyance of Water Facilities. Conditional upon the consummation of the West Reno Closing, BT South shall dedicate and convey to TMWA, at no cost to TMWA, all right, title and interest, if any, of BT South in and to the Water Facilities at the West Reno Closing. BT South shall convey the Water Facilities by a General Assignment and Bill of Sale substantially in the form attached hereto as Exhibit 3.4 ("BT South Bill of Sale") without warranty of any kind or nature, express or implied from BT South provided, BT South shall assign to TMWA any third party warranties applicable to the Water Facilities. BT South shall deliver the BT South Bill of Sale, duly executed by BT South, to Escrow on or before the West Reno Closing.

3.5 Lender Consents. The Tank Site and Water Facilities Easements shall be conveyed to TMWA free and clear of any monetary liens, mortgages, pledges, or security interests of any kind, any rights of third parties (but with respect to the Water Facilities Easements, rights of third parties to the extent in conflict with such Water Facilities Easements), encumbrances or other charges of any kind that would interfere with TMWA's use and enjoyment of such easements or the ownership thereof, and BT South shall secure, at its sole cost and expense, agreements in such form reasonably agreeable to TMWA releasing (in the case of the Tank Site) or subordinating (in the case of Water Facilities Easements) any such liens and encumbrances to the rights being granted to TMWA (collectively, the "Lender Consents"). BT South shall deliver the Lender Consents to Escrow in recordable form, duly executed with notary acknowledgement, on or before the West Reno Closing.

4. TMWA OBLIGATIONS.

4.1 Annexation of BT South Property Into TMWA Retail Service Area. Conditional upon the consummation of the West Reno Closing and the timely performance of all of RLD's and BT South's obligations under this Agreement, TMWA shall annex the BT South Property into TMWA's retail service area pursuant to the Annexation Agreement substantially in the form attached hereto as Exhibit 4.1.

4.2 Commitment Regarding Water Service. Conditional upon the consummation of the West Reno Closing and the timely performance of all of RLD's and BT South's obligations under this Agreement, TMWA shall issue to BT South an NAC 445A.65515 Acknowledgment of Water Service letter, acknowledging TMWA's willingness to supply water service to the BT South Property upon satisfaction of and in accordance with conditions in the Annexation Agreement and TMWA's rules and tariffs.

4.3 Water Resource Dedications. TMWA agrees the RLD Water Rights and BT Water Rights shall be acceptable for dedication for the issuance of will-serve commitment letters for future water service within the WR Service Area to the extent otherwise dedicated in compliance with TMWA Rule 7 and to

the extent the rights have not been cancelled, forfeited or the beneficial use is not otherwise restricted by the Nevada Division of Water Resources or Washoe County District Health. Notwithstanding the foregoing, TMWA agrees the RLD Water Rights and BT Water Rights shall be acceptable for dedication for the issuance of will-serve commitment letters for the Lower Zone Capacity Allocation, and further agrees TMWA will not require dedication of additional surface or ground water rights to supplement the RLD Water Rights and BT Water Rights in excess of Rule 7 dedication requirements as of the Effective Date of this Agreement for service for the Lower Zone Capacity Allocation, provided: 1) the application(s) for will-serve commitments using the RLD Water Rights and/or BT Water Rights are received by TMWA within forty two (42) months of the West Reno Closing; 2) marketable title to the applicable RLD Water Rights and BT Water Rights is conveyed to TMWA free and clear of liens and encumbrances; and 3) the underlying permits for the RLD Water Rights and/or BT Water Rights offered remain in good standing with the Nevada Division of Water Resources at the time of dedication.

4.4 Modified Connection Fees for Lower Zone Capacity Allocation. Conditional upon the consummation of the West Reno Closing and the timely performance of all of RLD's and BT South's obligations under this Agreement, TMWA agrees that in lieu of WSF Fees otherwise applicable under TMWA Rules, a modified connection fee shall apply to the Lower Zone Capacity Allocation equal to at least \$15,550 per GPM ("Modified BT South Connection Fee"). The Modified BT South Connection Fee shall be increased by: (i) the amount, if any, by which the actual cost incurred by TMWA to complete the TMWA Post Closing Improvements exceeds \$2,668,335; and ii) if TMWA has not been fully reimbursed for the actual costs incurred by TMWA for the TMWA Post Closing Improvements by January 31, 2026, the carrying costs incurred by TMWA for financing the actual cost of the TMWA Post Closing Improvements. The Modified BT South Connection Fee shall be paid no later than ten (10) days prior to the date a meter is to be installed for water service to the applicable parcel receiving service, and must be paid prior to and as a condition of TMWA having any obligation to commence water service to the applicable parcel. With respect to meters required to be set prior to or within ten (10) days after the West Reno Closing, BT South shall pay all such Modified BT South Connection Fees into Escrow, which fees shall be deposited and held in Escrow and released to TMWA at the West Reno Closing. From and after the West Reno Closing, BT South or its successors shall pay all Modified BT South Connection Fees directly to TMWA. In the event the West Reno Closing does not occur, all Modified BT South Connection Fees paid into Escrow shall be returned to BT South or such other person that paid them into Escrow. It is further agreed that except as otherwise set forth in this Section 4.4, new water service to the BT South Property shall be governed exclusively by this Agreement, TMWA Rules and other written agreements between TMWA and BT South, and except as provided herein any applications for new or modified water service to any project shall be processed under and in accordance with TMWA Rules and shall require annexation of the BT South Property into TMWA's retail service area in accordance with TMWA's Rules. Any new or modified service i) to any portion of the BT South Property other than the Lower Zone Property referenced above or ii) in excess of or which is not included within the Lower Zone Capacity Allocation shall be subject to all fees and charges, including WSF Charges, applicable to new development under TMWA Rules. The obligations in this Section 4 shall survive the West Reno Closing.

4.4.1 Assignability. BT South may assign all or any part of the Lower Zone Capacity Allocation and correlative rights to the Modified BT South Connection Fee to any person for use in within Lower Zone Property at any time without TMWA's consent provided i) such assignment is in writing in such form reasonably required by TMWA and is duly executed by BT South, the assignee and TMWA and ii) provided that any such assignment include a corresponding amount of the RLD Water Rights and/or BT Water Rights, it being expressly acknowledged and agreed that the Lower Zone Capacity Allocation and Modified BT South Connection Fee can only be utilized in conjunction with the RLD Water Rights and/or BT Water Rights. The Modified BT South Connection Fee may only be used in conjunction with the Lower Zone Capacity Allocation, and neither may be used in connection with any application for new or modified service to any property other than the Lower Zone Property.

5. RELEASE

Conditional on the consummation of the West Reno Closing, BT South and RLD each, for itself and any assignees or successors in interest, hereby release and agree to hold harmless TMWA from and against any and all claims, liabilities, losses, damages, actions, or causes of action (in law or equity) of any kind or nature whatsoever, relating to arising directly or indirectly from or incident to any agreements between BT South and RLD, respectively, (or its predecessor) and SJP Reno Property, LLC, West Reno, PNK (Reno) LLC, or any of their predecessors in interest in connection with water supply and water service to RLD, BT South, or any property owned by them. The foregoing release and hold harmless shall not apply to agreements (including will serve commitments) expressly assumed by TMWA in the West Reno Closing.

6. REPRESENTATIONS AND WARRANTIES

6.1 RLD Representations. As a material inducement for TMWA to enter into this Agreement, RLD represents and warrants to TMWA, as of the Effective Date and through the West Reno Closing, that:

6.1.1 Good Standing. RLD is a limited liability company duly organized, validly existing, and in good standing under the Laws of the State of Nevada. RLD has taken all necessary corporate and other action to authorize and approve the execution, delivery, and performance of this Agreement and the transactions contemplated hereby.

6.1.2 No Violations; Proper Authority; No Required Consents. The execution, delivery and performance by RLD of this Agreement is not inconsistent with and will not violate or contravene any Law applicable to RLD; does not and will not contravene any provision of, or constitute a default under any contract to which RLD is a party. RLD has taken or will obtain prior to the West Reno Closing all necessary approvals required of its Board and members under all applicable Laws to consummate the transactions contemplated hereunder. There are no consents necessary which will not be obtained prior to the Closing from any person, association, entity, or governmental authority necessary to render the transactions contemplated hereby lawful, effective in accordance with the terms of this Agreement, and in compliance with any requirements by which RLD or the Assets are bound. RLD has the power, authority, and legal right to execute, deliver, and perform this Agreement. When executed and delivered, this Agreement and all other documents and instruments hereunder shall constitute legal, valid, and binding obligations of RLD enforceable against RLD in accordance with their respective terms.

6.1.3 Freedom from Restrictions. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, and the fulfillment of the terms hereof by RLD, conditioned upon RLD's receipt of the Lenders Consents, do not violate or conflict with, and will not result in a breach or default, or in any occurrence that, with a lapse of time or action by a third party or both, could result in a breach or default with respect to any contract to which RLD is a party.

6.1.4 Material Contracts. Other than the CC&R's, RLD is not a party to, or bound by, any contract, understanding, commitment or agreement related to the Water Business or which would be applicable to or binding upon TMWA in connection with TMWA's operation of the Water Business after the West Reno Closing.

6.1.5 Compliance With Laws; Suits and Proceedings. RLD is not now (nor has it been within the past twelve (12) months) in violation of any Laws related to the Water Facilities. There are no actions, suits, proceedings, investigations or claims pending or, to the knowledge of RLD, threatened against RLD with respect to the Water Facilities, at law or in equity, before or by any federal, state, municipal or any other governmental court, department, commission, agency or instrumentality, domestic

or foreign; nor to the knowledge of RLD is there any basis for any such claim, suit, proceeding or investigation.

6.2 BT South Representations. As a material inducement for TMWA to enter into this Agreement, BT South represents and warrants to TMWA, as of the Effective Date and through the West Reno Closing, that:

6.2.1 Good Standing. BT South is a limited liability company duly organized, validly existing, and in good standing under the Laws of the State of Nevada. BT South has taken all necessary corporate and other action to authorize and approve the execution, delivery, and performance of this Agreement and the transactions contemplated hereby.

6.2.2 No Violations; Proper Authority; No Required Consents. The execution, delivery and performance by BT South of this Agreement is not inconsistent with and will not violate or contravene any Law applicable to BT South; does not and will not contravene any provision of, or constitute a default under any contract to which BT South is a party or by which it or any of the BT South Property are bound; and will not result in the imposition of a lien upon the Tank Site or Water Facilities Easements pursuant to the terms of any agreement or instrument to which BT South is a party or by which it is bound. BT South has taken or will obtain prior to the West Reno Closing all necessary approvals required of its Board and members under all applicable Laws to consummate the transactions contemplated hereunder. There are no consents necessary which will not be obtained prior to the Closing from any person, association, entity, or governmental authority necessary to render the transactions contemplated hereby lawful, effective in accordance with the terms of this Agreement, and in compliance with any requirements by which BT South, the BT South Property, Tank Site or Water Facilities Easements are bound. BT South has the power, authority, and legal right to execute, deliver, and perform this Agreement. When executed and delivered, this Agreement and all other documents and instruments hereunder shall constitute legal, valid, and binding obligations of BT South enforceable against BT South in accordance with their respective terms.

6.2.3 Freedom from Restrictions. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, and the fulfillment of the terms hereof by BT South, conditioned upon BT South's receipt of the Lenders Consents, do not violate or conflict with, and will not result in a breach or default, or in any occurrence that, with a lapse of time or action by a third party or both, could result in a breach or default with respect to any contract to which BT South is a party.

6.2.4 Ownership of Assets; Good Title. At the West Reno Closing, BT South shall convey good and marketable title to the Tank Site and Water Facilities Easements to TMWA, subject to no liens, mortgages, pledges, security interests, rights of third parties, encumbrances or other charges of any kind, except as expressly disclosed in this Agreement or in writing to TMWA and as approved in writing by TMWA.

6.2.5 Material Contracts. Other than the CC&R's, BT South is not a party to, or bound by, any contract, understanding, commitment or agreement related to the Water Business or which would be applicable to or binding upon TMWA in connection with TMWA's operation of the Water Business after the West Reno Closing.

6.2.6 Compliance With Laws; Suits and Proceedings. BT South is not now (nor has it been within the past twelve (12) months) in violation of any Laws related to the Tank Site or Water Facilities Easements. There are no actions, suits, proceedings, investigations or claims pending or, to the knowledge of BT South, threatened against BT South with respect to the Tank Site, Water Facilities or Water Facilities Easements, at law or in equity, before or by any federal, state, municipal or any other governmental court, department, commission, agency or instrumentality, domestic or foreign; nor to the knowledge of BT South is there any basis for any such claim, suit, proceeding or investigation.

7. CLOSING

7.1 Escrow Instructions. The transfers contemplated herein shall be consummated through the Escrow to be established at Western Title Company, Attn: Patti Hanson, with an address of 5390 Kietzke Lane Ste. 101, Reno, Nevada 89511 ("Escrow Holder" or "Title Company") pursuant to the West Reno Agreement. RLD, BT South and TMWA agree to execute and deliver to Escrow Holder such additional and supplemental instructions as Escrow Holder may require in order to clarify Escrow Holder's duties under this Agreement; provided, however, that in the event of any conflict or inconsistency between this Agreement and any other instructions delivered to Escrow Holder, the terms of this Agreement shall govern the duties of Escrow Holder and the rights and obligations of BT South, RLD and TMWA.

7.2 Closing Costs. Except as provided in this Section 7.2, RLD and BT South shall not be responsible for any closing costs. Any real property tax payable with respect to the Tank Site shall be prorated among TMWA and BT South as of the West Reno Closing, based upon the actual number of days in the month and/or year in which the West Reno Closing occurs. All Escrow Holder fees and costs, transfer taxes (if any), recording fees, escrow fees, closing costs and expenses shall be born and allocated between TMWA and West Reno pursuant to the West Reno Agreement.

7.3 Closing Duties of Escrow Holder. Upon receipt of all of the documents, instruments and funds required to be delivered to Escrow Holder pursuant to this Agreement, Escrow Holder shall proceed as soon thereafter as reasonably possible to but concurrently with the West Reno Closing to record any deed for the Tank Site, the Water Facilities Easements, CC&R Termination and Lender Consents in the Official Records, Washoe County, and delivering the fully executed original RLD Bill of Sale and BT South Bill of Sale to TMWA.

7.4 West Reno Contingency/Termination. RLD and BT South acknowledge and agree the terms and conditions set forth in this Agreement, and TMWA's obligations in this Agreement, are expressly conditional upon and subject to the execution of the West Reno Agreement by the parties thereto, TMWA's investigation of the West Reno system, the satisfaction and/or waiver of all conditions to the West Reno Closing benefitting TMWA, and the successful consummation of the West Reno Closing. At any time prior to the West Reno Closing, TMWA reserves the right in its sole and absolute discretion to terminate this Agreement with or without cause, and/or seek to renegotiate terms and conditions of this Agreement as deemed necessary by TMWA in its discretion to facilitate the West Reno Closing. If the West Reno Closing fails to occur or the West Reno Agreement is terminated for any reason, this Agreement shall automatically terminate and be of no further force or effect and TMWA shall have no obligation with respect to water service to or in connection with the BT South Property or RLD Property under or in connection with this Agreement.

8. NOTICES.

All notices or demands required or desired to be given under this Agreement shall be in writing and shall be validly given or made only if (i) personally delivered, (ii) mailed by United States mail, certified or registered, postage prepaid, return receipt requested, (iii) delivered by reputable overnight delivery service, such as FedEx, (iv) sent by facsimile if the sender's facsimile machine prints confirmation records showing the date sent, the recipient's facsimile number, and the completed status of the transmission, or (v) sent by email to the email address listed below with receipt confirmation requested, and shall be addressed as follows:

To RLD: Reno Land Development Company, LLC
6001 Talbot Lane
Reno, Nevada 89509
Attn: Chip L. Bowlby
Email: cbowlby@renolandinc.com

With a copy to: Brad Chamberlain
c/o Reno Land, Inc.
6001 Talbot Lane
Reno, Nevada 89509
Email: bchamberlain@bradchamberlainlaw.com

To BT South: BT South, LLC
6001 Talbot Lane
Reno, Nevada 89509
Attn: Chip L. Bowlby
Email: cbowlby@renolandinc.com

With a copy to: Brad Chamberlain
c/o Reno Land, Inc.
6001 Talbot Lane
Reno, Nevada 89509
Email: bchamberlain@bradchamberlainlaw.com

To TMWA: Truckee Meadows Water Authority
1355 Capital Blvd.
Reno, Nevada 89502
Attn: Mark Foree
Email: mforee@tmwa.com

With a copy to: McDonald Carano Wilson LLP
P.O. Box 2670
Reno, Nevada 89505
Attn: Michael A.T. Pagni, Esq.
Email: mpagni@mcdonaldcarano.com

Delivery of any such notice or demand shall be conclusively deemed made upon receipt if personally delivered or delivered by overnight delivery service, upon the date of delivery or attempted delivery shown on the return reply card if delivered by United States Mail, or upon the date of transmission shown on the sender's fax confirmation page or email receipt confirmation.

9. MISCELLANEOUS PROVISIONS.

9.1 Entire Agreement. This Agreement constitutes the entire agreement between the parties pertaining to the subject matter hereof and supersedes all prior agreements, oral or written, express or implied, and all undertakings, negotiations or discussions of the parties, whether oral or written, all of which are integrated herein to the extent agreed upon by the parties. This Agreement may not be amended, changed, waived, terminated or modified unless the same shall be in writing and signed by or on behalf of

the party to be charged. No waiver of any provision of this Agreement shall be valid unless in writing and signed by the party against whom it is sought to be enforced.

9.2 Attorneys Fees; Governing Law and Venue. In the event of any action for breach of, to enforce the provisions of, or otherwise involving this Agreement, the court in such action shall award a reasonable sum as attorneys' fees to the party who, in the light of the issues litigated and the court's decision on those issues was more successful in the action. This Agreement shall be governed by the Laws of the State of Nevada.

9.3 Construction; Headings. In the event of any dispute regarding any provision of this Agreement, the terms of this Agreement shall be construed neutrally and shall not be construed against or in favor of either party, notwithstanding the fact that one party may have been responsible for drafting the initial form of this Agreement. The parties acknowledge that they have each participated equally in the negotiation and drafting of this Agreement prior to execution and each have been represented by legal counsel of their choice in connection therewith. The headings of the sections and paragraphs of this Agreement are for convenience only and in no way define, limit or affect the scope of substance of any section or paragraph of this Agreement.

9.4 Severability. If any provisions or part of a provision in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, the same shall not affect any other provision or part of a provision, but, to the fullest extent possible without defeating the parties' intentions hereunder, this Agreement shall be reformed and construed as if such invalid or illegal or unenforceable provision or part of a provision had never been contained herein.

9.5 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

9.6 Relationship of Parties. Nothing contained in this Agreement is intended to nor shall be deemed to create any partnership, joint venture, agency, fiduciary duty or other relationship between RLD, BT South and TMWA other than with respect to their contractual obligations contained herein.

9.7 Third-Party Beneficiaries. There are no express or implied third-party beneficiaries to this Agreement, or any obligation, claim, or right arising under this Agreement, and no other person or entity who is not a signatory to this Agreement shall have any obligation, claim, right, or remedy hereunder.

9.8 Days. If the date for performance of any provision of the Agreement is a Saturday, Sunday, or legal holiday (in the State of Nevada), the date for performance shall be extended until the next day that is not a Saturday, Sunday or banking holiday. The phrase "Business days" in this Agreement means consecutive days excluding Saturday, Sunday and any such legal holiday.

9.9 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

9.10 Recitals, Exhibits and Schedules. The recitals at the beginning of this Agreement and the following Exhibits and Schedules attached to this Agreement are incorporated herein by this reference and made a part hereof as if set forth in full herein.

[Signature Page Follows]

[Signature Page – Agreement Regarding Water System Acquisition]

IN WITNESS WHEREOF, RLD, BT South and TMWA have executed this Agreement effective the latest date written below.

“TMWA”
TRUCKEE MEADOWS WATER AUTHORITY

By: _____

Its: _____

Dated: _____

“RLD”
RENO LAND DEVELOPMENT COMPANY, a Nevada
limited liability company

By: _____

Its: _____

Dated: _____

“BT SOUTH”
BT SOUTH, LLC, a Nevada limited liability company

By: _____

Its: _____

Dated: _____

Exhibits and Schedules

- Exhibit A: West Reno Agreement
- Exhibit B: RLD Water Rights and BT South Water Rights
- Exhibit C: Elevation Map
- Exhibit 2.3: Form of CC&R Termination
- Exhibit 2.4: Form of RLD Bill of Sale
- Exhibit 3.2: Form Water Facilities Easements
- Exhibit 3.4: Form of BT South Bill of Sale
- Exhibit 4.1: Form of Annexation Agreement

Exhibit A
West Reno Agreement
(to be attached)

Exhibit B
RLD Water Rights and BT South Water Rights

RLD Water Rights:

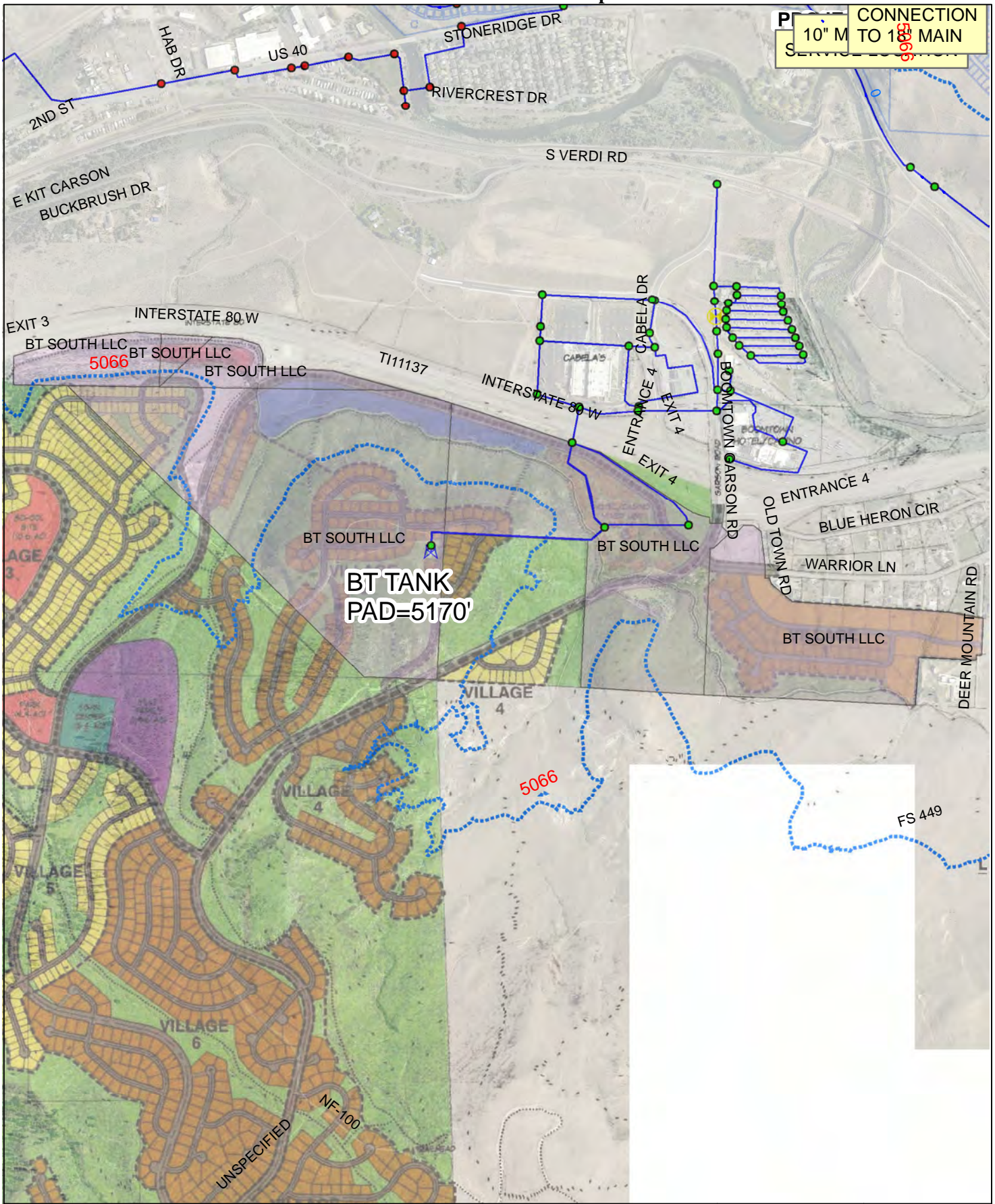
Permit No.	Amount in AF	Comments
Permit Nos. 44595 and 44596	10.00	Total combined duty

BT South Water Rights*:

Permit No.	Amount in AF	Comments
44595 & 44596	300.74	Total combined duty
66262	3.63	
66263	43.73	
66264	43.32	

Certificate No.	Amount in AF	Comments
Permit No. 36512/Certificate 11131	1.39	
Permit No. 44593/Certificate 12461	64.63	
Permit No. 44594/Certificate 12462	20.99	

*Total Combined Duty of all BT South Water Rights is
300.74 acre feet annually



**FIGURE 1:
UPPER AND LOWER
ZONE BOUNDARY**

DATE	SEPT 2017
MAP BY:	BL
TMWA #	17-5472
SCALE:	1 inch = 2,621 feet



Exhibit 2.2
Form of CC&R Termination
[To be attached]

Exhibit 2.3
Form of General Assignment and Bill of Sale
[To be Attached]

Exhibit 3.2
Form of Water Facilities Easement
[To be attached]

Exhibit 3.4
Form of General Assignment and Bill of Sale
[To be attached]

Exhibit 4.1
Form of Annexation Agreement
[to be attached]

APN: 038-090-61, 038-120-03, 038-120-10, 038-120-12, 038-120-13, and APN 038-132-25

When Recorded, Return to:

Truckee Meadows Water Authority
Attn: Amanda Duncan, ARWP, Land Agent
P O Box 30013
Reno, NV 89520-3013
TMWA WO: West Reno System Acquisition

RETAIL WATER SERVICE AREA ANNEXATION AGREEMENT
(West Reno System)

THIS AGREEMENT, entered into as of the date last executed by the parties below ("Effective Date"), by and between **TRUCKEE MEADOWS WATER AUTHORITY** (the "Authority"), a Joint Powers Authority entity created pursuant to a cooperative agreement among the cities of Reno, Nevada, Sparks, Nevada and Washoe County, Nevada pursuant to N.R.S. Chapter 277, and **BT SOUTH, LLC**, a Nevada limited liability company, (referred to as "Developer" or "Owner" in this Agreement and exhibits attached hereto, and together with Authority collectively referred to as "Parties");

WITNESSETH:

WHEREAS, Owner owns certain real property more particularly described on Exhibit "A" and shown on Exhibit "A-1" attached hereto and incorporated herein by this reference and comprised collectively of APNs 038-090-61, 038-120-12, 038-120-13, 038-120-03, 038-120-10 and 038-132-25 ("Property" or "Owner's Project"), located outside of Authority's current retail water service area.

WHEREAS, on June 20, 2018, Authority entered into an Agreement for Water System Acquisition (as amended, "West Reno Agreement") with West Reno Water Company ("West Reno") pursuant to which the Authority acquired and agreed to annex into the Authority system the water facilities assets of West Reno (the "West Reno System"), which system is located near or on portions of the Owner's Property.

WHEREAS, Owner anticipates developing the Property in separate projects or phases as set forth on the conceptual site plan attached as Exhibit "B" (the "Site Plan").

WHEREAS, Owner desires the Authority to expand its retail water service area to provide water service to the Property.

WHEREAS, on _____, 2019, Authority entered into an Agreement Regarding West Reno System Acquisition with Reno Land Development Company ("RLD") and Owner ("WR Ancillary Agreement"), pursuant to which Owner agreed to convey certain real property and easements utilized in connection with the West Reno System.

WHEREAS, the West Reno System together with interconnections into and enhancements to TMWA's surface water system, when constructed, can be utilized by Authority as part of an integrated system to provide capacity for water service to residential and commercial development in the former West Reno service area and to Owner's Property. Without improvements to and interconnection into TMWA's surface water system, the West Reno System will have limited capacity for new services.

WHEREAS, Authority has determined it is willing to provide water service to the Property, and accordingly, Owner's Property may be annexed into Authority's retail water service area, on the terms and conditions set forth herein.

WHEREAS, for and in consideration of the performance of obligations under the WR Ancillary Agreement and this Agreement, Authority is willing to reserve 140 GPM of capacity in the West Reno System for service to a portion of the Property and to expand its retail water service area to include water service to the Property, and Owner agrees to the expansion of Authority's retail water service area upon the terms and conditions set forth in this Agreement, subject to and on the express condition that Owner fully and completely perform the terms and conditions set forth in this Agreement and the WR Ancillary Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and conditions herein contained, the Parties agree as follows:

1. Expansion of Water Service area. Authority agrees to expand its retail water service area as set forth in Exhibit "A" attached hereto to provide water service for the Property; provided, however, that such expansion of the Authority's retail water service area is specifically conditioned upon execution of this Agreement by Owner and the Authority, and the complete and satisfactory performance of the terms and conditions in Section 2 herein. Owner agrees, for itself and its successors and assigns, that water service to and on the Property and Authority's obligations to provide new or modified water service to and on the Property shall be governed exclusively by this Annexation Agreement, Authority Rules, the WR Ancillary Agreement and other written agreements between Authority and Owner. Except as expressly provided otherwise herein, applications for new or modified water service to any project on the Property shall be processed solely under Authority Rules. Provided that Authority performs its covenants and obligations in accordance with this Agreement and the WR Ancillary Agreement, Owner agrees that Authority shall have no liability, obligation or responsibility under any entitlements or any other agreements between West Reno or its predecessors, on one hand, and Owner and/or its predecessors, on the other, with respect to water service to the Property and, subject to the foregoing, Owner hereby releases and agrees to hold harmless Authority from and against any and all claims, liabilities, losses, damages, actions, or causes of action (in law or equity) of any kind or nature whatsoever, relating to arising directly or indirectly from or incident to any such agreements in connection with water service to the Property.

