



TRUCKEE MEADOWS WATER AUTHORITY
Board of Directors

AGENDA

Wednesday, August 16, 2017 at 10:00 a.m.
Sparks Council Chambers, 745 4th Street, Sparks, NV

Board Members

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

Vice Chair Vaughn Hartung
Member Jeanne Herman
Member Naomi Duerr

NOTES:

1. The announcement of this meeting has been posted at the following locations: Truckee Meadows Water Authority (1355 Capital Blvd., Reno), Reno City Hall (1 E. First St., Reno), Sparks City Hall (431 Prater Way, Sparks), Sparks Justice Court (1675 E. Prater Way, Sparks), Washoe County Courthouse (75 Court St., Reno), Washoe County Central Library (301 South Center St., Reno), Washoe County Administration (1001 East Ninth St., Reno), 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) 835-8002. 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.
8. 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**).
9. Notice of possible quorum of Western Regional Water Commission: Because several members of the Truckee Meadows Water Authority Board of Directors are also Trustees of the Western Regional Water Commission, it is possible that a quorum of the Western Regional Water Commission may be present, however, such members will not deliberate or take action at this meeting in their capacity as Trustees of the Western Regional Water Commission.

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

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

5. Approval of the minutes of the June 21, 2017 meeting of the TMWA Board of Directors (**For Possible Action**)
6. Report on TMWA's dam inventory and rebuilding, and safety measures — Pat Nielson*
7. Informational report regarding the meter retrofit fund program — John Zimmerman*
8. Update and discussion on transfer of Farad hydro facilities from NV Energy under 2001 Asset Purchase Agreement and discussion and possible action on recommendations to staff regarding timing and reconstruction options for Farad dam and hydro facilities — Michael Pagni, Pat Nielson and Mark Foree (**For Possible Action**)
9. Discussion and possible action, and direction to staff regarding the draft Wholesale Water Service Agreement between TMWA and West Reno Water Company and request for Board authorization for General Manager to finalize and execute the agreement — John Enloe, Scott Estes and Mark Foree (**For Possible Action**)
10. Discussion and possible direction from Board regarding the General Manager's performance evaluation process — Mark Foree (**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 and conduct labor-oriented discussions in accordance with NRS 288.220 or receive information from legal counsel regarding potential or existing litigation and to deliberate toward a decision on such matters related to litigation or potential litigation.

TRUCKEE MEADOWS WATER AUTHORITY
DRAFT MINUTES OF THE JUNE 21, 2017
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Wednesday, June 21, 2017, at Sparks Council Chambers, 745 4th Street, Sparks, Nevada. Vice Chair Hartung called the meeting to order at 10:05 a.m.

1. ROLL CALL

Members Present: Jenny Brekhus, Naomi Duerr, Vaughn Hartung, Jeanne Herman, *Geno Martini, and Ron Smith.

Members Absent: Neoma Jardon

A quorum was present.

*Chair Martini was present via telephone.

2. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Charles Albright.

3. PUBLIC COMMENT

Mr. Albright spoke about his concerns about the dams along the river and asked TMWA to consider putting in bladder dams.

*Chair Martini called-in at 10:09 a.m.

4. APPROVAL OF THE AGENDA

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

5. APPROVAL OF THE MINUTES OF THE MAY 17, 2017 MEETING

Upon motion by Member Brekhus, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved the May 17, 2017 minutes.

6. REPORT ON THE RESULTS OF 2017 LEGISLATIVE ACTIVITIES AND BILLS

John Zimmerman, TMWA Water Resources Manager, reported that the 2017 Legislative Session ended June 5 and the Governor's deadline to either approve or veto bills was June 16.

Steve Walker, TMWA Lobbyist, provided a brief overview of the bills that passed out of session which TMWA monitored. Mr. Walker noted that none of the bills TMWA opposed were approved and most of the bills TMWA supported passed. He reported on SB379, which TMWA supported based on water resource, not governance, issues.

Member Duerr asked if any bills passed had significant impact. Mr. Walker replied the session was good for state-wide water issues; SB70, which changed the State conservation planning reporting requirement from gallons per capita per day for each conservation activity to acre feet saved annually.

Member Brekhus asked about SB239, common interest communities. Mr. Walker replied it dealt with gated community issues on planting drought tolerant plants in a homeowners association (HOA).

7. DISCUSSION AND POSSIBLE ACTION, AND DIRECTION TO STAFF ON THE INTERLOCAL AGREEMENT BETWEEN TRUCKEE MEADOWS WATER AUTHORITY (TMWA) AND CITY OF RENO FOR THE CITY ENERGY PROJECT (CEP) – RENO

John Enloe, TMWA Director of Natural Resources, introduced Lynne Barker, Sustainability Manager at City of Reno, who will present on the city's climate change and sustainability initiative. TMWA would like to participate in the project and the Better Buildings Challenge to promote water conservation goals in the region in existing and new commercial buildings and would propose to be a sponsor in the amount \$10,000 a year for two years.

Ms. Barker presented an overview of the City Energy Project to the Board (see attached).

Vice Chair Hartung confirmed San Francisco has greenhouse gas emissions lower than Reno. Ms. Barker replied yes, in part due to the transportation system and a denser community.

Member Duerr asked what is being requested. Mr. Enloe replied the City of Reno is looking for a financial commitment from TMWA to participate. This effort would be a part of the conservation program at TMWA, and it would allow us to learn about what other communities are doing to promote water conservation in the commercial building sector.

Vice Chair Hartung stated he would like to see single-family/residential included and address how the region can change planning policies to promote better water usage and improve energy efficiency. Ms. Barker replied this program targets the commercial sector buildings larger than 25,000 square feet which contribute greatly to greenhouse gas emissions. But, they are looking at starting a residential program.

Member Brekhuis supports this program and stated our economy is evolving in the use of existing and new building inventory, but retrofitting the smaller commercial buildings is an issue.

Mark Foree, TMWA General Manager, reported that this project was included in the tentative budget and without Board comments, it was included in the final budget.

Vice Chair Hartung stated it is important to fund these projects, but would like to branch out to incentivize the planning of new industrial and commercial buildings to include passive heating and cooling systems.

Member Smith asked if existing buildings would require to be retrofitted. Ms. Barker replied yes, voluntarily, but we will be meeting with builders and developers to identify the codes and policies that would be most effective in this region. Right now, the goal is to have a benchmarking policy in place which would encourage the participants to benchmark their energy performance.

Member Duerr commented, this is to promote buildings to be proactive to improve energy efficiency which will improve the bottom-line. Ms. Barker replied, yes.

Upon motion by Member Duerr, second by Member Hartung, which motion duly carried by unanimous consent of the members present, the Board approved the Interlocal Agreement between Truckee Meadows Water Authority (TMWA) and City of Reno for the City Energy Project (CEP) – Reno.

8. PRESENTATION ON PROPOSED CONSERVATION, COMMUNICATIONS AND OUTREACH PLAN FOR 2017, DISCUSSION AND POSSIBLE DIRECTION TO STAFF

Andy Gebhardt, TMWA Director of Operations and Water Quality, presented on the 2017 Conservation, Communications and Outreach Plan. The goal is to encourage smart water use and alter the communication style by which TMWA will clarify misconceptions. At the end of the year, staff will present a final report to inform the community what happened during the water year.

Vice Chair Hartung pointed out not only is water usage important but water storage as well, and the need to send the message of how stable the water supply is for the community. Mr. Gebhardt agreed and that is the challenge staff is taking on to change the community perception.

Vice Chair Hartung inquired about the status of the reinjection of wells. Mr. Enloe replied staff is pursuing the expanded recharge program in South Truckee Meadows General Improvement District (STMGID), Mt. Rose-Galena Fan area, and Spanish Springs area and working with the State, but there have been some challenges with the permitting process. He pointed out the greater benefit is conjunctive use; to be able to supply surface water to those areas and turn off the wells to rest them when needed.

Member Brekhuis appreciated the low-key subtle approach to deliver a complex topic to inform the community. Mr. Gebhardt agreed and it is changing the dialogue in a positive way.

Member Duerr agreed it is a more proactive approach to educate the community. Mr. Gebhardt replied yes, that is why the messaging is being changed to “Smart About Water.”

Member Smith said this is a good avenue and pointed out when the City of Sparks rebranded itself, it changed the messaging at the Sparks Marina for a more positive messaging to the community.

No action taken.

9. INFORMATIONAL REPORT ON TMWA RULE 7 AND BANKED WATER RIGHTS INVENTORIES, AND WATER RIGHTS ACQUISITION CONSIDERATIONS AND PROCESSES, INCLUDING CURRENT MARKET PROCESSES FOR FRACTIONATED WATER RIGHTS ACQUISITIONS

Mr. Zimmerman presented TMWA’s current practice of purchasing water rights on the open market and fractionated water rights issue. TMWA’s practice is not to purchase water rights on the open market unless they are significantly below current Rule 7 rates.

Vice Chair Hartung inquired who are the third parties that have banked water rights. Mr. Zimmerman replied mainly developers; water has been banked since Sierra Pacific to serve future projects.

Vice Chair Hartung asked how is the price established under Rule 7. Mr. Zimmerman replied that under Rule 7 the value of TMWA’s Inventory of water rights is calculated daily and include the price of water rights purchased, TMWA administration costs and a carrying charge.

Discussion followed around the various perceptions, circumstances and issues that affect the rate and value of water rights; such as water supply, the Truckee River Operating Agreement (TROA) and developers purchasing water rights in bulk. Mr. Zimmerman further explained the significant groundwater resources sold in 2016 had no return flow or drought factor added to them, and therefore, more sales were from Rule 7. Now there are more third-party dedications and use of water resources banked with TMWA.

Member Brekhus appreciated the report and asked if there is a precedent for state intervention to sweep up all the water rights, since it would be a takings issue. Mr. Zimmerman replied no, that is correct. TMWA maintains its water rights in good standing with the State Engineer’s office, and pay Federal Water Master and Washoe County Water Conservation District fees for maintaining its Truckee River decree water rights.

10. DISCUSSION AND ACTION ON NOMINATION AND ELECTION OF CHAIRMAN AND VICE CHAIRMAN AND REQUEST FOR BOARD ADOPTION OF RESOLUTION NO. 253 APPOINTING A CHAIRMAN AND VICE CHAIRMAN FOR FISCAL YEAR 2018

Member Smith reported that Chair Martini would like to continue as Chairman. Member Smith nominated both Chair Martini and Vice Chair Hartung to continue as Chair and Vice Chair, respectively, for fiscal year 2018.

Upon motion by Member Smith, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved the nomination and election of Geno Martini as Chairman for fiscal year 2018.

Upon motion by Member Smith, second by Members Herman and Duerr, which motion duly carried by unanimous consent of the members present, the Board approved the nomination and election of Vaughn Hartung as Vice Chairman for fiscal year 2018.

11. GENERAL MANAGER'S REPORT

Mr. Foree informed the Board that TMWA's annual summer picnic was on July 15th and they were more than welcome to join; Christian Kropf, TMWA Senior Hydrogeologist, wrote an article on how TMWA manages its water resources through conjunctive use, which was included in the Press Clips; reminded the Board of an attorney-client privilege meeting upon adjournment; and there is a new monthly conservation report for their review included in the report prepared by Laine Christman, TMWA Resource Economist and Conservation Coordinator.

Vice Chair Hartung inquired about the percent of late charges at 13% for bill payment high. Mr. Gebhardt replied it has always been between 10 – 14%.

Mr. Walker corrected his response to SB239; it allows access to water connections of unoccupied units in HOA in case of mold or leak problem. Staff watched this bill since TMWA is on the other side of the meter.

12. PUBLIC COMMENT

There was no public comment.

13. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

Member Brekhus requested a report on the meter retrofit program; maybe a source to the stabilization fund; different elements of the budget in terms of rate increases in outer years; and to have a report on the dam inventory and safety measures.

Vice Chair Hartung agreed and to see if there is a better way to build the dams. Mr. Foree replied staff can bring back a report on dam inventory, rebuilding of the dams and safety measures.

Vice Chair Hartung requested for staff to schedule a presentation by Rick Warner on reclaimed water.

Mr. Foree noted there are no pressing items and recommended there be no meeting in July.

14. ADJOURNMENT

With no further discussion, Vice Chair Hartung adjourned the meeting at 11:21 a.m.

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

Sonia Folsom, Recording Secretary

DRAFT



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: Pat Nielson, Distribution Maintenance & Generation Manager
DATE: July 26, 2017
SUBJECT: Report on TMWA's dam inventory and rebuilding, and safety measures

Recommendation

Information only.

Background

There are many diversion dams/structures on the Truckee River which are used for irrigation, hydroelectric generation and municipal water supply.

Truckee Meadows Water Authority (TMWA) owns and operates five diversion structures on the Truckee River which are used for the diversion of water into canals that then feed to either our hydro-electric facilities and/or our water treatment plants.

These facilities in order of upstream to downstream are:

- The Fleish Hydroelectric Diversion.
- The Verdi Hydroelectric Diversion.
- The Washoe/Highland Diversion.
- The Chalk Bluff/Orr Ditch Diversion.
- The Glendale Diversion.

A description of each diversion is shown at the end of this report.

These structures are all currently operational and in use.

The hydroelectric facilities during a normal water year can produce more than 50,000,000 kilowatt hours (kWh) of renewable electricity with a revenue of up to \$3.5 million dollars annually.

The water treatment plant diversions provide Truckee River water to the intakes of the water treatment plants and in the case of Chalk Bluff, the Washoe/Highland diversion provides a gravity feed supply via six miles of canal, pipelines and box culverts to the treatment plant.

Diversion Dams owned by others (not TMWA)

There are also a number of other large diversion dams/structures on the Truckee River that are not owned/operated by TMWA including:

- Orr Ditch diversion dam
- Steamboat Canal diversion dam
- Last Chance Ditch diversion dam
- Lake Ditch diversion dam
- Pioneer Ditch diversion dam
- Derby Dam (TCID Newlands project)
- Numana Dam (Indian Ditch)
- Marble Bluff Dam (Pyramid Lake Paiute Tribe)

In addition, there are also a dozen or so smaller diversion dams made of rock and rubble, many of which are still active. These include:

- Ambrose Park abandoned diversion dam (South Side Canal)
- Noce/Lagomarsino Ditch diversion dam (active)
- Murphy/Groton Ditch diversion dam (active)
- Hill Ditch diversion dam
- McCarran Ditch diversion dam
- Washburn Ditch diversion dam (active)
- Gregory Ditch diversion dam (active)
- Herman Ditch diversion dam (active)
- Proctor Ditch diversion dam (active)
- Fellnagle Ditch diversion dam
- Olinghouse #1 and #3 diversion dams (active)

Discussion (proposed projects)

The Steamboat Canal and the Verdi Hydroelectric diversion dams are currently being considered for replacement by the U.S. Fish & Wildlife Service (USFWS) to promote fish passage on the Truckee River. These projects have been the catalyst for conversations about boat passage and kayakers have been requesting consideration of removal of diversion dams from the Truckee River for the benefit of recreational users.

In regard to the Verdi diversion dam, TMWA and the USFWS have been engaged for the last two years in discussions on diversion design and functionality and have agreed that a replacement structure would not only provide fish passage but would also be designed to be recreation friendly. Currently all three hydro-electric diversions require boaters to leave the river and port around the structures and then return to the river. The new Verdi dam will be designed to not require boaters to leave the river and would provide a wet center channel down the structure at a gradual slope to accommodate both fish and boat passage. The goal of this design is to provide functionality for TMWA's hydroelectric operations, make available fish passage and provide the recreational users a navigable structure.

Fiscal Impact

Funding is being provided by the USFWS's National Fish Passage Program through its National Aquatic Connectivity Initiative, a grant program that supports fish passage improvement projects that have a national impact.

TMWA will provide a peer review of the design by an independent engineering firm with experience with these types of structures and designs, along with an independent constructability review prior to the project being presented for bid. Since TMWA will own and operate the new facility once complete, we want to be assured that the design meets design requirements for flood events and will function as required for hydroelectric plant operations, as well as fish passage and recreational uses. The costs of these reviews are estimated to be approximately \$200,000.

Description of TMWA's Hydroelectric Dams and Facilities

TMWA's hydroelectric diversions on the Truckee River date back to the early 1900s' and as they are rebuilt we will be proactive in creating both fish and recreation passage elements into the structures. The Glendale Treatment Plant intake diversion was designed to allow fish passage and recreational stakeholders were invited to participate in the design of that facility and had initially been satisfied with the design of the project. As the USFWS proceeds with the design of the Verdi Hydroelectric Diversion replacement structure, their public review process will allow for participation and comments from the public including recreational river users.

Fleish Hydroelectric Diversion Dam

The Fleish Hydroelectric Diversion Dam is utilized to divert approximately 300 to 350 cubic feet per second (cfs) of Truckee River water to the hydroelectric plant downstream through canals, flumes, tunnel, forebay and penstock facilities. After the water passes through the plant's turbine, the water is returned to the river. On average with consistent water available, the Fleish Hydroelectric Facility has a capacity to produce 2500 KW and an annual revenue of approximately \$1.38 million, helping to offset TMWA's electrical costs.

The Fleish Diversion Dam was originally constructed between 1900 and 1905 (when the hydroelectric plant was commissioned). This dam creates a static head of 124 feet between the head gates and the Fleish Turbine. The original dam consisted of rock filled timber cribbing with wood decking. The flood of November 1950 caused severe damage to the diversion dam and the dam was subsequently reconstructed utilizing rock and concrete as construction materials. This same dam exists today.

Since the dam's reconstruction very little expenditures have been needed for the diversion dam's maintenance. Maintenance has consisted of replacing flash boards approximately every two to three years but can be dependent on the severity of the previous winter's highwater events. The costs to replace flash boards is about \$10,000 for labor and materials.

To accommodate recreational users of the river, points of portage have been established. Portages are signed upstream and downstream of the Fleish Diversion Dam and river recreationists are directed to exit the river above the dam and re-enter the river below the dam.

Although there is a fish ladder on the South side of the diversion dam the ladder does not meet today's fish passage standards.

Verdi Hydroelectric Diversion Dam

The Verdi Hydroelectric Diversion Dam is utilized to divert approximately 400cfs of Truckee River Water to the Verdi Hydroelectric plant through canals and penstock. After passing through the turbine, water is returned to the river. The Verdi Hydroelectric Plant has a capacity to produce 2,400 KW and an annual revenue of approximately \$1.27 million, again helping to offset TMWA's electrical operating costs.

The Verdi Diversion Dam was constructed between 1911 & 1912 and is constructed of timber cribbing with boulder and rock fill. Three timbered decks are incorporated into the dam's design creating 96 feet of static head between the head gates at the diversion dam and the downstream turbine.

Maintenance to the diversion structure was completed in 1997 after the New Year's Flood and again in the early Spring of 2015 when the drought conditions dropped the river level low enough to allow maintenance. In both instances work consisted of re-decking the dam and reconstructing the facilities fish ladder. Approximately \$172,000 was spent for the rehabilitation work completed in 2015. During this maintenance period work also included removal of sedimentation deposition behind the flash boards as well as replacement of all flash boards.

A portage sign is posted upstream of the dam directing river recreationists to exit the river and another portage sign is in place downstream of the dam directing river users back to the river.

Washoe Hydroelectric/Highland Canal Diversion Dam

The Washoe/Highland Diversion Dam is utilized to divert approximately 400cfs of water from the Truckee River to the Washoe Hydroelectric Turbines. The Washoe Hydroelectric Plant has a capacity to produce with two 1,200 KW generators annual revenues of approximately \$1.05 million, again helping to offset TMWA's electrical operating costs.

The Washoe/Highland Diversion Dam, originally constructed between 1904 and 1905 and constructed of decked wood cribbing with rock fill, establishes a static head of 88 feet between the head gates and the two Washoe turbines. In 1955 the dam was reconstructed of concrete which remains today.

In addition to providing water to the Washoe Hydroelectric Plant, this same diversion also provides water to TMWA's Chalk Bluff Water Treatment Plant. Up to 95 million gallons per

day (MGD) can be gravity sourced to the water treatment plant thus saving on electrical pumping costs.

TMWA has had very little expenditures on the Washoe/Highland Diversion Dam Facility with the most recent work being the replacement of the dam's flash boards in December of 2016. As river flows allow, periodic inspections have been conducted on the dam's concrete decking but little maintenance has been required. The costs to replace flash boards is about \$10,000.00 for labor and materials.

A portage sign is in place upstream of the diversion structure directing river recreationists to exit the river, portage around the diversion and re-enter the river downstream.

Chalk Bluff/Orr Ditch Diversion Dam

The Chalk Bluff/Orr Ditch Diversion Dam was constructed in 1994 and is utilized to divert Truckee River Water to the Orr Ditch Pump Station Intake Structure. During periods of high demand, heavy winter icing of the Highland Canal or during maintenance on the Highland Canal, this pump station is utilized to pump raw water supply up to the Chalk Bluff Water Treatment Plant.

Portage signs are in place upstream and downstream of the weir structure. Annually during the peak of the river recreation season, temporary fencing is put in place to direct rafters away from the structures decking and intake debris racks. A re-entry point on the river is provided downstream of the diversion dam.

Glendale Diversion Dam

The Glendale Water Supply Improvement Project (GWSIP) was completed in November of 2011 at a cost of \$4.6 million dollars. The facility has the capacity to divert approximately 37.5 MGD of raw water to the Glendale Water Treatment Plant.

The structure is of a rocked weir design that incorporates recreational boat passage as well as fish passage that meets the standards of today. The facility was developed through hydraulic design and modeling with public involvement including involvement of kayaking enthusiasts and other river recreationists.

The riverbed underwent some damage during the highwater events during the winter/spring of 2017. Assessment of the damage will be completed as river flows allow.

A portage sign is installed upstream on the Northeast side of the river at Fisherman's Park directing river recreationists to exit the river. An additional portage project is to be constructed late summer/early fall of 2017 that will include three portage signs on the Southwest side of the river, provide a portage point, paved path along the river, cross walk across Glendale Avenue and paved path to a point on the South side of the Glendale Bridge for re-entry into the river.

Formula for determining generation revenues: KW x 24 x 330 x .07

KW= kilowatt output of the plant

24= hours of daily operation

330= days of the year plant is in operation. (Assuming 35 days off for maintenance, repairs and NV Energy line outages).

.07 = 7 cents per kwh



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: Pat Nielson, Director of Distribution, Maintenance and Generation
 Brent Smith, Field and Meter Service Supervisor
 John Zimmerman, Water Resources Manager
DATE: August 8, 2017
SUBJECT: **Informational report regarding the water meter retrofit fund program**

At the June Board meeting, Member Brekhuis requested an informational report on the status of the water meter retrofit program. The following is a brief discussion regarding the current meter fund balance, projected fund revenue over the next five years, and estimated costs and complications of retrofitting all remaining non-metered services.

Water Meter Retrofit Fee and Fund Balance

Under TMWA Rule 7(H)(3), applicants for water service (except those relying on domestic well conversion credits issued by the Nevada State Engineer, imported water resources, or groundwater rights for their dedication) must pay \$1,830 per acre-foot of their estimated water demand. In fiscal year 2017, TMWA collected \$370,667 in meter retrofit fund fees and as of June 30, 2017 the fund balance was \$2,425,647.

Estimated Annual Fund Revenue

Based on a very preliminary analysis, staff estimates that by the end of fiscal year 2022, the projected meter fund balance will be between \$4.2M and \$9.7M.¹ This range is based on the amount of surface water staff estimates may be used to satisfy dedication requirements over the next five years (fiscal years 2018-2022). The results of staff's analysis are shown in Tables 1 and 2.

Under the first scenario, surface water dedications remain constant at fiscal year 2017 levels. Under the second scenario, surface water dedications increase by 50% each year from fiscal year 2017 levels. It is somewhat likely that more surface water will be dedicated than projected in scenario 1 because groundwater resources in TMWA's Inventory are nearly exhausted, and thus, most commitments based on Inventory resources will be surface water. Accordingly, scenario 1 serves as a lower bound estimate.

¹ This projection does not account for expenditures under the fund over the next five years.

Table 1			
Scenario 1: 202.6 Acre-Feet of Surface Water Committed Annually			
Fiscal Year	Committed Acre-Feet	Revenue	Ending Balance
2018	202.55	\$ 370,667	\$ 2,796,314
2019	202.55	\$ 370,667	\$ 3,166,981
2020	202.55	\$ 370,667	\$ 3,537,648
2021	202.55	\$ 370,667	\$ 3,908,315
2022	202.55	\$ 370,667	\$ 4,278,982
Table 2			
Scenario 2: 50% Increase in Surface Water Committed Each Year			
Fiscal Year	Committed Acre-Feet	Revenue	Ending Balance
2018	303.90	\$ 556,137	\$ 2,981,784
2019	455.85	\$ 834,206	\$ 3,815,990
2020	683.78	\$ 1,251,308	\$ 5,067,298
2021	1025.66	\$ 1,876,962	\$ 6,944,260
2022	1538.49	\$ 2,815,444	\$ 9,759,704

Estimated Cost to Complete Retrofitting

There are 253 non-metered services and staff estimates the total cost to retrofit them with meters would be approximately \$4,326,000 – \$6,880,000. This cost estimate is based solely on staff's experience with, and knowledge of, these service types and is limited to the estimated amount of labor and materials to complete retrofitting. Staff believes converting these services to meters would be very difficult because of meter size, physical location of piping, and legal complications associated with obtaining any necessary easements and access rights. These complications are difficult to estimate without a more in-depth analysis, but are likely to increase the costs, substantially in some cases. To obtain more accurate cost estimates, staff would need to physically inspect each service property at a minimum.

The remaining services fall under three rate schedules:

Rate Schedule	Total Services	Estimated Cost Range
Multiple-Unit Residential and Irrigation Service	129	\$3,250,000 – \$4,000,000
Multiple-Unit Residential Flat Rate Service	14	\$300,000 – \$400,000
Small Unit Flat Rate Service	110 ²	\$500,000 – \$2,480,000

² As of June 2017, there were 396 customers billed under these SUFR party services.

