



TRUCKEE MEADOWS WATER AUTHORITY Board of Directors

AGENDA

Wednesday, March 17, 2021 at 10:00 a.m.
Virtual meeting only.

MEMBERS OF THE PUBLIC MAY ATTEND VIA THE WEB LINK, OR
TELEPHONICALLY BY CALLING THE NUMBER, LISTED BELOW.
NO PHYSICAL LOCATION IS BEING PROVIDED FOR THIS MEETING

(be sure to keep your phones or microphones on mute, and do not place the call on hold)

Please click the link below to join the webinar:

<https://tmwa.zoom.us/j/93199705901?pwd=b1BNd2hHM2pqVkVhZFJlCcGzV1NkUT09>

Password: 205040

Or call:

Phone: (888) 788-0099

Webinar ID: 931 9970 5901

Board Members

Chair Vaughn Hartung
Member Neoma Jardon
Member Jenny Brekhus
Member Paul Anderson

Vice Chair Kristopher Dahir
Member Alexis Hill
Member Naomi Duerr

NOTES:

1. This meeting is being conducted pursuant to the Governor's Declaration of Emergency Directive 006 ("Directive 006 [http://gov.nv.gov/News/Emergency_Orders/2020/2020-03-22 - COVID-19 Declaration of Emergency Directive 006/](http://gov.nv.gov/News/Emergency_Orders/2020/2020-03-22_-_COVID-19_Declaration_of_Emergency_Directive_006/) and will be held by teleconference only.
2. The announcement of this meeting has been electronically posted in compliance with NRS 241.020(3) and Directive 006 at <http://www.tmwa.com>, and NRS 232.2175 at <https://notice.nv.gov/>.
3. Pursuant to Directive 006, the requirement contained in NRS 241.020(3)(c) that physical locations be available for the public to receive supporting material for public meetings has been suspended. Staff reports and supporting material for the meeting are available on the TMWA website at <http://www.tmwa.com/meeting/> or you can contact Sonia Folsom at (775) 834-8002. Supporting material is made available to the general public in accordance with NRS 241.020(6).
4. The Board may elect to combine agenda items, consider agenda items out of order, remove agenda items, or delay discussion on agenda items. Arrive at the meeting at the posted time to hear item(s) of interest.
5. Asterisks (*) denote non-action items.
6. Pursuant to Directive 006, public comment, whether on action items or general public comment, may be provided without being physically present at the meeting by submitting written comments online on TMWA's Public Comment Form (tmwa.com/PublicComment) or by email sent to boardclerk@tmwa.com prior to the Board opening the public comment period during the meeting. In addition, public comments may be provided by leaving a voicemail at (775)834-0255 prior to 4:00 p.m. the day before the scheduled meeting. Voicemail messages received will be noted during the meeting and summarized for entry into the record. Public comment is limited to three minutes and is allowed during the public comment periods. The Board may elect to receive public comment only during the two public comment periods rather than each action item. Due to constraints of TMWA's videoconference system, public comment must be provided by voicemail, email or online comment as indicated above.
7. In the event the Chairman and Vice-Chairman are absent, the remaining Board members may elect a temporary presiding officer to preside over the meeting until the Chairman or Vice-Chairman are present (**Standing Item of Possible Action**).
8. Notice of possible quorum of Western Regional Water Commission: Because several members of the Truckee Meadows Water Authority Board of Directors are also Trustees of the Western Regional Water Commission, it is possible that a quorum of the Western Regional Water Commission may be present, however, such members will not deliberate or take action at this meeting in their capacity as Trustees of the Western Regional Water Commission.

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.

1. Roll call*
2. Pledge of allegiance*
3. Public comment — limited to no more than three minutes per speaker*
4. Possible Board comments or acknowledgements*
5. Approval of the agenda (**For Possible Action**)
6. Approval of the minutes of the February 17, 2021 meeting of the TMWA Board of Directors (**For Possible Action**)
7. Discussion and possible action and direction to staff regarding 2021 legislative activities, current bills, and TMWA recommended positions on legislative proposals — John Zimmerman and Leo Drozdoff (**For Possible Action**)
8. Water Supply Update — Bill Hauck*
9. Discussion and possible action on Resolution No. 291: A Resolution to approve funding for one or more of the projects recommended by the Truckee River Fund Advisory Committee and an authorization for the Community Foundation to fund such projects from Fund proceeds (Resolution may reflect action taken in one or more votes on recommended projects) — Sonia Folsom and John Enloe (**For Possible Action**)
10. Discussion and possible action on the TMWA Tentative Budget for the Fiscal Year ending June 30, 2022 and Draft Capital Improvement Plan for Fiscal Years 2022 through 2026 — Matt Bowman and Sandra Tozi (**For Possible Action**)
11. Discussion, action, and possible authorization to the General Manager and approval of Water Resource Exchange Agreement between TMWA, TRI General Improvement District and Tahoe-Reno Industrial Center in furtherance of the July 17, 2018 TMWA, TRIGID, Reno and Sparks Return Flow Management Agreement and reclaimed water service to the Tahoe Reno Industrial Center — John Enloe (**For Possible Action**)
12. General Manager's Report*
13. Public comment — limited to no more than three minutes per speaker*
14. Board comments and requests for future agenda items*
15. Adjournment (**For Possible Action**)

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TRUCKEE MEADOWS WATER AUTHORITY
DRAFT MINUTES OF THE FEBRUARY 17, 2021
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Wednesday, February 17, 2021, via Zoom Virtual Meeting, Reno, Nevada. Chair Hartung called the meeting to order at 10:17 a.m.