2. Conditions to Annexation. The Authority has determined that improvements and/or modifications to its Water System Facilities and/or certain conditions are required to expand its retail water service area to include the Property, and the following conditions in this Section 2 must be satisfied before water service is provided by Authority.

2.1 West Reno System Capacity Reservation And Intertie Facilities Improvements. Owner acknowledges that the West Reno System provides a finite capacity, the exact amount of which has not been determined by Authority and of which 488 GPM of maximum day demand ("MDD") is committed to existing or future West Reno Customers on property other than the Property. Subject to Section 2.3 of this Agreement, Authority agrees to reserve the Lower Zone Capacity Allocation for service to the Lower Zone Property (as defined below) The balance of available capacity within the West Reno System, if any, shall be available on a first come, first served basis to applicants for water service connecting into the West Reno System. Except as otherwise provided in Section 2.1.1 and 2.5, Authority's obligation to provide water service to the Property shall be limited to and in no event exceed the sustainable capacity of the West Reno System, whether through existing groundwater wells and/or in conjunction with constructed, in-service Intertie Facilities Improvements or constructed, in-service Backbone Facilities Improvements, to produce water supply which meets or exceeds Authority's water quantity and quality requirements as determined in Authority's reasonable discretion. For purposes of this Agreement, i) the term "Intertie

Facilities Improvements” means interconnections into Authority’s surface water supply system intended to provide limited off-peak conjunctive use capacity, such improvements generally consisting of approximately 1,800 linear feet of 16” water main between Riverbelle mobile home park and the West Reno water system, a booster pump station and jack and bore under the UP railroad; and ii) the term “Backbone Facilities Improvements” means improvements to Authority’s water system facilities intended to provide full design capacity to the Verdi area and provide a fully operational water distribution system, such improvements generally consisting of a 24” main across the Truckee River at Mayberry, expanded capacity at the existing US 40 Pump Station, approx. 6,600 feet of 16” main from Mesa Park/Mae Anne to Mogul, the Verdi Pump Station at Mogul, approx. 9,750 feet of 18” discharge main from the Verdi Pump Station to the Riverbelle mobile home park including utilization of an existing casing under the Truckee River between River Oak and Riverbelle mobile home park and the proposed 1.5 MG Lower Verdi Tank including approx. 4,400 feet of 18” feeder main. Owner acknowledges and agrees that except as otherwise provided in Section 2.1.1, the water quality, quantity and capacity of the West Reno System must be tested and accepted by Authority, and developed and capable of being placed into service prior to and as a condition precedent of Authority entering any Water Service Agreement for an application for new water service to any portion of Owner’s Property. For purposes of this Agreement, the term i) “Lower Zone Property” shall mean that portion of the Property located below the mean sea level elevation of 5,066 feet as depicted on the Elevation Map attached hereto as Exhibit “D” and incorporated herein by reference; ii) “Lower Zone Capacity Allocation” means the first 140 GPM of MDD supply sought or provided from the West Reno System to the Lower Zone Property and for which a corresponding will serve commitment has been issued on RLD Water Rights or BT Water Rights dedicated in accordance with the first sentence of Section 2.1.1.

2.1.1 Service to Lower Zone Capacity Allocation. Authority agrees that the RLD Water Rights and BT Water Rights (as defined in the WR Ancillary Agreement) shall be acceptable for dedication for the issuance of will-serve commitment letters for the Lower Zone Capacity Allocation, and further agrees Authority will not require dedication of additional surface or ground water rights to supplement the RLD Water Rights and BT Water Rights in excess of Rule 7 dedication requirements as of the Effective Date of this Agreement for service of the Lower Zone Capacity Allocation, provided: 1) the application(s) for will-serve commitments using the RLD Water Rights and BT Water Rights are received by TMWA within forty two (42) months of the recordation of this Agreement; 2) marketable title to the applicable RLD Water Rights and BT Water Rights is conveyed to TMWA free and clear of liens and encumbrances; and 3) the underlying permits for the RLD Water Rights and/or BT Water Rights, as applicable, remain in good standing with the Nevada Division of Water Resources at the time of dedication. Any water resource offered for dedication for a will serve commitment, whether RLD Water Rights and BT Water Rights or otherwise, not dedicated in full conformance with the requirements in the preceding sentence will be subject to Authority’s rules in effect at the time of dedication. In addition, and notwithstanding anything in this Agreement to the contrary, Authority agrees that the Lower Zone Capacity Allocation shall not be subject to any charges, reimbursements, contributions or connection fees payable by BT South or its successors and assigns for the Intertie Facilities or Backbone Facilities, and the completion of the Intertie Facilities or Backbone Facilities will not be a required condition for service of the Lower Zone Capacity Allocation.

2.1.2 Assignment of Lower Zone Capacity Allocation. BT South may assign portions of the Lower Zone Capacity Allocation (and correlative rights to the BT Modified Connection Fee) for use on portions of the Santerra Parcel (as defined in the WR Ancillary Agreement) as set forth in the WR Ancillary Agreement.

2.2 Additional Conditions Regarding Service To Upper Zone Property or in Excess of Lower Zone Capacity Allocation. The Authority has determined that additions, improvements and/or modifications to the West Reno System and Authority’s water system facilities are required to expand its

retail water service area to that portion of the Property other than the Lower Zone Property (such portion referred to as the “Upper Zone Property”) or to provide service in excess of the Lower Zone Capacity Allocation, the specific details of which have yet to be identified but which may include the Intertie Facilities and Backbone Facilities Improvements (collectively such additions, improvements and/or modifications referred to as the “West Reno Expansion Facilities”). In addition to the other conditions set forth in this Agreement, Authority’s obligation to provide water service to the Upper Zone Property or in excess of the Lower Zone Capacity Allocation shall be conditional upon the following: 1) the West Reno Expansion Facilities shall be completed, dedicated and in service prior to execution of a Water Service Agreement for such new service; 2) development shall be subject to, and all applicants for new service on the Upper Zone Property or for demand in excess of the Lower Zone Capacity Allocation shall pay all applicable Authority WSF Water System Facility Charges, including without limitation the Area 7 Facility Charge and/or special improvement district assessments, if any, in effect at the time of execution of a Water Service Agreement; 3) all applicants for new service to the Upper Zone Property for demand in excess of or which is not included within the Lower Zone Capacity Allocation shall be required to pay at the time of execution of a Water Service Agreement a prorated share of the West Reno Expansion Facilities, if any are needed; and 4) Owner shall dedicate to Authority such easements and other property located on the Property necessary for the construction and operation of the West Reno Expansion Facilities, such dedications to be made in accordance with Authority’s Rules.

2.3 WR Ancillary Agreement. Owner and RLD shall each have fully and timely performed all obligations required of each of them under the WR Ancillary Agreement.

2.4 Additional Conditions Regarding Authority’s Water System Facility Charges (“WSF Charges”). Subject to Section 2.3 and 2.5 of this Agreement, Authority agrees that in lieu of WSF Fees otherwise applicable under Authority Rules, a modified connection fee shall apply to the Lower Zone Capacity Allocation, such modified connection fee equal to \$15,550 per GPM (“Modified BT South Connection Fee”). The Modified BT South Connection Fee shall be increased by: (i) the amount, if any, by which the actual cost incurred by TMWA to complete the TMWA Post Closing Improvements (as defined in the West Reno Agreement) exceeds \$2,668,335; and ii) if TMWA has not been fully reimbursed for the actual costs incurred by TMWA for the TMWA Post Closing Improvements by January 31, 2026, the carrying costs incurred by TMWA for financing the actual cost of the TMWA Post Closing Improvements. The Modified BT South Connection Fee shall be paid no later than ten (10) days prior to the date a meter is to be installed for water service to the applicable parcel receiving service, and must be paid prior to and as a condition of Authority having any obligation to commence water service to the applicable parcel. Any new or modified service to any portion of the Upper Zone Property, or on the Property which in the aggregate (considering all service to the Property and Santerra Parcel, if applicable) exceeds the Lower Zone Capacity Allocation shall be subject to all fees and charges, including WSF Charges, applicable to new development under Authority Rules. The Modified BT South Connection Fee is appurtenant to, and may only be used in connection with development on, the Lower Zone Property and in connection with will serve commitments supported by the RLD Water Rights or BT Water Rights, and is not transferrable or assignable for use on any other property except as permitted in the Ancillary Agreement.

2.5 Special Charges for Water Quality Mitigation. Notwithstanding any provision herein to the contrary, Authority shall be entitled to impose against the Property and collect from all owners of property served by the West Reno System, including the Owner(s) of the Property, as such Owner(s) apply for new Service from Authority or as customers of the Authority, and on such allocable basis determined by Authority consistent with this Section, special charges (“Special Charges”), to fund costs incurred to relocate or modify wells in the West Reno System necessary to mitigate adverse water quality conditions which arise within ten (10) years of the Effective Date and which impair or affect Authority’s ability to supply water from the West Reno System facilities in compliance with applicable laws. The

amount of the Special Charges shall be adopted by the Authority Board through the normal public procedures for approving modifications to Authority Rules or rate tariffs. Authority shall allocate any modified Special Charges equally on a pro rata basis to all Service Properties and/or undeveloped property served by the West Reno System, such that the Owner of each Service Property and undeveloped property served by the West Reno System shall be responsible for paying the proportionate share of the total Special Charges as a condition of water service. Owner for itself and behalf of its successors and assigns to the Property, hereby covenants and agree to pay the Special Charges to the Authority, and agrees the Special Charges, together with interest thereon, late charges, costs, and reasonable attorneys' fees for the collection thereof, are and shall be a charge against and a continuing lien upon the Property or applicable portion thereof against which such Special Charges are made until paid in full, and may, at TMWA's election, be collected on TMWA's behalf by the County Assessor through the property tax rolls assessed against the Property or applicable portion thereof in the same manner as property tax deficiencies.

2.6 Construction of Improvements/Dedication of Real Property. The Authority has determined that the dedication of certain real property in fee, or certain easements, rights of way or other interests in real property is required, and that certain improvements to such dedicated property are required, to expand its retail water service area to include the Property. The real property required for dedication in fee or by easement and the improvements required thereto is set forth on Exhibit "C" attached hereto and incorporated herein by this reference. Such property shall be conveyed free and clear of all liens and encumbrances (including any covenants, conditions and restrictions), and Owner shall obtain and provide Authority prior to dedication, at Owner's expense, a preliminary title report for any property offered for dedication showing all matters of record affecting such property, except for such monetary liens and encumbrances for real property taxes that are not yet due and payable and such other nonmonetary liens and encumbrances that Authority, in its reasonable discretion in accordance with common utility practice, is willing to accept. Owner is solely responsible for obtaining all appropriate permits, licenses, construction easements, subordination agreements, consents from lenders, and other necessary rights from all necessary parties to dedicate property with title acceptable to Authority. Owner may not apply for, nor shall Authority shall have any obligation to issue or enter, a Water Service Agreement for service to any portion of the Property until such real property required hereunder is granted to Authority in such form, location, scope and condition of title satisfactory to Authority. Furthermore, unless such real property is granted to Authority no later than six (6) months from the Effective Date of this Annexation Agreement, this Annexation Agreement shall automatically terminate, and the Property shall be deemed de-annexed from the Authority retail service area.

3. Conditions of Water Service. Owner acknowledges and agrees that this Agreement merely addresses conditions required for the expansion of Authority's retail water service area, and that Owner must independently comply with all applicable requirements in Authority's Rules before the Authority has any obligation to provide water service to the Property, including without limitation (i) submitting and receiving approval from the Authority of appropriate applications for service; (ii) dedicating sufficient Water Resources to the Authority and receiving a Will Serve Commitment for service to the Property; (iii) in addition to any dedication requirements in Section 2 of this Agreement, dedicating appropriate easements and other real property required for service; (iv) in addition to any dedication requirements in Section 2 of this Agreement, installing, constructing and dedicating subdivision or on-site water system facility additions, improvements or modifications or, except as otherwise provided in Section 2.1.1 above, further additions, improvements, extensions or modifications to Authority's Water System Facilities as necessary to provide the requested new service(s) or modification of service(s) to the Property (excluding, with respect to the Lower Zone Capacity Allocation, the Intertie Facilities Improvements and Backbone Facilities Improvements); and (v) satisfying such other terms and conditions pursuant to the Authority's Rules and any requirements of any local governmental entity with jurisdiction over the Property as necessary to obtain a Will-Serve Commitment letter from the Authority for the delivery of water to the Property. Owner shall submit such applications and execute such other documents required by Authority's Rules and procedures

prior to being eligible for the delivery of water to the Property. All such conditions, dedications, additions, improvements, extensions and modifications shall be made in accordance with the Authority’s Rules and regulations in effect at the time Authority and Owner enter into any agreement or agreements for the specific dedication, additions, improvements or modifications required to provide water service to the Property.

4. General Terms

4.1 Owner acknowledges and agrees that it is entering this Agreement voluntarily, that the expansion of Authority’s service area is specifically conditioned on Owner’s performance of all terms and conditions contained herein, and that if any of the provisions of this Agreement are deemed unenforceable or if Owner fails to perform any of its obligations hereunder, Authority is under no obligation to expand its service area to include any portion of the Property for which the Authority has not previously entered an agreement to provide water service. Nothing in this paragraph shall be construed to grant Owner a right, and Owner specifically waives any right, if any exists, to dispute any of the terms and conditions of this Agreement under Rule 8 in Authority’s Rules. Upon annexation of the Property, the Parties acknowledge and agree that both are bound by the terms and conditions of the rules and regulations adopted by Authority, as the rules and regulations may be amended from time to time, and as such rules may exist at the time service is applied for or requested for the Property or certain phases of the Property.

4.2. Any written notices or communications required hereunder shall be served by placing such notices in the U.S. Mail, postage prepaid, properly addressed to:

To: Authority Attn. General Manager
P.O. Box 30013
Reno, NV 89520-3013

To: Owner Attn.: Chip L. Bowlby
6001 Talbot Lane
Reno, Nevada 89509

4.3. This Agreement shall inure to and be binding upon the parties, their respective successors and assigns.

4.4. This Agreement shall not be modified except in writing, signed by all parties.

4.5. This Agreement represents the entire agreement between the Parties related to the expansion of the Authority’s retail water service area and supersedes all prior representations and agreements whether written or oral with respect to the covenants and conditions provided herein; provided, however, that the obligations set forth in this Agreement shall be in addition to, and do not supersede or replace, any obligations that may be imposed upon Owner under Authority’s Rules.

4.6 This Agreement and terms and conditions herein shall run with the land and be binding upon and inure to the benefit and burden of the parties to the agreement and their heirs, successors and assigns and any future owners of the Property.

[Signature Page Follows]

[Signature Page to Annexation Agreement]

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement the day and year written below.

**TRUCKEE MEADOWS WATER
AUTHORITY**, a joint powers authority

BT SOUTH, LLC, a Nevada limited liability
company

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Dated: _____

Dated: _____

[Notary Page Follows]

STATE OF NEVADA)
) ss
COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 20____, by
_____ as _____, TRUCKEE
MEADOWS WATER AUTHORITY, on behalf of said Joint Powers Authority therein named.

NOTARY PUBLIC

STATE OF NEVADA)
) ss
COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 20____, by
_____, as _____, of
_____ on behalf of said _____ therein named.

NOTARY PUBLIC

Exhibit "A" to Annexation Agreement
Description of Annexed Property

PARCEL 1

A parcel of land situated within Section 17, Township 19 North, Range 18 East, M.D.M., Washoe County, Nevada, and more particularly described as follows:

Beginning at the center of said Section 17, from which the Southeast corner of said Section 17 bears South 43°29'18" East, a distance of 3729.89 feet;
 Thence North 02°16'07" East, along the North-South centerline of said Section 17, a distance of 487.67 feet, to the Southerly line of Interstate Highway 80;
 Thence along the Southerly line of Interstate Highway 80 the following three courses:
 Thence North 86°24'37" West, a distance of 211.00 feet;
 Thence North 03°50'21" West, a distance of 5.00 feet;
 Thence from a tangent which bears South 86°09'39" West, along a circular curve to the left with a radius of 4660.00 feet and a central angle of 14°17'05" an arc length of 1161.82 feet, to the Westerly line of the Southeast ¼ of the Northwest ¼ of said Section 17;
 Thence South 01°26'35" West, along the Westerly line of the Southeast ¼ of the Northwest ¼ of said Section 17, a distance of 266.61 feet to the Southwest corner of the Southeast ¼ of the Northwest ¼ of said Section 17;
 Thence South 89°13'07" East, a distance of 1336.04 feet to the POINT OF BEGINNING.

Basis of Bearing: The line between U.S.C. and G.S. triangulation stations "Knoll" to "Verdi Bluff" taken as North 25°27'12" West.

APN: 038-090-61

PARCEL 2

A parcel of land situated within Section 17, Township 19 North, Range 18 East, M.D.M., Washoe County, Nevada, and more particularly described as follows:

Beginning at the Southeast corner of said Section 17;
 Thence North 88°15'14" West, along the Southerly line of said Section 17, a distance of 962.68 feet to the Northeasterly line of the Timber Reserve Line;
 Thence North 44°51'49" West, along said Timber Reserve Line, a distance of 3648.64 feet to an angle point in said Timber Reserve Line;
 Thence North 88°52'39" West, along said Timber Reserve Line, a distance of 370.13 feet to the Westerly line of the Northeast ¼ of the Southwest ¼ of said Section 17;
 Thence North 01°50'29" East, a distance of 101.67 feet to the Northwest corner of the Southwest ¼ of the Southwest ¼ of said Section 17;
 Thence South 89°13'07" East, a distance of 1336.04 feet to the Northeast corner of the Northeast ¼ of the Southwest ¼ of said Section 17;
 Thence South 89°13'07" East, along the Northerly line of the Southeast ¼ of said Section 17, a distance of 2275.99 feet to the Southerly line of Interstate Highway 80;
 Thence South 75°06'06" East, along the Southerly line of Interstate Highway 80, a distance of 311.00 feet;
 Thence South 72°14'22" East, along the Southerly line of Interstate Highway 80, a distance of 140.36 feet to the Easterly line of said Section 17;
 Thence South 03°12'29" West, along the Easterly line of said Section 17, a distance of 2556.29 to the POINT OF BEGINNING.

Basis of Bearing: The line between U.S.C. and G.S. triangulation stations “Knoll” to “Verdi Bluff” taken as North 25°27’12” West.

APN: 038-120-03

PARCEL 3

A parcel of land situated within Section 16, Township 19 North, Range 18 East, M.D.M., Washoe County, Nevada, and more particularly described as follows:

Beginning at the Northwest corner of Southwest ¼ of the Southwest ¼ of said Section 16, from which the Southwest corner of said Section 16 bears South 03°12’29” West, a distance of 1336.75 feet;
 Thence North 03°12’29” East, a distance of 1219.54 feet to the Southerly line of Interstate Highway 80;
 Thence along the Southerly line of Interstate Highway 80 the following eight (8) courses:
 Thence South 72°14’22” East, a distance of 264.64 feet;
 Thence South 71°52’20” East, a distance of 1173.16 feet;
 Thence South 56°12’00” East, a distance of 944.50 feet;
 Thence along a tangent circular curve to the left with a radius of 550.00 feet and a central angle of 25°52’39”, an arc length of 248.41 feet;
 Thence with a non-tangent line South 01°42’40” East, a distance of 57.92 feet;
 Thence North 88°17’20” East, a distance of 115.00 feet;
 Thence South 01°42’40” East, a distance of 33.23 feet;
 Thence South 43°31’45” East, a distance of 84.39 feet;
 Thence South 46°28’15” West, a distance of 201.33 feet;
 Thence North 85°42’22” West, a distance of 27.23 feet;
 Thence South 02°27’02” West, a distance of 154.27 feet;
 Thence South 02°26’38” West, a distance of 1200.41 feet to the Southerly line of said Section 16;
 Thence North 86°37’42” West, along the Southerly line of said Section 16, a distance of 1161.72 feet to the Southeast corner of the Southwest ¼ of the Southwest ¼ of said Section 16;
 Thence North 02°50’11” East, a distance of 1345.35 feet to the Northeast corner of the Southwest ¼ of the Southwest ¼ of said Section 16;
 Thence North 87°00’13” West, a distance of 1303.76 feet to the POINT OF BEGINNING.

Basis of Bearing: The line between U.S.C. and G.S. triangulation stations “Knoll” to “Verdi Bluff” taken as North 25°27’12” West.

APN: 038-120-10

PARCEL 4

A parcel of land situated within Section 17, Township 19 North, Range 18 East, M.D.M., Washoe County, Nevada, and more particularly described as follows:

Beginning at the center of said Section 17, from which the Southeast corner of said Section 17 bears South 43°29’18” East, a distance of 3729.89 feet;
 Thence North 47°01’07” East, a distance of 671.33 feet to the Southerly line of Interstate Highway 80;
 Thence North 86°24’37” West, along the Southerly line of Interstate Highway 80, a distance of 472.75 feet to the North-South centerline of said Section 17;
 Thence South 02°16’07” West, along the North-South centerline of said Section 17, a distance of 487.67 feet to the POINT OF BEGINNING.

Basis of Bearing: The line between U.S.C. and G.S. triangulation stations “Knoll” to “Verdi Bluff” taken as North 25°27’12” West.

Document No. 4456768 is provided pursuant to the requirements of Section 6.NRS 111.312.

APN: 038-120-12

PARCEL 5

A parcel of land situated within Section 17, Township 19 North, Range 18 East, M.D.M., Washoe County, Nevada, and more particularly described as follows:

Beginning at the center of said Section 17, from which the Southeast corner of said Section 17 bears South 43°29’18” East, a distance of 3729.89 feet;
 Thence North 47°01’07” East, a distance of 671.33 feet to the Southerly line of Interstate Highway 80;
 Thence along the Southerly line of Interstate Highway 80 the following seven courses:
 Thence South 86°24’37” East, a distance of 252.20 feet;
 Thence South 72°32’45” East, a distance of 187.82 feet;
 Thence South 24°11’02” East, a distance of 83.65 feet;
 Thence South 01°26’43” East, a distance of 142.33 feet;
 Thence South 89°06’58” East, a distance of 322.25 feet;
 Thence South 87°16’16” East, a distance of 327.03 feet;
 Thence South 75°16’16” East, a distance of 690.25 feet to the Southerly line of the Northeast ¼ of said Section 17;
 Thence North 89°13’07” West, along the Southerly line of the Northeast ¼ of said Section 17, a distance of 2275.99 feet to the POINT OF BEGINNING.

Basis of Bearing: The line between U.S.C. and G.S. triangulation stations “Knoll” to “Verdi Bluff” taken as North 25°27’12” West.

Document No. 4456768 is provided pursuant to the requirements of Section 6.NRS 111.312.

APN: 038-120-13

PARCEL 6

A parcel of land, being Parcel A as shown on Parcel Map No. 2502, File No. 1460127 of the Official Records of Washoe County, Nevada, EXCEPTING THEREFROM that portion conveyed by Deed recorded August 15, 1991, in Book 3310, Page 805, as Document No. 1501647 of the Official Records of Washoe County, Nevada and situate within Section 16, Township 19 North, Range 18 East, M.D.M., Washoe County, Nevada, and more particularly described as follows:

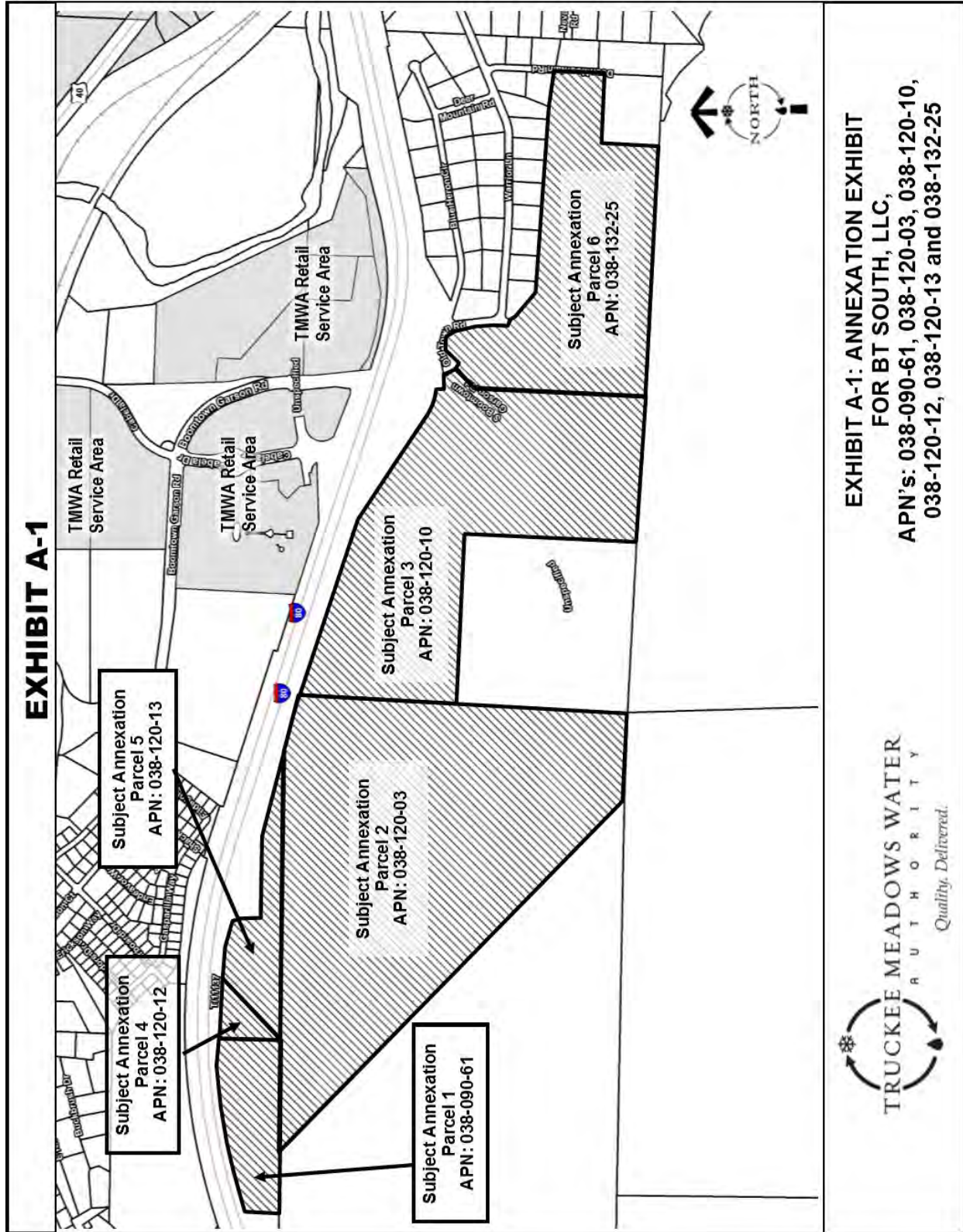
Beginning at the South ¼ corner of said Section 16;
 Thence North 86°37’42” West, along the Southerly line of said Section 16, a distance of 149.49 feet;
 Thence North 02°26’38” East, a distance of 1200.41 feet;
 Thence North 02°27’02” East, a distance of 154.27 feet;
 Thence South 85°42’22” East, a distance of 27.23 feet;
 Thence North 46°28’15” East, a distance of 201.33 feet;
 Thence South 43°31’45” East, a distance of 40.00 feet;

Thence North $46^{\circ}28'15''$ East, a distance of 151.62 feet;
Thence South $89^{\circ}00'25''$ East, a distance of 93.00 feet;
Thence South $50^{\circ}39'08''$ East, a distance of 89.87 feet;
Thence South $06^{\circ}28'28''$ East, a distance of 297.31 feet;
Thence along a tangent circular curve to the right with a radius of 255.00 feet and a central angle of $10^{\circ}06'59''$ an arc length of 45.02 feet;
Thence with a non-tangent line South $02^{\circ}25'45''$ West, a distance of 86.84 feet;
Thence South $86^{\circ}21'47''$ East, a distance of 49.99 feet;
Thence from a tangent which bears South $03^{\circ}40'06''$ West, along a circular curve to the left with a radius of 75.00 feet and a central angle of $52^{\circ}29'40''$, an arc length of 68.72 feet;
Thence South $48^{\circ}49'34''$ East, a distance of 234.90 feet;
Thence South $86^{\circ}13'28''$ East, a distance of 1463.03 feet;
Thence South $79^{\circ}50'28''$ East, a distance of 315.88 feet;
Thence South $02^{\circ}38'17''$ West, a distance of 341.12 feet;
Thence North $87^{\circ}21'43''$ West, a distance of 50.00 feet;
Thence South $02^{\circ}38'17''$ West, a distance of 46.56 feet;
Thence North $87^{\circ}05'01''$ West, a distance of 46.56 feet;
Thence South $03^{\circ}44'09''$ West, a distance of 452.97 feet;
Thence North $87^{\circ}04'15''$ West, a distance of 1811.62 feet to the POINT OF BEGINNING.

Basis of Bearing: The line between U.S.C. and G.S. triangulation stations "Knoll" and "Verdi Bluff" taken as North $25^{\circ}27'12''$ West.

