



TRUCKEE MEADOWS WATER AUTHORITY
Board of Directors

AGENDA

Wednesday, August 15, 2018 at 10:00 a.m.
Sparks Council Chambers, 745 4th Street, Sparks, NV

Board Members

Chair Vaughn Hartung
Member Neoma Jardon
Member Jenny Brekhus
Member Kristopher Dahir

Vice Chair Ron Smith
Member Bob Lucey
Member Naomi Duerr

NOTES:

1. The announcement of this meeting has been posted at the following locations: Truckee Meadows Water Authority (1355 Capital Blvd., Reno), Reno City Hall (1 E. First St., Reno), Sparks City Hall (431 Prater Way, Sparks), Sparks Justice Court (1675 E. Prater Way, Sparks), Washoe County Courthouse (75 Court St., Reno), Washoe County Central Library (301 South Center St., Reno), Washoe County Administration (1001 East Ninth St., Reno), at <http://www.tmwa.com>, and State of Nevada Public Notice Website, <https://notice.nv.gov/>.
2. In accordance with NRS 241.020, this agenda closes three working days prior to the meeting. We are pleased to make reasonable accommodations for persons who are disabled and wish to attend meetings. If you require special arrangements for the meeting, please call (775) 834-8002 at least 24 hours before the meeting date.
3. Staff reports and supporting material for the meeting are available at TMWA and on the TMWA website at <http://www.tmwa.com/meeting/> or you can contact Sonia Folsom at (775) 834-8002. Supporting material is made available to the general public in accordance with NRS 241.020(6).
4. The Board may elect to combine agenda items, consider agenda items out of order, remove agenda items, or delay discussion on agenda items. Arrive at the meeting at the posted time to hear item(s) of interest.
5. Asterisks (*) denote non-action items.
6. Public comment is limited to three minutes and is allowed during the public comment periods. The public may sign-up to speak during the public comment period or on a specific agenda item by completing a "Request to Speak" card and submitting it to the clerk. In addition to the public comment periods, the Chairman has the discretion to allow public comment on any agenda item, including any item on which action is to be taken.
7. In the event the Chairman and Vice-Chairman are absent, the remaining Board members may elect a temporary presiding officer to preside over the meeting until the Chairman or Vice-Chairman are present (**Standing Item of Possible Action**).
8. Notice of possible quorum of Western Regional Water Commission: Because several members of the Truckee Meadows Water Authority Board of Directors are also Trustees of the Western Regional Water Commission, it is possible that a quorum of the Western Regional Water Commission may be present, however, such members will not deliberate or take action at this meeting in their capacity as Trustees of the Western Regional Water Commission.

1. Roll call*
2. Pledge of allegiance*
3. Public comment — limited to no more than three minutes per speaker*
4. Approval of the agenda (**For Possible Action**)

¹The Board may adjourn from the public meeting at any time during the agenda to receive information 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 June 20, 2018 meeting of the TMWA Board of Directors **(For Possible Action)**
6. Presentation of the Bureau of Reclamation Truckee Basin Study — Arlan Nickel (USBR) and Laine Christman, TMWA*
7. Presentation of preliminary fiscal year 2018 unaudited financial performance — Matt Bowman*
8. Discussion and action, and possible designation of authorized representatives to request distributions from Retirement Benefits Investment Funds (RBIF) of the Truckee Meadows Water Authority Post-Retirement Medical Plan & Trust and the Section 115 OPEB Trusts and provide wire instructions to NV PERS — Michele Sullivan **(For Possible Action)**
9. Discussion and action, and possible direction to staff regarding the update to TMWA Financial Management and Reserve Policy, and the rate stabilization fund — Michele Sullivan **(For Possible Action)**
10. Discussion and action, and possible direction to legal counsel regarding negotiation of possible extension of employment agreement with general manager — Michael Pagni **(For Possible Action)**
11. General Manager's Report*
12. Public comment — limited to no more than three minutes per speaker*
13. Board comments and requests for future agenda items*
14. Adjournment **(For Possible Action)**

¹The Board may adjourn from the public meeting at any time during the agenda to 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.

TRUCKEE MEADOWS WATER AUTHORITY
DRAFT MINUTES OF THE JUNE 20, 2018
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Wednesday, June 20, 2018, at Sparks Council Chambers, 745 4th Street, Sparks, Nevada. Chair Martini called the meeting to order at 10:00 a.m.

1. ROLL CALL

Members Present: Jenny Brekhus, **Alternate Kristopher Dahir, Naomi Duerr, Vaughn Hartung, ***Bob Lucey, *Geno Martini and Ron Smith.

Members Absent: Neoma Jardon

A quorum was present.

* *Chair Martini left at 10:07 a.m.*

***Alternate Member Dahir stepped in at 10:07 a.m.*

****Member Lucey left at 11:54 a.m.*

2. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Member Lucey.

As chairman, Chair Martini moved up agenda item #13 and #6.

13. DISCUSSION AND ACTION ON NOMINATION AND ELECTION OF CHAIRMAN AND VICE CHAIRMAN OF TMWA BOARD OF DIRECTORS AND REQUEST FOR BOARD ADOPTION OF RESOLUTION NO. 264 APPOINTING A CHAIRMAN AND VICE CHAIRMAN FOR FISCAL YEAR 2019

Member Smith motioned to nominate Vice Chair Hartung, since he had done a decent job filling in for current Chair Martini, as Chair to the TMWA Board of Directors for fiscal year 2019.

Upon motion by Member Smith, second by Member Lucey, which motion duly carried by unanimous consent of the members present, the Board approved the nomination of Vaughn Hartung as Chairman of TMWA Board of Directors for fiscal year 2019.

Chair Martini motioned to nominate Member Smith as Vice Chair to the TMWA Board of Directors for fiscal year 2019.

Upon motion by Chair Martini, second by Member Lucey, which motion duly carried by unanimous consent of the members present, the Board approved the nomination of Ron Smith as Vice Chairman of TMWA Board of Directors for fiscal year 2019.

Chair Martini formally submitted his resignation as Chairman of TMWA's Board of Directors and thanked past and current board members, and TMWA staff (see attached).

Public Comment

Tammy Holt-Still, Lemmon Valley-Swan Lake Recovery Committee, expressed disappointment regarding the replacement of Commissioner Jeanne Herman with Commissioner Bob Lucey on the TMWA Board of Directors. Her concern is Commissioner Lucey is not from the north valleys and so is not able to represent the issues in that area fully.

6. PRESENTATION OF APPRECIATION AND RECOGNITION TO CHAIRMAN GENO MARTINI FOR SERVICE ON THE TMWA BOARD OF DIRECTORS

Mark Foree, TMWA General Manager, expressed deep gratitude and appreciation to Chair Martini for his many years of service and dedication to the community, TMWA Board of Directors and support of TMWA staff.

Chair Martini thanked Mr. Foree for his comments and gratitude.

No requests were made for Public Comment

3. PUBLIC COMMENT

Ms. Holt-Still stated TMWA does not have transparency. She addressed a comment on the Silver Knolls Facebook page addressing the activity in Lemmon Valley. Bird Seismic company, is mapping underground aquifer in Lemmon Valley for future development, but no information is being provided and residents of Lemmon Valley would like the reports made available and public. (see attached).

4. APPROVAL OF THE AGENDA

Vice Chair Hartung suggested to move agenda item #16 after hearing agenda item #5.

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

5. APPROVAL OF THE MINUTES OF THE MAY 23, 2018 MEETING

Upon motion by Member Lucey, second by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board approved the May 23, 2018 minutes.

16. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

Vice Chair Hartung thanked TMWA and staff, as well as the Sheriff's office, City of Sparks and Washoe County staff on a phenomenal job fixing the main break on Friday, June 15, 2018 on Vista Boulevard at Peppergrass, which closed northbound Vista Blvd. and caused long traffic delays. TMWA staff followed protocol and worked through the night to restore water as quickly as possible, while at the same time avoiding a high pressure gas main right next to the water main.

7. DISCUSSION AND ACTION, AND POSSIBLE DIRECTION TO STAFF REGARDING THE "STATEMENT OF INTEREST" SOLICITATION AND FOR THE POSSIBLE SALE, TRANSFER OR OTHER DISPOSITION OF ALL OF THE FARAD PROPERTY AND ACTION AND DIRECTION TO GENERAL MANAGER ON POSSIBLE GRANT OF RECREATIONAL EASEMENT ACROSS FARAD PROPERTY TO TAHOE-PYRAMID TRAIL INC., A NEVADA NONPROFIT CORPORATION

Pat Nielson, TMWA Distribution, Maintenance & Generation Director, and John Zimmerman, TMWA Water Resources Manager, presented on this agenda item. Mr. Nielson stated they obtained a cost for an appraisal (approximately \$7,500-\$15,000), staff met with Nevada County (the property is currently zoned for open space and there are many restrictions on development), to rezone the property would require changing the master plan, then would require a process to rezone (a timeline of six months – four years), and rezoning would require dedication of the Tahoe-Pyramid Trail (trail) as they want continuity of trails in the area (part of the Nevada County master plan). Mr. Nielson recommended staff publish a request for proposals (RFP) to solicit offers to purchase the property and bring back to the Board for their review. Mr. Zimmerman added TMWA owns property upstream and downstream of the Farad property parcels: in 2007, TMWA granted an access agreement to the trail downstream of Farad; the Truckee Donner Land Trust (TDLT) has an easement upstream to keep the property in its natural state; Nevada County would require continued access to the river and any zoning changes would require continued access to the river by the public.

Discussion followed regarding if the condition of title as it exists today would prevent interested parties from purchasing the property (it would be a question for the buyer and what their intended purpose would be); addressing the Nevada County development code and non-conforming uses related to historical structures; allow for seasonal use to continue; granting conservation easement for the property (it would depend on who purchases the property); and officially granting a permanent easement to the trail.

Member Duerr reported that she received several letters by constituents in support of granting a permanent easement for the trail.

Public Comment

Janet Phillips, Tahoe-Pyramid Trail President, stated she has support from both Sierra and Nevada counties for the trail, the trail from Reno to Truckee will be completed in the fall, approximately 20 people were in the audience to show their support for a permanent easement, and expressed the importance of receiving a permanent (even a relocatable) easement for legal purposes.

Kathy Englar, TDLT representative, stated they submitted a letter of interest on February 28, 2018 and are still interested in acquiring the land for conservation and recreation purposes (their mission), fully support the trail, and would like to schedule a follow-up meeting to discuss next steps.

Warner Griswold, Reno resident, stated he worked at Sierra Pacific Power Company in the plant accounting area. Mr. Griswold suggested conducting an environmental assessment of the property and showed support for the trail.

Elaine Alexander, Reno resident, expressed support of, and thanked the Board for also voting in support of, the trail.

End of Public Comment

Member Brekhus recommended staff work with the TDLT to see what they are willing to do, consider restoring the hydro building to solicit interest for historical purposes, and not recommend going out for an RFP.

Discussion followed regarding risks associated with granting an easement prior to cleaning up the area; General Counsel Michael Pagni said if TMWA granted an easement it would still own the property, but liability would depend on the language of the easement; Liberty Utilities' interest in the property (they have a permanent easement for a portion of the property); liability to property owners who grant recreational easements is limited somewhat by California law; the length of time it would take to re-zone (up to four years); not recommend a relocatable easement, for the trail; and the importance of getting an appraisal for the property.

Upon motion by Member Brekhus second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved: 1. The permanent relocatable easement for the Tahoe-Pyramid Trail; 2. Begin conversation with the Truckee Donner Land Trust and return a recommendation to the Board; and 3. Obtain an appraisal for the property.

8. DISCUSSION AND ACTION, AND POSSIBLE DIRECTION TO STAFF REGARDING POSSIBLE APPROVAL OF THE RETURN FLOW MANAGEMENT AGREEMENT BETWEEN CITY OF RENO, CITY OF SPARKS, TAHOE-RENO INDUSTRIAL GENERAL IMPROVEMENT DISTRICT (TRIGID) AND TMWA

RELATED TO USE OF TMWA RETURN FLOW RESOURCES AND WATER MANAGEMENT OF WATER RESOURCES IN CONNECTION WITH RENO AND SPARKS DELIVERY OF TREATED EFFLUENT TO RENO TAHOE INDUSTRIAL CENTER

John Enloe, TMWA Natural Resources & Planning Director, presented the draft agreement for the Board to approve the Return Flow Management Agreement (RFMA) with the Cities of Reno and Sparks, and Tahoe-Reno Industrial General Improvement District (TRIGID). Permitting, modelling, design and construction of the treated effluent facilities to Reno Tahoe Industrial Center remains to be completed. TMWA continues to act as facilitator of the agreement. One recent change in the agreement is to pool all parties' resources and manage them as one; to the benefit of all.

The Board discussed the agreement as being beneficial to all and expressed satisfaction with TMWA's role; the meaning of 'community resources' with regards to satisfying the return flow requirement; the length of the 10-year notice period to terminate the agreement (this allows time by all parties to adequately plan for the termination); how this agreement relates to Truckee Meadows Water Reclamation Facility (TMWRF) expansion; and perceived competition from TRIGID in obtaining Truckee River water rights (TRIGID was seen as competition. This agreement does not preclude them from acquiring other water rights. However, TRIGID will cooperate in good faith with TMWA to minimize its acquisitions for any purpose); if the resource fee was different for surface and groundwater (if TMWA were to modify its groundwater operations it would charge TRIGID \$29 per AF for TMWA's additional operating costs); if TRIGID would treat the reclaimed water to a higher standard (yes, higher than Class B); addressed concerns regarding TROA and hiring outside attorneys and if TMWA would be compensated for legal fees in the agreement (yes, TMWA will be reimbursed for legal fees, administrative time and modelling costs).

Michael Pagni, TMWA General Counsel, added section 47 of the agreement speaks to limitations on liability for TMWA and includes indemnity for any claims arising from or related to TMWRF reclaimed water supply.

Public Comment

Chris Mixon, attorney for the Pyramid Lake Paiute Tribe (PLPT), expressed that the Tribe has concerns with this project, but believe they can be addressed, amid reassurances from Mr. Pagni that TMWA will continue to work with PLPT.

Upon motion by Member Brekhus second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board recommended to authorize the General Manager to execute the Return Flow Management Agreement between City of Reno, City of Sparks, Tahoe-Reno Industrial General Improvement District (TRIGID) and TMWA related to use of TMWA return flow resources and water management of water resources in connection with Reno and Sparks delivery of treated effluent to Reno Tahoe Industrial Center.

9. DISCUSSION AND ACTION, AND POSSIBLE DIRECTION TO STAFF REGARDING POSSIBLE APPROVAL OF WATER RIGHTS MANAGEMENT AGREEMENT BETWEEN THE TAHOE-RENO INDUSTRIAL GENERAL IMPROVEMENT DISTRICT (TRIGID), NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) AND TMWA RELATED TO MANAGEMENT OF WATER RESOURCES IN CONNECTION WITH RENO AND SPARKS DELIVERY OF TREATED EFFLUENT TO RENO TAHOE INDUSTRIAL CENTER

Mr. Enloe presented the agreement with TRIGID, TMWA and the Nevada Department of Transportation (NDOT). NDOT owns water rights which they have not proven title to and are willing to provide up to 2,200 AF of water rights for the RFMA and to be managed by TMWA. NDOT has been quick to work with and they have already signed the agreement.

Upon motion by Member Duerr second by Member Smith, which motion duly carried by unanimous consent of the members present, the Board approved to authorize the General Manager to execute the Water Rights Management Agreement between the Tahoe-Reno Industrial General Improvement District (TRIGID), Nevada Department of Transportation (NDOT) and TMWA related to management of water resources in connection with Reno and Sparks delivery of treated effluent to Reno Tahoe Industrial Center.

10. DISCUSSION AND ACTION, AND POSSIBLE DIRECTION TO STAFF REGARDING THE METER RETROFIT FUND PROGRAM AND POSSIBLE FUTURE AMENDMENT TO METER RETROFIT FEE UNDER TMWA RULE 7THERE WAS NO PUBLIC COMMENT.

Mr. Zimmerman stated the Board directed staff to reserve the current amount in the meter fund for future retrofits for the reason the fee was collected and to go back to the TMWA's Standing Advisory Committee to identify specific uses for projects put under the broad category of drought resiliency or water resource sustainability. As of April 30th, there is about \$3.9 million in the retrofit fund; the fee will continue to be collected until it has officially changed.

Discussion followed regarding whether the fees applied to residential properties only (fees are applied to new or expanded service all customer classes); consider incorporating case studies of what other utilities have done and how this compares to other TMWA fees (this can be incorporated into the analysis as part of the review process and presented to the respective organizations during the public process); the possibility of rolling the meter retrofit fee into area/connection fees (it would not be beneficial since some projects benefit the entire system instead of area-by-area); consider ending the meter retrofit fee program and start another program when there is a need (staff considered this option, but the original purpose of the retrofit program was for conservation. This is still the case, but converting it to a much broader purpose); and future meter retrofits would end up costing more than what the yield would be.

Upon motion by Member Brekhus second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved staff to move forward with proposals to broaden the fee purpose for drought resiliency and water resources sustainability, proceed with the public process and present to the Board their final recommendation.

Vice Chair Hartung suggested hearing agenda items #11 and #12 together for sake of time. Mr. Pagni confirmed that is acceptable.

11. STATUS REPORT ON EXTENSION OF THE TMWA WATER SYSTEM INTO THE VERDI AREA

12. DISCUSSION AND ACTION, AND POSSIBLE DIRECTION TO STAFF REGARDING STATUS OF NEGOTIATIONS AND APPROVAL OF REVISED TERMS OF AGREEMENT WITH WEST RENO WATER COMPANY FOR THE ACQUISITION OF THE WEST RENO WATER SYSTEM, AND UPDATE ON STATUS AND POSSIBLE DIRECTION TO STAFF REGARDING ANCILLARY AGREEMENT WITH BCH GAMING RENO AND AGREEMENT WITH BT SOUTH LLC AND RENO LAND DEVELOPMENT RELATED TO WEST RENO WATER SYSTEM AND FACILITIES ACQUISITION

Scott Estes, TMWA Engineering Director, provided a status update: portions of the Verdi water supply facilities have been constructed; construction of the Verdi Main Extension has been delayed due to lack of easements through the River Oaks subdivision; the Washoe County School District has applied for a Drinking Water State Revolving Fund (DWSRF) principle forgiveness loan to extend a water main to the Verdi Elementary School (which will be expanded); and the West Reno Water Company acquisition agreement continues to be reviewed and revised by both parties.

Mr. Enloe informed the Board, since the initial presentation of agreement five months ago, that the agreement with West Reno Water Company, as well as the casing acquisition agreement, are both signed. Mr. Foree added the agreements were signed today.

Member Duerr stated the Meridian 120 project has not been approved due to the condition in the City of Reno code that required the use of surface water and if conjunctive use of surface and groundwater meet the condition. Mr. Enloe replied that it was brought to TMWA staff's attention, but it is now up to the City of Reno to determine what the condition means and to inform staff.

Member Brekhus said the issue is the infrastructure project that can allow development to occur. She requested TMWA staff's expertise and assistance as the City of Reno staff is taxed and have not been able to address the financing special assessment district concept.

Mr. Enloe stated TMWA wants reaffirmation of the acquisition agreement with changes to costs which are now TMWA's cost burden, which can be recouped in connection fees. The other unknown is the Public Utilities Commission (PUC) costs, which have yet to be determined.

Mr. Pagni added costs must be agreed upon during due diligence, and if not, TMWA can terminate the agreement.

Vice Chair Hartung wants to ensure TMWA current rate payers are not adversely impacted.

Upon motion by Member Duerr second by Member Smith, which motion duly carried by unanimous consent of the members present, the Board approved the revised terms of agreement with West Reno Water Company for the acquisition of the West Reno water system, and the ancillary agreement with BCH Gaming Reno and agreement with BT South LLC and Reno Land Development related to West Reno water system and facilities acquisition.

14. GENERAL MANAGER'S REPORT

Mr. Foree reported that TMWA's hydro generation revenue has broken a new record, \$3.65 million, \$100,000 over the previous record and we still have six weeks until year end. He thanked the Board for being very supportive of the hydro generation facilities and commended the hydro crew on a great job.

Vice Chair Hartung said no other organization in the region has an outside revenue source like this.

Mr. Nielson added they anticipate reaching \$3.75 million by fiscal year end.

Mr. Foree also informed the Board of the TMWA Annual Summer BBQ on Saturday, July 14th and recommended to cancel the July 18th Board meeting.

15. PUBLIC COMMENT

There was no public comment.

16. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

There were no Board comments.

17. ADJOURNMENT

With no further discussion, Vice Chair Hartung adjourned the meeting at 11:55 a.m.

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

Sonia Folsom, Recording Secretary

**Chair Martini was present for agenda items 1, 2, 4, 6 and 13 only.*

*** Alternate Member Dahir was present for agenda items 3, 5, thru 17 only.*

****Member Lucey was present for agenda items 1 thru 15 only.*

DRAFT



June 20, 2018

Mark Foree, General Manager
Truckee Meadows Water Authority
1355 Capital Boulevard
Reno, NV 89502

RE: Resignation, Chairman of the Board of Directors

Dear Mark,

Please accept this correspondence as my formal resignation as Chairman of the Board of Directors of the Truckee Meadows Water Authority.

Rest assured that I have enjoyed the time I have spent as Chairman and Director of TMWA over the past 13 years., with four of those as Chairman of the Board.

I would like to thank the past and present Board of Directors, the great management team and most of all – the terrific employees that allow TMWA to operate as the well-oiled machine that it is.

With warm regards,

A handwritten signature in black ink, appearing to read "Geno R. Martini". The signature is fluid and cursive, with a large, stylized "G" and "M".

Geno R. Martini,
Mayor

Chairman and Director of Truckee Meadows
Water Authority, Board of Directors



Seismic Refraction

Seismic refraction, MASW and SASW for engineering and environmental projects

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2D and 3D seismic data acquisition

2D and 3D seismic data acquisition in all types of terrain and conditions, shallow and deep targets

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High Resolution Surveys

High resolution surveys for shallow and near surface features (voids, tunnels, fractures and aquifer mapping)

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Tracy Grauberger is 🤔 feeling curious.

June 11 at 1:21pm

We noticed a few trucks along the Lemmon Valley dirt extension at American Flat, so we stopped and asked what they were working on. The company is called Bird Seismic and they have been contracted to map the underground aquifer in that area for future development. They couldn't give us any juicy details, so not sure if this is part of an environmental impact study or they are just looking to suck all the water from the neighbors.

RECLAMATION

Managing Water in the West



TRUCKEE BASIN STUDY

Reclamation Mid-Pacific Region Truckee Meadows Water Authority

August 15, 2018
Reno, NV



Basin Studies - Mandated Elements

P.L. 111-11 *The SecureWater Act*:

- Each Basin Study “will assess specific climate-related risks to water supplies in each Basin including”:
 - Changes in snowpack
 - Changes in timing and quantity of runoff
 - Changes in groundwater recharge and discharge
- Any increase in:
 - Demand for water due to increasing temperatures
 - Rates of reservoir evaporation



Basin Study Partners



Quick Orientation



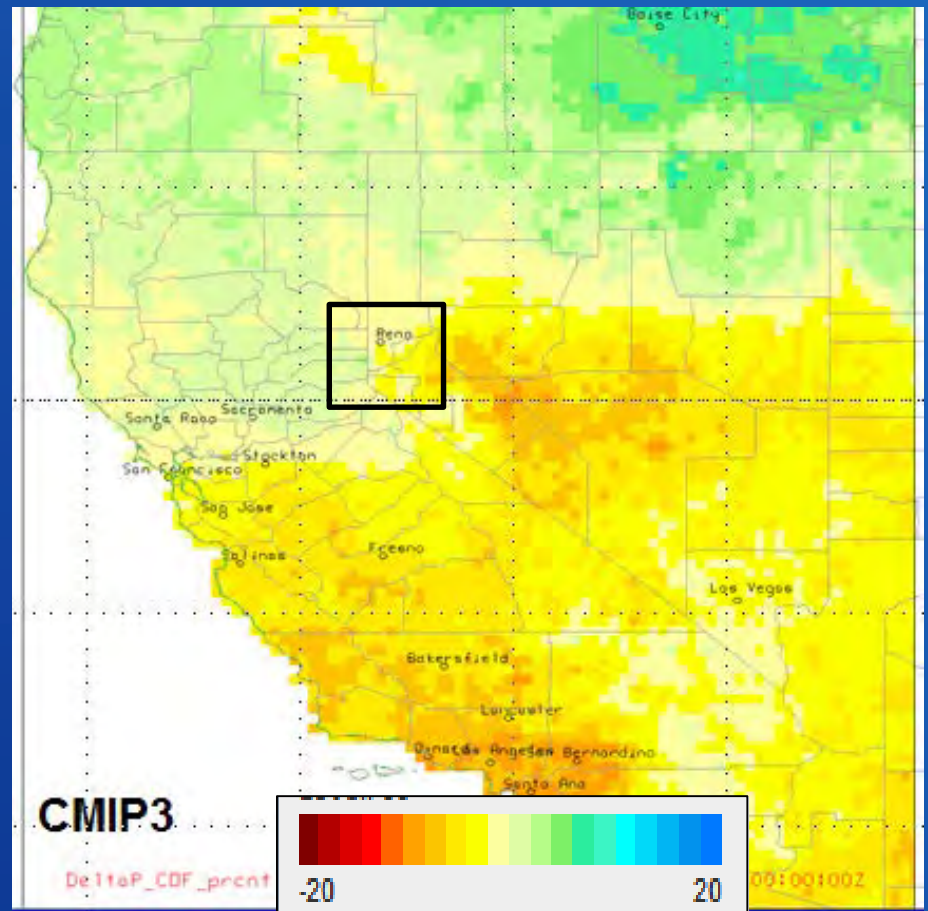
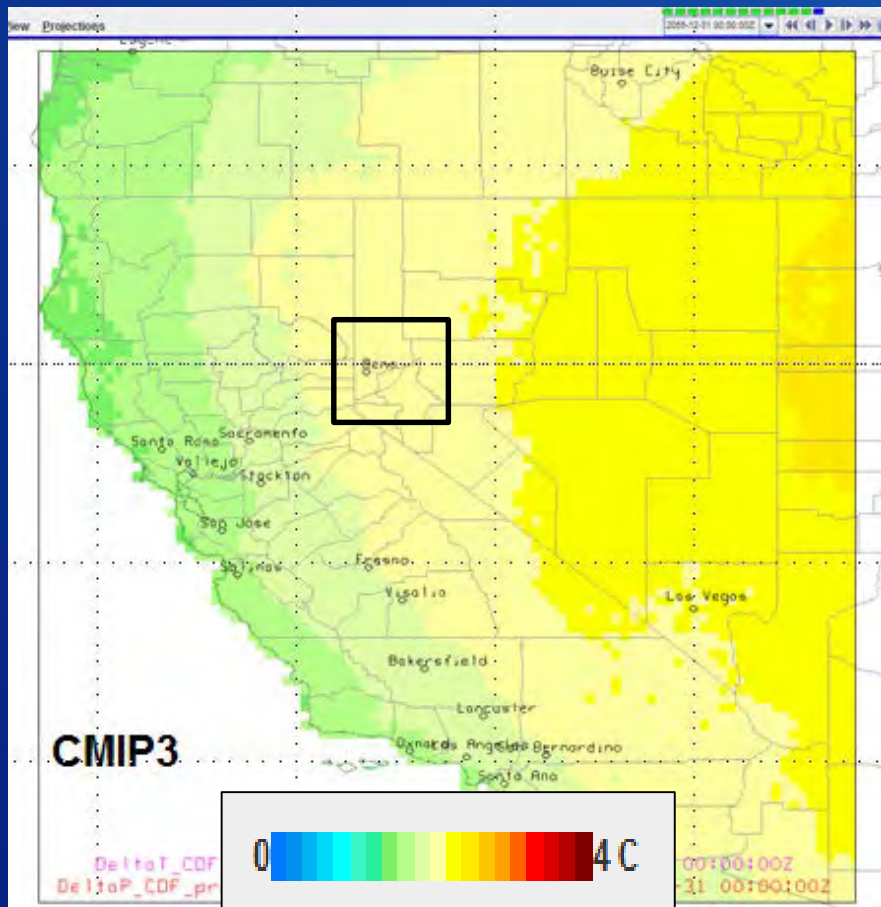
- 3,060 sq. miles
- 90% of flow originates in California
- 121 miles from Lake Tahoe to Pyramid Lake
- Derby Dam & Truckee Canal link the Truckee and Carson basins

Changes in the Truckee Basin that Drive Key Vulnerabilities

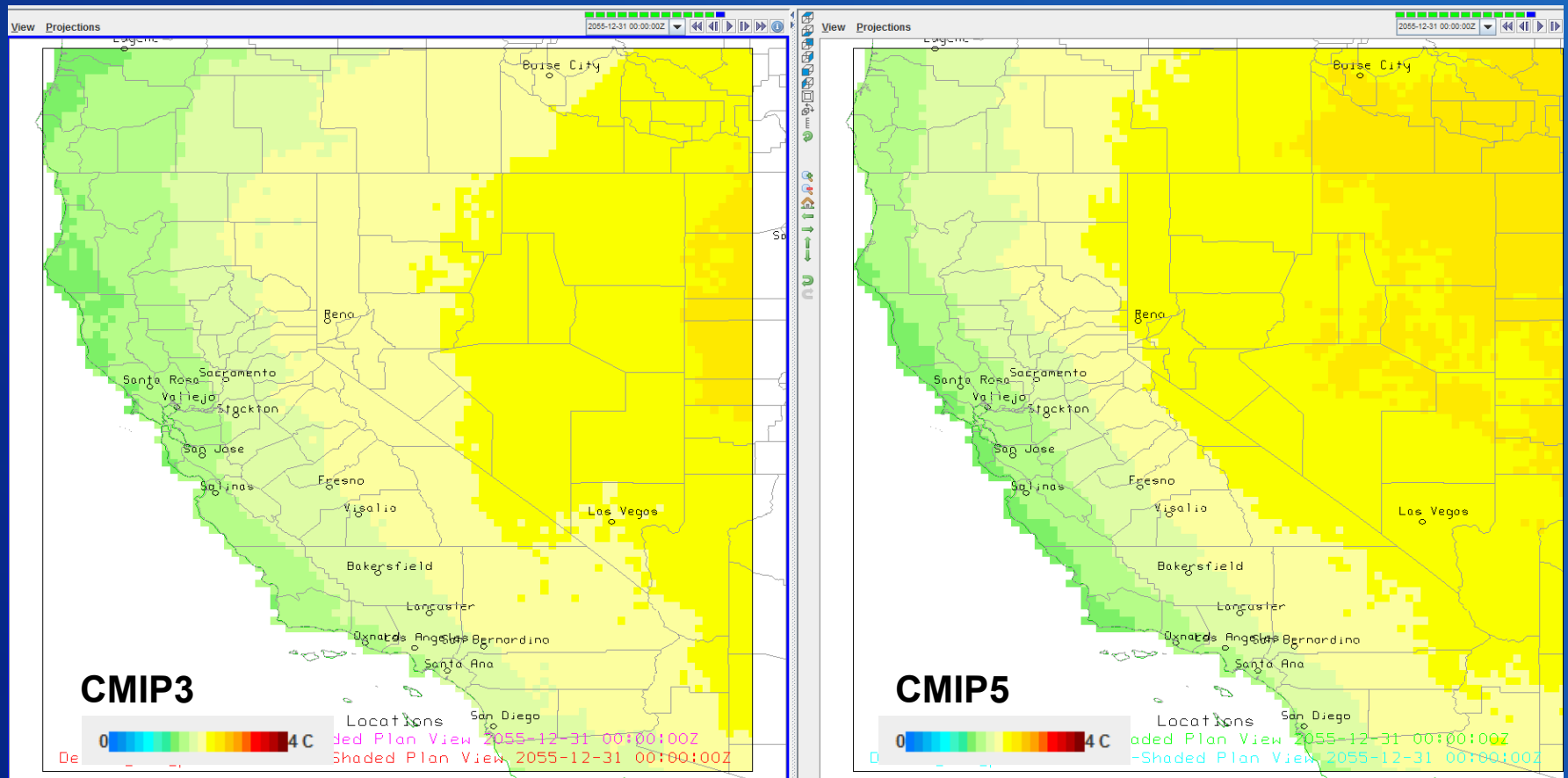


- **Changes in Supplies**
 - Less snow and earlier runoff
 - Higher rates of reservoir evaporation
- **Changes in Demands**
 - Earlier growing season
 - Potential changes in ecosystem needs