1. ROLL CALL

Members Present: Paul Anderson, Jenny Brekhus, *Kristopher Dahir, Naomi Duerr, Vaughn Hartung, and Alexis Hill.

Member Absent: Neoma Jardon

A quorum was present by telephonic appearance.

**Vice Chair Dahir left the meeting at 11:30 a.m.*

Chair Hartung noted Michael Pagni, TMWA General Counsel, was absent and Paul Lipparelli was present as alternate legal counsel.

2. PLEDGE OF ALLEGIANCE

The pledge of allegiance was led by Member Brekhus.

3. PUBLIC COMMENT

Valerie Cook, Reno Resident, expressed her gratitude of having such a great trail along the Steamboat Ditch Trail within city limits and her concern about the Steamboat Ditch trail project which may negatively affect future generations from enjoying.

4. POSSIBLE BOARD COMMENTS OR ACKNOWLEDGEMENTS*

There were no Board comments.

5. APPROVAL OF THE AGENDA

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

6. APPROVAL OF THE MINUTES OF THE JANUARY 20, 2021 MEETING

Upon motion by Member Hill, second by Member Anderson, which motion duly carried by unanimous consent of the members present, the Board approved the January 20, 2021 minutes.

7. NATIONAL WEATHER SERVICE (NWS) WINTER OUTLOOK

Chris Smallcomb and Tim Bardsley, NWS, presented on the meteorology for the next few weeks and months. Mr. Smallcomb stated snowfall monitored at the Reno-Tahoe International Airport is at 15 inches, where it is normally 17 inches for this time of year, which is just below normal; the region is drier than normal and there will be a few storms over the next couple of weeks, but temperatures will be fairly warm and will see some snowbelt sooner than expected; the last five Marches were at or above normal precipitation, but this year indicates a below average precipitation; and there is a 30% odds of recovering to normal snow water equivalent (SWE). Mr. Bardsley added that the 30% statistical odds factor in February's precipitation that is below average.

8. WATER SUPPLY UPDATE

Bill Hauck, TMWA Water Supply Administrator, informed the Board that conditions have improved since January where the snowpack (SWE) conditions were 57% of normal in both the Truckee and Lake Tahoe Basins and the Mt. Rose snotel site had approximately 10 inches of water equivalent in the snowpack now both basins are roughly 80% of normal and the Mt. Rose snotel site has approximately 20 inches of water equivalent in the snowpack; so conditions have significantly improved, but unless there are at least a couple of big atmospheric river (AR) type of precipitation events around the corner, the snowpack season will very likely end up below average once again; despite the latest NRCS projections for below average run-off, (~70% of normal); upstream storage on the Truckee River system is still in decent shape, currently at 42% of capacity; and this will help to provide normal river flows through the end of this year and into the next; and Lake Tahoe is still about 2.6 feet above the rim;. John Enloe, TMWA Director of Natural Resources, added that staff have been in discussions to expand the recharge program, which were identified in the 2020-40 Water Resource Plan, to increase to 9,000 acre feet per year throughout all the basins; and staff will return to the Board in April with a project concept for their consideration.

Vice Chair Dahir inquired under what circumstance would trigger for TMWA to ask the public to do something differently. Mr. Hauck replied that runoff forecasts consider multiple variables to determine drought conditions, but it is the Truckee River Operating Agreement (TROA) which determines whether or not the region is coming into a drought based on pre-determined thresholds for projected upstream storage and/or river flows; once a drought is determined a TROA, TMWA follows its own internal protocols for water conservation measures based on the severity of the drought ; all of which can be found in the 2020-40 Water Resource Plan.

Chair Hartung inquired about the study with the Bureau of Reclamation and Army Corps of Engineers for the potential to store water sooner than is allowed now. Mr. Hauck replied staff is working with both agencies evaluating the reoperation of upstream reservoirs to maintain flood control requirements and improve overall water supply conditions under different hydrologic scenarios.

Public Comment

Jerry Wager, Reno Resident, asked Mr. Hauck if it was possible to compare the level of variation in snowpack over the last 10-20 years compared to TMWA's historical record.

9. DISCUSSION AND POSSIBLE ACTION AND DIRECTION TO STAFF REGARDING 2021 LEGISLATIVE ACTIVITIES, CURRENT BILLS, AND TMWA RECOMMENDED POSITIONS ON LEGISLATIVE PROPOSALS

John Zimmerman, TMWA Water Resources Manager, and Leo Drozdoff, TMWA Lobbyist, informed the Board that the Legislative Session began February 1 and TMWA's Legislative Subcommittee (LSC), which consists of Members Dahir, Duerr, Hill and Anderson (as Alternate), have had two meetings to date. The bills listed in the packet provide details on the ones the LSC is tracking and the LSC-approved staff recommended positions; not all bills have yet to be introduced and only 287 bills have been introduced to date and over 1000 bill draft requests (BDRs) have yet to be introduced; and two water related BDRs yet to be released.

Member Brekhus inquired when a new lobbyist was obtained and if there was a contract brought to the Board for approval. Mr. Zimmerman replied that TMWA engaged Mr. Drozdoff, who is the former director of Conservation and Natural Resources and administrator of Nevada Department of Environmental Protection (NDEP), half-way through the last session and fully since the 2020 Interim Session, and no contract was brought forth to the Board, the General Manager authorized it.