APN: 038-132-25

[Legal descriptions were referenced from that certain Grant, Bargain and Sale Deed recorded as Document No. 4584663 on April 29, 2016 in the office of the County Recorder of Washoe County, State of Nevada.]



**EXHIBIT A-1: ANNEXATION EXHIBIT
FOR BT SOUTH, LLC,
APN's: 038-090-61, 038-120-03, 038-120-10,
038-120-12, 038-120-13 and 038-132-25**



Exhibit "B" to Annexation Agreement
Site Plan

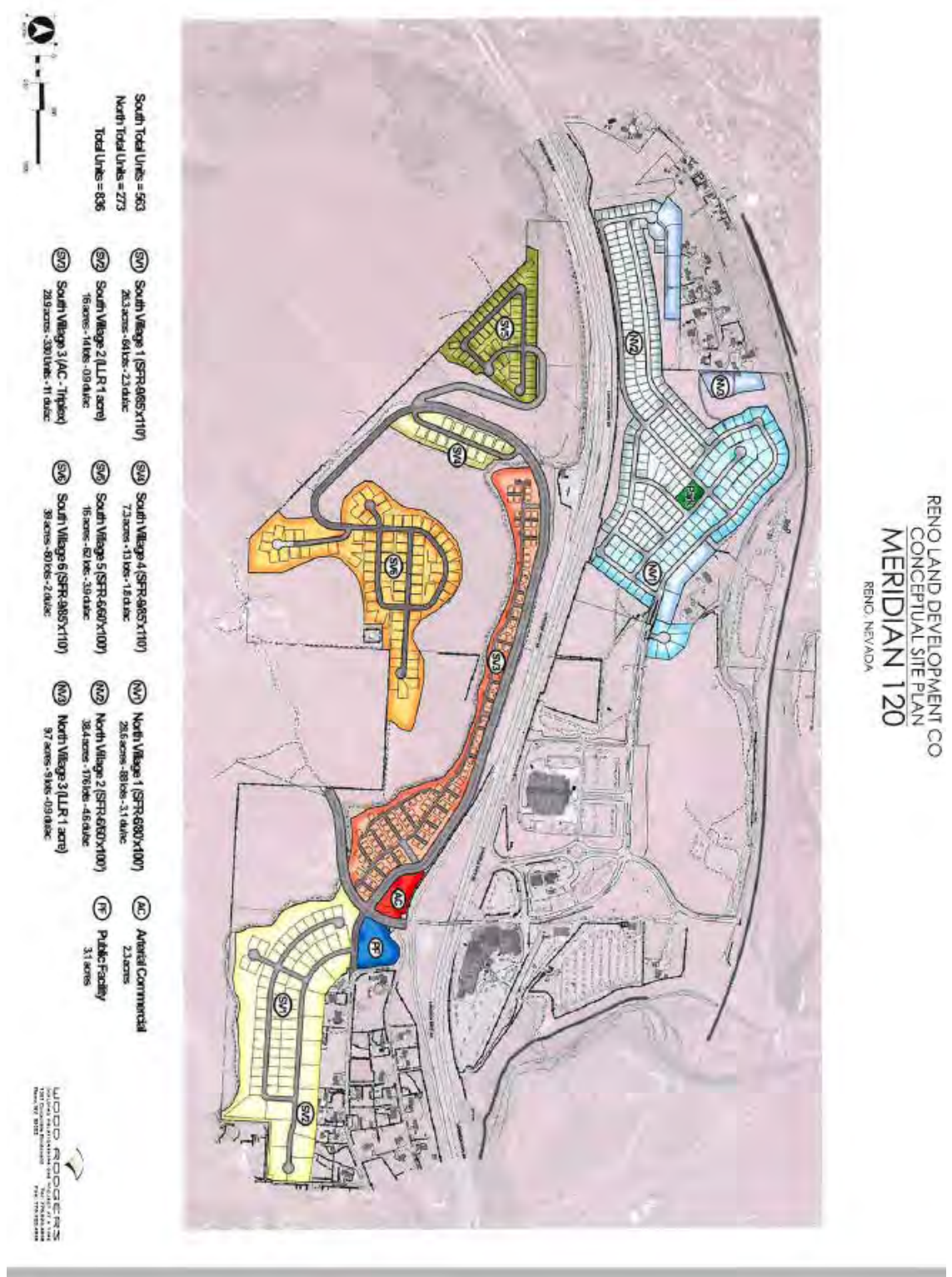
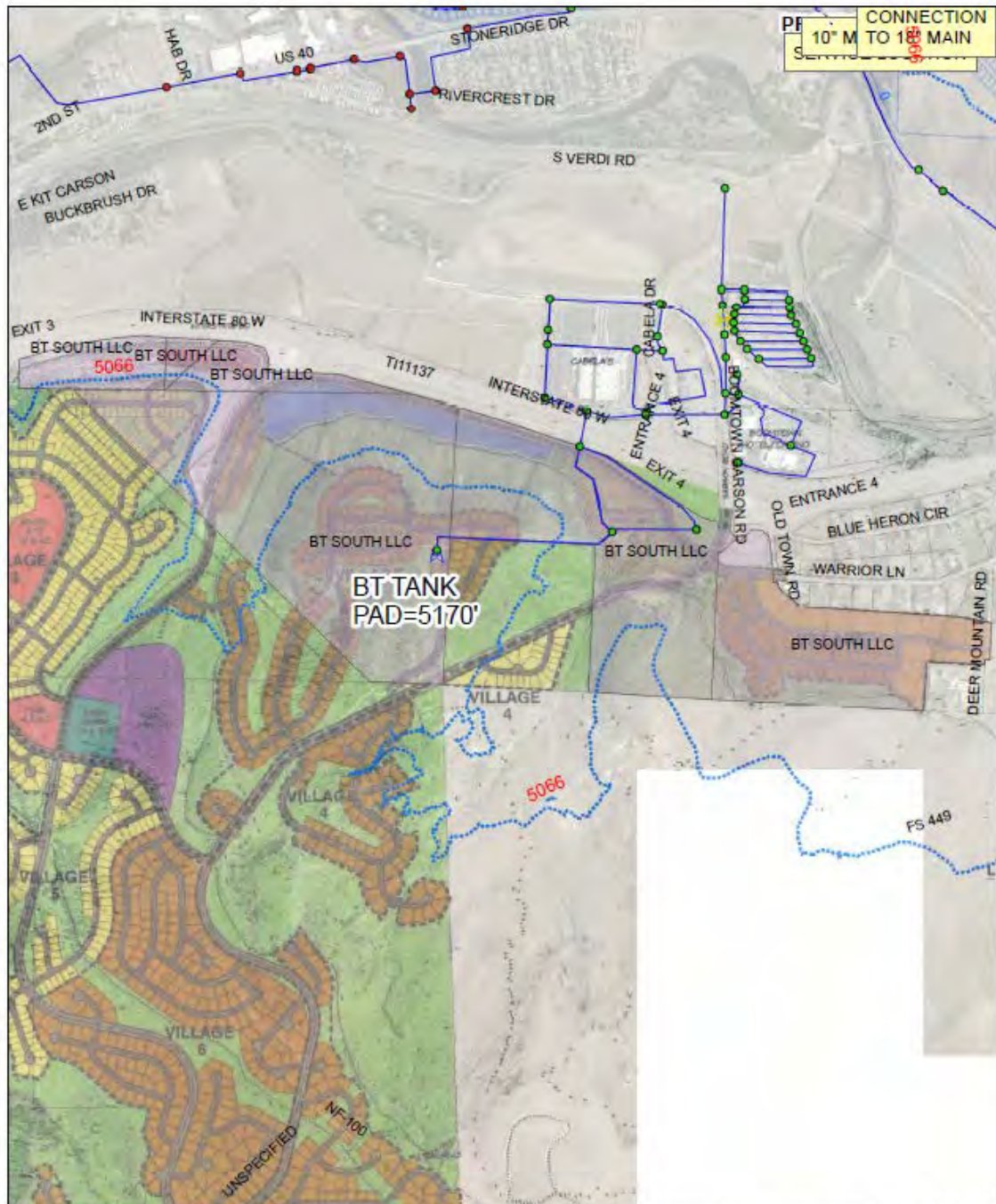




Exhibit "C"
Improvements/Dedications

1. Dedicate and convey to Authority the water tank and all water facilities comprising portions of the West Reno System located on the Property to the extent owned by Owner.
2. Convey to Authority Water Facilities Easements across the Property in form and substance agreeable to Authority for West Reno System water facilities located on the Property.
3. Dedicate and convey in fee title approximately ___ acres for a Tank Site located on a portion of APN 038-120-03.
4. Dedicate a new non-exclusive access easement to the Tank Site providing continuous access from the Tank Site to Boomtown Garson Road.
5. Dedicate a non-exclusive easement to the Well #5 site and blanket easement for water facilities to intertie and access the future pump station on DP Clark Garson property.
6. To the extent not previously secured by West Reno, secure all access and encroachment rights from Steamboat Canal described as Items #29 and 30 in Schedule 5.8.6 of the West Reno Agreement in accordance with the plans and specifications reviewed and approved by TMWA.
7. Construct and complete and procure all access and crossing rights from Steamboat Canal for the tank access road bridge replacement work described as Item #27 and 31 in Schedule 5.8.6 of the West Reno Agreement in accordance with plans and specifications reviewed and approved by TMWA.

Exhibit "D"
Elevation Map



 <p>TRUCKEE MEADOWS WATER AUTHORITY <i>Quality. Delivered.</i></p>	<p>FIGURE 1: UPPER AND LOWER ZONE BOUNDARY</p>	DATE: SEPT 2017	 <p>NORTH NAD 83 NEVADA STATE PLANE WEST FEET</p>
		MAP BY: BL	
		TMWA#: 17-5472	
		SCALE: 1 inch = 2,631 feet	

BATES STRINGER-RENO, LLC
&
QUEST RENO, LLC

ANNEXATION AGREEMENT

APN: 236-101-01 thru 06, 236-102-01 thru 14,
 236-103-01 thru 03, 236-104-01 thru 08,
 236-105-01 thru 11, 236-111-01 thru 21, 236-112-01,
 236-113-01 thru 24, 236-114-01 thru 08,
 236-120-01 thru 08, 236-131-01 thru 15,
 236-132-01 thru 16, 236-133-01 thru 13,
 236-134-01 thru 06, 236-141-01 thru 03,
 236-142-01 thru 11, 236-143-01 thru 16 and 236-151-01

When Recorded, Return to:

Truckee Meadows Water Authority
 Attn: Amanda Duncan, ARWP, Land Agent
 P O Box 30013
 Reno, NV 89520-3013
 TMWA WO: West Reno System Acquisition

RETAIL WATER SERVICE AREA ANNEXATION AGREEMENT
 (West Reno System)

THIS AGREEMENT, entered into as of the date last executed by the parties below ("Effective Date"), by and between **TRUCKEE MEADOWS WATER AUTHORITY** (the "Authority"), a Joint Powers Authority entity created pursuant to a cooperative agreement among the cities of Reno, Nevada, Sparks, Nevada and Washoe County, Nevada pursuant to N.R.S. Chapter 277, and **BATES STRINGER-RENO, LLC**, a Delaware limited liability company and **QUEST RENO, LLC**, a Nevada limited liability company (collectively referred to as "Developer" or "Owner" in this Agreement and exhibits attached hereto, and together with Authority collectively referred to as "Parties");

WITNESSETH:

WHEREAS, Owner owns certain real property more particularly described on Exhibit "A" attached hereto and incorporated herein by this reference ("Property" or "Owner's Project"), located outside of Authority's current retail water service area.

WHEREAS, on June 20, 2018, Authority entered into an Agreement for Water System Acquisition (as amended, "West Reno Agreement") with West Reno Water Company ("West Reno") pursuant to which the Authority acquired and agreed to annex into the Authority system the water facilities assets of West Reno (the "West Reno System"), which system is located near or on portions of the Owner's Property.

WHEREAS, Owner desires the Authority to expand its retail water service area to provide water service to the Property.

WHEREAS, the West Reno System together with interconnections into and enhancements to TMWA's surface water system, when constructed, can be utilized by Authority as part of an integrated system to provide capacity for water service to residential and commercial development in the former West

Reno service area and to Owner's Property. Without improvements to and interconnection into TMWA's surface water system, the West Reno System will have limited capacity for new services.

WHEREAS, Authority is willing to expand its retail water service area to include water service to the Property, and Owner agrees to the expansion of Authority's retail water service area upon the terms and conditions set forth in this Agreement, subject to and on the express condition that Owner fully and completely perform the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and conditions herein contained, the Parties agree as follows:

1. Expansion of Water Service area. Authority agrees to expand its retail water service area as set forth in Exhibit "A" attached hereto to provide water service for the Property; provided, however, that such expansion of the Authority's retail water service area is specifically conditioned upon execution of this Agreement by Owner and the Authority, and the complete and satisfactory performance of the terms and conditions in Section 2 herein. Owner agrees, for itself and its successors and assigns, that water service to and on the Property and Authority's obligations to provide new or modified water service to and on the Property shall be governed exclusively by this Annexation Agreement, Authority Rules and other written agreements between Authority and Owner. Except as expressly provided otherwise herein, applications for new or modified water service to any project on the Property shall be processed solely under Authority Rules. Provided that Authority performs its covenants and obligations in accordance with this Agreement, Owner agrees that Authority shall have no liability, obligation or responsibility under any entitlements or any other agreements between West Reno or its predecessors, on one hand, and Owner and/or its predecessors, on the other, with respect to water service to the Property and, subject to the foregoing, Owner hereby releases and agrees to hold harmless Authority from and against any and all claims, liabilities, losses, damages, actions, or causes of action (in law or equity) of any kind or nature whatsoever, relating to arising directly or indirectly from or incident to any such agreements in connection with water service to the Property.

2. Conditions to Annexation. The Authority has determined that improvements and/or modifications to its Water System Facilities and/or certain conditions are required to expand its retail water service area to include the Property, and the following conditions in this Section 2 must be satisfied before water service is provided by Authority.

2.1 West Reno System Capacity Reservation And Intertie Facilities Improvements. Owner acknowledges that the West Reno System provides a finite capacity, the exact amount of which has not been determined by Authority and of which 488 GPM of maximum day demand ("MDD") is committed or allocated to existing or future West Reno Customers, which 488 GPM includes 198 GPM of MDD committed or allocated to the Meridian North Lots on the Property. The balance of available capacity within the West Reno System, if any, shall be available on a first come, first served basis to applicants for water service connecting into the West Reno System. Except as otherwise provided in Section 2.1.1, Authority's obligation to provide water service to the Property shall be limited to and in no event exceed the sustainable capacity of the West Reno System, whether through existing groundwater wells and/or in conjunction with constructed, in-service Intertie Facilities Improvements or constructed, in-service Backbone Facilities Improvements, to produce water supply which meets or exceeds Authority's water quantity and quality requirements as determined in Authority's reasonable discretion. Owner acknowledges and agrees that except as provided in Section 2.1.1 and subject to Section 2.4, the water quality, quantity and capacity of the West Reno System must be tested and accepted by Authority, and developed and capable of being placed into service prior to and as a condition precedent of Authority entering any Water Service Agreement for an application for new water service to any portion of Owner's Property. For purposes of this Agreement, the term i) "Meridian North Lots" means the 273 single family residential lots described

and depicted as Lots 101 thru 198 in Subdivision Tract Map 5205, recorded May 15, 2017 as Document No. 4704095 and Lots 201 through 278 in Subdivision Tract Map 5227, recorded October 17, 2017 as Document No. 4754335, and Lots 301 through 397 in Meridian 120 North, Village 3, submitted to the City of Reno on or about November 30, 2017 and pending final approval as of the Effective Date of this Agreement; ii) “Intertie Facilities Improvements” means interconnections into Authority’s surface water supply system intended to provide limited off-peak conjunctive use capacity, such improvements generally consisting of approximately 1,800 linear feet of 16” water main between Riverbelle mobile home park and the West Reno water system, a booster pump station and jack and bore under the UP railroad; and iii) “Backbone Facilities Improvements” means improvements to Authority’s water system facilities intended to provide full design capacity to the Verdi area and provide a fully operational water distribution system, such improvements generally consisting of a 24” main across the Truckee River at Mayberry, expanded capacity at the existing US 40 Pump Station, approx. 6,600 feet of 16” main from Mesa Park/Mae Anne to Mogul, the Verdi Pump Station at Mogul, approx. 9,750 feet of 18” discharge main from the Verdi Pump Station to the Riverbelle mobile home park including utilization of an existing casing under the Truckee River between River Oak and Riverbelle mobile home park and the proposed 1.5 MG Lower Verdi Tank including approx. 4,400 feet of 18” feeder main.

2.1.1 Service to First 198 GPM of MDD to the Property. Authority agrees that the First 198 GPM of MDD to the Property shall not be subject to any charges, reimbursements, contributions or connection fees payable by Owner or its successors and assigns for the Intertie Facilities or Backbone Facilities, and the completion of the Intertie Facilities or Backbone Facilities will not be a required condition for service of the First 198 GPM of MDD to the Property. For purposes of this Agreement, the term i) “First 198 GPM of MDD to the Property” means the first 198 GPM of MDD supply sought or provided from the West Reno System to the Meridian North Lots and for which a corresponding will serve commitment has been issued; and ii) “GPM Limit” means 198 GPM of MDD supply calculated based on the aggregate water service demands for the Meridian North Lots. Authority acknowledges that the calculated demand for water service to the Meridian North Lots as configured on the Effective Date is 198 GPM.

2.2 Additional Conditions Regarding Property. The Authority has determined that additions, improvements and/or modifications to the West Reno System and Authority’s water system facilities are required to expand its retail water service area to provide service to the Property in excess of the GPM Limit, the specific details of which have yet to be identified but which may include the Intertie Facilities and Backbone Facilities Improvements (collectively such additions, improvements and/or modifications referred to as the “West Reno Expansion Facilities”). In addition to the other conditions set forth in this Agreement, Authority’s obligation to provide water service to the Property for demand in excess of the GPM Limit shall be conditional upon the following: 1) the West Reno Expansion Facilities necessary for service, as determined by Authority in its discretion, shall be completed, dedicated and in service prior to execution of a Water Service Agreement for new service to or on the Property; 2) development of the Property shall be subject to, and all applicants for new service on the Property shall pay, all applicable Authority WSF Water System Facility Charges, including without limitation the Area 7 Facility Charge and/or special improvement district assessments, if any, in effect at the time of execution of a Water Service Agreement; 3) the Property shall be subject to and all applicants for new service to the Property shall be required to pay at the time of execution of a Water Service Agreement a prorated share of the West Reno Expansion Facilities, if any are needed; and 4) Owner shall dedicate to Authority such easements and other property located on the Property necessary for the construction and operation of the West Reno Expansion Facilities, such dedications to be made in accordance with Authority’s Rules.

2.3 Additional Conditions Regarding Authority’s Water System Facility Charges (“WSF Charges”). Subject to Section 2.4 of this Agreement, Authority agrees that in lieu of WSF Fees otherwise applicable under Authority Rules, a modified connection fee shall apply to the First 198 GPM of

MDD to the Property for the Meridian North Lots equal to One Thousand Eight Hundred Dollars (\$1,800.00) per single family Residential Unit (“Modified Meridian North Connection Fee”). Owner shall pay the Modified Meridian North Connection Fee no later than ten (10) days prior to the date a meter is to be installed for water service to the applicable Meridian North Lot, and must be paid prior to and as a condition of Authority having any obligation to commence water service to the applicable Meridian North Lot. Any new or modified service on the Property other than single family residential use or which exceeds the GPM Limit shall be subject to all fees and charges, including WSF Charges, applicable to new development under Authority Rules. The Modified Meridian North Connection Fee is appurtenant to, and may only be used in connection with development on, the Property, and is not transferrable or assignable for use on any other property. For purposes of this Agreement, the term “Residential Unit” means one (1) single family dwelling or building (commonly referred to as a single family residence), whether attached or detached.

2.4 Special Charges for Water Quality Mitigation. Notwithstanding any provision herein to the contrary, Authority shall be entitled to impose against the Property and collect from all owners of property served by the West Reno System, including the Owner(s) of the Property, as such Owner(s) apply for new Service from Authority or as customers of the Authority, and on such allocable basis determined by Authority consistent with this Section, special charges (“Special Charges”), to fund costs incurred to relocate or modify wells in the West Reno System necessary to mitigate adverse water quality conditions which arise within ten (10) years of the Effective Date and which impair or affect Authority’s ability to supply water from the West Reno System facilities in compliance with applicable laws. The amount of the Special Charges shall be adopted by the Authority Board through the normal public procedures for approving modifications to Authority Rules or rate tariffs. Authority shall allocate any modified Special Charges equally on a pro rata basis to all Service Properties and/or undeveloped property served by the West Reno System, such that the Owner of each Service Property and undeveloped property served by the West Reno System shall be responsible for paying the proportionate share of the total Special Charges as a condition of water service. Owner for itself and behalf of its successors and assigns to the Property, hereby covenants and agree to pay the Special Charges to the Authority, and agrees the Special Charges, together with interest thereon, late charges, costs, and reasonable attorneys' fees for the collection thereof, are and shall be a charge against and a continuing lien upon the Property or applicable portion thereof against which such Special Charges are made until paid in full, and may, at TMWA’s election, be collected on TMWA’s behalf by the County Assessor through the property tax rolls assessed against the Property or applicable portion thereof in the same manner as property tax deficiencies.

2.5 Construction of Improvements/Dedication of Real Property. The Authority has determined that the dedication of certain real property in fee, or certain easements, rights of way or other interests in real property is required, and that certain improvements to such dedicated property are required, to expand its retail water service area to include the Property. The real property required for dedication in fee or by easement and the improvements required thereto is set forth on Exhibit “B” attached hereto and incorporated herein by this reference. Such property shall be conveyed free and clear of all liens and encumbrances (including any covenants, conditions and restrictions but excluding easements of record and property taxes and assessments for amounts not yet delinquent), and Owner shall obtain and provide Authority prior to dedication, at Owner’s expense, a preliminary title report for any property offered for dedication showing all matters of record affecting such property, except for such monetary liens and encumbrances for real property taxes that are not yet due and payable and such other nonmonetary liens and encumbrances that Authority, in its reasonable discretion in accordance with common utility practice, is willing to accept. Owner is solely responsible for obtaining all appropriate permits, licenses, construction easements, subordination agreements, consents from lenders, and other necessary rights from all necessary parties to dedicate property with title acceptable to Authority. Owner may not apply for, nor shall Authority shall have any obligation to issue or enter, a Water Service Agreement for service to any portion of the Property until such real property required hereunder is granted to Authority in such

4.3. This Agreement shall inure to and be binding upon the parties, their respective successors and assigns.

4.4. This Agreement shall not be modified except in writing, signed by all parties.

4.5. This Agreement represents the entire agreement between the Parties related to the expansion of the Authority's retail water service area and supersedes all prior representations and agreements whether written or oral with respect to the covenants and conditions provided herein; provided, however, that the obligations set forth in this Agreement shall be in addition to, and do not supersede or replace, any obligations that may be imposed upon Owner under Authority's Rules.

4.6 This Agreement and terms and conditions herein shall run with the land and be binding upon and inure to the benefit and burden of the parties to the agreement and their heirs, successors and assigns and any future owners of the Property.

[Signature Page Follows]

[Signature Page to Annexation Agreement]

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement the day and year written below.

TRUCKEE MEADOWS WATER AUTHORITY

BATES STRINGER-RENO, LLC

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Dated: _____

Dated: _____

QUEST-RENO, LLC

By: _____

Name: _____

Title: _____

Dated: _____

STATE OF NEVADA)

) ss

COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 20__, by _____ as _____, TRUCKEE MEADOWS WATER AUTHORITY, on behalf of said Joint Powers Authority therein named.

NOTARY PUBLIC

STATE OF NEVADA)

) ss

COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 20__, by _____, as _____, of BATES-STRINGER, LLC on behalf of said Delaware limited liability company therein named.

NOTARY PUBLIC

STATE OF NEVADA)
) ss
 COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 20____, by _____, as _____, of QUEST-RENO, LLC on behalf of said Nevada limited liability company therein named.

 NOTARY PUBLIC

Exhibit "A" to Annexation Agreement
Description of Annexed Property

All that certain real property located in the County of Washoe, State of Nevada, described as follows:

Parcel 1:

Lots 101 thru 198 and Common Areas A thru F set forth in the map of Meridian 120 North Village 1, filed in the Office of the County Recorder of Washoe County, State of Nevada, on May 15, 2017 as Tract Map 5205, Document No. 4704095, Official Records.

APN's: 236-101-01 thru 06, 236-102-01 thru 14, 236-103-01 thru 03, 236-104-01 thru 08, 236-105-01 thru 11, 236-111-01 thru 21, 236-112-01, 236-113-01 thru 24, 236-114-01 thru 08 and 236-120-01 thru 08

Parcel 2:

Lots 201 through 278 and Common Areas A & B set forth in the map of Meridian 120 North Village 2, filed in the Office of the County Recorder of Washoe County, State of Nevada on October 17, 2017, as Tract Map 5227, Document No. 4754335, Official Records.

APN's: 236-131-01 thru 15, 236-132-01 thru 16, 236-133-01 thru 13, 236-134-01 thru 06, 236-141-01 thru 03, 236-142-01 thru 11 and 236-143-01 thru 16

Parcel 3:

[Lots 301 through 397 and Common Areas A & B in Meridian 120 North, Village 3, submitted to the City of Reno on or about November 30, 2017 and pending final approval as of the Effective Date of this Agreement]

APN: Currently 236-151-01

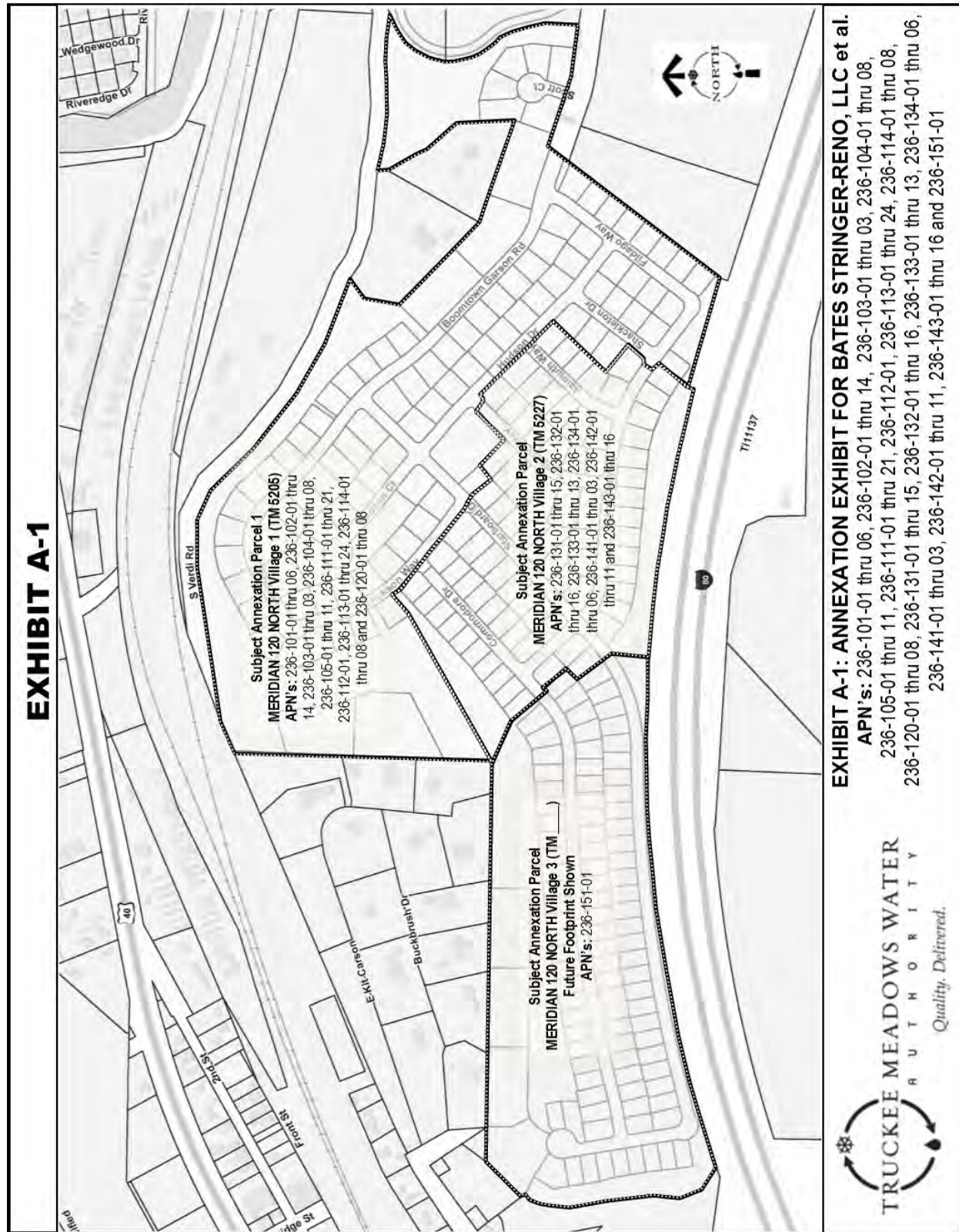


Exhibit "B" to Annexation Agreement
Improvements/Dedications

1. Dedicate and convey to Authority the water wells, pressure regulating station, and all water facilities comprising portions of the West Reno System located on the Property to the extent owned by Owner.
2. Convey to Authority Water Facilities Easements across the Property in form and substance agreeable to Authority for West Reno System water facilities located on the Property.
3. Dedicate and convey in fee title approximately ___ acres for a well site (Well #10) located on a portion of Common Area Parcel E of Meridian 120 North Village 1.
4. Owner acknowledges and agrees the condition and appearance of the wellhouse on the Well #10 parcel is acceptable "as is" and so long as it is maintained in good condition and repair Authority shall not be required to make any improvements or modifications to enhance the aesthetic appearance of the wellhouse.
5. Convey to Authority exclusive easements for the monitoring wells on Common Area Parcel C and Lot 107 of Meridian 120 North Village 1.