The Multiple-Unit Residential and Irrigation services include apartment complexes and mobile home parks. These services are connected to TMWA's water system by single or multiple feeds and some have multiple owners. Most of these services use relatively large diameter pipe that likely would require construction of a vault with backflow prevention assemblies. Also, some of these services may require pipe upsizing to meet fire flow requirements.

The Multiple-Unit Residential Flat Rate services are all apartment complexes fed by one service line. These services also are likely to require construction of a vault and backflow assemblies and may require modifications to satisfy fire flow requirements.

The Small Unit Flat Rate party services consist of duplexes and fourplexes that are each fed by a single service line.³ Each housing unit is usually under separate ownership, but some of the internal plumbing and irrigation waterlines are shared among the units. These services will be the most difficult to retrofit. It would require installation of additional service lines and metering facilities to each housing unit from TMWA's main waterlines. These additional service lines may need to be installed through adjoining property owner's land, and thus, would require coordination with, and easements from, the affected property owners. Lastly, retrofitting each unit with a single service connection would require modifications to each unit's internal shared and non-shared plumbing as well as separating their irrigation systems. These modifications could increase the cost to retrofit each unit by approximately \$5,000, which additional cost is included in the higher cost estimate provided above.

For each service type, any construction that involves the installation of new or modified facilities on a customer's property or within their housing unit would require their consent.

Meter Fund Status

Based on staff's preliminary estimates and using the lower range of values provided above, the fund may receive enough fees for the estimated retrofitting costs of these services between fiscal years 2020 and 2022. Staff continues to retrofit existing services as time allows, however, it may be worthwhile to analyze the benefits of retrofitting the remaining SUFR party services due to their complexity and expense.

³ See attached photographs of several Small Unit Flat Rate services.

Example Duplex – SUFR



Example Fourplexes – SUFR







STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Michael Pagni, General Counsel
Pat Nielson, Distribution, Maintenance and Generation, Director
DATE: August 1, 2017
SUBJECT: **Update and discussion on transfer of Farad hydro facilities from NV Energy under 2001 Asset Purchase Agreement and discussion and possible action on recommendations to staff regarding timing and reconstruction options for Farad dam and hydro facilities**

RECOMMENDATION

TMWA staff seeks direction from the Board on whether to pursue reconstruction of the Farad dam and hydro facilities at this time and general direction on interim operation of the Farad facility following transfer from NV Energy. Given current availability and pricing of hydroelectric resources and anticipated uninsured costs of reconstruction, staff believes there does not appear to be a sufficient return on investment to pursue reconstruction of the Farad dam at this time and recommends other options for the facility be explored.

DISCUSSION

Pursuant to the Asset Purchase Agreement dated January 15, 2001 (the "Asset Purchase Agreement") between TMWA and Sierra Pacific Power Company (now NV Energy), TMWA purchased certain hydroelectric facility assets, which included the Farad hydroelectric facility. Because of damages arising from a 1997 flood, the Farad hydroelectric facility was not operational in 2001 and Sierra Pacific was involved in extensive litigation with the insurance companies over insurance coverage disputes. As a result, the Asset Purchase Agreement provided for a post-closing delivery of the Farad Hydro.

The insurance litigation became prolonged, delaying delivery of the Farad Hydro. On June 18, 2014, TMWA and Sierra entered into a Settlement Agreement and Release in connection with the delayed delivery of the Farad Hydro. Under the Settlement Agreement, Sierra assigned to TMWA 100% of all future insurance proceeds under Farad Insurance Policies and all claims for interest due for delayed payment. This includes any payments under the ACV Coverage, Replacement Coverage, and Destruction and Increased Cost of Construction policies. At that time, the exact amount of insurance proceeds remained subject to litigation between Sierra and the insurance underwriters.

After nearly two decades of litigation, on January 18, 2017 the Court entered an order affirming the award of \$12,216,600 of “Actual Cash Value” Coverage plus interest, and affirmed that Sierra is entitled to “Replacement Cost” Coverage for the actual costs of reconstructing of the Farad Hydro. The Replacement Coverage policies are pay-as-you-go policies, meaning Sierra can seek reimbursement for invoiced construction costs in excess of the ACV Coverage (\$12,216,600) up to policy sublimits (\$62,000,000).

The District Court order provides that Sierra/TMWA may only recover replacement costs from the insurers if it elects Replacement Coverage by April 17, 2017 and completes reconstruction of the Dam within three years of the conclusion of the litigation. Assuming no further post-judgment proceedings on the interest payment occur, that three year deadline will expire on January 18, 2020. It should be noted that this three year deadline applies solely to the ability to seek Replacement Coverage. Nothing prevents TMWA from reconstructing the Farad Hydro at a later date, or evaluating or pursuing other options with respect to the Farad property.

Sierra timely elected Replacement Coverage, and pursuant to the Settlement Agreement requested the insurers assign the rights of payment under the Replacement Coverage to TMWA, which the insurers consented to on July 17, 2017. Pursuant to the Settlement Agreement, Sierra is required to transfer the Farad Hydro to TMWA within 120 days after the insurer’s acceptance and assignment of the policies. With the transfer of the Farad Hydro, Sierra will transfer all permits (including those permits Sierra has been maintaining for the reconstruction) and TMWA will thereafter assume ownership of the real property, including responsibility for operation and reconstruction of the Farad Hydro. Regardless of whether the Farad Hydro is reconstructed, the deteriorated condition of the Farad property will require certain repair and other maintenance expenses.

With the anticipated transfer of the Farad Hydro, staff is seeking direction from the Board on the timing and reconstruction options for Farad dam and hydro facilities. Available options include going to bid and reconstructing the Farad Hydro now, deferring reconstruction to a later date, seeking proposals for the sale or lease of the Farad Hydro assets, and various decommission options. Because of the deadline imposed by the Court, the only option that presents any timing constraint is the option to pursue Replacement Coverage for the reconstruction of the facility. Staff will provide a verbal report on these options at the Board meeting.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: John Enloe and Scott Estes
DATE: August 16, 2017
SUBJECT: **Discussion and possible action, and direction to staff regarding the draft Wholesale Water Service Agreement between TMWA and West Reno Water Company, Inc. and request for Board authorization for General Manager to finalize and execute the agreement**

Recommendation

Authorize the General Manager to finalize and execute the Wholesale Water Service Agreement between TMWA and West Reno Water Company, subject to possible refinements to Article 3. Water Resource Commitments, Article 6. Quantities of Water to Deliver, and other non-substantive revisions.

Summary

West Reno Water Company, Inc. (West Reno) proposes to provide retail water service to certain areas within its anticipated initial PUCN authorized service territory (PUCN application currently in process) in the Boomtown/Verdi area (see attached figure). West Reno will own, maintain, and operate its own distribution system for retail water service including wells, transmission and distribution mains, and storage tanks. West Reno has separate groundwater supplies that it intends to use to serve all or a portion of the proposed development within the anticipated PUCN authorized service territory, but desires to receive wholesale water service from TMWA to serve a portion of its total water demand to allow for conjunctive management of its groundwater resources with surface water.

Upon completion of the Mogul Booster Pump Station upgrade, the West Meadows Subdivision oversizing and the Somerset Road to Riverbelle Mobile Home Park improvements (estimated completion date April 13, 2018), TMWA will have 150 gallons per minute (GPM) of system capacity available to the Verdi area on a first-come, first-served basis. West Reno has initially requested 50 GPM of supply capacity, which would be provided as a year-round, base load supply. The necessary Truckee River water rights required to support this demand is approximately 80 acre feet per year. These water resources could be purchased through TMWA's Rule 7 Inventory or acquired on the open market. The wholesale service would be billed under the Firm Standby Partial Requirements (FSPR) rate schedule, which would generate

a revenue of approximately \$3,400 per month. Required facility fees for the proposed wholesale service amount to \$602,500.

Background

The West Reno Water Company is interested in a wholesale service from TMWA. TMWA has developed a Verdi Area Plan (Area Plan) to meet the projected buildout demands in the Verdi area. Portions of the Area Plan facilities have been, or are currently being, constructed, including a new water main extension to convey water to the West Meadows development within the east Verdi area. The water system currently being extended into the Verdi area will be a temporary extension of the Mogul/Verdi Business Park tank zone, which has 150 GPM of excess supply capacity. Facility requirements that West Reno would be responsible for include:

- A wholesale meter facility located in a vault near the southeast corner of the Riverbelle property.
- Commercial backflow facilities immediately downstream of the TMWA wholesale meter.
- A main extension from the wholesale delivery point to the West Reno system and a booster pump station to deliver TMWA wholesale water to the West Reno storage tanks.

West Reno Water Company's off-site facility requirements for the requested 50 GPM of capacity would be satisfied by payment of both the draft Area 7 Fee (attached) and the Supply-Treatment Facility Charge, as presented below:

Facilities & Costs:

Supply-Treatment Facility Charge	
50 GPM @ \$4,163 per GPM =	\$208,150
Area 7 Fee	
50 GPM @ \$7,887 per GPM =	\$394,350
TOTAL FACILITY COSTS	\$602,500

The remaining Area Plan water facilities and incremental water capacity increases associated with a phased implementation have been identified. However, several major water system improvements are required to deliver the estimated 1,933 GPM buildout demand to the Verdi area. Due to the significant cost of the facilities required to supply the necessary capacity (\$13.85 million), TMWA does not propose to fund the improvements based on the Area Fee model; therefore, new development will be responsible for the construction of all subsequent water system improvements and facility costs. A reimbursement mechanism could be established as a part of a future wholesale nomination or a specific reimbursement agreement process.

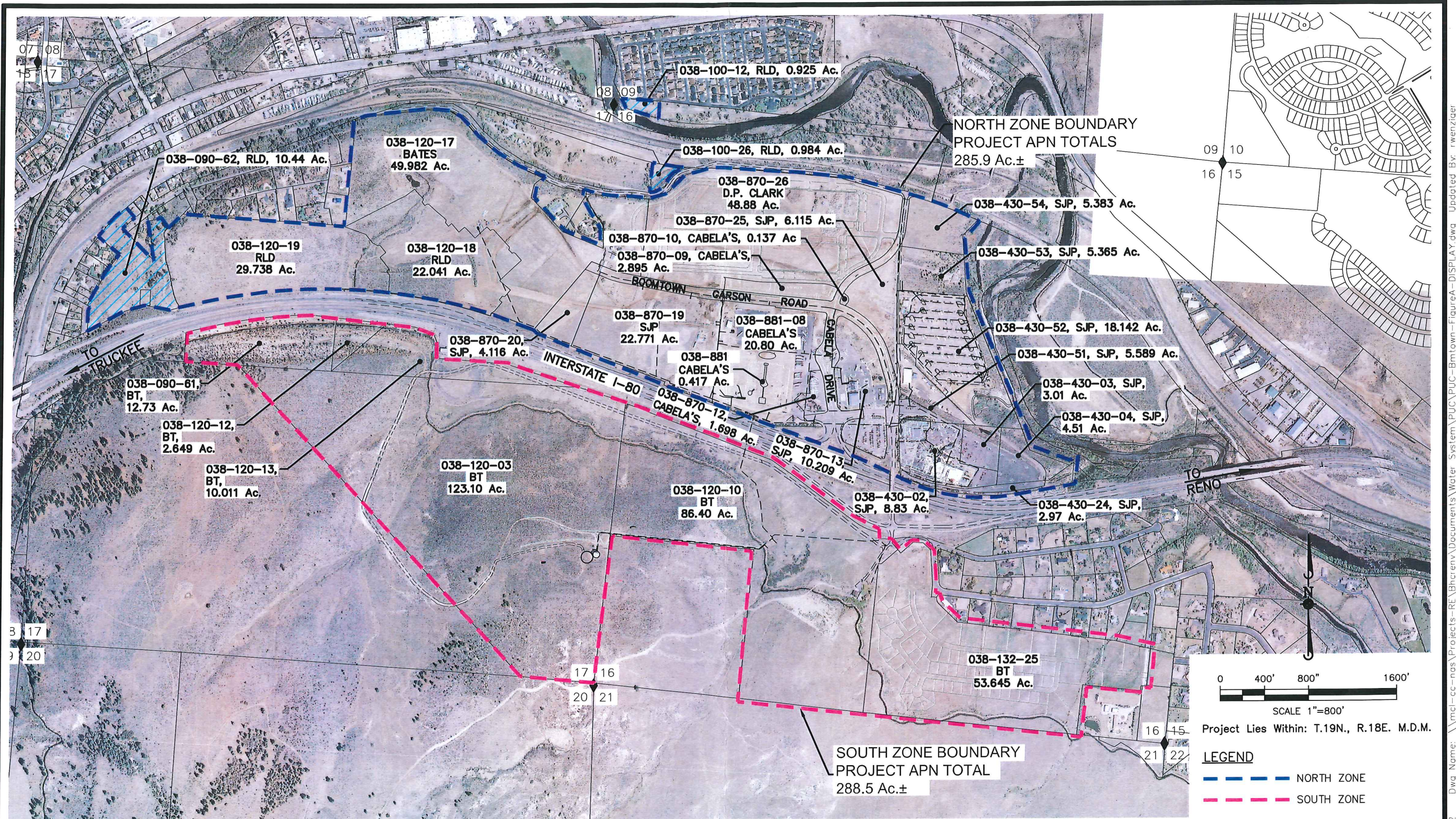
Attachments:

Figure A: West Reno Water Company

Figure 1: Verdi Area Plan, Proposed Facilities

Draft Area 7 Fee calculation

Draft Wholesale Water Service Agreement between TMWA and West Reno Water Company



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DATE	REVISIONS	DRAWN BY

Manhard
CONSULTING LTD.

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 Civil Engineers · Surveyors · Water Resources Engineers · Water & Wastewater Engineers
 Construction Managers · Environmental Scientists · Landscape Architects · Planners

WEST RENO WATER COMPANY			
BOOMTOWN, NEVADA			
FIGURE A			
DRAWN BY: MB	DATE: 04/11/17	SCALE: 1"=800'	CODE: Bhrcnv01

July 21, 2017 - 16:12 Dwg Name: \\mcl-cc-nas\Projects-RE\Bhrcnv\Documents\Water System\PUCC\Bmto\Bmto\FigureA-DISPLAY.dwg Updated By: rwenziger

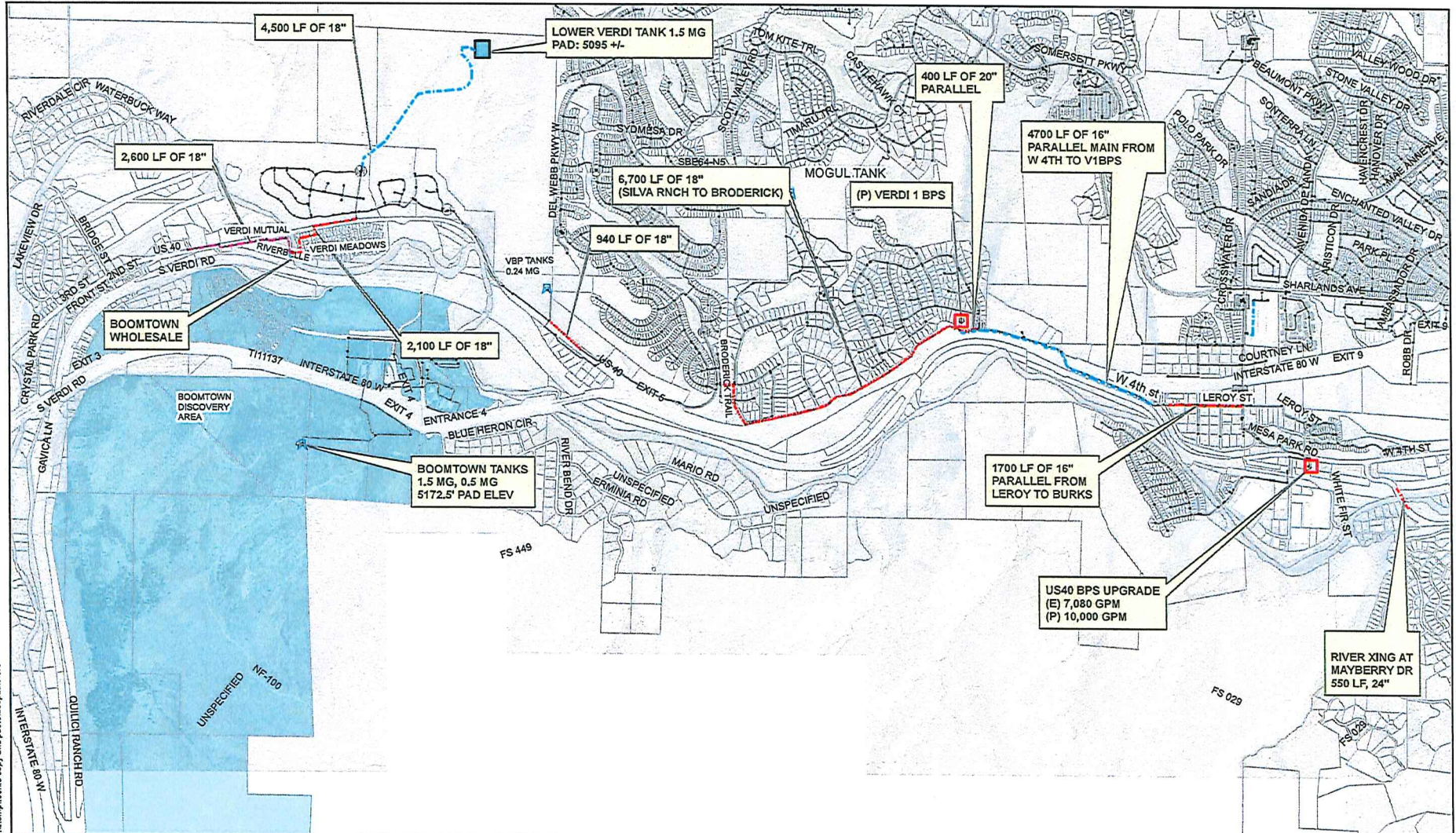


FIGURE 1: VERDI AREA PLAN
PROPOSED FACILITIES



DATE:	JULY 2017
MAP BY:	BL
REQUESTED BY:	NAME
SCALE:	1 inch = 2,000 feet NAD 83 NEVADA STATE PLANE WEST FEET



AREA 7 FEE

August 1, 2017 Update

Actual Costs to Date: **\$ 2,140,557**

<u>Project</u>	<u>FY</u>	<u>Total Cost</u>	<u>Exist. Cust.</u>	<u>New Growth</u>	<u>Cost to Growth</u>	<u>Comments</u>
Sierra Carryover (PUCN)	2001	\$ 433,000	0.00	1.00	\$ 433,000	actual cost
Mayberry 24" Parallel Main O/S	2004	\$ 330,000	0.00	1.00	\$ 330,000	actual cost
US 40 to MA#1 20" Main O/S	2006	\$ 128,655	0.00	1.00	\$ 128,655	actual cost
Verdi, US 40, W.Reno TWs	2006	\$ 427,327	0.00	1.00	\$ 427,327	actual cost
Boomtown Well Evaluations	2007	\$ 123,645	0.00	1.00	\$ 123,645	actual cost
Previous Oversizing ⁽¹⁾	2008	\$ 697,930	0.00	1.00	\$ 697,930	actual cost
West Meadows Oversizing ⁽³⁾	2017	\$ 706,000	0.00	1.00	\$ 706,000	
River Casing Reimbursement	2017	\$ 98,842	0.00	1.00	\$ 98,842	
Summerset Rd to Riverbelle MHP	2017	\$ 1,156,000	0.00	1.00	\$ 1,156,000	
Mogul BPS Capacity Upgrade	2017	\$ 600,000	0.00	1.00	\$ 600,000	
US 40 PS Expansion	20xx	\$ 350,000	0.00	1.00	\$ 350,000	
24" Mayberry River Xing	20xx	\$ 550,000	0.00	1.00	\$ 550,000	
16" & 20" Mogul Parallel Mains	20xx	\$ 2,152,000	0.00	1.00	\$ 2,152,000	
Verdi #1 PS	20xx	\$ 1,500,000	0.00	1.00	\$ 1,500,000	
18" US 40-Verdi T-Main ⁽²⁾	20xx	\$ 2,750,000	0.00	1.00	\$ 2,750,000	
Lower Verdi Tank Fdr Main	20xx	\$ 1,267,000	0.00	1.00	\$ 1,267,000	accts for W.Mdws O/S
1.5 MG Lower Verdi Tank	20xx	\$ 1,500,000	0.00	1.00	\$ 1,500,000	
Verdi #2 PS	20xx	\$ 1,000,000	0.00	0.00	\$	- West Reno Water Co.
Boomtown #2 Tank Fdr Main	20xx	\$ 1,711,000	0.00	0.00	\$	- West Reno Water Co.
1.5 MG Boomtown #2 Tank	20xx	\$ 1,500,000	0.00	0.00	\$	- West Reno Water Co.
Highland Gravity Mains	20xx	\$ 3,389,600	0.00	0.14	\$ 474,544	

Totals: **\$15,244,943**
Area 7 Fees Collected: **\$ -**
Balance Remaining: **\$15,244,943**

Max Day Demands:

Growth	1,933 gpm	Areas 1-4 Only Less Boomtown
Area 7 Sales	0	Well Capacity (2833-900)
Net Remaining GPM	1,933 gpm	

AREA 7 FEE = $\frac{\$15,244,943}{1933 \text{ GPM}}$ = \$7887 /GPM

Notes:

- The following partial improvements were completed in FY08-09:
 - FY08/09 Project 04-120 Canyon Pines Parallel 18" - \$448,874 for 3700 LF
 - FY08/09 Project 04-124 LeRoy to Mogul Parallel Main - \$189,051 for 370 LF of 18" on siphon slope
 - FY08/09 Project 04-143 Mayberry River Xing - \$60,005 stubs w/GV's for future xing prior to paving project
- Previously installed improvements include 1115 LF of 18" on US 40, plus a river crossing casing.
- W. Mdws. Subd. O/S: \$156K off-site 18"; \$280K on-site 8"; \$270K on-site tank feeder

Water Service Agreement for Wholesale Water Service for
West Reno Water Company Retail Area

August 2017

THIS AGREEMENT, entered into this ____ day of _____, 2017, by and between TRUCKEE MEADOWS WATER AUTHORITY, a Joint Powers Authority created pursuant to NRS 277 (Authority) and the WEST RENO WATER COMPANY, an investor owned water company and public utility (West Reno) that will be regulated by the Public Utilities Commission of Nevada (PUCN). Authority and West Reno may be referred to herein individually as a Party or collectively as the Parties.

RECITALS:

WHEREAS, Authority is engaged in the distribution, sale and delivery of water service to residents of Reno and Sparks, Nevada, and areas of unincorporated Washoe County;

WHEREAS, West Reno provides or proposes to provide retail water service to certain areas within its PUCN authorized service territory in Reno, Nevada, more particularly described in Exhibit A attached hereto and incorporated herein (West Reno Service Area);

WHEREAS, West Reno will own, maintain, and operate its own distribution system for delivery of water within the West Reno Service Area, consisting of wells, transmission and distribution mains, and storage tanks (West Reno System);

WHEREAS, West Reno represents that it has or will have separate water supplies capable of serving all or a portion of the current projected build out demand within the West Reno Service Area, but West Reno desires to receive wholesale water service from Authority to serve a portion of its total water demand for within the West Reno Service Area;

WHEREAS, Authority possesses 150 gallons per minute [**Note to draft: 150 gallons per minute is available as of August 7, 2017, on a first-come, first-served basis. This available system capacity may be adjusted as of the effective date of this agreement**] of available system capacity and is able to provide water system facilities and supply sufficient to provide the wholesale water service under this Agreement, all of which is subject to completion [**Note to draft: estimated completion date April 13, 2018**] of the Mogul Booster Pump Station upgrade, the West Meadows Subdivision oversizing and the Summerset Road to Riverbelle Mobile Home Park improvements.

NOW THEREFORE, in consideration of the mutual covenants and agreements herein contained, Authority and West Reno do covenant and agree as follows:

ARTICLE 1

AGREEMENT TO SUPPLY WATER

Subject to the following terms, conditions and limitations, Authority shall sell and deliver to West Reno, and West Reno shall purchase and receive from Authority, wholesale water service as described below to supply a portion of the water requirements for customers within the West Reno Service Area. It is understood and agreed that West Reno shall purchase treated water from Authority pursuant to this Agreement and shall use such water solely for the purposes of serving customers within the West Reno Service Area.

ARTICLE 2

TERM OF AGREEMENT

This Agreement shall become effective upon execution and shall remain in effect for an initial period ending December 31, 2022. This Agreement may be renewed for successive five-year periods upon mutual agreement of the Parties, subject to renegotiation of terms acceptable to the Parties. Provided that a notice of cancellation has not been timely delivered pursuant to Article 13, at least twelve months prior to the expiration date of the initial period or any subsequent five-year period a Party wishing to modify the terms of this Agreement for the successive term shall deliver written notice of such proposed modifications to the other Party, and the Parties shall negotiate in good faith regarding the proposed modifications and to review and adjust terms as necessary to meet current operating conditions. If the Parties are unable to reach agreement as to such modified terms before the expiration of the initial or renewal term, as applicable, then this Agreement shall terminate.

ARTICLE 3

WATER RESOURCE COMMITMENTS

3.1 Dedication of Water Rights. West Reno shall dedicate to Authority sufficient Truckee River water rights or Basin 87 groundwater rights (Water Rights) acceptable to Authority in its discretion and of sufficient quality and quantity to meet the levels of wholesale service requested from Authority hereunder. To be acceptable for dedication, all Water Rights must satisfy Authority requirements for dedication under Rule 7, be in permit form (not certificated) issued by the Nevada Division of Water Resources (NDWR) and the points of diversion, manner of use, and place of use must be the same as other Authority water rights supplied by Authority for municipal service. West Reno will bear all costs associated with the transfer of all Water Rights

to Authority, and all costs associated with the filing, processing and approval of any reports of conveyance or applications to change the point of diversion, manner of use and/or place of use (Applications) required from the NDWR. All Applications filed with NDWR will clearly designate Authority as the sole wholesale supplier to West Reno for the specific purpose to divert, treat, process and deliver the water required for wholesale service hereunder. Title to all Water Rights required and dedicated for wholesale water service hereunder must be held by Authority. Authority is not required to accept Water Rights to support service under this Agreement, except in conformance with its Rule 7. West Reno may purchase water resources from Authority's Rule 7 Inventory to meet its wholesale water service demand hereunder, provided, however, Authority has adequate water resources to support such demand and West Reno complies with all other Rule 7 requirements.