Staff provided an update on key legislation: AB3 (allows parcel maps and documents be sent electronically), support; AB5 (attempts to clarify what actions State Engineer can be judicially reviewed), monitor, and AB6 (does not require a hearing on a temporary application), support; AB39 (revises provision related to public records), monitor; AB87 (proposes to streamline the process by which certain easements of cities and counties can be vacated and abandoned without a hearing), oppose since the law includes public utility and staff wants to ensure TMWA is involved in the process; AB90 (requires counties to pay impact fees to certain local governments for projects of inner county significance), monitor, staff would like to speak with the bill sponsor to ensure they understand the bill; AB97 (revises provisions governing toxic chemicals), monitor, but it is not an issue in Nevada and TMWA does not monitor it annually, but when staff has sampled in the past the results were "non detect"; AJR2 (recognizes that forest health is directly related to water quality), support; and SB67 (increases the threshold that an agency can self-perform a public work from 100k to 250k), support since TMWA has a state certified apprenticeship program and it would allow more opportunity for on-the-job training, where appropriate, if it is increased.

The Board discussed the importance of monitoring AB97 in relation to chemicals used in firefighting foams and aerial suppression as it relates to the potential of contamination of our water supply in the region, despite there not being any evidence of it here now. Andy Gebhardt, TMWA Director of Operations and Water Quality, stated Will Raymond, TMWA Operations Manager, has been monitoring this for quite some time, long before it became a bill.

Upon motion by Member Duerr, second by Member Hartung, which motion duly carried by unanimous consent of the members present, the Board accepted the report and TMWA Legislative Subcommittee recommendations.

10. PRESENTATION ON THE STATUS OF THE DIGITAL PLAN REVIEW PROCESS

Danny Rotter, TMWA Engineering Manager, updated the Board on the status of the digital plan review process and the progress made internally and with local and state agencies. At the outset of the pandemic in March 2020, TMWA staff quickly stood up the temporary ability to allow scanned copies of plans to be electronically submitted to TMWA for approval and the transition to the permanent solution has been going extremely well.

Vice Chair Dahir congratulated staff on their progress, especially during the pandemic, which will be beneficial for the region as a whole.

Chair Hartung recessed at 11:50 a.m.

Chair Hartung resumed the meeting at 12:00 p.m.

11. PRESENTATION OF FISCAL YEAR 2021 Q2 YEAR TO DATE FINANCIAL RESULTS

Matt Bowman, TMWA Financial Controller, presented the actuals vs. budget as of December 31, 2020. Mr. Bowman said staff does its best to budget for what will happen throughout the year: change in net position \$9m (34%) over budget which was driven by higher water sales in the first quarter of FY2021; operating revenue water sales are ahead of budget by about \$3.4m (5%) due to high temperatures and drier season; operating expenses were under budget about \$3.2m (6%) due to services and supplies which is \$1.9m under budget, but expect it to catch up by the end of the year; non-operating expenses was \$1.3m (31%) higher than budgeted, which includes investment income and is less due to falling interest rates; capital contributions spent to date is \$19.3m; cash position was \$218.3m or \$12.5m higher than budgeted (\$161m unrestricted and \$58.1m restricted to pay for scheduled bond principal and interest payments).

Member Duerr asked what were “contributions from others”. Mr. Bowman replied it refers to direct developer payments, if TMWA has constructed a facility or asset and those payments are coming directly from the developer versus through area fees.

Member Brekhus asked if there is a rate increase scheduled for May. Mr. Bowman replied yes, the Board approved it in August 2020 after two deferrals. Michele Sullivan, TMWA CFO, added that the debt service coverage ratio is getting tight where they are projecting it to be 1.6 or 1.7x and the Board requirement is 1.5x. If the 2.5% rate increase (about \$1/month average) does not occur in May, they may be looking at a 5% increase, which is not something they want to implement.

Member Hill clarified the debt service coverage ratio was a percentage of bonds. Ms. Sullivan replied no, it is the amount remaining after operating expenses and it should be 1.5x for the year per Board policy. TMWA's covenants would be violated if it went below 1.25x, but if it fell below 1.5x that would put TMWA's gradings with the rating agencies in jeopardy.

Vice Chair Dahir appreciated TMWA staff having been patient with customers during the pandemic by delaying the rate increase. However, it is imperative now to be fiscally responsible and cognizant of our debt ratio to ensure there are no negative side effects to TMWA's ratings by delaying it further.

12 INFORMATIONAL REPORT REGARDING TMWA INVOLVEMENT WITH THE STEAMBOAT CANAL PROJECT AND STEAMBOAT CANAL & IRRIGATION COMPANY

Mr. Zimmerman noted the Board, at their last meeting, had questions about the project and TMWA's involvement in the Steamboat Canal & Irrigation Company (Steamboat) where TMWA's shares represent 13% (biggest shareholder) of active shares. He added that the Natural Resources Conservation Service (NRCS) decided to halt the project based on public comment. The NRCS asked TMWA to be a cooperating agency, which phrase is used under the Nevada Environmental Protection Agency (NEPA) regulations and gives an agency a greater participation in a project as opposed to a member of the public providing comments; the cooperating agency has an interest in the project or some expertise to offer the lead agency. NRCS asked TMWA if we wanted to be a cooperating agency and staff intended to bring that to the Board. However, the project is now on hold, but if NRCS takes it up, and approaches TMWA, again, staff will bring it to the Board for consideration and direction.