ATTACHMENT 3

Closing Documents

BATES-STRINGER			
<u>Doc No.</u>	<u>DOCUMENTS REQUIRED</u>	<u>NOTES</u>	<u>STATUS-Responsible Party</u>
1	Grant, Bargain & Sale Deed (Electronic File Name: Closing Doc. West Reno. Bates Stringer-Grant Bargain and Sale Deed-Well 10 - version 2 (HH))		Finalized-Signed
2	Grant of Water Facilities Easement (Electronic File Name: Closing Doc. West Reno. Bates Stringer. Water Facilities Easements - version 4)		Finalized
3	Grant of Temporary Water Facilities Easement (Electronic File Name: Closing Doc. West Reno. Bates Stringer-Meridian Temp Streets Easement - version 2 (HH))		Finalized
4	Retail Water Service Area Annexation Agreement (Electronic File Name: Closing Doc. West Reno. Bates Stringer Annexation Agreement - version 12)		Finalized
5	Release of Post Closing Obligations (Electronic File Name: Closing Doc. West Reno. Bates Stringer. Release of Post Closing Obligations Well #10 - version 2)		Finalized
6	Declaration and Notice of DeAnnexation Covenants, Conditions, and Restrictions and Reservations of Easements for Meridian 120 (Electronic File Name: Closing Doc. West Reno. Notice of DeAnnexation from Meridian 120 CC&R - version 4)		Finalized
7	Second Amendment to Declaration Covenants, Conditions, and Restrictions and Reservations of Easements for -Well 10 DeAnnexation (Electronic File Name: Closing Doc. West Reno. Bates Stringer. Draft Second Amendment to Declaration CC&R of Meridian 120-Well Site 10 Deannexation In Support of TMWA Acquisition)		Finalized
8	Termination of Declaration of Covenants, Conditions and Restrictions (Electronic File Name: Closing Doc. West Reno. Termination of CC&Rs - version 4 (HH) (003) Release Included)		Finalized
9	Parcel map for Well 10 Site		Pending Escrow Close for Recording
10	Grant of Temporary Construction Easement-Well 10 Detention Basin (Electronic File Name: Closing Doc. West Reno. Bates Stringer. Temp Const Well 10 Work Easement-Version 2)		
11	NV Energy Exclusive Easement Consent	Discussed with NVE-Common Use Agreement-Pending a Sample Doc for review from NVE	Multi-Party Document_Pending-TMWA

RLD			
<u>Doc No.</u>	<u>DOCUMENTS REQUIRED</u>	<u>NOTES</u>	<u>STATUS</u>
5	Release of Post Closing Obligations (Electronic File Name: Closing Doc. West Reno. Bates Stringer. Release of Post Closing Obligations Well #10 - version 2)		Finalized
8	Termination of Declaration of Covenants, Conditions and Restrictions (Electronic File Name: Closing Doc. West Reno. Termination of CC&Rs - version 4 (HH) (003) Release Included)		Finalized
11	NV Energy Exclusive Easement Consent	Discussed with NVE-Common Use Agreement-Pending a Sample Doc for review from NVE	Multi-Party Document_Pending-TMWA
12	RLD/BT South Ancillary Agreement (Electronic File Name: West Reno. Ancillary Agreement with RLD And BT South - version 33)-SIGNED		Finalized-Signed
13	Bill of Sale and General Assignment -(For any RLD interest in the water system assets) (Electronic File Name: Closing Doc. West Reno. BT General Assignment and Bill of Sale - version 2)		Finalized
14	Grant of Blanket Easement for Water Utility Facilities (For Waterlines through to the DP parcel pump station) (Electronic File Name: Closing Doc. West Reno. RLD. Blanket Easement - version 1)		Finalized
15	Termination of Water Line Easement - (Electronic File Name: Closing Doc. West Reno. RLD. Termination of Easement Doc. 4590425- version 1)		Finalized
16	Quitclaim Deed (Electronic File Name: Closing Doc. West Reno. RLD. Quitclaim Deed Doc. 4584663 - version 1)		Finalized
48	Construction Escrow Agreement (Electronic File Name: Closing Doc. West Reno. Well 10 Construction Escrow Agreement-Version 2)		Finalized

BT SOUTH			
<u>Doc No.</u>	<u>DOCUMENTS REQUIRED</u>	<u>NOTES</u>	<u>STATUS</u>
8	Termination of Declaration of Covenants, Conditions and Restrictions (Electronic File Name: Closing Doc. West Reno. Termination of CC&Rs - version 4 (HH) (003) Release Included)		Finalized
11	NV Energy Exclusive Easement Consent	Discussed with NVE-Common Use Agreement-Pending a Sample Doc for review from NVE	Multi-Party Document_Pending-TMWA
12	RLD/BT South Ancillary Agreement (Electronic File Name: West Reno. Ancillary Agreement with RLD And BT South - version)		Finalized-Signed
13	Bill of Sale and General Assignment (For any BT South interest in the water system assets) (Electronic File Name: Closing Doc. West Reno. BT General Assignment and Bill of Sale - version 2)		Finalized
17	Retail Water Service Area Annexation Agreement (Electronic File Name: Closing Doc. West Reno. BT Annexation Agreement - version 15)		Finalized-Signed
18	Grant, Bargain and Sale Deed and Bill of Sale (Electronic File Name: Closing Doc. West Reno. BT South Tank Site Deed - version 2)		Finalized
19	Grant of Easement for Water Facilities and Access (Electronic File Name: Closing Doc. West Reno. BT South Water Facilities and Access Easement - version 3)		Finalized
20	Subordination Agreement (Electronic File Name: Closing Doc. West Reno. BT. Mountain West Easement Subordination Agreement - version 2)		Finalized
21	Substitution of Trustee and Deed of Partial Reconveyance (Electronic File Name: Closing Doc. West Reno. BT. Mountain West Substitution of Trustee and Deed of Partial Reconveyance - version 2)		Finalized
22	Subordination and Partial Release Agreement (Electronic File Name: Closing Doc. West Reno. BT. Arcus Secured Fund Easement Subordination Agreement - version 2)		Finalized
23	Slope Access & Maintenance Easement (Electronic File Name: Closing Doc. West Reno. BT South-Slope Maintenance Access Easement - Version 2)		Finalized
24	Parcel map for Tank Site		Pending Escrow Close for Recording
48	Construction Escrow Agreement (Electronic File Name: Closing Doc. West Reno. Well 10 Construction Escrow Agreement-Version 2)		Finalized

CABELA'S			
<u>Doc No.</u>	<u>DOCUMENTS REQUIRED</u>	<u>NOTES</u>	<u>STATUS</u>
11	NV Energy Exclusive Easement Consent	Discussed with NVE-Common Use Agreement-Pending a Sample Doc for review from NVE	Multi-Party Document_Pending-TMWA
25	Subordination Agreement (Electronic File Name: Closing Doc. West Reno. Cabelas CC&R Easement Subordination Agreement-Version 2 (Cabelas))	TMWA has Signed Original	Finalized-Signed
26	Grant of Easement for Water Wells, Pumps, Water Pipes, Pumphouse and Underground Electric and Water Distribution and Communications Facilities (Electronic File Name: Closing Doc. West Reno. Cabelas Facilities Easements with Well Option - version 4)	TMWA has Signed Original	Finalized-Signed
27	Bills of Sale & Assignment (Private) (Conveying private water facilities to owner of property on which facilities are located) (Electronic File Name: Closing Doc. West Reno. Assignment of Private Water Facilities-Version 2)		Finalized

DP CLARK GARSON ROAD

Doc No.	DOCUMENTS REQUIRED	NOTES	STATUS
8	Termination of Declaration of Covenants, Conditions and Restrictions (Electronic File Name: Closing Doc.West Reno.Termination of CC&Rs - version 4 (HH) (003) Release Included)		Finalized
11	NV Energy Exclusive Easement Consent	Discussed with NVE-Common Use Agreement-Pending a Sample Doc for review from NVE	Multi-Party Document_Pending-TMWA
27	Bills of Sale & Assignment (Private) (Conveying private water facilities to owner of property on which facilities are located) (Electronic File Name: Closing Doc.West Reno. Assignment of Private Water Facilities-Version 2)		Finalized
28	Subordination Agreement and Notice of DeAnnexation (Electronic File Name: Closing Doc.West Reno.DP Clark CC&R Easement Subordination Agreement - version 5)		Finalized
29	Grant of Water Facilities Easement-DP GARSON ROAD 1 (Electronic File Name: Closing Doc.West Reno. DP GARSON ROAD 1 LLC- New Water Facilities Easements - version 1)		Finalized
30	Grant of Water Facilities Easement-DP GARSON ROAD 2 (Electronic File Name: Closing Doc.West Reno. DP GARSON ROAD 2 LLC- New Water Facilities Easements - version 1)		Finalized
31	Booster Pump Station Parcel Map		Finalized
32	Grant, Bargain and Sale Deed and Bill of Sale (Electronic File Name: Closing Doc.West Reno.DP GARSON ROAD 2 LLC - BPS Site Deed - version 1)		Finalized
33	Subordination Agreement (Electronic File Name: Closing Doc.West Reno.DP Clark Garson 1 and 2.BOKF Easement Subordination Agreement - version 1)	Awaiting Lender Review	
34	Substitution of Trustee and Deed of Partial Reconveyance (Electronic File Name: Closing Doc.West Reno.DP Clark Garson Road 2.BOKF.Substitution of Trustee and Deed of Partial Reconveyance - version 1)	Awaiting Lender Review	
35	Subordination Agreement (Electronic File Name: Closing Doc.West Reno. DP Clark.Bank of West Easement Subordination Agreement-Version 1)	Awaiting Lender Review	
36	Substitution of Trustee and Deed of Partial Reconveyance (Electronic File Name: Closing Doc.West Reno. DP Clark .Bank of West-Substitution of Trustee and Deed of Partial Reconveyance-Version 1)	Awaiting Lender Review	

WRWC

Doc No.	DOCUMENTS REQUIRED	NOTES	STATUS
8	Termination of Declaration of Covenants, Conditions and Restrictions (Electronic File Name: Closing Doc.West Reno.Termination of CC&Rs - version 4 (HH) (003) Release Included)		Finalized
27	Bill(s) of Sale & Assignment (Private) (conveying private water facilities to owner of property on which facilities are located) (Electronic File Name: Closing Doc. West Reno.Assignment of Private Water Facilities--Version 2)		Finalized
37	West Reno Water System Acquisition Agreement-6.20.18 version 1-Signed		Signed
38	First amendment to purchase agreement extending due diligence		Signed
39	Second Amendment to Acquisition Agreement		Signed
40	Third Amendment to Acquisition Agreement		Signed
41	Fourth Amendment to Acquisition Agreement	Signed by WRWC	Subject to TMWA Board approval
42	Grant, Bargain, and Sale Deed (West Reno assets) (Electronic File Name: Closing Doc.West Reno.GBS Deed and Bill of Sale from West Reno-Version 3 (JRC Redline)-Final)		Finalized
43	Water Rights Deed (Electronic File Name: Closing Doc. West Reno.Water Rights Deed.West Reno Water Co to TMWA, 245.34 AF, 10-18)		Finalized
44	NDOT (Assignment of existing permits)	Awaiting Permits Assigned from NDOT	Pending-TMWA
45	NDOT (Obtain new occupancy permit in Exit 4 right-of-way)	Awaiting Permits Assigned from NDOT	Pending-TMWA
46	Assignment of Assumed Contracts (Electronic File Name: Closing Doc. West Reno.Assignment of Assumed Contracts-Version 1)		Finalized
47	Assignment of License and Indemnification Agreement for Water Pipeline and Discharge Improvements – 2 water line, 2 drain lines) (Electronic File Name: Closing Doc.West Reno.Assignment of Steamboat License - version 1)		Finalized
48	Construction Escrow Agreement (Electronic File Name: Closing Doc. West Reno. Well 10 Construction Escrow Agreement-Version 2)		Finalized
60	Contruccion Escrow Agreement (Electronic File Name: Closing Doc.West Reno. Boomtown System Construction Escrow Agreement-Version 4)		Finalized

SJP

Doc No.	DOCUMENTS REQUIRED	NOTES	STATUS
8	Termination of Declaration of Covenants, Conditions and Restrictions (Electronic File Name: Closing Doc.West Reno.Termination of CC&Rs - version 4 (HH) (003) Release Included)		Finalized
11	NV Energy Exclusive Easement Consent	Discussed with NVE-Common Use Agreement-Pending a Sample Doc for review from NVE	Multi-Party Document_Pending-TMWA
27	Bill(s) of Sale & Assignment (Private) (conveying private water facilities to owner of property on which facilities are located) (Electronic File Name: Closing Doc. West Reno.Assignment of Private Water Facilities--Version 2)		Finalized
48	Construction Escrow Agreement (Electronic File Name: Closing Doc. West Reno. Well 10 Construction Escrow Agreement-Version 2)		Finalized
49	Agreement Regarding West Reno Water System Acquisition (Electronic File Name: West Reno.Ancillary Agreement with SJP - version 19)		Finalized
50	Grant of Water Facilities Easement (Electronic File Name: Closing Doc.West Reno.SJP Water Facilities Easements - v4)		Finalized
51	Grant of Easement for Water Wells, Access Road and Drainage Facilities (Electronic File Name: Closing Doc.West Reno. SJP Easement-Exclusive Well wAccess Drain - version 6)		Finalized
52	Retail Water Service Area Annexation Agreement (Electronic File Name: Closing Doc.West Reno.SJP Annexation Agreement - version 6)		Finalized
53	Subordination Agreement (Electronic File Name: Closing Doc.West Reno.SJP.Umpqua Easement Subordination Agreement - version 2)		Finalized
54	Authorization and Request for Partial Reconveyance (Umpqua) (Electronic File Name: Closing Doc.West Reno.SJP Umpqua Request Partial Reconveyance-Version 1)		Finalized
55	Deed of Partial Reconveyance (Electronic File Name: Closing Doc.West Reno.SJP. Umpqua Deed Partial Reconveyance-Version 3)		Finalized
56	General Assignment Agreement and Bill of Sale (Any SJP assets required to be conveyed to TMWA) (Electronic File Name: Closing Doc. West Reno. General Assignment and Bill of Sale-Version 1)		Finalized
57	Termination of Relocatable Tank Easement (created under Doc. No. 4590427) (Electronic File Name: Closing Doc. West Reno.SJP Termination of Easement Doc. 4590427-Version 1)		Finalized
58	Assignment of Easement (TM5205) (Electronic File Name: Closing Doc. West Reno.Assignment of TM5205 Easement-Version 1)		Finalized
59	Grant of Temporary Construction License (Electronic File Name: Closing Doc.West Reno. SJP Boomtown Work License-Version 2)		Finalized
60	Contruccion Escrow Agreement (Electronic File Name: Closing Doc.West Reno. Boomtown System Construction Escrow Agreement-Version 4)		Finalized

PNK (Reno) LLC

<u>Doc No.</u>	<u>DOCUMENTS REQUIRED</u>	<u>NOTES</u>	<u>STATUS</u>
61	Subordination of Option Agreement (Electronic File Name: Closing Doc. West Reno.PNK Option Subordination Agreement - version 1)		Finalized
62	Abandonment and Termination of Easement (Electronic File Name: Closing Doc. West Reno. Termination of Easement Doc. 3410826 - version 1)		Finalized

QUEST-RENO,LLC

<u>Doc No.</u>	<u>DOCUMENTS REQUIRED</u>	<u>NOTES</u>	<u>STATUS</u>
3	Grant of Temporary Water Facilities Easement (Electronic File Name: Closing Doc. West Reno.Bates Stringer-Meridian Temp Streets Easement - version 2 (HH))		Finalized
4	Retail Water Service Area Annexation Agreement (Electronic File Name: Closing Doc. West Reno.Bates Stringer Annexation Agreement - version 12)		Finalized
8	Termination of Declaration of Covenants, Conditions and Restrictions (Electronic File Name: Closing Doc. West Reno. Termination of CC&Rs - version 4 (HH) (003) Release Included)		Finalized

STEAMBOAT

<u>Doc No.</u>	<u>DOCUMENTS REQUIRED</u>	<u>NOTES</u>	<u>STATUS</u>
46	Assignment of Assumed Contracts (Electronic File Name: Closing Doc. West Reno.Assignment of Assumed Contracts-Version 1)		Finalized
47	Assignment of License and Indemnification Agreement for Water Pipeline and Discharge Improvements – 2 water line, 2 drain lines (Electronic File Name: Closing Doc. West Reno.Assignment of Steamboat License - version 1)		
63	License Agreement for Bridge Steamboat to BT South		



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: February 11, 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 January 10, 2019 through February 13, 2019.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
BY: Bill Hauck, Senior Hydrologist
DATE: February 11, 2019
SUBJECT: February 2019 Operations Report

Summary

- Customer demands are still at wintertime lows
- Lake Tahoe is 74% of maximum storage capacity (and just 1.6' from full)
- Combined upstream reservoir storage is at 72% of capacity
- Snowpack is looking extremely good at approximately 140% of normal in both basins
- The overall water supply outlook for the region as of February 01 is exceptionally good
- Hydro revenue for January 2019 was an estimated \$145,079

(A) Water Supply

- **River Flows** - Truckee River flow at the CA/NV state line is slightly below normal for this time of year at 355 cubic feet per second (CFS) due to TROA Credit Storage operations. The median flow for February 11th based on 109 years of record is 404 CFS.
- **Reservoir Storage** - The elevation of Lake Tahoe is currently 6227.50 feet, up by half ($\frac{1}{2}$) a foot over the last three weeks. The lake is now just 1.6' below its legal maximum storage elevation of 6229.10' and about $\frac{3}{4}$ full (@ 74% of capacity). Overall, Truckee River reservoir system storage is in extremely good shape as well at 72% (almost $\frac{3}{4}$) of maximum capacity. Storage values for each reservoir as of 2/11 are as follows:

Reservoir	Current Storage (Acre-Feet)	% of Capacity (Percent)
Tahoe	548,000	74%
Boca	10,343	25%
Donner	3,483	37%
Independence	14,452	83%
Prosser	7,071	24%
Stampede	190,746	84%

In addition to the 17,935 acre-feet of storage in Donner and Independence reservoirs, TMWA has 18,931 acre-feet of water stored between Tahoe, Boca and Stampede reservoirs under the terms of TROA. TMWA’s combined upstream reservoir storage is approximately 36,900 acre-feet as of this morning.

- **Snowpack** - We are now more than 2/3rd of the way through the traditional snowpack building season and really couldn’t be in a much better position after another solid snowstorm event in the Sierra this past weekend. Since the first of the year we have had over half a dozen or so moderate to larger type storms which have significantly improved conditions since late December when it was starting to look rather dry. Snowpack in the Truckee Basin is currently 140% of normal, and 144% of normal in the Lake Tahoe Basin.

(B) Water Production

Demand - Customer demand is still at wintertime lows. Consumption averaged 36 million gallons per day (MGD) last week. Surface water from the Chalk Bluff water treatment plant provided 92% and groundwater the other 8% of supply required to meet demand. Customer demands will begin to inch up over the coming weeks as springtime is right around the corner.

(C) Hydro Production

Generation - Average Truckee River flow at Farad (CA/NV state line) for the month of January averaged 362 cubic feet per second (CFS). TMWA’s Fleish plant was off-line the entire month for scheduled maintenance. Both the Verdi and Washoe hydroelectric plants were on-line the entire month of January however. Monthly statistics are as follows:

Hydro Plant	Days On-Line	Generation (Megawatt hours)	Revenue (Dollars)	Revenue (Dollars/Day)
Fleish	0	0	\$ 0	\$ 0
Verdi	31	1,246	\$ 90,381	\$ 2,916
Washoe	31	746	\$ 54,698	\$ 1,764
Totals	62	1,992	\$ 145,079	\$ 4,680



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager, Water Resources
DATE: February 12, 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	4,679.97 AF
Purchases of water rights	0.00 AF
Refunds	0.00 AF
Sales	- 86.43 AF
Adjustments	0.37 AF
Ending Balance	4,593.91 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.

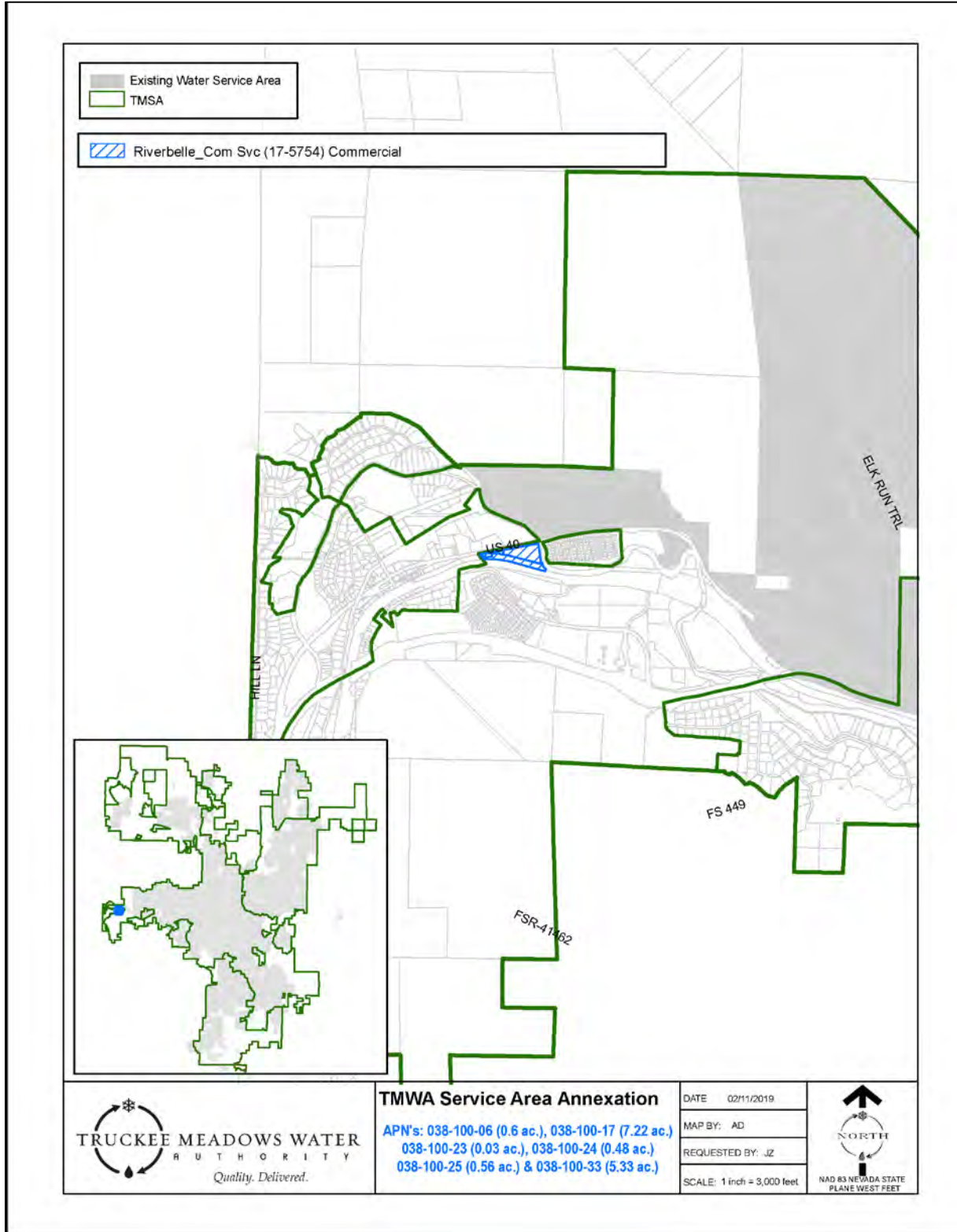
Beginning Balance	7,907.02 AF
Committed water rights	33.83 AF
Ending Balance	7,873.19 AF

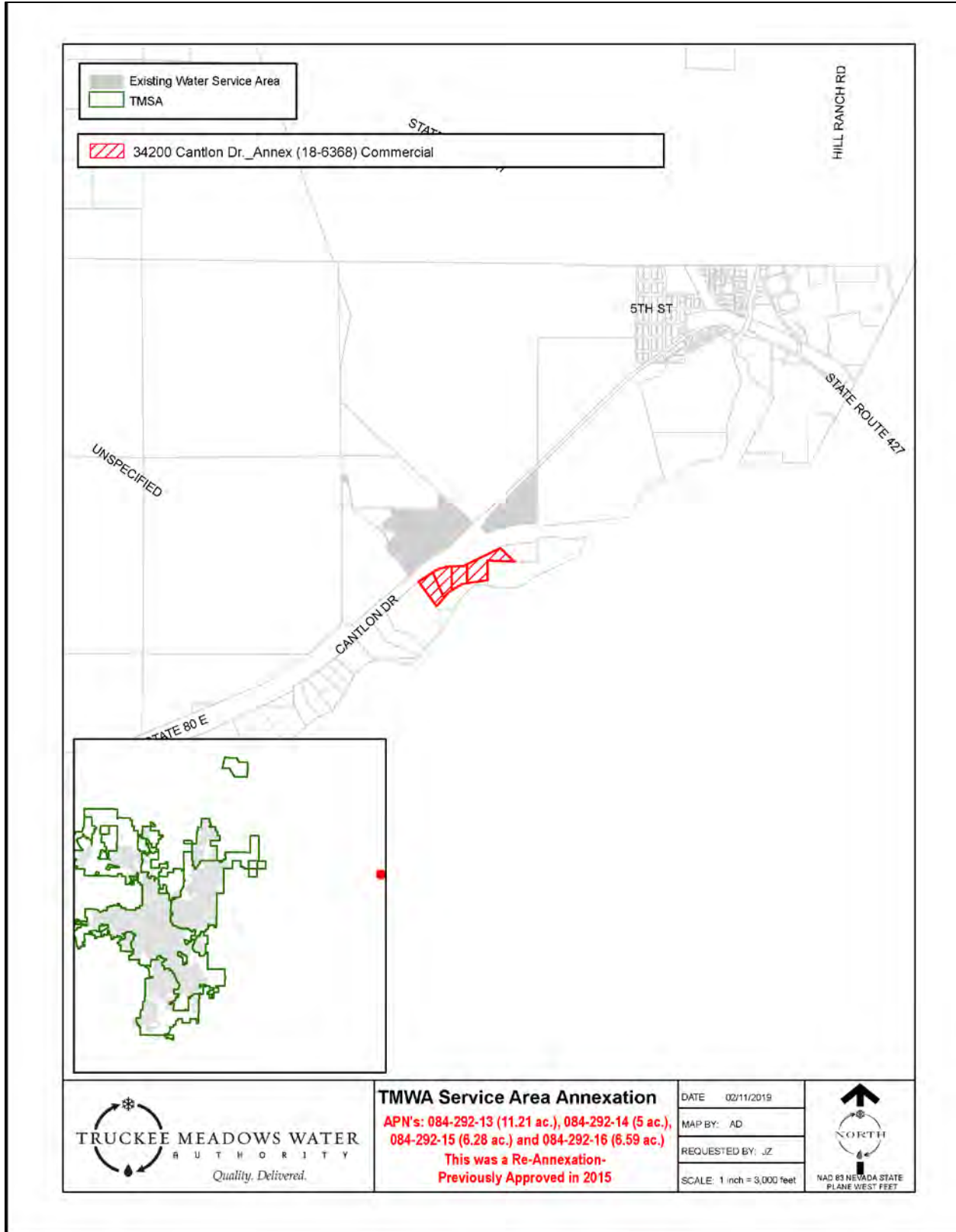
Price per acre foot at report date: \$35,000¹

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 two annexations since the date of the last report (see attached maps). One is the Riverbelle Properties, LLC mobile home park in Verdi and the other is a commercial property adjacent to the Stampmill water system area.







STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: February 11, 2019
SUBJECT: **January Customer Service Report**

The following is a summary of Customer Service activity for January 2019.

Ombudsman

- Customer called for landlord information regarding 300 accounts, we had the call center lead call back and handle the request.
- Customer called requesting assistance with high usage, we had conservation follow up with customer.

Communications

Customer outreach in January included:

- Danny Rotter attended a Municipal Water Systems and TMWA presentation for Continuing Education for NACRI members and 20 people attended.
- James Bryant had a Water quality/water treatment presentation for the Girl Scouts and 11 girls attended.
- Marci Westlake and April Goins attended the Resource Fair at Old Town Mall for the Government workers that were furloughed, 15 people attended.

Conservation (January 1 – December 31)

- 0 Water Watcher Contacts
- 97 Water Usage Reviews

Customer Calls – January

- 7,799 phone calls handled
- Average handling time – 4 minutes, 29 seconds per call
- Average speed of answer – 18 seconds per call

Billing – January

- 128,867 bills issued
- 5(<.1%) corrected bills
- 18,634 customers (14.0%) have signed up for paperless billing to date.