3.2 Quantity of Water. The quantity of water rights required for wholesale service hereunder and procedures for dedication shall be determined by Authority's rules and regulations. Authority shall not be obligated to provide wholesale water service to West Reno at quantities that exceed the Water Rights dedicated to Authority by West Reno. Concurrently with the execution of this Agreement, West Reno shall dedicate and convey to Authority Water Rights in the amount set forth in Exhibit B. Should the level of wholesale water service required by West Reno (as determined by West Reno or Authority) expand beyond the amount set forth in Exhibit B, then additional Water Rights to support such expanded wholesale water service must be dedicated prior to providing the expanded service and Exhibit B will be amended to reflect changes in the level of wholesale water service.

In addition to dedicating sufficient Water Rights to meet the demand for wholesale service under this Agreement, under the Truckee River Operating Agreement (TROA) and Authority's Rules, West Reno must dedicate 11% more water resources than demand (See, TROA Section 4.B.2(b) and Rule 7(E)(2)), and pay to Authority all applicable fees in accordance with Authority's Rules in effect at the time of dedication.

3.3 Conservation Measures. To promote efficient use of water resources to be supplied pursuant to this Agreement, West Reno agrees to adopt and enforce conservation programs consistent with other conservation programs implemented by Authority.

3.4 Administration. All dedicated Water Rights shall be administered and governed by the terms and conditions of this Agreement and Authority's Rules and policies. Except as provided

below for voluntary reductions, if West Reno takes any action that impairs the availability of any dedicated Water Rights, then Authority may reduce water service in proportion to the affected Water Rights. If West Reno desires to reduce the quantity of water delivered from Authority under this Agreement, West Reno shall provide written notice to Authority no less than ninety (90) days prior to implementing the proposed reduction. To the extent such reduction is allowed pursuant to the terms of this Agreement, Authority shall re-convey the affected Water Rights to West Reno.

ARTICLE 4

POINTS OF CONNECTION

West Reno and Authority agree that the Point of Connection for transferring water from Authority to West Reno or West Reno to Authority shall be the meter intertie facilities identified in Exhibit A as the West Reno Wholesale Meter Point; a planned two-way intertie which can be used by West Reno to receive its wholesale water supply from Authority, and by Authority to receive emergency supplies consistent with Article 9.

West Reno and Authority agree that the point of delivery hereunder is located adjacent to the West Reno Service Area as noted in Exhibit A hereto and shall be metered by the delivering party at the point of delivery or at such other points of delivery as are mutually agreed upon.

ARTICLE 5

CONDITIONS OF DELIVERY OF WATER

Parties shall deliver water at the Point of Connection meeting all applicable state and Federal drinking water regulations. West Reno acknowledges it is responsible for meeting all water quality standards and requirements for providing service to its customers. West Reno shall indemnify and hold Authority harmless from and against any claims or causes of action arising from any violation or failure of West Reno to meet any water quality standards or requirements for providing water service to its customers so long as Authority provided water that satisfied all applicable state and Federal drinking water regulations for the water delivered to the Point of Connection. Notwithstanding the foregoing, West Reno shall be solely responsible for monitoring and treating, if applicable, any water delivered by West Reno to its customers to ensure such water meets all applicable state and Federal drinking water regulations.

Each Party shall at all times be solely responsible for maintenance and operation of its respective retail distribution system, including, but not limited to, storage, fire flows, peak flows,

minimum pressure requirement, leak repairs, and maintenance of water quality supplied hereunder within their respective water systems.

Authority agrees to supply water up to the maximum rates of flow and at the approximate minimum hydraulic grade line (HGL) elevation identified at the Point of Connection in Exhibit C attached hereto and incorporated herein by reference. The flows and HGL elevations in Exhibit C are approximate capacities available from Authority to West Reno when Authority's system is operating under the noted demand condition. The HGL elevations shown in Exhibit C are approximate and do not account for pressure losses that normally occur through intertie facilities.

West Reno shall be solely responsible for and shall provide all required or necessary daily storage and fire flow capacity in the West Reno System in a quantity to be sufficient to meet the fire suppression needs within the West Reno Service Area.

ARTICLE 6

QUANTITIES OF WATER TO DELIVER

Subject to the terms, conditions and limitations set forth herein, Authority agrees to sell and deliver to West Reno, and West Reno agrees to purchase from Authority, the quantities of treated water up to the rates of delivery as described in this section and subject to the provisions of Article 14 (Curtailment, Interruption and Emergencies) which specifies that in no event shall Authority be obligated to deliver water to West Reno at a higher rate of delivery, or in greater quantities than as otherwise delineated under this Article and as set forth in Exhibit C.

The maximum rate of flow from Authority to West Reno through the West Reno Wholesale Meter shall not exceed 50 gallons per minute (Facility Limit).

ARTICLE 7

FACILITIES RESPONSIBILITIES

Parties agree that West Reno shall be responsible for design and construction of all retail water distribution facilities, including but not limited to pump stations, wells, mains, storage tanks, fire hydrants, treatment facilities and related improvements in the West Reno Service Area and as necessary to provide wholesale water service as described in Exhibit D. From and after the Effective Date of the Agreement, all new water system facilities within the West Reno Service Area will be designed and constructed in accordance with applicable state and Authority standards.

Parties agree that West Reno contributions for construction of Authority facilities are required to meet West Reno demands up to the Facility Limit, and West Reno agrees to contribute

to the cost of such facilities as shown in Exhibit D attached hereto and incorporated herein by reference. The cost of facilities installed by Authority to meet the service requirements requested by the West Reno include without limitation, supply/treatment capacity (e.g., water supply and treatment facilities), water mains, pumping facilities and other related facilities. West Reno shall pay its share of said facilities costs identified in Exhibit D as follows:

- a. West Reno shall pay either i) applicable Area 7 Water System Facility Charges in accordance with Authorities Rules and Rates in effect as of the Effective Date of this Agreement for the entire balance of the Facility Limit as shown in Exhibit D within 60 days of the Effective Date of this Agreement, if the Verdi Main Extension has been constructed; or ii) Authority costs to construct all facilities identified in the Discovery attached hereto as Exhibit E necessary to deliver water to the Point of Connection.
- b. West Reno shall pay applicable Supply-Treatment Facility Charges in accordance with Authorities Rules and Rates in effect as of the Effective Date of this Agreement for the entire balance of the Facility Limit as shown in Exhibit D within 60 days of the Effective Date of this Agreement.

Subject to agreement of the Parties to add any new intertie points of connection, Authority and West Reno agree that the actual cost of intertie meter facilities and associated facilities necessary to provide delivery of water to any new points of delivery agreed upon by the Parties will be paid by the Party requesting the new point of delivery, except for any costs associated with modifying the intertie to benefit the non-requesting Party. Such intertie meter facilities and associated facilities may include without limitation all necessary engineering, easements, permits, meter station facilities, inclusive of the meter and telemetry equipment necessary for providing remote, daily or instantaneous meter readings, as well as any other equipment required for service hereunder such as flow control devices, piping, treatment capacity (e.g., water treatment facilities), water mains, pumping facilities and other related equipment. The Parties acknowledge and agree that each party owns the respective billing meter facilities and all facilities upstream of the billing meter at each intertie, and each party is responsible to operate and maintain its facilities. Each Party reserves the right to request supporting documentation for all construction related costs for intertie meter facilities constructed by the other Party.

For purposes of meeting the service levels contemplated in this Agreement, the delivery capacity for the Facility Limit purchased by the West Reno shall be for the sole benefit of the West

Reno or its successors and assigns for service within the West Reno Service Area only; and in addition, is applicable only for the specific quantities delivered to the Points of Connection(s) and used in the West Reno Service Area. Notwithstanding the termination of this Agreement, Authority agrees and acknowledges that West Reno, its successors and assigns, shall have the permanent right to retain, reserve and hold or assign all of its rights, or a portion thereof, in the delivery capacity for the Facility Limit purchased and to delegate its duties and obligations under this Agreement with the prior written consent of Authority, which may be withheld in Authority's sole discretion. Such right to retain, reserve, hold or assign shall survive in perpetuity the termination of this Agreement and any extensions thereto. West Reno acknowledges and agrees that any assignment of rights and delegation of duties under this Agreement shall be in writing and shall state that the assignee agrees and covenants to perform and abide by all terms and conditions of this Agreement. Authority shall be provided with an executed copy of such agreement assigning and delegating West Reno's rights and duties to assignee.

West Reno acknowledges that if its demands exceed the Facility Limit, except as provided under Article 14 of this Agreement, the Authority shall require the installation, at West Reno's cost, of facilities to restrict flow into West Reno's system to the Facility Limit until such time that Authority constructs new facilities sufficient to meet the new actual demand and West Reno contributes to the cost of the new facilities. Authority may take any steps in its discretion to install, at West Reno's cost, facilities to control flow into West Reno's system at any time to protect the integrity of Authority's system. West Reno shall exercise reasonable care and diligence to protect the integrity of the Authority's water system.

ARTICLE 8

RATES

West Reno agrees to pay Authority for water service rendered hereunder pursuant to the Firm Standby Partial Requirements (FSPR) rate schedule as may be amended and adjusted from time to time by action of Authority's Board, including the Regional Water Management Fee and any Right of Way tolls imposed by the City of Reno or Washoe County.

ARTICLE 9

CURTAILMENT, INTERRUPTION & EMERGENCIES

This Agreement does not obligate Authority to provide wholesale water service to West Reno at greater rates of delivery, or in greater (daily or annual) quantities, or under conditions

other than as delineated in Articles 5 and Article 6. Service in excess of the Facility Limit may be subject to curtailment or total interruption by Authority at its sole discretion. Except as otherwise provided for below in this Article, Authority, in its sole discretion, may provide water to West Reno in excess of the quantity commitments established in this Agreement; but such service shall only be provided on an interruptible basis.

The parties agree that Authority is not obligated to provide the firm service requirements under this Agreement should West Reno fail to provide sufficient water resources to Authority under Article 3. If sufficient water resources have not been supplied to Authority to support the level of firm service it is to provide under this Agreement, all such service beyond the available water resources will not be provided until sufficient water resources are properly provided to Authority, unless exception is made by Authority under the extreme circumstances of an “emergency” situation on West Reno’s system. As used in this Agreement, “emergency” means a disruption of normal supply to or a disruption of normal operation of a Party’s systems caused by a condition that is or is likely to be beyond the control of a Party.

Quantity limitations on water deliveries may be waived by Authority during periods of emergency. Authority shall make best efforts to deliver water in excess of the firm quantity levels provided for in this Agreement to meet the emergency situation that exists on West Reno's system. However, Authority may have to balance West Reno's emergency requirements against the paramount need to adequately protect the integrity of service to its other water customers. At the onset of such emergency on West Reno System, West Reno must notify Authority of the emergency situation that requires (or may require) it to deliver water in excess of the firm quantities of water otherwise required under this Agreement. West Reno shall make such notification to Authority with reasonable speed, verbally or by telephone, upon becoming aware of the emergency followed by notification in writing within five business days of the verbal communication. This notification shall specify the nature of the emergency and the time it began, the estimated quantity of water to be delivered in excess of the quantities required under the Agreement, and the estimated period of time the emergency is expected to last. Upon resolution of the emergency situation, West Reno shall similarly notify Authority verbally or by telephone followed by notification in writing within five business days of the verbal communication. If West Reno does not provide the required written notification, the interpretation of the verbal communication will be at the sole discretion of Authority.

The Parties also agree that Authority reserves the right, upon notification to West Reno, to reduce, curtail or suspend deliveries under the terms of this Agreement should an emergency arise on Authority's treatment and delivery system impeding or preventing Authority from providing the wholesale service to West Reno. It shall be in Authority's sole judgment if such curtailment or interruption is necessary, and Authority shall not be liable in damages for or on account of any curtailment or interruptions of delivery. Whenever curtailment or interruption of water delivered hereunder is required in Authority's judgment, Authority shall issue a verbal or telephone curtailment notice to West Reno with reasonable speed followed by notification in writing within five business days of the verbal communication. Such notification by Authority shall specify the nature of the emergency and when it began, the anticipated impact on water deliveries to West Reno, and the estimate of the duration of the emergency. Authority shall resume full deliveries of water under the terms of this Agreement as quickly as possible after the emergency has been resolved. Authority shall notify West Reno verbally or by telephone the time at which restoration of service is to be made. It is the intent of Authority that service to West Reno shall not be reduced to any greater or lesser extent than other customers of Authority.

If an emergency situation occurs on Authority's system, then West Reno agrees to supply Authority, to the extent reasonably possible, with short-term emergency water supplies until such time as the emergency can be resolved. Compensation for water delivered, supplied or exchanged by the Parties during an emergency situation will be reconciled annually based on the current FSPR commodity rate.

ARTICLE 10
FORCE MAJEURE

If either Party is rendered unable, wholly, or in part, by force majeure to carry out its obligations under this Agreement other than to make payments due hereunder, it is agreed that on such Party's giving notice and full particulars of such force majeure in writing or by facsimile to the other Party as soon as possible after the occurrence of the cause relied upon, then the obligations of the Party giving such notice, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused but for no longer period, and such cause shall as far as possible be remedied with all reasonable dispatch. The term "force majeure" as employed herein shall mean acts of God, strikes or other industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes,

fires, storms, floods, washouts, droughts, arrest and restraints of government and peoples, court orders, civil disturbances, explosions, breakdown of machinery or equipment and any other causes, whether of the kind herein enumerated or otherwise, not within the reasonable control of the Party claiming suspension and which by the exercise of due diligence such Party is unable to prevent or overcome, including any limitations or prohibitions on water supply resulting from environmental control laws or other laws or governmental regulations; such term likewise includes (a) in those instances where either Party herein is required to obtain servitudes, rights-of-way grants, permits or licenses to enable such party to fulfill its obligations hereunder, the inability of such Party to acquire, or the delays on the part of such Party in acquiring and after the exercise of reasonable diligence, such servitudes, rights of way grants, permits or licenses, and (b) in those instances where either Party hereto is required to furnish materials and supplies for the purpose of construction or maintaining facilities or is required to secure permits or permission from any governmental agency to enable such Party to fulfill its obligation hereunder, the inability of such Party in acquiring, and after the exercise of reasonable diligence, such materials and supplies, permits and permissions. It is understood and agreed that the settlement of strikes shall be entirely within the discretion of the Party having the difficulty, and that the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes by acceding to the demands of the opposing Party or Parties when such course is inadvisable in the discretion of the Party having the difficulty.

ARTICLE 11

INDEMNITY

West Reno agrees to defend, indemnify and hold harmless Authority and any of its officers, agents, or employees against all liability, demands, claims, suits, losses, damages, and causes of action in the performance of the covenants hereof and in the performance of the acts, matters, or things otherwise required or contemplated by this Agreement, or in any other claim or suit arising out of this Agreement, including all litigation expenses and attorney's fees arising out of such actions, claims, or suits caused by or arising from County's negligent acts, omissions or willful misconduct under this Agreement.

To the extent allowed by law but subject at all times to the limits set forth in Chapter 41 of the NRS, Authority agrees to defend, indemnify and hold harmless West Reno and any of its officers, agents, or employees against all liability, demands, claims, suits, losses, damages, and

causes of action in the performance of the covenants hereof and in the performance of the acts, matters, or things otherwise required or contemplated by this Agreement, or in any other claim or suit arising out of this Agreement, including all litigation expenses and attorney's fees arising out of such actions, claims, or suits caused by or arising from Authority's negligent acts, omissions or willful misconduct under this Agreement.

ARTICLE 12

NOTICES

All notices and communications, except those specified in the paragraph below, shall be in writing and sent prepaid mail to the addresses stated below, or at such other addresses as may hereafter be designated in writing:

Authority: General Manager
Truckee Meadows Water Authority
P.O. Box 30013
Reno, Nevada 89520

With a copy to: [insert appropriate TMWA emergency contact cell phone and email]

West Reno: West Reno Water Company
Rob Medeiros
P.O. Box 1070
Verdi, NV. 89439
775-345-8710

With a copy to: [insert appropriate Reno Water emergency contact cell phone and email]

Notices with respect to curtailment or restoration of water service, or with respect to force majeure, shall be sufficient if given by Authority in writing (including email) or verbally in person or by telephone to the person or persons designated from time to time by West Reno as authorized to receive such notices. Notices given orally shall be followed up in writing within five (5) days.

ARTICLE 13

TERMINATION OF AGREEMENT

This Agreement may be terminated as follows:

1. Mutual written consent of the Parties;
2. By West Reno, effective on the expiration date of the then current term, provided that

advance written notice is given to the Authority at least one year prior to said termination date.

3. By Authority if West Reno is in default. Default means West Reno's failure to pay any amounts due and owing to Authority when such amounts are delinquent for a period of 30 days or more, and West Reno then fails to cure within 15 days after Authority has provided written notice of such delinquency. If Authority terminates this Agreement due to West Reno's Default, it may continue to provide water service to West Reno's retail customers until West Reno secures an alternative water source, provided that Authority receives adequate financial protection. West Reno agrees to cooperate in affording Authority such protection, including allowing Authority to collect revenues directly from West Reno's retail customers. Any service provided by Authority to West Reno following the cancellation or termination of this Agreement shall be subject to an administrative surcharge of 10% of West Reno's receipts.

ARTICLE 14

DISPUTE RESOLUTION

Any dispute arising under this Agreement may be resolved by arbitration at the election of either Party. If a Party wishes to use arbitration to resolve a dispute under this Agreement, it must notify the other Party in writing. Arbitration shall be conducted pursuant to the Nevada Uniform Arbitration Act of 2000, NRS 38.206 through 38.248 except that arbitration shall be conducted by a panel to be selected as follows:

No later than 45 days following a Party's notice to use arbitration, the Parties must each select an arbitrator that is qualified by training and experience in the subject matter of the dispute and meeting the criteria as set forth in NRS 38.226 and NRS 38.227 respectively. The two arbitrators must then select a third arbitrator, also an experienced professional qualified by training and experience in the subject matter of the dispute and meeting the criteria of NRS 38.226 and NRS 38.227.

If the dispute is regarding the terms of a renewal of this Agreement and the arbitration of such dispute has not been completed by the expiration of the then current Agreement period, the Parties agree to continue to be bound by the terms of the Agreement during the pendency of the arbitration, provided that any terms determined by the arbitrators shall apply retroactively to the beginning of the renewal period. The award of arbitration may include termination of this Agreement.

ARTICLE 15
MISCELLANEOUS

a. This Agreement shall be binding upon and inure to the benefit of the Parties, and their respective heirs, personal representatives, successors and assigns. This Agreement may not be assigned by West Reno except with the advance written consent of the Authority, which consent may be withheld in Authority's sole discretion.

b. This Agreement is being executed and delivered in Washoe County, Nevada and the laws of Nevada shall govern the validity, construction, enforcement, and interpretation of this Agreement. Venue for any legal action arising out of this Agreement shall be in Washoe County, Nevada.

c. This Agreement may be amended or supplemented only by an instrument in writing executed by the party against whom enforcement is sought. No oral statements or representations made before or after the execution of this Agreement regarding the subject matter of this Agreement are binding on a party, nor may any such oral statements or representations be relied on by a party.

d. If any provision of this Agreement is held to be illegal, invalid or unenforceable under present or future laws, such provision shall be fully severable. The Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part of the Agreement. The remaining provisions of the Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance from this Agreement.

e. If any action is necessary to enforce the rights of any party hereto, the prevailing party in any such action shall be entitled to reasonable costs and attorneys' fees.

f. This Agreement shall be effective upon the date of approval by the Authority's Board (Effective Date).

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement by their duly authorized representatives on the date first above written.

Authority:

TRUCKEE MEADOWS
WATER AUTHORITY

By _____

Its _____

West Reno:

West Reno Water Company

By _____

Its _____

DRAFT

EXHIBIT A: MAP OF WHOLESALE AREA AND INTERTIES

See Figure A.

DRAFT

EXHIBIT B: WATER RIGHTS DEDICATED FOR WHOLESALE SERVICE

TBD: estimated wholesale demand, base load of 50 GPM = 80.7 AF

DRAFT

EXHIBIT C – APPROXIMATE WATER DELIVERY REQUIREMENTS

<u>Demand Scenario</u>	<u>Delivery by Authority</u>		<u>Delivery by West Reno</u>	
	<u>Max Flow (gpm)</u>	<u>Min. Pressure HGL(feet)</u>	<u>Max Flow (gpm)</u>	<u>Min. Pressure HGL(feet)</u>
<u>West Reno METER</u>				
Average Day Demand (ADD)	50	TBD	TBD	TBD
Maximum Day Demand (MDD)	50	TBD	TBD	TBD
Peak Hour Demand (PHD)	50	TBD	TBD	TBD
Fire Flow coincident with the MDD	n/a	n/a	n/a	n/a

DRAFT

EXHIBIT D – FACILITIES & COST RESPONSIBILITIES

Facilities & Costs:

1. Supply-Treatment Facility Charge	
• 50 GPM @ \$4,163 per GPM =	\$208,150
2. Area 7 Fee	
• 50 GPM @ \$7,887 per GPM =	<u>\$394,350</u>
TOTAL FACILITY COSTS	\$602,500

West Reno shall pay either i) applicable Area 7 Water System Facility Charges in accordance with Authorities Rules and Rates in effect as of the Effective Date of this Agreement for the entire balance of the Facility Limit as shown in Exhibit D within 60 days of the Effective Date of this Agreement, if the Verdi Main Extension has been constructed; or ii) Authority costs to construct all facilities identified in the Discovery attached hereto as Exhibit E necessary to deliver water to the Point of Connection.



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: July 26, 2017
SUBJECT: Discussion and possible direction from Board regarding the General Manager's performance evaluation process

Recommendation

The Board consider continuing with the approved GM evaluation form and process (attached) and provide direction regarding same.

Background

In August 2016, the Board agreed upon a formal evaluation process for the General Manager's annual performance review. A questionnaire was sent to all Board members and senior leadership at TMWA via SurveyMonkey, an online survey tool. The results were provided to the Board at the September Board meeting which was very well received. It provided the Board and General Manager with clear direction on future goal setting criteria that was presented at the October 2016 Strategic Planning Session.



GENERAL MANAGER ANNUAL PERFORMANCE EVALUATION

Summary

The General Manager's performance evaluation consists of an annual appraisal by the Board of Directors, as provided for in the General Manager's employment agreement.

The purpose of the evaluation process is to maintain a strong Board/Manager team by ensuring open and productive communication on an annual basis. During this formal review process, there is an opportunity to identify areas of satisfaction and areas for growth or needing change as identified by the Board.

The Executive Team and Department Heads reporting to the General Manager will be invited to participate in this performance review process.

The Human Resources Manager is the facilitator for this process, and will gather input from a confidential survey completed by each of the above-referenced individuals. The data will then be compiled into a comprehensive format and presented at a Board Meeting for the Board's review and discussion.

The attached evaluation form will also be completed by each member of the Board and provided to the Human Resources Manager. A staff report and the summary results will be provided as supporting materials for the public meeting at which the TMWA Board reviews the annual performance of the General Manager.

Rating Criteria:

For each performance criteria, please use the following rating scale:

- E – Exceeds your expectations
- M – Meets your expectations
- AG – Areas for growth
- NA – Not applicable

Interpersonal Skills/Relationships:

- _____ Ability to relate well to others and to make people feel at ease, even in difficult situations.
- _____ Ability to gain the trust and confidence of the public; fosters contact and cooperation among citizens, community organizations and other government agencies.
- _____ Fosters cooperative communication and positive working relationships with the Board.
- _____ Skilled in negotiation techniques in a variety of scenarios – employee, Board, public, interagency, outside entities.
- _____ Demonstrates sensitivity to individuals and groups, as appropriate.
- _____ Is forthright and honest in all relationships.

Comments:

Leadership:

- _____ Supports and manages in accordance with identified TMWA values and Board priorities.
- _____ Uses sound judgment in decision making; seeks out all relevant and necessary data, makes decisions in a timely manner.
- _____ Directs utilization of TMWA resources effectively.
- _____ Crises and/or emergencies are handled in an effective, efficient, and professional manner.
- _____ Stays current on management practices and techniques and seeks to increase his/her value to TMWA.

Comments:

Innovation:

- _____ Participates with Board and Staff in strategic planning.
- _____ Links goals to Board priorities; sets objectives for performance and manages toward those objectives.

_____ Receptive to new ideas, suggestions and approaches to make our community a better place. Exhibits a short-term and long-term forward-thinking approach to the State of TMWA.

_____ Receptive to a changing environment.

Comments:

Communication Skills:

_____ Verbal Communication Skills – Good command of oral expression; expresses ideas clearly and concisely; easily comprehends ideas expressed by others; ability to explain and understand difficult and complex subjects.

_____ Written Communications Skills – Good command of written expression; expresses ideas clearly and concisely; easily comprehends ideas expressed by others; ability to explain and understand difficult and complex subjects through written media.

_____ Presentation Skills – Ability to present effective, quality presentations in public settings appealing to a variety of audiences.

_____ Ability to utilize appropriate media for communication – TV, radio, newspaper, group interaction, individual meetings.