Member Brekhus inquired if TMWA pays an assessment equal to the number of shares or above. Mr. Zimmerman replied proportionate. Mark Foree, TMWA General Manager, added TMWA pays the same amount as other uses where TMWA paid \$46k (228 of 1,700 shares) and TMWA uses the water from the ditch at Hunter Creek ponds and it is not for municipal use. Under Sierra Pacific, Hunter Creek was an old chemical treatment plant which took a lot of water from the ditch, but it closed down in 1994 when Chalk Bluff Water Treatment Plant went online.

Member Brekhus said Reno has agreements with Steamboat for stormwater conveyance and the City of Reno has the oldest infrastructure which has been neglected, and many of her constituents brought their concerns to her regarding TMWA's General Counsel working for both TMWA and Steamboat, and potential conflict of interest, as well as Mr. Foree's sitting on the Steamboat Board and Mr. Hauck sitting on the Conservation District; it is imperative to clarify roles and responsibilities of TMWA and legal counsel with regards to inter-governmental issues.

Member Duerr confirmed the shares are for maintenance of the ditch, but inquired about water rights. Mr. Zimmerman replied that nearly all of TMWA's water rights to Steamboat Ditch have been converted to municipal use and that the only water rights still on the ditch are used for the Hunter Creek ponds and are a wildlife use.

Chair Hartung cautioned the Board since TMWA is a shareholder of, and does not have any water rights in, Steamboat. He stated Washoe County (the "County") also uses Steamboat for stormwater conveyance and the County has been involved in claims when the water has flooded the banks and damaged properties; TMWA was never involved.

Member Duerr continued that since TMWA is the largest shareholder in Steamboat, then they have the most potential benefit for the NRCS project, which was designed to take on maintenance responsibilities, prevent floods and to reduce liability to Steamboat. Also, there is a chance that Steamboat can increase payment and/or double the price of shares to pay for damages or repairs that are needed; that would negatively impact TMWA.

Mr. Foree added staff did provide comments to the NRCS regarding how the project affects or may affect water supply, which is appropriate for TMWA to be commenting on and going forward if it is resurrected, we will continue that if the Board directs as such.

Chair Hartung agreed that may be necessary if the project is resurrected and the Board may need a third party legal opinion or feedback, such as Mr. Lipparelli, on what TMWA's role is in this project.

Mr. Lipparelli said he is familiar with Steamboat and other ditch companies as well as their relationship with local governments. He said it is a highly complex system, built many years ago under outdated laws. If Steamboat decides to bring it back for consideration and it is understood what is being proposed, that may be the time for TMWA, and other shareholders, to get a briefing from Steamboat about what TMWA's involvement would entail.

Public Comment

Allison Boles, Reno resident, submitted a public comment via email expressing her opposition to the Steamboat Ditch Trail project and requested alternative options to maintain the integrity of the trail.

Beth Dory, Reno resident, submitted a public comment via voicemail expressing her opposition to the Steamboat Ditch Trail project and potential conflict of interest with TMWA's General Counsel representing the interests of both TMWA and the Steamboat Ditch & Irrigation Canal Co.

Mr. Wager said the lack of transparency from the agencies involved is extremely disappointing and that it took months for this to be agendized to allow public comment. He asked if the ditches were piped and conservation realized, who would the water rights accrue to.

End of Public Comment

At this time the Board discussed waiting for a future meeting to further review TMWA's role in the Steamboat ditch project should it be resurrected, and to consider engaging conflict counsel in regard to the Steamboat Canal issues as well as possibly enhancing internal counsel's role and responsibilities in

regard to potential conflicts. Mr. Lipparelli cautioned the Board that engaging alternate counsel is not on the current agenda and therefore should not be deliberated at this meeting.

13. GENERAL MANAGER'S REPORT

Mr. Foree updated the Board on TMWA's a new CIS system set to go live next month. Ms. Sullivan added that all facets of customer service (expanded payment options, data management system, dispatch, etc.) will be new after the go-live date March 9th, and payments will no longer go to Arizona, which is one of the customer feedback suggestions we received.

Members of the Board inquired if the processing of mail-in payments were carried out in state or elsewhere. Ms. Sullivan replied that payments will be picked up by armored truck every day, but they are driven over the hill to California to be processed and deposited.

14. PUBLIC COMMENT

There was no public comment.

15. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

Chair Hartung requested Mr. Foree to have Mr. Enloe reach out to Mr. Wager to answer his question.

Member Duerr asked for a future agenda item to discuss the possibility of hiring an attorney to do research on Steamboat Ditch Canal and overlapping jurisdictional responsibilities, interests, and liabilities.

16. ADJOURNMENT

With no further discussion, Chair Hartung adjourned the meeting at 1:08 p.m.

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

Sonia Folsom, Board Clerk.

**Vice Chair Dahir was present for agenda items 1 thru 12 only.*



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager, Water Resources
DATE: March 11, 2021
SUBJECT: Discussion and possible action and direction to staff regarding 2021 legislative activities, current bills, and TMWA recommended positions on legislative proposals

SUMMARY

TMWA staff, lobbyist, and General Counsel continue to monitor and review all bills as they are released. At the Board meeting, TMWA staff, lobbyist, and General Counsel will provide an update regarding the Session and a summary of all significant bills and bills on which the Legislative Subcommittee recommends TMWA support or oppose.