Service Orders –January (% is rounded)

- 7,188 service orders taken
- 2,974 (41%) move-ins / move-outs
- 1,046 (15%) cut-out-for-non-payment and cut-in after receiving payments, including deposits and checks for tamper
- 1057 (15%) zero consumption meter checks
- 430 (6%) re-read meters
- 714 (10%) new meter sets and meter/register/ERT exchanges and equipment checks
- 415 (6%) problems / emergencies, including cut-out for customer repairs, dirty water, no water, leaks, pressure complaints, safety issues, installing water meter blankets, etc.
- 119 (1%) high-bill complaints / audit and water usage review requests
- 433 (6%) various other service orders

Remittance – January

- 31,650 mailed-in payments
- 27,550 electronic payments
- 33,294 payments via RapidPay (EFT)
- 18,476 one-time bank account payments
- 6,971 credit card payments
- 954 store payments
- 2,143 payments via drop box or at front desk

Collections –January

- 16,319 accounts received a late charge
- Mailed 8,585 10-day delinquent notices, 6.6% of accounts
- Mailed 1,722 48-hour delinquent notices, 1.3% of accounts
- 356 accounts eligible for disconnect
- 326 accounts were disconnected (including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection)
- 0.13% write-off to revenue

Meter Statistics – Fiscal Year to December 31

- 0 Meter retrofits completed
- 645 Meter exchanges completed
- 947 New business meter sets completed
- 125,970 Meters currently installed



TMWA Board Meeting

Wednesday, February 20, 2019

Press Clippings

January 10, 2019 – February 13, 2019



Our Town Reno: Life Along The Truckee River

By OUR TOWN RENO • DEC 18, 2018

[KUNR Public Radio: Local News Feed](#)
[TweetShare](#)[Google+](#)[Email](#)



Wendy Wigglesworth sits by the Truckee River.

Until recently, Wendy Wigglesworth lived for nine years on the banks of the Truckee River after fleeing an abusive relationship and not feeling comfortable at Reno's main downtown shelter. In this audio postcard, she recounts details of surviving as a homeless person and creating a sense of community along the river.

Wigglesworth has been homeless since her boyfriend threw all of her stuff out into the street. At first, she tried to go to the shelter, but she found the environment too stifling.

Now, she prefers living outside to being in the shelter and says she established herself within the river community as a resource.

"I was, like, called by more than one people as the 'welcome wagon,' " she said. "I'd show everybody where to go, where to get blankets, where to sleep, when to wake up."

Wigglesworth, who used to run her own salon, said the homeless community takes care of each other.

"Most of the community that I know will do anything for you if you're hungry; it doesn't matter who you are, if you're scared, you're tired.... 'Here, come, you need a blanket? Are you hungry? Come sit down, you need a cigarette?'"

Read Our Town Reno's [original story on Wendy](#).

This story was produced by Our Town Reno, a multimedia street reporting project run by the [Reynolds School of Journalism](#). Our Town Reno is hosting a series of live journalism events focused on homelessness. [The next one](#) is December 21st at 5 pm at Brodhead Park.

Nevada has long taken conservation measures for success in drought contingency plan



Ross D. Franklin / AP

In this May 31, 2018, file photo, the low level of the water line is shown on the banks of the Colorado River in Hoover Dam, Ariz.

By [Yvonne Gonzalez](#) ([contact](#))

Sunday, Jan. 6, 2019 | 2 a.m.

- [Southwest states eye drought plans ahead of expected Lake Mead shortages](#)
- [Guest column: Conservation fund is crucial for Nevada](#)
- [Arizona makes progress on Colorado River drought plan](#)

Southern Nevadans will see few noticeable consequences from a soon-to-be-finalized drought plan for states that get most of their water supply from the Colorado River, according to a Southern Nevada water resources expert.

States are nearing a federal deadline for the drought contingency plans, dealing with lower reservoir levels and a higher probability that Lake Mead will experience a shortage by 2020. Brenda Burman, commissioner of the Bureau of Reclamation, told Nevada, Arizona, California, Colorado, New Mexico, Utah and Wyoming to finalize their drought plan by Jan. 31.

Nevada has its elements of the established plan, said Colby Pellegrino, director of water resources at the Southern Nevada Water Authority.

“The two biggest keys to the drought contingency plan are that we need to put more water in the lake in order to protect Lake Mead’s elevation, and prevent further declines to critical reservoir elevations,” she said. “And in doing so, we need to create flexibility in how people have access to and use water that they have stored in Lake Mead, so we don’t de-incentivize using Lake Mead as a place to store water, and have the benefit of keeping its elevation up.”

Pellegrino said contributing states have to conserve water above and beyond current operating agreements to allow the drought contingency plan to work. Nevada already uses less than its allocation in these agreements, and has been for more than a decade, she said. The plan also allows for storing water in Lake Mead for future use at a low cost to residents, she said.

“We look at doubling the amount of water that goes into Lake Mead in order to help prevent its decline,” Pellegrino said.

The water authority is the wholesale water provider managing the regional water system, including intakes at Lake Mead, two treatment plants and the pipelines that bring the water to be delivered to the Las Vegas Valley Water District, Henderson, North Las Vegas and Boulder City, which distribute to customers.

The Las Vegas Valley Water District is the managing agency for the water authority, sharing resources as two distinct agencies with the Clark County Commission as the board of directors. The water authority was formed to bring coordination among the different entities in Southern Nevada and establish a uniform voice to federal authorities during water negotiations.

“The whole reason SNWA came together and was formed was because North Las Vegas, Henderson and the Las Vegas Valley Water District, we were all vying for the remaining, unallocated water on the Colorado River,” said Bronson L. Mack, a spokesman for the water district and water authority.

The authority brings a uniform conservation program to the region, Mack said. Mandatory regional watering restrictions are part of that plan, and a prohibition on daytime outdoor watering has been in place since the 1950s.

Colorado River Basin states are in a 19-year drought. The Bureau of Reclamation in August boosted its prediction of a 52 percent chance of a Lake Mead shortage by 2020 to a 57 percent chance.

The bureau says the combined capacity of Lake Powell and Lake Mead is lower than it’s ever been during the drought, a little less than half full. Powell and Mead are the two major reservoirs on the Colorado River, Pellegrino said.

Pellegrino said the Colorado River is “the lifeblood of the Southwest,” responsible for an economic output of over \$1 trillion and 16 million jobs relying directly or indirectly on the river.

“The basin is fortunate that the reservoirs were full in 2000, and we’ve relied upon that reservoir storage for all of these years, stretching that supply so that reductions haven’t been felt in the Lower Basin yet,” Pellegrino said. “And there is over a 50 percent chance that we will see the first federally declared shortage on the river next year.”

Southern Nevada has prepared for such a shortage, Pellegrino said, adding that every jurisdiction to which the authority provides water has water waste fees in place. Most of the agency’s conservation programming was put in place in 2003, Mack said.

“People who are not following the guidelines for when you should be watering, time of day, day of week, having water running off into the street in the gutter — there are many different components, but those are already in place across all of Southern Nevada,” Pellegrino said. “These are long-standing.”

Southern Nevada has been preparing for decades for these kinds of droughts, Pellegrino said.

“We are the only Colorado River water user that’s been consistently using less than our allocation for over a decade,” she said. “Arizona and California cannot boast that. Essentially, we’ve taken a very serious approach to conservation in order, 1) to make it easier for us to implement things like this, but 2) to lessen the impacts when something like this is implemented.”

While users may not notice a difference once the drought contingency plan is finalized, Pellegrino said, it's still vital for residents to prioritize conservation.

"Our organization is also trying to refocus the community on ... the importance of water conservation," she said. "That's not directly related to (the drought contingency plan); we're doing that regardless, and we're trying to get the community to come back together and fire up that conservation ethic that we've built really strong here, and keep it going into the future.

Preventing water waste, using the watering schedule, and knowing grass doesn't need to be watered more than one day a week, especially in fall and wintertime, are all important for residents.

"Compliance with that (watering) schedule is very important for us saving water," Pellegrino said. "(It's) just a recognition that we live in the desert and this is how we need to act."

The agency increased its turf removal rebate in May as part of its conservation efforts.

In addition to the drought contingency plan, Pellegrino said, infrastructure has been put in place to continue pulling the authority's water from the lake even after Hoover Dam can no longer release water to Arizona and other downstream users.

"We've spent a lot of time preparing, but all indications of drought and climate change are that this region will continue to be warmer and drier into the future," she said. "Does that mean that we won't see good years on the Colorado River? No, we certainly will see good years on the Colorado River, but it's (incumbent) upon every water user in the basin to do what they can to save water and use less water as we head into a warmer and drier future."

As The State's Snowpack Declines, Cloud Seeding Takes Off In Colorado

BY XANDRA MCMAHON | XANDRA.MCMAHON@CPR.ORG JAN 7, 2019



Charlie Riedel/AP Photo

A wing-mounted generator emits particles of silver iodide for the Western Kansas Weather Modification program Aug. 28, 2007, near Lakin, Kan.

Some solutions to climate change and drought are more, well, science fiction-y than others.

Take cloud seeding, the science of manipulating clouds to dump more snow and water.

CPR listener Paula Yunker of Edwards was curious if the technology was actually real, and if it was, how cloud seeding worked and if there were any environmental downsides.

Yunker posed her question through CPR's **Colorado Wonders project**.

Cloud seeding is indeed real, and thanks in part to recent research from **CU**

Boulder's Katja Friedrich, scientists know more about it than ever.

When mountains push air up into the atmosphere, it condenses into "tiny cloud droplets," as Friedrich describes them. Most of the time, those droplets are too small to fall back to the ground as precipitation. Cloud seeding mixes silver iodide into clouds to turn those droplets into ice crystals, and then into snow.

"So the idea is again to turn something that would otherwise just hover in the atmosphere into snow," Friedrich said.

Studies have shown that the amount of silver iodide left behind by cloud-seeded snowfalls is too small to have an affect on people, plants or animals.

Getting silver iodide into those clouds is the very foundation of cloud seeding, but it's the trickiest and most expensive part of the process. Scientists have to find the right kind of moisture-rich clouds and launch the silver iodide at an ideal temperature: between 17 and 25 degrees Fahrenheit.

Part of Friedrich's research has focused on figuring out the best way to release the silver iodide — distributing the substance from above the clouds by aircraft is more effective, but igniting the silver iodide flares from the ground is cheaper. Power companies, ski resorts and governments have all funded various cloud seeding efforts.

Cloud seeding has existed for decades, and has significant traction in other western states such as Idaho and Wyoming. Colorado has only recently joined the cloud seeding game as the state's snowpack has declined and the Colorado River runs dry.

While cloud seeding is successful, Friedrich believes there needs to be more than one technology at play to negate the affects of climate change.

"The way I see cloud seeding, we really need to think about this in a broader sense. How can we generate water? How can we generate snowpack? How can we maintain snowpack? And how can we retrieve the water that we need?" Friedrich said. "I think cloud seeding is just a tiny puzzle piece in a bigger picture. I think it's valuable, but I don't think it's really the overall solution to our problems."

TMWA pushes back planned rate increase

by News 4-Fox 11 Digital Team
Tuesday, January 8th 2019



AA

The Truckee Meadows Water Authority announced in early January that they plan to push back a planned rate increase that would have gone into effect this May, according to a statement.

RENO, Nev. (News 4 & Fox 11) — The Truckee Meadows Water Authority announced in early January that they plan to push back a planned rate increase that would have gone into effect this May, according to a statement.

The TMWA Board of Directors voted to defer the 2.5% increase on Dec. 13, 2018.

In a letter sent to customers, TMWA said this increase will be deferred for all customer classes. TMWA said the choice to postpone the rate increase was due to a "positive financial position," caused in part by increased water sales during unseasonably warm summers.

TMWA also told customers that [\\$3.7 million in hydroelectric power revenue](#) -- generated by TMWA's three plants -- offset almost all of their power costs.

The Truckee Meadows Water Authority said its staff recommended that the Board hold off on imposing the 2.5% rate increase until May 2020, as well as reassess rate increases proposed for 2021 and 2022 later down the road.

TMWA said their funding plan will be updated in the fall of 2019 and board members will decide if the 2020 increase is necessary.

Drinking water guidelines in the US vary widely from state to state

January 8, 2019, Springer



Credit: CC0 Public Domain

In response to the growing problem of drinking water contaminated with per- and poly-fluoroalkyl substances (PFAS), a new analysis shows that many states are establishing their own guideline levels for two types of PFAS—PFOA and PFOS—that differ from federal guidelines. The new study appears in the *Journal of Exposure Science & Environmental Epidemiology*, which is published by Springer Nature. According to Alissa Corder of Whitman College in the US, the study's lead author, the findings highlight the need for enforceable federal standards and more health protective limits on these contaminants in drinking water to safeguard the health of millions of people whose water supplies have been contaminated.

PFOA (perfluorooctanoic acid) and PFOS (perfluorooctane sulfonate) are widely-used chemicals found in a range of products such as non-stick coatings, stain repellents, and firefighting foam. They have been in use since the 1950s. When it became clear the substances were linked to a variety of diseases, manufacturing of products containing PFOA and PFOS ceased in the US.

However, both contaminants are very persistent in the environment and the human body. They are also extremely mobile in the environment and so have contaminated drinking water supplies serving millions of Americans. Although the chemicals are no longer produced in the US, they are still used in many products manufactured outside the country. Companies have been replacing PFOS and PFOA with other PFAS substances, however studies show these replacement chemicals share many of the same chemical properties.

In this study, the research team identified state agencies that have guidelines regarding the levels of PFOA and PFOS chemicals that are allowed in drinking water without causing adverse health effects, and the remedial action to be taken if these contaminants are found in water sources. These guidelines were compared with the US Environmental Protection Agency (EPA) health advisories for the same chemicals.

As part of the assessment, Corder and her colleagues at Silent Spring Institute and Northeastern University gathered information released in June 2018 by the Interstate Technology and Regulatory Council. The researchers also sourced documents from state websites and contacted state environmental and health agencies.

Their analysis shows that seven states so far have adopted or proposed their own water guideline levels for PFOA and/or PFOS, and three states have set levels of the contaminants that are lower than those set by EPA. In some cases, states developed the guideline levels after specific incidents of contamination. The state water guideline levels also vary dramatically. While EPA has released a health advisory level of 70 nanograms per liter for PFOA and PFOS combined, state guideline levels for the two chemicals range from 13 nanograms per liter (in New Jersey) to 1,000 nanograms per liter (in North Carolina). Some states are also developing guideline levels for other PFAS.

The researchers identified multiple scientific factors that influenced the guideline levels, including the choice of toxicological endpoints and assumptions about drinking water consumption. Social, economic and political pressures all influenced the establishment of guidelines by states, for instance in response to community concerns or discovery of contamination incidents.

"Assessments by multiple states and academic scientists suggest that EPA's health advisory for drinking water is not sufficiently protective," explains Cordner. Previous studies in children exposed to PFOS have shown effects on immune function at lower exposures than EPA's drinking water advisory levels. The most sensitive toxicological endpoints—altered mammary gland development and suppressed immune function—were not the basis for EPA's health advisories but were used by a small number of states.

"There are currently no federal drinking-water standards for PFOA and PFOS, despite widespread drinking water contamination, ubiquitous population-level exposure, and toxicological and epidemiological evidence linking it to various diseases. Because of this, public water entities are not required by law to routinely test whether contaminant levels in water exceed EPA's health advisory and state agencies are not empowered to enforce cleanup," she explains.

The researchers stress that lack of federal standards may create or exacerbate public health disparities because not all states have the resources to develop their own guideline levels or ensure cleanup of contaminated supplies.

Explore further: EPA issues tighter limits for industrial chemical in water
(Update)

More information: Alissa Cordner et al, Guideline levels for PFOA and PFOS in drinking water: the role of scientific uncertainty, risk assessment decisions, and social factors, *Journal of Exposure Science & Environmental Epidemiology* (2019). DOI: 10.1038/s41370-018-0099-9

Read more at: <https://phys.org/news/2019-01-guidelines-vary-widely-state.html#jCp>

After the fire: Blazes pose hidden threat to the West's drinking water

At least 65 percent of the public water supply in the Western U.S. comes from fire-prone areas, and wildfires can taint water with toxins and parasites.



The ruins of houses destroyed by the Tubbs Fire on Oct. 14, 2017 in Santa Rosa, California. David McNew / Getty Images file

Jan. 5, 2019, 4:09 AM PST
By Kaitlin Sullivan

Gerald and Serene Buhrz were among the lucky ones.

When they fled their home at 2:00 a.m. on Oct. 8, 2017, the [flames of the massive Tubb Fire](#) had already engulfed most of the Fountaingrove neighborhood on the north side of Santa Rosa, Calif. They returned to their devastated street eight hours later to find their two-story stucco home still standing. It was surrounded by the embers of burned houses but untouched by flames.

Not all [fire damage](#), however, is visible to the eye.

When Serene Buhrz turned the water on for the first time several days later, the [chemical smell](#) from their kitchen tap was overpowering.

"It was so strong you felt like you couldn't light a match," said her husband Gerald.

He called the city water department immediately, and got the agency to send someone to test the water.

Santa Rosa Water found the problem was not confined to the Buhrz home. Throughout Fountaingrove, plastic water pipes had melted as houses burned, releasing a carcinogenic chemical called benzene into the neighborhood's water system.

For nearly a year after the fire, Fountaingrove residents were told not to drink water from the tap, even if it was boiled first. Though their home was spared, the Buhrzes chose to live in a hotel for the 11 months of the advisory.



"You couldn't drink it, couldn't take a bath in it. You really couldn't do anything with the water so we just stayed out," said Gerald. The couple eventually returned home but Serene Buhrz still relies on bottled water.

"She still doesn't trust the water yet," said Gerald.

As more people build homes in fire-prone areas, and as climate change and other factors increase the frequency of fires, there is a [growing risk to life and property](#) throughout the West — and a lesser known risk to the region's already endangered water supply. At least 65 percent of the public water supply in the Western U.S. comes from fire-prone areas.

Blazes like the Tubb Fire and 2018's massive Camp and Carr wildfires can expose the drinking water for millions of people to the risk of contamination by toxic chemicals and parasites. Experts are concerned the new scale of wildfires torching urban areas could cause damage to public water supply that isn't immediately apparent.

"Lots of structures, vehicles, and man-made materials were involved in the Camp and Carr fires and there isn't a lot of information on how the environment is affected when these materials burn," said Clint Snyder, assistant executive officer of California's Central Valley Water Board.

The concern is prompting more intensive water testing programs following wildfires and spurring utility companies to invest in wildfire mitigation projects across the West.

Houses in the woods

One-third of U.S. homes are now built in what's called wildland-urban interface (WUI) areas, areas near or on land prone to wildfire. It's the fastest-growing land use type in the continental U.S.

According to U.S. Forest Service data, in just 20 years, new WUI areas grew by more than 46 million acres, covering an area larger than Washington State.

When these homes become wildfire tinder, insulation, roofing and home furnishings [release toxins](#) as they go up in flames, creating new sources of water contamination.

In addition to releasing toxins into the water supply, fires kill healthy tree roots. Without the roots, contaminating sediment and ash are flushed by rain into the reservoirs, rivers and lakes that supply cities with drinkable water.

In 2017 the U.S. Geological Survey published a study that predicted wildfires could double the amount of sediment in a third of the largest western watersheds by 2050. In some areas, sediment could increase 1,000 percent, potentially carrying parasites and harmful metals and chemicals with it.

According to representatives at the California State Water Resources Control Board, bacteria and parasite contamination, rather than chemical contamination, are the main worries in the wake of the Camp Fire, which burned 153,000 acres and 19,000 structures north of Sacramento, killing at least 86 people.

In Paradise, the town [most affected](#) by the Camp Fire, 22 out of 24 water systems were tested for contamination and cleared at the time of writing this article, but until the remaining two can be confirmed as uncontaminated, a Boil Water Notice, first released on Nov. 9, will remain in effect.

Firefighters walk through the Fountaingrove neighborhood on Oct. 13, 2017 in Santa Rosa, California. Elijah Nouvelage / Getty Images file

"My number one issue by far is actually not chemicals but intestinal issues due to parasites," said Gina Solomon, a clinical professor of medicine at the University of California San Francisco.

Solomon's biggest concern is a parasite called cryptosporidium. When bare soil is exposed because vegetation has burned, the sediment that is flushed into water sources often contains spores of the intestinal infection-causing parasite. While a discomfort to healthy people, cryptosporidium can become life-threatening to people who are undergoing chemotherapy, have AIDS, or are elderly.

"Cryptosporidium form spores and that's a problem because spores are like armored tanks, encasing the pathogen in a way that allows it to invade even significant amounts of chlorine," said Solomon.

Sediment clogs the microfiltration systems that filter parasites in large water treatment systems, requiring expensive clean-ups.

In 2002, the Hayman Fire cost Colorado utility company Denver Water \$27 million, when heavy rains following the fires washed sediment, fallen trees, and man-made debris into the Stronita Springs and Cheeseman Reservoirs. The contaminants had to be filtered out before the water was safe for consumers.

To date, the Tubb Fire is one of California's starkest examples of post-wildfire water contamination.

Before last year's larger, deadlier Camp Fire, it was the most destructive California wildfire ever recorded. It burned nearly 37,000 acres, 5,636 homes and businesses, and killed 22 people.

But despite the scope of the blaze, it took a phone call from Gerald Buhrz to alert local authorities to the possibility of water contamination.

"If [he] hadn't called in to report a chemical smell in the water, we may never have known about it," said Bennett Horenstein, who was director of Santa Rosa Water during the fire. "It makes me wonder how many times this has happened and gone unreported."

In total, the City of Santa Rosa had to spend \$8 million replacing hydrants, valves, and other water system components in 352 properties, including 1,265 feet of water main.

"What happened in Fountaingrove should be a learning opportunity for water systems nationally," Horenstein said.

Utility companies invest in forest management

Awareness of the risk is increasing. In the more than 244-square-mile burn area left by November's [Camp Fire](#), officials have launched a months-long water monitoring program and will sample surface water at least seven times through spring 2019.

Samples in the Camp Fire burn area will be tested for levels of pollutants including mercury, chemicals found in the fire retardant dropped from the air, and PCBs which are commonly found in electronics.

As wildfires [grow more severe](#) across the country, private companies are beginning to take action.

Just days before the Camp Fire began, Blue Forest Conservation, an investment group focused on forest and watershed health, partnered with the Yuba Water Agency, a utility company that services parts of Southern California, to fund wildfire mitigation in one of its watersheds.

The public-private partnership, called the North Yuba River Project, will focus on tree thinning and water quality monitoring in the North Yuba River.

"The conditions in the North Yuba River watershed are ripe for a fire similar to the Camp Fire. We have those conditions, just not the actual fire yet," said Willie Whittlesey, the project manager overseeing Yuba Water Agency's forest initiatives.

Avoid the trouble of frozen pipes this winter

By [Kelsey Marier](#) |

Posted: Fri 11:41 PM, Jan 11, 2019 |

Updated: Sat 10:34 AM, Jan 12, 2019

RENO, Nev. (KOLO) -- With overnight temperatures reaching below freezing this winter, winterizing your home is a priority. Some people have already winterized their homes ahead of the winter season, but not everyone knows the steps to take to do so.



<https://www.kolotv.com/content/news/Avoid-the-trouble-of-frozen-pipes-this-winter-504257531.html>

"I don't really know that much. I know you have to do it so the pipes don't break, but I've actually never done it before," Raine Kerhin, a Reno resident, said. This is the first house she's lived in on her own since leaving her family's home. Kerhin said her roommate's dad winterizes their home.

Kerhin said since she's still a college student, winterizing a home isn't something that's on her radar. She thinks learning how to winterize a home is something everyone, young and old, should learn.

"It's definitely something people need to know, and I think it would be informative," Kerhin said.

[Truckee Meadow Water Authority](#) (TMWA) has simple precautions you can take to avoid the trouble of frozen or bursting pipes.

"You want to make sure all your outside pipes are winterized and drained properly, shutting off the back flow, making sure all your drainpipes are open and empty by the time it freezes," Marci Westlake, manager of customer service at TMWA, says. Other steps they advise to follow include:

- 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 55°F.
- 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 bursts 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.

[Deputy state engineer to serve as interim top water regulator](#)



[Daniel Rothberg](#)

January 10th, 2019 - 5:12pm

The Department of Conservation and Natural Resources announced Thursday that it has appointed a deputy state engineer to serve as Nevada's interim top water regulator. As the state's top water regulator, the state engineer is responsible for allocating water rights, settling disputes over claims and signing off on housing developments that need water.

Tim Wilson, a deputy administrator who has worked for the Nevada Division of Water Resources since 1995, will take over as the state's top water engineer. Wilson will assume the position as the department pursues [a package of water bills](#) in the legislative session aimed at updating Nevada water law. The bills are expected to be controversial among some water users.

Jason King, the current state engineer, is retiring tomorrow. During King's tenure, he prioritized managing surface water and groundwater as a joint-resource, rather than considering the two as separate. Like past state engineers, he also had to rule several times on the Southern Nevada Water Authority's proposal to pump millions of gallons of rural groundwater about [250 miles from Eastern Nevada to Las Vegas](#), often drawing the ire of the project's proponents.

"We are in a new era of water management in Nevada, and my administration will continue to tackle our most challenging water issues head-on in partnership with the Department of Conservation and Natural Resources and the next state engineer," Gov. Steve Sisolak said in a statement. "I am confident Tim Wilson will continue the direction and progress established under Jason's leadership on the many critical water issues and policies that affect all Nevadans."

The press release did not elaborate on whether the department was searching for a longer-term state engineer. State statute requires Nevada's top water regulator to be a certified engineer. Some water users have floated the idea of changing that requirement in the Legislature, given that the position revolves around hydrology and the law. Others have argued that such a move would further politicize a quasi-judicial position that is one of the most scrutinized in the state.

Several of King's [decisions spawned court cases](#) from Nye County to White Pine County. But King was widely respected by several water users, even those who disagreed with him.

In an interview after King's most [recent ruling on the water authority's proposal](#), former Gov. Brian Sandoval praised him and noted that his departure would be a loss for the state.

"[He] is the most knowledgeable water expert in the state," Sandoval told *The Nevada Independent* after the decision. "There is a reason he is in this position. He's been there for decades, literally decades. He knows water better than anybody. And that is a quasi-judicial decision where he hears all the evidence and he makes decisions so he has my full-faith trust and support."

"I am really sad to see him go," Sandoval said of King's departure. "But we always have the next person up and there will be someone to step in. But he has done a profoundly great job."

Jan 14, 2019

Nevada water official retires, court fights go to successor

LAS VEGAS (AP) — Nevada's top water regulator has stepped down after eight years as state engineer, leaving several key court battles to his acting successor.

Jason King retired last Friday after 28 years as a state employee, and Nevada Department of Conservation & Natural Resources chief Bradley Crowell announced last week that he would be replaced at least temporarily by state Division of Water Resources Deputy Administrator Tim Wilson.

Wilson has been with the department since 1995 and served as King's top aide. JoAnn Kittrell, a spokeswoman for the department, did not immediately respond Monday to phone and email messages seeking comment.

The state engineer is responsible for the appropriation and regulation of water in the nation's most arid state, except the Colorado River, and for oversight of water well drilling, dam safety, water planning and flood plain management.

King oversaw key water rights issues including an ongoing effort by the Southern Nevada Water Authority to get approval to pump groundwater from arid valleys west of the Utah state line and pipe it to Las Vegas.

In 2012, King decided the Las Vegas-based water authority could tap some of the groundwater it wants in rural Clark, Lincoln and White Pine counties. Last year, he rescinded those water rights because of a 2013 court ruling that he said he disagreed with but was legally bound to follow.

That decision is under appeal, along with contentious orders that King issued since 2017 barring new domestic groundwater wells in rural Pahrump west of Las Vegas and prohibiting more pumping by the developers of the stalled Coyote Springs development on the Clark and Lincoln county line, the Las Vegas Review-Journal reported .

In both cases, King said he was acting to protect existing well owners and water levels in aquifers he considered to be severely over-appropriated.

New Democratic Nevada Gov. Steve Sisolak credited King with steadfast leadership and thoughtful management of crucial water resources.

"I am confident Tim Wilson will continue the direction and progress established under Jason's leadership on the many critical water issues and policies that affect all Nevadans," Sisolak said.

Information from: Las Vegas Review-Journal, <http://www.lvrj.com>

Sonoma Valley water users can get smart about water use



CHRISTIAN KALLEN

INDEX-TRIBUNE STAFF REPORT | January 14, 2019, 10:10PM

| Updated 10 hours ago.

“Have you ever wondered how you can save money on your water bill?”

So begins, in a perky female voice, the 1-minute video overview of the new WaterSmart online tool being offered by the Valley of the Moon Water District. It promises instant cell-phone alerts of high water use, upcoming bills, track leaks and costs, and recommendations on ways to reduce water use and achieve lower water bills.

That’s the promise of the WaterSmart “customer water portal” now offered by VOMWD, characterized as “an online tool for customers to look at their water use information,” according to interim VOMWD general manager Matthew Fullner.

Logging into the tool at vomwd.watersmart.com with a utility’s customer email and password brings up a screen full of applications, including daily water use, current bills, water usage suggestions based on your property, and more. Customers can even track and compare water use (and payments) over time, to help anticipate periods of higher water bills, or find ways to counteract them.

“We are very excited to empower our customers in the use of this new platform,” said Fullner. “A lot of work and planning has gone into the building and operation of the AMI (automated metering infrastructure) system that is used to feed data into the Water Smart tool.”

Fullner added that the AMI system enables the water district’s small staff to “be much more proactive in alerting our customers to possible leaks and other problems while they are still small,” rather than having any problems only appear at the end of the 60-day billing cycle.

Sixty-five percent of the VOMWD system is currently fitted with an AMI meter and, when the entire system is fully updated, customers will be “generally more able to take control of their water bill,” he said.

WaterSmart Software, based in San Francisco, was founded in 2009 and recently announced its 100th utility partner in the U.S. and United Kingdom.