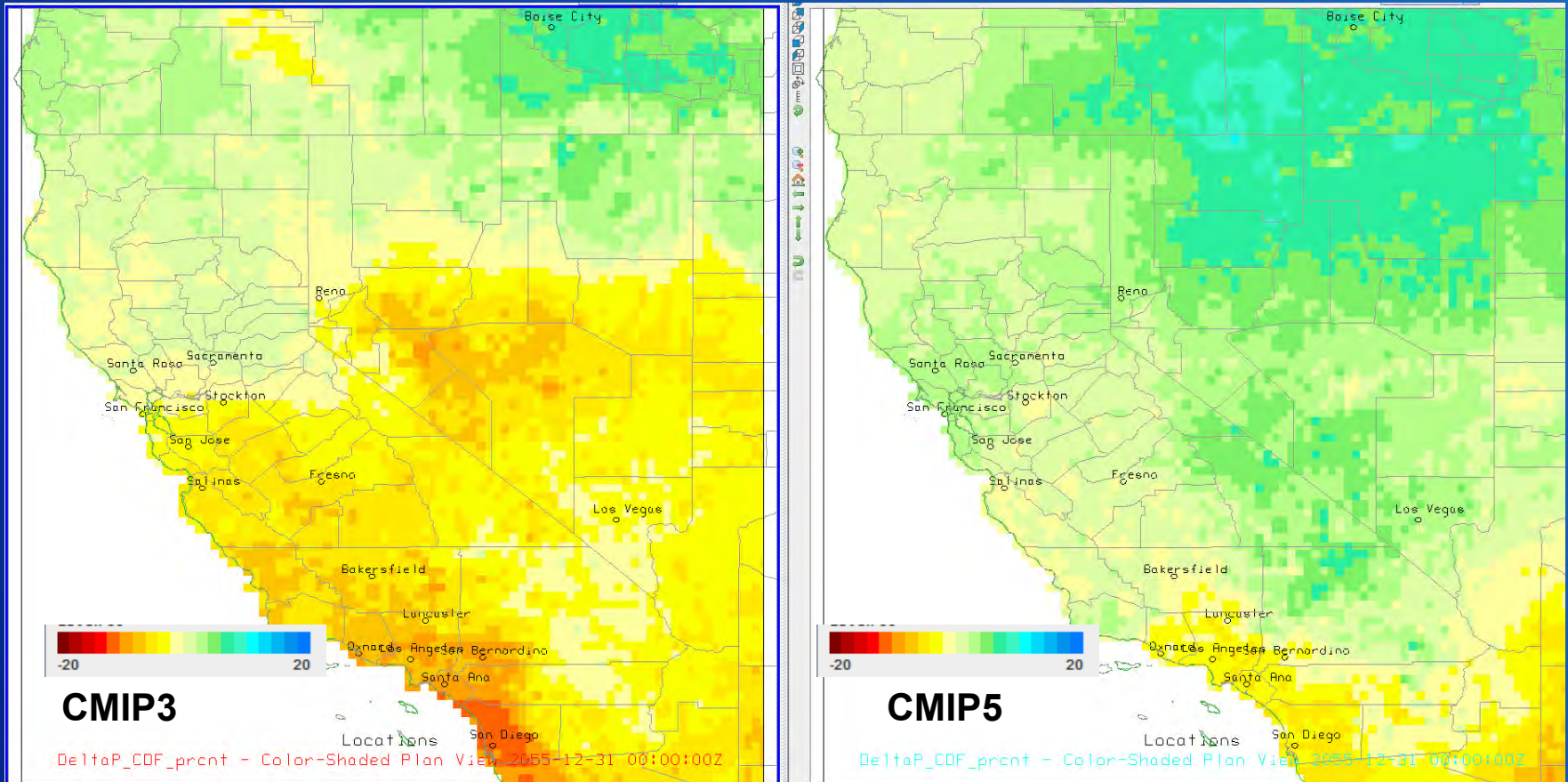
Median Projected Changes in Annual Temperature (C°) and Precipitation (%) by Mid-Century - CMIP3 Projections



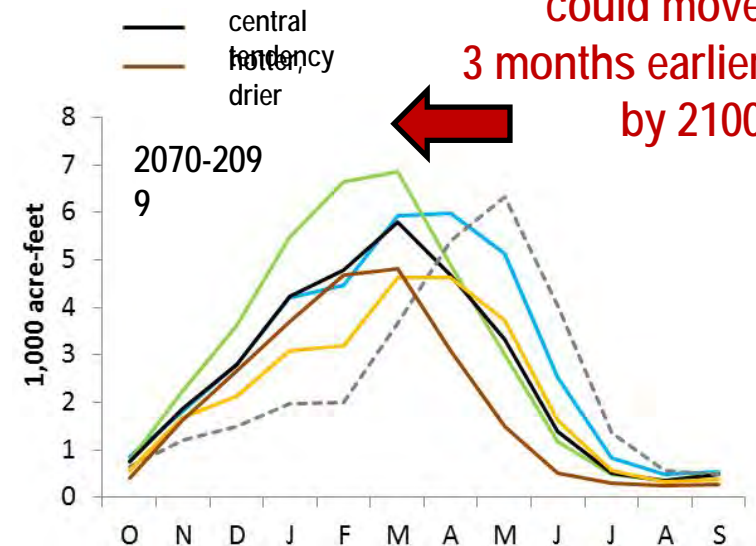
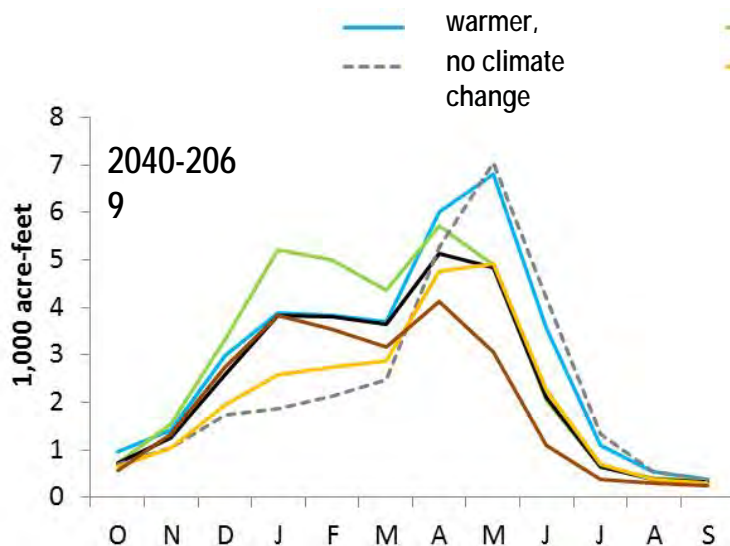
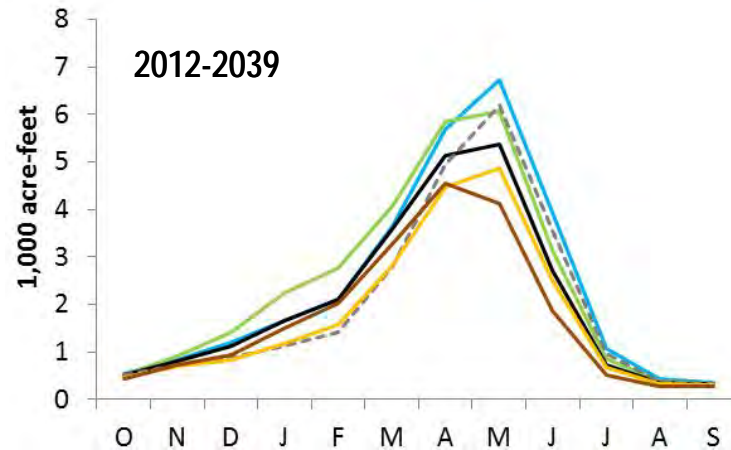
CMIP3 Vs CMIP5: Comparison of Median Projected Changes (°C) in Annual Mean Temperature by Mid-Century between CMIP3 (left) and CMIP5 (right) Ensembles

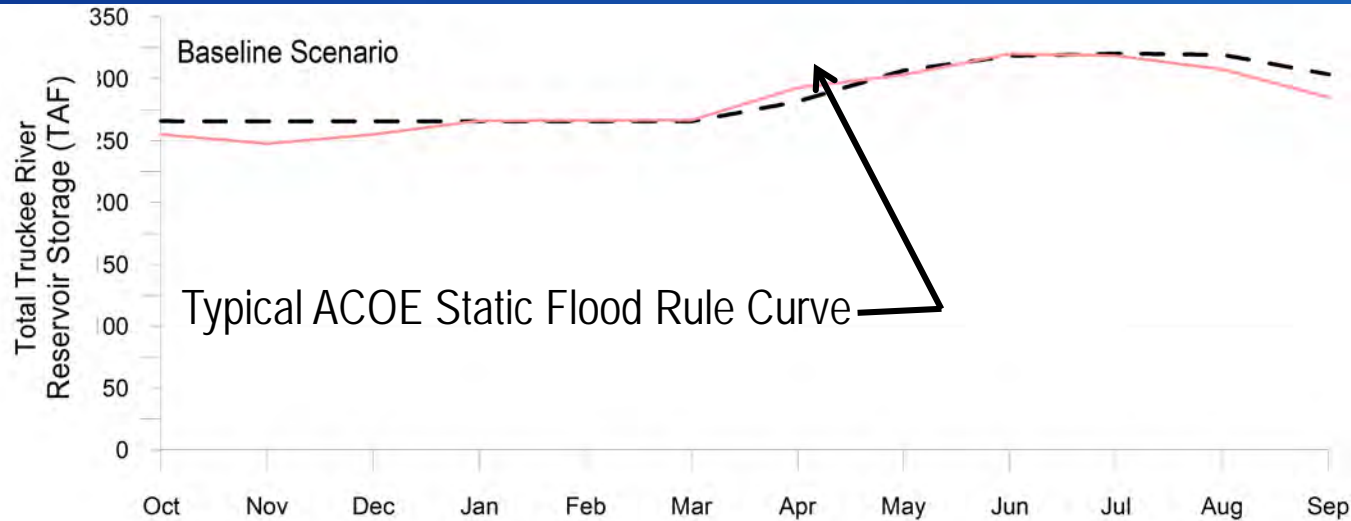


CMIP3 Vs CMIP5: Comparison of Median Projected Changes (%) in Annual Precipitation by Mid-Century between CMIP3 (left) and CMIP5 (right) Ensembles

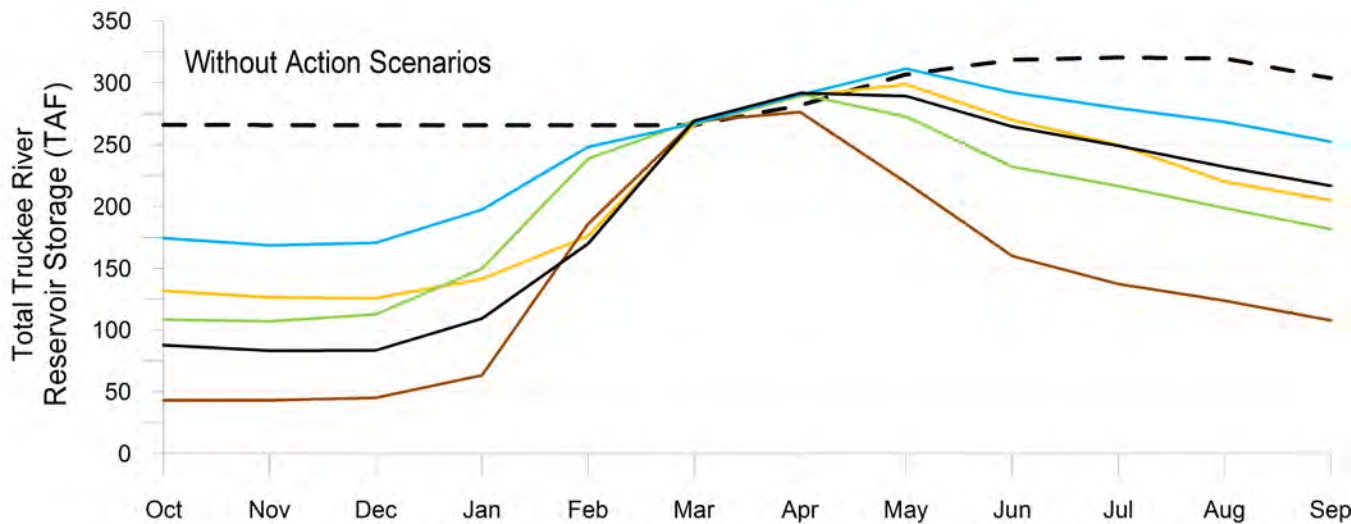


Seasonality Shifts Appear Certain, and Will Challenge Existing Infrastructure





Historically, Basin reservoirs have refilled in April and began drawdown in late summer



Shifts in the timing of runoff:

- Challenge the refill of reservoirs,
- Causes earlier drawdown of storage, and
- Reduces carry over storage.

Lake Tahoe is Especially Sensitive to increases in Evaporation

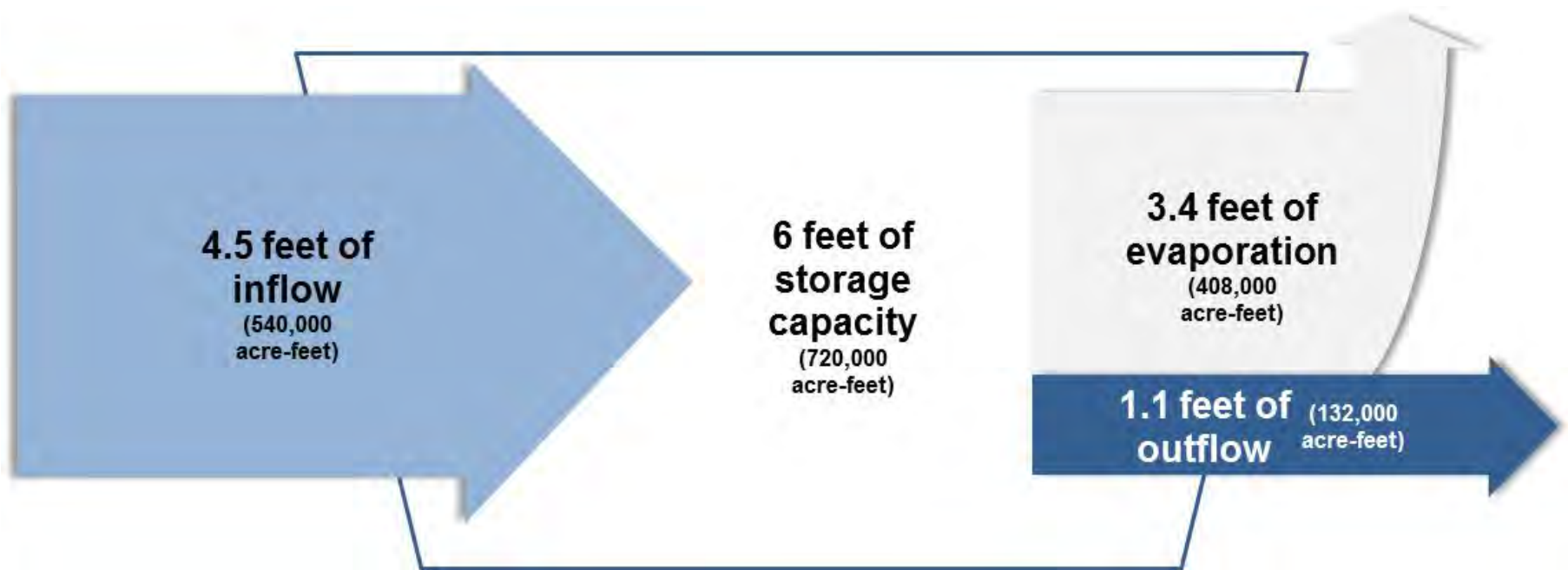
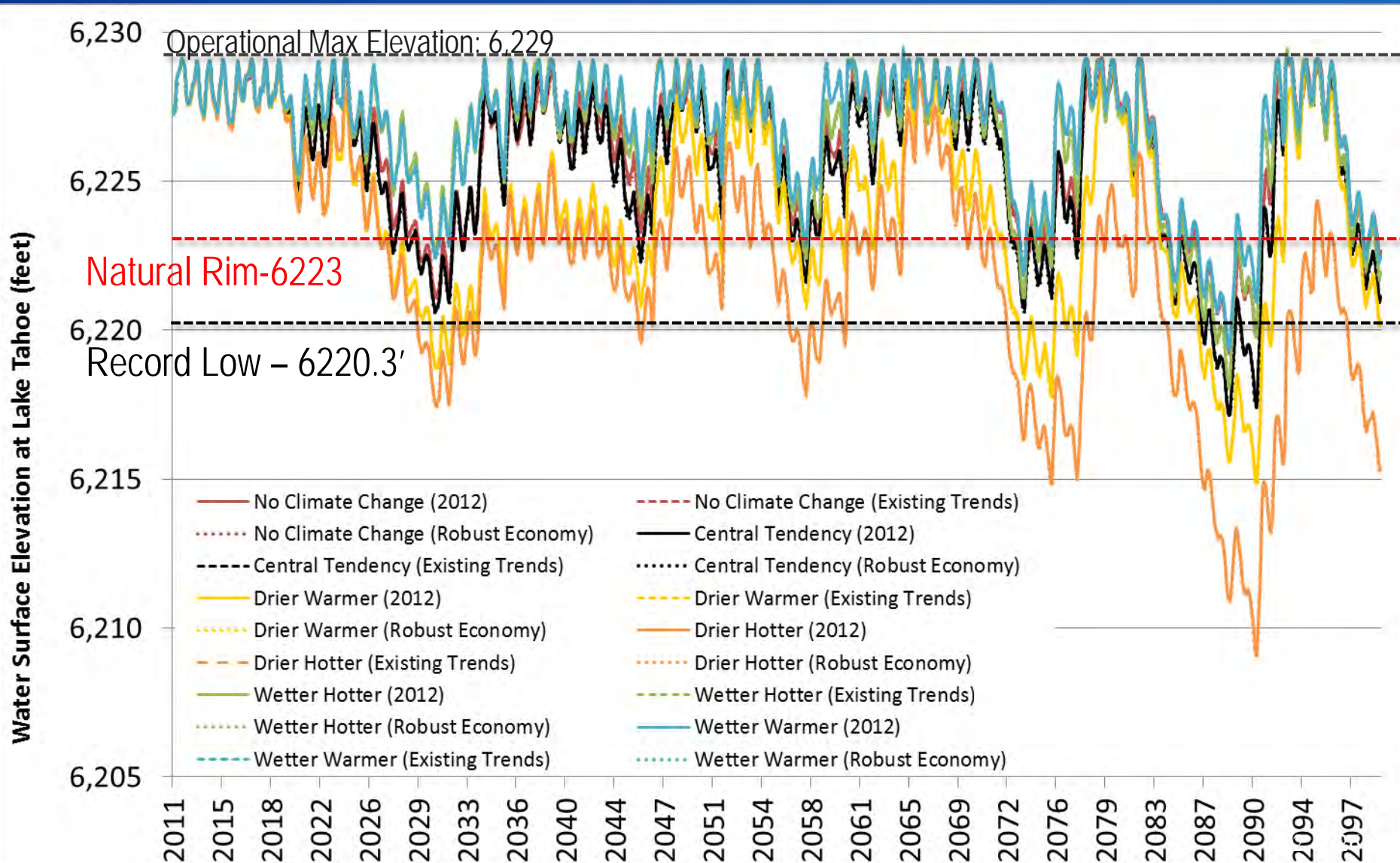


Diagram depicts historical relationships.

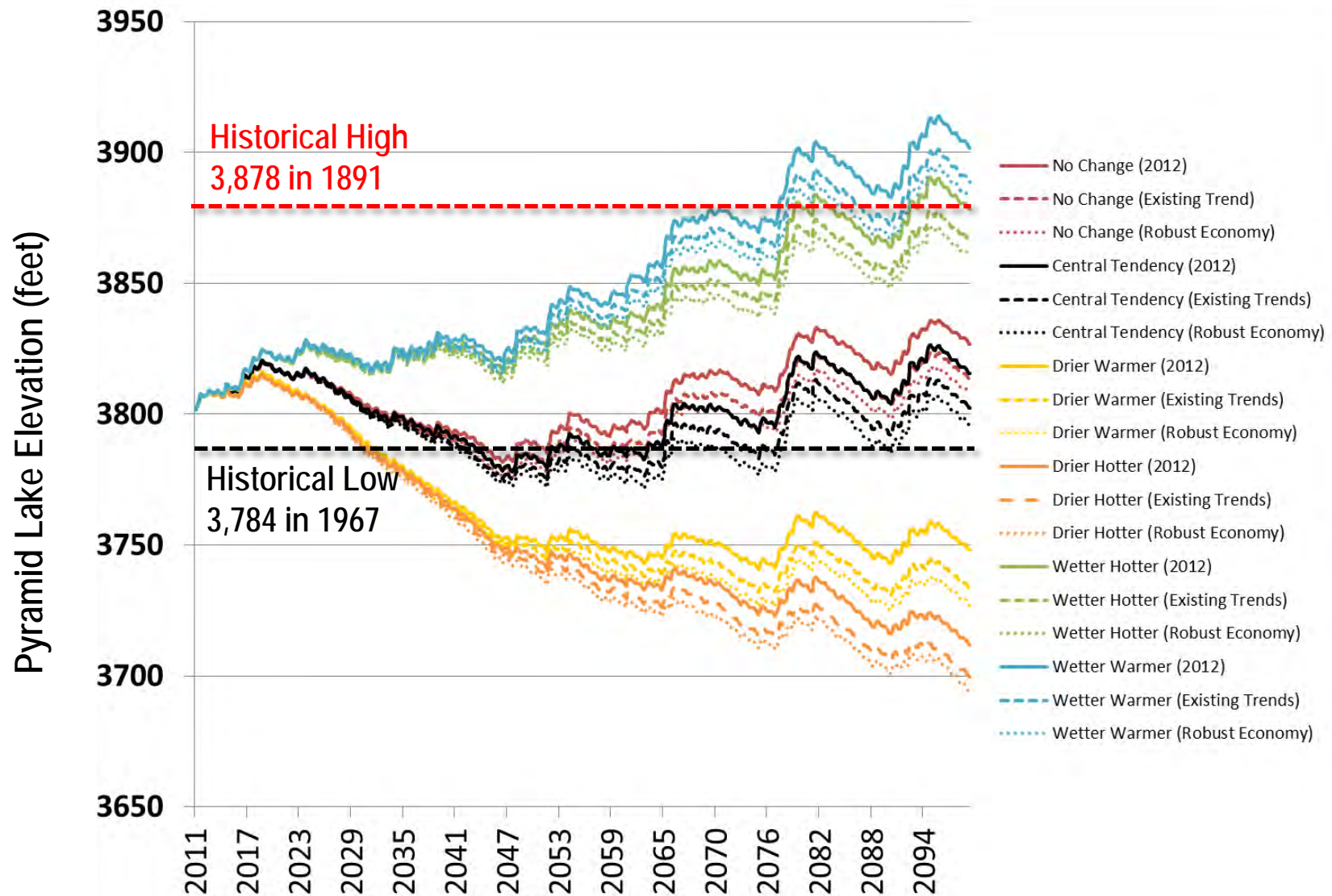
Tahoe accounts for approximately one third of Truckee River flows.

Lake Tahoe Surface Elevations Under Future Climate Scenarios

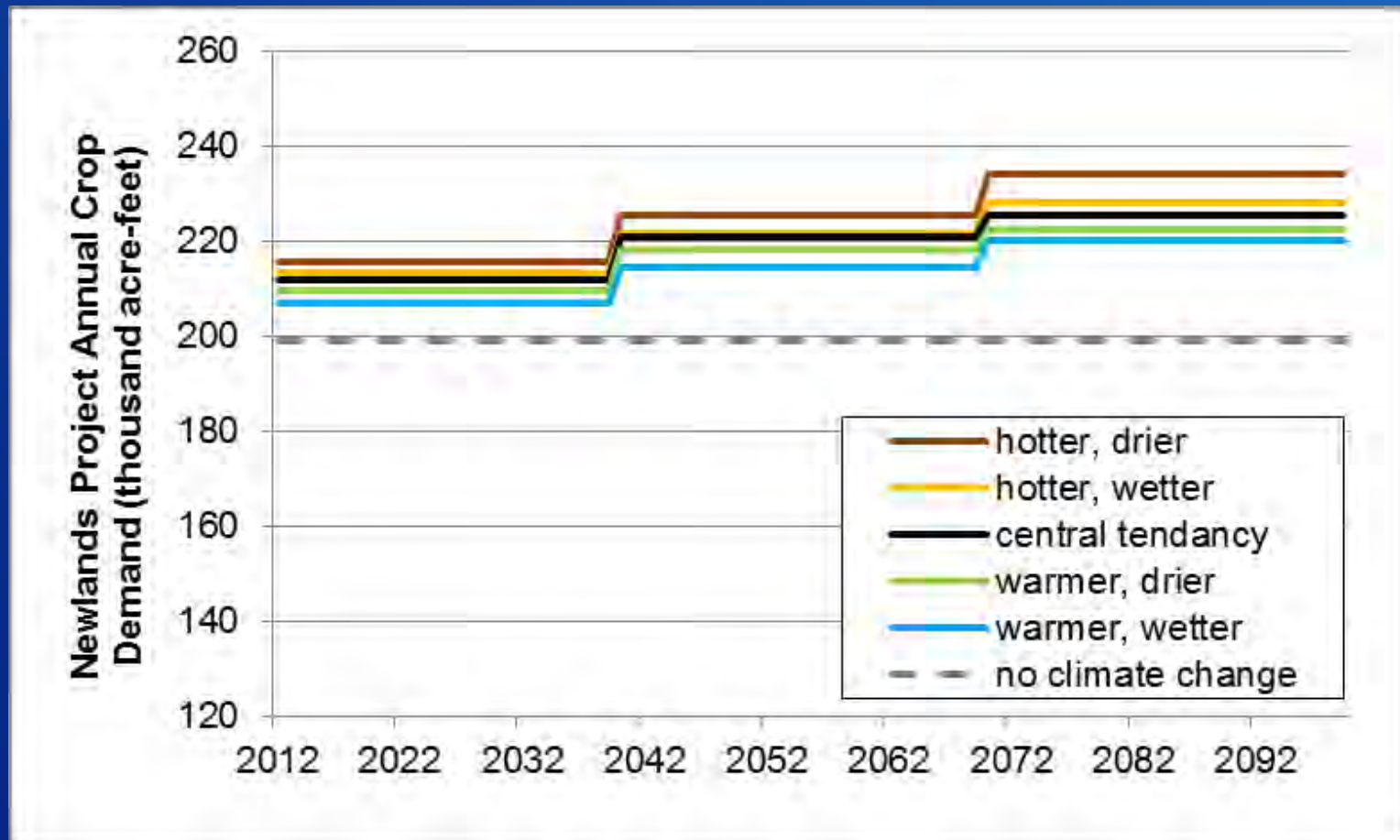
08-15-18 BOARD Agenda Item 6



Pyramid Lake Reveals the Importance and Uncertainty in Future Conditions

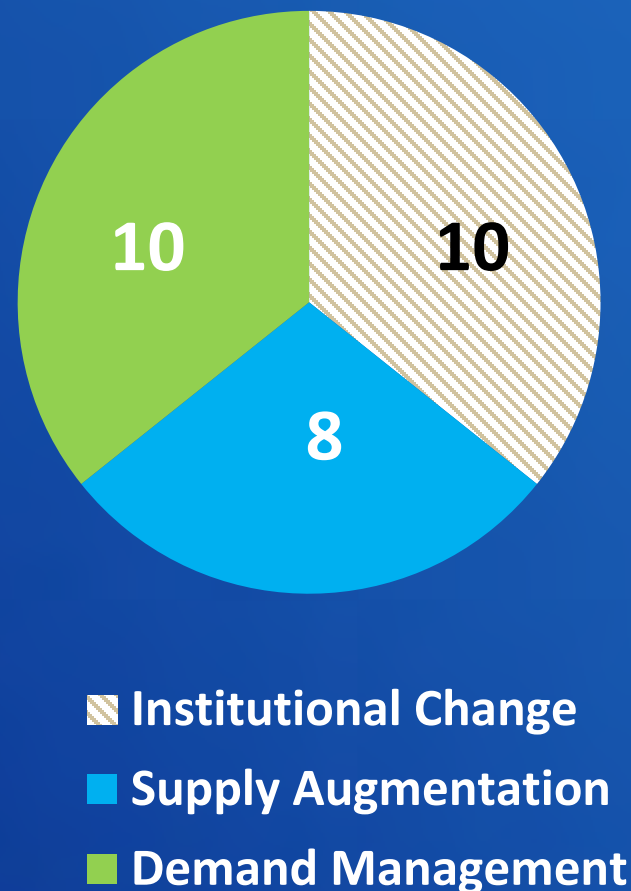


Irrigation Demands Will Increase with Rising Temperatures



Basin Study Process Used a Scoping-Level Assessment of Options Identified by Partner Agencies and Stakeholders

- 140+ individual suggestions collected from Basin stakeholders
- Organized thematically by “Adaptation Strategy”
 - **Institutional Change** –
“operate what we have better”
 - **Supply Augmentation** –
“obtain more water”
 - **Demand Management** –
“shift or reduce demands”



Institutional Change

Adaptation Strategy	Grouping	Option
Institutional Change	Basin-wide Planning	Define regional priorities and goals for water use
		Eliminate prior appropriation
	Surface Water Reservoir Management	Allow TCID carryover storage in Truckee River reservoirs
		Change balance of credit storage available to users at Truckee River reservoirs
		Remove storage limits at Truckee River reservoirs
		Modify flood control curves to adapt to climate
		Modify OCAP criteria at Lahontan Dam to improve success of refill
	Surface Water Rights Management	Allow management of water between Pyramid Lake fisheries and Lahontan Valley wetlands
		Create open water markets
		Consolidate agricultural water rights

Demand Management

Adaptation Strategy	Grouping	Option
Demand Management	Agricultural Use	Convert to low water-use crops
		Reduce conveyance losses
		Transfer agricultural water rights to municipal and industrial uses
		Water rights retirement
		Water use efficiency improvements
	Environmental Flows	Revise flow targets to correspond with peak flows under climate change
	Municipal & Industrial Use	Increase outreach and education on conservation
		Mandate efficiency improvements
		Outdoor use efficiency improvements
	Water Quality	Water quality improvements for the lower Truckee River

Supply Augmentation

Adaptation Strategy	Grouping	Option
Supply Augmentation	Alternative Sources	Interbasin Transfer of Groundwater
	Conveyance Facility Improvements	Augment Truckee Canal capacity
	Groundwater Storage	Aquifer storage and recovery
	Modifications to the Hydrologic Cycle	Forestry-based watershed management
		Weather modification
		Wetland, meadow, and stream corridor restoration
	Surface Storage	Additional Carson River storage
		Increase Truckee River reservoir storage

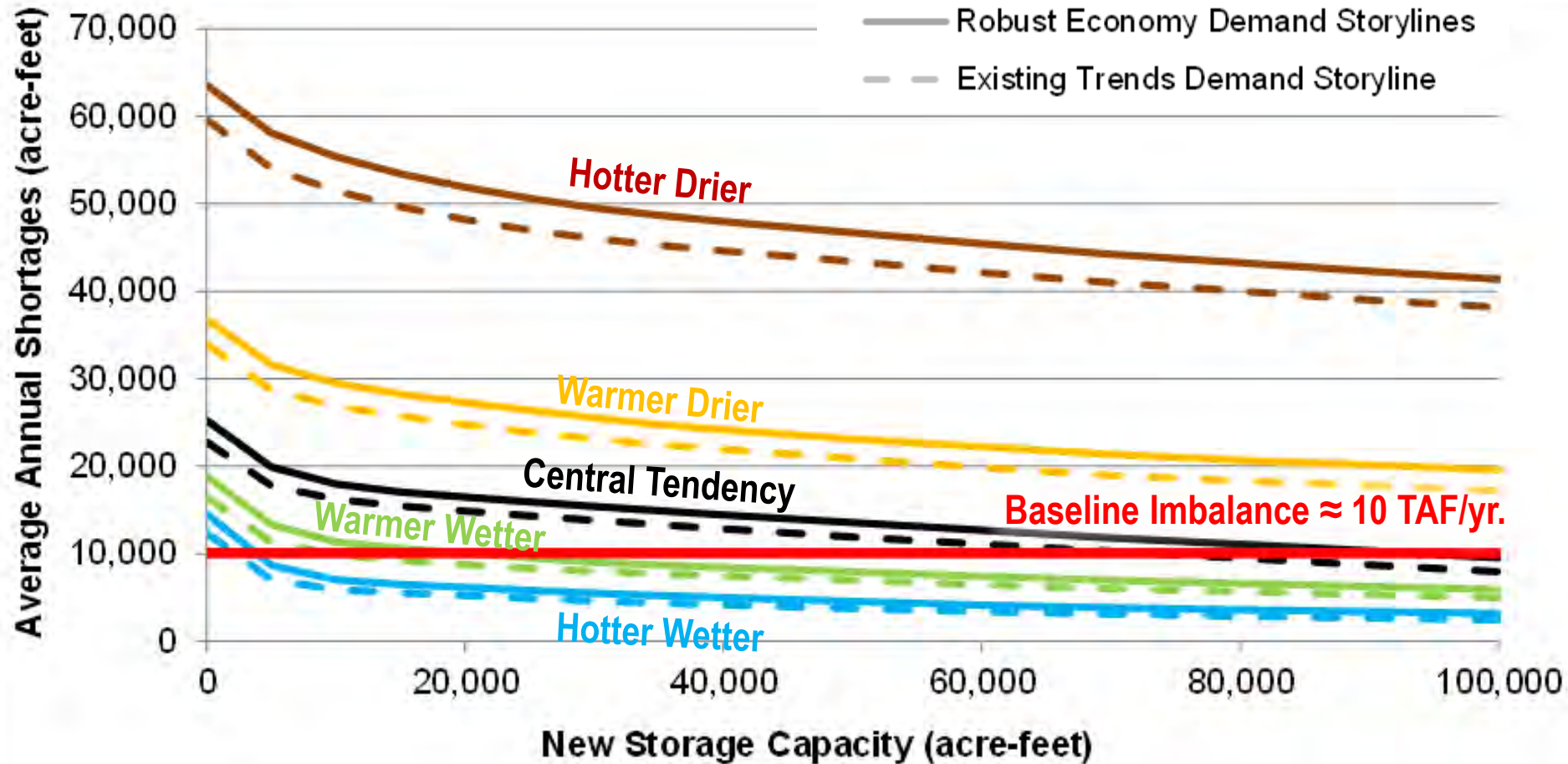
Example Option: Additional Storage

Basin Study investigated new storage for capture of spills from Truckee River reservoirs, with the intent of reducing shortfalls for all water users.