Key 2021 Legislative Deadlines:

February 1	Session Begins
February 8	Legislators' Bill Draft Requests
March 15	Legislators' Bill Introductions
March 22	Committees' Bill Introductions
April 9	Committee Passage (1 st House)
April 20	First House Passage
May 14	Committee Passage (2 nd House)
May 21	Second House Passage
May 31	Session Ends

Assembly Bills

Bill	Description	Sponsor(s)	Status	Past Meetings	Past Action	Future Meetings	LEG. SUBCOMMITTEE RECOMMENDATIONS
AB1	Revises provisions relating to training for Legislators. (BDR 17-438)	Committee on Legislative Operations and Elections	Legislative Operations and Elections	Assembly Committee on Legislative Operations and Elections 2/18/2021 4:00 PM	Heard		MONITOR
AB3	Revises provisions concerning the electronic transmission of certain maps and other documents relating to the approval of divisions of land. (BDR 22-406)	Committee on Government Affairs	Government Affairs	Assembly Committee on Ways and Means and Senate Committee on Finance, Subcommittees on Human Services 2/26/2021 8:00 AM	Mentioned no jurisdiction		SUPPORT
AB5	Makes various changes to provisions relating to judicial review of orders and decisions of the State Engineer. (BDR 48-311)	Committee on Natural Resources	Natural Resources	Assembly Committee on Natural Resources 3/1/2021 4:00 PM	Heard		MONITOR
AB6	Revises provisions governing an application for a temporary change relating to appropriated water. (BDR 48-309)	Committee on Natural Resources	Natural Resources	Assembly Committee on Natural Resources 3/1/2021 4:00 PM	Heard		SUPPORT
AB15	Revises the membership of the Colorado River Commission of Nevada. (BDR 48-341)	Committee on Natural Resources	Natural Resources				MONITOR
AB28	Imposes an inverse preference on certain bidders for state purchasing contracts. (BDR 27-238)	Committee on Government Affairs	Government Affairs	Assembly Committee on Ways and Means and Senate Committee on Finance, Subcommittees on General Government 3/4/2021 8:00 AM	Mentioned no jurisdiction		MONITOR
AB37	Revises provisions relating to the enforcement of obligations for support of children. (BDR 3-301)	Committee on Judiciary	Judiciary	Assembly Committee on Judiciary 2/26/2021 8:00 AM	Amend, and do pass as amended		MONITOR
AB39	Revises provisions relating to public records. (BDR 19-333)	Committee on Government Affairs	Government Affairs				MONITOR
AB49	Revises provisions relating to disciplinary action by the State Contractors' Board. (BDR 54-322)	Committee on Commerce and Labor	Commerce and Labor	Assembly Committee on Commerce and Labor 2/15/2021 1:30 PM	Heard		MONITOR
AB61	Revises provisions relating to trade practices. (BDR 52-424)	Committee on Commerce and Labor	Commerce and Labor	Assembly Committee on Commerce and Labor 2/24/2021 1:30 PM	Heard		MONITOR
AB65	Revises provisions relating to ethics in government. (BDR 23-257)	Committee on Legislative Operations and Elections	Legislative Operations and Elections	Assembly Committee on Legislative Operations and Elections 2/23/2021 4:00 PM	Heard		MONITOR
AB83	Revises the date of the legal holiday for the observance of Nevada Day. (BDR 19-70)	Yeager	Government Affairs				MONITOR
AB87	Makes various changes to provisions governing the vacation or abandonment of certain easements. (BDR 22-460)	Nguyen and Roberts	Government Affairs	Assembly Committee on Government Affairs 3/4/2021 9:00 AM	Heard		OPPOSE
AB90	Requires counties to pay impact fees to certain local governments for projects of intercounty significance. (BDR 22-883)	Benitez-Thompson	Government Affairs				MONITOR
AB93	Revises provisions relating to states of emergency or declarations of disaster proclaimed by the Governor. (BDR 36-41)	Wheeler, Dickman, O'Neill, Ellison, Hafen, Hansen, Hardy, Kasama, Krasner, Leavitt, Matthews, McArthur, Roberts and Titus	Government Affairs				MONITOR
AB95	Revises the membership of the Legislative Committee on Public Lands. (BDR 17-463)	Committee on Legislative Operations and Elections	Legislative Operations and Elections	Assembly Committee on Legislative Operations and Elections 2/16/2021 4:00 PM	Heard		MONITOR