Water & Land

[IndyMatters: Brad Crowell, the governor's natural resources aide, expects policy shifts on climate change, water](#)

January 16th, 2019 - 2:05am

They're here: The words "climate change."

When it comes to natural resource policy, expect to be hearing more about climate change under Gov. Steve Sisolak's administration, Brad Crowell, the governor's top adviser on public lands, water and wildfire, said during a [recent episode of the IndyMatters podcast](#).

"I think you'll see from this administration more leaning in on addressing climate and energy problems, ... focusing on clean energy, focusing on reducing emissions," he said. "The prior administration has set the stage very well for Gov. Sisolak to lean even further in that direction."

Gov. Brian Sandoval appointed Crowell to lead the state's Department of Conservation and Natural Resources (DCNR) in late 2016. During the Sisolak transition, Crowell, who worked as an assistant energy secretary for the Obama administration, was asked to stay on.

His department, one of the largest cabinet agencies in the state, is responsible for all natural resource issues, except wildlife, energy and agriculture. The department plays an important role in how the state manages water, wildfires and the Greater sage grouse, an imperiled bird that has come to symbolize the tension between development and conservation on public land.

On Monday, Crowell sat down with *The Nevada Independent* for nearly an hour to discuss some of these issues and how the dynamics around them might change under a new administration.

The top water regulator

For the most part, Crowell said the Sisolak administration plans to stay the course. But he noted that there could be changes around the state's water policy during the next four years.

"We're the driest state in the nation, and we're also one of the fastest growing states in the nation," Crowell said. "Those two facts make it very challenging to manage our growth and our water resources at the same time."

Last Friday, the state's top water regulator, Jason King, [retired after](#) two decades with the state. The state water engineer is responsible for issuing water rights, settling disputes over existing claims and signing off on subdivision maps. Although Crowell has appointed an interim state engineer, he said that the governor has not settled on a plan for after the legislative session.

Per Nevada statute, the state's top water regulator is required to be an engineer. Some water users have floated the idea of broadening the criteria, through legislative action, to make it possible for a hydrologist or lawyer to serve in the position. Crowell said the department did not have a formal proposal at this time, but that having "flexibility generally" would help the state.

"I sometimes joke that the Division of Water Resources should be named the Division of Water Litigation because the majority of time that the division spends is on adjudications and litigation, yet the vast majority of the employees within the division are engineers," he said. "I'm not saying that the state engineer should be a lawyer. But the scope of what the state engineer has to cover is often outside the scope of what an engineer's background usually entails."

Water law — in court and Carson City

Decisions by the state engineer often end up in court. In only the past few years, the state has found itself embroiled in litigation from Pahrump to Eureka. The result is that local judges and the Supreme Court have played a significant role in interpreting Nevada water law and setting policy. Nevada's law is modeled on Western water law, a system developed in the late 1800s to organize claims to water — what was recognized, even then, as a limited resource.

“The problem is that we’re getting to a point now where the courts and the judicial branch in Nevada are starting to make and set water policy through the vector of litigation, rather than having that done through the state engineer’s office or the Legislature,” Crowell said.

The state has already [proposed three bills](#) that would tweak Nevada water law. The bills aim to rein in speculative water rights claims, align regulations with new watershed science and offer a way for developers to mitigate conflicts with other claims. Environmentalists, ranchers and rural communities are concerned that the mitigation bill — [Assembly Bill 30](#) — favors large-scale developers, from mining companies to homebuilders, and urban centers like Las Vegas.

The grouse-wildfire interface

For years, state officials have been forced to grapple with how to conserve the Greater sage grouse and prevent it from being listed under the Endangered Species Act, a move that would cripple rural economies across its range. The sage grouse, a large bird known for its [flamboyant mating ritual](#), traverses a habitat that includes most of Northern Nevada and 10 other states.

In 2015, a bipartisan group of Western governors entered into an agreement with the Obama administration to enact state-based conservation plans in exchange for deferring a federal Endangered Species Act listing until at least 2020, when the issue will be revisited.

Earlier this year, [an action from the Trump administration](#) threatened Nevada’s conservation plan. In December, the Sandoval administration [secured an exemption](#) to continue requiring land developers to pay for sage grouse conservation, even though it would require the state’s involvement in permitting on federal land to avoid a sage grouse listing in 2020, Nevada and other Western states need to prove to the federal government that their plans are working.

“We can’t manage the sage grouse — and the protection of the habitat — without the cooperation of the federal agencies,” Crowell said. “And primarily that’s the Bureau of Land Management and the Forest Service. So whatever plan [we] come up with... [has] to have the cooperation and good working engagement with those federal agencies, otherwise [it’s] just not going to work.”

Crowell said that the most important way to conserve sage grouse was to focus on restoring its habitat: sagebrush. The species is very sensitive to land disturbances, and even small changes in its ecosystem can devastate its ability to mate, hide from prey and find food.

Last year, two fires alone burned more than one million acres in Nevada last year, destroying high-quality sage grouse habitat and traditional mating grounds (sage grouse often return to the same mating areas, known as leks). Crowell, whose department oversees the state’s Division of Forestry, said wildfire management is interwoven with sage grouse conservation. He stressed collaboration with the federal government but also called for changes to state wildfire funding.

“We don’t currently fund our Division of Forestry in a way that reflects our wildfire realities,” Crowell said. “It is basically funded through \$5 million every two years, which is laughable in the context of what it takes to fight fires... Nevada will always rely on its federal partners but we can and should be doing more within the scope of our state authorities.”

As a result, the Division of Forestry ends up seeking supplementary funding from the Interim Finance Committee (IFC) to keep up with the demands of increasingly aggressive fire years.

“There was [a] tacit agreement to underfund the forestry division, but that when we had high-activity fire years, they would come back to the IFC and get supplementary appropriations,” he said. “That’s not a great way of doing business, especially when it’s a given that you are going to have to come back and ask for more money because the initial funding level has been so low.”



INDY FAST FACTS

Steve Sisolak

Job: Clark County commission chairman Party: Democrat

In current office: 2009-present
Commission chairman since 2013

Birthdate: December 26, 1953

Education:

University of Wisconsin—Milwaukee (B.S.)
University of Nevada, Las Vegas (M.B.A.)

Other public offices held:

Nevada System of Higher Education Regent (1999-2009) **Total donations:** \$9,647,261 (1/12/11-6/7/18)

Top donors:

MGM Resorts International \$174,359
Station Casinos/Zuffa: \$90,000
Las Vegas Sands \$75,000
Fidelity National \$61,600
Marnell Companies LLC \$55,000

INDY FAST FACTS

Brian Sandoval

Job: Nevada Governor

Party: Republican

In current office: 2011-present

Birthdate: August 5, 1963

Education:

University of Nevada, Reno (B.A.)
Ohio State University (J.D.)

Other public offices held:

U.S. District Court Judge (2005-2009)
Nevada State Attorney General (2003-2005) Nevada Gaming Commission Chair (1999-2001) Nevada Gaming Commission Member (1998-2001) State Assemblyman, District 25 (1994-1998) **Total donations:**

\$5,035,808 (1/7/11 – 7/5/17)

Top donors:

Caesars Entertainment \$245,000
Station Casinos \$158,072
MGM Resorts International \$160,000
Wynn Resorts \$80,000
Marnell Properties LLC \$70,000



Northwestern states secure \$21 million in federal funds to combat invasive mussels

• By [SAVANNAH CARDON scardon@idahopress.com](mailto:scardon@idahopress.com)

• Jan 16, 2019



[Buy Now](#)

Pacific Northwest Economic Region delegates discuss the impact of invasive quagga and zebra mussels during a House Agricultural Affairs Committee hearing.

Savannah Cardon / Idaho Press

BOISE — About \$21 million in federal funds have been appropriated to Idaho, Montana, Oregon and Washington to help keep invasive quagga and zebra mussels out of state waters.

The invasive mussels can devastate lakes and rivers, affecting water intakes, agriculture, recreation and more, according to a Pacific Northwest Economic Region presentation Wednesday to the House Agricultural Affairs Committee.

To combat this, Northwestern states have banded together to keep the invasive mussels out of their waters.

Over the last two years, the government has provided \$9 million in matching funds through the Army Corps of Engineers to the four states and has allocated another \$12 million for 2019 and 2020, according to Brandon Hardenbrook, PNWER chief operating officer. The nonprofit group is composed of five states and five Canadian jurisdictions.

Last year, Montana received \$2.2 million, Idaho received \$1.1 million, Oregon got \$650,000 and Washington got \$700,000 for mussel prevention efforts.

Lake Winnipeg in Canada is a key example of the devastating impact the mussels can leave on the environment. Six years ago, the lake had no signs of mussels. Now, they've washed up on the lake shores, piling nearly three feet high for miles on the beach.

"It just goes to show what can happen in a short period of time" said Larry Doke, PNWER president and member of the Legislative Assembly of Saskatchewan. "This is very serious. We're very worried about it and I think everybody needs to take it seriously — they spread fast."

Canada, unlike the Northwestern states, receives no federal funding for mussel control. However, the country did pass a bill that made transporting mussels across the border illegal. The invasive mussels are typically spread on boats and other watercraft through travel.

An Idaho-specific analysis showed that the small invasive mussels, if introduced in the state, would have a \$94 million annual impact on the state, not including the agricultural impact, according to Hardenbrook. In 2014, Washington state completed a study that estimated it would cost them nearly \$500 million annually if the mussels were introduced into the Columbia River basin.

Inspections have turned up 50 instances in the past year of quagga or zebra mussels on watercraft in Idaho, Idaho Department of Agriculture plant industries Director Lloyd Knight told the Joint Finance-Appropriations Committee Wednesday.

"All 50 of those were carrying dead mussels, and all 50 of those we had some kind of pre-notification," Knight said. "So to us, even though that number has gone up, that's a good thing. It shows we're catching up with these."

Other state and federal agencies also are doing their part and working with Idaho, Knight said.

"So we are catching watercraft, we're catching more of them, and there's more communication now between state and federal agencies before they get to Idaho," Knight said.

Rep. Neil Anderson, R-Blackfoot, asked Knight about reports of invasive mussels in Montana. Montana found evidence of mussels in their immature form in 2017 in two reservoirs, Knight said. Since then, they've ramped up their monitoring programs, and have found no further evidence of mussel infestations.

"They've done a pretty good push on it in Montana," Anderson said.

Savannah Cardon is the Caldwell reporter for the Idaho Press. Follow her on Twitter, @savannahcardon, or reach her at 208-465-8172.

Bureau of Reclamation:

Water Reuse Grant Program Supports Diverse Projects and Is Managed Consistently with Federal Regulations

GAO-19-110: Published: Dec 13, 2018. Publicly Released: Jan 15, 2019.

Fast Facts:

Population growth and drought are among the factors taxing the U.S. water supply, particularly in the West. Reuse or recycling of wastewater that is typically unusable can help boost supplies. Water can be treated and then put to work in many ways, including irrigating parks and farms, and cooling power plants.

A Bureau of Reclamation program awards grants to water districts and other project sponsors seeking to reuse water and add to supplies. From 1992 through 2017, it awarded about \$715 million for 46 construction projects and 71 studies. Nearly all of the funding—about \$703 million—went for construction projects that recycled water.

- Additional Materials:**
- Highlights Page:
 - [\(PDF, 1 page\)](#)
 - Full Report:
 - [\(PDF, 56 pages\)](#)
 - Accessible Version:
 - [\(PDF, 67 pages\)](#)

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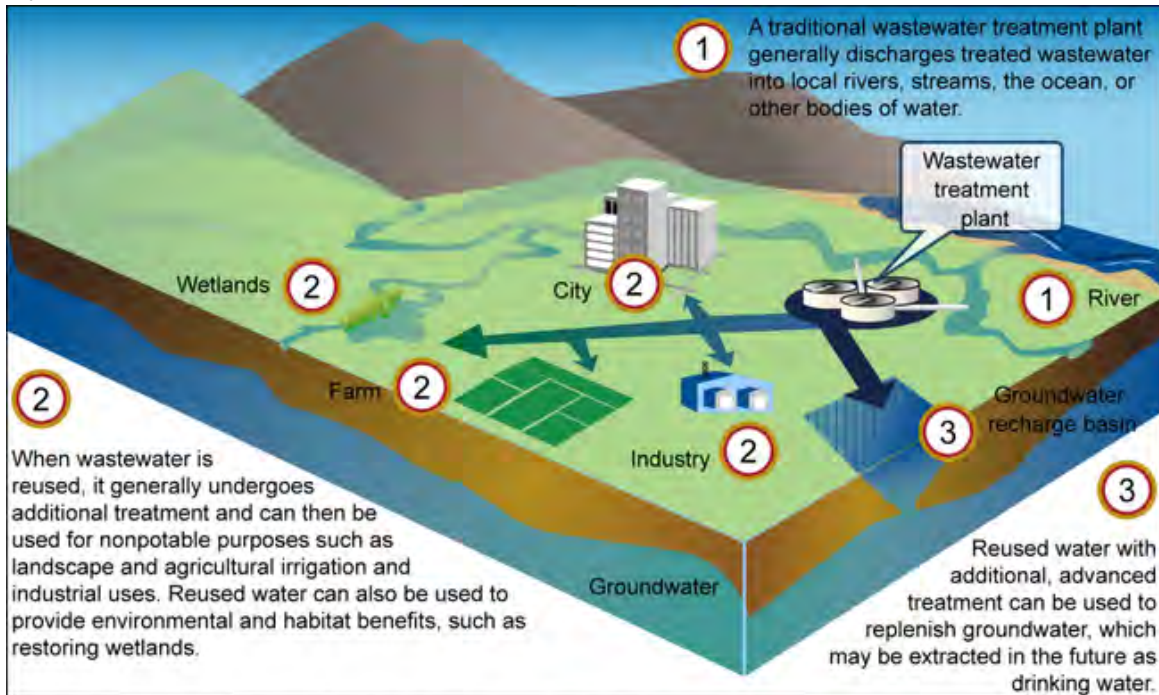
What GAO Found

The Bureau of Reclamation, within the Department of the Interior, awarded about \$715 million in water reuse grants for 46 construction projects and 71 studies under the Title XVI Water Reclamation and Reuse Program (Title XVI) from fiscal year 1992 through fiscal year 2017, according to agency documents. Most of the Title XVI funding—about \$703 million—has been awarded for construction projects. Some construction projects remain eligible for Title XVI grant funding. About \$464 million in eligible Title XVI grant funding not yet awarded remains for projects that Congress individually authorized; for projects eligible under the 2016 amendments to the Title XVI program, about \$513 million remains.

Title XVI projects and studies cover various uses for reused water. For example, many projects GAO reviewed produce reused water for landscape and agricultural irrigation, as well as water that may later be extracted for drinking water, as shown in the figure. Title XVI projects are located in western urban and rural areas, with California accounting for 36 construction projects.

Reclamation's process to select Title XVI projects and studies to receive grants involves announcing the funding opportunity, establishing criteria to evaluate potential projects, and reviewing applications to make award decisions, according to agency documents GAO reviewed. GAO found that Reclamation's grant award process is consistent with relevant federal regulations for awarding grants. For example, the Title XVI funding opportunity announcements GAO reviewed contained information required by the regulations, such as the criteria used to evaluate applications. In recent years, Reclamation has changed the criteria it uses to evaluate projects, eliminating or adding some criteria and changing the weighting of others. Reclamation officials said that these changes were made in part in response to statutory changes.

Typical Uses for Reused Water



Source: GAO analysis of information from reports on water reuse. | GAO-19-110

Why GAO Did This Study

Population growth and drought are among the factors that have placed increasing demands on the U.S. water supply, particularly in the arid West. The reuse of wastewater can help address water management challenges by treating water that is typically unusable and then reusing it for beneficial purposes, such as irrigation, according to the Environmental Protection Agency. Reclamation's Title XVI program awards grants for the study and construction of water reuse projects in 17 western states and Hawaii. From fiscal years 1992 through 2009, Congress individually authorized some Title XVI projects. In 2016, Congress amended the Title XVI program to allow grants to be awarded to additional water reuse projects.

GAO was asked to review the Title XVI program. This report describes, among other things, for the Title XVI program (1) grants Reclamation has awarded for projects and studies and remaining projects that are eligible for grants, (2) the types and locations of projects and studies that have received grants, and (3) Reclamation's process for selecting projects and studies and its consistency with federal grant regulations as well as how the program's evaluation criteria have changed since 2011. GAO reviewed relevant laws, regulations, and agency guidance; analyzed financial data for fiscal years 1992 through 2017; compared documents related to the project selection process against federal grant regulations; and interviewed agency officials and nonfederal project sponsors with different types of projects.

For more information, contact Anne-Marie Fennell at (202) 512-3841 or fennella@gao.gov.

Otay Water District uses drones to survey facilities, properties

Alexander Schultz, a Otay Water District geographic information systems (GIS) technician, operates a drone in front of a facility. (Otay Water District)



David Hernandez

When it's time to inspect facilities, such as water tanks, or survey the topography of its properties, the Otay Water District now turns to technology it has embraced in the past year: drones.



embraced in the past year:

drones.

The water agency, which serves more than 225,000 customers in eastern and southern San Diego County, uses two camera-equipped drones to get a bird's-eye view of its vast and mostly remote sites and facilities, which include 40 potable water reservoirs, more than 20 pump stations and a treatment plant.

Among other water agencies in the region and across the state, the Otay Water District is ahead of the curve in adopting the technology, said Adolfo Segura, the agency's administrative services chief. He said he anticipates that other water districts will follow suit; the Lakeside Water District already has shown interest.

"Drones will be part of a tool set for the future," Segura said of his expectations for the technology in the water industry. "It's going to be like any mobile technology."

He said drones are efficient at surveying sites and facilities while keeping employees out of potentially dangerous scenarios.

For example, drones are flown over water tanks to observe conditions, eliminating the need for water operators to climb ladders to the top of the tanks, which are generally at least 25 feet tall.

The agency also uses the drones to monitor the progress of the ongoing expansion of the Roll Reservoir in the Otay Mesa area.

With more infrastructure projects anticipated, Segura said the agency expects to use the drones in the future to capture images to create 2-D and 3-D models of a site to plan for construction.

It's not just facilities that the agency inspects with drones. The technology is also used to monitor the vegetation and wildlife on the agency-owned land. The main goals are to protect the fauna, as required by state law, and to assess the risk of a wildfire.

The long-range hope is that the images and videos taken using the drones will help the agency analyze over time the impacts of climate change on the vegetation and facilities, which could be susceptible to damage caused by weather conditions, Segura said. He added the state has called on water districts to keep tabs on the effects of climate change.

He said it's common practice for photos captured by the cameras mounted on the drones to be used in quarterly reports shared with the agency's governing board.

The agency has other potential future uses in mind. One example: using drones equipped with thermal imaging cameras to check for cracks in pipes and water leaks, with the thermal imaging detecting signs such as moisture.

So far, the public hasn't had major concerns about the drones, Segura said. While the use of drones by public agencies such as police departments draw some concerns about privacy, Segura said he believes that's not the case with the water agency because the drones are flown over district-owned land that is remote, not above communities.

Following a weeks-long pilot program, the agency began to use drones in late 2017. While two employees are trained to fly the remote-controlled devices in compliance with the regulations set by the Federal Aviation Administration, the agency plans to train water operators who inspect facilities and test water quality on a regular basis.

The Otay Water District "will continue to leverage (the technology) wherever we can, according to regulations," Segura said.

Segura said he is aware of one other water agency that uses drones: The San Diego County Water Authority. Mike Lee, the agency's public affairs supervisor, said the San Diego County Water Authority uses drones to survey its facilities and land, particularly in areas with rugged terrain that are difficult to access.

It's not the first time the Otay Water District embraces innovative technology. In 2004, the agency equipped vehicles with automated meter readers, which allow the devices to "read" a one-way radio signal from residential water meters up to a half-mile away, eliminating the need to go onto customers' properties to take water-use readings. The agency began to upgrade the so-called AMRs in 2017 and expects to replace all by 2023.

"It's an agency heavily invested in technology ... but for good reason," Segura said of the Otay Water District.

The agency serves customers within 125 square miles that includes Chula Vista, Otay Mesa, Jamul, Spring Valley, Rancho San Diego and unincorporated communities near El Cajon and La Mesa.

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Water & Land

[Departing state engineer approves controversial water market near Eureka](#)

By



[Daniel Rothberg](#)

January 20th, 2019 - 1:55am

A center-pivot irrigation system that replaced a less efficient irrigation system in Diamond Valley through a Nevada Department of Agriculture grant. (Courtesy of Nevada Department of Agriculture)

January 20th, 2019 - 1:55am

In the valley north of the central Nevada town of Eureka, dozens of circle irrigation systems spray water onto alfalfa each spring. The water that flows through the rotating center pivots comes from the ground. But that limited groundwater supply is being overpumped and beginning to dry up at a rate that has long concerned Nevada's top water regulator, the state engineer.

Each year, water users near Eureka pump more than twice the amount of groundwater from Diamond Valley — a hub for hay growers in central Nevada — than is replenished by Mother Nature. Underneath the valley, the water table has dropped further away from the surface.

An aerial view of center-pivot irrigation in Diamond Valley, one of the basins that the state engineer wants to bring into balance. (Photo courtesy of Thomas W. Young for Eureka County)

The result: ranchers and farmers, like Vickie Buchanan — who has a priority, or senior, claim to water — have been forced to extend their wells to reach the water they have a right to use.

"I'm completely senior, but I've spent a fortune trying to build new wells," Buchanan said.



Last week, the state approved a [first-of-its-kind plan](#) to reduce water use in Diamond Valley, a community caught between a desire to maintain its agricultural industry and the realities of water availability in the high desert. The plan revolves around the concept of a water market. But it also deviates from Western water law — and will almost certainly be challenged in court.

If the groundwater plan does not go into effect by 2025, the state could be forced to halt more than half the valley’s pumping in one blunt move, with economic consequences rippling across a basin [that is said to bring](#) in about \$22 million from producing over 110,000 tons of hay annually. Some junior water users said in public comments that they would have to declare bankruptcy.

Under the plan, each water user would get a certain number of shares — based on a formula — that they could freely sell, trade or bank. Each share would represent a unit of water. And each year, those units would decrease in amount, resulting in an overall reduction in pumping.

Former State Engineer Jason King approved the plan on Jan. 11, one of his last actions before he retired, [noting that](#) the years of local debate over the plan had been “emotional and difficult.”

Irrigators have been working on a groundwater management plan in Diamond Valley for more than five years. The market emerged after lawmakers passed a bill in 2011 allowing water users to create a local plan to reduce pumping, if approved by a majority of irrigators. Lawmakers kept the guidelines for the plans vague, which gave discretion to the state engineer and flexibility to local water users interested in thinking beyond the strict application of Western water law.

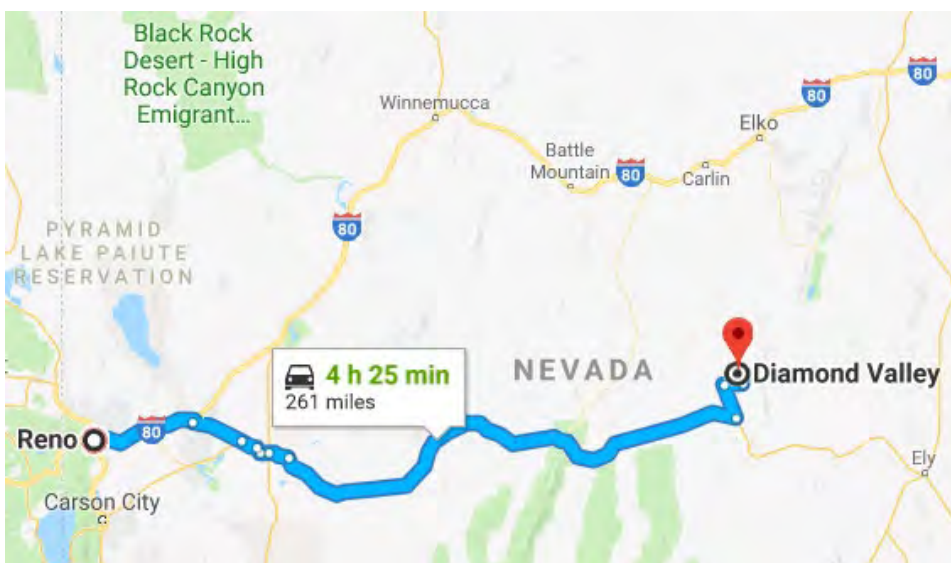
Their motivation was simple.

Across the West, the law is set up to protect senior rights, water users with the earliest claims to divert water. In times of scarcity, those with senior rights are entitled to their full allocation before newer diverters with junior rights. State regulators are required to curtail junior rights if their pumping prevents diverters with senior rights from accessing their water.

Without a plan in place by 2025, a curtailment action remains imminent.

“The irrigators that support this plan understand that we all need to sacrifice for the long-term benefit of the community and the long-term continued success of the farming industry,” one irrigator wrote in public comment, [according to the order](#), which cited the statement.

Proponents argue that, by turning rights into shares, a water market will give water users more flexibility to reduce their pumping. A market would soften the blow of curtailment by easing the basin into a world in which irrigators use less water. It would allow farmers to use a portion of their claim and lease the rest of it without being punished by traditional Western water law.



Map showing distance from Reno to Diamond Valley via Google Maps.

Irrigators could, for instance, lease shares and get compensated to fallow a field without losing the property value of their water right. In another instance, an irrigator could switch to a less water-intensive crop than hay and then lease or sell the water that they conserved. The plan would also allow irrigators to bank and store unused shares of groundwater for future use.

“[It] is meant to provide some certainty,” said Jake Tibbitts, Eureka County’s natural resource manager. “There’s no perfect solution. We don’t know what that perfect solution would be.”

But opponents say the plan deviates too far from the tenets of Western water law and will harm farmers with senior claims. Even supporters of the water market believe that senior users are likely to appeal the plan in District Court. Irrigators have until early February to file an appeal.

In strict curtailment actions, senior water users would not lose a drop of water until all junior users lost their allocations. The plan deviates from that by reducing water use for both senior and junior users in Diamond Valley (though junior users will see reductions at a faster rate).

Citing a [New Mexico court case](#), the state engineer argued [in his order](#) that the market complied with current water law by reducing junior rights faster than senior rights. Once the water market is set up, irrigators with senior rights will receive more shares than those with junior rights.

Paul Taggart, a water lawyer who is representing a client with historical claims to Diamond Valley springs, said the plan was insufficient because it did not include all users. Taggart also questioned whether the reductions in use were sufficient to end the over-pumping issue.

“What’s really critical is that it does not fix the harm that has been done to senior water rights and allows [the problem] to continue for decades — even forever,” Taggart said in an interview.

State regulators estimate valley pumping totals at about 76,000 acre-feet (an acre-foot is the unit that describes how much water can fill one acre to a depth of one foot). Hydrologists estimate that the amount of water that can be pumped sustainably is about 30,000 acre-feet. The plan, however, may only reduce water use to about 34,000 acre-feet over two to five decades.

As a result, some worry that the plan could continue to leave the door open for over-pumping to continue. Although the plan applies to irrigation, mining and milling, it excludes municipal groundwater users and domestic wells from taking reductions in their water use.

In his order, the state engineer defended the plan’s exemptions, noting that 96 percent of the basin’s water users will be represented in the water market. He also noted that the estimate for sustainable pumping could fluctuate — some believe it is 35,000 acre-feet — and that the rate of reductions could be adjusted as water users see how the groundwater aquifer responds.

But water users with senior rights are divided. And one nuance is that 90 percent of the irrigators have a combination of junior and senior rights. When the plan went up for a vote in July, owners of about 47 percent of the senior rights permits supported the plan. A majority of water users across the basin approved of the plan by more than 50 percent, the requirement by statute.

Even with the approval, other issues are at play that could affect the market’s implementation.

For years, Taggart’s firm has been locked in litigation with Eureka County and the state engineer over Sadler Ranch. Developed in the late 1800s by Nevada’s ninth governor, Reinhold Sadler, the ranch has what are known as “vested rights,” rights to water that predate Nevada water law. Users with vested rights have priority above all other water users, even senior water users.

At least four decades of over-pumping in Diamond Valley has dried up springs that Sadler Ranch claims to have historical vested rights to use. [As of early 2017](#), the ranch had been asking for 7,500 acre-feet of water to mitigate what had been lost to over-pumping. The state offered the ranch about 975 acre-feet of mitigation water. But the question of how much water they are entitled to became the subject of litigation. A judge said the ranch was entitled to about 5,000 acre-feet of water, though that number could change in an ongoing procedural process.

Sadler Ranch also sued to curtail pumping in the basin, litigation that is pending. The outcome of that litigation could end up affecting a groundwater plan meant to avoid such action.

The state has ever quantified all of the vested claims to water rights in Diamond Valley. As a result, the state is undergoing a lengthy adjudication to determine what water users are entitled to what claims based on their historical use of the water. That process, which has to be certified by a court and could affect the plan, might take another five years — or even longer.

Despite the hurdles, the concept of a water market in Diamond Valley has attracted national attention as a way to tackle the challenges that plague groundwater basins across the West.

“It’s the first of its kind,” said Debbie Leonard, a McDonald Carano lawyer representing junior users in the adjudication. “There were a lot of people waiting to see what happened with this.”

In many aquifers throughout the West, there is more water on paper than there is actual water to go around. The difference between “paper water” and “wet water” is often the result of blithe predictions by past policymakers that there was more water to go around. It is also the result of federal policies, like the Desert Land Entry Act and the Homestead Act, which encouraged Western development on public lands but often ignored the arid realities of the region.