Comments:

Management:

- _____ Knowledgeable, effective and efficient use of authority granted to the General Manager by the Cooperative Agreement, by Board Resolution, and by the TMWA Board and respectful of the delegation of powers described in Board Resolutions.
- _____ Setting the Agenda for the TMWA Board Meetings: presenting issues for consideration by the Board in a timely manner; creating logical sequence for items to be considered.
- _____ Preparation of Materials for Board Meeting: Materials explanatory to the Board, with the pertinent facts and analysis for the Board to make informed decisions; materials available for the general public to review and understand.
- _____ Conduct of TMWA Board Meetings: Initiates responses to issues and concerns that the Board and/or public poses; contributes positively to Board deliberations.
- _____ Ability to delegate authority, granting proper authority at the proper times; sound judgment in the evaluation of when delegation is appropriate.
- _____ Utilizes a positive approach to direct work efforts of staff.
- _____ Encourages and rewards initiative and promotes effective Human Resources programs and values.
- _____ Utilizes effective project management techniques. Completes projects agreed upon with Board within given time frame.
- _____ Promotes cohesive teamwork with the Senior Management Team.

Comments:

General Comments:

In a brief narrative, please describe:

What you are most pleased with in the General Manager's performance?

What areas for growth would you like to see? Please provide specific suggestions on how the General Manager may improve the areas for growth?

THE FOLLOWING FOR GENERAL MANAGER SELF EVALUATION AND BOARD MEMBER EVALUATION ONLY

Accomplishments for FY2017:

Goals for FY2018:



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: August 7, 2017
SUBJECT: General Manager's Report

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

Also, included in your agenda packet are press clippings from June 15, 2017 through August 9, 2017.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
BY: Bill Hauck, Senior Hydrologist
DATE: August 8, 2017
SUBJECT: August 2017 Operations Report

Summary

- The snowmelt runoff season is now over
- Truckee River flows are still slightly above average for this time of the year
- Lake Tahoe came within an inch and a half of completely filling
- All other storage reservoirs on the Truckee River system are at or close to capacity
- Normal Truckee River flows are anticipated for the next 2 years
- Hydro revenue for July 2017 was \$359,227

(A) Water Supply

- **River Flows** - Truckee River flows at the CA/NV state line were approximately 630 cubic feet per second (CFS) this morning. This is slightly higher than the long-term average of 524 CFS. Normal to above average river flows are anticipated for the remainder of the year.
- **Reservoir Storage** - All reservoirs on the Truckee River system are at or near capacity at this time. The elevation of Lake Tahoe is currently 6228.86 feet (0.24' below the legal maximum storage elevation of 6229.10 feet). Current storage values are as follows:

Reservoir	Current Storage (Acre-Feet)	% of Capacity (Percent)
Tahoe	715,100	96%
Boca	40,400	99%
Donner	9,200	97%
Independence	17,500	100%
Prosser	22,500	76%
Stampede	222,500	98%

In addition to Donner and Independence lakes, TMWA has approximately 10,800 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 37,500 acre-feet as of this morning.

- **Outlook** - The big water year of 2017 basically rewound the system in terms of upstream reservoir storage as everything (including Lake Tahoe) is now just about completely full. This dramatic turn-around on the heels of one of the most severe droughts in recorded history makes it especially impressive. Lake Tahoe saw its biggest single elevation rise since the dam was completed in 1913, and Pyramid Lake has risen over ten feet since January. It was one of the biggest water years since records have been kept, and the water supply outlook for the region couldn't be better.

(B) Water Production

Demand - Last week customer demand averaged 125 million gallons per day. For the year-to-date, demand is approximately 99.5% of 2016. As of last week, surface water made up about 80% of our raw water supply, and groundwater the other 20% from production wells located throughout TMWA's service territory.

(C) Hydro Production

Generation - Average Truckee River flow at Farad (CA/NV state line) for the month of July was approximately 954 cubic feet per second (CFS). With steady river flows it was a very solid generation month as all three of TMWA's hydro-electric plants were on-line and experienced limited outages.

Hydro Plant	Days On-Line	Generation (Megawatt hours)	Revenue (Dollars)	Revenue (Dollars/Day)
Fleish	31	1,852	\$132,917	\$4,288
Verdi	31	1,709	\$121,497	\$3,919
Washoe	31	1,458	\$104,813	\$3,381
Totals	93	5,019	\$359,227	\$11,588



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: August 16, 2017
SUBJECT: **June/July Customer Service Report**

The following is a summary of Customer Service activity for June/July 2017.

Ombudsman

We had four calls for June- one was a gentleman looking for a senior discount and three others that were just hang ups, no message.

We had one call for July-a customer was looking for a more substantial leak adjustment because he did not believe he actually had a leak. We sent out a member of our Conservation team and they assisted him in finding a leak. Customer was happy with adjustment after learning of his leak.

Communications

Customer outreach in June/July included:

June

- Necie/Lauren had a TMWA Workshop for Drip System Maintenance, 36 people attended.
- Necie/Lauren had a TMWA Workshop for Easy Sprinkler Maintenance Workshop, 21 people attended.
- Laine Christman attended a Conservation and Truckee River health event, held at McCarran Ranch and 30 people attended.
- Dillon Hansen/Joe Stokes held a Water Treatment workshop at Vaughn Middle School and 60 people attended.
- Mark Foree, John Enloe, Ron Smith and Jenny Brekhus took part in a Truckee River restoration tour put on by The Nature Conservancy that 40 people attended.

July

- Kara Steeland, Lauren Roaldson, Laine Christman & Jackie Boado did a Groundwater Well Model, Water Quality and Truckee River watershed presentation for South Lake Tahoe 4-H Camp and 150 attended.
- Lauren Kunin did a Water Conservation presentation for the girl scouts and 10 girls attended.

Conservation (January 1 – December 31)

- 4,353 Water Watcher Contacts
- 1,026 Water Usage Reviews

Customer Calls – June/July

- 17,975 phone calls handled (8,986-June, 8,989-July)
- Average handling time – 4 minutes, 31 seconds per call
- Average speed of answer – 20 seconds per call

Billing – June/July

- 252,510 bills issued (126,043-June, 126,467-July)
- 200 (<.1%) corrected bills (102-June, 98-July)
- 14,277 customers (11.0%) have signed up for paperless billing to date.

Service Orders –June/July(% is rounded)

- 16,737 service orders taken (8,691-June, 8,046-July)
- 10,237 (61%) move-ins / move-outs (5,448-June, 4,789-July)
- 1,068 (6%) cut-out-for-non-payment and cut-in after receiving payments, including deposits and checks for tamper (588-June, 480-July)
- 917 (5%) zero consumption meter checks (406-June, 511-July)
- 828 (5%) re-read meters (438-June, 390-July)
- 1,339 (8%) new meter sets and meter/register/ERT exchanges and equipment checks (620-June, 719-July)
- 780 (5%) problems / emergencies, including cut-out for customer repairs, dirty water, no water, leaks, pressure complaints, safety issues, installing water meter blankets, etc. (305-June, 475-July)
- 503 (3%) high-bill complaints / audit and water usage review requests. (236-June, 267-July)
- 1,065 (7%) various other service orders (650-June, 415-July)

Remittance – June/July

- 57,549 mailed-in payments (29,118-June, 28,431-July)
- 51,138 electronic payments (26,662-June, 24,476-July)
- 51,211 payments via RapidPay (EFT) (27,011-June, 24,200-July)
- 32,561 one-time bank account payments (16,633-June, 15,928-July)
- 11,710 credit card payments (5,761-June, 5,949-July)
- 6,764 store payments (3,250-june, 3,514-July)
- 4,126 payments via drop box or at front desk (2,259-June, 1,867-July)

Collections –June/July

- 28,597 accounts received a late charge (14,589-June, 14,008-July)
- Mailed 15,916 10-day delinquent notices, 6% of accounts, (8,867-June, 7,049-July)
- Mailed 2,716 48-hour delinquent notices, 11% of accounts (1,072-June, 1,644-July)
- 287 accounts eligible for disconnect (130-June, 157-July)
- 289 accounts actually disconnected (including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection) (127-June, 162-July)
- 0.10% write-off to revenue

Meter Statistics – Fiscal Year

- 0 meter retrofits completed
- 87 meter exchanges completed
- 126 new business meter sets completed
- 122,930 meters currently installed



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager, Water Resources
DATE: 9 August 2017
SUBJECT: **Report Water Resources and Annexation Activity**

RULE 7

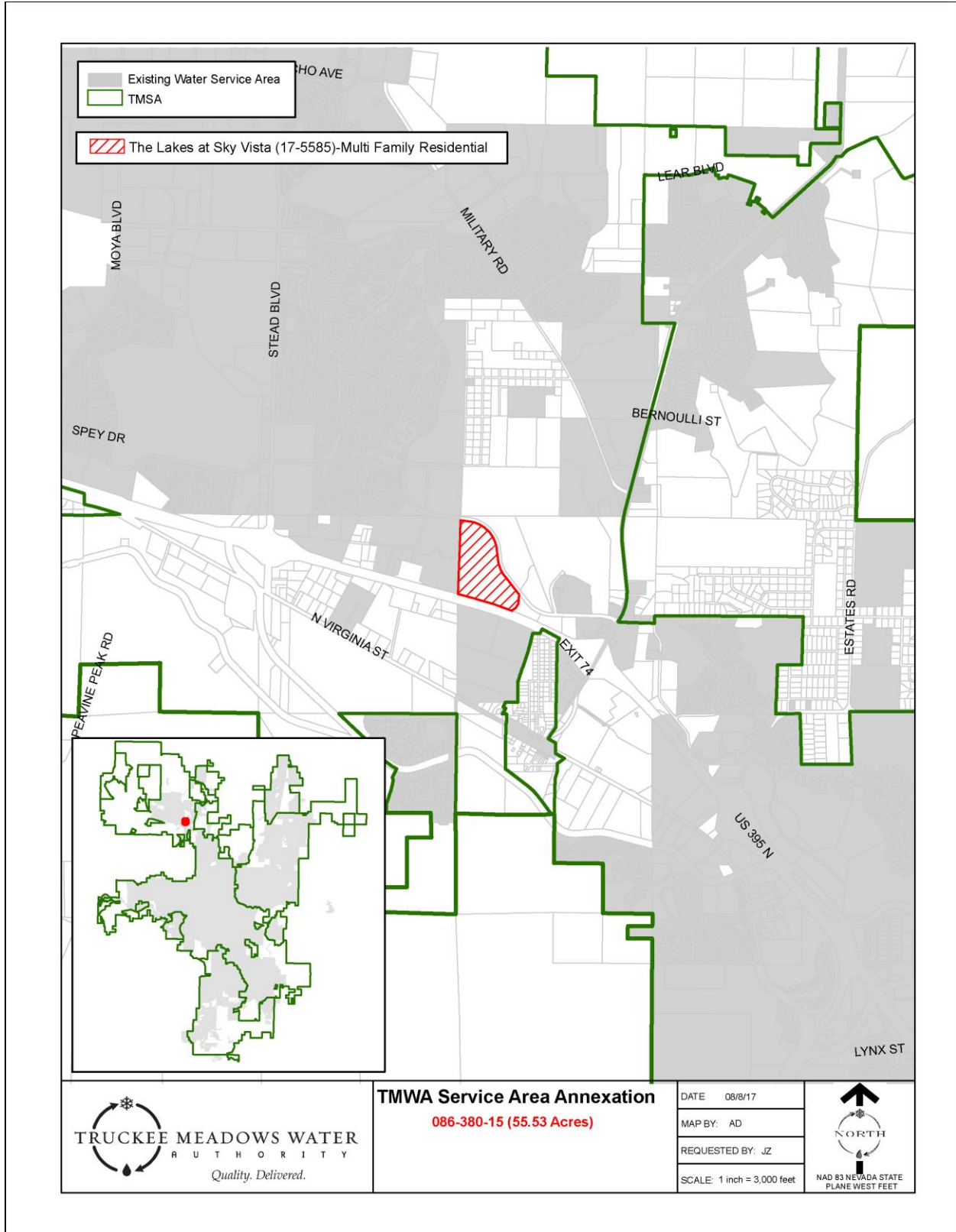
Rule 7 water resource purchases and will-serve commitment sales against purchased water resources through this reporting period:

Beginning Balance	5,936.44 AF
Purchases of water rights	0.00 AF
Refunds	0.00 AF
Sales	- 184.95 AF
Adjustments	- 1.99 AF
Ending Balance	5,749.05 AF

Price per acre foot at report date: \$7,500

WATER SERVICE AREA ANNEXATIONS

One 55.53-acre multi-family development in Lemmon Valley. (See attached map).





TMWA Board Meeting

Wednesday, August 16, 2017

Press Clippings

June 15, 2017 – August 9, 2017



Lawmakers Approve Most of Sandoval's Requests

Posted: Jun 19, 2017 3:18 PM PDT Updated: Jun 19, 2017 4:46 PM PDT

By Paul Nelson

CONNECT



Governor Brian Sandoval laid out his budget proposal during his final State of the State Address, in January. Six months later, almost all of those requests have the legislature's approval, and his signature on them. The theme of his January speech was workforce development, focusing on training Nevadans for tech jobs at places like Tesla, Apple and possibly Google.

"That's why that was a priority for me, to make sure that we have the certifications and the curriculums at our community colleges and our universities, so that Nevadans get all those jobs," Sandoval said.

An additional \$115 million is going into higher education, focusing on enhancing career and technical programs, community colleges, and universities. \$50 million will be used for new student enrollment at the University of Nevada and UNLV. High school students across Nevada will have more opportunities for dual enrollment, taking college courses that also count as high school credit. The state also invests in equipment, used by by tech companies, to train workers.

"There's just a lot of great opportunity and it was important for me that every Nevadan have an opportunity to participate in this new Nevada economy," Sandoval said.

The capital projects budget includes a new DMV and veterans home in northern Nevada, as well as a medical school at UNLV and a new engineering building at UNR.

"There's a very high demand for engineers," Sandoval said. "So this college will be able to produce those engineers that we're going to need."

The state is funding more money to invest in broadband, particularly in rural communities, and for the first time in Nevada's history, there will be a Cyber Defense Division. \$3.5 million will be used to help detect, prevent and respond to a cyber attack.

"We read about it, every day, where there's a been a breach, and now with the type of technology society that we have, we have to make sure that we have every defense and every protection that we can get," Sandoval said.

The governor says the rooftop solar industry is getting a new start, after lawmakers approved a return of net metering. Solar customers will receive a credit of 75-95 percent for excess energy that goes back into the grid. Customers will also get incentives for energy storage.

"We are already, per capita, number one in the country with regard to solar installation, and fourth in the country overall, but it really puts us ahead," Sandoval said.

Last week, Sandoval put his signature on a bill that could reform juvenile justice, and on another that makes it harder to get prescription opioids.

"It'll ensure that there isn't over-prescription of those drugs," Sandoval said. "There's going to be more education for the treatment providers."

State employees will get a raise and \$20 million will go into the Millennium Scholarship fund.

Nevada also added two new state parks, including three historic ranch properties along the East Walker River, opening up 12,000 acres and 28 miles of the Walker River to the public. Approximately \$20 million will be used to upgrade existing state parks with new camping, fishing, cabin rentals and WiFi access.

For the first time in nearly a decade, money will go into the Rainy Day Fund. \$63 million of the \$193 million comes from a 10 percent excise tax on the sales of marijuana.

The governor did not get everything he asked for, including \$60 million for Education Savings Accounts. The legislature did not fund the program, but instead added \$20 million for the Opportunity Scholarship Program, which expands school choice in Nevada.

The fourth and final legislative session of the governor's term is over, and he says Nevada has come a long way in the 6-plus years since he took office.

"We were in the worst situation that we had ever been, economically, in the history of our state," Sandoval said. "Now, we're in a position to lead in the United States."

JUNE 21, 2017
Search for:

TMWA Signs On As City Energy Project Sponsor

[June 21, 2017](#) [Carla O'Day](#)



By Carla O'Day

Water efficiency and conservation will be the focus of TMWA's contributions to the City Energy Project.

The Truckee Meadows Water Authority (TMWA) board approved an agreement Wednesday to support Reno's involvement in the nationwide City Energy Project by providing \$20,000.

TMWA will be a "visionary level" sponsor, making a \$10,000 payment to Reno this year and a second one in 2018. The utility's participation will focus on increasing water efficiency and developing water conservation goals.

"It's just another part of our conservation program," said John Enloe, TMWA director of natural

resources. "Even though it's going to the city of Reno, it'll benefit the whole community. The lessons learned will be valuable."

In November 2016, Reno joined the City Energy Project, a national initiative designed to create healthier cities by improving energy efficiency of buildings.

Reno got a \$560,000 grant from the City Energy Project and the support from TMWA will be part of the \$100,000 required match. Financial support to the city has also come from Renown Health, Barrick Goldstrike Mines, and Gaia Development, among others.

TMWA general manager Mark Foree told the board that funds for this project have already been budgeted.

The project is expected to save up to \$11 million on energy bills through 2030 and is projected to cut about 95,000 metric tons of carbon emissions from buildings annually, which is an equivalent to taking 73,835 cars off the road for one year.

Reno's emissions are 11 metric tons per capita, said Lynne Barker, Reno sustainability manager.

Although that's less than the average of 21 metric tons per capita in cities nationwide, she said there's room for improvement.

For example, San Francisco's population is approximately four times that of Reno but it emits half the emissions of Reno. Barker noted that San Francisco has been working on initiatives for decades and has a highly-used transit system.

Some TMWA board members said it's about time something get done locally and it starts with educating owners of large commercial buildings.

Buildings are the largest source of carbon pollution nationwide, with lots of energy wasted by inefficient systems and operations, according to the City Energy Project.



Councilwoman Naomi Duerr

“Until you know what you’re using, it becomes a self initiative to make those improvements because it’ll help your bottom line,” Reno City Councilwoman Naomi Duerr said. “But if you don’t know, you’re losing an opportunity to reduce cost.”

Barker said a “Better Building Challenge” will be launched soon and will challenge building owners to reduce energy use by 20 percent during the next decade.

This is a joint project of the Natural Resources Defense Council and the Institute for Market Transformation. It works with participating cities to make buildings more efficient and reduce harmful pollution.

Funded by a partnership with Bloomberg Philanthropies, the Doris Duke Charitable Foundation, and The Kresge Foundation, the project launched in January 2014. More than 50 municipalities nationwide have signed on.

Reno plans to work with a commercial green building task force to catalyze investments in energy efficiency through public policies and programs. A comparison of green buildings to conventional commercial buildings found that green buildings use an average of 33 percent less greenhouse gas emissions, 26 percent less energy and 15 percent less water.

City Energy Project: www.cityenergyproject.org

Next steps for the Truckee River Flood Project

- Article

Related article:

[TRFMA seeks additional funding for flood projects. Washoe voters may be asked to fund projects in 2018](#)

Assembly Bill No. 375 was signed into law on June 12, 2017, allowing the Truckee River Flood Management Authority (TRFMA) to continue its mission to plan, engineer and construct flood project improvements that will protect the Truckee Meadows region from a 100-year major flood event. The 100-year plan will help avoid the life-threatening and economic impacts that a major flood event could cause in the future, and is intended to benefit the community as a top regional priority.

The governing body of the flood management authority may, by resolution, create a Flood Control Project Needs Committee (FCPNC) to recommend the imposition of one or more taxes, fees, rates or charges to fund the construction of an approved flood control project. The TRFMA Board of Directors met on June 20, 2017, and passed a resolution creating the FCPNC.

"It will be a community effort to provide the best solution to prevent major flooding for our region that will benefit our citizens," said Jay Aldean, executive director of the TRFMA. "Our goal is to utilize the approved federal funding from the Army Corps of Engineers along with the additional local matching funds needed to construct the flood project."

The committee will be comprised of the following representatives: the executive director of the flood management authority (non-voting); one State Senator whose district includes all or part of the flood management authority; one Assembly person whose district includes all or part of the flood management authority; a representative of the Nevada Association and Realtors; a representative of the Retail Association of Nevada; one individual appointed by the Washoe County Board of County Commissioners; one individual appointed by the mayor of the City of Reno; one individual appointed by the mayor of the City of Sparks; a representative of the AFL-CIO; a member of the general public as appointed by the Governor; a representative of the Regional Development Authority; a representative of the Nevada Resort Association; a representative of the Chamber of Commerce; a representative of the Nevada Homebuilders Association; a representative of the Airport Authority (non-voting); and a representative of the NAIOP Commercial Real Estate Development Association.

Before April 2, 2018, the FCPNC will prepare recommendations regarding taxes, fees, rates or any combination thereof, to provide funding to the flood management authority for an approved flood management project.

The Board of Directors of the TRFMA has the authority to propose a fee to help fund the project, and the FCPNC also may add a proposal for voter consideration for the implementation of taxes or fees to help fund the project. The FCPNC:

-Must include a proposal for the imposition of a fee, rate or charge that the governing body of the flood authority is authorized to propose

-May include a proposal for imposition of one or more taxes or fees

Under AB 375, the taxes that may be considered include: room tax, supplemental government services tax (vehicle privilege tax); real property transfer tax; property tax; or any other tax that the county is authorized to impose under State law. Sales tax may not be considered.

If a fee is recommended, the flood management authority shall impose the fee as recommended. If a tax is recommended, the Board of County Commissioners shall submit a question to the voters at the general election of 2018 asking if any of the proposed taxes should be imposed.

The FCPNC will have 18 months to receive information and evidence concerning the issue of the flooding in areas of the county that are not covered by a flood protection plan, including street storm drains and tributaries. It shall submit a report of its investigation to the Governor, the Director of Legislative Counsel Bureau, the Regional Planning Commission, the Board of County Commissioners, the city councils of Reno and Sparks, and the TRFMA Board of Directors.

The next TRFMA Board of Directors meeting will be held on July 14, 2017 at 8:30 a.m. at the Washoe County Commission Chambers, 1001 E. 9th Street, Reno. For more information on the Truckee River Flood Management Authority, please visit trfma.org.

About the Truckee River Flood Management Authority (TRFMA):

The Truckee River Flood Management Authority (TRFMA) is responsible for the oversight and implementation of the Truckee River Flood Management Project. The agency is a joint powers authority created in 2011 by an Interlocal Cooperative Agreement executed among Washoe County, the City of Reno and the City of Sparks. The agency's primary mission is to plan, design, build, operate and maintain infrastructure to reduce flood damages, safeguard public health and create a more resilient community.

Lake Tahoe water level approaches max limit after heat wave

June 26, 2017 By [Robert Pursell](#)

71 SHARES

Californians and Nevadans who watched Lake Tahoe's water levels recede during the historic drought experienced in the states over the past few years are dealing with a completely different situation now, as the [San Francisco Chronicle](#) reports that a recent heat wave poured a staggering 12 billion gallons of runoff into the lake and brought it within a few inches of its max limit.



Lake Tahoe, pictured above, is one of the deepest lakes in the world and is nearing its legal limit.

Photo: Courtesy of Wilco737/[Flickr](#)

Now, per [SnowBrains](#), water officials expect Lake Tahoe to fill to its limit by mid-July. To put that into perspective, SnowBrains reports that hasn't happened since 1997. During the week-long heat wave last week which saw triple-digit temperatures, Lake Tahoe — which is over 1,600 feet deep at its deepest — saw its water level rise a full four inches.

While that huge influx of water melting off the snowpack from this year's historic amounts of snowfall might seem like a good thing for states — particularly California — that have been gripped by drought, according to the Chronicle, it actually poses a real threat of flooding in the area.

Per the [Sacramento Bee](#), a single dam in Tahoe City, California, regulates Lake Tahoe's water levels and has been releasing billions of gallons into the Truckee River over the past four months to make sure the lake's water levels don't get to a dangerous level and exceed its legal limit.

Truckee River Rescues On Pace To Break Record

Posted: Jun 26, 2017 4:32 PM PDT Updated: Jun 26, 2017 9:01 PM PDT
By Paul Nelson

CONNECT



Content starts in 17 sec



The number of river rescues is piling up for the Reno Fire Department. Firefighters have rescued 38 people since January 1. One year ago, they had been called to 17 of them.

"This is a serious river, this year," Anthony Marvel, Reno Fire Department said. "This is the real deal. So, it is a difficult year. The rescues have been more dangerous for us and more dangerous for the people involved."

RFD is on pace to break the record of 103 river rescues, set in 2011. That is the last time the Sierra snowpack was above average, causing higher flows as it melted. The water is a welcome sight for Sierra Adventures. The company is located in downtown Reno, offering guided rafting trips down the Truckee River. But the guides don't recommend rafting or kayaking without an expert.

"They should really be with a professional, right now, until the water drops," Sarah Taylor, Raft Guide in Training for Sierra Adventures said. "Maybe in two months, it'll be safe enough for people to go without a guide."

Marvel says the high conditions will probably last at least through July. He says rescues happen when people either underestimate the river or overestimate their abilities. Four people have already died in the river between Verdi and Mustang.

"The people that are dying are the people who are treating this like the normal Truckee River, going into the river with bathing suits, flip flops, a little inflatable raft."

The river is tempting for some people who are looking to escape the summer heat, despite the dangerous conditions.

"I will be jumping in it but I probably won't get too close to the current," Braden Waters, Reno resident said. "It's running a little fast. Probably up to my waste and that's about it. I don't want to get swept by the current."

Experts recommend staying out of the water, but anyone who does get in should wear safety gear like life jackets, helmets, strong shoes, and wet suits. Sierra Adventures provides the essential equipment to its customers.

"We have a safety kayaker with us at all times," Taylor said. "Everyone wears life jackets, we wear helmets, everyone has splash jackets, even if they think they're gonna be hot. The water is cold."

Safety precautions are critical, because of the speed and temperature of the water. That's why it is best to stay out. Especially if you're alone.

"Our message to the general public is stay out of the water, let the levels come down as the snow runs off, let the water warm up," Marvel said

Social media becoming new tool to warn people about Truckee River dangers

by News 4-Fox 11 Digital Staff
Thursday, June 29th 2017

KRNVThumbnail

AA

RENO, Nev. (News 4 & Fox 11) — Local agencies are teaming up for a social media campaign warning about the dangers of the Truckee River.

More than 40 rescues have been made for people in the river, and all next month posts will be sent out with the hashtag "#TruckeeRiverSafe."