Assembly Bills

Bill	Description	Sponsor(s)	Status	Past Meetings	Past Action	Future Meetings	LEG. SUBCOMMITTEE RECOMMENDATIONS
AB97	Revises provisions governing toxic chemicals. (BDR 40-141)	Watts	Natural Resources				MONITOR
AB100	Revises provisions relating to wildfires. (BDR 42-109)	Committee on Government Affairs	Government Affairs	Assembly Committee on Government Affairs 2/25/2021 9:00 AM	Heard		MONITOR
AB108	Creates the Nevada Office of the Inspector General. (BDR 18-64)	Brittney Miller	Government Affairs				MONITOR
AB124	Revises provisions relating to employment. (BDR 53-169)	Duran, Watts, Torres, Anderson, Benitez-Thompson, Bilbray-Axelrod, Brown-May, Carlton, Considine, Gorelow, Martinez, Marzola, Brittney Miller, Monroe-Moreno, Nguyen, Peters and Thomas	Commerce and Labor				MONITOR
AB146	Revises provisions relating to water. (BDR 40-123)	Peters	Natural Resources			Assembly Committee on Natural Resources 3/17/2021 4:00 PM	MONITOR
AB147	Authorizes a board of county commissioners to create the office of county counsel. (BDR 20-119)	Nguyen	Government Affairs	Assembly Committee on Government Affairs 3/4/2021 9:00 AM	Heard		MONITOR
AB152	Revises provisions relating to the collection of certain debts. (BDR 54-855)	Krasner, Yeager and Marzola	Commerce and Labor	Assembly Committee on Commerce and Labor 3/3/2021 1:30 PM	Heard		MONITOR
AB153	Revises provisions governing performance contracts. (BDR 27-708)	Assemblywoman Bilbray-Axelrod; Senator Brooks	Government Affairs	Assembly Committee on Government Affairs 3/2/2021 9:00 AM	Heard		MONITOR
AB154	Revises provisions governing certain notice provided by public utilities. (BDR 58-510)	Assemblymen Roberts, Tolles, Nguyen, Watts and Monroe-Moreno; Senator Hammond	Growth and Infrastructure	Assembly Committee on Growth and Infrastructure 3/4/2021 1:30 PM	Heard	Assembly Committee on Growth and Infrastructure - Work Session Item 3/18/2021 1:30 PM	MONITOR
AB162	Revises provisions relating to apprentices. (BDR 28-687)	Assemblymen Ellison, Dickman, Titus, Hafen, Hansen, Kasama, Leavitt, Matthews, O'Neill and Wheeler; Senator Goicoechea	Government Affairs				MONITOR
AJR2	Recognizes that forest health and water quality are inextricably linked. (BDR R-112)	Committee on Natural Resources	Natural Resources	Assembly Committee on Natural Resources 2/10/2021 4:00 PM	Mentioned		SUPPORT
AJR3	Urges various actions relating to the protection and conservation of land and water. (BDR R-775)	Assemblymen González, Watts, Yeager, Cohen, Anderson, Brown-May, Flores, Brittney Miller, Nguyen and Torres; Senator Donate	Natural Resources	Assembly Committee on Natural Resources 3/10/2021 4:00 PM	Heard		MONITOR
AJR5	Urges Congress to sell or transfer certain public lands to local governmental agencies and nonprofit organizations. (BDR R-470)	Committee on Natural Resources	Natural Resources	Assembly Committee on Natural Resources 2/22/2021 4:00 PM	Discussed as BDR		MONITOR

Senate Bills

Bill	Description	Sponsor(s)	Status	Past Meetings	Past Action	Future Meetings	LEG. SUBCOMMITTEE RECOMMENDATIONS
SB11	Authorizes certain incorporated cities to impose a supplemental governmental services tax. (BDR 32-433)	Committee on Revenue and Economic Development	Revenue and Economic Development	Senate Committee on Revenue and Economic Development 3/4/2021 1:00 PM	Heard, No Action		MONITOR
SB13	Revises provisions relating to collective bargaining by local government employers. (BDR 31-370)	Committee on Government Affairs	Government Affairs	Assembly Committee on Government Affairs 2/12/2021 9:00 AM	Mentioned no jurisdiction		MONITOR
SB14	Revises provisions relating to certain emergency response plans and assessments. (BDR 36-280)	Committee on Government Affairs	Government Affairs	Senate Committee on Government Affairs 2/17/2021 3:30 PM	Amend, and do pass as amended		MONITOR
SB18	Revises provisions governing penalties for certain violations relating to public utilities. (BDR 58-277)	Committee on Growth and Infrastructure	Growth and Infrastructure	Senate Committee on Growth and Infrastructure 2/17/2021 3:30 PM	Heard, No Action		MONITOR
SB26	Revises provisions relating to the protection of personally identifiable information from release. (BDR 52-332)	Committee on Commerce and Labor	Commerce and Labor				MONITOR
SB33	Revises certain provisions relating to natural resource management. (BDR 47-312)	Committee on Natural Resources	Natural Resources	Senate Committee on Natural Resources 3/2/2021 3:30 PM	Amend, and do pass as amended		MONITOR
SB40	Provides for the collection of certain data relating to health care. (BDR 40-415)	Committee on Health and Human Services	Health and Human Services	Senate Committee on Health and Human Services 3/9/2021 3:30 PM	Heard, No Action		MONITOR
SB67	Revises provisions relating to public works. (BDR 28-400)	Committee on Government Affairs	Government Affairs			Senate Committee on Government Affairs 3/17/2021 3:30 PM	SUPPORT
SB71	Revises provisions governing unclaimed property. (BDR 10-398)	Committee on Judiciary	Judiciary	Senate Committee on Judiciary 2/25/2021 1:00 PM	Amend, and do pass as amended		MONITOR
SB73	Allows the imposition of certain taxes or the reallocation of certain tax revenue to fund certain natural resources projects and services in the City of Reno based on the recommendations of a committee and voter approval. (BDR S-432)	Committee on Revenue and Economic Development	Revenue and Economic Development	Senate Committee on Revenue and Economic Development 3/4/2021 1:00 PM	Heard, No Action		MONITOR
SB88	Revises provisions relating to emergency management. (BDR 36-51)	Pickard, Settelmeyer, Hansen, Buck, Goicoechea, Hammond, Hardy and Kieckhefer	Government Affairs				MONITOR
SB106	Enacts the Uniform Easement Relocation Act. (BDR 10-833)	Harris and Ohrenschall	Judiciary				MONITOR
SB107	Makes various changes relating to the statute of limitations for certain causes of action. (BDR 2-872)	Ohrenschall	Judiciary	Senate Committee on Judiciary 2/18/2021 1:00 PM	Heard, No Action		MONITOR
SB109	Revises provisions relating to the collection of certain information by governmental agencies. (BDR 19-95)	Spearman	Government Affairs				MONITOR
SB131	Revises provisions relating to the Office of Grant Procurement, Coordination and Management in the Department of Administration. (BDR 18-100)	Pickard, Buck, Goicoechea, Hammond, Hardy, Kieckhefer, Seevers Gansert and Settelmeyer	Government Affairs				MONITOR
SB139	Requires certain health insurance to cover treatment of certain conditions relating to gender dysphoria. (BDR 57-54)	Scheible and Harris	Commerce and Labor			Senate Committee on Commerce and Labor 3/12/2021 8:00 AM	MONITOR
SB141	Revises provisions relating to public works. (BDR S-44)	Brooks	Commerce and Labor	Senate Committee on Commerce and Labor 3/10/2021 8:00 AM	Heard, No Action		MONITOR
SB149	Revises provisions relating to groundwater boards. (BDR 48-462)	Committee on Natural Resources	Natural Resources			Senate Committee on Natural Resources 3/11/2021 3:30 PM	MONITOR
SJR1	Proposes to amend the Nevada Constitution to provide that the Nevada Court of Appeals has original jurisdiction over certain cases relating to water. (BDR C-310)	Committee on Judiciary	Judiciary				MONITOR