Buchanan said the market, if successful, could serve as a model for the region, especially for agricultural communities that are using groundwater at unsustainable rates but don’t want to see the vast majority of their junior irrigators go out and declare bankruptcy because of a curtailment call.

“We know that it’s never going to bring the water [rights] back,” she said. “But hopefully it will make it be sustainable — and we won’t just keep pumping ourselves dry.”

Sustainability beyond water

How Denver Water is implementing efficient and environmentally friendly operations.

January 21, 2019 | By: Todd Hartman

In 2018, Denver Water's employees diverted 60 tons of waste from Colorado's landfills.



Scrap metal salvaged from a lighting retrofit at Lake Dillon facilities was salvaged and recycled thanks to the dedication of three Denver Water team members at the hydroelectricity facility.

Throughout the year, employees separated their waste into bins dedicated for recycling, composting and trash. All told, some 41,163 pounds of waste were sent for composting. An additional 79,152 pounds of material was sent for recycling.

The effort kept the equivalent of 134 truckloads of material out the state's landfills last year, according to calculations by Denver Water's waste hauler, Alpine Waste & Recycling.

That day-to-day effort by the more than 1,000 people who work at Denver Water is part of the organization's larger dedication to the environment.

"While we specialize in water, we understand our water supply is tied inextricably to the condition of our environment, our climate and our landscapes," said Brian Good, Denver Water's chief administrative officer. "Stewardship for water means stewardship for all of our natural resources."

Denver Water has a special responsibility to the environment, and a proud history of championing [water conservation and efficiency](#).

And our work on sustainable practices is expanding. We're reaching beyond water to [cut waste, save energy and reduce emissions](#).

Here at TAP we will be telling you about these efforts in the months ahead, sharing what we're doing and why. We hope these stories will inspire other individuals and organizations to do the same.



Workers at Denver Water’s Recycling Plant did away with disposal dishware altogether, saving money on disposal and composting costs and eliminating landfill waste. Photo credit: Denver Water.
To kick things off, let’s talk some trash.

Denver Water’s [Sustainability Guide](#) calls for cutting our solid waste stream that goes into the landfill by 25 percent by 2020 compared to 2016 levels.

How are we doing that? Through steps large and small across our operations.

This year, employees at Denver Water’s Recycling Plant in northeast Denver agreed to “Commit to Quit” using disposable kitchenware such as plates, cups, bowls and silverware.

The breakroom now has reusable tableware for employees to use, and the recycling plant has stopped ordering these disposable supplies. They’ve even eliminated compostable plates, cups and silverware from the breakroom — going a step further in a commitment to sustainability.

“At the water recycling plant, we believe that reducing and reuse should come before recycling and composting, so making the switch to reusable kitchenware was a piece of cake,” said Tyler Johnson, the treatment lead for the facility who played a big role in getting the program started at the plant.

The move led to a significant reduction in solid waste coming from this facility and helped the plant save money in its operating budget.

Johnson said the plant’s staff has embraced the shift: “We’ve been without recyclable or compostable kitchenware for almost a year and the transition was painless.”

Two other Denver Water treatment plants, Foothills and Moffat, are jumping on the “Commit to Quit” program to further the organization’s waste reduction efforts.



The hydroelectric team at Dillon separated waste from a major lighting retrofit, recycling these capacitors instead of sending them to the Summit County landfill. Photo credit: Denver Water.

At Dillon Reservoir, [Denver Water's largest water storage site](#), the hydroelectric team that works at the facility went above and beyond in the name of sustainability.

The team was determined to make sure a lighting retrofit project not only saved energy (more on those savings in an upcoming story), but also didn't lead to piles of scrap destined for the trash heap.

John Blackwell, Rick Geise and Donald McCreer disassembled the old light fixtures and separated them into recyclable parts. The resulting pile of scrap metal and aluminum included 24 transformers, 24 capacitors, and 24 175-watt halide bulbs. All of it was diverted from Summit County's landfill.

Efforts like the ones at the recycling plant and Dillon Reservoir add up.

"Within the first year of publishing our sustainability commitments, Denver Water employees have responded; we are making progress toward our goals," said Kate Taft, Denver Water's sustainability manager. "With the enthusiastic and creative support of our workforce we are building these actions into our institutional culture and daily operations.

"Not only do we want to find more ways to reuse, repurpose, recycle and close loops with resources we need, we want to continue to drive down resource use and reduce our consumption to begin with."

TAP will continue to report on our sustainability progress. Watch this space for upcoming stories on energy savings, emissions reductions, electronic waste recycling and — yes — even water savings.

Potential climate impacts on the Great Basin and Sierra Nevada.



FEB 2

Potential climate impacts on the Great Basin and Sierra Nevada.

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Details

Just after Thanksgiving, the federal government released the fourth National Climate Assessment. We'll look at some of their key messages for the Great Basin and Sierra Nevada, as well as exploring the process of how they came to these conclusions

Research team develops first lidar-based method for measuring snowpack in mountain forests



In forested areas such as the Emerald Bay region of Lake Tahoe, Calif., tree canopy often obscures the view of the snowpack below. A new lidar-based method for measuring mountain snowpack will help scientists and water managers assess snow conditions. Credit: Ben Hatchett, DRI.

Reno, Nev. (Jan. 22, 2018): Many Western communities rely on snow from mountain forests as a source of drinking water – but for scientists and water managers, accurately measuring mountain snowpack has long been problematic. Satellite imagery is useful for calculating snow cover across open meadows, but less effective in forested areas, where the tree canopy often obscures the view of conditions below.

Now, a new technique for measuring snow cover using a laser-based technology called lidar offers a solution, essentially allowing researchers to use lasers to “see through the trees” and accurately measure the snow that lies beneath the forest canopy.

In a [new study](#) published in *Remote Sensing of the Environment*, an interdisciplinary team of researchers from Desert Research Institute (DRI), the University of Nevada, Reno (UNR), the California Institute of Technology’s Jet Propulsion Laboratory, and California State University described the first successful use of lidar to measure snow cover under forested canopy in the Sierra Nevada.

“Lidar data is gathered by laser pulses shot from a plane, some of which are able to pass light through the tree canopy right down to the snow surface and create a highly accurate three-dimensional map of the terrain underneath,” explained lead author Tihomir Kostadinov, Ph.D., of California State University San Marcos, who completed the research while working as a postdoctoral researcher at DRI. “Passive optical satellite imaging techniques, which are essentially photographs taken from space, don’t allow you to see through the trees like this. We are only starting to take full advantage of all the information in lidar.”



Rowan Gaffney surveying the amount of snow at Sagehen Creek Field Station during the NASA airborne campaigns in March 2016. Credit: A. Harpold.

In this study, researchers worked with NASA's Airborne Snow Observatory to collect lidar data at the University of California, Berkeley's Sagehen Creek Field Station in the Sierra Nevada by aircraft on three dates during spring of 2016 when snow was present. Additional lidar data and ground measurements facilities by the long-term operation of Sagehen Creek field station were critical to the success of the study.

Analysis of the datasets revealed that the lidar was in fact capable of detecting snow presence or absence both under canopy and in open areas, so long as areas with low branches were removed from the analysis. On-the-ground measurements used distributed temperature sensing with fiber optic cables laid out on the forest floor to verify these findings.

Tree canopies interact with the snowpack in complex ways, causing different accumulation and disappearance rates under canopies as compared to open areas. With the ability to use lidar data to measure snow levels beneath trees, snow cover estimates used by scientists and resource managers can be made more accurate. The importance of this advance could be far reaching, said team member Rina Schumer, Ph.D., Assistant Vice President of Academic and Faculty Affairs at DRI.

"In the Sierra Nevada, April 1st snow cover is what is used to estimate water supply for the year," Schumer said. "Being able to more accurately assess snow cover is important for California and Nevada, but also all mountainous areas where snowpack is essential to year-round water supply."

Snow cover estimates are also used by hydrologists for streamflow forecasts and reservoir management. Snow cover data is important to ecologists and biologists for understanding animal migration, wildlife habitat, and forest health, and it is useful to the tourism and recreation industry for informing activities related to winter snow sports.



Rose Petersky surveying the amount of snow under the forest canopy at Sagehen Creek Field Station during the NASA airborne campaigns in April 2016. The photo clearly shows the reduced snow cover under the canopy that is difficult to measure with satellites. Credit: A. Harpold.

Although lidar data is currently collected via airplane and not easily accessible by all who might like to use it, the study team believes that information gleaned from this study could be used to correct data derived from satellite imagery, which is already widely available from NASA's MODIS sensor and NASA/USGS's Landsat satellites.

"This is proof of concept for the method that we think could really expand the extent that we measure snow at high resolution in forests," said team member Adrian Harpold, Ph.D., Assistant Professor with the Department of Natural Resources at UNR. "I'm now working with a student to extend this approach across multiple sites to improve our understanding of the relationship between snow cover in the open versus under the tree canopy. Then, we hope to use that information to correct and improve satellite remote sensing in forested areas."

This study was part of a larger NASA EPSCoR project titled *Building Capacity in Interdisciplinary Snow Sciences for a Changing World*, which aimed to develop new research, technology, and education capacity in Nevada for the interdisciplinary study of snowpack. Objectives included an educational goal of training the next generation of scientists.

"This project brought together people who look at snow from different scientific perspectives, and generated a conversation amongst us," said Alison Murray, Ph.D., Research Professor at DRI and principal investigator of the NASA EPSCoR project. "In addition to bringing together expertise from three institutions in Nevada (DRI, UNR, and UNLV) in hydrology, remote sensing, geosciences, atmospheric chemistry and snow associated life, we developed strategic alliances with NASA's airborne snow survey. Where the Nevada researchers might have been studying snow on our own, this interdisciplinary project allowed us to look at snow in an integrated fashion and make some important advances."

The full study, titled *Watershed-scale mapping of fractional snow cover under conifer forest canopy using lidar*, is available online from Remote Sensing of the Environment: [https://www.sciencedirect.com/science/article/abs/pii/S003442571830546](https://www.sciencedirect.com/science/article/abs/pii/S0034425718305467)

7

[The Colorado River equation, the drought plan and why things have stopped adding up](#)

Press Clips

January 27th, 2019 - 2:05am

A view of Hoover Dam is seen from the Mike O'Callaghan-Pat Tillman Memorial Bridge on Wednesday, Aug. 28, 2018. (Jeff Scheid/The Nevada Independent)

The Colorado River equation, the drought plan and why things have stopped adding up

[Daniel Rothberg](#)

January 27th, 2019 - 2:05am

The National Park Service is preparing for the worst.

In November, the federal agency [released its plan](#) for how to operate Lake Mead marinas and launch ramps if the elevation of the Colorado River reservoir — the poster-child for prolonged drought in the Southwest — continues to decline because of overuse and climate change.

To the passerby visiting Lake Mead, it has been clear for some time that things on the Colorado River are not working the way they were intended to. Signs warn of closures to boat launches. [Underwater ghost towns](#) are now visible because of low lake levels. From the top of the Hoover Dam, visitors see a bathtub ring, a chalk-colored display of how far the waterline has dropped.

To the water manager, it has been clear for decades that things might not be working right.

The Colorado River equation went awry a long time ago. The reason is simple. In many years, cities and farms are diverting water beyond the amount of runoff that flows into the Colorado River from snowpack in the Rockies. This structural issue has existed for several decades. But the nearly two-decade drought beginning in 2000 brought the structural issue into stark relief.

Some water users, like Nevada, figured out ways to use less water years ago (more on that below). But other water users, like Arizona, have struggled to find ways to use less water amid competing interests from agriculture, cities and developers and a water rights system that does not do it any favors. As a result, Arizona remains the biggest holdout in signing off on a drought plan that the seven states in the Colorado River basin have been working on for years.

If the states cannot agree to plans by Thursday, federal water managers from the Bureau of Reclamation will take action, starting a process to give the federal government more control of the river, challenging the ability for irrigators, cities, and states to manage the river collectively.

Historically, the federal government has allowed the states to make many decisions about how the federal government's complex system of dams and reservoirs on the Colorado River should be managed. Negotiators from the states have created collaborative plans for federal water managers to follow. If the federal government took a unilateral action, it would turn that approach on its head. The bureau has not said what it would do next. But local water managers, including in Nevada, worry it could reduce their ability to advocate for their specific interests.

At a conference in December, Southern Nevada Water Authority General Manager John Entsminger described this move as the federal government "laying down the gauntlet."

How did we get here?

The year is 1922 and negotiators from the seven states have just signed the Colorado River Compact. Among other things, they divided the massive Colorado River Basin at a crossing known as Lees Ferry in Northern Arizona. Flows below Lees Ferry went to the Lower Basin states of Arizona, California and Nevada. Above Lees Ferry are the Upper Basin states of Colorado, New Mexico, Utah and Wyoming — where the majority of the precipitation fell.

What the negotiators did next was effectively split the river system in half.

They said the Lower Basin and Upper Basin were each entitled to divert 7.5 million acre-feet of water per year. In a later treaty, the United States promised to deliver to Mexico another 1.5 million acre-feet (an acre-foot is the amount of water that can fill one acre to a depth of one foot). They also threw in an extra 1.0 million acre-feet for flows from Arizona's tributaries like the Gila River.

By 1944, water users had the right to divert 17.5 million acre-feet of water — on paper.

That amount of water didn't actually exist in most years.

When the Colorado River Compact was negotiated, policymakers and hydrologists relied on a period of record that was one of the wettest in history. As a result, they issued more rights to divert Colorado River water — “paper water” — than there was water flowing through the river:

[Link here to the infographic](#) (it's great)

What does that mean for Nevada?

Of the Lower Basin states, Nevada receives the smallest allocation of Colorado River water. But the river is crucial to Southern Nevada's existence. Where Arizona and California divert surface water from other rivers, Las Vegas is almost entirely dependent on the Colorado River.

The city pulls 90 percent of its drinking water from Lake Mead. At the same time, Las Vegas has taken proactive measures to secure its Colorado River water supply like no other state. Water managers in Las Vegas have [implemented conservation measures](#) and [recycling programs](#). They have also [stored water underground](#) and are [building expensive infrastructure](#) to ensure that Las Vegas will be the only state able to take water out of Lake Mead at extreme conditions.

Those measures mean Nevada will be able to easily recover from cuts in the drought plan.

[Link here to see the infographic](#) (graphics are great!)

In an interview with [The Nevada Independent](#) last year, Entsminger likened the state's position to that of Switzerland in global diplomacy, a party that can help broker deals when other states are not seeing eye to eye.

He echoed this sentiment last week, as the [Las Vegas Review-Journal](#) reported, saying that the state was working with Arizona to help it reach a deal to sign onto the drought plan by Jan. 31.

What's the matter with Arizona?

Map of the diversions in the Colorado River Basin. (U.S. Bureau of Reclamation)

As the graphic shows, the burden of the cuts falls on Arizona. And accordingly, Arizona officials, [torn between the interests of cities, agriculture, developers and tribes](#), have faced a challenging battle figuring out how to withstand the cuts.

“Central Arizona is looking at losing potentially half of its [Colorado River] water supply through the [drought plan],” Kathryn Sorensen, the head of Phoenix's water utility, said in December. “Every single drop of water is accounted for and being used. So of course, those are really difficult conversations. So we have to come up with a way to make those reductions in a collaborative manner because everyone holds veto power over everybody else in some fashion. And plus, you want to look at the equity of the proposition as well.”



Arizona has known this reckoning would come for some time.

The state's rights are junior to California's rights on the river. Under Western water law, that means California could take its entire allocation of Colorado River water before Arizona ever saw a drop in its canal. That is unlikely to ever happen. But state officials have long known that they would have to cut down or augment their tenuous canal supply by the turn of the century.

When the canal was approved by Congress in 1968, [some even suggested studying the quixotic plan of augmenting the Colorado River by diverting water from the Columbia River](#), which rises in British Columbia and snakes through Washington and Oregon.

In 2019, with the [deadline looming](#) and a [Lake Mead shortage](#) predicted for 2020, there is little time left to wait. And for months, Arizona has been working on a plan to mitigate the impacts of losing nearly half of its Central Arizona supply as part of the Drought Contingency Plan.

The plan appears to be nearing the finish line. On Jan. 24, the board of the Central Arizona Project, which transports about 1.5 million acre-feet of water in a 336-mile canal from Lake Havasu to Tucson, [approved a legislative package](#) that will now go before state lawmakers.

But things could get tricky in the Legislature. There are concerns that other water issues in one of the nation's driest states could subvert a delicate deal on the Colorado River.

The burden of the cuts — at least at first — would mostly fall on Pinal County farmers outside of Phoenix. The farmers, with low-priority rights but significant political clout in the Legislature, have asked for replacement water to offset the cuts and funds to [transition back to groundwater](#).

The Gila River Indian Community, with high-priority Colorado River rights, had planned to sell a large portion of water to offset the impacts of the drought plan. But on Jan. 19, the tribe sent a letter, reviewed by *The Nevada Independent*, to Arizona water officials that threatened to walk away from the deal over legislation it said would undermine its rights on the Gila River.

“We must inform you that unless this bill is either withdrawn or we receive some other reliable indication that it will not be moving forward, the community will unfortunately not be in a position to sign on to any of the agreements necessary for the successful implementation [of the drought plan],” the letter said.

The legislation was introduced by Arizona House Speaker Rusty Bowers, a key player in the drought plan who told the [Arizona Daily Star](#) last week he has no intention of backing away.

That has left observers concerned Arizona might miss the deadline or that the plan could fall apart.

If no plan is approved by Jan. 31, the Bureau of Reclamation will issue a notice in the federal register asking the seven Colorado River states to submit comments about how they think management on the river should proceed during drought and a likely Lake Mead shortage.

The states will have about a month to submit those comments.

Improving public perception of water reuse

Posted on January 20, 2019 by jaylund



By Kahui Lim and Hannah Safford

Water reuse is becoming more important to water security in arid regions like California. The California Recycled Water Policy calls for an increase of 1 million acre-feet of reused water per year by 2020 and 2 million by 2030. Assembly Bill (AB) 574 mandates that California establish a legislative framework for [direct potable reuse \(DPR\)](#)—where highly treated wastewater is recycled for drinking and other potable purposes—by 2023.

Technology already exists to treat reused water to levels meeting or exceeding health standards. But adequate technical capacity is not sufficient. Water reuse can trigger revulsion, especially when water is reused for drinking or other potable purposes. This note explores outreach and engagement strategies to overcome the “yuck factor” and achieve public support for water reuse.

Case studies

Los Angeles East Valley Water Recycling Project

In 1995, the Los Angeles Department of Water and Power (LADWP) began developing the East Valley Water Recycling Project. This \$55 million water-reclamation project was intended to help “drought-proof” Los Angeles by using treated wastewater for groundwater recharge, irrigation, and other purposes. The project secured necessary approvals and construction was completed in 2000.

But as East Valley was about to come on-line, it was derailed by a public-relations disaster. Problems began when the *Los Angeles Daily News* published an article about East Valley with the headline “Tapping Toilet Water.” The concept of sewage being used for drinking sparked public outcry.

At the same time, an open Los Angeles mayoral contest was beginning. Several candidates seized on opposition to East Valley as campaign fodder, pledging to put a stop to “toilet-to-tap.” City attorney James Hahn was ultimately elected and made good on this promise. Hahn shut down East Valley and required LADWP to sever the pipeline bringing recycled water to the Hansen Spreading Grounds.

That public outcry could undermine a finished, \$55 million project illustrates the importance of robust public engagement. As Gerald Silver, President of the Homeowners of Encino, said of LADWP’s poor outreach around East Valley: “Reaching out means reaching out in a way that people will understand.”



The severed pipeline at the Hansen Spreading Grounds is a reminder of and the importance of outreach.

Water reuse in Orange County

The Orange County Water District (OCWD) provides a successful example of water reuse. In 2008, OCWD began operating the Groundwater Replenishment System (GWRS), treating treated more than 70 million gallons per day of wastewater to potable standards. The product was then sent to replenish local aquifers used for drinking water.

The project has been widely recognized for its emphasis on education and engagement as well as engineering. A full decade before beginning construction, OCWD launched a public relations campaign to overcome negative perceptions of water reuse and secure broad support. The campaign employed various outreach strategies, including facility tours, television ads, briefings for elected officials, and partnerships with community groups and community leaders. It worked; the GWRS faced no substantial opposition. Media coverage of the project was generally positive, including headlines like [“How California is Learning to Love Drinking Recycled Water”](#) and [“Magic in a Bottle”](#).

OCWD continues to creatively prioritize public relations as the GWRS expands. In 2017, OCWD secured special permission to bottle its recycled water for consumption. The bottles were distributed at tasting events throughout Southern California. In 2018, OCWD gained substantial media attention by earning a Guinness World Record for the most recycled water produced in 24 hours.

Research insights

Research confirms that outreach and engagement can increase acceptance of water reuse. Providing consumers with information on water reuse is a good first step. A [survey](#) commissioned by the water-technology company Xylem Inc. found that 89% of California residents are more accepting of reused water after learning more about the treatment process. A similar [survey](#) from the Victor Valley region of Southern California found that educating respondents about water reuse increased support for water reuse projects by 8 percent and decreased opposition by 7 percent.

Research also suggests ways to tailor messaging around water reuse. Public reaction to water reuse is often influenced by “affect heuristic,” a psychological principle that refers to people’s tendency to instinctively react to a stimulus based on prior experiences with similar or related things. Affect heuristic makes it difficult for people to overcome disgust associated with wastewater and accept scientific evidence that water reuse is safe. Numerous strategies exist to combat this heuristic. The Xylem survey found that referring to reused water as “purified” water garners stronger support for its use as an additional local water supply than referring to it as “recycled” or “reclaimed” water. [Other studies](#) have found that emphasizing the low risks of water reuse increases support more than emphasizing the benefits. Finally, messaging should avoid terms with negative connotations (such as “sewage” or “waste”) and incorporate terms with positive connotations (such as “clean” and “sustainable”).

In addition, it is helpful to provide opportunities for people to experience water reuse firsthand. [Pure Water San Diego](#) and the [Silicon Valley Advanced Water Purification Center](#) are just two of the multiple water recycling projects that, like OCWD, offer regular public tours. Tours allow participants to sample finished water: a powerful strategy for increasing consumer acceptance. As Marta Lugo, a public information representative of the Santa Clara Valley Water District (SCVWD, which oversees the Silicon Valley project), [noted](#): “If people see their neighbors taking a taste, or their friends and peers, they get over a psychological barrier—it becomes normalized.” Indeed, the SCVWD found that taking a tour more than doubled the percentage of people strongly in favor of potable wastewater reuse.

Key takeaways

1: Engage proactively

The LADWP case study shows that it is difficult to recover once a negative narrative has taken hold. Hence outreach should begin early, during project planning. Options include working with community organizations, the media, and local leaders to explain how and why key decisions were made; sending brochures to utility customers; and hosting informational booths at public events.

2: Message carefully

How information is delivered is as important as the content itself. Messages should be delivered in clear, non-technical language, and should emphasize positive aspects and low risks of recycled water. It is also useful to articulate how water recycling can mitigate local water-supply issues.

3: Encourage public involvement

Broad public involvement in creates a sense of ownership that increases support. Project managers should consider recruiting local and stakeholders for advisory councils, providing opportunities for public comment, and offering tours and open houses.

Kahui Lim (klim@ucdavis.edu) and Hannah Safford (hrsafford@ucdavis.edu) are graduate students of environmental engineering at UC Davis. This blog was prepared for the course “ECI 289: Synergies Between Environmental Engineering and Water Policy” and originally published as a policy brief through the [UC Davis Policy Institute for Energy, Environment, and the Economy](#). [Click [here](#) to download this blog as a PDF]

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Survey Shows Areas of Land Subsidence in Sacramento Valley

Published: Jan 29, 2019



Groundwater irrigation for a rice field in the agriculture region of Yuba County east of Marysville, California.

SACRAMENTO, Calif. – New data released today measure changes in land subsidence in the Sacramento Valley over the past nine years, finding the greatest land surface declines near the city of Arbuckle in Colusa County. According to the [Sacramento Valley GPS Subsidence Network Report](#) and [accompanying fact sheet](#), most of the valley has experienced little to no subsidence, however, land in the Arbuckle area has sunk 2.14 feet compared with baseline measurements recorded in the same location in 2008. The report was led by the California Department of Water Resources (DWR), in coordination with 19 state and local agencies.

“We’ve long known that excessive groundwater pumping causes subsidence, which is one of the many reasons we’ve pushed for sustainable groundwater management and pursued innovative tools to better manage and report subsidence throughout the state,” said DWR Director Karla Nemeth. “Data provided by studies like this inform water managers and owners of large infrastructure so they can plan for and prevent against subsidence.”

Land subsidence can damage critical infrastructure, including water delivery systems, levees, roads, and bridges. In 2017, DWR worked with NASA to release a [report on San Joaquin Valley](#)

[subsidence](#) citing areas along the California Aqueduct that have experienced almost two feet of subsidence over three years.

The Sacramento Valley survey results were collected as groundwater levels were recovering from the severe drought of 2012-16, which saw groundwater levels in much of the state reach historic lows. Compared with 2011 pre-drought groundwater levels, the largest decreases were observed in Glenn and Colusa counties at 58 to 43 feet, respectively. Field work indicates that groundwater levels have recovered an average of seven feet, but more frequent and more comprehensive monitoring is needed to more accurately detail the impacts of droughts and high-water years on groundwater levels and subsidence.

The Sacramento Valley GPS Subsidence Monitoring Network, launched by DWR in 2008, surveyed 300 measurement locations in 11 counties from Shasta County in the north to Solano and Sacramento counties in the south. The 2017 resurvey effort was led by DWR's Division of Integrated Regional Water Management (DIRWM) Northern Region Office (NRO), with the assistance of 19 state, county, and local entities.

“The data provided in this report are an example of the technical assistance we provide and the collaborative effort needed to facilitate successful and sustainable groundwater plans at the local level,” said Taryn Ravazzini, DWR Deputy Director of Special Initiatives.

DWR offers [several tools](#) that assist groundwater agencies and the public assess aquifer conditions and plan for sustainable management, including:

- [Land Use Viewer](#): Allows local agencies and the public to access land use survey datasets for the past 30 years.
- [Well Completion Report Viewer](#): Provides information about wells collected during the drilling and construction of water wells.
- [SGMA Data Viewer](#): Compiles many groundwater related datasets that can be used to look at groundwater levels and subsidence.

The Sacramento Valley subsidence report also concludes that areas of Yolo County experienced the most widespread subsidence, in terms of geographic area affected by subsidence, with 31 survey sites measuring a land surface decline between .3 and 1.1 feet. Other statistically significant levels of subsidence were observed at three survey sites in Glenn County (between .44 and .59 feet of subsidence) and five survey sites in Sutter County (between .20 and .36 feet of subsidence).

WATER

Why We Can't Stop Talking About California's Sierra Snowpack

It's not just skiers who have been whipsawed this season between fear of another dry winter and delight over the epic January snowfall in the Sierra Nevada.

Also paying close attention: water wonks.

Why? Because melting Sierra snow provides somewhere between one-third and one-half of California's [water supply](#). What determines just how much water is derived from that snow is called the "snowpack."

As of this week, water stored in accumulated Sierra snows was running just about average for late January, and amounted to about 60 percent of the average on April 1, when the snowpack is typically at its peak for the year. "Average" is good news compared to where things stood less than a month ago, when the snowpack was only about two-thirds of the early-January average.

"We can really make up a lot of ground if we just have a couple of kind of heavy-hitting storms," says Ben Hatchett, a snow watcher at the Desert Research Institute in Nevada. "And we sure did, and the people rejoiced -- both at the ski resorts and hopefully at the water management and other agencies."

So What's the Snowpack?

The term snowpack refers to the amount of snow on the ground at a given time. When scientists measure snowpack, they're typically concerned with the Snow Water Equivalent (also known as Snow Water Content). The Snow Water Equivalent is how much water, measured as depth in inches, would be produced by melting the snow.

Melting Sierra snow provides somewhere between one-third and one-half of California's water supply.

Thus, the Snow Water Equivalent, or SWE, takes into account a particular snow's density, and it can vary widely: Colorado's powder may be luxurious for skiers, but because it's less dense it contains less water. Meanwhile, the snow that skiers call "[Sierra cement](#)" is much denser and thus full of water.

The California Department of Water Resources and other organizations monitor the snowpack by conducting monthly [snow surveys](#), which help inform projections of the state's [water supply](#).

In this video, KQED Science Editor Craig Miller ventures into the Sierra with veteran state surveyor [Frank Gerhke](#), to see how traditional manual snow surveys are taken.

Timing: It's Everything

UC Merced hydrology professor Rogers Bales has been studying the Sierra Nevada snowpack for roughly three decades. He says the importance of the snowpack comes down to its functioning as storage.

"Most of California's precipitation comes during the cold, wet season when the crops and forests don't need as much water," Bales explains. He notes that farmers use [80 percent of the state's water supply](#). "[They] need a lot of water in the summer, when there's very little or no precipitation."