ADVERTISING

Washoe County officials say the alerts will include warnings and advice on how to stay safe along the Truckee River.

They say they hope the social media campaign will get the word out about the risks involved, and encourage people to find safer ways to cool off during the summer.

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here: <http://dlvr.it/PR3Pfn> <https://twitter.com/WashoeSheriff/status/8805231509743042>

56 ...

[5:46 PM - 29 Jun 2017](#)

Truckee River Changes Color

Posted: Jun 29, 2017 3:29 PM PDT Updated: Jun 29, 2017 3:29 PM PDT
By Zac Mooney

CONNECT



Part of the Truckee River pulled a bit of a magic act recently. Typically the water is a blue or green color, but for a short time it turned brown.

We caught up with some folks that say they noticed the river changing colors while driving from Truckee to Reno.

They stopped off at Crystal Peak Park to see it up close.

"Well, watching the river change from glorious green and clear to Colorado mud, it looks like we could be on the side of the Grand Canyon," says Janna Caughron of Reno.

Wayne Vandergriff of Reno adds, "It was gradual, it didn't-- it took probably about 4 minutes for it to really turn brown."

Now there is nothing to worry about here. Experts tell us this is from debris flowing into the Truckee from Bronco Creek near Floriston.

Truckee Meadows Water Authority says its treatment plant is ready for the muddy water and always adjusts treatment when these things happen.

Waste water treatment project taking shape in Carson City



Brad Coman/Nevada Appeal |

Jim Morris looks over the Waste Water Treatment Plant project last year.

As the first phase of Carson City's waste water treatment plant rehabilitation nears completion, the next portion is well underway.

In June, the Board of Supervisors approved a \$1.22 million contract with Keller Associates Inc., to design the \$9.72 million second half of the project at the Water Resource Recovery Facility on 5th Street between Butti Way and Fairview Drive.

The next phase of the project will include covering the headworks where waste water enters the plant to reduce odors.

The first progress meeting between designers and the Public Works department staff is scheduled in two weeks, said Jim Morris, project manager for the city.

In September or October, the first phase should reach substantial completion, said Morris, meaning the new construction will be fully operational with just punch list items remaining.

"We'll shut down the old aeration ponds and two old trickling filters," said Morris, and power on the new bioreactors, the construction of which made up the biggest chunk of the \$30 million first phase.

"It will be a much more stable process."

The initial phase came in a year ahead of schedule and under budget, allowing the city also to add on replacement of the screw pumps at the plant's headworks.

Morris attributes the savings to the city's use of a process called construction manager at risk, or CMAR, in which the project designer and builder are hired at the same time and collaborate before ground is broken.

It's the city's second project using the CMAR process, the first being construction of the Multi-Athletic Center.

The next phase isn't using CMAR, instead going to the lowest responsible bid, but Morris said a lot was already learned from the initial work that can be used during the remainder of the project.

The next phase will take a year to design, which includes approvals from the supervisors at the point when design is 60 percent and 90 percent complete. Construction is scheduled to begin in June.

Construction should take a full 14 months, said Morris, with little room for time savings because the work is done sequentially.

The first stage is the headworks, where a design decision still has to be made between two types of processes to reduce odors.

The headworks will be covered and the odors diverted to one of two filtering methods: an earthen filter or tanks for chemical treatment.

Staff prefers the earthen filter, in which blowers push the odors into a mound of landscaped dirt where bacteria eat away at it, said Randall Gray, wastewater operations manager.

Gray said the process is used successfully at facilities in Dayton, Stead and Truckee, Calif., but may be initially more costly to install.

After that, the facility's two primary clarifiers, in service for more than 40 years, will be drained, cleaned and put back in service, hopefully using the same equipment.

"The secondary clarifiers we know are in bad shape. We're going to have to go in and replace the mechanisms," said Morris. "We can't clean them, we need to replace them."

Some pavement will be repaved and the clay-lined emergency overflow pond, which holds up to 3 million gallons of wastewater, will be relined with a rubberized liner per state law.

The motorized controls will be replaced at the north lift pump station, where wastewater from northwest Carson City is pumped to the headworks, and at the effluent pump station, where the treated water is pumped to its golf course and prison farm users in the summer and to Brunswick Canyon Reservoir in the winter.

If any money is left over, it will go to replacing more of the electrical equipment throughout the plant, said Morris, work that needs to be done over the coming years.

All of the construction will be covered by the existing water and sewer rate increases, begun in 2013, which let the city bond for the entire project.

In the end, the goal is to reduce odors, produce higher quality effluent by removing more nutrients and improve plant reliability, all while maintaining or minimizing operational costs, said Gray.

"We're replacing some very old technologies that were wonderful for their time," said Gray. "But in those decades we've learned a lot about how to treat waste water."

Share2

Bay Area Water District Board Oks Big Rate Hikes— 18+% Over Two Years



Photo: Justin Sullivan, Getty Images

A sprinkler waters a lawn on April 7, 2015 in Walnut Creek, California. As California enters its fourth year of severe drought, EBMUD and water districts throughout the state are assisting customers with finding ways to reduce water use at their homes. California residents are facing a mandatory 25 percent reduction in water use. less

A sprinkler waters a lawn on April 7, 2015 in Walnut Creek, California. As California enters its fourth year of severe drought, EBMUD and water districts throughout the state are assisting customers with ... more

East Bay water rates that had already doubled over the past 10 years are shooting up another 19 percent, utility directors decided Tuesday over the objections of scores of angry customers.

The East Bay Municipal Utility District Board of Directors approved the rate hike on a 6-1 vote despite praising customers for conserving water during the recently ended five-year drought — the very action they said is now partially causing them raise rates.

“Water is inexpensive, (but) getting it to the tap is not. This is not fun for us,” board President Lesa McIntosh told the overflow crowd at the board’s regular meeting in Oakland. “We believe it is necessary.”

The rate hike will take effect Wednesday, with bills rising 9.25 percent. Next July they will go up another 9 percent, and with interest compounding, the overall increase will be 19 percent.

This means the average user’s bill will go up a total of \$9 a month after the 2018 increase.

EBMUD officials said the 19 percent rate hike will help pay for the first two years of a five-year, \$608 million investment in pipeline and distribution projects, in addition to water treatment plant upgrades.

The water district serves 1.4 million customers in Alameda and Contra Costa counties, and during the drought that concluded this winter, customers cut average daily usage from 250 gallons a day to 200 gallons a day.

That was great, board directors said, but it also meant less money flowing in to upgrade the district's aging pipeline system and improve its water treatment plants.

"This is a dire time," said Director William Patterson. "Old pipes are breaking all over the place. It's like running your car with a lot of things wrong with it."

The audience of more than 150 people, many of whom held signs reading, "Stop rate hikes," wasn't buying it. One by one, nearly 50 of them took the speaker's podium over a period of two hours, and not one voiced support for higher rates.

"I've got a 5-gallon barrel in the shower. This makes you furious," said customer Maureen Stapleton. "No one can afford anything anymore. I've got my bill at home and I'm afraid to open it, and that's a fact.

"These people are slapping us on the back of the head."

Several customers also held signs reading, "Stop shutoffs," to protest the 9,000 EBMUD water shutoffs last year for people who couldn't pay their bills.

The only "no" vote came from Director John Coleman, who represents the hotter-temperature zone of central Contra Costa County.

"We need to look at things differently," he said.

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Sponsored Content

Working to protect the Truckee River

By
Priya Hutner
July 12, 2017



Kayakers and paddleboarders enjoy the leisurely part of the adventure.

The Truckee River is a jewel that runs from Lake Tahoe through Truckee and Reno and ends in Pyramid Lake. The Truckee River is also a vital resource, providing drinking water to Northern Nevada along its journey; a resource that is protected by a network of government agencies, nonprofits and dedicated individuals. One of those stewards is Rivers for Change. Through adventure, conservation and education, Rivers for Change works to connect individuals and communities to rivers, promote source-to-sea literacy and envision a world where people and communities are active stewards of river systems. The organization co-founded by Danielle Katz is made up of a passionate group of river enthusiasts dedicated to changing the way people think about and interact with water. Bringing that interaction to a personal level, Rivers for Change recently organized the Source to Sea fundraiser to paddle from Lake Tahoe to Pyramid Lake.

The numerous industrial facilities juxtaposed with the flowing river, eddies and desert landscape was unsettling.

The journey, which began at the Upper Truckee River on Lake Tahoe's South Shore, continued across the lake and down the Truckee River from Tahoe City to its terminus in Pyramid Lake, Nev. Local kayakers, paddlers, representatives from nonprofit organizations and people who wanted to support the organization signed up for the trip, including 10 student ambassadors, some as young as 10 years old.



From left, Priya

Hutner, Danielle Katz and Sue Norman prepare for their journey.

I was fortunate enough to join Katz and Sue Norman, project director of Rivers for Change, on the Lower Truckee River portion of the trip from Lockwood to U.S. Parkway. This part of the river takes its journey through the middle of a desert. The group met at the McCarran Ranch Preserve east of Reno. I'd borrowed gear from a friend and suited up. We were shuttled to our drop-in point. The day was initially cool with some cloud cover. All manner of craft were on hand for the trip: kayaks, paddleboards and two large rafts. Tahoe Whitewater Adventures led by co-owner Paul Miltner and river guide Clayton Coates donated their time to the event.

I jumped into Coates' raft along with five other women. This portion of the Truckee is mostly mellow with some Class II rapids and lots of floating. As we paddled along, Cottonwood trees and willows stood tall along the banks the river. Fluffy white seeds floated around our raft and showered down on us. The sun came out and it was time to remove some layers. The river was serene; a red-shouldered hawk swooped by. In some areas we paddled there was beauty and there was garbage. The numerous industrial facilities juxtaposed with the flowing river, eddies and desert landscape was unsettling.

We stopped for lunch at the McCarran Ranch Preserve. A large flock of white pelicans flapped overhead. They breed on Anaho Island National Wildlife Refuge at Pyramid Lake, one of the largest nesting colonies in the western U.S.

Linda Nelson from the Nevada Division of Forestry spoke to the group about the importance of the river to the environment.

“Otters, mink, skunk and raccoons all use the river as do beavers. There are an estimated 75,000 beavers in Nevada,” Nelson said, adding that coyote, bear, porcupine and bobcat also inhabit the area and use the river.



River guide Clayton Coates

Laurie Leonard spoke on behalf of the Nature Conservancy, which is working on restoration in this area of the river.

“In the 60s, there were efforts to deal with flooding that had unintended consequences in which 90 percent of the forest died and 70 percent of the bird population lost their habitat,” said Leonard.

The Conservancy has already restored 11 miles of the portion of the river we were paddling. They’ve planted native trees, grasses and shrubs and mitigating invasive species and erected mileage markers from Tahoe to Pyramid Lake for river awareness and emergency rescue.

Representatives for One Truckee River was also on hand to explain its management plan that will manage, protect and provide stewardship for the Truckee River across all jurisdictional boundaries.

Laine Christman, a resource economist for the Truckee Meadows Water Authority, discussed water conservation. The Truckee River is the water source for 400,000 people in Washoe County and 90 million gallons a day are used. I received an incredible amount of information on the trip.

We wrapped up and launched back into the water. Coates invited me to steer the raft. He gave me a quick lesson and I took the back seat. We headed into the rapids. The boat ended up heading down the flow backward my first time. Eventually, I had us right again. The water was considerably warmer than Tahoe and soon folks were dipping in. We rolled past "Tracy," the enormous power plant humming away. The Pah Rah Range in the background rose above it kissing the sky.

As we neared the end of our journey, I reflected on my day on the river and the parts that awed me: the depth and width of the river, the hidden coves and the desert mountains. Another part of me was saddened by the state of the river and the places where humankind utterly neglects the natural environment. It was a reminder how interconnected and dependent we are on this beautiful river. | riversforchange.org

Justin Scacco**jscacco@sierrasun.com**Back to: [SUMMER RECREATION](#)

July 17, 2017

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Rafting operations sidelined on Truckee River



Sierra Sun file photo |

Water rushes through the Tahoe City Dam, pouring out of Lake Tahoe and into the Truckee River on April 6, 2017.

After having too much water coming down the Truckee River because of high lake levels, Tahoe City's rafting companies were finally able to get customers on the water in early July.

But after having an excess of water, now there isn't enough and rafting trips have again been sidelined as lake levels have dropped below the upper limit, prompting Federal Water Master Chad Blanchard to close the Lake Tahoe Dam on Wednesday, July 12.

"When we don't need to spill anymore and natural flow is meeting our needs downstream, we cannot legally release water," Blanchard said. "That's the way it's been since 1908."

If lake levels are below the agreed upon elevation of 6,229.10 feet, and the water needs are being met downstream, Blanchard said, the dam will remain closed. He also explained that the lake elevation agreement was established in 1917 between homeowners and water rights holders, and that above the upper limit, shoreline erosion can occur.

The lake level was at 6,228.99 as of Thursday, July 13, according to the water master's daily worksheet.

"We had an inkling when it was coming," said Truckee River Rafting's Richard Courcier of the dam closure. "We just didn't know when the hammer would fall."

"Tahoe has almost stopped rising, and there's no demand down in Reno because they are still getting enough water from tributaries."

Courcier said Truckee River Rafting was open for a ninth day this season when they got the call that the dam would be closed.

However, conditions could be worse, even as the company goes from several years of having not enough water for operations into one where there was too much.

"Last year we were open only 18 days total," Courcier said. "The year before that, we didn't open at all because it was too low."

Truckee River Rafting expects to reopen in late July, according to Courcier, and aims to remain open until Labor Day.

Next to the rafting company is Tahoe City's other river outfit, Truckee River Raft Co.

"It's been difficult," said Owner Aaron Rudnick of the summer season. "Most people don't believe you when you say you're not open. Several years of not enough water, and now there was too much."

Both Rudnick and Courcier said that the amount of water in Lake Tahoe should provide for at least two or three good summers of rafting on the upper Truckee.

"There's so much water, there should be some great years over the next few years," Rudnick said.

Truckee River Raft Co. was open for 10 days before the dam closure, and expects to reopen rafting operations in late July. Once the company can get rafters back on the water, Rudnick said he expects a solid end to the season.

"We'll have a pretty good August for recreation around here," he said. "More like our normal flows."

Down river, Truckee's three other rafting companies, Tahoe Whitewater Tours, Tributary Whitewater Tours, and IRIE Rafting Company, remain open because of their operations on other portions of the river.

Truckee River Flows Drop

Posted: Jul 18, 2017 5:57 PM PDT Updated: Jul 18, 2017 6:03 PM PDT

By Paul Nelson

CONNECT



After the record winter that saw double the amount of snowpack, the Truckee River was running fast and high into July. Now, the snow melt is slowing, and the river flows are dropping.

"As far as the river goes, it does certainly look low," Mike Cherniski, Lincoln, California resident. "This is so tame, I don't see how you can get hurt in it."

At the end of March, most of the gates were open at the Tahoe City Dam, making room for the high volume of water that was still flowing into Lake Tahoe. Now, only one gate is opening. It is releasing 252 cubic feet per second, leaving shallow water downstream. Water is being stored at the lake, which is staying about one inch from its legal limit, meaning the inflow matches the outflow.

"They're not releasing much water into the Truckee River up at its source," Kevin Joell, Team Leader of the RFD Water Entry Team said. "So, that kind of caused our significant drop that we saw through town, here."

The Truckee River, in downtown Reno, is nearly three feet lower than it was at the end of June, which is good news for people who want to jump in.

"I was super happy to see how low it is because of the little one," Andi McCarty, Stead resident said. "You know, she's only 2 1/2. So, definitely have to have a vest on her."

"It's been perfect," Alli Reeves, Reno resident said. "It's been a lovely day and it's super nice not to have to worry about being washed away."

Joell says people should continue to use caution and good judgment along the river, but that the biggest hazards created by the snowmelt are behind us.

"We're definitely past that point," Joell said. "We're back down to normal conditions that we would see on any average summer day."

The Federal Water Master has to maintain a minimum flow in the Truckee River for things like fish habitat. If it gets below that flow or if Lake Tahoe reaches its top, more water could be released into the river. So, it is possible that river flows will fluctuate.

Fallon Flooding Averted

Posted: Jul 21, 2017 5:10 PM PDT Updated: Jul 21, 2017 7:14 PM PDT

By Paul Nelson

CONNECT



Fallon residents have avoided a possible disaster, now that the peak of spring run-off has passed.

The winter's record precipitation numbers forced local, state, and federal officials to start flood mitigation efforts, starting in February. Now, they are declaring victory over Mother Nature.

"We couldn't be more thrilled with how things turned out," Rusty Jardine, General Manager of the Truckee-Carson Irrigation District said. "We've managed to avoid any kind of damage to people downstream of Lahontan."

Water was being released from the Lahontan Dam at a rate of 3,000 cubic feet per second, to allow the high volume of water that was flowing into the reservoir. That is about three times more water than the Carson River can handle downstream, and Fallon would have almost certainly flooded. To alleviate those problems, crews cleaned the Carson River channel and built a spillway on the V Line Canal to send excess water into the desert. Then came the Big Dig, which is a 16-mile canal to funnel that water to the Carson Sink.

"We all came together and we provided something that I think was extraordinary," Jardine said. "I think other communities can look at us and go 'This is the way it ought to be.'"

Lake Lahontan is about as full as it can possibly be, this late in the year, holding close to 300,000 acre feet of water.

"We actually got it to the very top and now we're starting to inch down as the demand, downstream, exceeds what's coming into it," Jardine said. "It's where we want to be."

Exactly two years ago, the lake had less than 5,800 acre feet of water, so today is a stark contrast to what Fallon farmers faced, after four years of drought. This year, farmers did not have to pay for irrigation water during flood operations. What might be more important is they still have an almost-full reservoir, halfway through the irrigation season.

"We've never seen that kind of supply before," Jardine said. "We're thinking that in the year to come, we're probably going to see quite a reserve here at Lahontan, and then we'll have to see again what Mother Nature is going to do in terms of future conditions."

If next spring presents the same challenges, the infrastructure is already in place to channel the water away from Fallon. The Lahontan Dam is 102 years old. While it requires some maintenance, Jardine said it held up well. Especially, since it is designed for irrigation, not flood control.

"We pushed this dam," Jardine said. "We asked it to do something that it had never had to do before."

Fallon is full of green crops like corn and alfalfa, thanks to the abundance of water. Farmers will have more than enough water to get them through the irrigation season, which ends in November. Jardine says about one-third of the Lake Lahontan's water will be left by then, which is still a good head-start, heading into 2018

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July 25, 2017

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State of the Lake Report on Lake Tahoe to be presented July 27



Ryan Hoffman / Tribune File Photo

The annual state of the lake will take place Thursday, July 27.

Environmentalists, outdoor adventurers, government officials, business people, and even the tourist who's passing through all come to Lake Tahoe during the summer to experience its crystal blue waters.

The clarity of Lake Tahoe is important, so scientists began monitoring it regularly and reporting their findings. It's almost that time again.

Researchers at the University of California, Davis, Tahoe Environmental Research Center will present the annual "State of the Lake" report, assessing the overall condition of Lake Tahoe on July 27 from 5:30 to 7 p.m. at Sierra Nevada College in Incline Village.

The report is based on data collected in 2016, which was the [hottest year on record](#), and was followed by a record-breaking winter that brought more precipitation to the region than it's seen in years.

Researchers at the University of California, Davis, Tahoe Environmental Research Center will present the annual "State of the Lake" report, assessing the overall condition of Lake Tahoe on July 27 from 5:30 to 7 p.m. at Sierra Nevada College in Incline Village.

Data released in May from the center and the Tahoe Regional Planning Agency show that average clarity for Lake Tahoe declined in 2016. According to the report, 2016 was the second consecutive year that lake clarity has declined due to impacts from climate change. [Last year's State of the Lake](#) focused on the gradual warming of Lake Tahoe, how that has impacted a process called mixing, and what that may or may not have to do with long-term algae growth trends.

Dr. Geoff Schladow will present the latest report on July 27 at the Tahoe Center for Environmental Sciences, located at the Sierra Nevada College campus at 291 Country Club Dr. in Incline Village. There is a suggested donation of \$5. To find out more and to register, visit tahoe.ucdavis.edu/events/



State of American Drinking WaterEWG's Policy Recommendations

State of American Drinking Water

When most Americans drink a glass of tap water, they're also getting a dose of industrial or agricultural contaminants linked to cancer, brain and nervous system damage, developmental defects, fertility problems or hormone disruption. That's the disturbing truth documented by EWG's Tap Water Database – the most complete source available on the quality of U.S. drinking water, aggregating and analyzing data from almost 50,000 public water utilities nationwide.

The vast majority of the nation's drinking water supplies get a passing grade from federal and state regulatory agencies. However, many of the 250-plus contaminants detected through water sampling and testing are at levels that are perfectly legal under the Safe Drinking Water Act or state regulations, but well above levels authoritative scientific studies have found to pose health risks.

What's more, the Environmental Protection Agency has not added a new contaminant to the list of regulated drinking water pollutants in more than 20 years. This inexcusable failure of the federal government's responsibility to protect public health means there are no legal limits for the more than 160 unregulated contaminants the tests detected in the nation's tap water.

Unanswered questions

Utilities must treat their water to meet state and federal standards before piping it into homes, schools and businesses, but water treatment chemicals can themselves produce other potentially harmful **contaminants**. Utilities must also provide annual water quality reports to their customers, but those reports leave many unanswered questions, such as:

- How did these contaminants get into drinking water?
- What's the truly safe level of a contaminant – not just for healthy adults, but for babies and children whose brains and bodies are still developing, pregnant women and their developing fetuses, and people with medical conditions that make them more susceptible to chemicals' effects?
- Why do regulatory standards focus on keeping treatment costs down instead of protecting public health?
- What contaminants are in the water that local utilities are not required to treat?
- How can individuals take steps to ensure that the purity and safety of their water goes beyond what the law requires?

EWG believes Americans have an absolute right to know the full story about the water they drink. We believe that knowledge will lead to improvements in controlling pollution at the source, tougher regulatory standards, and upgrading of treatment plants, delivery pipes and other drinking water infrastructure.

The Tap Water Database lets people enter their zipcodes to see exactly what contaminants were found in their water, at what levels, and what this could mean for their health. It provides information on the most widespread and potentially harmful contaminants and their sources – including agriculture, a leading source of pollution in the U.S. that is largely exempt from federal laws designed to protect drinking water.

Contaminants of concern

EWG collected data from state agencies and the EPA for drinking water tests conducted from 2010 to 2015 by 48,712 water utilities in 50 states. All told, the utilities, which had the opportunity to review the data for accuracy, tested for 500 different contaminants and found 267.

Contaminants detected included:

- 93 linked to an increased risk of cancer. More than 40,000 systems had detections of known or likely carcinogens exceeding established federal or state health guidelines – levels that pose only negligible health risks, but are not legally enforceable.
- 78 associated with brain and nervous system damage.
- 63 connected to developmental harm to children or fetuses.
- 38 that may cause fertility problems.
- 45 linked to hormonal disruption.

In the summer of 2015, the scandal of extremely high levels of lead in the drinking water of Flint, Mich. – discovered only because a worried mother contacted the EPA after her children got sick – set off national alarm and led to revelations of lead contamination in communities and schools across the country.

There is no safe level of exposure to lead, especially for young children, who can suffer irreversible brain damage from drinking water with any amount of the poison. The data compiled by EWG show that between 2010 and 2015 almost 19,000 public water systems had at least one detection of lead above 3.8 parts per billion, the level at which a formula-fed baby is at risk for elevated blood lead levels.

But the Tap Water Database also reveals nationwide detection of other drinking water contaminants at levels that are legal but scientists and medical experts say are not fully protective of public health. For example:

- Chromium-6 or hexavalent chromium – an industrial chemical made notorious by the film “Erin Brockovich,” but unregulated under the Safe Drinking Water Act – has been detected in drinking water supplies for more than 250 million Americans in all 50 states, at levels exceeding those California state scientists say pose a negligible risk of cancer for people who drink it daily for a lifetime.
- Tap water supplies for over 8 million people in 27 states had detections of 1,4-dioxane – an unregulated industrial solvent and an unwanted byproduct in consumer goods such as detergents, shampoos and cosmetics – at levels above those the EPA considers to pose a negligible cancer risk.
- In 2015, more than 1,800 water systems serving 7 million Americans in 48 states detected nitrates - chemicals from animal waste or agricultural fertilizers - at an average above the level the National Cancer Institute research shows increases the risk of cancer, which is a concentration just half of the government's legal limit for nitrate in drinking water.*

For the levels this database endorses as safe, we relied on the best available science, going far beyond regulations that are too often driven by political compromise with polluters rather than protecting public health. Going forward, EWG will determine and publish truly safe [standards](#) not only for toxic chemicals in drinking water, but also for those in food and consumer products. These EWG-endorsed levels are referred to in this database as health guidelines.

[Geographic and income inequities](#)

The quality of drinking water can vary greatly depending on not only where it comes from, but where you live, which is often tied to income levels.

Pesticides and toxic byproducts from fertilizer and manure are found by water utilities in many areas of the country, but are often detected in greater numbers and at higher readings by utilities serving rural communities in places where agriculture has a significant footprint. For example, water tests in Topeka, Kan., found at least four pesticides used on corn fields, including atrazine – the second most-widely used weedkiller in the U.S. – which studies find can turn male frogs into females after exposure to levels of the pesticide commonly found in drinking water sources throughout the Corn Belt.

In Iowa, the Des Moines Water Works battles daily to keep nitrate levels from uncontrolled farm pollution just below the EPA legal limit of 10 parts per million, or ppm, in local drinking water. Based on the findings of the National Cancer Institute, EWG’s health guideline for nitrates is 5 ppm, but the average level found in 2015 by the Des Moines utility was more than 7 ppm.

Among the largest utilities, the East Los Angeles Water District detected the most contaminants of concern overall, with 14 different pollutants in its 2015 water tests above established health guidelines. The district serves 115,000 people in an area whose [median household income](#) in 2010, the most recent year for which data is available, was more than 20 percent below the national average.