Northern Nevada Water Supply Outlook

TMWA Board of Directors Meeting

Bill Hauck, Water Supply Administrator

March 17, 2021



NRCS SNOTEL Data (03/16/2021)



CALIFORNIA SNOTEL Snow Water Equivalent Update Graph

As of TUESDAY: MARCH 16 , 2021

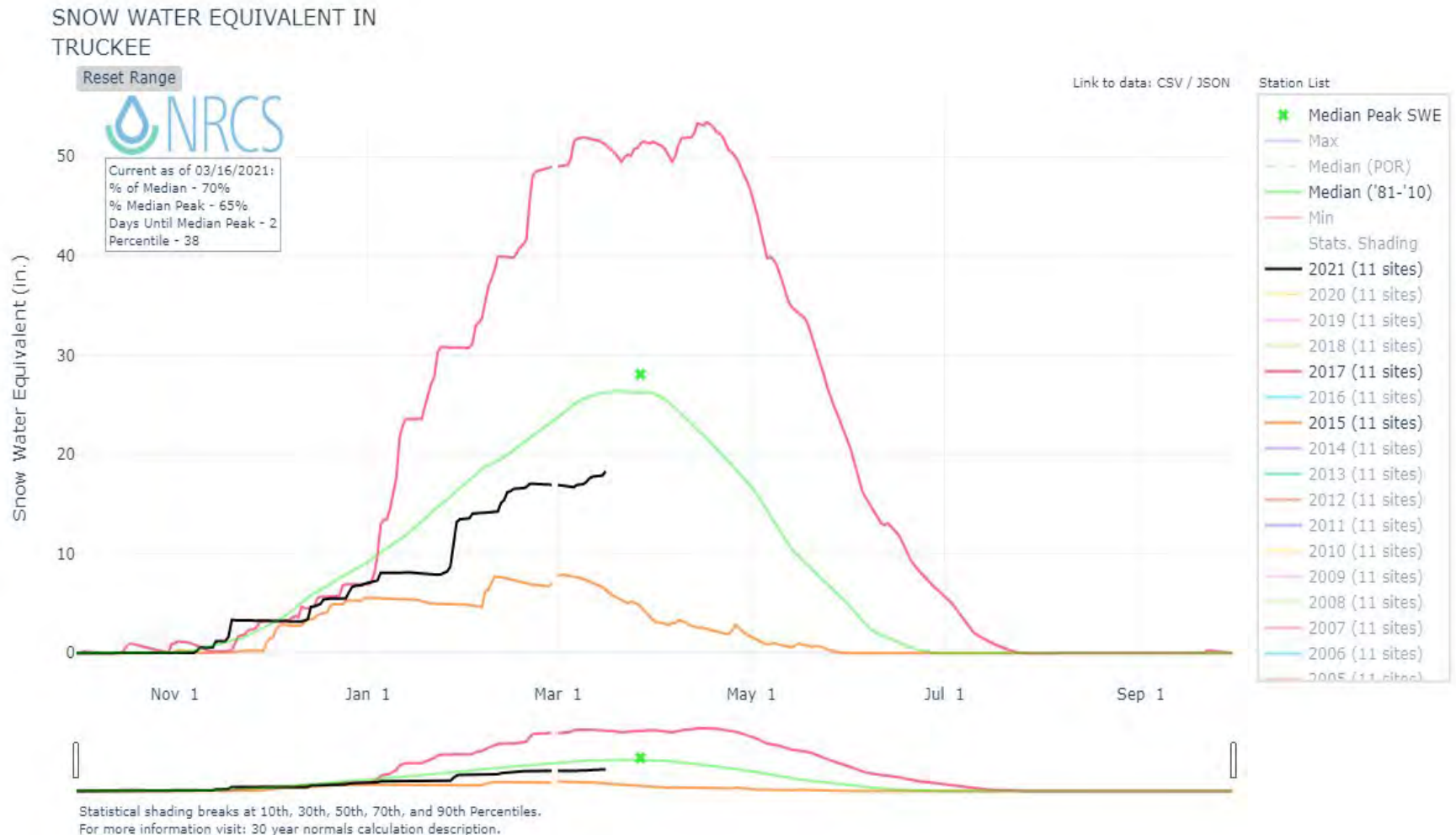
Basin	Snow Water Equivalent Percent of Median
NORTHERN GREAT BASIN	92%
TRUCKEE RIVER	70%
LAKE TAHOE	69%
CARSON RIVER	75%
WALKER RIVER	61%