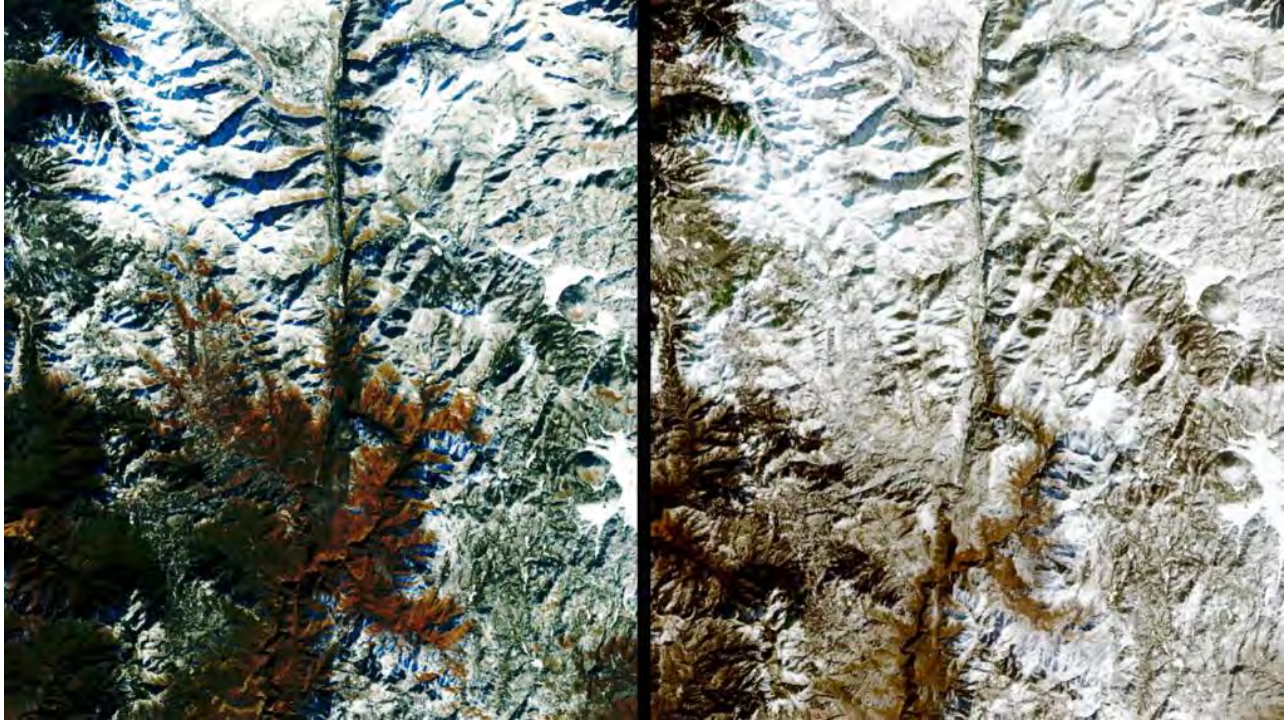
And that's where the snow comes in. Its natural ability to store water is why the Sierra snowpack is often referred to as California's "frozen reservoir." As spring sets in, the snowpack begins to melt. Water that's not absorbed into the ground, called "runoff," trickles into mountain streams, which feed rivers and eventually aqueducts and reservoirs, where it can be stored for use throughout the dry season.

So timing is everything when it comes to the melting of the snowpack.

"We want the runoff to be as late as possible, as close to when we need it as possible," Bales says.

Typically, that runoff begins in April, and in wet years, it can continue to flow through August, according to Bales. But in years with less precipitation, and therefore less accumulation of snow, the runoff can wind down as early as May. That leaves farmers with less reserves for those dry summer months.

Another concern, Bales says, is runoff that comes too early, triggered by warmer temperatures and rains over the mountains during winter months. Runoff occurring before April has the potential to cause flooding downstream. In February 2017, storms caused the equivalent of a full season's runoff in the Feather River watershed to pour into Oroville Reservoir, in Butte County. Ultimately, attempts to release huge volumes of water through Oroville Dam caused both the main and emergency spillways to [collapse](#), forcing evacuation orders for 100,000 people.



Before and after the snowstorms: satellite images of Sequoia on Jan. 4, 2019 and Jan 23, 2019, after the Sierra Nevada was pummeled with snow. (*Couresty Planet*)

The Future: Warming Temperatures Mean a Smaller Snowpack

The warming climate is already shrinking California's "frozen reservoir."

Over time, temperatures in the mountains are rising, leading to more "rain-on-snow" events, when warming temperatures cause it to rain where there's already snow on the ground. That accelerates the melt, which produces runoff that's out of sync with California's seasonal water needs.

The accepted rule of thumb, according to Bales, is that for every two degrees Celsius (3.6 F) of increased surface temperature, the snowline will rise 1,000 feet in elevation, which makes for a kind of double-whammy.

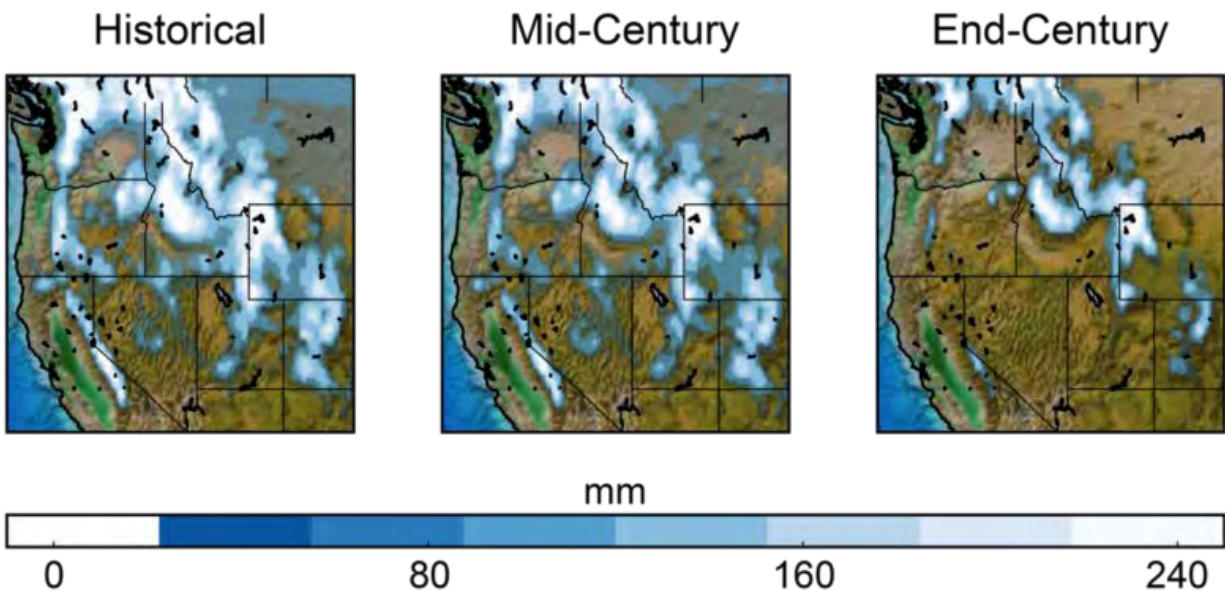
"You're getting rain instead of snow," says Bales, "and [the snow is] melting earlier."

This is not just speculation, according to Alan Rhoades, a climate modeler with Lawrence Berkeley National Laboratory. He says that climate change has already begun to impact the Sierra snowpack.

"We have had roughly about a one-degree Celsius [1.3 F] increase over the last 50 years in the Western United States in terms of surface temperature." Rhoades says. "And so the timing [of runoff] has been shifting earlier and earlier."

Research conducted by Rhoades and colleagues published in [Geophysical Research Letters](#) predicts that more than three-quarters of the snowpack in the Sierra Nevada could be gone by the close of the century.

"Most of the [climate modeling scenarios](#) that I've seen predict about a 30 to 60 percent decline by mid-century in average snowpack in winter months," Rhoades says. "By the end of the century that [ramps up](#) to about 70 to 80 percent."



Climate models predict drastic reductions of snowpack in the Western U.S. by the end of the Century. Image from 4th National Climate Assessment. (*Hari Krishnan and Michael Wehner/Lawrence Berkeley National Lab*)

But, Rhoades says, this forecast is not set in stone. His projections are based on a "high-emissions scenario" that contributes to surface warming. In other words, it assumes minimal progress in reducing warming emissions like carbon dioxide and methane.

On the flipside, if the world succeeds in making drastic cuts in climate emissions, the picture needn't be so grim.

The 2018-19 Season

About half California's annual precipitation typically falls within three months, from December through February. After an eerily dry November -- the first storms didn't roll in until nearly Thanksgiving -- the January storms have more than made up for lost time, with an [atmospheric river storm](#) dropping several feet of snow on the Sierra and pushing the statewide snowpack to above normal: 103 percent of average, as measured on Jan. 17, versus just 67 percent on Jan. 3.

The next snow survey is scheduled for Feb. 1. Despite the good season to date, water wonks and worriers will be keeping a close tab.

Requests for Proposals Open until February 8, 2019



[The Truckee River Fund](#) and the [Nevada Dream Tags Fund](#) are offering open requests for proposals. The Dream Tags Charitable Fund provides funding to engage Nevadans in wildlife conservation by focusing donated funds to restore resilience in at-risk Nevada habitats with projects that support the preservation, protection, management, or restoration of wildlife and its habitat. The Truckee River Fund makes grants for projects that protect and enhance water quality or water resources of the Truckee River and its watershed. A 25% match is required for requested funding from both RFPs.

Southeast Reno homes have water back after leak



The Truckee Meadows Water Authority released this photograph.

By Staff |

Posted: Thu 6:10 PM, Jan 31, 2019 |

Updated: Fri 9:31 AM, Feb 01, 2019



[View Map](#)

RENO, Nev. (KOLO)-- FRIDAY MORNING UPDATE: Truckee Meadows Water Authority says the leak has been repaired and homes have water back.

ORIGINAL STORY: 20 to 22 homes are without water on the Bismarck Drive area of southeast Reno due to a water leak, the Truckee Meadows Water Authority reports.

Storm drains are handling the leak and the water has not gotten into any homes.

The source of the leak has not been confirmed.

“There’s some kind of water leak there,” Olson said. “We don’t know the extent of it.”

No one is without water right now, she said, although some may have less water pressure.

This is the time of year when pipes break after warming up after the cold, Olson said.

OPINION

Gov. Sisolak should prioritize infrastructure improvements | Joseph

Chuck Joseph Published 2:44 p.m. PT Jan. 31, 2019

CLOSE 

Gov. Steve Sisolak is the first Democratic governor sworn into office in Nevada in two decades. Brian Duggan, bduggan@rgj.com

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In response to Governor Sisolak's State of the State address, the Nevada Section of the American Society of Civil Engineers (ASCE) would have liked to see Nevada's infrastructure mentioned as a top priority for this legislative session.

Gov. Sisolak touted the fact that the state of Nevada is strong, and more companies are coming into the state. He is correct in the statement, as Nevada is leading the way in infrastructure and mobility innovation, including in renewable energies; autonomous vehicles; drone technology; and transit systems. One of his focuses was on schools and education, but improving education also means we must continue to invest in modern education facilities that can prepare students for high-tech jobs of the future.

We urge Gov. Sisolak to also look at the state and future of Nevada's infrastructure. It was just last month that ASCE released infrastructure grades for our state, [giving the state a "C" overall](#). Thanks to voters passing fuel revenue indexing in Clark and Washoe counties, the transportation grades increased. Nevada's infrastructure has been on the path of steady improvement over the past four years in many respects.

Another view: [Rebuilding infrastructure vital for rural Nevada: Cowee](#)

Another view: [Rebuilding U.S. infrastructure will require better access to minerals and metals: Quinn](#)

The story is not all positive, however. When we look at Nevada, we sadly see a tale of two states — a rapidly growing population in urban areas benefiting from recent investments and a large tax base, and 15 rural counties with mounting needs. Although Clark and Washoe counties saw the positive effects of [fuel-revenue indexing](#) in 2014, similar measures failed throughout the rest of the state in the 2016 election.

Nevada must build on the progress that is happening in our urban areas without leaving rural counties behind. The entire state should follow the leadership and long-term thinking of Washoe and Clark Counties in future election cycles by indexing their gas

taxes to inflation to maintain and modernize their roads and bridges. Otherwise, the state could end up looking like a patchwork quilt of haves and have-nots, newly paved roads connected to stretches riddled with potholes.

A slight increase in grades is a positive step in the future of Nevada's economy, and investing in infrastructure supports our population growth. We still have needs across the state — including a \$450 million backlog of road repairs, mostly due to much needed repairs in rural areas. We hope Gov. Sisolak and the Legislature will take into consideration these recommendations when determining how to invest in our infrastructure at the state level:

- Increase the state gas tax, which has not been raised since 1992, and has seen a reduction in its buying power
- Increase funding for operations and maintenance and road safety measures to decrease traffic fatalities
- Continue to expand transit programs to increase mobility in both urban and rural areas
- Fund the State Infrastructure Bank ([Senate Bill 517](#)), which was authorized by legislators in 2017, but not funded. This bank would give local governments the ability to obtain loans and grants to fund infrastructure improvements.

Ensuring we are maintaining our current systems today will keep us from having to replace and rebuild down the line — saving us money in the long run.

To keep improving our infrastructure grade, we ask that you help us urge state, local and federal leaders to work together. Adequate investment in our roads and bridges is critical to ensuring that freight move seamlessly throughout the state; 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. This can only be achieved through comprehensive infrastructure legislation at the federal level, consistent and long-term investment from the state and local leaders, and voters like us who step up to the ballot box and say “yes” to investing in the maintenance, repair or replacement of aging infrastructure.

Chuck Joseph, P.E. is a senior engineer with Innova Technologies with three decades of experience in the design of highway, railroad and transit structures.

Have your say: [How to submit an opinion column or letter to the](#)

Philadelphia Selects Sensus for Advanced Metering Infrastructure Upgrade

Posted: Monday, February 4, 2019 7:15 am
Associated Press |

RALEIGH, N.C.--(BUSINESS WIRE)--Feb 4, 2019--The [City of Philadelphia Water Department](#) (PWD) has selected [Sensus, a Xylem brand](#), through a competitive request for proposal process, to deliver smart water technology for its Metering and Customer Service Program. PWD provides services to more than 1.7 million people in Philadelphia.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20190204005150/en/>

Sensus smart water technology will provide the City of Philadelphia Water Department with real time access to detailed water usage data. (Photo: Business Wire)
“Our AMI deployment will provide us with real time access to detailed water usage data, enhancing our customer service and empowering our customers to better manage their water usage,” said Water Commissioner Debra McCarty. “The Sensus solution will enable our customers to receive leak detection notifications that can help avoid unexpectedly high water bills.”

The city will begin deployment of the Sensus [FlexNet® communication network](#) and approximately 480,000 [SmartPoint®](#) radio transceivers for its existing water meters over the next three years. The [Advanced Metering Infrastructure \(AMI\) solution](#) allows for daily water meter reads and the data is automatically transmitted to PWD.

“We welcome the opportunity to partner with the City of Philadelphia on its smart water journey,” said Mike McGann, Vice President, Sensus Americas. “Our solution will help streamline city water operations thanks to smart metering capabilities such as meter malfunction alerts, leak detection and tamper alarms.”
Sensus participated in the city’s successful AMI pilot demonstration last year.

About Sensus

Sensus helps a wide range of public service providers—from utilities to cities to industrial complexes and campuses—do more with their infrastructure to improve quality of life in their communities. We enable our customers to reach farther through the application of technology and data-driven insights that deliver efficiency and responsiveness. We partner with them to anticipate and respond to evolving business needs with innovation in sensing and communications technologies, data analytics and services. Learn more at sensus.com and follow @SensusGlobal on [Facebook](#), [LinkedIn](#), [Twitter](#) and [Instagram](#).

About Xylem

Xylem (XYL) is a leading global water technology company committed to developing innovative technology solutions to the world's water challenges. The Company's products and services move, treat, analyze, monitor and return water to the environment in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced infrastructure analytics solutions for water, electric and gas utilities. The Company's more than 16,500 employees bring broad applications expertise with a strong focus on identifying comprehensive, sustainable solutions. Headquartered in Rye Brook, New York with 2017 revenue of \$4.7 billion, Xylem does business in more than 150 countries through a number of market-leading product brands.

The name Xylem is derived from classical Greek and is the tissue that transports water in plants, highlighting the engineering efficiency of our water-centric business by linking it with the best water transportation of all – that which occurs in nature. For more information, please visit us at www.xylem.com.

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KEYWORD: UNITED STATES NORTH AMERICA NORTH CAROLINA
PENNSYLVANIA

INDUSTRY KEYWORD: ENERGY UTILITIES TECHNOLOGY DATA MANAGEMENT
HARDWARE SOFTWARE

SOURCE: Sensus

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Lake Tahoe's new reality: Study says Sierra Nevada snowpack to suffer sharp decline



Bill Rozak

February 6, 2019

February 6, 2019



Claire Cudahy / Tribune file photo

A recent study points to a rapidly-rising "snow line," the elevation at which rain turns to water, in the northern Sierra Nevada. Imagine Lake Tahoe with no snow year round.

Every winter storm that reaches the basin brings only rain.

No skiing. No snowboarding. No winter sports of any kind.

As unpleasant and uncomfortable a thought it is, Tahoe is staring at a drastically different future.

A dramatic decline in the Sierra Nevada snowpack will be felt the most in Northern California by mid century, according to a study published in December 2018 by the Department of Energy's Lawrence Berkeley National Laboratory (Berkeley Lab).

Those findings were reiterated Wednesday during the 23rd annual Operation Sierra Storm: "The New Reality," a national weather conference hosted on Tahoe's South Shore.



Snow total update: Storm dumps over 7 feet of snow at Lake Tahoe ski resorts



Lake Tahoe's new reality: Study says Sierra Nevada snowpack to suffer sharp decline

That new reality could send Tahoe's winter tourism economy sliding down its world-class slopes and to the bottom of the lake.

Tahoe will be 1st to feel the burn

The tallest mountain surrounding Lake Tahoe, Freel Peak, sits at 10,891 feet. Monument Peak at Heavenly Mountain Resort is the only other peak that reaches 10,000 feet surrounding the basin.

While tall, those are modest compared to other peaks in the Sierra Nevada.

Farther south, the range runs south through Yosemite National Park and grows to a top height, Mount Whitney, of 14,505 feet near Lone Pine, California.

The lower elevation mountains are why Tahoe will feel the burn of a dwindling snowpack first, according to the Berkeley Lab study.

By 2100, the study says the entire Sierra snowpack will suffer a 79 percent decline.

To reach that conclusion, lab 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 a shift in peak timing to four weeks earlier.

The peak timing is important to water managers because it indicates the start of the melt season.

The Sierra's snowpack stores a third of California's water supply and it gradually melts off in the spring into the state's managed reservoirs.

Dr. Kristie Ebi, a lead author for a special report for the Intergovernmental Panel on Climate Change, said Wednesday that limiting global warming to 1.5 degrees Celsius (2.7 Fahrenheit) from the pre-industrial era would require unprecedented societal changes, but is possible. She said having it increase to 2 degrees Celsius would have much bigger consequences.

"We're seeing incredible shifts, a completely different kind of weather pattern," Ebi, the Health and the Global Environment (CHanGE), and Rohm and Haas Endowed Profession in Public Health Services at the University of Washington said to a crowd of about 100. "In just a couple of decades, we're going to be looking at a completely different future."

Ebi was not involved with the study by the Berkley Lab.

Slopes have been Tahoe's top draw in winter

Lake Tahoe Visitor Association President and CEO Carol Chaplin says skiing and snowboarding are the biggest draws for tourists in the winter, but adds the association continues to see more non-skier activities due to additional opportunities like tubing or snow-play parks.

"I think we could make the case that our younger generations like multiple activity experiences as opposed to a singularly focused ski experience," Chaplin said.

LTVA points to 2010-11 figures from the California Ski Association, or Ski California, that say ski visitors direct spending in the Tahoe and Shasta regions account for \$742 million. There is no breakdown between the North and South shores, nor is there data available to estimate skier/snowboarder visits, although Vail Resorts has indicated online in its quarterly annual results that pass sales are up 21 percent from the previous year.

Seeing change coming, state ski trade associations, including Ski California, have joined the Outdoor Industry Association, SnowSports Industries America and National Ski Areas Association to form the Outdoor Business Climate Partnership to provide leadership on climate change — and to ratchet up political pressure.

"Our 32 member resorts in California and Nevada are thrilled to join our fellow ski states in supporting action for climate solutions," said Mike Reitzell, president of Ski California. "As an industry, we can make an impact through advocacy, innovation, and collaboration with the legislature, guests, and other industries. California enjoys the largest outdoor recreation economy in the United States; and as a state, continues to be a leader on climate initiatives. Climate action requires the efforts of many, not the few. Our ski industry will continue to be part of the solution."

Ski California has been proactive on climate change since the turn of the century when a national policy was adopted.

Ski areas are striving to reduce carbon emissions in their operations and supporting a clean energy economy.

Diamond Peak Ski Resort last year became STOKe certified, a designation designed specifically for surf and ski tourism operators. The organization is on a mission to assist resorts in developing systematic approaches to sustainability, environmental responsibility, customer loyalty and staff retention.

"Ski areas are making great strides in reducing carbon emissions in operations and supporting a clean energy economy," Chaplin said. "We all need to do our part. We all have a role to play in reducing our carbon footprints and in advocating for climate change solutions."

Chaplin's examples include developing renewable energy on-site through wind, solar, and geothermal technology; applying energy-efficient green building techniques; retrofitting existing facilities to save energy; investing in efficient snowmaking systems; replacing inefficient compressors in snowmaking operations; using alternative fuels in resort vehicle fleets; implementing anti-idling policies; and providing or promoting carpooling or mass transit use by guests and employees."

Snow lovers better come get it now

Without sweeping changes, this snow-less future is coming.

The LTVA recognized long ago that operating on a year-round basis makes good business sense and Chaplin said the revenue from the spring, summer and fall seasons continue to increase with more diverse recreation.

While measuring the snowpack in early January at Mount Rose, Natural Resources Conservation Service Nevada hydrologist Jeff Anderson said his main concern, rather than the snowpack reading that day, was the long-term trend of a [rising snowline](#).

That line is moving up the mountain at 125 feet per year, according to Anderson.

Do the math: It's time to either move to Colorado and take advantage of the higher elevation resorts or get it now while the getting is still good.

"There are big shifts happening snow tourism, in all kinds of weather-related tourism," Ebi said. "You better enjoy your time here and hope there isn't a drastic change in the next couple of decades."

SPEEDING UP INNOVATION ON THE CLOUD, SMART ENERGY WATER AND IBM SIGN MULTI-YEAR AGREEMENT

February 7, 2019

NEW ORLEANS, FEB 7, 2019 -- Smart Energy Water (SEW), a global energy and water cloud platform provider serving over 150+ utilities worldwide, has signed a multi-million dollar agreement with IBM (NYSE: IBM) to leverage the IBM Cloud for SEW platform [global deployment](#) over the next five years.

Through the new agreement, SEW will access the flexibility and scalability of the IBM Cloud to provide a common global infrastructure for their enterprise web and mobile applications. These workloads include customer engagement and mobile workforce engagement applications, online bill processing, energy efficiency and demand response applications, reward programs as well as tools for real-time data collection and management in the field. For example, a large scale energy company may turn to SEW to deploy its full digital customer and workforce engagement platform with IBM Cloud. SEW can now scale its services faster, more easily and at global scale to help the company meet the fluctuating demand of its customers.

This agreement comes as SEW looks to grow its business and tap into advanced offerings like [analytics](#), Artificial Intelligence (AI), machine learning and Internet of Things (IoT). By hosting these workloads on the IBM Cloud, SEW can gain more value from its data and accelerate the development of new tools that can help improve efficiency and engage customers in new and personalized ways.

The energy and utilities industry is grappling with an aging infrastructure, growing client demand for affordable, reliable and environmentally sustainable electricity, as well as stringent government mandates on energy efficiency and water conservation. These challenges, coupled with the growing expectations of today's tech-savvy consumers, have driven a rapid need for change and are forcing many utilities to create new business platforms and tap new technologies to solidify a competitive advantage.

"Consumers are open to new ways of engaging with their utility," said Harman Sandhu, President Smart Energy Water. "Together with IBM, we can deliver solutions at large scale that help utilities lower the cost-to-serve by moving customers from the call center to lower-cost digital channels, personalize service to increase overall customer satisfaction, and target customers for the right opportunities for value-added programs and services."

The SEW and IBM agreement also provides a platform to jointly expand accretive and complementary go-to-market efforts globally.

"Smart Energy Water is anticipating the major impact connected technologies will have on their customers business," said Brad Gammons, global managing director, IBM Energy, Environment and Utilities. "By investing in data, their workers can do their job better than ever before and customers will have access to self-service capabilities that can help improve client service."

From managing renewables' fluctuating energy levels to bringing new efficiency tools to consumers, utility providers are increasingly turning to hybrid multicloud solutions to help meet the demands of a more sustainability-focused, digital society. TenneT Energy, Ista UK, and Hydro Ottawa have recently turned to the IBM Cloud to help them build new customer services, save money, and generate revenue.

For more information about IBM Cloud's work with energy and utilities visit:
<https://www.ibm.com/industries/energy>.

Sheriff's Office: Keep eye on backflow devices in wake of thefts

By Staff/WCSO Release |
Posted: Fri 1:52 PM, Feb 08, 2019 |
Updated: Sat 12:48 PM, Feb 09, 2019



SPANISH SPRINGS, Nev. (KOLO) - Washoe County Sheriff's Office detectives are investigating two reports of backflow devices stolen from commercial properties in north Spanish Springs in late January 2019.

The thefts occurred sometime between Tuesday, January 22, and Wednesday, January 23 and were detected when tenants of the property noticed water wasn't available to them.

The Sheriff's Office says, "These thefts serve as a reminder to all residents to keep an eye on their water systems during the winter months. Typically metal thieves target irrigation systems after they have been turned off for the winter. It is not uncommon for the Sheriff's Office to start receiving reports of stolen back flow prevention valves in the spring, as residents and businesses begin turning their water systems back on and detect the theft."

Residents are encouraged to take time now to check their water systems and report any thefts to the Sheriff's Office [online here](#).

The Sheriff's Office says, "Thieves target back flow prevention valves because they can get a nice piece of brass for very little effort."

Here are WCSO tips to help protect against metal theft:

- Secure foundation openings in the crawl space of your house with a good hasp and padlock.
- If possible, build a small chain link fence or cage enclosures around the outside portions of your commercial fixtures, heating and cooling systems.
- Don't store scrap metals outside, or within view of people passing by.
- Contact local law enforcement if you see any suspicious activity.
- Check your business and residential properties regularly.

Keep a close eye on your irrigation systems and on vacant homes and businesses in your neighborhood.

Anyone with information about the recent thefts in Spanish Springs is asked to contact the Washoe County Sheriff's Office Detective Division at (775) 328-3320 or Secret Witness at (775) 322-4900. Refer to cases WC19-50054 and WC19-50055.

Secret Witness is offering a \$250 reward for information.

WCSO warning Spanish Springs residents of backflow devices being stolen

by News 4 & Fox 11 Digital Team

Saturday, February 9th 2019

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WCSO warning Spanish Springs residents of backflow devices being stolen

Washoe County Sheriff's Office detectives are investigating two reports of backflow devices stolen from commercial properties in north Spanish Springs in late January.

According to the sheriff's office, the thefts occurred sometime between Tuesday, January 22, and Wednesday, January 23 and were detected when tenants of the property noticed that water wasn't available.

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It is not uncommon for the Sheriff's Office to start receiving reports of stolen back flow prevention valves in the spring, as residents and businesses begin turning their water systems back on and detect the theft.

Area residents are encouraged to take time now to check their water systems and report any thefts to the Sheriff's Office online at WashoeSheriff.com.

Thieves target back flow prevention valves because they can get a nice piece of brass for very little effort. Here are some tips to help protect against metal theft:

- Secure foundation openings in the crawl space of your house with a good hasp and padlock.
- If possible, build a small chain link fence or cage enclosures around the outside portions of your commercial fixtures, heating and cooling systems.
- Don't store scrap metals outside, or within view of people passing by.
- Contact local law enforcement if you see any suspicious activity.
- Check your business and residential properties regularly.
- Keep a close eye on your irrigation systems and on vacant homes and businesses in your neighborhood.

Secret Witness is offering a reward in the amount of \$250.00 for information leading to the arrest and prosecution of the suspect(s) wanted in connection with this case.

Anyone with information about the recent thefts in Spanish Springs is asked to contact the Washoe County Sheriff's Office Detective Division at (775) 328-3320 or Secret Witness at (775) 322-4900. Refer to cases

Pune partners with smart meter provider Sensus on 24x7 water project

Pune plans to install more than 275,000 iPERL meters over a three year period, and aims to reduce its non-revenue water by half during this time.

Sensus Feb 11th 2019

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Sensus, a Xylem brand, has been selected as Larsen & Toubro's (L&T) technology partner to ensure the successful implementation of Pune Municipal Corporation's (PMC) innovative 24x7 water distribution project. Aiming to supply continuous water supply and significantly reduce water loss, PMC has invested in over 275,000 Sensus iPERL smart water meters to monitor, measure and manage activity across its network.

As the first city in India to implement a programme aligned to the country's Smart City Mission, PMC was motivated by the exponential growth in its population over the last decade and subsequent strain on its water supply. In order to meet the growing demand and future-proof against a potential water crisis, PMC launched its water distribution project to ensure it could deliver continuous water supply to its inhabitants.

Commenting on the deployment, V. G. Kulkarni, Chief Engineer, Pune Municipal Corporation, said, "We are extremely proud to be the first Indian city to deploy cutting-edge smart water meters. This is just the first step on our journey towards making Pune a more sustainable and self-sufficient city committed to conserving water. We are confident that Sensus is the right partner to ensure we achieve these goals."

Pune plans to install more than 275,000 iPERL meters over a three year period, and aim to reduce its non-revenue water by half during this time. "The investment in smart technology presents a tremendous opportunity for PMC to gain an in-depth understanding of the network and respond accordingly to improve its performance," said Tom Mills, Vice President, Strategic Solutions at Sensus. "We are delighted to be working with PMC and L&T and hope other cities follow in their footsteps."