By contrast, the water system for Merrick, N.Y., serving 117,000 citizens on Long Island, is one of the cleanest in the nation, detecting only one contaminant, chromium-6, above health guidelines in 2015. Merrick’s [median household income](#) in 2010 was more than two-and-a-half times the national average.

What should concerned Americans do?

Citizens can take steps to make sure they and their families are drinking the cleanest, safest water possible. The right in-home water filtration system can dramatically reduce the presence of many contaminants utilities detect. [EWG's Water Filter Guide](#) lets users search for the types of filters designed to remove or reduce specific contaminants of concern.

But drinking water contamination is not just a personal concern. It affects everyone in the entire nation. Americans should not take safe drinking water for granted. Instead they must get informed on what comes out of their taps, and the contaminants fouling streams and rivers, and then take action. Ensuring a safe water supply is a fundamental responsibility of government, and we must demand that our public officials at every level step up and fix this broken system. President Trump has promised to make protecting the nation's drinking water a top priority of his administration. But he and EPA Administrator Scott Pruitt have taken or proposed a series of alarming actions that would further undermine the government's ability to make good on that promise, including cutting and eliminating programs and resources for water protection.

Safe drinking water isn't a privilege, but a right. This database is more than just a helpful resource for individuals and families, but a call to action for everyone who cares about clean water. In the richest country on Earth, every American – rural or urban, affluent or lower-income – should be able to rest assured that the water in their homes, schools and public places is clean and safe to drink.

* Systems have two ways to report nitrate results - as "nitrate" and "nitrate and nitrite." Systems may report both types of nitrate results. EWG's calculation of 7 million people exposed to nitrate above the health guideline is a combination of both types of nitrate results and does not double count systems that reported values for both types of nitrate.



Questions for Your Local Officials

7 Questions To Ask Your Elected Officials About Tap Water

After you've checked [EWG's Tap Water Database](#) to see how the water in your community stacks up and considered your [water filter](#) options, what's the next step?

Most utilities provide water that gets a passing grade from the government, but that doesn't mean there's no need to worry about contamination or that your water can't be better. One of the best ways to push for cleaner water is to hold elected officials who have a say in water quality accountable – from city hall and the state legislature, to Congress, all the way to the Oval Office – by asking questions and demanding answers.

Here are seven questions with which we suggest starting.

1. What's in my tap water?

Does your mayor, city councilmember or state representative know what are the biggest concerns for your local tap water? Do they realize that even if tap water meets federal standards, that doesn't mean it's free of potentially harmful contaminants? It could still contain neurotoxic or cancer-causing chemicals, many of which are not covered under federal drinking water regulations. Millions of Americans drink tap water with contaminants at levels that, while legal, could still pose a risk to health. Ask your local officials and your water utility to test more extensively than either state or federal regulations require. Broader testing provides a better picture of what's in your water.

2. Why are these contaminants in my water?

The first question is whether the contaminants come from a local source, such as an abandoned waste site; or underground storage tanks and septic tanks; or from the entire watershed, which would include fertilizers and pesticides. Tap water contaminants could be in the river or groundwater that supplies your system, but not be removed by treatment processes before being piped to your home. Some contaminants are produced by the treatment process itself.

Understanding the [source of the problem](#) is the first step toward addressing it.

3. How is our water system removing contaminants?

Make sure that elected officials do their homework about drinking water quality and know what water treatment methods already exist at your local utility, as well as what additional treatments may need to be installed to ensure good quality water. Most water systems use a basic process to treat water that removes larger particles by sedimentation and filtration, followed by disinfection to kill disease-causing pathogens. However, this conventional water treatment approach cannot remove many types of contaminants, such as the fertilizer chemical nitrate, volatile solvents such as the dry cleaning chemical perc, or radioactive substances. Many water systems install additional treatment, for example granular activated carbon to treat pesticides. Advanced treatment can remove many contaminants and increasingly, water utilities and the communities they serve are investing in such equipment to provide better water. These technologies require long-term planning and financing, and involving local officials early and often is essential.

4. How are you investing in better water treatment technology and ensuring better water quality going forward?

Tell your elected officials that investment in protecting drinking water quality must happen at all levels of government. At the local level, a change in the process used at a water treatment plant can make a big difference, and scientists are working on new and improved technologies to treat tap water. But such changes and technologies can be expensive to adopt, particularly for small water utilities, so state and federal support for water infrastructure is essential. At the national level, water quality could be improved by better protecting source water, expanding testing requirements and establishing health-protective standards for unregulated chemicals.

5. What are you doing to create sustainable funding for our water systems?

Make sure that your elected officials are budgeting for the water treatment needed now and in future. U.S. water systems are in urgent need of investment. In its 2017 Infrastructure Report Card, the American Society of Civil Engineers gave the nation's water infrastructure a "D." According to research by the the Environmental Protection Agency Water Infrastructure and Resiliency Finance Center, the U.S. needs to invest more than \$600 billion in water infrastructure improvements over the next 20 years. Without a sustainable source of funding, our water infrastructure will continue to age and our water quality will suffer.

6. How are you protecting our source water to keep pollution from getting into water in the first place?

So far, both Congress and state legislatures have failed to require important source water protection measures like buffer zones around rivers and reservoirs, forcing water utilities to invest heavily in treatment, which is expensive and can lead to disinfection byproducts that are harmful to health themselves. Tell your officials that source water protection is a must for ensuring long-term water quality and making sure that we have enough water to drink.

7. How are you making sure that good, clean water remains affordable for all residents?

Every American deserves access to safe, clean, affordable drinking water from the tap. Meeting this challenge won't be easy – local water utilities are dealing with increased source contamination, and state and federal agencies are facing constrained budgets. That's why advocacy has never been more important. Letting officials at all levels know that you care about safe, affordable tap water will help keep the issue on the agenda and help ensure that all Americans have water they can count on.

EWG'S GUIDE TO SAFE DRINKING WATER

Reduce your exposures to common drinking water pollutants with EWG's handy tipsheet.

By downloading the guide, you'll also be subscribed to receive email updates - including the latest news, tips, action alerts, promotions and more - from EWG.

New Technology Combats Invasive Weeds in Lake Tahoe

Posted: Jul 26, 2017 5:36 PM PDT Updated: Jul 26, 2017 7:33 PM PDT
By Ryan Canaday

CONNECT



All it's taken is a specialized boat and a little bit of UV-C light and the water in the Lakeside Marina in Lake Tahoe has gone from plant-riddled, to nearly clear as day.

John Paoluccio is the man leading the way to remove several species of aquatic invasive weeds. In his efforts, he aims to improve not only the water's quality but also the fish habitat within the lake.

"A few weeks ago they were all about 8 feet tall within this marina and you can see now, they're all laying down," says Paoluccio.

Paoluccio has spent the last two years in a lab testing and treating invasive weeds with UV-C light. He's now taking his findings and applying them directly into Lake Tahoe using a UV-C light array underwater.

"Basically what we're doing is affecting the DNA of the plant and giving them a severe sunburn."

Paoluccio says in the lab, the plants he tested with the light would fall apart and never grow back. Now he waits day by day to see if the results will be just as effective beneath the water's surface.

"We have time lapse cameras under water, every morning we take photographs, and now it's monitoring to see what grows back," says Paoluccio. "Our ultimate goal would be a continuous movement system where you wouldn't have to park the boat, you could actually move a very slow pace and treat as you go."

This September the project's results will be evaluated to see how successful the UV-C light has been in removing the invasive weeds for good.

EDITORIALS

Sacramento wants you to save water. It's your choice how



BY THE EDITORIAL BOARD

JULY 26, 2017 12:02 PM

It shouldn't be oversold as a huge step, but it only makes sense to adapt to our new water reality. The city of Sacramento is [moving toward stricter water conservation rules](#) even when we're not officially in a drought.

Now, when there's not a shortage, [residents are restricted to watering lawns three days a week during the summer](#). Under code changes approved by the City Council's Law and Legislation Committee on Tuesday, the limit would be two days a week, March through October. Also, the initial fine – starting with a second violation within 12 months – would be doubled from \$25 to \$50.

Any penalties could be waived if a customer accepts a house call from a city conservation specialist, or if customers sign up for city incentives to remove grass, upgrade irrigation systems or install a smart meter. To encourage conservation, the proposal also says the watering restrictions would not apply to customers who have smart meters or irrigate with recycled water.

During the drought, Sacramento residents did their part. [According to state figures](#), since the mandatory conservation ordered by Gov. Jerry Brown began in June 2015, Sacramento has reduced its water use by 28.1 percent – better than the 22.4 percent average for all California urban water systems.

[Unwisely, the State Water Resources Control Board relaxed conservation rules](#) for most urban water systems in May 2016. To its credit, Sacramento kept its twice-a-week limit during summers. In June, its water use was down 26.6 percent from June 2016, higher than the average for water providers in the region.

On conservation overall, however, [Sacramento is still behind cities in Southern California](#), which are much further along on reusing water, capturing storm water and replacing grass with drought-resistant landscaping. Even with [an accelerated effort](#) that has water meters at 70 percent of houses, the city won't be finished until 2020.

The new permanent water-saving changes will help Sacramento catch up. The City Council would do well to approve them.

[FACEBOOK](#) [TWITTER](#) [EMAIL](#) [SHARE](#)

Water-saving tips for your lawn

Considering killing your lawn in favor of drought-tolerant landscaping? In this installment of The Sacramento Bee's Water-Wise Homeowners series, landscape architect Michael Glassman offers strategies for boosting curb appeal while reducing water use.

ENVIRONMENT

Lake Tahoe's waters continue to warm, and thousands of trees are dying

BY CAROLYN WILKE
cwilke@sacbee.com



JULY 27, 2017 11:18 AM

Lake Tahoe's famously clear waters continue to warm, and the surrounding forests face dire threats due to drought, disease and insects, according to the [annual Tahoe State of the Lake report](#) by researchers at UC Davis.

The second deepest lake in the United States after Crater Lake, Lake Tahoe has warmed by half a degree Fahrenheit each year for the past four years — 14 times faster than the historic rate, the report said.

Overall, summer weather has been persisting for longer, with earlier spring snowmelts. Last year's snowmelt began on March 29, 2016 — 19 days earlier than in 1961, the report found. A warming climate may bring changes to Lake Tahoe's ecosystems and the plants and animals they support.

ADVERTISING

"It's making conditions less ideal for the species that are native to the lake that are adapted to the very high UV conditions and cold water temperature conditions," said Geoffrey Schladow, the report's author and director of the UC Davis Tahoe Environmental Research Center.

Climate change may also make it harder for native species to defend themselves when an invasive species shows up, he said.

Boat inspection programs have helped keep new invasive species out of the lake, the report said. However, boating on the lake worsens the spread of invasive species already present when creatures such as the Asian clam hitch a ride in the ballast water.

Researchers suspect that Asian clams likely contribute to the growth of thick mats of algae by concentrating the nutrients that these algae need to grow. Recent years have seen more thick mats of algae wash up near Tahoe's shores.

“They rot and they smell and it’s not what people picture Lake Tahoe looking like,” Schladow said. “If you snorkel down and you try to grab it, they sort of disintegrate in your hands. And essentially, with the right winds, they do get moved onshore.”

This past year was also the fifth in a row without “deep mixing,” when oxygen sinks to the lake’s depths to sustain life there while pulling nutrients back up to the surface, the researchers found. The report said increases in water temperature correspond to years when deep mixing doesn’t occur. Without mixing, the bottom of the lake continues to heat due to the earth’s geothermal heat, raising its temperature by a small amount every year.

Because the warm days of summer heat the surface of the lake, the water near the surface is less dense. In winter, the surface of the lake cools and the cooler, more oxygen-rich water sinks. With fewer days of cool weather, the mixing doesn’t reach deep enough to stir up water at the bottom of the lake.

When algae or fish die, they sink to the bottom of the lake and decompose, releasing the nutrients that they’ve ingested. This causes nutrients to build up there.

“Eventually, maybe next year, maybe three or four years when it does mix to the bottom all these nutrients will suddenly come back up to the surface and the concern is we’re going to feed a very large algal bloom that year,” Schladow said.

“We’re starting to approach some of the highest nitrate levels we’ve ever seen at the bottom of Lake Tahoe,” he said. Nitrate is one of the nutrients that fuel algal growth.

With last year’s increased rain and snow, [the lake level rose](#) by more than 20 inches in the 2016 water year, which ran from October 2015 through the end of September 2016. Higher stream flows also washed more nutrients into the lake than they did in 2015.

Despite the changes, long-term trends show that Lake Tahoe’s clarity is continuing to improve, the report said. Clarity is measured by the depth at which a Secchi disk, a 10-inch white circle, disappears from view. In 2016, the average depth was 69.2 feet, the report found. That represented a greater depth of about 4 feet from last year’s measurement, and 5 feet deeper than when clarity was at its worst in 1997.

Winter water clarity improved by nearly 12 feet. However, clarity decreased in the summer when populations of tiny algae grow in the upper 50 feet of the lake. Because of their small size, the algae stay suspended in the water and scatter light.

Tree mortality in Tahoe’s forests has also increased drastically, with the number of dead trees more than doubling from 35,000 in 2015 to 72,000 last year due to the stress of the drought combined with attacks from insects and disease, according to the report. The problem was worst on Tahoe’s north shore, but forests on the east shore were also affected.

Patricia Maloney, a researcher who is part of the Tahoe Environmental Research Center at UC Davis, likens the trees to straws in the ground that compete to suck up the water.

“These bark beetles, they will almost preferentially attack drought-stressed trees,” she said.

Beth Moxley, an arborist and owner of Rockwood Tree Service, has witnessed the damage from the blister rust fungus and pine beetle infestation. She’s worked in the Tahoe area since 1986.

“We’re basically in a crisis,” she said about the large number of dead and dying trees in the Tahoe Basin. “It all started with the drought. The trees become weakened and then they’re susceptible to attack by disease or insect infestation.”

Pines in the area have been severely affected by the blister rust, which has no cure. “I took down a 600-year-old sugar pine the other day,” Moxley said.

“As a tree service here in the Basin, we are overwhelmed. ... We feel abandoned by the government agencies,” she said. “We need help.”

The massive tree die-offs also raise the risk of forest fires.

“We’re sitting ducks,” Moxley says. “It’s not a matter of if. It’s when and where.”

FACEBOOK TWITTER EMAIL SHARE

Counting bald eagles at Lake Tahoe

It's time for the annual midwinter bald eagle survey. Tahoe Institute of Natural Science co-Executive Director T. Will Richardson explains.

Randall Benton The Sacramento Bee

Carolyn Wilke: [916-321-1073](tel:916-321-1073), [@CarolynMWilke](https://twitter.com/CarolynMWilke)



Lake Tahoe’s famously clear waters continue to warm, and the surrounding forests face dire threats due to drought, disease and insects, according to the annual Tahoe State of the Lake report by researchers at UC Davis. **Lezlie Sterling** lstirling@sacbee.com

Annual Report Card For Tahoe Is In

Posted: Jul 28, 2017 4:40 PM PDT Updated: Jul 28, 2017 5:47 PM PDT
By Angela Schilling

CONNECT



The water level at Tahoe is passing the test this year. However the latest report card for the lake is not as clear.

"The grade is an incomplete because the story is constantly changing," said Geoffrey Schladow of UC Davis Tahoe Environmental Research Center.

It's hard to predict where Tahoe will be in a year. After all, who would have thought we'd get so much snow in 2017. Next year's notes might be different too, considering the report goes through December and the Sierra was still a winter wonderland this past January.

"It was above the rim at the end of December but then you see this sudden rise as we get all this snow," said Schladow.

The new snow we got only accounts for about one percent of the water in Tahoe. The temperature is pretty cold, but over the past four years the water temperature has risen about one fourth of a degree each year.

"Overall the lake is warming and that's creating an environment that's more suited for many invasive species," added Schladow.

Algae is not only connected to water temperature but they are also connected to the clarity of the water. On the plus side, winter 2016 data shows the clarity improved by nearly 12 feet. This proves new storm water projects are working. Trees are struggling though.

"As they die they're less effective and binding to the soil. So one thing is looking for erosion now," said Schladow.

Next years report card will be an interesting one.

"We have a really good idea now of what happens during a recent drought. And now we're going to see what's going to happen during a recent snow year," said Schladow.

He's not sure when he'll be able to give Tahoe an actual grade, but if there was a fire or something it would obviously be poor.

Las Vegas water pipeline fight to go before federal judge

Posted: Jul 29, 2017 8:14 AM PDT Updated: Jul 29, 2017 8:26 AM PDT

By KEN RITTER
Associated Press

LAS VEGAS (AP) - A decades-long fight over a plan to pump water from arid and sparsely populated valleys along Nevada's eastern edge and pipe it to thirsty Las Vegas is about to get its first hearing before a federal judge.

Environmental groups and American Indian tribes are expected to tell U.S. District Judge Andrew Gordon in Las Vegas on Monday that a proposed 263-mile (423-kilometer) north-to-south water pipeline just west of the Nevada-Utah state line amounts to a city water grab supported by incomplete and inadequate federal environmental studies.

Southern Nevada Water Authority lawyers are expected to argue that the state's largest metropolitan area and economic hub has to have water, and that the U.S. Bureau of Land Management properly granted rights of way for the pipeline to cross federal lands in 2012.

The environmental review took eight years, the water agency said in a statement characterizing the pipeline and related pumping and storage facilities as a "modest investment in water resources for considerable economic returns that benefit Nevada as a whole."

Southern Nevada uses only 5 percent of Nevada's statewide water resources, the statement said, but is responsible for roughly 70 percent of the state's economic activity.

Rob Mrowka, a senior scientist with the Center for Biological Diversity, evokes fears that remote springs will wither, rare species of plants and animals will die, and arid scrub brush rangeland in the Spring, Cave, Dry Lake and Delamar valleys will turn to dust if Las Vegas is allowed to tap ancient underground aquifers that don't naturally replenish every year.

"Their plan to drain ancient aquifers left by the last ice age would cause significant and catastrophic changes across a section of central Nevada the size of Vermont," said Mrowka, whose organization filed a lawsuit in February 2014 against the environmental findings.

Other lawsuits were filed by plaintiffs including local governments in Nevada's White Pine and Lincoln counties, citizen groups, the Duckwater and Ely Shoshone tribes, and the Confederated Tribes of the Goshute Reservation in Utah.

Water agency officials concede a pipeline built to carry 75,000 gallons (283,900 liters) of water a day from near Ely in White Pine County - a distance comparable to a drive from Las Vegas to Los Angeles - could cost billions of dollars to build.

But they say it may become essential if drought keeps shrinking Lake Mead on the Colorado River. The Las Vegas area, home to 2 million people and host to 40 million visitors a year, currently gets almost all of its drinking water from the vast reservoir behind Hoover Dam.

Attorney Simeon Herskovits, representing the Great Basin Water Network, noted the federal court hearing is the first in a case that has been developing since 1989 in state courts.

Proponents and opponents also are due later this year to respond to an order by a Nevada state court judge in Ely that rejected findings by the state's top water official, Jason King, that enough underground water exists to supply the pipeline.

"Our key argument Monday is that the federal government simply failed to take the hard look required under (the National Environmental Policy Act)," Herskovits said of Monday's proceedings. "In practical terms, there will be no way to replenish or recharge these systems."

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Health & Science

Towns sell their public water systems — and come to regret it July 8



The water tower in Lake Station, Ind. (John Nelson/www.johnnelsonphoto.com)
By Elizabeth Douglass By Elizabeth Douglass

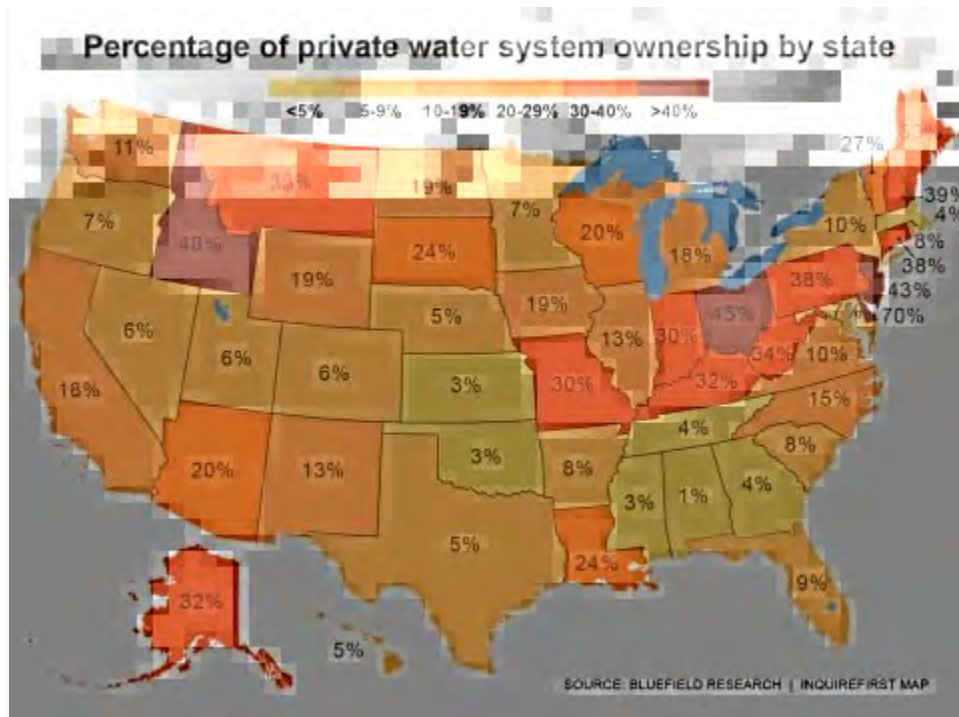
LAKE STATION, Ind. — This hard-luck town just south of Chicago is weighing a decision confronting many small and midsize cities with shrinking populations and chronic budget deficits: whether to sell the public water system to a for-profit corporation.

Lake Station desperately needs the cash. Once solidly middle-class, the town of 12,000 has suffered from cutbacks at nearby steel mills, statewide caps on property taxes, and debt incurred to build a pricey new City Hall.

Selling the water system would erase \$11 million in utility debt and leave the city with a \$9 million windfall. But the deal does not fund any of the water system's \$4 million in overdue repairs, costs that will be passed along through higher rates. Customers usually pay more for water after private companies take over.

“You're in bad shape financially to where you're talking about laying off police, so you're going to have to do something,” said Lake Station Mayor Christopher Anderson (D). “The biggest issue with privatizing is we're losing control of the operations.”

Neglected water infrastructure is a national plague. By one estimate, U.S. water systems need to invest \$1 trillion over the next 20 years. Meanwhile, federal funding for water infrastructure has fallen 74 percent in real terms since 1977, and low-interest government loans have not filled the gap.



(Bluefield

Research/Inquirefirst Map)

President Trump campaigned on a promise to rebuild the nation’s infrastructure, but his budget would reduce federal aid for water projects. It eliminates a \$498 million loan program that helps rural communities fund water projects. And it adds only \$4 million, or less than half a percent, to the State Revolving Funds, considered one of the government’s most successful programs for local water projects. That means the revolving fund for drinking water would have the lowest budget in real terms since the program began in 1997, according to the Congressional Research Service.

The need to rehabilitate infrastructure is urgent for many of the nation’s 50,000 community water utilities. Broken or leaking pipes can contaminate water, flood streets, disrupt businesses and require expensive emergency repairs. Outdated treatment plants have trouble filtering out potentially harmful chemicals. Old pipes can leach dangerous levels of lead into drinking water. Some communities have higher lead levels than Flint, Mich., where a confluence of bad decisions and coverups led to widespread lead contamination.

The prospect of offloading these headaches to for-profit water companies — and fattening city budgets in the process — is enticing to elected officials who worry that rate hikes could cost them their jobs. Once a system has been sold, private operators, not public officials, take the blame for higher rates.

But privatization will not magically relieve Americans of the financial burden of upgrading their

water infrastructure. Water customers still foot the bill. And although there is no reliable data to compare the service or safety records of public and private utilities, studies show that in most cases, the tab rises when for-profit companies are involved.

That is in part because state regulatory agencies allow private operators to earn a profit on their investments — American Water Works' Indiana subsidiary collects 6.6 percent on these costs — giving them a strong incentive to upgrade systems more quickly than government-owned facilities would be.

Elected officials and the public “should ask good questions, and they should understand the trade-offs” before agreeing to sell municipal water systems, said Janice Beecher, who studies public and private systems as director of Michigan State University's Institute of Public Utilities. Selling a publicly owned water utility “shouldn't be rushed,” she warned. “Once it's gone, it's gone.”

Privately owned water systems serve about 12 percent of Americans. But the figure is much higher — 30 to 70 percent — in Indiana and 14 other states, including many with industry-friendly policies. Indiana has adopted six laws benefiting for-profit water companies in the past two years.



Lake Station Mayor

Christopher Anderson discusses the city's budget figures. He is weighing a decision confronting many small and midsize cities with shrinking populations and chronic budget deficits: whether to sell the public water system to a for-profit corporation. (John Nelson/www.johnnelsonphoto.com)

In 2015, investor-owned companies bought 48 water and sewer utilities, according to Bluefield Research, which studies the water market. They bought 53 systems in 2016, and 23 more through March of this year.

Fears raised by Flint's lead contamination crisis act as a "helpful catalyst" in the sales, said Richard Verdi, a Wall Street analyst who until recently covered water companies for Ladenburg Thalmann Financial Services. The Dow Jones U.S. Water index, made up of the three largest publicly traded U.S. water utilities, began rising in 2015, when Flint's water problems became national news. It hit a record high a year later, as other cities discovered lead in their water. After a brief dip, the index is rising under Trump.

In Lake Station, a divided city council voted in June to sell the municipal water system to American Water. Indiana passed a law last year that bypasses a public vote if a system is considered "distressed," as Lake Station's is. The

city's finances are so dire that it has laid off workers, delayed road repairs and skipped even small niceties such as Christmas decorations. Volunteers have begun cleaning the parks.