This option assessed:

- **Capture spills from Donner, Prosser Creek, Martis Creek, and Boca reservoirs**
- **Reservoir performance (storage/evaporation) similar to Stampede Reservoir**
- **The ability of captured spills to restore the supply-demand imbalance for all water users downstream of Lake Tahoe**

Performance of Additional Storage varied by Future Climate



Additional Storage Option: Key Findings

- Storage helps address seasonality shifts for all scenarios
- Up to 800,000 AF of new storage (equivalent to four Stampede Reservoirs) would be needed to achieve Baseline-level shortages for the driest climates
- Any new storage project (ground, surface reservoirs, pump-back, etc.) should be considered
- Institutional considerations (i.e. water rights) and location of the reservoir are important potential limitations, and were not considered in this evaluation



Key Findings in the Truckee Basin

- Climate change will alter both demands and runoff patterns, changing the way that reservoirs must be operated and decreasing their reliability.
- Climate change will likely disrupt the present balance between water users, potentially requiring adaptation by all water users in the Basin.
- Potential changes in the climate have far greater impact than projected human demands, finding a balance between water users may require extensive adjustments and/or investments.

Truckee Basin Study – Findings of the Truckee River Flood Frequency Analysis:

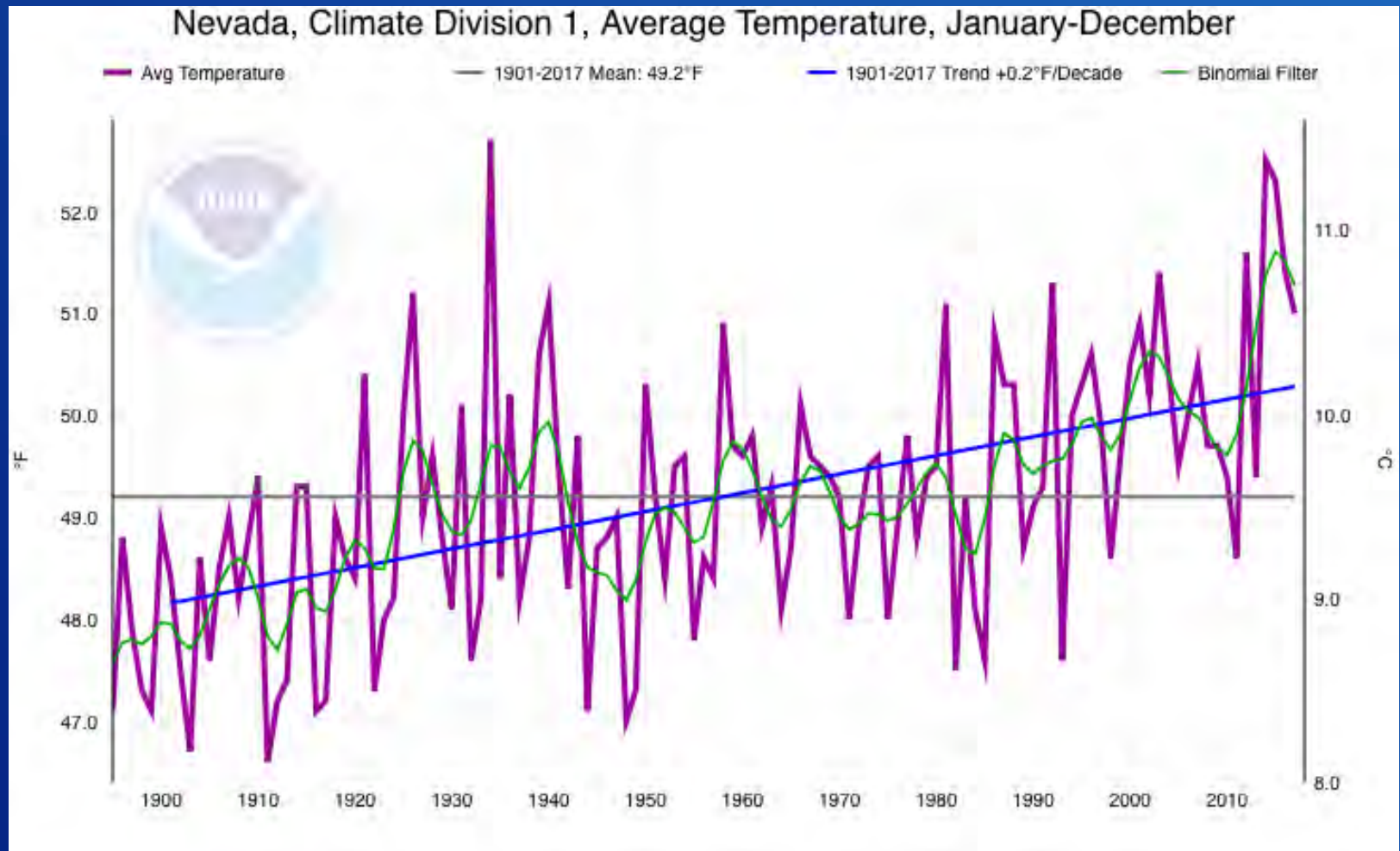
- Flood Risk - defined as the probability of a 1-Day maximum Truckee River flow exceeding a design flood magnitude of 37,600 cfs.
- Flood Risks were assessed at both the Farad and Reno Gauge locations
- For the 2000-2049 period, flood risk increased at both the Farad and Reno Gauge locations by 10-30%
- For the 2050-2099 period, flood risk increased at both the Farad and Reno Gauge locations by 30-50%

Truckee Basin Study – Potential Follow-up Steps:

- **Continue to improve existing models of the Truckee River to assist in evaluating future strategies**
 - Expand TROA water supply operations model into CA
 - Consider coupled surface and groundwater model
 - Improve Carson River supply and demand representation
- **Focus additional research efforts on key uncertainties and vulnerabilities (e.g., changing needs of listed fish, paleo drought, changing flood control needs)**
- **Consider forming a basin-wide water planning forum- To evaluate water supply risks and vulnerabilities and cooperatively investigate and sponsor promising strategies (e.g., Resource Investment Optimization Model (RIOS), etc.)**

Truckee Basin Study –

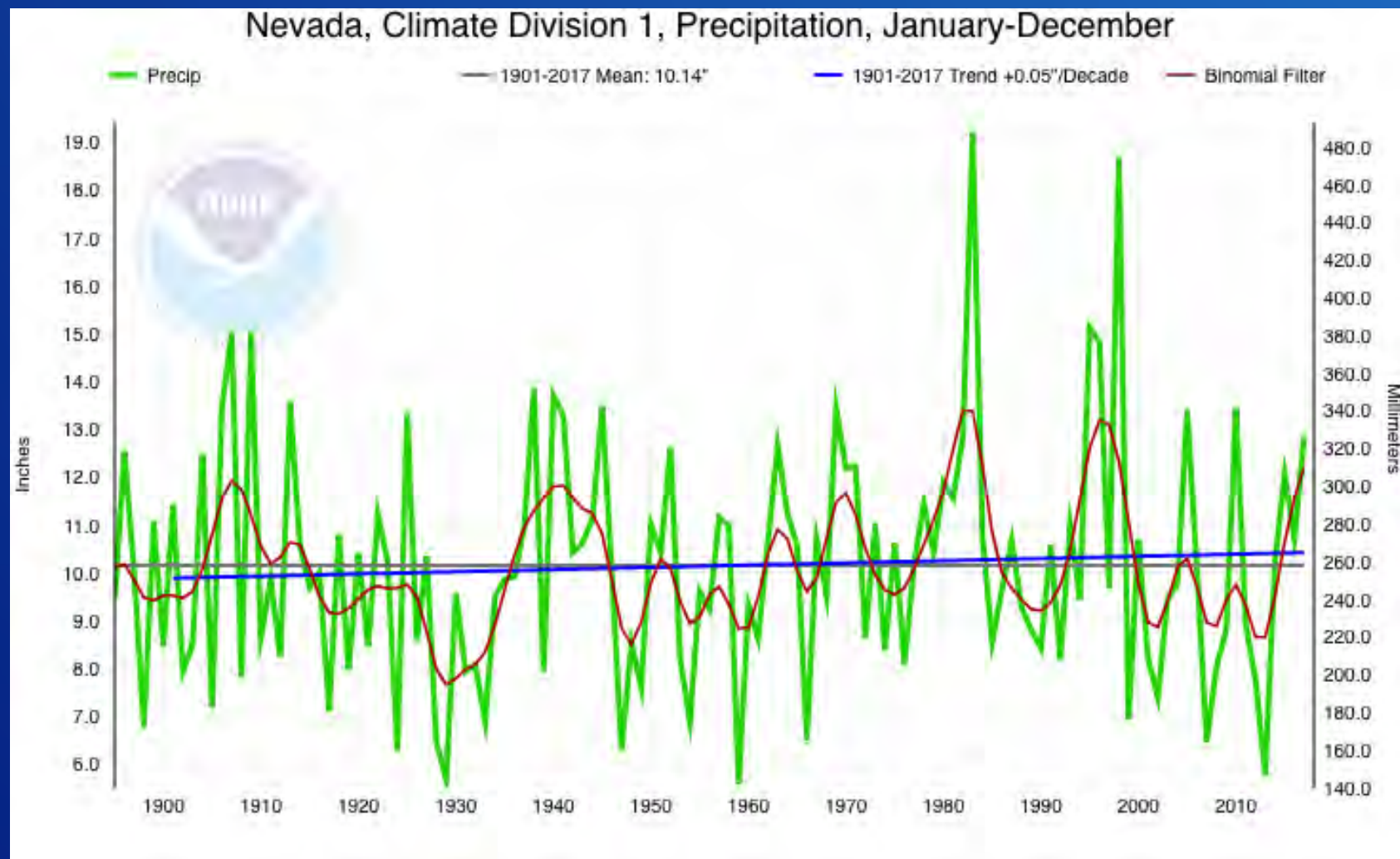
Updated Temperature Trends in the Reno Area



Truckee Basin Study –

08-15-18 BOARD Agenda Item 6

Updated Precipitation Trends in the Reno Area





TO: Board of Directors
FROM: Michele Sullivan, Chief Financial Officer
 Matt Bowman, Financial Controller
DATE: August 7, 2018
SUBJECT: Presentation of preliminary Fiscal Year 2018 unaudited financial performance

Summary

Budget to Actual

	Actual YTD 2018	Budget YTD 2018	Variance \$	Variance %
CHANGE IN NET POSITION	38,802,368	12,391,706	26,410,662	213%

Change in net position (or overall P&L) for fiscal year 2018 (FY 2018) was \$26.4m more than budget. However, \$11.3m of this variance is due to developer contributed assets which is a non-cash capital contribution. Lower operating expenses, higher non-operating revenue and higher developer contributions led to the remaining increase of \$15.1m. Please refer to **Attachment A-1** for the full Statements of Revenues, Expenses and Changes in Net Position with budget to actual comparisons.

Year over Year

	Actual YTD 2018	Actual YTD 2017	Variance \$	Variance %
CHANGE IN NET POSITION	38,802,368	46,480,316	(7,677,948)	-17%

Year over year, change in net position was \$7.7m less in FY 2018 compared to FY 2017. This is due primarily to an insurance settlement related to the Farad Hydroelectric facility in FY 2017 of \$11.8m. This was offset by higher revenue and lower nonoperating expenses in FY 2018. Please refer to **Attachment A-2** for the full Statements of Revenues, Expenses and Changes in Net Position with year over year comparisons.

Cash Position

At June 30, 2018 total cash on hand was \$193.4m or approximately \$19.4m higher than at the beginning of the fiscal year. Of the total cash on hand, \$146.9m was unrestricted to be used to meet upcoming and future operating/maintenance expenses, principal/interest payments, and construction project payments. The remaining \$46.5m was restricted to pay for scheduled bond

principal and interest payments as well as maintaining required reserves as stipulated in our bond indentures.

Revenue

Budget to Actual

	Actual YTD 2018	Budget YTD 2018	Variance \$	Variance %
OPERATING REVENUES				
Charges for water sales	\$ 95,272,287	\$ 94,303,278	\$ 969,009	1%
Hydroelectric sales	3,757,043	2,990,391	766,652	26%
Other operating sales	2,893,493	3,131,500	(238,007)	-8%
Total Operating Revenues	101,922,823	100,425,169	1,497,654	1%

The principal driver in the higher-than-budgeted FY 2018 operating revenue was strong 1H 2018 Irrigation and Residential Metered sales (as discussed in the February 2018 Financial Performance Staff Report). Water sales in 4Q 2018 were down approximately \$1.1m or 5% from budget. This was due to a wet spring which delayed irrigation water use. Hydroelectric sales finished up a record year with revenues achieving \$0.8m or 26% over budget.

Year over Year

	Actual YTD 2018	Actual YTD 2017	Variance \$	Variance %
OPERATING REVENUES				
Charges for water sales	\$ 95,272,287	\$ 92,687,260	\$ 2,585,027	3%
Hydroelectric sales	3,757,043	1,788,934	1,968,109	110%
Other operating sales	2,893,493	2,791,989	101,504	4%
Total Operating Revenues	101,922,823	97,268,183	4,654,640	5%

The 3% rate increase in FY 2017, coupled with consistent water use, led to a 3% increase in water sales year over year. Combined with \$2.0m in additional Hydroelectric sales, total Operating Revenues ended up \$4.7m or 5% higher in FY 2018 compared to the prior year.

Operating Expenses

Budget to Actual

	Actual YTD 2018	Budget YTD 2018	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and wages	18,473,168	19,024,704	(551,536)	-3%
Employee benefits	9,832,820	9,303,274	529,546	6%
Services and supplies	24,506,834	28,312,357	(3,805,523)	-13%
Total operating expenses before depreciation	52,812,822	56,640,335	(3,827,513)	-7%
Depreciation	33,719,279	34,061,148	(341,869)	-1%
Total operating expenses	86,532,101	90,701,483	(4,169,382)	-5%

Total operating expenses were \$4.2m or 5% less than budget in FY 2018. Of this variance, \$4.8m came in 1H 2018 due to decreased services and supplies costs and employees' salaries and wages. Salaries were slightly less than budget due primarily to delayed IBEW and MPAT raises until January 2018. Employee benefits were \$0.5m more than budget due primarily \$1.6m non-cash PERS adjustment related to the implementation of GASB 82. Finally, services and supplies costs were \$3.8m less than budget due to several factors. First, the budget was augmented in January 2018 for dredging of the outlet channel at Donner Lake for estimated costs of \$2.6m. These costs are continuing in to FY 2019, so through June 30, 2018, there was only \$1.3m in spend. This results in a variance of \$1.3m from budget. Other fluctuations from budget include lower chemical costs (\$0.6m) due to improved water quality in the Truckee River coupled with process improvements to focus on cost reductions in chemical usage, lower power costs (\$0.3m) due to less activity at Fish Springs than what was expected in FY 2018, lower distribution and vehicle maintenance costs (\$0.6m) due to process improvements and very few large maintenance expenditures during the year. The remaining \$1.0m (3%) is due to general savings from budget resulting from an overall conservative budgeting process.

Year over Year

	Actual YTD 2018	Actual YTD 2017	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and wages	18,473,168	17,257,014	1,216,154	7%
Employee benefits	9,832,820	9,047,279	785,541	9%
Services and supplies	24,506,834	23,980,864	525,970	2%
Total operating expenses before depreciation	52,812,822	50,285,157	2,527,665	5%
Depreciation	33,719,279	32,169,578	1,549,701	5%
Total operating expenses	86,532,101	82,454,735	4,077,366	5%

Operating expenses were higher than prior year, ending \$4.0m or 5% higher in FY 2018 compared to FY 2017. Salaries and wages increase reflects increases in headcount and wages in FY 2018. Services and supplies costs are 2% higher than in prior year, including \$1.3m spent for the Donner dredging project discussed above. Without these costs in FY 2018, costs would have been roughly \$0.7m less than FY 2017.

Non-Operating ExpensesBudget to Actual

	Actual YTD 2018	Budget YTD 2018	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment earnings	2,313,513	1,342,692	970,821	72%
Net increase (decrease) in FV of investments	(934,120)	-	(934,120)	-
Gain (loss) on disposal of assets	785,260	-	785,260	-
Amortization of bond/note issuance costs	(942,927)	(468,624)	(474,303)	101%
Interest expense	(11,559,267)	(13,394,016)	1,834,749	-14%
Other nonoperating revenue	-	-	-	-
Other nonoperating expense	-	-	-	-
Total nonoperating revenues (expenses)	(10,337,541)	(12,519,948)	2,182,407	-17%

Non-operating expenses were \$2.2m less than budget in FY 2018. Investment earnings were higher than budget due to higher principal amounts as well as an increase in interest rates. Change in fair value of investments was down (loss) due to rising interest rates which lowers the fair value of fixed rate investments (non-cash expense). Gain on disposal of assets reflects the sale of water rights for \$1.1m (sold to Pyramid Lake Paiute Tribe) offset by \$0.5m of loss due to the demolition of the Peavine Storage Tank. Interest expense is lower due to interest costs accelerated to FY 2017 as part of the Series 2017 refunding (Q4 2017) and the recognition of effective interest (accelerated) bond premium amortization in FY 2018.

Year over Year

	Actual YTD 2018	Actual YTD 2017	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment earnings	2,313,513	7,209,113	(4,895,600)	-68%
Net increase (decrease) in FV of investments	(934,120)	(342,257)	(591,863)	173%
Gain (loss) on disposal of assets	785,260	(155,722)	940,982	-604%
Amortization of bond/note issuance costs	(942,927)	(1,183,526)	240,599	-20%
Interest expense	(11,559,267)	(16,968,911)	5,409,644	-32%
Other nonoperating revenue	-	-	-	-
Other nonoperating expense	-	(243,000)	243,000	-100%
Total nonoperating revenues (expenses)	(10,337,541)	(11,684,303)	1,346,762	-12%

Non-operating expenses were less than the prior year by \$1.3m principally due to lower interest expense due to the Series 2017 bond refunding in closed in FY 2017. Other increases include the net gain on asset disposal (discussed above) offset by decreases in investment earnings due to the release of forward delivery agreements paying higher rates on some cash reserves in 2017.

Capital Contributions

Budget to Actual

	Actual YTD 2018	Budget YTD 2018	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	348,248	200,004	148,244	74%
Water meter retrofit program	2,379,206	781,488	1,597,718	204%
Developer infrastructure contributions	11,337,746	-	11,337,746	-
Developer will-serve contributions (net of refunds)	6,670,879	5,034,744	1,636,135	32%
Developer capital contributions-other	6,448,549	4,345,296	2,103,253	48%
Developer facility charges (net of refunds)	6,464,559	4,826,436	1,638,123	34%
Contributions from others	100,000	-	100,000	-
Net capital contributions	33,749,187	15,187,968	18,561,219	122%

Capital contributions were \$18.6m more than budget in FY 2018. *Preliminary* developer infrastructure contributions are non-cash and were over \$11m which is not an item that is budgeted. The remaining variance from budget is driven almost exclusively by significant development in the service area. This results in higher water rights and developer contributions.

Year over Year

	Actual YTD 2018	Actual YTD 2017	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	348,248	1,226,863	(878,615)	-72%
Water meter retrofit program	2,379,206	341,074	2,038,132	598%
Developer infrastructure contributions	11,337,746	10,797,854	539,892	5%
Developer will-serve contributions (net of refunds)	6,670,879	7,950,666	(1,279,787)	-16%
Developer capital contributions-other	6,448,549	6,062,247	386,302	6%
Developer facility charges (net of refunds)	6,464,559	5,116,956	1,347,603	26%
Contributions from others	100,000	11,855,511	(11,755,511)	-99%
Net capital contributions	33,749,187	43,351,171	(9,601,984)	-22%

Capital contributions are down from prior year due mostly to the Farad settlement payment received in FY 2017 of \$11.8m. This was the final payment of the settlement. Grant funds received were down due to the wrap up of the TROA Bureau of Reclamation grant in FY 2017. This reduction was offset by higher developer and water rights payments as discussed above.

Capital Spending

Spending on capital outlays and construction projects during FY 2018 was approximately \$33.0m. Target spending for capital in FY 2018 was \$43.0m. The primary reason for the underspend is the delay in construction of the Mt. Rose Water Treatment Plant due to delays in permitting and satisfying regulatory requirements. Through June 30, 2018, spend is approximately \$1.1m compared to the CIP budget of \$6.0m on the project. Had the budget been spent on this project total spend would have been about 88% of budget which is typical.

TRUCKEE MEADOWS WATER AUTHORITY
Comparative Statements of Revenues, Expenses and Changes in Net Position
For the twelve months ended June 30, 2018

	Actual YTD 2018	Budget YTD 2018	Variance \$	Variance %
OPERATING REVENUES				
Charges for water sales	\$ 95,272,287	\$ 94,303,278	\$ 969,009	1%
Hydroelectric sales	3,757,043	2,990,391	766,652	26%
Other operating sales	2,893,493	3,131,500	(238,007)	-8%
Total Operating Revenues	101,922,823	100,425,169	1,497,654	1%
OPERATING EXPENSES				
Salaries and wages	18,473,168	19,024,704	(551,536)	-3%
Employee benefits	9,832,820	9,303,274	529,546	6%
Services and supplies	24,506,834	28,312,357	(3,805,523)	-13%
Total operating expenses before depreciation	52,812,822	56,640,335	(3,827,513)	-7%
Depreciation	33,719,279	34,061,148	(341,869)	-1%
Total operating expenses	86,532,101	90,701,483	(4,169,382)	-5%
OPERATING INCOME	15,390,722	9,723,686	5,667,036	58%
NONOPERATING REVENUES (EXPENSES)				
Investment earnings	2,313,513	1,342,692	970,821	72%
Net increase (decrease) in FV of investments	(934,120)	-	(934,120)	-
Gain (loss) on disposal of assets	785,260	-	785,260	-
Amortization of bond/note issuance costs	(942,927)	(468,624)	(474,303)	101%
Interest expense	(11,559,267)	(13,394,016)	1,834,749	-14%
Other nonoperating revenue	-	-	-	-
Other nonoperating expense	-	-	-	-
Total nonoperating revenues (expenses)	(10,337,541)	(12,519,948)	2,182,407	-17%
Gain (Loss) before capital contributions	5,053,181	(2,796,262)	7,849,443	-281%
CAPITAL CONTRIBUTIONS				
Grants	348,248	200,004	148,244	74%
Water meter retrofit program	2,379,206	781,488	1,597,718	204%
Developer infrastructure contributions	11,337,746	-	11,337,746	-
Developer will-serve contributions (net of refunds)	6,670,879	5,034,744	1,636,135	32%
Developer capital contributions-other	6,448,549	4,345,296	2,103,253	48%
Developer facility charges (net of refunds)	6,464,559	4,826,436	1,638,123	34%
Contributions from others	100,000	-	100,000	-
Net capital contributions	33,749,187	15,187,968	18,561,219	122%
CHANGE IN NET POSITION	38,802,368	12,391,706	26,410,662	213%
NET POSITION, BEGINNING OF PERIOD	631,462,629	605,764,318	25,698,311	4%
NET POSITION, END OF PERIOD	\$ 670,264,997	\$ 618,156,024	\$ 52,108,973	8%

TRUCKEE MEADOWS WATER AUTHORITY
Comparative Statements of Revenues, Expenses and Changes in Net Position
For the twelve months ended June 30, 2018

	Actual YTD 2018	Actual YTD 2017	Variance \$	Variance %
OPERATING REVENUES				
Charges for water sales	\$ 95,272,287	\$ 92,687,260	\$ 2,585,027	3%
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Other operating sales	2,893,493	2,791,989	101,504	4%
Total Operating Revenues	101,922,823	97,268,183	4,654,640	5%
OPERATING EXPENSES				
Salaries and wages	18,473,168	17,257,014	1,216,154	7%
Employee benefits	9,832,820	9,047,279	785,541	9%
Services and supplies	24,506,834	23,980,864	525,970	2%
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OPERATING INCOME	15,390,722	14,813,448	577,274	4%
NONOPERATING REVENUES (EXPENSES)				
Investment earnings	2,313,513	7,209,113	(4,895,600)	-68%
Net increase (decrease) in FV of investments	(934,120)	(342,257)	(591,863)	173%
Gain (loss) on disposal of assets	785,260	(155,722)	940,982	-604%
Amortization of bond/note issuance costs	(942,927)	(1,183,526)	240,599	-20%
Interest expense	(11,559,267)	(16,968,911)	5,409,644	-32%
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Other nonoperating expense	-	(243,000)	243,000	-100%
Total nonoperating revenues (expenses)	(10,337,541)	(11,684,303)	1,346,762	-12%
Gain (Loss) before capital contributions	5,053,181	3,129,145	1,924,036	61%
CAPITAL CONTRIBUTIONS				
Grants	348,248	1,226,863	(878,615)	-72%
Water meter retrofit program	2,379,206	341,074	2,038,132	598%
Developer infrastructure contributions	11,337,746	10,797,854	539,892	5%
Developer will-serve contributions (net of refunds)	6,670,879	7,950,666	(1,279,787)	-16%
Developer capital contributions-other	6,448,549	6,062,247	386,302	6%
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Net capital contributions	33,749,187	43,351,171	(9,601,984)	-22%
CHANGE IN NET POSITION	38,802,368	46,480,316	(7,677,948)	-17%
NET POSITION, BEGINNING OF PERIOD	631,462,629	584,982,314	46,480,315	8%
NET POSITION, END OF PERIOD	\$ 670,264,997	\$ 631,462,630	\$ 38,802,367	6%



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer
DATE: August 7, 2018
SUBJECT: Discussion and action, and possible designation of authorized representatives to request distributions from Retirement Benefits Investment Funds (RBIF) of the Truckee Meadows Water Authority Post-Retirement Medical Plan & Trust and the Section 115 OPEB Trust Fund and provide wire instructions to NV PERS

Recommendation

Staff recommends the Board approve the following wire instructions for the bank distribution and list of authorized representatives to request distributions for both the Truckee Meadows Water Authority Post-Retirement Medical Plan & Trust and the Section 115 OPEB Trust Fund.

Background

The NV PERS, Retirement Benefits Investment Fund (RBIF) requires Board approval and designation of authorized representatives to request distributions and to authorize changes to wire instructions as necessary to both the Truckee Meadows Water Authority Post-Retirement Medical Plan & Trust and Section 115 OPEB Trust Fund.

Discussion

Truckee Meadows Water Authority Post-Retirement Medical Plan & Trust

- List of authorized representatives to request distributions
 1. Michele Sullivan, CFO/Trustee
 2. Matt Bowman, Financial Controller
- Wire instructions
 - ABA Routing #: 121000248
 - Bank Name: Wells Fargo Bank, N.A.
 - Bank Address: PO Box 63020 – San Francisco, CA 94163

 - Beneficiary Account Number: XXXXXXXXXX75
 - Beneficiary Account Name: Truckee Meadows Water Authority Post-Retirement Medical Plan & Trust
 - Beneficiary Address: 1355 Capital Blvd. – Reno, NV 89502

Truckee Meadows Water Authority Section 115 OPEB Trust Fund

- List of authorized representatives to request distributions
 1. Michele Sullivan, CFO/Trustee
 2. Matt Bowman, Financial Controller
- Wire instructions
 - ABA Routing #: 121000248
 - Bank Name: Wells Fargo Bank, N.A.
 - Bank Address: PO Box 63020 – San Francisco, CA 94163

 - Beneficiary Account Number: XXXXXXXXX83
 - Beneficiary Account Name: Truckee Meadows Water Authority OPEB Trust Fund
 - Beneficiary Address: 1355 Capital Blvd. – Reno, NV 89502



STAFF REPORT

TO: TMWA Board of Directors
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer
DATE: August 6, 2018
SUBJECT: Discussion and action, and possible direction to staff regarding the update to TMWA Financial Management and Reserve Policy, and the rate stabilization fund

Recommendation

That the Board approve the updated Financial Management and Reserves Policy (FMRP) and consider options to direct staff related to the balance in and use of the Rate Stabilization Fund (RSF).

Summary

TMWA's FMRP has not been updated for several years and a draft is included that updates the policy to the most current reserve requirements required by current TMWA Senior Lien Debt. A new unrestricted cash and investment reserve policy was added to the policy which helps to establish minimum cash and investment balances. The Government Financial Officer's Association (GFOA) and the American Water Works Association (AWWA) both recommend that a policy related to unrestricted cash should be developed to address the needs of a municipality based on local conditions. TMWA's strong unrestricted cash balances have helped to retain good credit ratings, and a policy related to these balances will ensure continued attention to a solid working capital position. Discussion of appropriate balances for the RSF and methods for funding and usage of the RSF are also included for Board discussion and input.

Discussion

Financial Management and Reserves Policy

The FMRP has three main purposes as detailed on page 1 of the document. First, to establish TMWA management's financial responsibilities. There have been no changes made to this first part of the policy. Second, to detail a funding priority for restricted and designated funds as required by TMWA Senior Lien Debt. This section has been updated and reviewed by financial advisor's Hobbs, Ong & Associates, Inc. as well as bond counsel Sherman & Howard for

accuracy. A third policy purpose was added to fulfill a recommendation from the GFOA and the AWWA that unrestricted cash and investment reserves have minimum balance guidelines established through policy. With the new policy, cash balances would be reserved as follows:

Truckee Meadows Water Authority		
Cash Reserves		
Restricted Cash		
Senior Lien Bond Debt Service	\$ 9,357,746	
Subordinate Debt Service	3,286,363	
O & M Reserve	9,440,056	
Renewal and Replacement	10,000,000	
Rate Stabilization	500,000	
STMGID	9,180,630	
Water Meter Retrofit	<u>4,717,726</u>	
Total Restricted Cash		46,482,521
Designated Reserves		
Rate Stabilization	<u>1,300,000</u>	
Total Designated Reserves		1,300,000
Unrestricted Reserves		
O & M Reserve	18,880,112	
Maximum Annual Debt Service	32,629,232	
Capital Related Reserve	22,520,200	
Unforeseen Events Reserve	<u>7,649,358</u>	
Total Unrestricted Reserves		<u>81,678,902</u>
Total Reserves per New Policy		129,461,423
Actual Cash Balance		<u>193,372,435</u>
Additional Unrestricted Cash and Investments	<u>\$ 63,911,012</u>	

With this new policy, TMWA will have a way to analyze total cash reserves balances based on financial metrics.

Currently, TMWA has additional unrestricted cash and investments mainly due to the deferral of bond principal payments, lower than anticipated capital spending, and several one-time cash infusions from Farad insurance settlement received (\$21.5M) and payments from banks for release of forward delivery agreements (\$9.5M).

Rate Stabilization Fund

One reserve fund that board members have requested more information on is the RSF. RSF's are a type of financial reserve that can buffer the impacts of occasional revenue shortfalls. This can occur for a variety of reasons, including cool temperatures, wet weather conditions, drought restrictions, and increased conservation and efficiency.

Currently TMWA has \$1.8M in an RSF. The current policy allowing for a maximum of \$7.5 million for the fund was determined in September, 2003 based on four months of O&M expenses at that time. The reserve was to provide a financial bridge in the event TMWA suffered a significant interruption in water deliveries. This determination was made when the system was first taken over by TMWA. Since TMWA has now been operating for many years, the maximum amount to be held in an RSF should be determined based on a risk assessment to create a target based on experienced financial impacts. For TMWA the greatest impact on revenue was a request for conservation in the most recent drought in FY2016. With TROA, it is not as likely that a public request for additional conservation will be necessary, but if a call for 10% conservation was implemented, this could reduce TMWA water sales revenues by approximately \$5M based on our experience from 2015. The average drought in the service area over the last 50 years has been 2 years, and over the last 30 years has been 3 years. Given that conservation would not be requested until the second or third year of a drought, one option would be to reserve a maximum of:

<u>Conservation</u>		<u>Annual Water Sales Budget</u>		<u>Years</u>		<u>Maximum RSF</u>
5%	X	100,626,513	X	1	=	5,031,326

This amount could be altered by changing the number of years, and will fluctuate as annual water sales change, and most likely increase. Since conservation requests can affect revenues for future years, the number of years might be 1.5 or 2, \$7,546,988 or \$10,062,651 respectively.

Revenue can swing as irrigation season begins and ends depending on rainfall. If there was a significantly wet spring, followed by a significantly wet fall, revenue shortfalls could be as much as 10% in those months, or about \$3M total. TMWA budgets consider usage based on a blended average of wet and dry years. This type of revenue shortfall could also easily be offset by a hotter than usual summer. Since the climate in Reno is dry, and prolonged wet weather has not been an issue, there isn't a solid reason to plan for the financial impact of wet weather at this time.

Policies around reserve funds state how the fund should be managed. A common way to manage a rate stabilization fund is to tie the funding to the debt service coverage ratio. For example, if the debt service coverage ratio at year end is great than a certain target, 1.5 times for example, excess water sales revenue can be transferred to a rate stabilization fund up to the determined maximum amount. The rate stabilization reserve fund will be drawn down to smooth rate increases and to ensure that minimum debt service coverage of 1.50 times annual debt service is met. Specifically, they will be applied in any year where other revenues are not sufficient to meet the required debt service coverage ratio of 1.50 times. They will also be applied if meeting 1.5 times coverage levels could result in downgrades of credit ratings.

The problem with a policy like this one is that credit agencies would rather a utility maintain an acceptable DSC ratio through proper planning. They won't necessarily downgrade a utility for using an RSF, but there should be a sound financial reason related to proven fluctuations in revenues if revenue from one year is going to be set aside to adjust the DSC calculation in another year.

Another approach to funding the RSF could be funding from additional unrestricted cash and investments. When all restricted and unrestricted cash reserves are funded, excess funds could be allocated to the RSF. If it is determined that cash is needed to supplement cash flow for a year due to shortfalls in water sales revenue or higher than expected costs, that cash can be used to fund operations or construction and would move out of the RSF and into the unrestricted cash balances.

Given TMWA's solid cash and investment balances, we are basically funding shortfalls between operating revenues and cost of service with cash. The Board can request an update to the balance in the RSF and implement more policies around the RSF at this time, or elect to defer to a later time.

FINANCIAL POLICIES

Effective Date: August 15, 2018

**TRUCKEE MEADOWS WATER AUTHORITY
FINANCIAL MANAGEMENT AND RESERVE POLICY**

TRUCKEE MEADOWS WATER AUTHORITY ENTERPRISE FUND:

The Truckee Meadows Water Authority (“TMWA” or “Authority”) Enterprise Fund was established to account for the operations and maintenance functions and the costs of capital projects associated with the facilities. An enterprise fund is, by definition, established to account for operations that are financed and operated in a manner similar to private business enterprises where the intent of the governing body is that the costs (expenses, including capital costs, depreciation and debt service) of providing goods and services to the general public on a continuing basis be financed or recovered primarily through user charges, without producing any significant amount of profit in the long run.

POLICY:

To determine the funding level in each of TMWA's reserve accounts and financial accounts. Capital funding needs, financial stress, and critical areas of funding flexibility will all have a bearing on the appropriate balance in each reserve fund and similar accounts.

Resources for the Truckee Meadows Water Operations Fund include user charges and surcharges which are used for the operation and maintenance of the water system necessary to support system users. Resources for the Water Capital Projects Fund include the proceeds of bond issues and charges which are used for expansion and rehabilitation of the water system to support new users of the system or to fund major system improvements. (Initial funding was provided by an allocation of bond proceeds).

PURPOSE:

- A. To establish the financial mechanisms required to support the operation and administration of TMWA.
- B. To provide a financial framework for identifying reserves required by debt provisions and other designated unrestricted reserves related to the operation of TMWA.
- C. Establish a policy related to unrestricted cash and investments to maintain adequate and prudent cash reserves to mitigate the risks of significant and unexpected decreases in sources of funds and/or increases in uses of funds of TMWA.

DEFINITIONS:

- A. The **Truckee Meadows Water Authority Board** is comprised of seven members representing the Cities of Reno and Sparks and Washoe County. The Board establishes policies regarding the operations, maintenance, and capital improvements to the Truckee Meadows Water Authority Facilities as well as the contemplation of future debt requirements.
- B. The **Truckee Meadows Water Authority Facilities** consist of water distribution infrastructure, storage reservoirs, wells, and water treatment facilities which serve the residents of Reno, Sparks, and portions of unincorporated Washoe County. A General Manager hired by the TMWA Board serves as the Chief Administrative Officer of TMWA and generally is responsible for operation of the water system.

TMWA MANAGEMENT FINANCIAL RESPONSIBILITIES:

- A. Oversee the operation and maintenance of the TMWA water system.
- B. Prepare the annual tentative and final budget as required by State law.
- C. Review the costs for operating and maintaining the water system at least annually and adjust rates, fees and other charges, when necessary, to maintain proportionate distribution of costs by user and user class and to meet reserve requirements as established by this policy.
- D. Insure that the revenues collected from rates, fees and other charges are used for purposes including, but not limited to, debt service requirements, and the operation, maintenance, and repair of the water system.
- E. Insure that all funds of TMWA are being reported in accordance with generally accepted accounting principles.
- F. Insure that all necessary revenue accounts are established and shall insure that all receipts are tracked in the appropriate category.
- G. Insure that all necessary expense accounts are established and shall insure that all expenditures are tracked in the appropriate category.

RESTRICTED AND DESIGNATED FUND BALANCE RESERVE POLICY:

- A. So long as any of the Authority's Bonds are outstanding the flow of funds from the Enterprise Fund must be applied in the following order of priority:

1. Operations and Maintenance Expenses Account – Adequate reserves in an amount to fund one month of operation and maintenance expenses. The reserves should be set aside by the last day of each month that is at least one month prior to such expenses being paid.
2. Bond Fund Account – Adequate reserves in amount to fund substantially equal monthly installments - sufficient to pay the next accruing installment of the principal and interest on outstanding senior lien debt. The monies in the bond fund shall be used solely for the purpose of paying the bond requirements of the senior lien bonds and any additional outstanding senior lien securities. This account, held by the bond trustee for the senior lien debt, includes the interest account and the principal account.
3. Bond Reserve Account – Adequate reserves in an amount established by the bond resolution or other instrument in connection with any senior lien securities.
4. Rebate Account – Adequate reserves in an amount that is required by Section 148(f) of the Internal Revenue Code, before the transfer of any net revenues to the payment of subordinate securities, such amounts required to meet the Authority's obligations in accordance with Section 148 (f) of the tax code with respect to the Authority's bonds shall be deposited into the Rebate Account. Amounts in the Rebate Account shall be used for the purpose of making payments to the United States required by such covenant and Section 148(f) of the tax code. Any amounts in the Rebate Account in excess of those required to be on deposit may be withdrawn and used for any lawful purpose.
5. Subordinate Securities Bond Fund/Reserve Account - Adequate reserve in an amount to be used for the payment of bond requirements of subordinate debt, including any reasonable reserves or related rebate requirements.
6. Operation & Maintenance Reserve Account - Adequate reserve in an amount equal to 1/6th of the fiscal year's operation and maintenance budget. If the operation and maintenance budget for a fiscal year is greater than the prior fiscal year (as is likely), additional monthly deposits are required to be made into this reserve to bring it up to the required level in 12 months.
7. Renewal and Replacement Reserve Account - Adequate reserves in the sum of \$166,000 per month, up to a maximum of \$10,000,000. The maximum reserve can be adjusted by the

TMWA Board based upon recommendation by the General Manager based on an analysis by the TMWA engineering staff, but at no event at an amount less than \$2,000,000.

8. Rate Stabilization Account - Adequate reserves in the amount of not less than \$500,000. The TMWA Board has designated an additional \$1,300,000 in unrestricted reserves to the Rate Stabilization account and has approved a maximum of \$7,500,000.
9. General Purpose Account - This account will be funded in the event that revenues remain at the end of each fiscal year. This reserve is to be used for capital costs, major maintenance costs, lawful refunds, bond requirements, lawsuit obligations or any lawful purpose.

UNRESTRICTED CASH AND INVESTMENTS RESERVES POLICY:

- A. After all required restricted and designated reserve balances are funded, remaining cash and investments should be held in unrestricted accounts to fund the following reserves listed by in the following order of priority:
 1. Base Operating Reserve - Adequate reserves to fund 2/6th of operating and maintenance expenses. With the required reserve of 1/6 above, this will bring total reserves to half a year of operating expenses, insulating TMWA and its customers from volatility in operating revenues and expenses, as well as from other factors that could interrupt cash flow or impose unforeseen costs.
 2. Debt Service Reserve – Adequate reserves to fund one year of the maximum annual debt service. For both credit rating considerations and prudent financial practices, TMWA should strive to achieve this level of reserves to maintain or improve credit ratings.
 3. Capital Related Reserve – Adequate reserves to fund a one-year average of mandatory future capital requirements. As a method to determine future capital needs, the capital improvements plan may be used. This will enable TMWA to better react to capital needs as they may arise and to properly address the timing of infrastructure improvements relative to system needs. This reserve will also enable TMWA to continue with uninterrupted critical capital improvements during times of difficulty.
 4. Unforeseen Events Reserve - Adequate reserves to fund one percent of assets subject to depreciation. This is to mitigate

one-time, unforeseen infrastructure or major capital equipment failures and other significant non-recurring impacts to operating revenues and expenses.

- B. Should this enterprise fund experience deficiencies in the balance of restricted designated or unrestricted cash and investment reserves or retained earnings, the deficiency will be corrected by increasing rates, fees and other charges.
- C. This fund is governed by Nevada Revised Statutes (NRS) Chapters 350, 351, 354, and 355; and Nevada Administrative Code (NAC) Chapters 350 and 354.

EXHIBIT A

FINANCIAL POLICIES

Effective Date: ~~August January 9, 2002~~ August 15, 2018

TRUCKEE MEADOWS WATER AUTHORITY

~~FINANCIAL FUND~~ FINANCIAL MANAGEMENT AND RESERVE POLICY

TRUCKEE MEADOWS WATER AUTHORITY ENTERPRISE FUND:

The Truckee Meadows Water Authority (~~“TMWA” or “Authority”~~) Enterprise Fund was established to account for the operations and maintenance functions and the costs of capital projects associated with the facilities. An enterprise fund is, by definition, established to account for operations that are financed and operated in a manner similar to private business enterprises where the intent of the governing body is that the costs (expenses, including capital costs, depreciation and debt service) of providing goods and services to the general public on a continuing basis be financed or recovered primarily through user charges, without producing any significant amount of profit in the long run. ~~The Operations Fund provides for a system of user charges for the operation and maintenance of the Truckee Meadows Water Authority Board water system, including the operations of the water treatment plants. The Capital Projects Fund provides for the major repair and expansion of the water system. The two funds are combined for budgeting and financial reporting purposes.~~

POLICY:

To determine the funding level in each of TMWA's reserve accounts and financial accounts. Capital funding needs, financial stress, and critical areas of funding flexibility will all have a bearing on the appropriate balance in each reserve fund and similar accounts.

~~Resources for the Truckee Meadows Water Operations Fund include user charges and surcharges that are used for the operation and maintenance of the water system necessary to support system users. Resources for the Water Capital Projects Fund include the proceeds of bond issues and charges that are used for expansion and rehabilitation of the water system to support new users of the system or to fund major system improvements. (Initial funding was provided by an allocation of bond proceeds).~~

PURPOSE:

- A. To establish the financial mechanisms required to support the operation and administration of ~~the Funds~~ TMWA.
- B. To provide a financial framework for identifying revenues and expenses reserves required by debt provisions and other designated unrestricted reserves related to the operation of TMWA ~~the Funds~~.

EXHIBIT A

~~B-C.~~ Establish a policy related to unrestricted cash and investments to maintain adequate and prudent cash reserves to mitigate the risks of significant and unexpected decreases in sources of funds and/or increases in uses of funds of TMWA.

DEFINITIONS:

- A. The **Truckee Meadows Water Authority Board** is ~~a group of individuals comprised of seven members~~ representing the Cities of Reno and Sparks and Washoe County. The Board establishes policies regarding the operations, maintenance, and capital—improvements to the Truckee Meadows Water Authority Facilities as well as the contemplation of future debt requirements.
- ~~B.~~ The **Truckee Meadows Water Authority Facilities** consist of water distribution infrastructure, storage reservoirs, wells, and ~~two~~—water treatment facilities which serve the residents of Reno, Sparks, and portions of unincorporated Washoe County. A General Manager hired by the TMWA Board serves as the Chief Administrative Officer of TMWA and generally is responsible for operation of the water system.

~~the TMWA Board operates the facility. The City of Reno contracts with the Water Authority to provide accounting, purchasing, accounts payable, investment and other financial services.~~

TMWA RESPONSIBILITIESMANAGEMENT FINANCIAL RESPONSIBILITIES:

- A. Oversee the operation and maintenance of the TMWA water system.
- B. ~~Cause to be prepared~~ Prepare the annual tentative and final budget as required by State law.
- C. Review the costs for operating and maintaining the water system at least annually and adjust ~~user rates, fees and other~~ charges, when necessary, to maintain proportionate distribution of costs by user and user class and to meet reserve requirements as established by this policy.
- D. Insure that the revenues collected from rates, fees and other user charges are used for purposes including, but not limited to, debt service requirements, and the operation, maintenance, and repair of the water system.
- E. Insure that all funds of TMWA are being reported in accordance with generally accepted accounting principles.
- F. Insure that all necessary revenue accounts are established and shall insure that all receipts are tracked in the appropriate category.
- G. Insure that all necessary expense accounts are established and shall insure that all expenditures are tracked in the appropriate category.

RESTRICTEDFINANCIAL SPECIFICITYRESTRICTED AND DESIGNATED FUND BALANCE RESERVE POLICY::

- A. ~~Fund reserves shall be established as follows~~So long as any of the Authority's Bonds are outstanding the flow of funds from the revenue fundEnterprise Fund must be applied in the following order of priority; in the following order:
 - 1. Operations and Maintenance Expenses Account — Adequate reserves in an amount to fund one month's of operation and maintenance expenses. The reserves should be set aside Bby-By the last day of each month andthat is at least one month prior to such expenses being paid, at a minimum, one month's worth of operational expense funding is to be setreservedset aside in this account.

2. Bond Fund Account — Adequate reserves in amount to fund~~This account was funded out of bond proceeds. This account, held by the 2001A and 2001B Bond Trustee for the Senior Lien Debt includes the Interest Account, and the Principal Account. An and the Bond Reserve Account. At a minimum amount in substantially equal monthly installments - , amounts -~~ sufficient to pay the next accruing installment of the principal and interest on outstanding senior lien debt~~for one year will be reserved in this fund.~~ The monies in the bond fund shall be used solely for the purpose of paying the bond requirements of the senior lien bonds and any additional outstanding parity senior lien securities. This account, held by the bond trustee for the senior lien debt, includes the interest account and the principal account.
3. Bond Reserve Account – Adequate reserves in an amount established by the bond resolution or other instrument~~in connection with any senior lien securities.~~
4. Rebate Account – Adequate reserves in an amount that is required by Section 148(f) of the Internal Revenue Code, before the transfer of any net revenues to the payment of subordinate securities, such amounts required to meet the Authority's obligations in accordance with Section 148 (f) of the tax code with respect to the Authority's bonds shall be deposited into the Rebate Account. Amounts in the Rebate Account shall be used for the purpose of making payments to the United States required by such covenant and Section 148(f) of the tax code. Any amounts in the Rebate Account in excess of those required to be on deposit may be withdrawn and used for any lawful purpose.

~~Rebate Reserve Account – If amounts are required by Section 148 (f) of the Internal Revenue Code, before the transfer of any Net Revenues to the payment of subordinate securities, amounts required to meet the Authority’s obligations under Section 148 (f) of the Tax Code with respect to the 2001A TMWA Bonds shall be deposited into the Rebate Reserve Account. Amounts in the Rebate Reserve Account shall be used for the purpose of making payments to the United States required by such covenant and Section 148 (f) of the Tax Code. Any amounts in the Rebate Reserve Account in excess of those required to be on deposit may be withdrawn and used for any lawful purpose.~~

5. Subordinate Securities Bond Fund/Reserve Account - ~~This Adequate reserve is an amount to be used for the payment of bBond RrequirementsBond Requirements of subordinate debt, including any reasonable reserves or related rebate requirements.~~
6. Operation & Maintenance Reserve Account - ~~This Adequate reserve was funded out of bond proceeds. It is to contain in~~ an amount equal to 1/6th6 of the fiscal year’s operation and maintenance budget. If the operation and maintenance budget for a fiscal year is greater than the prior fiscal year (as is likely), additional monthly deposits are required to be made into this reserve to bring it up to the required level in 12 months.
7. Renewal and Replacement Reserve Account - ~~This Adequate reserves reserve is to be funded on a monthly basis in the sum amount of \$166,000 per month, up to a maximum of is to be funded at until the reserve reaches an initialat~~ \$10,000,000. The maximum reserve can be adjusted by the TMWA Board based upon recommendation by the General Manager based on an analysis by the TMWA engineering staff, but at no event at an amountthe reserve cannot be set at a level less than below \$2,000,000.
8. Rate Stabilization Account - ~~At a minimum, this Adequate reservesreserve will be funded at in the amount of not less thanwith monthly payments until it reachesat~~ \$500,000. ~~Theor aThe greater amount subsequently determined by the~~ TMWA Board has designated an additional \$1,300,000 in unrestricted reserves to the Rate Stabilization account and has approved a maximum of \$7,500,000.
- 4.9. General Purpose Account - This account will be funded in the event that revenues remain at the end of each fiscal year. This reserve is to be used for capital costs, major maintenance costs, lawful refunds, bond requirements, lawsuit obligations or any lawful purpose.

UNRESTRICTED CASH AND INVESTMENTS RESERVES POLICY:

- A. After all required restricted and designated reserve balances are

funded, remaining cash and investments should be held in unrestricted accounts to fund the following reserves listed by in the following order of priority:

1. Base Operating Reserve - Adequate reserves to fund 2/6th of operating and maintenance expenses. With the required reserve of 1/6 above, this will bring total reserves to half a year of operating expenses, insulating TMWA and its customers from volatility in operating revenues and expenses, as well as from other factors that could interrupt cash flow or impose unforeseen costs.
 2. Debt Service Reserve – Adequate reserves to fund one year of the maximum annual debt service. For both credit rating considerations and prudent financial practices, TMWA should strive to achieve this level of reserves to maintain or improve credit ratings.
 3. Capital Related Reserve – Adequate reserves to fund a one-year average of mandatory future capital requirements. As a method to determine future capital needs, the capital improvements plan may be used. This will enable TMWA to better react to capital needs as they may arise and to properly address the timing of infrastructure improvements relative to system needs. This reserve will also enable TMWA to continue with uninterrupted critical capital improvements during times of difficulty.
 4. Unforeseen Events Reserve - Adequate reserves to fund one percent of assets subject to depreciation. This is to mitigate one-time, unforeseen infrastructure or major capital equipment failures and other significant non-recurring impacts to operating revenues and expenses.
- B. Should this enterprise fund experience deficiencies in the balance, of restricted designated or unrestricted cash and investment reserves or retained earnings, the deficiency will be corrected by increasing rates, fees and other charges.
- C. This fund is governed by Nevada Revised Statutes (NRS) Chapters 350, 351, 354, and 355; and Nevada Administrative Code (NAC) Chapters 350 and 354.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Michael Pagni, TMWA General Counsel
DATE: August 7, 2018
SUBJECT: **Discussion and action, and possible direction to legal counsel regarding negotiation of possible extension of employment agreement with general manager**

Recommendation

The TMWA Board direct legal counsel to negotiate terms with the General Manager for possible extension of the General Manager's employment agreement, to be brought back to the Board for review and consideration at a future meeting. Legal counsel requests one or two Board members be identified as points of contact for legal counsel to solicit input from on an as needed basis.

Discussion

In the past, some Board members provided comments about possibly adding or amending terms and provisions regarding the TMWA General Manager employment contract. As the agreement for the current general manager, Mark Foree, is set to expire October 14, 2018, this provides the opportunity for legal counsel to negotiate possible amendments with the General Manager, with the intention of bringing the Agreement to the Board for consideration at the October Strategic Planning Workshop. Attached is the current general manager's employment agreement for your reference.

AMENDED AND RESTATED EMPLOYMENT AGREEMENT

1. PARTIES AND RECITALS

This Amended and Restated Employment Agreement ("Agreement") is entered into on October 15, 2014 ("Effective Date") by and between the Truckee Meadows Water Authority, by and through its duly constituted Board of Directors ("TMWA"), a political subdivision of the State of Nevada and a public entity organized pursuant to NRS 277.110, et. seq., and Mark Foree ("Foree"), collectively the "Parties", and amends and supersedes the Employment Agreement entered between the Parties dated October 17, 2012.

1.1 TMWA was formed to exercise powers, privileges and authorities to develop and maintain supplies of water for the benefit of the Truckee Meadows community;

1.2 TMWA desires to retain the services of Foree as General Manager;

1.3 Foree desires employment as General Manager of TMWA; and

1.4 The parties desire to enter into an agreement reflecting the terms and conditions under which Foree will be employed by TMWA as its General Manager.

NOW, THEREFORE, in consideration of their mutual covenants contained herein, TMWA and Foree agree as follows:

2. EMPLOYMENT

TMWA hereby employs Foree and Foree agrees to serve as the General Manager of TMWA to perform the functions and duties specified in Section 3 for the term specified in Section 5.

3. DUTIES/ESSENTIAL JOB FUNCTIONS

3.1 Foree agrees that during the Term of Employment (as defined in Section 5.1) he will hold the office of General Manager of TMWA reporting to TMWA's Board of Directors (the "Board"). Foree agrees to perform faithfully and to the best of his ability such duties and assignments relating to the business of TMWA as the Board of Directors of TMWA shall direct.

3.2 During the Term of Employment Foree shall, except during customary vacation periods and periods of illness, devote his business time and attention to the performance of his duties hereunder and to the business and affairs of TMWA and to promoting the best interests of TMWA. Foree shall not, either during or outside of normal business hours, engage in any activity inimical to the best interests of TMWA. Foree acknowledges that he has ownership interest in a water company in Winnemucca, Nevada, for which he provides occasional services for compensation. Foree agrees to ensure that his ownership and any activities undertaken by Foree in connection with said company shall not interfere with his ability to devote his full time

and attention to the business and affairs of TMWA. Except for said services, Foree shall not serve as a consultant to other public or private utilities. Notwithstanding the foregoing, Foree may engage in charitable or civic pursuits provided that such service or pursuits do not interfere with Foree's obligations under the Agreement.

4. SALARY

TMWA agrees to pay Foree for his services an annual base salary of One Hundred Eighty Three Thousand Three Hundred Four and 12/100 Dollars (\$183,304.12) ("Base Salary"). Foree will have an opportunity to earn a Base Salary increase and a lump sum award based upon Foree's specific job performance in meeting the mutually agreed upon goals for the previous year. The Board and Foree will meet by December 1, 2014 to set initial performance goals for the 2014-15 fiscal year. The Board shall evaluate Foree's performance and in its sole discretion may determine a performance lump sum award or any salary adjustment in accordance with Section 6 of this Agreement. This adjustment may be made either to the Base Salary or in the form of a lump sum award or as a combination of the two at the sole discretion of TMWA. The total award (addition to Base Salary plus lump sum award) may be up to 10% of Base Salary. Any portion of a salary adjustment granted as a lump sum award shall not become part of Foree's Base Salary for future years.

5. TERM AND TERMINATION

5.1 Term. The term of this Agreement ("Term of Employment") is four (4) years beginning on the Effective Date of this Agreement; subject, however, to prior termination as provided herein.

5.2 Events of Termination. The Term of Employment, Foree's Base Salary, and any and all other rights of Foree under this Agreement or otherwise as an employee of TMWA may terminate (except as otherwise provided in this Section):

- (a) Upon the death of Foree;
- (b) Upon the disability of Foree (as defined in Section 5.3) immediately upon written notice from either party to the other;
- (c) For Cause (as defined in Section 5.4) immediately upon notice from TMWA to Foree, or at such later time as such notice may specify;
- (d) Upon Foree's 60 days written notice unless the parties subsequently agree to a different notice period; or
- (e) Upon termination by TMWA for any reason other than "For Cause" as defined in Section 5.4.

5.3 Definition of Disability. For purposes of Section 5.2, Foree will be deemed to have a "disability" if, for physical or mental reasons, Foree is unable to perform the essential

functions of Forcee's duties under this Agreement for a period of ninety (90) days. The disability of Forcee will be determined by a medical doctor selected by written agreement of TMWA and Forcee upon the request of either party by notice to the other. If TMWA and Forcee cannot agree on the selection of a medical doctor, each of them will select a medical doctor and the two medical doctors will select a third medical doctor who will determine whether Forcee has a disability. The determination of the medical doctor selected under this Section 5.3 will be binding on both parties. Forcee must submit to a reasonable number of examinations by the medical doctor making the determination of disability under this Section 5.3, and Forcee hereby authorizes the disclosure and release to TMWA of such determination and all supporting medical records. If Forcee is not legally competent, Forcee's legal guardian or duly authorized attorney-in-fact will act in Forcee's stead, under this Section 5.3, for the purposes of submitting Forcee to the examinations, and providing the authorization of disclosure, required under this Section 5.3.

5.4 Definition of "For Cause". For purposes of Section 5.2, the phrase "For Cause" means: (a) Forcee's breach of this Agreement; (b) Forcee's failure to adhere to any written policy of TMWA if Forcee has been given a reasonable opportunity to comply with such policy or cure his failure to comply; (c) the appropriation or attempted appropriation of a material business opportunity of TMWA, including attempting to secure or securing any personal profit in connection with any transaction entered into on behalf of TMWA; (d) the misappropriation or attempted misappropriation of any of TMWA's funds or property; or (e) the conviction of, the indictment for or its procedural equivalent, or the entering of a guilty plea or plea of no contest with respect to, a felony, the equivalent thereof, or any other crime with respect to which imprisonment is a possible punishment.

5.5 Termination Pay. Effective upon the termination of this Agreement, TMWA will be obligated to pay Forcee (or, in the event of his death, his designated beneficiary as defined below) only such compensation as is provided in this Section 5.5, and in lieu of all other amounts and in settlement and complete release of all claims Forcee may have against TMWA. For purposes of this Section 5.5, Forcee's designated beneficiary will be such individual beneficiary or trust, located at such address, as Forcee may designate by notice to TMWA from time to time or, if Forcee fails to give notice to TMWA of such a beneficiary, Forcee's estate. Notwithstanding the preceding sentence, TMWA will have no duty, in any circumstances, to attempt to open an estate on behalf of Forcee, but will act reasonably in ascertaining the whereabouts of Forcee's beneficiaries and seeing to it that such beneficiaries are properly paid.

(a) If this Agreement is terminated by either party as a result of Forcee's death or disability as determined under Section 5.3, TMWA shall pay Forcee his Base Salary accrued through the date of termination plus any accrued unused banked vacation and PTO as set forth in section 8 below.

(b) If this Agreement is terminated by TMWA "For Cause" pursuant to Section 5.2(c) or by Forcee pursuant to Section 5.2(d), TMWA shall pay Forcee his Base Salary accrued through the date of termination, but not any accrued unused banked vacation and PTO.

(c) If TMWA terminates this Agreement for any reason other than “For Cause” pursuant to Section 5.2(e), TMWA agrees to pay Foree severance pay equal to Foree’s six-month Base Salary.

5.6 Renewal of Agreement. In the event TMWA elects not to renew or extend this Agreement or offer some other mutually agreeable contract, TMWA will give Foree six months written notice of its intent not to renew the Agreement. Failure to give such notice on the part of TMWA shall be treated as a termination and Foree will receive severance pay as set forth in Section 5.5(c) above.

6. PERFORMANCE EVALUATION

TMWA's Board of Directors will review and evaluate Foree’s performance at least once annually on or within four months of the end of the fiscal year. Foree’s annual salary review and any adjustment to compensation will coincide with the annual performance evaluation timeframes established for all TMWA employees.

7. RETIREMENT

7.1 Subject to applicable laws, TMWA will contribute an amount equal to 6% of Foree’s base salary to a deferred compensation plan on Foree’s behalf.

7.2 TMWA agrees that Foree will be a member of the Nevada Public Employees Retirement System at TMWA's expense.

8. PAID TIME OFF

8.1 Foree will be granted 40 days of compensated paid time off (“PTO”) each year for personal use, including vacation and illness. Unused PTO may be taken as pay, at any time, or carried over to the next calendar year as set forth in Section 8.2.

8.2 Accrued but unused PTO will be carried over from year to year. A maximum of 320 PTO hours can be carried over each calendar year. Upon termination of Foree’s employment, Foree will be entitled to full compensation for his accrued, unused PTO, up to a maximum of 320 hours.

8.3 Banked vacation which Foree accrued as of July 1, 2009 will remain in the banked vacation account until used. Such banked vacation time may also be cashed out as pay at any time and upon Foree’s employment termination, except for termination “For Cause” pursuant to Section 5.4.

9. DUES, SUBSCRIPTIONS AND PROFESSIONAL DEVELOPMENT

9.1 TMWA agrees to pay the professional dues, certifications and subscriptions of Foree necessary for his continuation and participation in national, regional, state and local

associations and organizations necessary and desirable for his continued professional participation, growth and advancement, and for the good of TMWA.

9.2 TMWA agrees to pay the travel and subsistence expenses of Foree for professional and official travel and meetings adequate to continue the professional development of Foree as the chief executive of a water utility and to adequately pursue necessary official functions for TMWA. Such travel and subsistence expenses must be approved by TMWA's Chief Financial Officer and submitted to the Chair of the TMWA Board for review. TMWA will also pay for Foree's attendance at conferences, seminars and short courses which are deemed to be of value to TMWA.

10. EXPENSES, ALLOWANCES AND OTHER BENEFITS

10.1 Foree will be paid a fixed sum of \$750 per month for the use of his personal vehicle for TMWA business, with future increases to be determined by TMWA as a part of the budget cycle.

10.2 TMWA agrees to pay Foree a fixed sum of \$150 per month as a cell phone/personal digital assistance (PDA) allowance.

10.3 TMWA will pay all costs of any fidelity or other bonds required of Foree by virtue of his employment with TMWA.

10.4 Foree will be provided all other benefits given to management employees, such as observed paid holidays, group health coverage (medical, dental, vision), short and long term disability.

11. TEAM BUILDING, GOALS AND RETREATS

TMWA agrees that annually TMWA's Board of Directors will schedule and participate in the following:

- (a) A goals-setting session to develop objectives for TMWA; and
- (b) A session to develop specific criteria to serve as the basis for Foree's pay-for-performance clause set forth in Section 6 of this agreement. This session will be held within four months of the end of each fiscal year of the Term of Employment.

12. MISCELLANEOUS

12.1 The captions in this agreement are not part of the provisions hereof, are merely for the purpose of reference and shall have no force or effect for any purpose whatsoever, including the construction of the provisions of this Agreement, and if any caption is inconsistent with any provisions of this Agreement, such provisions shall govern. The Recitals are part of this Agreement.

12.2 This Agreement is made in, and shall be governed by and construed in accordance with the internal laws of the State of Nevada.

12.3 This Agreement contains a complete statement of all of the arrangements between the parties with respect to the subject matter hereof. There are no representations, agreements, arrangements or understandings, oral or written between the parties relating to the subject matter of this Agreement, which are not fully expressed in this Agreement.

12.4 This Agreement may not be waived, changed, modified or discharged orally, but only by an agreement in writing signed by the party against whom any waiver, change, modification or discharge is sought.

12.5 All notices given hereunder shall be in writing and shall be sent by registered or certified mail, return receipt requested as such other address as TMWA and Foree designate. Each such notice shall be deemed to be given on the date received at the address of the addressee.

12.6 If litigation over this Agreement is initiated in any court, the Parties agree the proper venue is Washoe County, Nevada. Foree irrevocably (i) waives and agrees not to assert in any such action, suit or other proceeding that he is not personally subject to the jurisdiction of such courts, that the action, suit or other proceeding is brought in an inconvenient forum or that the venue of the action, suit or other proceeding is improper, (ii) waives personal service of any summons, complaint or other process and (iii) agrees that the service thereof may be made by certified or registered mail directed to Foree at his address for purposes of notices hereunder. Should Foree fail to appear or answer within the time prescribed by law, he shall be deemed in default and judgment may be entered by TMWA against him for the amount or other relief as demanded in any summons, complaint or other process so served.