Selling the system to American Water, the nation's largest private water utility, allows the city to restore jobs and services and put the budget in the black.

Anderson, the mayor, a fifth-generation Lake Station resident, knows people are uneasy about handing control of the town's most essential resource to a publicly traded corporation.

"We want to make sure we get it right," he said last fall, when he was mulling the sale, "and I don't even know if there is a right answer right now."

Indiana and several other states allow private water operators to spread their costs and price increases among customers from other water systems they own in the state. If regulators approve the deal, that means American Water could bill its customers throughout Indiana for the estimated expenses of buying Lake Station's system. Those include the \$20.7 million purchase price, plus the 6.6 percent profit that state regulators allow the company to earn; business and property taxes; legal fees and other incidental expenses, plus 6.6 percent profit on those costs; and a 6.6 percent profit on the \$2.8 million that American Water plans to spend fixing Lake Station's aging pipes over five years.

One of the biggest inducements for water deals is the "fair market value" legislation that has been passed in six states — Indiana, California, Illinois, Missouri, New Jersey and Pennsylvania — and is being considered by others. It allows a city to sell its water system for an appraised value closer to what it would cost to replace the system, rather than the commonly used and much lower "book value," which reflects the age and original purchase price of the assets. The higher price is a potent lure for cities that need money for their

ailing budgets. It benefits the private buyers, too, since they can recoup the purchase price from ratepayers, along with a profit on the elevated figure.

“The importance of this legislation is evident when we look at the numbers,” Walter Lynch, chief operating officer of American Water, told analysts in August. “Nearly 97 percent of the customers [from deals] we have closed or pending are from one of these ‘fair market value’ states.”

Even as more cities consider selling their water infrastructure, others are trying to wrest control of their systems back from private operators, usually because of complaints about poor service or rate hikes. Since private owners are rarely willing to surrender these lucrative investments, cities usually end up pursuing eminent domain in court. That means proving that city ownership is in the public’s interest and then paying a price determined by the court.

Those prices can be exorbitant.

When residents of Mooresville, Ind., grew frustrated with rate hikes, the city tried to buy the system from American Water for more than \$9 million. A judge ruled in Mooresville’s favor in 2014, but the court-approved price — \$20.3 million — was more than the town of 10,000 was willing to pay. Today, Mooresville’s water system is still privately owned.

In 2015, Fort Wayne, Ind., finished paying \$67 million to take control of water systems in two areas served by private companies, most recently by Aqua America. The eminent domain effort lasted 13 years and included two separate court cases, a trip to the Indiana Supreme Court, and protracted battles over price.

Missoula, Mont., took ownership of its water system in June after winning a fight that left the city of 70,000 facing an \$88.6 million bill, plus millions of dollars more in expenses. Over the years, Missoula's water system had been owned by a regional water company; by one of the world's largest private-equity funds, the Carlyle Group; and by a subsidiary of Algonquin Power & Utilities, a Canadian corporation.

The city argued that under private ownership, the system leaked so badly that half of the water flowing through its pipes was lost — and that during Carlyle's three-year tenure, Carlyle investors received millions of dollars in dividends, paid for by Missoula ratepayers.

This story was produced by [InquireFirst](#), a San Diego nonprofit news organization, with support from the [McGraw Center for Business Journalism](#) at the [CUNY Graduate School of Journalism](#).

Road Closures for Highland Canal Storm Drain Project

Posted: Jul 28, 2017 9:52 PM PDT Updated: Jul 31, 2017 6:32 AM PDT



The City of Reno says there will be road closures for utility work on the Highland Canal Storm Drain Project.

Starting Monday, July 31, there will be construction on Mesa Park Road/Mae Anne Avenue with road closures from West Fourth Street to Leroy Street.

Construction is expected to take about four weeks and will take place Monday through Friday from 7 am until 7 pm.

The City says detour signs will be posted and they are asking drivers and bicyclists to use an alternate route during construction.

The City of Reno, Truckee Meadows Water Authority and Washoe County are partnering on the Highland Canal Storm Drain Project which is designed to capture and convey stormwater in a constructed collection system to reduce sources of stormwater pollution into the Highland Canal.

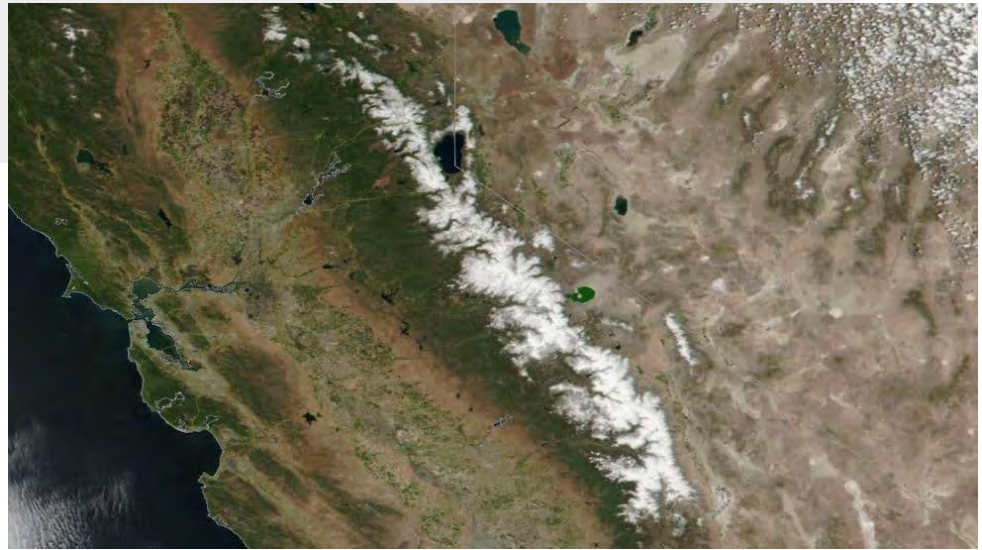
For the latest road closure information during the project, visit Reno.Gov/RoadClosures.

Sierra Snowmelt Is Triggering Earthquakes in Lake Tahoe Area, Scientists Say

By Ada Carr

Jun 29 2017 12:00 AM EDT

weather.com



Satellite image of the snow-covered Sierra Nevada on May 19, 2017. (NASA)

Story Highlights

More than three dozen quakes hit the Lake Tahoe area this week.

Earthquakes are more frequent in the region this time of year due to the weight of the melting snow, researchers say.

More than three dozen earthquakes have rattled the Lake Tahoe area this week, and researchers say they were triggered by snow melting off the surrounding mountain ranges.

Reports showed there were [more than three dozen minor quakes](#) that shook the Lake Tahoe area Tuesday, according to the U.S. Geological Survey. The largest measured a 4.0 magnitude and was reported 11 miles away from the town of Truckee.

Preliminary reports showed there were at least 28 minor aftershocks in the area that ranged 0.6 to 3.2 in magnitude. No injuries or major damage were reported.

Earthquakes are more frequent in the region this time of year due to the weight of the [melting snow and water lifting off of the ground](#), which triggers fault movement, according to a recent study.

(MORE: [2 Billion Could Become Climate Refugees From Rising Seas by 2100](#))

“We are finding that on the central San Andreas, the late summer months are when we see most seismicity, and that correlates with the larger stress changes,” University of California, Berkeley graduate student and study author Christopher Johnson said in the release. “It is not during the rainy season, it is more of the unloading that is resulting in the larger stresses, for that one fault.”

The snowpack presses down on the Sierra Nevada by roughly three-eighths of an inch and ground and stream water depress the Coast Ranges by nearly half of that, scientists say. The Earth’s crust flexes and begins pushing and pulling on California’s faults, including the San Andreas, which is its largest.



Snow-water equivalent, the water content of snow, in California's Tuolumne River Basin in the Sierra in 2015 and 2017. Lighter blue indicates less snow, while darker blue indicates more snow. The 2017 snow-water equivalent was 21 times greater than 2015. (NASA)

The annual movement of the mountains only raises the chance of earthquakes by a few percentage points, however, these findings give seismologists insight into how faults rupture and what kinds of stresses trigger quakes.

Earlier this week, officials reported that Lake Tahoe is just 3 inches from reaching maximum capacity because [more than 12 billion gallons of water](#) from snow melt in the Sierras have poured into it.



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New research indicates that a hidden fault in Asia could trigger a cataclysmic earthquake.



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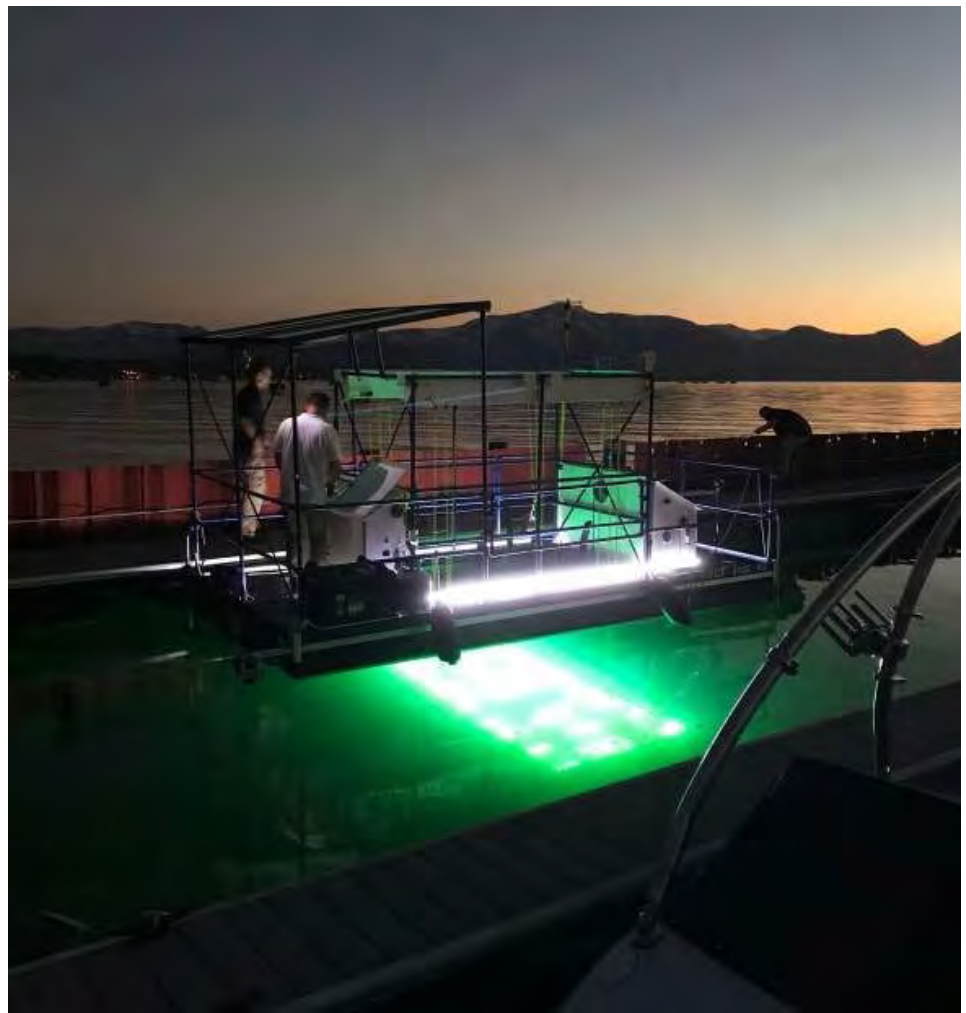
Environment

2016 Antarctica Melt Event Was Bigger Than Texas, Scientists Conclude

Here's why this is such scary news.

The Weather Company's primary journalistic mission is to report on breaking weather news, the environment and the importance of science to our lives. This story does not necessarily represent the position of our parent company, IBM.

Pilot program kills invasive aquatic plants in Lake Tahoe with UV light (video)





1 / 4

Claire Cudahy / Tahoe Daily Tribune |

The boat built by Inventive Resources has a panel of UV lights that is lowered down to expose the aquatic invasive plants.

Over the past two weeks, engineers have been testing out a new method of killing off invasive aquatic plants in Lake Tahoe using ultraviolet light — and the results are promising.

A team from Inventive Resources, Inc., a private engineering firm with a focus on environmental services, spent the last two years lab testing the effects of targeted ultraviolet light, specifically ultraviolet-C, on non-native aquatic species like Eurasian watermilfoil.

The research showed that UVC light damaged the DNA and cellular structure of the plants, causing them to die.

After approaching the Tahoe Resource Conservation District with the idea, a pilot project was launched in the Lakeside Marina at the end of June. The Lakeside Marina was constructed around 1955 with underwater barriers to limit water movement that could jostle the boats. This altered environment soon became an ideal location for the propagation of invasive plants, which prefer stiller, warmer water. The spread of these plants, which are around 8-feet tall in the marina, pose a major threat to the clarity of Lake Tahoe.

The research showed that UVC light damaged the DNA and cellular structure of the [invasive] plants, causing them to die. **Linkt o video:**

[Pilot program fights invasive plants in Lake Tahoe with UV light](#) from [Tahoe Daily Tribune](#) on [Vimeo](#).

Using a specially-made boat fitted with a drop-down panel of UVC lights, Inventive Resources has spent the last two weeks treating roughly 0.4 acres of the marina.

John Paoluccio, president of Inventive Resources, previously used UV light to eliminate algae in caves. When he heard about the issue of invasive aquatic species in Lake Tahoe, he knew this technology could be applied.

"These plants are so transparent and translucent that the light energy goes right into that plant and basically sunburns and scars the outer tissue. When you do that it releases all the air bubbles out of the plant, and they just drop," explained Paoluccio. "It causes a cell fusion, and they can no longer reproduce."

Paoluccio and his team have been testing different exposure times and distances from the bottom of the marina, all while monitoring the water hourly for levels of dissolved oxygen, pH, temperature and turbidity. So far there have been no significant changes.

"The biomass is so minimal with Eurasian watermilfoil and other aquatic plants that as it's dying back, it just disintegrates. We'll monitor that, too, as far as water quality pre- and post-treatment," said Nicole Cartwright, aquatic invasive species program manager for the Tahoe RCD.

Tahoe RCD will also monitor the microorganisms underneath the sediment to see if there are any impacts from the UVC treatment.

"We are already submitting to try and get funding to do environmental documentation to make this a method once we can prove it," said Cartwright. "Once the pilot's done we really do want to take this technology and make it bigger."

Paoluccio is also eager to see the technology grow.

"If you had a 30-foot barge out there, you could do a very large area very quickly," said Paoluccio. "Acres are not a big deal."

Tahoe RCD facilitated this pilot project using seed money from Tahoe Fund and a \$260,000 grant from the California Tahoe Conservancy.

"We're excited because it's a great private-public partnership," said Amy Berry, CEO of the Tahoe Fund. "We're going to need to try a lot of new innovative ways to fight this problem. Some may work and some may not. But the idea is that we can't just sit back and let the weeds destroy Tahoe."

Tahoe RCD and other members of the multi-agency Lake Tahoe Aquatic Invasive Species Coordinating Committee have had success with other methods of fighting invasive species around Lake Tahoe, too. The invasive plant population was significantly reduced in Emerald Bay using sun-blocking bottom barriers and diver-assisted suction removal.

This January, the Tahoe Keys Property Owners Association announced that it has applied for a permit for [small-scale demonstrations of aquatic herbicides](#) in 2018. The Tahoe Keys was created in the late 1950s by dredging an estimated 5 million cubic yards of material from the marsh at the mouth of the Upper Truckee River. Aquatic invasive plants, primarily curly leaf pondweed and Eurasian watermilfoil, have taken over more than 90 percent of the neighborhood's 172-acre lagoon system.

Share

Lake Erie an "outstanding" drinking water source, but toxins remain, report finds

Updated on July 31, 2017 at 7:51 AM Posted on July 29, 2017 at 6:00 AM



By [James F. McCarty, The Plain Dealer](#)
jmccarty@plaind.com

The Cleveland Water department analyzed common tap water in 2006 and found it safer to drink than Fiji bottled water. Scientists from the Environmental Working Group also recommended against buying bottled water on Wednesday. *(Gus Chan/Plain Dealer file photo)*
 182 shares

CLEVELAND, Ohio - A national, non-profit health research and advocacy organization released a report this week that found widespread contamination of drinking water in Cleveland and throughout Ohio.

The Environmental Working Group determined that, in 2015, virtually every large water system in Ohio produced tap water with detectable levels of the same seven or eight contaminants that exceeded health guidelines, but not federal standards.

EWG obtained its health guidelines from the latest state and federal scientific research, as well as from health and environmental agencies and EWG's own research, said David Andrews, a senior scientist at EWG.

Nearly all of the contaminants listed by EWG are byproducts of chlorine and other disinfectants used in the treatment process that water systems typically use to purify their raw water from natural sources.

All of the contaminants are legal, as there have been no additions to the nation's list of regulated chemicals since 1996, the EWG said.

"Just because your tap water gets a passing grade from the government doesn't always mean it's safe," said Ken Cook, president of EWG, in a prepared statement.

"It's time to stop basing environmental regulations on political or economic compromises, and instead listen to what scientists say about the long-term effects of toxic chemicals, and empower Americans to protect themselves from pollutants even as they demand the protective action they deserve from government."

The report arrived about a year after EWG proclaimed that the drinking water in Cleveland and 28 other water systems in Northeast Ohio contained unhealthy levels of chromium, a [cancer-causing toxin made famous in a film that documented the work of environmental activist Erin Brockovich](#).

Chromium remains a problem in much of the nation's drinking water, including Ohio, according to the latest EWG report. [Chromium has been linked to industrial pollution, road salt](#) or natural occurrences in mineral deposits and groundwater.

EWG supports a safety level of 0.02 parts per billion in drinking water, citing studies that even the tiniest amount of chromium can cause cancer. The federal limit for chromium is 100 ppb; California's legal limit is 10 ppb.

Cleveland's water in the latest report showed chromium levels of 0.103 parts per billion. For comparison, 1 part per billion is the equivalent of a drop of water in an Olympic-size swimming pool.

All of the other large water systems in Ohio also tested below 1 part per billion for chromium, including Akron, Cuyahoga Falls, Columbus, Cincinnati, Mentor, Avon, and Avon Lake.

Ohio EPA spokesman James Lee criticized EWG as an "alarmist advocacy group ... that creates unnecessary panic by cherry-picking data and developing misleading conclusions."

All Ohio public water systems are in compliance for chromium federal standards, Lee said.

The U.S. EPA is in the process of conducting a national scientific review of chromium. If a new health standard is set for drinking water, Ohio will move quickly to adopt that standard, Lee said.

Overall, EWG tested for 500 contaminants and found evidence of 267 nationwide.

Contaminants detected included 93 linked to an increased risk of cancer; 78 associated with brain and nervous system damage; 63 connected to developmental harm to children or fetuses; 38 that may cause fertility problems; and 45 linked to hormonal disruption.

According to the EWG findings, Cleveland also exceeded health guidelines in bromodichloromethane, chloroform, dibromochloromethane, dichloroacetic acid and trichloroacetic acid -- all potential carcinogens. Similar results were found in the water of most Northeast Ohio systems because they all use the same basic water disinfection techniques, said Cleveland Water Quality Manager Scott Moegling.

"The amount of byproducts is related to the quality of the water treatment," Moegling said.

"In Lake Erie, we have an outstanding source of raw water with little pollution or organic matter, and few of the other concerns such as cloudiness or contaminants from farming discharges that other systems have to worry about."

Cleveland Water Commissioner Alex Margevicius said the city has invested \$650 million in the past decade to update its four water treatment plants with state-of-the-art technology, providing 20,000 different monitoring checks during the treatment process.

"We are proud of the level of water quality we provide on a daily basis," said Jason Wood, chief of public affairs at the Cleveland Water department. "We can assure our customers that the water they drink is safe, and that we have some of the best people anywhere in the country to do this work."

He noted that all of the Cleveland Water department's 1.3 million customers receive drinking water that meets or exceeds all state and federal standards established by the Safe Drinking Water Act and the Ohio EPA.

EWG's Andrews said the test results for contaminants in the Cleveland Water department were similar to the averages found throughout the rest of the country, and at levels that would make it difficult "to make a huge impact" on improving the test results.

"Our intent is to highlight the water quality differences for the consumers, and to point out where the water systems' goal posts should be," Andrews said.

Andrews recommends home water filters using carbon or reverse osmosis technologies as the best way for consumers to reduce or eliminate contaminants from their drinking water. He shuns bottled water.

"EWG recommends that you drink filtered tap water," Andrews said. "You'll save money, drink water that's purer than straight tap water and help solve the global glut of plastic bottles."

Nearly every bottled water manufacturer fails to disclose if their water contains contaminants, whether it was purified, and from where it was obtained, according to the EWG. Bottled water manufacturers are not required by law to disclose contaminant levels in their products.

To learn about every potentially harmful chemical in your drinking water, and what scientists consider safe levels of those contaminants, check out this database, which can be searched by ZIP code: [Tap Water Database](#)

The site also includes a water filter buying guide.

To obtain its findings, the EWG mined the water data submitted by 50,000 water utility systems nationwide from 2010-2015. The data was originally submitted by health or environmental departments, and collected by the USEPA.

EWG's drinking water quality database includes nearly 30 million test results for 502 contaminants.

6 Cancer-Causing Contaminants Found In Horsham Water Supply: Study

A study claims that six cancer-causing contaminants have been found in unsafe levels in Horsham's water supply.



By [Justin Heinze \(Patch Staff\)](#) - Updated August 2, 2017 5:24 pm ET

HORSHAM, PA — A study released last week by an environmental nonprofit reveals that a number of cancer-causing chemicals have been found in levels they deem unsafe in water systems across Pennsylvania, including the Horsham Water and Sewer Authority. Horsham provides water to around 25,000 residents in the area.

The Environmental Working Group (EWG) reports that Horsham's water contains six cancer causing chemicals which exceed the health guidelines recommended by scientists: arsenic, chromium, perfluorinated chemicals, radium-229 and uranium (counted as one), tetrachloroethylene, and total trihalomethanes.

The perfluorinated chemicals PFOS and PFOA are the source of recent public outrage and health concerns, due to firefighting foams spilling on the nearby base. EWG's database shows PFOS and PFOA in Horsham water, but that database was based on tests from January to March of 2017. The [most recent studies](#) from Horsham Water and Sewer Authority show that now PFOS or PFOA has been found in the water supply since a testing done on April 5, 2017. Water has been clear of those contaminants in the six studies done since then.

The other contaminants found within Horsham's water were within legal limits as established by the Environmental Protection Agency (EPA), but not those established by leading scientists, according to EWG.

"Just because your tap water gets a passing grade from the government doesn't always mean it's safe, EWG President Ken Cook said in a statement. "It's time to stop basing environmental regulations on political or economic compromises, and instead listen to what scientists say about the long-term effects of toxic chemicals and empower Americans to protect themselves from pollutants even as they demand the protective action they deserve from government."

Patch reached out to Horsham Water and Sewer in regards the study, but they did not directly address its claims. Instead, they provided their most recent contaminant report, which lined up with the information in EWG's report. The information in the [EWG database](#) comes from federal and state reports.

Most water authorities in the region have a number of cancer causing chemicals, according to EWG. Several water authorities, including the nearby North Penn Water Authority, have said that they trust the EPA standard as the health standard.

"Our water is safe to drink," Anthony J. Bellitto Jr., executive director of North Penn Water Authority, told Patch. "It is not getting anybody sick and is not causing cancer. We use the best available water treatment technology and our system operators, treatment plant operators and team of water quality professionals are highly trained and experienced individuals who work every day to ensure that NPWA water meets or exceeds all Federal EPA and State PA DEP drinking water standards."

Why is the Truckee River flowing low?

by Diane Thao
Tuesday, August 1st 2017

The Truckee River is seen in downtown Reno on Tuesday, Aug. 1, 2017 (SBG)

RENO, Nev. (NEWS 4 & FOX 11) — Local residents have been seeing a dramatic drop in the levels of the Truckee River within the last month.

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The Truckee River looking dry compare to a month ago. Tonight at 5/6 find out why and if it's below average

[1:32 PM - Aug 1, 2017](#) [Twitter Ads info and privacy](#)

For several months, officials warned the public that the river was too dangerous following the historic winter. After having too much water, because of high lake levels, federal water master Chad Blanchard minimized the released from the Lake Tahoe Dam.

"We cannot release water from Lake Tahoe if we don't need it for Floriston rate," Blanchard explained. "We'd be breaking the law. So right now there's still enough snow melt - natural flow - to meet our required flow. So we cannot release from storage."

Typically after the lake peaks, the inflow from the snow melt exceeds evaporation. This causes Lake Tahoe to rise. Once balanced, the water master - Blanchard - has to trim back on the release.

Blanchard reported that the Truckee River is running at 630 cubic feet per second (CFS) as of August 1. That's above the river's average of 500 CFS.

Some areas along the Truckee River have sediment brought downstream from the high flows during the winter. The City of Reno has plans to remove the excessive gravel near Wingfield Park by the end of August.

AQUAOSO Launches Water Trading Platform in California

PR Newswire Jul. 31, 2017, 08:02 AM

GRANITE BAY, Calif., July 31, 2017 /PRNewswire/ -- AQUAOSO™, an early-stage water management and trading platform that helps customers manage, identify, buy and sell water rights is launching a beta version of its water trading platform. This initial roll-out is intended to better connect buyers and sellers of water rights.

"We are excited to bring advanced technology to water managers in California," said Christopher Peacock, CEO/Founder of AQUAOSO, a 20-year veteran of the water sector. "The beta version of our platform is an essential stepping stone for us to reach since our ultimate goal is building a resilient water future and sustainable communities by unlocking the true value of water."

AQUAOSO combines knowledge of water markets with smart sensors and big data to reimagine how all stakeholders manage, trade and view water resources. The platform helps customers research, identify, manage, buy and sell water rights while significantly reducing costs and risk. Through market intelligence AQUAOSO enables smarter water markets and watersheds around the globe.