IN WITNESS WHEREOF, the parties have executed this Agreement the day and year first hereinabove written.

TMWA

Dated this 17 day of OCT., 2014

By: 

Mike Carrigan, Chairman

GENERAL MANAGER

Dated this 15th day of OCT., 2014

By: 

Mark W. Foree



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: August 7, 2018
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*), the Customer Services Report (*Attachment C*), and the Monthly Conservation Report (*Attachment D*).

Also, included in your agenda packet are press clippings from June 14, 2018 through August 8, 2018.

Water Project Review Update: Modifications to NAC 445A regulations governing water system design and construction are complete and have been approved by the State Environmental Commission. These modifications provide clarification and more flexibility in design and construction of water system improvements. The modifications will go before the Legislative Committee on August 30 for final approval, and if approved, will be effective on that date.

TMWA, NDEP and WCHD staff are finalizing the interlocal agreement (ILA) between the three entities, and pending legal review, anticipate the ILA to be presented to the Board for approval at its September meeting. The ILA will provide TMWA with the authority to review and approve water plans (designed by others, i.e. consulting engineering firms) for distribution projects such as subdivisions, without submittal to WCHD. NDEP and WCHD will periodically audit TMWA's review program to insure compliance with NAC 445A.

West Reno Water Company Update: TMWA staff is conducting due diligence regarding acquisition of the West Reno Water Company water system. The due diligence period expires October 17, 2018. Staff anticipates that it will be able to provide a fairly complete due diligence report to the Board at the September Board meeting. Staff is striving to complete all due diligence by October 17th, however, there are complicated real property issues involving multiple landowners, lenders, and third-party interests that could delay completion of due diligence and closing. In that event, TMWA would seek to extend the due diligence period to resolve the issues. At the earliest, closing of the transaction would occur this November.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
BY: Bill Hauck, Senior Hydrologist
DATE: August 08, 2018
SUBJECT: August 2018 Operations Report

Summary

- TMWA is in the middle of our peak customer demand season
- The peak integrated system customer demand day was 144.7 MG on July 17th
- Lake Tahoe is still only 7/10th of a foot below its legal maximum elevation
- Combined upstream reservoir storage is in great shape at 88.5% of capacity
- Truckee River flows are close to normal for this time of the year
- Hydro revenue for July 2018 was an estimated \$324,429

(A) Water Supply

- **River Flows** - Truckee River flows at the CA/NV state line were approximately 575 cubic feet per second (CFS) this morning. The median flow for August 8th based on 109 years of record is 523 CFS.
- **Reservoir Storage** - The elevation of Lake Tahoe is currently 6228.40 feet. This is 7/10th of a foot below its legal maximum storage elevation of 6229.10 feet. Overall, Truckee River reservoir system storage is 88.5% of capacity. Storage values for each reservoir as of 8/8 are as follows:

Reservoir	Current Storage (Acre-Feet)	% of Capacity (Percent)
Tahoe	658,500	88%
Boca	31,264	76%
Donner	8,439	89%
Independence	16,863	96%
Prosser	19,396	65%
Stampede	211,853	94%

Besides the storage in Donner and Independence reservoirs, TMWA has 11,600 acre-feet of water stored between Boca and Stampede reservoirs under the terms of TROA.

TMWA's combined back-up reservoir storage between Donner and Independence lakes and TROA is approximately 36,900 acre-feet as of this morning.

(B) Water Production

Demand - We are in the middle of our peak summer demand season. Customer demand averaged 127 MGD last week. It looks like our peak integrated system demand day will end up being Tuesday July 17th at 144.7 million gallons. Surface water between the Chalk Bluff and Glendale treatment plants made up approximately 79% of TMWA's raw water supply, and groundwater the other 21% from production wells located throughout TMWA's service territory.

(C) Hydro Production

Generation - Truckee River flow at Farad (CA/NV state line) for the month of July averaged 603 cubic feet per second (CFS). All three of TMWA's plants were on-line and available every day last month. Statistics as follows:

Hydro Plant	Days On-Line	Generation (Megawatt hours)	Revenue (Dollars)	Revenue (Dollars/Day)
Fleish	31	1,662	\$ 120,462	\$ 3,886
Verdi	31	1,711	\$ 122,884	\$ 3,964
Washoe	31	1,117	\$ 81,083	\$ 2,616
Totals	93	4,490	\$ 324,429	\$ 10,466



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager, Water Resources
DATE: August 7, 2018
SUBJECT: **Report Water Resources and Annexation Activity**

RULE 7

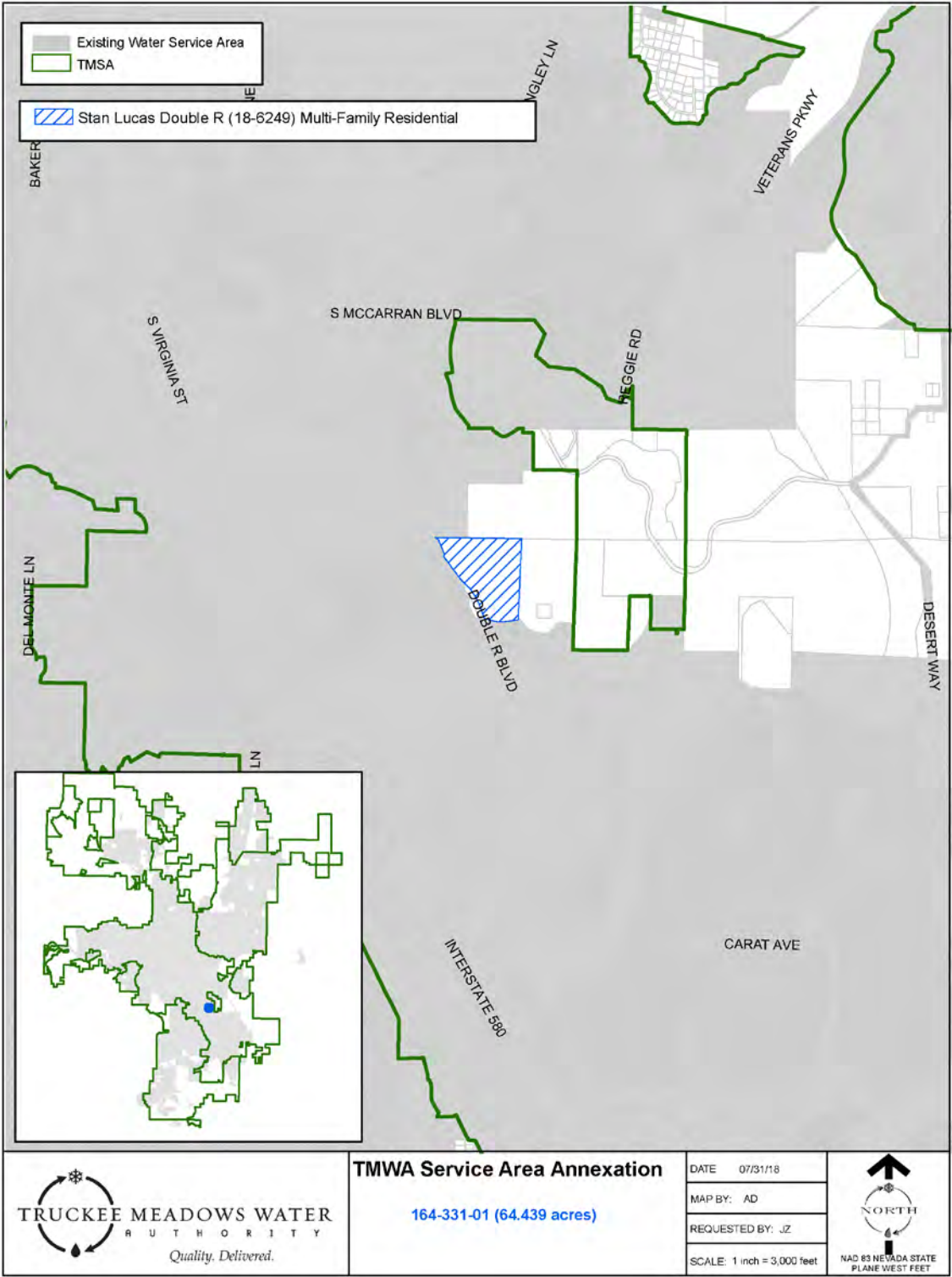
Rule 7 water resource purchases and will-serve commitment sales against purchased water resources through this reporting period:

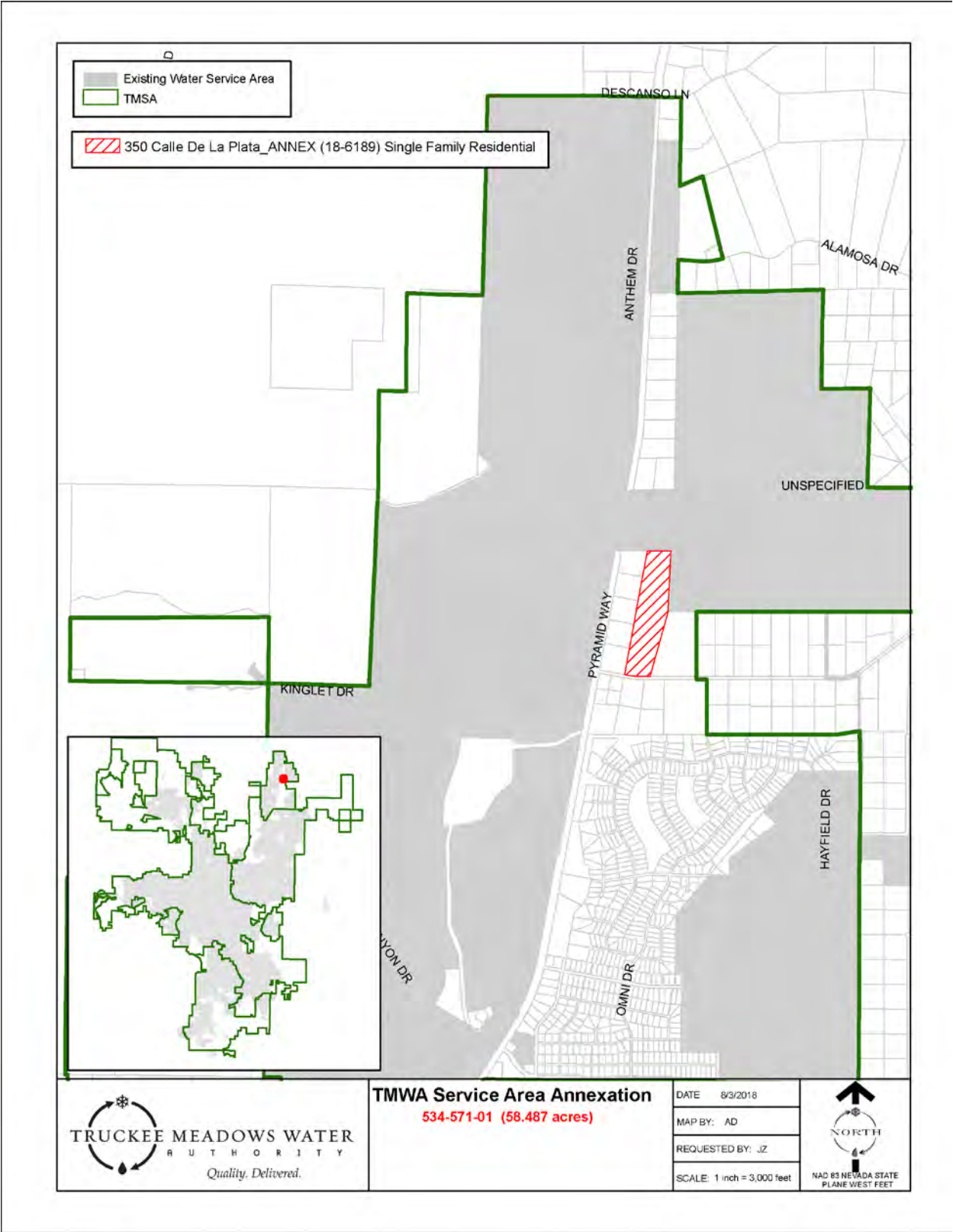
Beginning Balance	5,109.67 AF
Purchases of water rights	0.00 AF
Refunds	0.00 AF
Sales	– 135.01 AF
Adjustments	0.00 AF
Ending Balance	4,974.66 AF

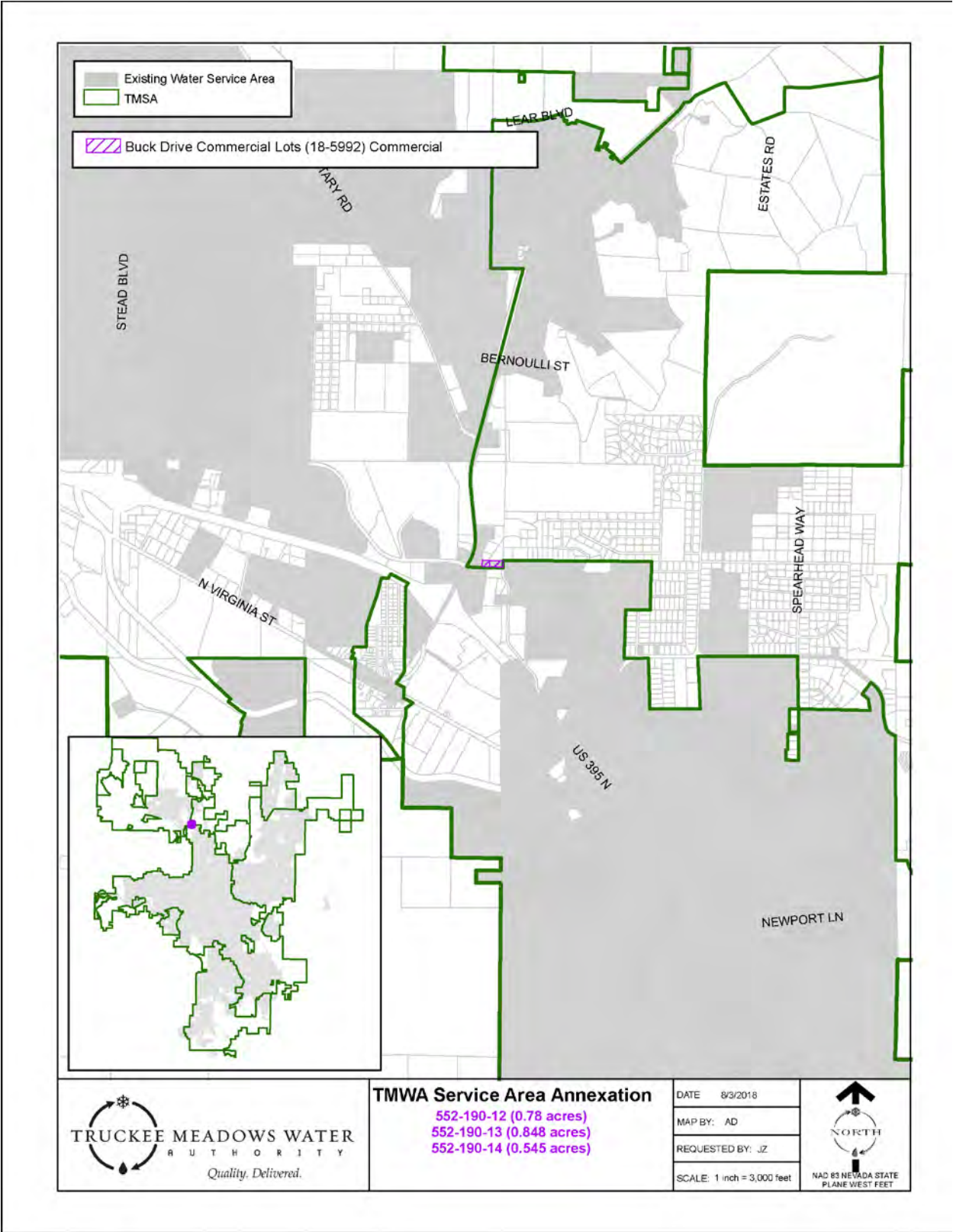
Price per acre foot at report date: \$7,600

WATER SERVICE AREA ANNEXATIONS

There have been three annexations since the date of the last report. See attached map (a 64-acre multi-family development in South Truckee Meadows, 58-acre single-family residential service in Spanish Springs, and a 2-acre commercial development in the North Valleys).









STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: August 15, 2018
SUBJECT: June and July Customer Service Report

The following is a summary of Customer Service activity for June and July 2018

Ombudsman

- Customer called regarding sand in the water, we went out and discovered it was a sprinkler system issue. Customer will have landscaper out to fix.
- Customer called upset that he had a leak at his rental and felt that we should have fixed it. Leak was on customers side in the yard line. Gave leak adjustment.
- Customer called regarding having his meter moved. Customer had a leak with the line running through the customer's property made it very difficult to fix leak, referred to new business.

Communications

Customer outreach in June and July included:

- Christian Kropf had a Water Treatment presentation at Chalk Bluff Water Treatment Plant for Peavine Elementary School and 30 kids attended.
- Laine Christman and Sonia Folsom presented Water Conservation at the Innovation Center for ReEnergize Reno workshop series and 20 people attended.
- Chuck Swegles and Lauren Kunin had a Sprinkler Maintenance Workshop at Truckee Meadows Water Authority's Capital building and 20 people attended.
- Lauren Kunin had a Walking Tour at Valley Wood Park and 10 people attended.
- Laine Christman and Sonia Folsom presented Reduce Water Consumption, Impact on Climate Change presentation for the National Wildlife Federation at Patagonia and 46 people attended.
- Laine Christman attended the Community Science Resource Fair at North Valleys High School and 150 attended.

Conservation (January 1 – July 31)

- 4,206 Water Watcher Contacts
- 1,097 Water Usage Reviews

Customer Calls – June and July

- 17,437 phone calls handled (8,319 for June & 9,118 for July)
- Average handling time – 4 minutes, 16 seconds per call
- Average speed of answer – 18 seconds per call

Billing – June and July

- 257,437 bills issued (128,675 for June & 128,762 for July)
- 9 (<.1%) corrected bills 5 for June & 4 for July)
- 17,341 (13.0%) customers have signed up for paperless billing to date.

Service Orders –June and July (% is rounded)

- 15,923 service orders taken (7,754 for June & 8,169 for July)
- 9,177 (58%) move-ins / move-outs (4,673 for June & 4,504 for July)
- 961 (6%) cut-out-for-non-payment and cut-in after receiving payments, including deposits and checks for tamper (412 for June & 549 for July)
- 1,115 (7%) zero consumption meter checks (501 for June & 614 for July)
- 808 (5%) re-read meters (437 for June & 371 for July)
- 1,434 (9%) new meter sets and meter/register/ERT exchanges and equipment checks (June 617 & 817 for July)
- 1,081 (7%) problems / emergencies, including cut-out for customer repairs, dirty water, no water, leaks, pressure complaints, safety issues, installing water meter blankets, etc. (509 in June & 572 for July)
- 557 (3%) high-bill complaints / audit and water usage review requests (293 in June & 264 for July)
- 790 (5%) various other service orders (312 in June & 478 for July)

Remittance – June and July

- 51,994 mailed-in payments (23,442 for June & 28,552 for July)
- 50,394 electronic payments (24,131 for June & 26,263 for July)
- 57,236 payments via RapidPay (EFT) (26,681 for June & 30,555 for July)
- 35,415 one-time bank account payments (16,577 for June & 18,838 for July)
- 13,200 credit card payments (6,267 for June & 6,933 for July)

- 3,555 store payments (1,745 for June & 1,810 for July)
- 4,010 payments via drop box or at front desk (1,889 for June & 2,121 for July)

Collections -June and July

- 25,296 accounts received a late charge (11,216 for June & 14,080 for July)
- Mailed 15,079 10-day delinquent notices, 5.8% of accounts (8,224 for June & 6,855 for July)
- Mailed 3,362 48-hour delinquent notices, 0.13% of accounts (1,217 for June & 2,145 for July)
- 368 accounts eligible for disconnect (131 for June & 237 for July)
- 380 accounts actually disconnected (including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection) (146 for June & 234 for July)
- 0.07 % write-off to revenue

Meter Statistics – Fiscal Year 2017-2018

- 0 meter retrofits completed
- 1,277 meter exchanges completed
- 2,199 new business meter sets completed
- 124,989 meters currently installed

Meter Statistics – Fiscal Year -July 31st

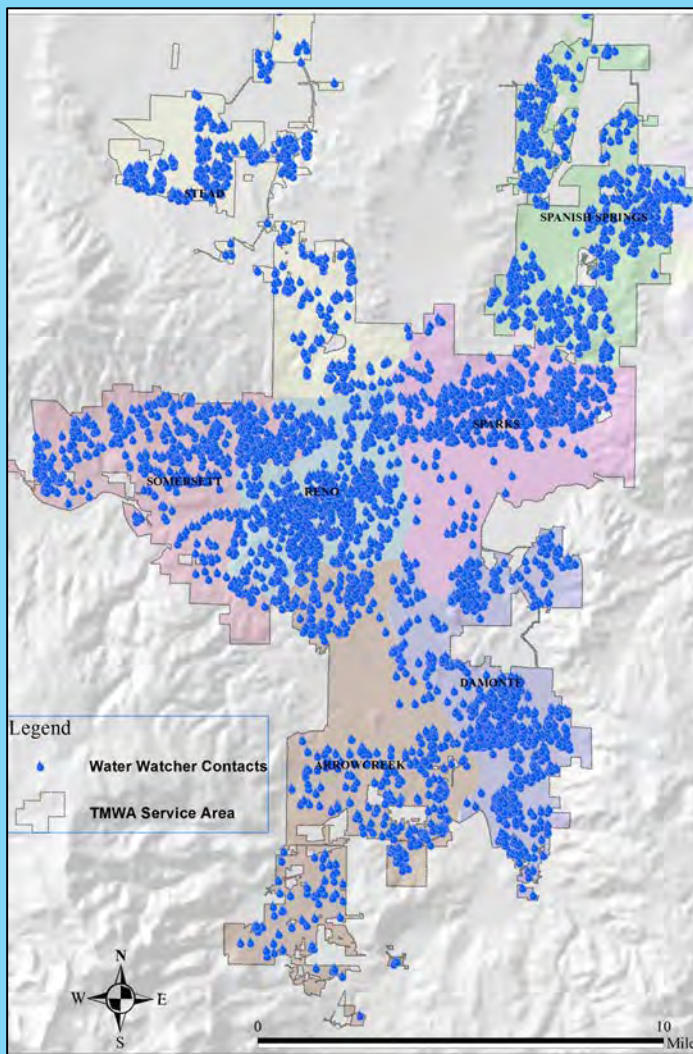
- 0 meter retrofits completed
- 40 Meter Exchanges Completed
- 107 New Business Meter Sets Completed
- 125,084 Meters currently installed



MONTHLY CONSERVATION REPORT – July 2018

SUMMARY – July went on the books as the hottest on record, according to the National Weather Service - and there was a lot of water being used out there. Waste reports were up 63%, compared to July of last year; however, water watcher contacts declined a bit overall, due to our limited staffing. Nevertheless, conservation addressed 390 waste-related issues this month, compared to 130 last July. - Consv.

CONSERVATION CONTACT LOCATION MAP



Water Watcher Contact Initiation Type

Drive-bys	3746
Deliveries	43
Hotline Reports	215
Email Reports	202
Total	4206

Watering Violations Observed

Waste	1032
Wrong Day	2800
Wrong Time	340
Total	4172

Water Watcher Actions Taken

Educational Visits	1968
A.M. Letters	1983
Courtesy Calls	183
No Actions	70
Total	4204

Efficiency Devices Supplied

Faucet Aerators	0
Hose Timers	22
Nozzles	87
Low-flow Shower heads	2
Tree Root Feeder	0
Total	111

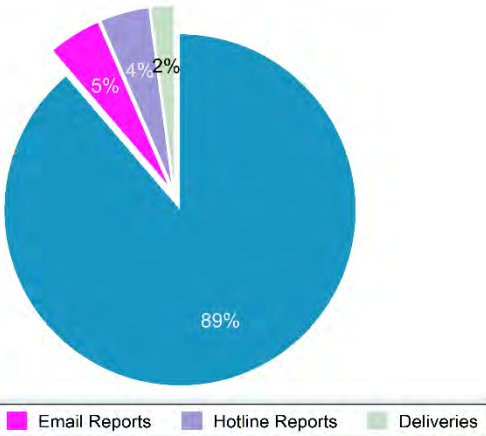
Other Conservation Actions

Water Usage Reviews	1097
Tree Care Visits	80
Total	1177

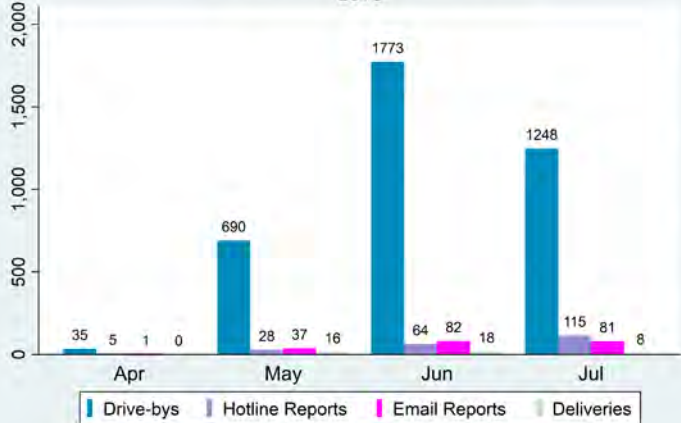
Attendees at Workshops /Tours

Irrigation System Start-up Workshop #1	8
Irrigation System Start-up Workshop #2	5
Landscape Planning & Design Workshop	30
Tree Care Workshop	18
Drip System Maintenance Workshop	18
Sprinkler System Maintenance Workshop	7
Walking Tour - Valley Wood Park #1	9
Walking Tour - River School Farm	N/A
Walking Tour, Part 2 - Valley Wood Park #2	N/A
Winterize Your Irrigation System Workshop #1	N/A
Winterize Your Irrigation System Workshop #2	N/A
Winterize Your Irrigation System Workshop #3	N/A
Winterize Your Irrigation System Workshop #4	N/A
Total	95

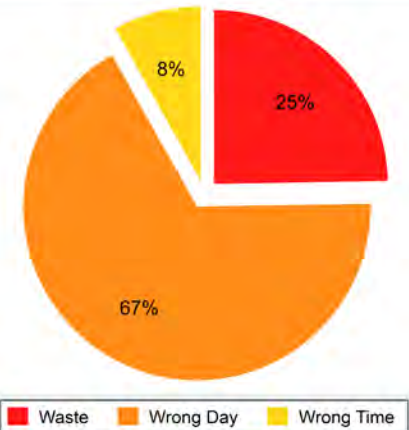
Water Watcher Contact Initiation
2018



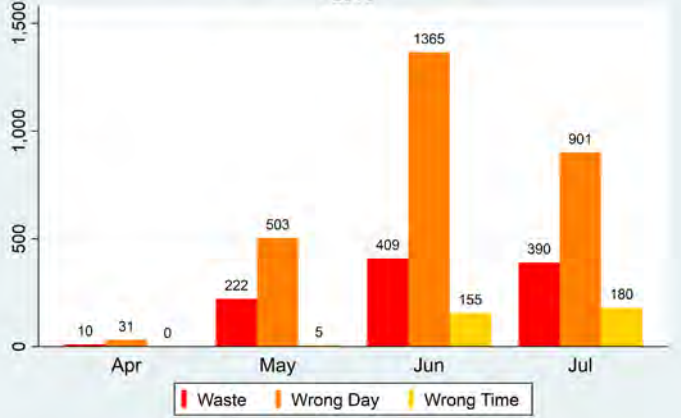
Water Watcher Contact Initiation
2018



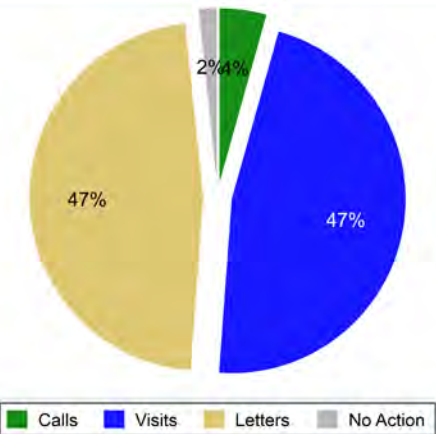
Water Violations Observed
2018



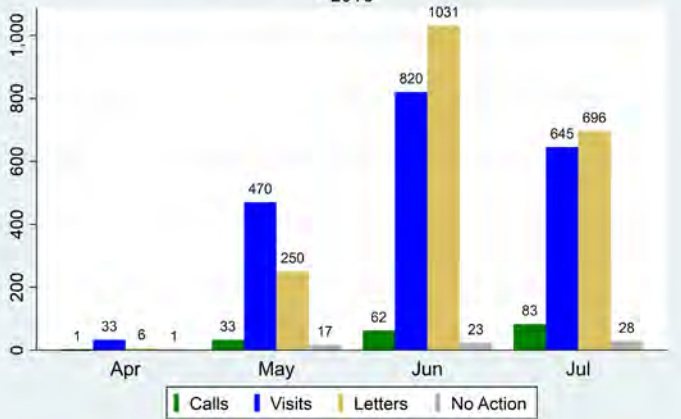
Water Violations Observed
2018



Water Watcher Actions Taken
2018



Water Watcher Actions Taken
2018





TMWA Board Meeting

Wednesday, August 15, 2018

Press Clippings

June 14, 2018 – August 8, 2018



Glendale Water Treatment Plant

Balancing the Boom: How Utilities Strive to Keep Up with Developers

NEVADA BUSINESS MAGAZINE July 1, 2018 By John Seelmeyer [Comments](#)



Nevada's utility providers, facing a wave of requests from developers who need water, power and natural gas service for their projects, increasingly rely on digital solutions to help move applications along.

At the same time, utilities emphasize one of the oldest strategies in the book to reduce the possibilities of delay. They encourage development teams to meet face-to-face with utility engineering staffs as early in the process as possible. Problems often can be solved easily if they're identified early, utility engineers say. Problems that crop up later may require expensive, lengthy solutions.

Utility providers say they're busy these days with requests for service from developers in Las Vegas, Reno and outlying areas, and developers universally want to get their projects moving quickly.

Staffing Growth

"It's busy on both ends of the state, and everyone is in a hurry nowadays," said Jeff Brigger, director of business development in the economic development unit of [NV Energy](#). NV Energy has added staff and, what Brigger called, "a significant amount of contractor resources" to handle the upsurge.

“Many times developers ask if we need to just hire more people to satisfy all the work. They are understanding when I explain that, in many areas, employees already work extended days and weekends in addition to the high volume of work that’s contracted out,” he said.

It’s not just new projects creating more work for employees of the state’s largest electric utility. Pressure also comes from shifts in the way power is generated and distributed.

In the next year, for instance, NV Energy will add three engineers, as well as new planning techniques, to strengthen its analysis of the growing use of distributed energy resources on its grid. Distributed energy resources — which range from energy-efficiency systems to solar generation — often are proposed by developers seeking to capture incentives as well as long-term savings in utility costs.

Digital Advancements

Technology, too, helps utilities meet developers’ hopes for speedy approval.

Digital systems have empowered the engineering service staff at [Las Vegas Valley Water District \(LVVWD\)](#), for instance, to meet what the district calls a “4-1-1” program for timely approval of service application. Doa Meade, engineering services manager for LVVWD said the program calls for turnaround of initial review of applications within four weeks, turnaround of revised applications within one week and turnaround of final approval within a week.

Despite the surge of applications that’s accompanying new development, Meade said the water district staff is able to meet those standards.

During 2017, it took an average of less than four weeks — 18.6 working days, to be precise — to review 744 new applications. Revised applications (which totaled 2,336) took an average of 5.7 days and final approvals (which totaled 846 during the year) took an average of 4.22 days.

“We’re trying,” said Meade. “We’re really trying.”

Technology helps. The district’s engineering submissions are digitized, allowing for multiple reviews which can be conducted simultaneously. No longer does one review await the completion of another.

A results-oriented management philosophy helps, too.

“Our staff is empowered to get things done,” explained Meade. “They stay in touch with the developers’ engineers in real time to resolve questions quickly.”

Meeting Early

Among the ways developers and their engineers can move projects through the process quickly is investment of time early in the process.

“We strongly encourage a pre-submittal meeting,” said Meade. That meeting gets water district staff up to speed on a proposal and allows potential problems to be identified and resolved before the application itself is submitted.

Information about sanitary sewers and storm sewers on the site are particularly critical, the water district engineering chief says. That information will influence decisions about water service. Failure to provide that information up front might mean that a water service plan has to be reworked later on.

In some cases, Meade said, meetings with water district staff members even earlier can pay benefits.

In fact, a developer looking at a piece of land, no matter how small, might want to talk with district engineers about potential water service issues long before closing on the purchase. An urban redevelopment site, for instance, might provide limited space for the installation of water-related infrastructure, and those questions may need to be resolved before the purchase is completed.

Valley Electric Association (VEA), the Pahrump-based cooperative that serves more than 6,800 square miles in Southern Nevada and small parts of California, also seeks to meet as early as possible with developers, said Ramon Abueg, the cooperative’s chief operating officer. That way VEA staff can work with the developer to create conceptual plans to serve the development.

In that process, the architect for the developer defines the requirements for electric service and estimates the property’s consumption of electricity. From there, Abueg explained, VEA’s engineering staff can design the service infrastructure — the transformers, cables, electric panels — needed to get electric service to the property.

The costs vary, depending on the amount of infrastructure the cooperative needs to build and the distance of the property from existing power lines. One cost, however, is small. Applicants pay \$10 to become a member of the cooperative.

“Common stumbling blocks could be incomplete applications or, in some instances, being unable to execute right-of-way easements from adjacent properties,” said Abueg.

By getting an early start, VEA can meet its goal of completing energy infrastructure before the developer’s go-live schedule, added Abueg.

It’s not just electric service that’s designed by the VEA team. Through its subsidiary, Valley Communications Association, the cooperative also provides high-speed broadband service to commercial developers.

Partnering with Developers

Brigger added that early meetings with developers sometimes create opportunities to improve the marketability of new real estate projects. For instance, utility executives often provide information about financial incentives for energy efficiency and use of renewable energy sources to developers — information that developers can share with the companies that are the end users of new buildings.

“We can help developers close deals with their customers,” Brigger says. “We want to be a strong partner with the development community.”

In its initial discovery sessions, NV Energy works with developers to get an overview of the project and its energy requirements. The utility also provides materials that detail application and construction requirements.

“That initial conversation is vital for us to understand the scope of the project and the project’s timeline,” says Brigger.

The state’s Public Utilities Commission (PUC) establishes the rules that determine what parts of the costs of new service are to be paid by the developer and what parts are to be paid by the utility.

The Waiting Game

For all of the good intentions of utility providers, the complexity of the approvals process sometimes leaves developers waiting.

“We are responsible only for a small part of this. There are a lot of utilities and agencies involved,” said Scott Estes, director of systems planning and engineering for [Truckee Meadows Water Authority \(TMWA\)](#), which serves the Reno-Sparks metropolitan area.

TMWA's agreement to provide water is necessary before the Washoe Health District will give its approval to a building permit application. Estes explained that, because of this, savvy developers get water service in place before they file for a building permit. That doesn't always happen and some building permits get hung up as a result.

TMWA's goal is 30-day turnaround of at least three-quarters of the applications it receives, and 60-day turnaround on all applications. ("Turnaround" is the time between the receipt of a completed application for new construction and review of engineering documents.) Despite the upsurge in development, TMWA has managed to maintain an approximately 10-day turnaround, Estes said.

When developers begin working with TMWA, they pay a \$300 application fee as well as fees to cover the costs of engineering and health department reviews, inspections and installation of meters. Developers also face a set of connection fees designed to ensure that the demands of growth pay their own way. Those fees, Estes said, help recoup the costs of the water treatment, storage and delivery infrastructure that's needed to serve new development.

For developers in the Reno-Sparks area, however, the costs and paperwork involved with an application for TMWA service is only a small part of the process of getting water service to a project. The purchase of water rights is a bigger requirement.

A court decree in 1944 established the number of water rights available in the Truckee River system. No new water rights can be created.

That means a developer must purchase water rights for a project on the open market, often buying water rights that once served agricultural land and converting them for use in urban developments.

At last count, about 45,000 acre-feet of water — enough to serve roughly 90,000 homes — remain to be converted from agricultural to urban uses in the Truckee River area.

The price of water rights sold on the open market in Northern Nevada varies widely, depending on the type of rights and their limitations, explained Chris Facque, water rights manager at [Farr West Engineering](#) in Reno.

A commonly used yardstick maintained by TMWA is currently set at about \$7,000 an acre-foot, roughly the amount of water needed to serve two homes. That compares with rates as high as \$35,000 in the boom year of 2006 — and it's up a bit from the low of \$5,500 in 2009.

The cost of water rights themselves is only part of the equation, Facque notes. Developers need to factor in time — and the costs related to time — to ensure water rights are properly permitted.

Attention to Detail

The most important factor in speeding applications along, utility executives say, is careful attention to application details and the underlying rules. Even a few square feet of inappropriately placed grass can slow things down.

Las Vegas Water District engineers, for instance, encourage residential developers to pay close attention to their planned use of turf in common areas. While a limited amount of turf is allowed in community spaces where it can be used for recreation, the district's engineers often encounter plans that include turf on medians in the middle of busy streets — hardly a place for children to play. If turf isn't used appropriately, developers face delays to redraw plans — and new construction reaches the market more slowly.

Filed Under: [Building Nevada](#) Tagged With: [Chris Facque](#), [Doa Meade](#), [Farr West Engineering](#), [Jeff Brigger](#), [Las Vegas business](#), [Las Vegas Valley Water District](#), [Nevada business](#), [NV Energy](#), [Ramon Abueg](#), [Reno business](#), [Scott Estes](#), [Truckee Meadows Water Authority](#), [Valley Electric Association](#)

KOLO TV:

Vista in Sparks open after water main break; water restored

By Staff |

Posted: Sat 12:29 AM, Jun 16, 2018 |

Updated: Sat 11:46 AM, Jun 16, 2018



[View Map](#)

SPARKS, Nev. (KOLO)-- One lane of Vista Boulevard is open in both directions after the was closed Friday night for the repair of a 24-inch water main break.



Water on Vista Boulevard from a water main break. Photo by Abel Garcia/KOLO.

[Link to video](#)

Water has been fully restored. The leak was in the Peppergrass Drive area.

“We want to thank all of the agencies for pulling together,” said Andy Gebhardt, director of operations & water quality for Truckee Meadows Water Authority. “They were here all night until we located the problem and replaced the valve in a very difficult and deep location. Thanks also to our customers for their patience and understanding.”

The break was reported about 5:45 p.m. June 15, 2018.

The Vista closure meant backups also on Pyramid Highway, the other route into Wingfield Springs, via La Posada. That was problematic as well, because La Posada itself is closed because of roadwork, meaning a detour through residential neighborhoods north of La Posada.

FACEBOOK POSTS:



KOLO 8 News Now

June 16 at 8:54am ·

TRAFFIC ALERT: One lane of northbound traffic has been REOPENED on Vista Boulevard at Peppergrass after yesterday's water main break. Also, [Truckee Meadows Water Authority](#) says water has been restored to that neighborhood after being unavailable all night.



Marlene Olsen

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[Madi Elizabeth Sanchez](#) Can you get in and out of wingfield springs on vista??

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1 Reply



[Kelly Wilton Heckert](#) Water is back on in Pioneer Meadows area

1

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[KOLO 8 News Now](#)

June 16 at 5:53am ·

UPDATE: Traffic is moving again on Vista into Wingfield Springs, and water service has been restored.

[Sparks Police](#) say Vista Boulevard is still closed to northbound traffic between Vista Del Rancho and Peppergrass during repair of a water main break that happened yesterday evening. The southbound side is open for normal use. Please avoid the area and use alternate routes. [Truckee Meadows Water Authority](#) should be releasing further information later this morning. Police advise traffic delays for this incident do not warrant a call to 9-1-1 for information.



1414

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[Ron Roques](#) The city of Sparks needs to get its head out of its A--. Before letting big business build houses the roads should be in place. Lennar and others should have been required to extend Wingfield Springs Rd to Pyramid prior to getting their building permit...[See More](#)

KTVN TV:

Water Services Restored At Vista Blvd., Some Traffic Delays

Posted: Jun 15, 2018 6:08 PM PDT Updated: Jun 16, 2018 12:06 PM PDT



- Water Restored Near Vista Blvd.
00:35

- Sparks Water Main Break
00:55



- Water Main Break Vista and Los Altos
00:15



Water Restored Near Vista Blvd.



Courtesy of TMWA



Courtesy of TMWA

[Link to video REPORT](#)

The City of Sparks says that one lane in each direction of Vista Boulevard is now open. They expect the entire road to be open with minor controls by around 1 p.m. Saturday.

Also, TMWA says that water services are now working again. They advise that residents should be careful when first turning on the water and to be sure to flush it out first. They say to expect some initial murkiness.

TMWA thanks the agencies who helped and the public for their patience.

“We want to thank all of the agencies for pulling together,” said Andy Gebhardt, Director of Operations & Water Quality for Truckee Meadows Water Authority.

“They were here all night until we located the problem and replaced the valve in a very difficult and deep location. Thanks also to our customers for their patience and understanding.”

UPDATE: TMWA reports that their crews will be working through the night to repair the break in the vicinity of Vista Blvd. and Peppergrass Road.

They said residents in that area might experience a drop in water pressure as they do repairs.

“We would like to assure affected customers that we are working on the problem and will be on site until water service is restored,” said Andy Gebhardt, TMWA’s Director, Operations and Water Quality.

They are also warning drivers to be aware of traffic impacts in the area.

Sparks Police reports they are assisting Truckee Meadows Water Authority (TMWA) with a water main break.

Officials said it's a 24 inch main break that busted under Vista Blvd and Wingfield Hills Parkway.

TMWA is trying to locate where the break is and the cause is still under investigation.

They said northbound traffic on Vista Blvd. is shut down at Wingfield Hills Parkway until further notice and that drivers should seek an alternate route.

Facebook Posts:



KTVN Channel 2 News

June 16 at 9:33am ·

TMWA tells us that the water services in Vista Blvd. are now working again. Also, one lane in each direction of Vista Blvd. is now open.

KTVN.COM

Water Services Restored At Vista Blvd., Some Traffic Delays

The City of Sparks says that one lane in each direction of Vista Boulevard is now open.



Marlene Olsen

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Comments



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KTVN Channel 2 News

June 15 at 6:10pm ·

UPDATE: City of Sparks now says the water main break is near Wingfield Hills Parkway and Vista Boulevard. Northbound traffic is closed so drivers should seek alternate routes.

KTVN.COM

Water Main Break At Vista Blvd. And Wingfield Hills Pkwy.

Sparks Police reports they are assisting Truckee Meadows Water Authority with a water main break. They said northbound traffic on Vista Blvd. is...



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[Mark Stimac](#) Great planning by the city of sparks to have 1 road to Wingfield Springs. Now it's a huge mess with 100s of people unable to get to their homes. Why doesn't the city get 1 of the other new roads open instead of screwing around with la posada. What are they thinking?

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2 Replies



[Krisayla Lynnay](#) Water is back on ~ All the water in the area was shut off completely between 11 and 12 last night and turned back on about 645 this morning. I had to bleed my water lines of air, then the brown water. Everyone bleed out your water lines and flush all of your toilets, I had to do this for about 2 minutes before it ran clear and all the air was out, also flush all of your toilets until they stop sputtering air too.

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5 Replies

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KRNV TV

Water main break closes northbound Vista Blvd at Wingfield Hills Pkwy

by Issmar Ventura
Friday, June 15th 2018



Water main break closes northbound Vista at Wingfield Hills Pkwy

AA

SPARKS, Nev. — A water main break has caused the closure of northbound Vista Blvd. and Peppergrass Rd. at Wingfield Hills Parkway due to a TMWA water leak.

Truckee Meadows Water Authority will be on site throughout the night working on repairing the water main break until the water is restored.

Customers will be experiencing a drop in water pressure meanwhile the work goes on and the repairs are completed.

ADVERTISING

Avoid the area and take alternate routes.

Update: June 16 12:00 p.m.

Water service has been restored to all customers affected by the water main break in the Wingfield Springs area at Vista Blvd.

Currently, traffic is restricted to one lane in each direction, but all lanes should be open completely within the hour with only minor traffic control.

FACEBOOK POSTS:



[KARNV News 4](#)

June 15 at 9:04pm ·

Northbound Vista at Wingfield Hills Parkway is closed due to a TMWA water leak. Avoid the area.

About this article

MYNEWS4.COM

Water main break closes northbound Vista at Wingfield Hills Pkwy

A water main break has caused the closure of northbound Vista at Wingfield Hills Parkway due to a TMWA water leak. Avoid the area and take alternate routes. This is a developing story. Check back for updates.

1717

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Comments



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[Savannah Davis](#) Took me an hour and a half to get home last night and I just woke up and there's no water. Any update?

1

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2 Replies



[JoAnna Parker](#) I literally just want to get home [Manage](#)



[View 11 more comments](#)

Also reporting: KKOH Radio

Perfect storm: Wingfield Springs traffic mess Friday



By Staff |
Posted: Sat 12:29 AM, Jun 16, 2018 |

Updated: Mon 6:50 PM, Jun 18, 2018

[Link to Video](#)



[View Map](#)

SPARKS, Nev. (KOLO)-- Truckee Meadows Water Authority now says it was not a broken water main, but a broken water valve 14 feet underground that led to the closure of Vista Boulevard into Wingfield Springs Friday. A spokesman also says part of what took so long was that crews had to navigate the same closure everyone else did before getting there to find the valve, which is old enough that its type is no longer used.



Water on Vista Boulevard from a water main break. Photo by Abel Garcia/KOLO.

Water has since been fully restored. The leak was in the Peppergrass Drive area.

“We want to thank all of the agencies for pulling together,” said Andy Gebhardt, director of operations & water quality for Truckee Meadows Water Authority. “They were here all night until we located the problem and replaced the valve in a very difficult and deep location. Thanks also to our customers for their patience and understanding.”

The break was reported about 5:45 p.m. June 15, 2018. The road was reopened and water service restored about 15 hours later.

Gephhardt says a new water system was already scheduled to be in place in that area in about six months

Washoe Lake Dam update: 'It is not over yet,' but crews have stopped the leak

[Benjamin Spillman](#), Reno Gazette Journal Published 3:04 p.m. PT June 18, 2018 | Updated 6:59 p.m. PT June 18, 2018



Buy Photo

The Little Washoe Lake flows under Old Hwy 395 in the south side. A dam on the north side is threatening to fail, which would suck water under the highway into Pleasant Valley. (Photo: Mike Higdon)

Update 5:30 p.m.:

Officials with the state and county say the threat posed by a potential breach at Washoe Lake Dam has diminished as crews pile on rocks to the structure.

"It is not over yet, they can relax now for the moment," said Eddie Quaglieri, the dam safety manager with the state of Nevada.

About 100 homes could have been affected by a potential dam breach from Pleasant Valley to Toll Road, according to Washoe County officials. They said the downstream Pagni Dam would likely capture some of the flow and mitigate damage.

Crews move earth and inspect the possible breach area at the Washoe Dam site. Andy Barron/RGJ

Quick work on Monday afternoon by crews using earth moving equipment plugged a leak in the Washoe Lake Dam that threatened to undermine the structure, which could have caused extensive flooding downstream.

The leak prompted dam operators and officials to enact an emergency action plan on file with the Nevada Division of Water Resources which inspects dams in the state.

"When you have seepage going through an earthen embankment... all of a sudden you can have a failure," said Jason King, the state engineer.

Louis G. Damonte Jr., director of the company that owns and operates the dam, said he and others rallied workers to the site Monday as soon as they learned of the problem.

The workers used trucks to haul dirt and rocks to the edge of the dam and an excavator to place the material and slow the leak. They planned to use cement to cover the rocks, Damonte said.

"We don't know what caused this," Damonte said. "What is important to note on our part is the protocol and how fast we were able to move equipment in here."



[Buy Photo](#)

Repairs are being done to the Washoe Lake Dam on Monday. (Photo: Andy Barron/RGJ)

The emergency action plan outlines steps to take in event of a problem that threatens the structure. It includes a map of potential inundation areas, which in the case of Washoe Lake Dam included downstream homes in Pleasant Valley.

About 100 homes could have been affected by a potential dam breach from Pleasant Valley to Toll Road, according to Washoe County officials. They said the downstream Pagni Dam would likely capture some of the flow and mitigate damage.

"It could have been a lot worse," Damonte said.

Damonte said the company that owns the dam, which the Nevada Secretary of State lists as Washoe Lake Reservoir and Galena Creek Ditch Company, has an estimated 50 to 75 users. The users pay assessments to maintain the dam which is in place to store about 5,000 acre-feet of water. Damonte said the users don't always pay an assessment or use their water rights.

"A lot of them are small users," he said.

The apparent leak was discovered Monday following a report from the public, according to the Nevada Division of Water Resources.

Related: [Many high hazard dams in Nevada lack emergency plans](#)

Related: [U.S. dams are aging and many don't have emergency plans](#)

CITY OF RENO SPOKESMAN TWEETED OUT MAP OF POSSIBLE FLOOD AREA, WHICH INCLUDES PORTION OF PLEASANT VALLEY NEIGHBORHOOD:

WHICH INCLUDES PORTION OF PLEASANT VALLEY NEIGHBORHOOD:

The dam holds in Little Washoe Lake upstream from Steamboat Creek.

"Instead of water coming through the spillway ... there was also noticed a significant amount of water coming through the embankment," King said.

King said officials are enacting the emergency action plan for the dam and have notified the Washoe County Sheriff's Department and Nevada's Division of Emergency Services.

He said there are no evacuations underway, but that could change.

"We have concerns about the seepage and the potential for a release of more water than they would normally see," King said about communities near Steamboat Creek. "At some point if it gets worse that turns into an evacuation."

Washoe County issued the following warning: "Should the Washoe Lake Dam breach, Steamboat Creek and Steamboat Ditch areas would be flooded. The dam is showing signs of potential compromise, and residents are asked in these and surrounding areas, to please be prepared to evacuate when notified."



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An excavator shoves rocks into the Steamboat Ditch waterway on the north side of Old Hwy 395. The privately owned Washoe Lake Dam may need repairs to prevent failure. NDOT, Washoe County Sheriff, Highway Patrol and Truckee Meadows Fire are managing the scene. (Photo: Mike Higdon, RGJ)

Washoe Lake Dam is categorized as a “high hazard” dam, meaning, “failure carries probability of causing loss of human life and excessive damage to downstream properties,” King said.

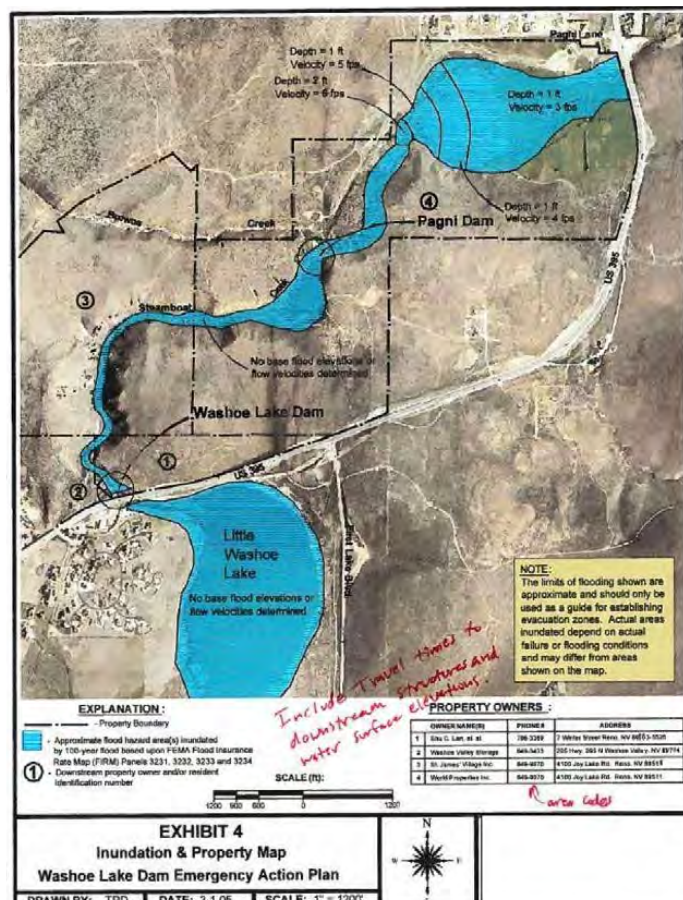
King said the dam is holding back the entirety of Little Washoe Lake and a portion of Washoe Lake.

The dam itself is constructed from granite blocks. Damonte said he didn't know what year the structure was built but noted the blocks are similar to those used in the construction of the Comstock-era Virginia and Truckee Railroad.

It was last inspected in August of 2017, said Eddie Quagliere, dam safety manager for the state of Nevada.

Crews work to repair Washoe Lake Dam on Monday, June 18, 2018. Mike Higdon, RGJ

Here is the flood area of a potential Washoe Lake Dam breach, according to its emergency action plan filed with the Nevada Division of Water Resources:



TMWA: Limited Potential for Defunct Farad Hydroelectric Plant Property



The Farad Hydroelectric Plant, and a recently-constructed footbridge that's part of the Tahoe-Pyramid Trail. Photo: Tahoe-Pyramid Trail

Future uses of the Farad Hydroelectric Plant are minimal, Truckee Meadows Water Authority board members learned Wednesday, although the utility agreed to work with Tahoe-Pyramid Trail Inc. to get it a relocatable permanent easement through the site.



Formerly known as the Tahoe-Pyramid Bikeway, Tahoe-Pyramid Trail currently has a revokable easement. The 114-mile trail extends from Pyramid Lake to Tahoe City where the Truckee River and Lake Tahoe meet. Easements are rights to pass through or to use land that belongs to someone else for a specified purpose.

Tahoe-Pyramid Trail map.

The board also agreed to work with the Truckee Donner Land Trust, which is based in Truckee and has expressed interest in ensuring the continuity of the trail.

TMWA got the property in Nevada County, California, as part of a settlement several months ago and has been trying to dispose of it.

"We would want to sell it in as-is condition, warts and all," said John Zimmerman, TMWA water resources manager.

"Here's my '93 Bronco and it doesn't run, but you can make it run," said Washoe County Commissioner Vaughn Hartung, putting a comedic twist on the situation.

Selling the property might be more difficult than expected as TMWA officials have been learning about the land use policy in California. For example, it could take 6 months to 4 years for a zoning change.

"That's crazy," said Sparks mayor-elect Ron Smith.

Fees to Nevada County for filing zoning change applications are roughly \$10,000 and an outside appraisal of the 70-acre parcel would cost between \$7,500 and \$15,000.

TMWA staff met recently with Nevada County officials to discuss the future of the property, zoning and other land issues. The property is zoned for open space, which mean few permissible uses under local regulations, limiting it mostly to parks, playgrounds, and trails. Even a campground would be prohibited under current zoning, according to Nevada County.

A proposed zoning change would also mean an environmental review per the California Environmental Quality Act and involve the California Office of Historic Preservation, California-Lahontan Regional Water Quality Control Board, and various other boards and stakeholders from the public and private sectors. The property is also in a flood plain, which could trigger additional conditions and restrictions.

Desired zone change conditions cited by TMWA are a 100-foot setback from the Truckee River for construction, maintaining river access for fishing and other recreation, a permanent easement for the Tahoe-Pyramid Trail and no installation of septic systems. Zone change requests would require the assistance of consultants to guide the utility through steps and conduct necessary studies and write reports.

TMWA decided to hold off on advertising its request for "statements of interest" in regional newspapers, although it even went as far to request advertising quotes from The New York Times and The Wall Street Journal.



The plant was built alongside the Truckee River in 1899. It was the first electric generating plant on the eastern slope of the Sierra Nevada. Mining interests bankrolled the project so water could be pumped out of the Virginia City silver mines as the mine shafts were sunk deeper into the ground.

TMWA purchased the hydroelectric facility and some of its assets, according to an agreement in January 2001 between TMWA and Sierra Pacific Power Co., now known as NV Energy. As a result of damages from a 1997 flood, the Farad facility wasn't operational then and Sierra Pacific was involved in litigation with insurance companies over coverage disputes.

Insurance litigation delayed delivery of the Farad facility but TMWA and Sierra Pacific entered into a settlement agreement in June 2014. The agreement stated Sierra Pacific would assign TMWA 100 percent of all future insurance proceeds related to Farad and all claims for interest due for delayed payment.

The land transferred to TMWA in December 2017, but TMWA has determined that it's not economically feasible to rebuild and rehabilitate the necessary components to create an operational hydro generation facility.

Truckee bridge construction taking off in Tahoe City

Hannah Jones
hjones@sierrasun.com
June 24, 2018



Since the beginning of May, road blocks and orange cones have lined the edges of California Route 89 leading into Tahoe City, marking the beginning of a major construction project that is expected to run through Oct. 15.

The project, originally conceptualized in the 1994 Tahoe City Community Plan, is a new Truckee River bridge — a rebuild of Fanny Bridge.

The construction of three new roundabouts, the realignment of SR-89 to match new road plans, and other street improvements along West Lake Boulevard are all part of the bridge project.

The new Truckee River Bridge, located east of the Caltrans maintenance yard along SR-89 and downstream of Fanny Bridge, will become the new junction between SR-89 and Nevada Route 28. The 88-year-old Fanny Bridge will be rebuilt to include new sidewalks and bike lanes on each side, with bridge railing that matches the existing design.

A new roundabout will be constructed on the north side of the Truckee River with outlets onto the new bridge and West River Street. Another roundabout will connect a new route from the new bridge to West Lake Boulevard.

The third roundabout will replace Tahoe City's busiest intersection where the original junction between SR-89 and SR-28 currently stands.

West Lake Boulevard also will receive improvements including new sidewalks, crosswalks, street lights, and street and trail signs. Two new Tahoe City gateway signs will be installed at the two roundabouts leading into the city.

The Tahoe City Trout Sculpture has already been dismantled and moved to storage to allow for construction. City officials are still making efforts to secure a new location for the sculpture when the project is complete.

Night construction will take place Sunday through Thursday from 8 p.m. to 8 a.m. Day work is scheduled Monday through Friday from 7 a.m. to 5 p.m. Bridgework will be conducted Monday through Saturday from 7 a.m. to 5 p.m. Visitors should expect up to 20-minute delays in the area.

The project is headed by the Tahoe Transportation District in cooperation with the California Department of Transportation, Placer County and other agencies. According to TTD, the project is intended to improve safety for pedestrian cyclists, alleviate traffic congestion and provide two safety routes from the west shore.

Truckee Meadows Water Authority Battles Community Water Waste This Summer

Posted: Jun 25, 2018 4:50 PM PDT Updated: Jun 25, 2018 4:59 PM PDT
By Ryan Canaday

CONNECT

[Link to video](#)



TMWA Water Patrols

Every day more than a dozen conservation consultants with the Truckee Meadows Water Authority (TMWA) drive around Reno/Sparks communities in search of water that's going to waste. Their efforts are said to be as similar as going fishing, because they never know what they're going to find.

"Out there monitoring and it's totally random when they come across somebody watering on their wrong day," said Laine Christman, Conservation Supervisor with TMWA.

Every now and then they find someone who isn't following TMWA protocol. In fact, TMWA makes 5,000 educational interactions with customers violating the rules each year.

When they find a violation, the consultant video records it for proof. They then check to see if the customer has permission to be watering on an unassigned day. If not, the resident is given an informational baggie, warning them of what they've done wrong.

Every resident has assigned days of when they're allowed to water their lawn, however nobody can water on Mondays because that's when TMWA does the maintenance work of replenishing the water systems. In addition to watering at the wrong time or day, water waste is frowned upon as well. Broken sprinklers or too much run-off will also earn you a visit from a TMWA consultant.

"Right now in the heat of the summer people are trying to keep things alive and we're just out there trying to help them use water efficiently," said Christman.

Water efficiency can be the key to delaying the effects of drought. Even long longtime locals agree that more water is not always better.

"I think the yard stays really nice looking on three days, we water evening and morning on those three days and we don't have too many problems other than a couple dry spots but it's pretty minor," said Reno resident Darrel Mormando.

If you aren't sure which days you're supposed to be watering or you'd like to report someone using too much water, you can find that link here: <https://tmwa.com/article/assigned-day-watering/>

PICO Holdings (PICO) Agrees to Sell Water Rights in Lyon County, Nevada and Water Rights in the North Valleys Region of Reno, Nevada for \$10M

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StreetInsider.com Top Tickers, 6/28/2018

June 25, 2018 4:38 PM EDT

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PICO Holdings, Inc. (NASDAQ: [PICO](#)) announced today that its wholly-owned subsidiary, Vidler Water Company, Inc., has sold 500 acre-feet of water rights in Lyon County, NV to a well-respected residential real estate developer for proceeds of \$10 million, or \$20,000 per acre foot. The sale agreement also provides for future cooperation of, among other things, the dedication of right of way easements, temporary construction staging areas and the negotiation of agreements to provide proportional financial participation in such infrastructure based upon respective project impacts for transmission line sizing, storage and other utility system requirements that may be imposed on respective future development in the area by Lyon County Utilities.

In addition, PICO also announced that Vidler's subsidiary, Fish Springs Ranch, LLC, has agreed to sell 70.52 acre-feet of water rights to a developer of multi-family units in the North Valleys region of Reno, NV for \$35,000 per acre-foot. The transaction is expected to close in the third or fourth quarter of 2018.

Vidler's President and Chief Executive Officer, Dorothy Timian-Palmer, commented, "We are very pleased to see the first of what we believe to be several residential developments in the Carson/Lyon area take down a substantial portion of our existing water rights in the region. We are also pleased to be able to include in the agreement future cooperation with the buyer for a wide variety of infrastructure issues for extending our existing water rights further east along the Highway 50 corridor. We believe this to be highly strategic for our remaining water rights in the Carson/Lyon region. The agreement allows for the potential to minimize future water and sewer infrastructure expansion costs adding value to our remaining water rights which we estimate could exceed \$5,000 per acre foot as we help facilitate development eastward along the Highway 50 corridor. Co-operative and collaborative relationships with our buyers have proven to be mutually beneficial to their projects and to our assets.

"We are also very pleased to start selling some of our inventory of Fish Springs Ranch water rights to residential housing developers. We believe the North Valleys region is a very good location for much needed housing in the Reno/Sparks area and it is good to see developments coming on line to ameliorate the region's lack of housing supply. The agreement to sell our water rights in this transaction is through our arrangement with Truckee Meadows Water Authority (TMWA). We are very pleased to partner with TMWA and assist them to provide water to new residential and commercial developments as robust growth continues to occur in the region."

Water markets can solve shortages

Nearly a decade ago, *The Economist* deemed water to be “the world’s most valuable stuff,” offering puns on “liquid assets” and “solutions on tap” for availability. For Nevada residents and policymakers regularly grappling with water availability issues, the pronouncement is yet another reminder of a fundamental threat to continued city expansion. One of the most intriguing conservation ideas in circulation has been water markets, in which owners of water supplies can freely trade and bargain with one another.

This idea has been met with considerable hostility, with detractors claiming that low-income folks would be stuck with sky-high water prices. But as Australia’s experience with water markets shows, the trading and wholesale pricing of water can leave everyone better off by redirecting supplies toward its most important issues. To consumers and businesses looking for plentiful clean water and taxpayers sick of dubious conservation schemes, water markets can make way for smoother sailing.

Due to the perceived “different” nature of water, it’s easy to lose sight of what the markets would be for the world’s most important resource. But as markets for other vital goods demonstrate, even necessities need the guiding direction of prices to ensure the best outcome for everyone involved.

Take the mineral cobalt, a rare-earth mineral used for smartphones and laptops. Military equipment also relies on cobalt as a key input. In order to guide decisions around use of the material, extractors and distributors need to know the price they can fetch on the global marketplace. And when supply shocks happen, like the infamous Chinese export limitations on rare-earth minerals, resulting higher prices give more motivation to producers to look elsewhere for cobalt supplies.

The lessons from cobalt can be applied to water trading. For water, supply limitations tend to unfold more naturally and frequently, as city expansion in dry areas outpaces water supplies. In Australia, dry conditions and ever-short water supplies led to the development of water trading rights, particularly in the waterstarved Murray-Darling basin. Initial “entitlements” confer ownership of water resources, with deeds that are easily transferable and unbundled from land ownership.

These entitlements are based on the *share* of water in any given source, rather than the volume itself. Thus, in a particularly dry season, water supply owners are mutually limited in the amount of liquid they can draw from. And since prices are a central feature of the system, scarcity in drier seasons forces water to go to its most highly valued uses. The Organization for Economic Cooperation and Development finds “significant allocative efficiency gains as the limited water available moves from those producers with flexible irrigation demands to those with inflexible demands including long-lived perennial horticultural assets.”

Contrast this situation with Nevada’s failed status quo. While farmers are granted water rights, these rights mean little because they are chronically over-allotted. Farmers are given free rein to pump far more than basins can bear, resulting in “an entire community based on overappropriation.” On top of formal water rights

recognition, Nevada grants residents the ability to drill domestic wells on their properties.

This idea may not sound unreasonable, but it results in a large accounting problem; formal and informal claims on water exceeds the total amount available. Because of resulting shortages, state and local authorities strictly regulate water consumption at a hefty cost to taxpayers. More than a dozen “water cops” in Las Vegas, for example, hunt down water wasters and stay on the beat for ... water flowing onto sidewalks. Water agencies spend thousands of dollars on advertisements implying that water wasters need to be physically punished for their eco-crimes.