"Individual farmers, irrigation districts and groundwater sustainability agencies will benefit from AQUAOSO's cloud based solutions that provide transparency and insights into water rights transactions which enables smarter water management," continued Peacock. "Our platform will reduce costs, time and risk associated with managing water rights and can help GSA's on the critical issue of establishing future groundwater credit markets."

Last month, AQUAOSO released "Enabling Smart Water Markets" a whitepaper that summarizes insights into the current state of water markets. To download a copy of the report or sign up as a beta user on the AQUAOSO platform, visit www.AQUAOSO.com.

About AQUAOSO

AQUAOSO™ is a Sacramento based public benefit corporation building a water resilient future through advanced technologies. The AQUAOSO water rights management and trading platform provides transparency and insight into water right transactions for all stakeholders. The platform enables smart water markets with data and IoT devices to increase the efficient allocation of water while enhancing stakeholder value. Save time. Save money. Reduce risk. AQUAOSO is A Better Way to Water Trade. www.AQUAOSO.com

Media Contact

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WQA SUPPORTS EWG'S TAP WATER DATABASE

LISLE, IL, AUG 1, 2017 -- The Water Quality Association supports the Environmental Working Group's newly released [Tap Water Database](#) as a way for consumers to learn more about the kinds of contaminants that might be in their local [drinking water](#). "It's important for consumers to know what's in their drinking water," said WQA Government Affairs Director David Loveday. "This new [tool](#) from EWG will help homeowners across the country determine whether they should consider having their water tested and whether they need some form of water [treatment](#)."

The database contains the results of tests from the U.S. Environmental Protection Agency from nearly 50,000 [utilities](#) in all 50 states and the District of Columbia from 2010 to 2015. Consumers can enter their zip code to learn more about the quality of their local drinking water.

SPONSORED CONTENT BY H2bid

WATER AND WASTEWATER INDUSTRY SEES GROWTH IN BID ACTIVITY

Media reports have produced numerous stories showing that the water and wastewater infrastructure industry is facing serious challenges due to crumbling infrastructure, new regulations, lead leaching in water pipes (e.g., Flint, Michigan), and population growth. [Read More...](#)

Brought To You By 

The EPA requires nearly all community water systems to issue a Consumer Confidence Report every year by July 1st, but according to a recent national study conducted for WQA, 62 percent of households across the United States either didn't read or don't know if they received their community's CCR. That's up from 56 percent in a 2015 survey. Residents should have their drinking water tested through a certified water-testing laboratory. Homeowners can check with the Water Quality Association at <http://www.wqa.org> to find a water quality professional or connect with a certified [testing lab](#) through the USEPA (<http://water.epa.gov/scitech/drinkingwater/labcert/statecertification.cfm>).

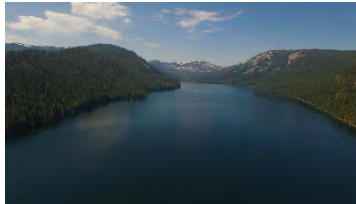
About WQA

WQA is a not-for-profit trade association representing the residential, commercial, and industrial water treatment industry. Since 1959, the WQA Gold Seal certification program has been certifying products that contribute to the safe consumption of water. The WQA Gold Seal program is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC).

Nature Conservancy Continues Work To Preserve Independence Lake

Posted: Aug 02, 2017 4:59 PM PDT Updated: Aug 03, 2017 7:38 AM PDT
By Paul Nelson

CONNECT



About a half-hour north of Truckee, down a rough, dirt road, you will find Independence Lake. It has been described as a small version of what Lake Tahoe looked like 100 years ago, with very little development. The Nature Conservancy is trying to keep it that way. It paid \$15 million for 2,300 acres around most of the lake, in 2010.

"By buying the land, we could protect the habitat, the watershed of the lake," Chris Fichtel, Independence Lake Project Manager with the Nature Conservancy said.

Its goal is to conduct forest restoration, prevent aquatic invasive species, and maintain native fish populations.

"It has the full compliment of native fish that it always had, and in particular, it had one, the Lahontan Cutthroat Trout," Fichtel said. "This is only one of two lake populations of that trout remaining. The other is Summit Lake, Nevada."

The lake also provides a lot of recreation for people. Josh and Bryan Cosby are from southern California, visiting Independence Lake because it is a lot less developed than other lakes in the area.

"You don't see this a lot," Josh Cosby said. "Especially, with not a lot of motor boats or not any developed buildings on the lake. Just nature."

"It's just an incredible day and you can see the reflections of the mountains and the trees, and it's almost like a painting or something, just incredible," Bryan Cosby said.

Anyone can visit Independence Lake, but there is no camping. People cannot bring their own watercraft, but there are three small motor boats provided by the Nature Conservancy, every other week. Kayaks are available every week.

"They're free," Fichtel said. "They're first-come, first-served and because there's only one access to the lake across our property, we can control that access."

"It's great just being able to fill out a little form, hop on the lake and just explore," Josh Cosby said.

High-profile vehicles are recommended to get to the lake, because the road can get rough, and it requires fording a small creek.

"It's almost as if it's off-limits to the public, but anyone can come here," Bryan Cosby said.

Along with boating, many people go to Independence to hike and have picnics along the clear water.

"It was glassing over," Lauren Kelly, Truckee Resident said. "It was a great morning for a kayak ride. Now, it's starting to get a little bit windy and we're gonna go for a hike. It's nice and beautiful, peaceful, not a lot of people out here."

Fishing is also popular, and people can take their catch home, with the exception of the Lahontan Cutthroat Trout. Those are "catch and release" only.

Independence Lake is also a last-resort for the Truckee Meadows Water Authority. The lake stores drought reserves, which can be released through a dam.

"That's an added benefit, is we're protecting water supply, the water quality for Reno and Sparks," Fichtel said.

Clearing the forest is another priority, which could make the area less vulnerable to wildland fires. Those fires create ash that easily washes into the lake and can affect clarity and the shoreline. The lake is two miles long and a half-mile wide, but it is important to the Nature Conservancy.

"This is an important resource for a number of reasons," Fichtel said. "Obviously, the water but also as a recreational resource and just a spectacular place to come."

Visitors do not have to pay an entrance fee but the Nature Conservancy does accept donations. Other funding comes from grants.

Ask the RGJ: Why is water still not filling Reno's Virginia Lake?

Mark Robison, mrobison@rgj.com Published 10:29 a.m. PT Aug. 2, 2017 | Updated 6:54 p.m. PT Aug. 2, 2017



Water covered elevated walkways and a deck at Reno's Oxbow Park before receding, leaving debris behind. Video by Chris Healy of Nevada Department of Wildlife. Nevada Department of Wildlife



(Photo: Provided by Lauren Ball/City of Reno)

22CONNECTTWEETLINKEDIN 2COMMENTEMAILMORE

Why is Virginia Lake *still* not filling up with water after promises back in February by the city of Reno to fix the problem?

• **Short answer:** After debris was cleared earlier this year from a ditch feeding into the lake, a large amount of sediment was discovered that had built up and was also impeding water flow. The city of Reno plans to start work on removing the sediment “later this month.”

Full question

Back in February, [an Ask the RGJ column looked at why Virginia Lake’s water level was so low](#). It turned out debris from the winter floods clogged the ditch that feeds into the lake. The city of Reno planned to remedy the situation within “a month or so.”

That was more than five months ago, and the lake still isn’t getting the water flow it should. Peggy Lear Bowen called to ask why.

Full reply

Here’s the response from Lauren Ball, public relations coordinator for the city of Reno:



Sediment clogs Cochrane Ditch on the south side of the Truckee River near Sierra Street in downtown Reno. (Photo: Provided by Lauren Ball/City of Reno)

“The Cochrane Ditch allows water to flow from the Truckee River to Virginia Lake. Over the winter, sediment and debris filled the ditch, which stopped water from flowing to Virginia Lake. The city staffers had to wait for water levels to drop before clearing the debris. The debris has been cleared, but lower water levels in the Truckee River led to the discovery of an additional issue impeding water flow to Virginia Lake. A large amount of sediment has accumulated along the edge of the river, near the Cochrane Ditch entrance leading to Virginia Lake. The sediment blocked any water from flowing to the Cochrane Ditch. City staffers are hoping to remove this sediment and restore water flow to Virginia Lake. Sediment removal for this area is slated to begin later this month.”

Ball added, "In order to clear sediment from the river, the city of Reno needs authority granted from multiple federal and state agencies."

This story was updated to include the need for approval to remove sediment.

Local Las Vegas

Las Vegas Valley Water District among nation's best, audit shows

August 3, 2017 - 6:30 pm

Updated August 3, 2017 - 8:13 pm

By Michael Scott Davidson Las Vegas Review-Journal



Janelle Boetler watches over the 24-hour command center at the Las Vegas Valley Water District headquarters on Wednesday, January 25, 2017, in Las Vegas. Rachel Aston Las Vegas Review-Journal @rookie__rae

The Las Vegas Valley Water District headquarters at the intersection of South Valley View and West Charleston boulevards is seen on Thursday, April 28, 2016. (Erik Verduzco/Las Vegas Review-Journal Follow @Erik_Verduzco)

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The Las Vegas Valley Water District considers its delivery system one of the most efficient in the country, but it still leaked enough water last year to fill more than 5,000 Olympic-size swimming pools, according to an annual internal audit.

Even with that amount of loss, the audit estimates the district is operating at 99 percent efficiency in its delivery of water through the city of Las Vegas and unincorporated Clark County.

“Every water system is going to lose water. That’s a fact,” district spokesman Bronson Mack said. “Water follows the path of least resistance. You have a lot of linkage within the water system, and any of that linkage provides some opportunity for leakage.”

Regardless of the losses, the district is doing an exceptional job, said Rob Renner, chief executive officer of the Denver-based Water Research Foundation.

“They’ve probably got one of the tightest systems in the U.S.,” he said. “In the middle of a desert water is so precious you can’t waste it. That’s why they’ve gone to the extent they have.”

Newer system, fewer losses

Last year the district was unable to bill for about 5 billion gallons of water that it treated and pumped, according to the audit that the district published in July and provided at the Review-Journal’s request.

The report found that two-thirds of the missing water was due to leakage and seepage, while most of the rest can be blamed on inaccurate readings from obsolete water meters.

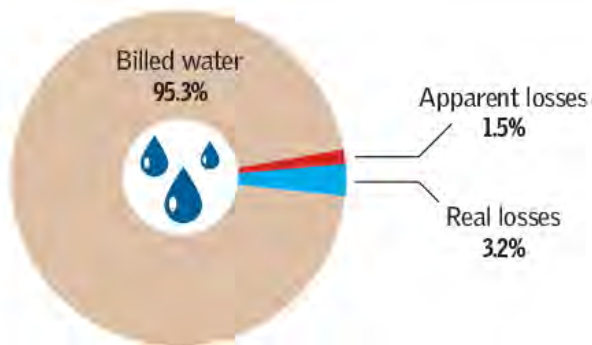
Still, the annual volume of water lost has trended downward over the past 10 years. Losses in 2006 were approximately 1 billion gallons more than last year.

In 2016, losses represented only about 5 percent of what traveled through the district’s system, three times lower than the national average, the audit found.

Peter Mayer, a water management expert with the Colorado-based WaterDM consulting firm, said the system’s efficiency likely reflects the fact that the Las Vegas Valley has seen most of its population arrive over the past 30 years.

Drip by drip

The Las Vegas Valley Water District delivery system is extremely efficient, but 5 billion gallons went unaccounted for last year. The bulk of that was due to leaks, but some losses were caused by inaccurate water meters.



Leakage compared

Nationally, water delivery systems measure losses on a scale of 1 (best) to 8 (worst). Here’s how Vegas compares to some state averages.



“Las Vegas is benefiting from the fact that they are a newer water system, and it’s generally easier to maintain,” he said. “On the East Coast there are water systems that are hundreds of years old with losses more in the neighborhood of 30 percent of water deliveries.”

Mayer said, however, he wouldn’t back the district’s claim that Las Vegas has one of the country’s best water systems.

“My biggest caution is that comparing between utilities is always an iffy proposition because each utility is so different,” he said. “The value of comparison is really with yourself, how are you doing over time?”

Listening for leaks

To continue working toward optimization, Mack said the water authority is replacing hundreds of obsolete meters a year. The audit shows they have about 850 to go.

The district also has leak-detection technology that measures frequencies along pipelines overnight to pinpoint leaks. Analysts who listen in can tell the difference between a leak, typical water usage or the buzz of other infrastructure, like an electrical transformer.

“Vegas is a 24-hour town; our water system is a 24-hour water system,” Mack said. “The last thing we want to do is dig up a street and say, ‘OK, the leak isn’t here. Let’s keep digging.’ ”

But there will always be leaks. The audit estimated that at 100 percent efficiency, the system would still leak about 2.2 billion gallons of water a year due to unavoidable losses.

And becoming much more efficient might not be worth the cost, Mack said.

“We have to weigh the investment that we make in ratepayer dollars into finding and fixing these leaks and seepage with how much savings we’re actually going to get,” he said. “Does it make sense for us to invest \$2 million a year if we’re only going to realize \$1 million in savings on the back end? That’s the balance you have to maintain.”

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No-growth zealots hurt the cause of protecting Reno lifestyle: Randi Thompson

Randi Thompson, Special to the RGJ Published 2:35 p.m. PT Aug. 3, 2017 | Updated 2:36 p.m. PT Aug. 3, 2017

CLOSE 

The rising cost of housing in the last few years is making home ownership a tough proposition for Reno home buyers. We look at what's fueling the Biggest Little City's housing crisis and potential options for people looking for a new place to call home Jason Hidalgo/RGJ

(Photo: Provided)

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There is a lot of pending development going on around the Truckee Meadows, and a lot of long-time (and short-time) residents are not happy about it. I understand. I used to drive Mt. Rose Highway when it was a two-lane road. When Meadowood Mall opened, I remember saying, "Who is going to drive all the way out there to shop?" In the 1990s, there were city and county candidates who ran as "no growth" candidates. So this opposition to growth is nothing new.

Growth is inevitable, as we do live in a great area. And I'm counting on our elected officials to manage that growth in a sustainable and sensible manner. That is our job as residents and voters, to express our concerns to our leaders. But folks, we have to do it in the right manner and tone, or we will not only lose our credibility, we'll lose our scenic views and open lands.

The recession of 2009 is over, and now we are booming again, and the "no growers" are back; but now they are called: NIMBYs (Not In My Back Yard), CAVEs (Citizens Against Virtually Everything) and BANANAs (Build Absolutely Nothing Anywhere Near Anything). I don't like the labels, but sadly many residents are deserving of them.

There has been a significant surge from residents opposing various development projects. They are often emotional because the neighborhood they love could change, and I understand that. The real concern is when residents stand up at meetings and outright lie about the project, the developer or its possible impacts. They lose credibility; and when they lose that, they lose the argument. That is not helping your cause.

Our elected officials are under immense pressure to provide housing to a growing workforce. Developers support candidates who align with this growth. We residents need

to maintain our credibility in talking with our elected officials, to ensure that we can keep a balance in this growth.

Our region is growing, and it will continue to grow. We have a housing shortage, so more development is inevitable. That is why we need to work with our leaders, not put up signs saying they should be recalled. Such antagonism works against us residents, not the developers.

I hear residents saying that some of these projects are going to destroy our lifestyle or take all our water. Reno is not the rural community that it once was, I admit. Yet I still drive by homes with horses, cows and sheep in their yards. That is because residents have worked with city leaders and builders to develop the area in a way that protects our way of life. We need to continue to do that. In the work I have been involved with to redevelop the old D'Andrea golf course, I have seen how communication can work to find common ground.

Don't make developers the enemy. Many of them live here and want the best for our community. Working together, we can have smart, responsible growth in Northern Nevada.

Randi Thompson is a political and public relations consultant. You can reach her at Randi@RandiThompson.com.



Buy Photo

Housing construction in the Damonte Ranch area on March 24, 2017. (Photo: Andy Barron/RGJ)

This tiny Sierra Valley town voted to pull out of CalPERS. Now city retirees are seeing their pensions slashed

By **[Phil Willon](#)** *Contact Reporter*



Loyalton city retiree John Cussins had his pension cut by 60% when the city opted out of CalPERS, citing the inability to afford paying into the program. (Myung J. Chun / Los Angeles Times)

The tremor in John Cussins' right hand worsened as he described restless nights haunted by worries about paying the bills.

After suffering a stroke in 2012, he retired as a 21-year employee of the city of Loyalton, Calif., where he oversaw the town's water and sewer systems.

Cussins, 56, believed his city pension and the Social Security payments he and his wife received would bring in enough to provide a decent retirement in the tiny, old timber mill town in the Sierra Valley.

Then a letter arrived in October. The California Public Employees' Retirement System was cutting his \$2,500-a-month pension by 60 percent, bringing it to about \$1,000 a month.

"I was really shocked when I found out about it," Cussins said. "We thought the pensions were there for the rest of our lives."

Loyalton's four retired city employees became the first in California to see their pensions sliced by CalPERS because of a city defaulting on its payments to the fund, but hundreds of other government retirees across the state may soon face a similar fate. At the same time, financially strapped local governments that considered pulling out of the state pension system, some hoping to find more affordable alternatives, have found it next to impossible to do because of the large termination fees they must pay CalPERS if they do.

As the nation's largest public pension fund, CalPERS manages a \$300-billion retirement system that services more than 1.8 million members and a retiree healthcare program that serves close to 1.4 million more. CalPERS functions as a money manager, investing the funds paid into the system by state and local governments. But those governments decide what pension benefits they will provide their employees and are ultimately responsible for ensuring there is enough money in their pension funds to provide the benefits promised.

Cussins was a member of the Loyalton City Council when the pensions were cut, but he said he had no idea it was coming. More than three years before he was elected, the council voted to pull out of CalPERS when its last pension-eligible employee retired, deciding the monthly payments were too steep for a town that for years flirted with insolvency.

CalPERS levied a \$1.66-million termination fee on the city. Loyalton, home to about 760 people, has a single full-time city worker and an annual budget just shy of \$1 million. The city didn't pay the fee, so the four retired city employees saw their pensions slashed in November.

"I'm scared to do anything. I'm scared to spend much money," Cussins said. "I guess worst comes to worst, we'd even have to sell our property and try to go to some low-income housing deal."

He now has company. The CalPERS Board of Administration in March voted to cut the pensions of close to 200 retirees from the East San Gabriel Valley Human Services Consortium, a Southern California job training program created by the cities of Azusa, Covina, West Covina and Glendora. The agency stopped contributing to the state pension system when it folded in 2014. On July 1, CalPERS sliced the pension checks for the consortium's retirees by 63%.

Retirees of the Niland Sanitary District, just east of the Salton Sea, could also face action, although the agency is currently negotiating with CalPERS officials to determine how much it may cost to leave the pension system.

At the center of all of these cases is the termination fee local governments must pay to CalPERS if they opt to leave the system — money that officials at the state pension system say is needed to ensure retirees receive the full pensions they were promised.

How state and local government budgets will be affected by CalPERS' trimmed investment expectations>>

After the city of Stockton declared bankruptcy in 2012 following the nationwide recession, the federal court judge handling the case called the fee a “golden handcuff” and “poison pill” that prevents cities and other local governments from leaving CalPERS to find other options for employee pension benefits. The price tag for Stockton to pull out of CalPERS was \$1.6 billion. The city chose to stay put.

If a city decides to pull out of the state pension fund, CalPERS places the municipality’s pension fund into a pool of lower-risk investments, which lowers the return rate on what that city earns. As a consequence of the reduced investment earnings, the city will have less money to pay the full pension benefits of its retirees, increasing the termination fee imposed by CalPERS to make up the shortfall.

Loyalton’s CalPERS account was worth \$1.1 million when it voted to pull out. And when placed in the pool of terminated pension accounts, the city was expected to earn a 2.4% rate of return on those investments. That rate of return for Loyalton’s terminated account was far lower than what CalPERS expects to earn for active pension accounts — roughly 7%.

CalPERS spokeswoman Amy Morgan said the agency placed the pool of terminated accounts in conservative investments as a precaution because CalPERS would be obligated to cover any shortfall if there was a drop in earnings. That risk is compounded by the fact that cities exiting CalPERS stop contributing to the pension system — monthly payments that serve as a buffer to investment losses and other potential impacts, including inflation.

Close to 100 cities and other government entities have terminated their CalPERS accounts and, combined, those pension funds create a pool of money that exceeds \$222 million. As of June 2015, the amount CalPERS expected to have to pay in pensions from that fund was estimated to be \$88.5 million — meaning the pension account had a \$111-million surplus, [according to a March report](#).

Villa Park in Orange County toyed with the idea of leaving CalPERS in 2014, in part because officials wanted to determine the small city's long-term pension liability. Former Villa Park Mayor Rick Barnett said other, more affordable options are available, including deferred compensation plans similar to a 401(k). But Villa Park opted not to move forward after CalPERS tallied the termination fee: \$3.6 million.

"It's a joke," said Barnett, an Irvine bankruptcy attorney. "You're trapped."



Sunset on Main Street in Loyalton, Calif. The city opted out of funding its CalPERS program, leaving four retirees with 60 percent cuts to their pensions. (Myung J. Chun / Los Angeles Times)



two \$10,000 headstones was criticized as wasteful spending. (Myung J. Chun / Los Angeles Times)

Loyalton's purchase of



Deer graze on the front

lawn of a house on Beckwith Road in Loyalton. (Myung J. Chun / Los Angeles Times)

CalPERS warned Loyalton officials about the exit fee back in June 2014 and met with city leaders several times to discuss the consequences. CalPERS officials said that Loyalton received 10 collection notices before the pensions were cut. But the retirees said neither the city nor CalPERS warned them that their pensions were at risk until last fall.

“As a Board, we have a fiduciary responsibility to keep the CalPERS Fund on secure footing, and as part of this duty we must ensure that employers adhere to the contracts they agreed to. When they don’t, the law requires us to act,” said Rob Feckner, president of the CalPERS board, in a statement after the November decision. “The people who suffer for this are Loyalton’s public servants who had every right to expect that the city would pay its bill and fulfill the benefit promises it made to them.”

Loyalton City Council members told CalPERS officials in November that the city would directly reimburse retirees for the pension money they lost — \$5,000 a month for all four retirees combined.

But that promise may be short-lived. The City Council has been providing those supplemental payments since CalPERS sliced the city retirees’ pensions, and it has voted to continue those payments until November. After that, the payments may be reduced — or cut off entirely.

[How a governor’s bid to exert control over California public pensions backfired>>](#)

Most of Loyalton’s annual budget is dedicated to running the city’s water and sewer system. The city only has about \$160,000 for other expenses, including paying the Sierra County Sheriff’s Office for police protection, the salary of the city’s single full-time employee who works inside City Hall and outside contractors that help run the city. Loyalton only expected to have \$30,000 in reserves, city officials said. Reimbursing the city’s retirees will cost \$60,000 a year.

Loyalton Mayor Mark Marin knows the math won’t work. The son of the former town fire chief, Marin spent most of his life logging in the Sierra Nevada until he said he was talked into running for mayor just over a year ago, adding that he only ran for City Council to help untangle the city’s financial mess.

“I don’t know where we’re going to get the money unless we start selling crap off,” Marin said. “What’ll end up happening is that we won’t be able to pay our obligation and the retirees will come back with a lawsuit. The only way they’re going to get any money is if they take property. It’s a Catch-22.”

Marin noted that it would have been a lot cheaper if the city had just stayed in CalPERS. Loyalton was paying just \$3,500 a month, and that covered the cost of its retirees’ full pensions.

Once a proud and vibrant company town known for solid-paying jobs and a frontier lifestyle, Loyalton was flattened in 2001 when Sierra Pacific Industries — the largest employer in Sierra County at the time — shut down the sawmill that sustained the town for more than a century.

And more recently, Loyalton has been bitten by a series of self-inflicted financial blunders and misfortune.

In 2014, a Sierra County grand jury issued a [scathing report that detailed a litany of mismanagement issues](#) in the city. It found some members of the City Council were “less than honest” and questioned whether the city would survive financially.

“The City, through its City Council, has decided that amateurs know the best way to run the city, and this is causing problems that are starting to show up. This is exposing the citizens of the city to liability issues in many forms and from many sources,” the report stated.



Loyalton Mayor Mark Marin, at his City Hall desk, has the job of sorting through the budget mess he inherited — including the city opting out of the state pension fund. (Myung J. Chun / Los Angeles Times)

In 2010, the city’s bookkeeper was arrested and charged with embezzling public funds. The FBI was called in to help sift through the city’s tangled finances.

Around the same time, Loyalton’s city employees received a big raise — close to 50 percent. Explanations for how that happened differ. Marin says it was knowingly approved by a former City Council. But Councilman Brooks Mitchell, who was on the council when the raises went through, insists that he and his colleagues approved only a 5% raise and that the figure was mysteriously switched to 50% after the vote. It took years for city officials to notice, Mitchell said.

Mitchell figures that mistake cost the city more than \$650,000, though Loyalton’s insurance policy allowed the city to recoup about \$330,000. But that pot of money disappeared fast. The council spent a chunk to convert an old elementary school into a new home for Loyalton’s City Hall and the town museum in 2015. It also spent more than \$20,000 on a pair of engraved stone signs to welcome visitors to Loyalton.

“The City Council went overboard. They got all this money back from the insurance and started spending everything. Then, later on, they cut our retirement,” said Patsy Jardin, 71, who worked for the city for three decades as the City Hall office manager and bookkeeper.

Jardin said her \$4,100 monthly check from CalPERS was slashed by close to \$2,000 after the City Council voted to pull out of the pension fund in 2012.

The council “promised me it wouldn’t cut my retirement,” Jardin said. “They promised me.”

Loyalton’s mayor said there’s no doubt the city messed up by granting pension benefits without thinking hard about whether the small town could pay for them down the line. But, he said, Loyalton’s predicament is just a symptom of a overly generous state pension system that has become unsustainable.

“There are people who made \$200,000 a year and they’re drawing \$200,000 in retirement,” Marin said. “How’s that going to work?”

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