State regulators, however, rightly recognize that the main issue is property rights and have attempted to change the legal system toward water ownership. This has resulted in no shortage of political battles, as state regulators have required well-drillers to obtain water property rights before taking a big gulp. While the drive to universalize property rights is welcome, Nevada pushed property owners into the water market without any real way of trading. Unlike the situation in Australia, there is no real exchange for trading water; deals are mainly one-off and are strictly limited by state regulations. It is little wonder, then, that residents are angry at the hassle and thousands of dollars required to get in the game.

By expanding water property rights and allowing for more widespread trading, Nevada regulators can create thriving water markets that will make all Sagebrush State residents better off. Water is, after all, essential to survival, and too important *not* to be mediated by prices. By making water more like cobalt, consumers and taxpayers can look forward to a more of the “most valuable stuff” around.

Ross Marchand is the director of policy for the Taxpayers Protection Alliance.

Conservation deal for 'last big piece' of Sierra wildland near Truckee will improve hiking, skiing and other recreation opportunities

[Benjamin Spillman](#), **Reno Gazette Journal** Published 2:00 p.m. PT June 28, 2018



(Photo: Truckee Donner Land Trust/Contributed to the RGJ)
CONNECTTWEETLINKEDINCOMMENTEMAILMORE

A trio of conservation groups announced Thursday plans to buy nearly 3,000 acres of land near Truckee, Calif.

The Trust for Public Land, Truckee Donner Land Trust and The Nature Conservancy said in a joint statement they hope to make the \$15 million purchase by February of 2020. The groups operate under the banner of the Northern Sierra Partnership.

The budget includes \$11.4 million for acquisition and \$3.6 million for recreation improvements and conservation.

They're planning to use \$8 million in grants from state and federal agencies and \$7 million in private donations to fund the project.

The purchase will require two transactions, one to acquire 2,234 acres around Carpenter Valley from the Sierra Pacific Industries and another to acquire 680 acres around Frog Lake from the Smith family, which has owned and conserved it since the 1930s, the announcement stated.

"The opportunity to conserve these lands is a dream come true for so many," Markley Bavinger, Sierra program manager for The Trust for Public Land said in a written statement. "This acquisition is the last big piece in the conservation puzzle east of the Sierra Crest and north of Truckee."

Frog-Carpenter Campaign Map 062518 v12 by Benjamin Spillman on Scribd

According to the statement, the acquisition will include Frog Lake, Red Mountain and ridges north and south of Carpenter Valley.

It will complement prior deals near the Little Truckee River headwaters and Prosser Creek, including a 2008 purchase of Perazzo Meadows, a 2009 purchase of Webber Falls and a 2010 purchase of Independence Lake.

More: Conservation district acquires land on Upper Truckee River

More: Debate turns ugly as Tahoe snowmobilers fear forest closures

It's expected to improve opportunities for hiking and backcountry skiing in the area and includes plans for new trails linking Castle Peak and Truckee to Independence Lake and a small network of backcountry huts for year-round use. A historic stone house at Frog Lake will be a hub for the network, the announcement stated.

"This is our best chance to permanently protect and connect the spectacular landscapes of the northern Sierra Nevada, for water, for wildlife and for all of us," Lucy Blake, president of the Northern Sierra Partnership, said in the announcement.



AUGUST 2, 2018

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VIDEO: Hydroelectric Power Plants Generate \$3.7 Million in Revenue

August 2, 2018 ThisIsReno Website Facebook Twitter YouTube LinkedIn

Truckee Meadows Water Authority (TMWA) announces a record-breaking year for clean power generation. From July 2017 through June 2018, TMWA's three 100-year-old hydroelectric plants generated an all-time-high of \$3.7 million in revenue due to high river flows. TMWA owns and operates the Washoe,

Verdi and Fleish plants on the Truckee River for the benefit of customers. The power generated was sold to NV Energy and significantly offset the power costs of the water system.

The total kilowatt hours produced by the three hydroelectric plants reached 52,367,487 KWh, breaking the former record set in 2012/2013 by more than 200,000 KWh. The revenue produced from the hydro power sold to NV Energy was \$3,757,043.39.

"Hydroelectric power has consistently been a key asset to help limit costs for our customers over the years, helping to keep rates lower," said Pat Nielson, TMWA's director of distribution maintenance and generation.

The hydroelectric power generated by TMWA is not dependent on the release of stored water from a dam; rather, it uses a "run-of-the-river" configuration in which water is diverted from the river to drive generation turbines. The same amount of water that flows into plant is returned to the river unchanged. Technological upgrades over the years have made management of the plants more efficient, but the core process of green energy generation has remained the same for more than a century.

The contribution TMWA's hydroelectric plants make to the quality of life in the Truckee Meadows is not entirely financial. When all three plants run at capacity, more than 90,500 pounds of CO2 emissions are eliminated daily from the atmosphere. In one year, this is roughly 15,000 metrics tons of CO2 that would be released if TMWA relied exclusively on fuel-based power generation. While there certainly are dry years and maintenance issues that keep the plants from running at capacity all the time, the fact remains that TMWA's hydroelectric plants make a major contribution to northern Nevada's green-energy portfolio.

"These plants have always been important to this region," said Nielson. "In the early 1900s, the plants provided power to the Virginia City mining industry; now hydroelectric helps us keep TMWA's operational costs very low in the delivery of water to over 400,000 residents in our service area. They are as relevant today as they have always been."

Free tours of TMWA's historic hydroelectric plants will take place throughout September. Visit www.tmwa.com/events for the tour schedule and to RSVP.

Groups including SYRCL compile letter to feds supporting salmon, river conditions

Submitted to The Union
August 1, 2018

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A diverse group of Yuba River stakeholders filed comments recently regarding a proposed hydropower project, according to a release.

The comments went to the Federal Energy Regulatory Commission addressing the Draft Environmental Impact Statement for the relicensing of the Yuba River Development Project.

The project is owned and operated by the Yuba County Water Agency and includes three powerhouses, the largest being New Colgate powerhouse, one of the largest hydropower projects in the state. The letter included 14 groups including fishing organizations, Native American tribes, whitewater boating businesses and conservation organizations.

YCWA's original license for the project was for a 50-year term that expired in April 2016. The agency continues to operate, based on annual extensions, according to terms and conditions that are more than 50 years old and developed during a time when few environmental protections existed, the release stated.

"The last 50 years have been marked by the continued decline of salmon and the absence of habitat in the Lower Yuba River and below New Bullards Bar," stated Melinda Booth, Executive Director of the South Yuba River Citizens League. "We know the damaging effects that such an extensive hydropower and dam system has had on our watershed and our communities. We have the power and responsibility to make sure the Yuba River and the salmon will still be here for future generations."

The Federal Energy Regulatory Commission is authorized by the Federal Power Act to relicense hydropower dams and projects.

"Required flows in the lower Yuba River are needed to improve river habitat and to contribute flows into the Delta and San Francisco Bay," said Chris Shutes, of the California Sportfishing Protection Alliance (CSPA). "The flows recommended by the Foothills Water Network and two fisheries agencies would meet those needs while protecting local agriculture and YCWA's revenues."

New licenses for the Yuba hydropower projects were developed collaboratively over seven years of research and negotiations, and as part of the process, the Federal Energy Regulatory Commission released the Draft Environmental Impact Statement for review in May. The final report is expected out this fall.

"The Yuba hydropower project cumulatively affects fish and wildlife and recreation resources in the Yuba watershed," said Chandra Ferrari, Senior Policy Advisor with Trout Unlimited. "We have asked (Federal Energy Regulatory Commission) to properly consider these effects and require YCWA to contribute its fair share of mitigation to ensure these resources are adequately protected."

American Whitewater worked to include new measures in the license that will improve recreation opportunities and amenities. One key change is that the public will be able to access the Yuba River directly below New Bullards Bar Dam.

According to Dave Steindorf with American Whitewater, "(Federal Energy Regulatory Commission's) requirement allowing public access below New Bullards Bar Dam will open a section of river that has been closed to the public for almost 50 years"

"We are also asking (Federal Energy Regulatory Commission) to rethink their 30-year-old policy of not looking at future energy needs when evaluating power projects such as this one. Renewable energy is rapidly changing California's energy landscape. Mandates that will further increase the amount of wind and solar power, will continue to change what we need from other energy resources, particularly hydropower projects. It is irresponsible of (Federal Energy Regulatory Commission) not to analyze how this project will be operated in the future."

The coalition's letter urges the Federal Energy Regulatory Commission to include the following in its final report:

Public participation in the implementation of the new license by establishing a citizen-stakeholder ecological group

Improved river flows and consistent monitoring of water temperature in order to protect endangered salmon, steelhead and sturgeon

Recreation improvements so that the public can better access the Yuba River.

SYRCL and American Whitewater received over 200 letters from community members that were also submitted to the Federal Energy Regulatory Commission.

For more information, including a map of the project and locations of dams and powerhouses in the watershed, see the Dams and Hydropower page on SYRCL's website.

TMWA Hydroelectric Power Plants Break Records

During the last fiscal year, TMWA's hydroelectric power plants generated more than 52.2 million KWh of electricity and more than \$3.7 million in revenue, breaking both previous marks.

Thursday, August 2nd 2018, 3:50 pm PDT by Paul Nelson

Updated:

Thursday, August 2nd 2018, 4:02 pm PDT

Video on Demand

Tech: Video JS

Close

The Truckee Meadows Water Authority owns and operates three hydroelectric plants along the Truckee River. During the last fiscal year, those plants generated more than 52.2 million KWh of electricity and more than \$3.7 million in revenue. Both break the previous records set in the '12-13' fiscal year by 211,809 KWh and \$199,058.43. A big reason for the increase is high river flows.

"We've had two consecutive winters and the upstream storage is at a point where the river flows have been more than adequate to maximize our generation, this year," Pat Nielson, TMWA Director of Distribution, Maintenance & Generation said.

The Fleish, Verdi and Washoe Hydroelectric Plants are more than 100 years-old and operate around the clock. Water is diverted from the Truckee River into canals that lead to the turbines. TMWA's four-man crew makes sure they operate as efficiently as possible.

"They have to come out here and adjust the flows in the canals almost on a daily basis, this time of the year, and so it's actually them maximizing the generation out of these plants," Nielson said.

Nielson says the Verdi facility produces enough energy to power about 1,500 homes. TMWA sells the electricity to NV Energy, which sells it to consumers. The low-cost facilities create revenue that helps offset costs and stabilizes water rates.

"If we weren't generating this, then we would have to buy it from NV Energy ourselves and then there's no offset to cost," Nielson said.

Hydroelectric electricity is a clean, renewable source of energy that Nielson says has the lowest carbon footprint because the plants can operate for so long. It is also efficient because it only requires river flows.

"It's one of the renewables, as long as there's water in the river, we base-load the facilities to full-load and it runs 24 hours a day, seven days a week whether the sun's shining or the wind's blowing," Nielson said. "Other renewables require Mother Nature to cooperate. We just need the river flows and it's a great benefit."

Water is essentially used three times between the three plants, cycled through the plants and back into the river.

"There's no thermal loading of the water," Nielson said. "It's a nonconsumptive use of the water so almost every drop of water that's diverted is returned to the river."

TMWA is offering free tours of the Hydroelectric Plants through the month of September. To RSVP and to check the tour schedule, visit www.tmwa.com/events

Homeless, Advocates Respond to Sparks Sweep of Camps Along River

July 5, 2018 Bob Conrad Website Facebook Twitter LinkedIn



Sparks Police Lieutenant Greta Woyciehowsky. Image: City of Sparks Facebook video.

The City of Sparks is touting its homeless sweep along the Truckee River as a success.

A video posted Monday on Facebook featured Sparks Police Lieutenant Greta Woyciehowsky outlining what she said was the problem with the homeless along the river — too many people camping, dogs running loose, drugs and needles, bathing and crapping in the river, and massive amounts of trash.

Woyciehowsky said that multiple agencies worked together to make the river “a safer and healthier environment. We’re pleased to report that the bike path has been cleaned of all trash and camps.”

She promised that the homeless sweeps will be a work in progress, something the city will continue to work on.

“One of the other concerns was the amount of trash that was starting to pile up,” Woyciehowsky explained.



Cheryl Edwards, left, and Terry Audiss said they were forced to move from the Truckee River in Sparks after the city initiated a clean-up and sweep. They said they just moved to another spot on the river outside of Sparks city limits. Image: Bob Conrad.

Advocates Critical of Sparks

Homeless advocates dispute the efficacy of the city’s actions. Jennifer Cassady with the Reno Initiative for Shelter and Equality (RISE) pointed out what ThisisReno reported before the sweeps — services are limited.

“There are no resources in town, so I’m not sure which ones you pointed them to,” she posted in response to the City of Sparks video. “We all know the shelters are overflowing and the animal services only take away these precious family members and sell them. These are our neighbors and we should treat them as such.”

Sparks spokesperson Julie Duewel responded: “We worked diligently with Washoe County and the Volunteers of America to provide services to those living illegally along the river. Many were offered alcohol and drug, mental health, and shelter services. The Volunteers of America took everyone that accepted these services directly off the river and into shelters.”

Homeless individuals told ThisisReno that Sparks' actions are actually exacerbating homelessness. Three people said today that, yes, they got kicked out of Sparks proper, but they merely relocated either to Reno or out of Washoe County.

Terry Audiss and his partner, Cheryl Edwards, were living at one location on the river for about a year. He said the sweeps cost him his driver license and birth certificate, which he said were discarded when the city swept the camps.

"They came through with ... dump trucks and basically threw away important stuff," he explained. "I was saving up trying to get us off the river. I'm a mechanic, and I had to save up tools to start working again. They purposefully threw them away even when I asked them not to.

"The resource that they offered, the shelter, was full," he added. "I could have went there, but I'd have to leave her (Edwards) and the dog. If they would have offered something where we could have gone as a family, yeah we would've took it."

Audiss said he's still on the river, "just in a different location." He and Edwards are restarting their lives but now with fewer resources. They said most of those caught up in the sweep just moved somewhere else. Sparks, in its video, said that many rounded up by the city took advantage of the services that were offered.

"They (Sparks) said they didn't really care where (we went) as long as we were out of their county," Audiss continued. He said many of the river residents are just like other members of the greater Reno community — there are good and bad actors.

RELATED:

City of Sparks' Last Friday In June Premieres the New City of Sparks Community Band

"We're not camping, we're living," he continued. "I don't have options. I don't have family. I'm trying to take care of us with the little things we've got."

[THIS IS A LINK TO A 4 MIN VIDEO PRODUCED BY CITY OF SPARKS ON THE OPERATIONS](#)

Why There are so Many Unsheltered Homeless People on the West Coast

July 8, 2018 ThisIsReno Website Facebook Twitter YouTube LinkedIn

Margot Kushel, *University of California, San Francisco*

One-quarter of homeless people in the U.S. live in California, despite Californians making up only 12 percent of the population.

Not only is homelessness more common on the West Coast but it is also more visible, because a higher proportion of homeless people are unsheltered. In the U.S., 24 percent of homeless people sleep outside, in vehicles or somewhere else not meant for human habitation. But that varies greatly from place to place: In California, 68 percent of homeless people are unsheltered, compared to just 5 percent in New York.

Visitors to the West Coast may be shocked to find the tents that line cities from San Diego to Seattle. Like a modern-day “Grapes of Wrath,” the tents are a stark reminder of the suffering of the thousands living outside, homeless.

What’s to blame for such high numbers of unsheltered homeless on the West Coast? The reason isn’t drug use, mental health problems or weather. Rather, it is due to the extreme shortage of affordable housing.

Life unsheltered

As a physician and researcher who provides medical care for people experiencing homelessness, I have seen firsthand how devastating homelessness is to health.

Being unsheltered is terrifying, humiliating and isolating. People living without shelter lack access to toileting facilities, sinks and showers. They have no way to store or prepare food and no protection from the elements. Hunger is common.

Sleeping in makeshift beds or on the ground, they get little sleep. They must contend with having their possessions stolen. They face frequent forced moves, which disrupt relationships and make it difficult for family, friends or service providers to find them.

People who are unsheltered are at high risk of physical and sexual abuse. If they struggle with substance use disorders, their use of drugs and alcohol occurs in public, leaving them open to arrest. There are no places to refrigerate or store medicines, no place to receive mailed appointment reminders or a visit from a visiting nurse, no place to dress a wound or plug in medical equipment like oxygen. Without access to hygiene facilities, they are at high risk for communicable diseases like hepatitis A.

Unaffordable housing

Some assume that homelessness is so common on the West Coast because people move here when they become homeless, but data do not support this. Most people experience homelessness close to where they lost their housing. My team’s research in Oakland found that 81 percent of older adults who are homeless became homeless in the Bay Area. Only 10 percent had lost their housing outside of California.

Instead, the high rate of homelessness can be attributed to the lack of affordable housing in these regions. The West Coast suffers from rising costs of rental housing, stagnant incomes for low-wage workers and a decline in federal support for affordable housing. For example, California has gained 900,000 renter households since 2005, but lost US\$1.7 billion in state and federal funding for affordable housing.

Extremely low-income households – defined as those with income less than 30 percent of the area median income – are at the highest risk of homelessness. Nationally, there are only 35 units available for every 100 extremely low-income households.

In the West, these shortages are more severe: Nevada has 15 units available for every 100 extremely low-income households; California has 21.

In 2017, for the first time in 13 years, Los Angeles opened its wait list for housing choice vouchers. These vouchers allow households to pay 30 percent of their income in rent, with the rest paid by the government. There were 600,000 applicants for just 20,000 spots on the list, highlighting the enormous unmet need.

Who pays for homeless services

Why are people on the West Coast so much more likely to be unsheltered than homeless people in other parts of the country? It reflects differing government priorities .

New York City, where there is a legal right to shelter, spends approximately \$17,000 per homeless person per year on homeless services. Massachusetts spends approximately \$14,000 per year. Los Angeles, by contrast, spends approximately \$5,000.

With enormous numbers of people living outside, West Coast cities are scrambling for solutions. Some cities, like Seattle, have created sanctioned homeless encampments, bringing hygiene facilities and other services. However, the U.S. Interagency Council on Homeless cautions that this approach is costly and doesn't provide a solution to homelessness.

Other cities are following San Francisco's example and creating navigation centers, homeless shelters with added services. Unlike typical shelters, these centers allow people to come in groups, bring pets and belongings and stay all day.

Many areas have passed tax increases to fund new housing and services. These efforts show modest success but continue to struggle against the unfavorable housing conditions that lead people to become homeless in the first place.

So where can we go from here? There are solutions to homelessness, but, in my view, these will not succeed without solving the affordable housing crisis that is the underlying cause of homelessness.

For people who are chronically homeless and have disabling conditions, permanent supportive housing is highly effective. This type of subsidized housing offers supportive services, without the requirement that people be sober or engaged in medical care. Studies show that expanding permanent supportive housing has reduced the number of people experiencing homelessness in many parts of the country.

The success of permanent supportive housing has been overshadowed by increases in people becoming newly homeless due to the lack of affordable housing. In my view, preventing and ending homelessness will require a commitment to creating housing that is affordable to all.

Margot Kushel, Professor of Medicine, *University of California, San Francisco*

This article was originally published on The Conversation. [Read the original article.](#)

On Borrowed Time: Lake Tahoe's Wildfire Risk Top of Mind at 2018 Tahoe Summit

[Sam Gross](#), Reno Gazette Journal Published 4:10 p.m. PT Aug. 7, 2018 | Updated 4:17 p.m. PT Aug. 7, 2018



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Nevada Congressman Mark Amodei at the 2018 Tahoe Summit at Sand Harbor State Park near Incline Village. (Photo: Sam Gross/RGJ) [Buy Photo](#)

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Both physically and rhetorically, wildfires dominated this year's Tahoe Summit.

Physically, smoke from some of the largest and deadliest wildfires in California history hazed over the normally stellar view from Nevada's Sand Harbor State Park, where the 22nd edition of the summit was held.

And rhetorically, elected officials from both the Nevada and California sides of Tahoe honed in on the blazes that have ravaged the western U.S. with increased ferocity over the past few years, and the threat those fires pose to Lake Tahoe.

"For many years, forest management and fire prevention have taken a back seat at these summits, but now nature is screaming its warning at us through the fires that rage throughout the west," said Rep. Tom McClintock, R-Calif., who chairs the House Subcommittee on Federal Lands.

“The Tahoe Basin is on borrowed time. The fires are all around us and you can see the smoke in the air, which presents a very stark question — how much longer does Tahoe have?”

Rep. McClintock was joined by Sen. Dianne Feinstein D-Calif., and Rep. John Garamendi, D-Calif. The summit was hosted by Nevada Republican Sen. Dean Heller, who was joined onstage by Sen. Catherine Cortez Masto, D-Nev., and Rep. Mark Amodei, R-Nev.

The six were joined by Sen. Lisa Murkowski, R-AK., chairman of the Senate Committee on Energy and Natural Resources and the summit’s keynote speaker.

Wildfires a major theme

The wildfire risk to the Lake Tahoe Basin was a major theme across remarks given by all seven elected officials who gave remarks at the summit. They warned of fires accelerated and amplified by climate change and forests that are brimming with dead and dry fuels.

Sen. Feinstein also took the summit as an opportunity to announce that the U.S. Air Force is transferring seven C-130 cargo aircraft to Cal Fire, which will give California’s firefighting agency the largest aerial firefighting force in the world.



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Sen. Dianne Feinstein (D-CA) at the 2018 Tahoe Summit at Sand Harbor State Park near Incline Village. (Photo: Sam Gross/RGJ)

Two of those aircraft are already running air attack missions over fires in California and the other five are being upgraded before their transfer to Cal Fire.

They also championed progress in preservation efforts made by a coalition of public and private entities dubbed “team Tahoe” by Sen. Feinstein.

During that partnership, the members of “team Tahoe” have invested nearly \$2.2 billion to preserve the lake. Roughly \$705 million has come from the federal government, \$840 million from California, \$159 million from Nevada, \$121 million from local communities and \$362 million from the private sector, according to Feinstein.

The private arm of that coalition, the Tahoe Fund, raised roughly \$8 million at a fundraiser Monday night, Feinstein said.

Heller notes federal funding for Tahoe

Heller boasted the recent successes of the six politicians charged with protecting Tahoe, including the Senate’s recent bipartisan passage of a \$12 million appropriation for the Lake Tahoe Restoration Act, which aims at wildfire prevention, environmental improvement and invasive species management, among other things.

The appropriation was passed in a bulk of four senate spending bills and it marks the first time in eight years an environmental appropriations bill has come before the U.S. Senate, Murkowski said.

The fate of that funding is now in the House’s hands, where it must be approved before being forwarded to President Trump for the final nod.

Feinstein praised the bipartisan effort to preserve Lake Tahoe.

“All is not lost in your congress,” she declared to the crowd Tuesday. “There’s a lot of dissension, a lot of stress and anxiety ... then there’s the stuff that gets done.”

Region's network of fire cameras highlighted

Graham Kent, the director of UNR’s Seismological Lab, which runs the AlertTahoe camera system, also appeared on stage with the politicians.

AlertTahoe, a network of 67 cameras stretching across multiple states, has become a proven and vital tool in wildfire detection.

The cameras, perched atop mountains and linked by a fire and earthquake-proof microwave communications network, function as a sort of wildfire early detection system.

The network allows firefighters to find, size-up and respond to fires before they can grow to neighborhood-engulfing behemoths. That network, which is growing, discovered and tracked roughly 240 fires last year alone.

AlertTahoe is expecting to install the Tahoe Basin’s final two cameras either this summer or the following spring and will be adding two more facing the eastern flank of the Carson Range at the same time, courtesy private funding organized by the Parasol Tahoe Community Foundation

with help from the Tahoe Prosperity Center and roughly \$226,000 secured from the Forest Service by Sen. Heller.

The cameras have proven their worth as an effective firefighting tool, according to Kent, potentially saving firefighting agencies tens of thousands in costs of deploying unnecessary equipment.

But even he echoed the concern of Tahoe's flammable future.

"Think of it as Genghis Khan and his horde pushing on the door and we're trying to hold them back," Kent said.

Smart Water Meters Market to witness more than 16% growth to 2024

PRESS RELEASE PR Newswire
Jul. 25, 2018, 09:00 AM

SELLBYVILLE, Del., July 25, 2018 /PRNewswire-iReach/ -

- According to a latest research report by Global Market Insights, Inc. "Annual installation of [smart water meters market](#) is set to exceed 35 million units by 2024; surpassing a revenue of USD 3 Billion" Implementation of favorable government policies and rollout programs toward the adoption of intelligent systems will boost the smart water metering market. Initiatives focusing on effective water monitoring and conservation will further propel the industry landscape. For instance, the European Union in collaboration with the International Monetary Fund announced a mandatory rollout of smart water meters in Ireland.

Increasing measures toward water security and monitoring of Non-Revenue Water (NRW) will enhance the smart water meters market. Increasing urbanization, ageing distribution mains and rising energy cost will further provide a stimulus to the industry outlook. According to the World Bank, 32 billion cubic meters of treated water is lost through leakages in distribution network worldwide. An additional 16 billion cubic meters is supplied annually but not charged due to poor metering, inappropriate billing and thefts.

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U.S. smart water metering market is projected to expand over 6% by 2024. Ongoing water conservation reforms coupled with government funding toward installation of smart grid technologies will positively drive the product adoption. In 2013, the U.S. Department of Energy and the Smart Grid Investment Grant (SGIG) mutually sponsored the

installation of smart grid infrastructure in the nation and provided a federal financial assistance of over USD 8 billion in 99 ventures.

AMI smart water meters market is predicted to grow over 28% by 2024. The use of AMI systems is attributed to quick detection of water leakages, reduction in water wastage and improved water supply. These systems offer advanced capabilities in data analysis and operations.

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Rising demand for effective management, monitoring, and utilization of water will fuel the smart water metering market. Global initiatives toward water conservation and measures to address water scarcity will further propel the business landscape. In 2015, the U.S. average water consumption has witnessed significant drop owing to growing water conservation concerns across various states in the country.

Growing measures toward effective mapping of water distribution coupled with regulatory regimes to limit non-revenue water loss will complement the Europe smart water meters market. Increasing administrative emphasis toward the development of high performance advanced systems will further embellish the industry growth.

Ongoing technological advancement to develop effective and precise metering technologies will boost the commercial smart water meters market. Rising concerns relating to reduction of water wastage and water scarcity will further facilitate the product adoption.

Notable players operating in the industry comprise of Landis+GYR, Badger Meter, Itron, Siemens, Arad Group, Schneider Electric, Sensus Sentec, Neptune, Kamstrup, Elster Group, Diehl Metering and Honeywell International.

Buy this industry insights spread across 311 pages with 552 market data tables & 16 figures & charts from the report, "Smart Water

Metering Market Size By Technology (AMR, AMI), By Application (Residential, Commercial, Utility), By Product (Smart Hot Water Meter, Smart Cold Water Meter), Industry Analysis Report, Regional Outlook (U.S, Canada, Germany, UK, France, Russia, Sweden, Italy, Denmark, Austria, Spain, Japan, China, South Korea, India, Australia, UAE, Saudi Arabia, Oman, Kuwait, Iran, Jordan, Egypt, South Africa, Nigeria, Mexico, Brazil, Uruguay, Argentina, Chile), Growth Potential, Competitive Market Share & Forecast, 2017 – 2024" in detail along with the table of contents:

<https://www.gminsights.com/securecheckout/paymenta/697>

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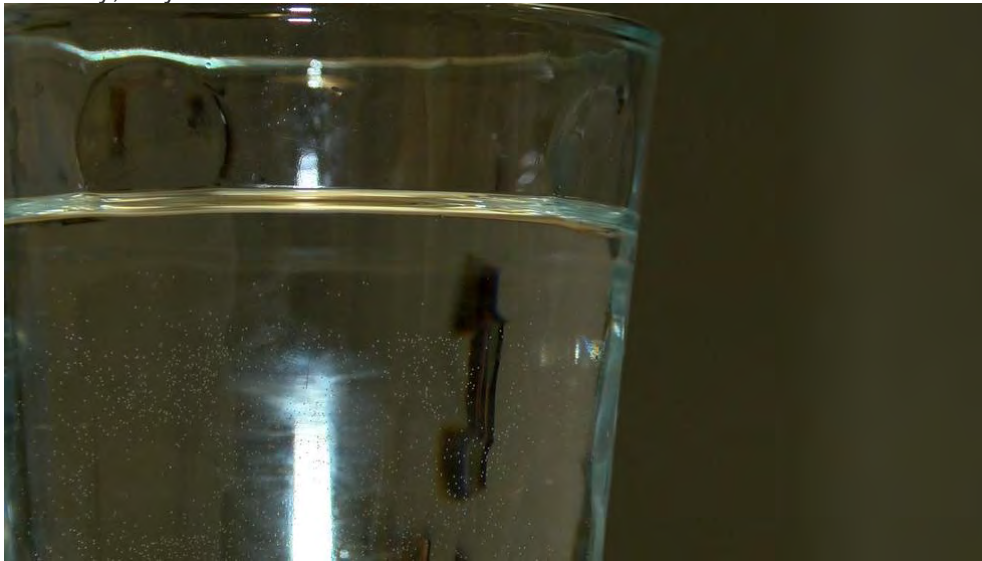
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+13028467766, sales@gminsights.com

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Truckee Meadows Water Authority releases 2018 water quality report

by Sanaz Tahernia
Tuesday, July 10th 2018



AA

TMWA WATER QUALITY_0011.jpg

Every year the Truckee Meadows Water Authority releases a water quality report based on data collected for the previous calendar year, and [this year's report is now available.](#)

The report looks at water quality for the [Primary Service Territory](#) in addition to five separate water systems in the Truckee Meadows region for 2017. Those systems include the [Lightning W](#), [Old Washoe](#), [Stamptmill](#), [Sunrise Estates](#), and [Truckee Canyon](#).

These annual reports are required by the [Environmental Protection Agency](#), so each report contains information about the drinking water source and how it compares to drinking water standards set forth by the agency.

With the exception of the Truckee Canyon Water System, none of the water systems had any violations reported last year. The Truckee Canyon Water System was in violation because officials for that system didn't check for contaminants known as synthetic organic chemicals and volatile organic chemicals when they were supposed to. However this isn't something to be concerned about because this particular violation didn't pose a safety risk, and as soon as staff was notified, they immediately took action and collected a sample to be tested.

With regard to the reports, the TMWA General Manager, Mark Foree says, "At TMWA, we take pride in the high-quality water delivered to our customers. The Water Quality Report is a welcome opportunity to show the stringent safety standards that our staff adheres to in ensuring high-quality water on a daily basis."

Of the various contaminants tested, TMWA looks for microbial, organic, inorganic, and radioactive contaminants in addition to pesticides and herbicides, and the reports identify the possible sources of these contaminants.

Signs don't mean Reno's parks are healthy

Press Clip

“Pesticide-free” signs in Wingfield Park create the illusion of an environmentally caring city while unleashed dogs roam the park and river shoreline as their owners use the greenspace as a defecation depot. But a greater sin is encountered east of Virginia Street where the riparian zone and bikeway have been transformed into a public pustule.

Congrats to Sparks for addressing the problem; Reno will put up another sign.

*Jerry Wager,
Reno*

VIDEO: TMWA Releases 2018 Water Quality Report

July 12, 2018 ThisIsReno Website Facebook Twitter YouTube LinkedIn

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Link to Produces video w Will and Kelli

<http://thisisreno.com/2018/07/tmwa-releases-2018-water-quality-report/>

Every year Truckee Meadows Water Authority (TMWA) releases a Water Quality Report, as required by the Environmental Protection Agency (EPA).

This report, which is based on data collected in the 2017 calendar year, contains information about the source of TMWA's drinking water and how it compares to drinking water standards established by the EPA. In addition to the primary service territory, there are separate reports on the following utilities operated by TMWA: Lighting W, Old Washoe Estates, Stampmill, Sunrise Estates and Truckee Canyon.

"At TMWA, we take pride in the high-quality water delivered to our customers," said General Manager Mark Foree. "The Water Quality Report is a welcome opportunity to show the stringent safety standards that our staff adheres to in ensuring high-quality water on a daily basis," he added.

The Water Quality Report is now available online at www.tmwa.com/quality . If you would like a print copy mailed to you, please call Water Quality Senior Chemist Craig Moyle at (775) 834-8130 or email him at cmoyle@tmwa.com. In addition, information by specific neighborhood is available by using TMWA's online map-based reference tool which provides the latest water quality data by geographic location: visit www.tmwa.com/water-quality-lookup.

Delivering high-quality water involves constant testing to ensure the community's water is safe. TMWA performs more than 1,000 laboratory tests every month on more than 180 samples taken from various locations throughout the TMWA distribution system. TMWA is dedicated to providing reliable service and delivering high-quality drinking water to more than 400,000 residents and businesses throughout the Reno and Sparks area.

RELATED:

TMWA Hosts Watering and Sprinkler Workshops

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California State Parks offers new plans for Upper Truckee Restoration

Maggie Mayer
mmayer@tahoedailytribune.com
July 16, 2018



After a November court ruling resulted in California State Parks compromising restoration plans for the Upper Truckee River at Washoe Meadows State Park and Lake Valley State Recreation Area, the department has developed a new alternative and is seeking public comment until the end of this month.

The new plan for the Upper Truckee River Restoration and Golf Course Reconfiguration Project, Alternative 2B, is now the preferred method of action. It would relocate five of the holes of Lake Tahoe Golf Course while restoring the river. The other option on the table, Alternative 1, would require no action but treatments to the river as needed.

"The Upper Truckee River is one of the biggest producers of sediment going into Lake Tahoe," said Cyndie Walck, an engineering geologist for California State Parks and leader of the restoration project. "A river works kind of like a conveyor belt for water and sediment, and a lot of what makes rivers go out of whack is when you mess with the slope."

In the 1940s, parts of the Upper Truckee were straightened to form a direct channel, a common practice at the time. However, this means sediment can't be properly filtered and is instead deposited in the lake. This ultimately destroyed the wetland ecosystem that should exist there, and now contributes to 16 dump trucks' worth of sediment entering the lake annually, according to an environmental assessment report from Swanson Hydrology and Geomorphology (SH&G).

Versions of restoration plans have been in the works for years, but backlash over how the river and golf course should be reconfigured has stalled progress.

The Washoe Meadows Community has filed two lawsuits against the California Department of Parks and Recreation, one in November 2011, in which State Parks rescinded its project approval and provided required reports. The community acted again after a second project approval in 2012. The approval was revoked because the Environmental Impact Report (EIR) did not layout a specific plan available for the public.

Lynne Paulson, the leader of the Washoe Meadows Community effort, said at one point the group had about 500 people supporting its cause, and there are still hundreds of active participants.

The community initially rejected proposed Alternative 2, which had been approved and rescinded following the lawsuits. It would have relocated nine holes and resulted in about 1,600 trees being cut down.

The League to Save Lake Tahoe also opposed the plan, but has not yet taken a stance on Alternative 2B, according to Chris Carney, the League's communications manager.

The goal of the project is to restore the natural flow of water to the area, allowing the river to revive the floodplain and eventually, return to the wetland habitat that would exist there had it been left alone by human hands. In order to do this, the area must be excavated so that the river regains a meandering flow, and the riverbed must be raised to counteract several feet of erosion to the banks.

Both sides claim that the river, not the golf course, is the priority, but Walck says the golf course configuration is a byproduct of the project at large.

Under Alternative 2B, the river would be rerouted over part of what is now golf course, and relocating some of the golf course on what is now state park land. It would expand the size of the state park by about two acres and reduce the size of the course by 15 percent.

Finally, the restoration plan aims to make the state land more accessible, since there is currently no designated parking or entrance, and the trails are limited and overgrown. Paulson said the community agrees that the state park should be made more accessible.

THE GOLF COURSE

The root of the argument is what to do with Lake Tahoe Golf Course, which sits on Lake Valley State Recreation Area; whether it should be kept 18 holes or reduced to nine, or if state park land should be used to relocate some of the holes. Doing so would declassify some of the land as state park and turn it into state recreation area, because golf courses can't exist in state parks.

Paulson said this move is unprecedented, and the Washoe Meadows Community is open to keeping the 18-hole course as it is, if that means the state park land is protected. Likewise, it could be reduced to nine holes if the river needs to be directed through what is now part of the course.

"(State Parks) is refusing to make improvements to the existing course," she said. "They could reconfigure the golf course where it already is."

The community doesn't want the golf course to exist on either side of the river, which would likely happen under Alternative 2B.

The argument for keeping it is the financial gain and recreational opportunity a full course provides.

Lake Tahoe Golf Course brings in about \$600,000 annually for the parks department, and about two-thirds of players are visitors to the Basin. It is because of this economic advantage that Walck said getting rid of half the course isn't feasible.

At the same time, the river can't be diverted completely around the existing course without a portion of the course being converted to floodplain.

Both sides have conflicting economic views about the golf course. One report from the Washoe Meadows Community, prepared by TCW Economics, cites a decline in golf participation in recent years and rebukes claims about the golf course's contribution to the South Shore's economy.

WHY WETLANDS?

Despite two lawsuits and years of drafting, approving, and rescinding plans, both sides have the same goal — to protect the Upper Truckee River and its surrounding land.

Wetlands are some of the most valuable ecosystems Mother Nature has to offer, and their filtration ability makes them key players in Tahoe's pristine waters. About 75 percent of the wetlands in the Tahoe Basin have been destroyed, according to the League to Save Lake Tahoe, which has a direct effect on Big Blue's declining clarity.

They are also powerhouses at sequestering and storing carbon, holding an estimated 20 to 30 percent of the world's soil carbon, though they only occupy about 6 percent of land surface area. Finally, wetlands are nature's method of flood control, because floodplains act as sponges for excess water.

Since the 19th century, about 90 percent of California's wetlands have been drained, most for agricultural and irrigation developments, according to the United States Geological Survey (USGS).

Least to say, wetlands and their functions are important — and we are now seeing the long-term consequences after centuries of damage to these ecosystems.

"You have to be very careful when you're working with rivers so they have the right slope and the right curviness," Walck said. "If you get those geo-parameters right it supports all the rest of the ecosystem."

PUBLIC OUTREACH

State Parks is seeking public comment until July 30; a comment form can be found at the Upper Truckee Restoration website, <http://www.restoreuppertruckee.net>, where maps of the project proposal and land reconfiguration can also be found. Queries can also be sent to utproject@parks.ca.gov.

Walck will be hosting a public tour of the state park and recreation area on Tuesday, July 17, from 5:30 to 7 p.m. for those interested in the project. The tour group will be meeting at the corner of Bakersfield Street and Country Club Drive. State Parks encourages you to RSVP at utproject@parks.ca.gov.

Information about the Washoe Meadows Community and counterarguments to the proposals can be found at <http://www.washoemeadowscommunity.org>.

The California Tahoe Conservancy (CTC), Tahoe Regional Planning Agency (TRPA), U.S. Department of Interior Bureau of Reclamation and the Lake Tahoe Environmental Improvement Program are partners for the proposed restoration project.

If State Parks moves forward with the preferred plan, Walck said it could take about three years to break ground and several more until the habitat is restored. There is currently no construction funding, but that could come from different sources down the line, including California Proposition 68, the Parks, Environment and Water Bond.

LETTERS TO EDITOR:

Sparks' homeless camp cleanup wasn't a real solution

The city of Sparks missed an opportunity to be a real leader in helping to solve or reduce the homeless population. Instead, they touted their success through a video in cleaning up the homeless camps. Indeed, they have made it more sanitary and friendly to visit the banks of the Truckee, but at what cost?

The city shifted the problem to other communities, including Reno. The homeless will eventually return to Sparks.

Are the mayor and City Council just lazy? They seemingly allowed their city manager, who has no innovation or compassion, to contribute to a larger problem.

Leslie Arrowood, Sparks

What happened to community dialogue on wild horse management?

After a five-year successful partnership, the Bureau of Land Management has now pulled the rug out from under us with a surprise massive roundup plan of our beloved Fish Springs horses ("Wild horse advocates prepare for a fight," July 16).

Volunteers who work at no charge to any of us have been managing the herd, keeping them in their herd areas, darting the mares with PCP for birth control and monitoring them daily. Now the BLM wants to round up our world-famous Fish Springs herds with absolutely no dialogue!

We're not unreasonable people. But both sides must be willing to listen, understand and come up with a solution that both parties agree to.

The roundup will split up families forever. Their future is bleak with thousands of horses across the nation in BLM holding pens with little hope of adoption.

Check out the BLM pens in Palomino Valley to gain some insight. As far as Amodeli's supporting this — he's an elected official, right? He's supposed to be representing the people!

Irene Muller, Gardnerville

Pedersen is right — dogs are not kids!

April Pedersen is spot-on; pets are not children ("All the pet dogma is getting old, RGJ," July 11).

Dogs, horses, cats, gerbils, whatever, are not your sons and daughters. No amount of knee-jerk sentimentality will change that fact. If you actually believe pets are akin to children, you'd better not neuter them, crate them, euthanize them or prevent them from getting at least an eighthgrade education. And I suspect most real children do not go around sniffing people's private parts.

Dennis Middlebrooks, Reno

WATER vs. RECREATION

Green River Reservoir at center of high-profile debate

[*Rutland Herald*](#) | July 14, 2018

By SARAH GALBRAITH
CORRESPONDENT



PHOTO

Cathy Buni, of East Montpelier, kayaks on Green River Reservoir in Hyde Park. JEB WALLACE-BRODEUR / STAFF FILE

On the Green River, a tributary to the Lamoille River in Hyde Park, sits a hydroelectric dam waiting for a court decision to determine whether and how it will continue to make power. In addition to providing renewable energy, the water held back by the dam creates Green River Reservoir State Park, a place enjoyed by Vermonters for its wild loons, bass fishing, boating, and camping. The river provides fish habitat and whitewater paddling, and a number of homes sit down-river.

“This is a beloved river,” said Bob Nasdor by phone from his office in Sudbury, Massachusetts. As the northeast stewardship and legal director for American Whitewater, the dam on the Green River is one of a dozen throughout the Northeast whose fate he is monitoring.

Morrisville Water & Light, the owner of the dam, recently applied for relicensing after its former 1981 license ran out on its 30-year term. The approval of dams like this one is a federal decision, and licenses are given 30- to 50-year terms following rules put forth in the Federal Power Act, the implementation of which is overseen by the Federal Energy Regulatory Commission.

But, this federal-level decision hinges on state-level certification that requires each dam to meet certain water-quality standards. When three decades pass between licensing applications, a lot can change in water quality science and conservation. In the case of this dam, the Vermont Agency of Natural Resources is now asking the utility to leave more water in the river, and divert less to the power plant, to protect the quality of the river.

The utility had anticipated this change, and included in their application a reduction in the volume of water diverted from the river, but ANR’s requirements exceeded the utility’s proposal. The utility appealed the decision in Vermont environmental court in April, and was joined there by other groups like Nasdor’s and Vermont Natural Resources Council. VNRC cross-appealed the state’s decision, asking for more-stringent water-quality requirements than those required by ANR.

Nasdor said, “This legal case is ultimately about, ‘how do you protect water quality through recertification?’” He says the law requires that equal consideration be given to nonpower values like habitat, aesthetics, and recreation, and that recreation is also protected “very clearly” under the Water Quality Act.

Morrisville Water & Light has scheduled dam releases that draw 100 or more boaters to enjoy the rapids created by the increase in water flow. Nasdor says protecting the recreation value of the river is part of protecting water quality. His group has also proposed terms for the license to include a certain number of seasonal scheduled dam releases and time-shifted releases, all of which would mimic the natural flow of the river. The utility has been operating under its former license by diverting water from the river and holding it behind a dam, and then releasing it through its power generation plant as needed to make electricity. To be economical, the hydro power plant is best used when regional power prices are high, such as times of high energy demand. At these times, the utility can generate their own inexpensive power using a free resource— water — instead of buying expensive electricity from the regional power grid, a move that boosts the utility’s profits and keeps electric rates lower for customers.

ANR wants more water to stay in the river and less to be diverted to the hydro power plant. Their rules aim for the water flow leaving a hydroelectric plant to be identical to the natural flow of water running into the plant. Called run of river, this mode of operation protects the natural flow regime, allowing fish and macroinvertebrates to thrive. While ANR’s rules would still allow some water to be diverted to the power plant, VNRC is calling for water to instead run continuously through the plant without any being held back. It’s a move that VNRC says would protect water quality, but it would also mean the utility would lose control of storing this potential power source for use at optimal times, thereby reducing profits.

“Some of the biggest challenges (with hydroelectric plants) are the fluctuations of water level that negatively impact habitat, as well as downstream flow, or keeping water in the river,” said Leslie Weltz, an environmental litigation attorney with ANR. “We regulate by maintaining natural flow,” she added.

But, at a time when utilities have been mandated to generate 55 percent of their power from renewable sources by 2017 and 75 percent by 2032, utility general manager Craig Myotte feels the state has conflicting goals. He says, while one state agency is asking for more renewable energy, another is being prohibitive to hydropower, a main source of renewable energy in Vermont.

“You have aggressive renewable energy targets from one state agency and another [state agency] who is not concerned with renewable energy is operating in a vacuum, they have their blinders on. They’re not considering any other perspective,” said Myotte by phone. He feels ANR should consider other perspectives like economics, customer rates, and the state park.

But, said Groveman, “This is precedent-setting in Vermont, saying that economic impacts on a facility should be considered when considering water quality. We shouldn’t allow our waters to slowly degrade. We should maintain, restore and improve water quality.”

Myotte said the utility recently hired a consultant to study the health of the Green River by measuring fish populations, and the results were positive. “We’re not doing the damage they’re saying we’re doing,” said Myotte. This legal case is one that appears to be putting renewable energy at odds with water quality, both of which can be argued to be important environmental considerations. Weltz said that using water, which is in the public trust, to make renewable energy is a good thing and that the rules proposed by ANR are meant to encourage renewable energy while protecting water quality.

The state's comprehensive energy plan speaks to this balance, acknowledging and accounting for some reduction in hydroelectricity due to more-stringent water quality standards.

"I don't accept the idea that we're pitting renewable energy against water quality," said Groveman. "Hydropower is not renewable if you're having adverse impacts on water quality. That doesn't meet the definition of renewable energy."

In addition to the profitability of power production for the utility is the cost of owning and maintaining the dam itself. While the dam is depreciated and paid for, there are costs for maintaining it. Once a year, the utility puts all staff time for a single day to an emergency drill, along with the town and local emergency response departments, to simulate their response to a dam failure. Plus, every five years, the utility spends \$25,000 on a dam inspection conducted by a consultant.

"If the dam were to fail," said Myotte, "there would be loss of life and property damage at the houses below the dam. That's our responsibility." These costs are required by the

utility as owner of the dam, and they pencil out when power is being produced and sold.

"The economics of owning the dam change significantly to hold water without power generation," pointed out Myotte.

If the utility was unable to obtain a new license or the improvements needed to meet modern water-quality standards were cost-prohibitive, the utility would most likely sell the dam. Some worry this would put the dam under consideration for decommissioning, which would mean the loss of the state park up-river.

"The loss of Green River State Park is very unlikely," said Jon Groveman, with Vermont Natural Resources Council. "That's an alarmist point of view." He said if the utility backed out of owning the dam, it would most likely be sold as a valuable asset. And, even if it wasn't sold, he couldn't envision any state administration doing away with a state park that so many enjoy.

Plus, decommissioning a dam is a long process that also requires an application to FERC and public input, points out Jeff Crocker, a river ecologist with ANR. He agrees that the loss of the state park is unlikely. But Nasdor has a **different take, saying, "People who enjoy the recreation in this reservoir ought to be concerned about the economic viability of this hydro-power dam."**

Since the trial in April, there has been one round of post-trial briefing, and final post-trial filings were due last week. The court will then take these filings into consideration when making a decision, which some expected would come as early as August, while others expected it later this fall or over the winter.

Land Trust eyes Frog Lake purchase

By **Tahoe Weekly**
- July 20, 2018



Looking across Frog Lake at Frog Lake Cliffs. | Courtesy Truckee Donner Land Trust

The [Truckee Donner Land Trust](#) has announced a new campaign to purchase Frog Lake and neighboring parcels, which would open up the pristine lake and surrounding landscapes to the public in 2020.

Working with [The Trust for Public Land](#) and [The Nature Conservancy](#) under the [Northern Sierra Partnership](#), the capital campaign is now underway, according to a press release. Until these acquisitions are complete, the Land Trust asks that members of the public respect the current owners' private property. Hikers can get a glimpse of Frog Lake from the top of Frog Lake Cliffs by taking the Warren Lake Trail.

Totaling 2,914 acres, the properties are north of Interstate 80 and east of the Sierra Crest, falling between Castle Peak to the west and Tahoe Donner's Euer Valley to the east. Frog Lake, owned by the Smith family since the 1930s, has been closed to the public for nearly a century, preserving a beautiful landscape including the lake itself at 7,600 feet, Frog Lake Cliffs, late seral forests and key habitat for numerous species.

The other acreage, currently owned by Sierra Pacific Industries, includes Red Mountain on the ridge between Euer Valley and Carpenter Valley. These parcels link Frog Lake to other Land Trust acquisitions including Lower [Carpenter Valley](#), Independence Lake, Perazzo Meadows, [Webber Falls](#), [Webber Lake](#) and [Lacey Meadows](#).

An aerial view with Carpenter Valley in the foreground, Red Mountain to the left, Frog Lake Cliffs in the Upper left. | Courtesy Truckee Donner Land Trust

That connection is critical, creating contiguous land management, providing threatened and endangered species with connected habitat and protecting the upper watersheds of the middle stretch of the Truckee River. It protects upland water sources for the rare and delicate fens of Carpenter Valley, and is home to species like black bear, marten, mountain lion and northern goshawk.

The Land Trust and its partners have taken on the lofty goal of raising \$15 million to acquire the property by 2020, at which point the property will be open to the public. Trails are planned to not only give visitors access to Frog Lake and the Carpenter Valley ridges, but also to connect other preserved properties, opening up huge swaths of the Northern Sierra previously unavailable to the public. Access will be for non-motorized use only, and back-country skiing, snowboarding and snowshoeing will be excellent in the winter months.



An historic stone lodge, built for the Smith family, may become a winter back-country hut, part of larger plans in the works for a hut system in the region.

The Frog Lake property was acquired by the late Felix Smith from the Southern Pacific Railroad in the 1930s, and it has been a summer retreat for the family since. The family has been a great steward of this extraordinary property, and with this commitment to Truckee Donner Land Trust, they have now achieved their goal to ensure it goes to conservation.

Warren Lake Trail

While the property won't be open to the public for two years as the Land Trust and its partners raise the funds required to complete the transaction, hikers can enjoy the aerial view of this gem from above using the Warren Lake Trail.

The Warren Lake Trail starts at the Intersection of the [Summit Lake Trail](#) and the [Donner Lake Rim Trail](#) on Donner Summit, accessible by the Pacific Crest Trail or from the Castle Valley Trailhead. Parking is available at the Castle Peak exit off Highway 80. This popular trailhead was protected from development in 2016 allowing continued public access to the Pacific Crest Trail, Castle Peak and the popular Hole in the Ground mountain biking Trail.

A trail kiosk at the end of the paved road directs hikers to the Donner Lake Rim Trail. Follow the trail east behind the Donner Summit Rest Area toward Summit Lake. You'll encounter a well-signed intersection with the Warren Lake trail east of the Rest Area before Summit Lake.

From parking to Frog Lake Cliff via the Donner Lake Rim Trail and Warren Lake Trail is about 3 miles, gaining roughly 1,400 feet in elevation through mature mixed conifer forest replete with regular views east. A short unsigned spur trail to the top of Frog Lake Cliff will be evident at a high, open point. Follow that spur and your climb will be rewarded not only with sweeping views of Frog Lake more than 1,000 feet below, but also Euer Valley and the surrounding peaks.

For those looking for more mileage, continue another mile or two on the Warren Lake Trail north and into Castle Valley where views of Castle and Basin Peaks from the East are impressive. Warren Lake is another 4 miles from the Frog Lake Cliffs viewpoint and includes a steep 1-mile descent to the lake.

| tdlandtrust.org

Sparks Police: Water Main Break Closes Part of Probasco Way

Sparks Police is advising the public that crews are currently working on a large water main break.

Sunday, July 22nd 2018, 2:08 pm PDT

Updated:

Sunday, July 22nd 2018, 3:33 pm

[Link to video](#)

Sparks Police is advising the public that crews are currently working on a large water main break.

Probasco from I Street to East Prater Way will be closed until at least 8 p.m. Please avoid the area until further notice.

Truckee Meadows Water Authority says five customers are affected, but crews have it under control.

We will bring you more information as soon as it becomes available.

Lake Tahoe Warmer Than Ever— Tahoe Basin Still Warming

Benjamin Spillman, Reno Gazette Journal Published 2:00 p.m. PT July 26, 2018



The view at Emerald Bay at Lake Tahoe last year. (Photo: Provided by Linde Pirtle)

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Water in Lake Tahoe was warmer than ever last year – and the average temperature of the Tahoe Basin is expected to keep getting warmer.

That's according to the latest yearly report on water and climate conditions at the world's second largest alpine lake.

The findings show climate change is putting the squeeze on the environment at the lake, a situation that highlights the urgency of efforts to make the lake's ecosystem more resilient to global warming.

The "Tahoe: State of the Lake," report published Thursday.

It showed that surface water temperatures in July 2017 reached 68.4 degrees, the warmest ever recorded and 6.1 degrees higher than 2016.

And the report stated air temperature in the Tahoe Basin is expected to increase seven to nine degrees by the end of the century, which will contribute to even warmer water in the lake.

"That is certainly big," said Geoffrey Schladow, director of the UC Davis Tahoe Environmental Research Center and author of the report, said of warming conditions.

In addition to being warmer than ever in 2017, Lake Tahoe also experienced a significant decrease in clarity.

Researchers made 26 clarity readings in 2017. The clearest was 90.2 feet of visibility on March 9 and the least clear was 47.6 feet in Oct. 17 and Dec. 19.

More: Wilderness ranger reports tense lion encounter near Tahoe

More: Dreamy stroll to Showers Lake from Carson Pass great place to let the mind wander

More: Trump's plans to weaken pollution rules threaten Lake Tahoe, experts say

Average clarity for all readings was 59.7 feet, a decrease of 9.5 feet from the prior year and the lowest level on record.

In some ways the decline in clarity was an anomaly that doesn't appear to be repeating in 2018.

The decline came on the heels of a five-year drought during which sediment built up on surrounding land followed by a deluge of snow and rain in 2016-17 that washed the sediment into the lake.

Researchers estimate more sediment washed into the lake in 2017 than in the previous five years combined.

However, there remains evidence that climate change may have exacerbated the clarity decline.

"While 2017 may be viewed as an anomalous year, it has reinforced the fact that progress toward environmental restoration of Lake Tahoe will be punctuated by extreme years in future decades," Schladow said.

Warmer water temperatures are contributing to greater stratification in the water column. Essentially, the division between layers of warm water near the surface and cooler, deep water gain strength, which results in less natural mixing.

That increase in stratification helps to keep sediment that washes into the lake suspended higher in the water column, reducing clarity.

The decreased mixing also has the effect of allowing nitrate and phosphorous rich deposits to build up at the bottom of the lake.

Each season the lake doesn't mix the deposits can grow and increase the risk that future mixes will introduce a greater than usual amount of those materials into the water column. It's been seven years since the lake mixed all the way to the bottom, Schladow said. When it does mix again, clarity could suffer.

"When the lake does mix to the bottom again it is going to be bringing up all these nitrates and phosphorous," Schladow said. "It is just building up these reservoirs of nutrients at the bottom when it doesn't mix."

Warming planet, warming lake

Although efforts to improve Lake Tahoe have paid big dividends in recent decades, they aren't enough to shield the lake from the planet's warming climate.

In the past century, the daily minimum air temperature at Tahoe City, Calif., has increased 4.4 degrees, from about 28 degrees to more than 32 degrees. The average maximum has increased 2.2 degrees to a little more than 56 degrees.

Significantly, the number of days in which average air temperature stayed below freezing has decreased by 30 since 1911.

That's contributed to a significant change in the amount of precipitation that falls as snow in the Tahoe Basin.

In 1910, about 52 percent of total precipitation fell as snow. Since then that number has fallen to an average of 32 percent. In 2017 snow represented 31.3 percent of total precipitation.

Total precipitation in 2017, according to the report, was 68.9 inches, the second-highest total on record.

The drastic shift from extreme drought to extreme moisture that contributed to the reduction in clarity could be repeated more frequently in future years.

That's because one of the affects climate change is having on California is an increase in extreme conditions.

Warmer winters mean earlier snowmelt, particularly at lower elevations, and more winter rain and runoff.

And greater summer heat extremes can mean higher intensity droughts and greater risk of fire.

"Warmer conditions create more severe hot conditions during the warm season, less reliable snowpack, greater increase of flood risk during the rainy season," said Noah Diffenbaugh, a professor of earth science and senior fellow at the Stanford Woods Institute for the Environment. "From the perspective of California's climate, we are seeing the changes that have been predicted for three decades, we are seeing those unfold."

Advancements in science improve future outlook

Even as climate change increasingly influences the environment of the lake, researchers are searching for new ways to improve water quality.

One example from the State of the Lake report is research into Mysis shrimp, an invasive species in Lake Tahoe.

The shrimp, which are one to two centimeters long, were introduced in the 1960s in an attempt to fatten up the fishery.

Their flourishing in the lake, however, came at the expense of native Daphnia, a much smaller form of plankton.

The Mysis shrimp learned to feed on the Daphnia and then retreat to deeper water where they could avoid getting eaten by fish they were intended to fatten.

"Instead of adding food for the fish ... they actually ate up the food the fish would normally eat," said Heather Segale, education and outreach director for the Tahoe Environmental Research Center.

In recent years, researchers noticed a significant decline in the Mysis shrimp population in Emerald Bay. The decline coincided with the return of Daphnia and an increase in clarity as the smaller, native organisms consumed organic sediment.

Schladow said the observation raises the possibility that Mysis shrimp may have a stronger influence on clarity, or lack thereof, than previously thought.

"I don't think it was appreciated this change in the ecology might have been having on clarity," Schladow said.

Now researchers are looking into the possibility of other efforts to control the Mysis population, possibly by using technology to locate groups of shrimp and special nets to capture them.

"We are just trying to get the science right," Schladow said. "How you do that is the next question."

There's also research into forest health in the Tahoe Basin which could lead to improvements for the lake.

Recent surveys have shown an increase in tree mortality in the area, particularly in stands of sugar pine along the north shore.

Much of the mortality increase is attributed to the drought exacerbating the risk of mountain pine beetles.

"One of the big, sort of, red flags in mortality was the Sugar Pine mortality we saw on the north shore," said Patricia Maloney, a forest and conservation biologist and associate director of the UC Davis Tahoe Environmental Research Center.

But researchers also noticed stands of trees that survived the harsh conditions, leading them to think the surviving trees are more resilient to conditions associated with the warming climate.

Now they're collecting and planting seeds from the resilient trees in a controlled environment until they're ready to be replanted in the forest.

"When you are not losing every tree perhaps it is selection for more drought resilient trees," Maloney said.

Tahoe-Pyramid Trail secures future in Farad

Justin Scacco

July 26, 2018



For more than a decade work has gone on to create a bikeway linking Lake Tahoe to Pyramid Lake.

The project recently cleared another major hurdle when an existing section of trail in Farad, California, was secured after the Truckee Meadows Water Authority granted a permanent easement on property it intends to sell, paving the way to protect the continuity of the trail into the future.

"That easement will be an encumbrance on that property," said Truckee Meadows Water Authority Director Jenny Brekhus. "Encumbrance is often a burdensome word, but this is an encumbrance to the public's advantage — to transport through the trail connection."

Brekhus said no matter the buyer of the property, the easement will allow for future use and maintenance of the trail by the nonprofit organization, Tahoe-Pyramid Trail.

"It's huge because the section of the canyon that they own, there really is no other way to go through there," said Tahoe-Pyramid Trail founder Janet Phillips. "It's a huge, important step."

The real estate for sale consists of roughly 70.53 acres in the Truckee Canyon, which includes the 2.8 MW hydroelectric plant built in 1899, and also permits related to the operation of the plant and the reconstruction of a diversion dam.

RECOMMENDED STORIES FOR YOU

"(Truckee Meadows Water Authority) doesn't see a utility function for it, that's why we are disposing of it," Brekhus said. "From my perspective, I do want to see it go toward a good use. I really want to see the building stay, even if it's in a private capacity."

TRAIL HISTORY AT THE SITE

In 2013, before the property's title was transferred to Truckee Meadows Water Authority, NV Energy entered into a Memorandum of Understanding with Tahoe-Pyramid Trail, according to documents from the water authority, in which NV Energy granted a revocable license to access and use the property to construct and maintain the trail. Tahoe-Pyramid Trail has since built and maintained a trail, including a bridge, on the property.

The water authority's board of directors voted unanimously on June 20 to grant a permanent easement for the section of trail, clearing the way for future use regardless of the property's owner.

TRUCKEE RENO LINK REACHES MILESTONE

Work began earlier in the year on the final two miles of trail needed to link Truckee to Reno, which, according to Phillips, has been a priority of trail builders since work began in 2003. Upon completion the section will offer cyclists and hikers unparalleled views of the canyon and Truckee River below.

Phillips started Tahoe-Pyramid Trail 15 years ago to investigate the feasibility of creating the route and has been working to link existing trails, paths and roads to create 114 miles of trail connecting the two lakes.

"As much as we could we used existing paths or roads," Phillips said in an interview earlier this year. "For instance there's remnants of Highway 40 in the canyon. We used that, and there's also a few little utility dirt roads that we used. Unfortunately for us, there's some sections where there's just nothing to work with, and that's where we get into the really expensive construction."

Since work began this year, volunteers have held maintenance and cleanup days on the trail, completing usual spring work on the trail. Volunteer teams have also dealt with the unexpected, including last month when a semi-truck and trailer crashed over the guardrail and onto the trail.

"Our new shared trail concept with trucks," Phillips joked. "The truck got removed right away and that was a good thing, but the remaining problem we have is there are some boulders it knocked down onto the trail that are still there. They're too big for volunteers to move, so we're hoping to get some help somehow on making big rocks into little rocks, and then moving them. You can still get through on the trail, it's just narrower than normal."

Most recently work crews on the Tahoe-Pyramid Trail hit a major milestone when the two contractor teams working on opposite ends of the missing link between Reno and Truckee connected. Though the crews have met up at a midway point on the missing section, Phillips stressed the trail in that area is not yet open to the public.

"You've got two different groups working on different legs of the trail and when they can actually see each other, and then they can actually shake hands, it's kind of a nice celebration," said Phillips.

COMPLETING THE TRAIL

Going forward Tahoe-Pyramid Trail is in need of funding to complete the link between the lakes. The organization recently hit a funding goal after receiving \$30,000 from Renown Health, according to Phillips, as well as a trio of sizeable individual donations.

"We're always trying to raise money to complete the trail and we never know when there is going to be an unexpected cost or a complexity that we didn't foresee," Phillips said. "We always need volunteers and the farther we get upriver toward Truckee, the more it would be helpful to get some Truckee-based volunteers, because most of our guys are from Reno."

With a connection between Truckee and Reno expected to be completed sometime this year, there will only be a couple of missing sections of trail between Reno and Pyramid left to finish. For more information visit TahoePyramidTrail.org or check out the organization's booth at Truckee Thursday on Aug. 2.

"If people want to stop by and see the maps and get a brochure, that's where we'll be," said Phillips.

Justin Scacco is a reporter for the Sierra Sun. Contact him at jscacco@sierrasun.com.

Truckee Meadows Water hydroelectric plants generate \$3.7 million in revenue

by Issmar Ventura
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Truckee Meadows Water hydroelectric plants generate \$3.7 million in revenue



ENO, Nev. — Truckee Meadows Water Authority (TMWA) announces a record-breaking year for clean power generation.

From July 2017 through June 2018, TMWA's three 100-year-old hydroelectric plants generated an all-time-high of \$3.7 million in revenue due to high river flows.

TMWA owns and operates the Washoe, Verdi and Fleish plants on the Truckee River for the benefit of customers. The power generated was sold to NV Energy and significantly offset the power costs of the water system.

The total kilowatt hours produced by the three hydroelectric plants reached 52,367,487 KWh, breaking the former record set in 2012/2013 by more than 200,000 KWh.

The revenue produced from the hydro power sold to NV Energy was \$3,757,043.39.

"Hydroelectric power has consistently been a key asset to help limit costs for our customers over the years, helping to keep rates lower," said Pat Nielson, TMWA's director of distribution maintenance and generation.

The hydroelectric power generated by TMWA is not dependent on the release of stored water from a dam; rather, it uses a "run-of-the-river" configuration in which water is diverted from the river to drive generation turbines. The same amount of water that flows into plant is returned to the river unchanged. Technological upgrades over the years have made management of the plants more efficient, but the core process of green energy generation has remained the same for more than a century.

The contribution TMWA's hydroelectric plants make to the quality of life in the Truckee Meadows is not entirely financial. When all three plants run at capacity,

more than 90,500 pounds of CO2 emissions are eliminated daily from the atmosphere. In one year, this is roughly 15,000 metrics tons of CO2 that would be released if TMWA

relied exclusively on fuel-based power generation. While there certainly are dry years and maintenance issues that keep the plants from running at capacity all the time,

the fact remains that TMWA's hydroelectric plants make a major contribution to northern Nevada's green-energy portfolio.

"These plants have always been important to this region," said Nielson. "In the early 1900s, the plants provided power to the Virginia City mining industry; now hydroelectric

helps us keep TMWA's operational costs very low in the delivery of water to over 400,000 residents in our service area. They are as relevant today as they have always been."

Free tours of TMWA's historic hydroelectric plants will take place throughout September. Visit www.tmwa.com/events for the tour schedule and to RSVP.