Legend:	<70%	70-90%	91-110%	111-130%	>130%
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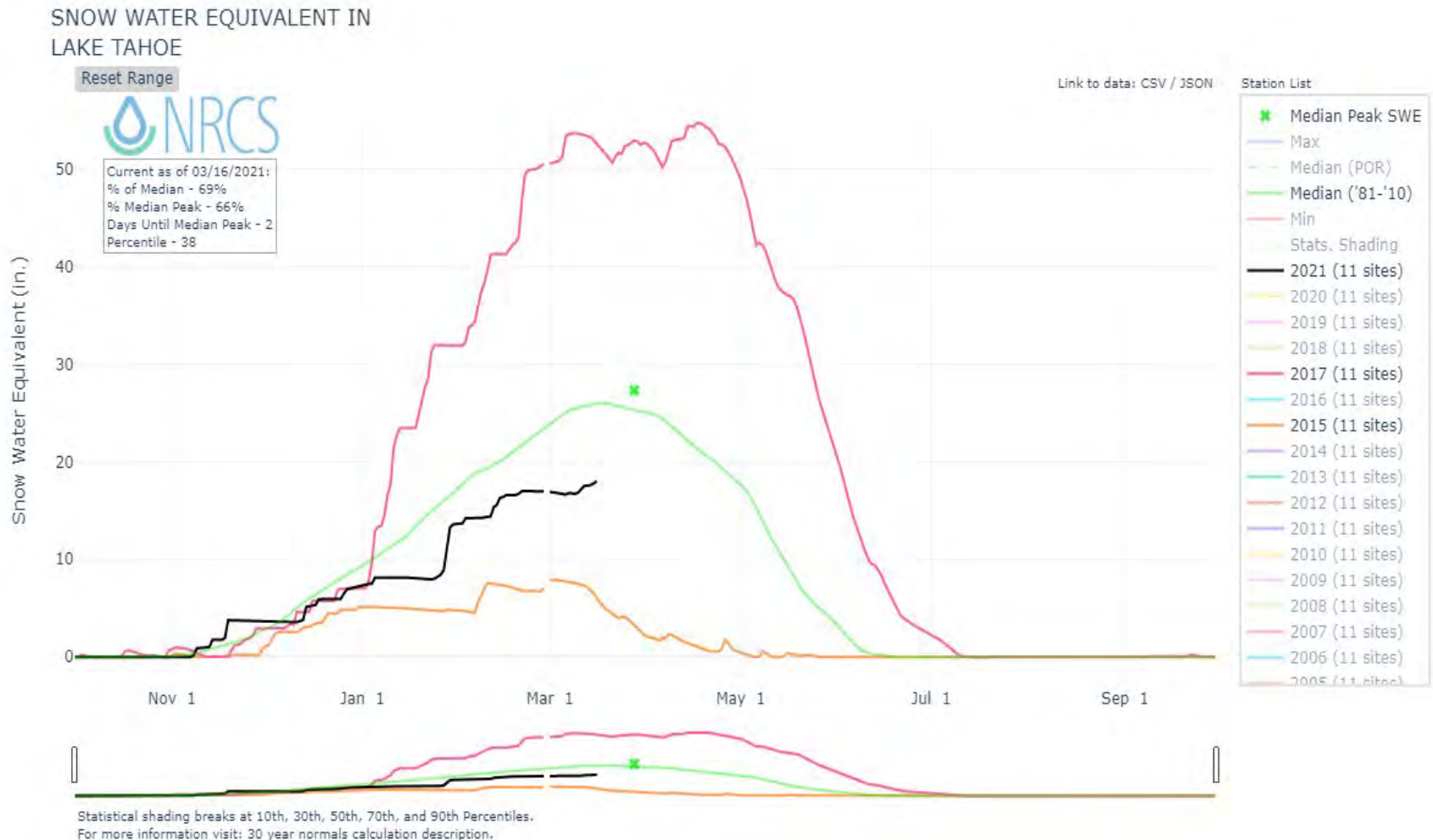
* = Data are not available or data may not provide a valid measure of conditions for over half of the sites within the basin.

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Truckee Basin Snowpack (03/16/2021)



Lake Tahoe Basin Snowpack (03/16/2021)



U.S. Drought Monitor West

03-17-21 BOARD Agenda Item 8

March 9, 2021


(Released Thursday, Mar. 11, 2021)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	10.91	89.09	76.58	61.20	41.41	20.39
Last Week 03-02-2021	10.91	89.09	79.92	60.82	41.80	20.42
3 Months Ago 12-08-2020	11.35	88.65	78.52	64.32	44.77	22.18
Start of Calendar Year 12-29-2020	11.57	88.43	78.63	65.18	46.49	22.16
Start of Water Year 09-29-2020	8.51	91.49	76.07	54.55	33.11	2.31
One Year Ago 03-10-2020	51.68	48.32	27.01	3.02	0.00	0.00

Intensity:

 None	 D2 Severe Drought
 D0 Abnormally Dry	 D3 Extreme Drought
 D1 Moderate Drought	 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

March 01 NRCS Streamflow Forecasts

- Lake Tahoe (GCR)

0.65' (50% Avg.) 50% COE (Apr-High)

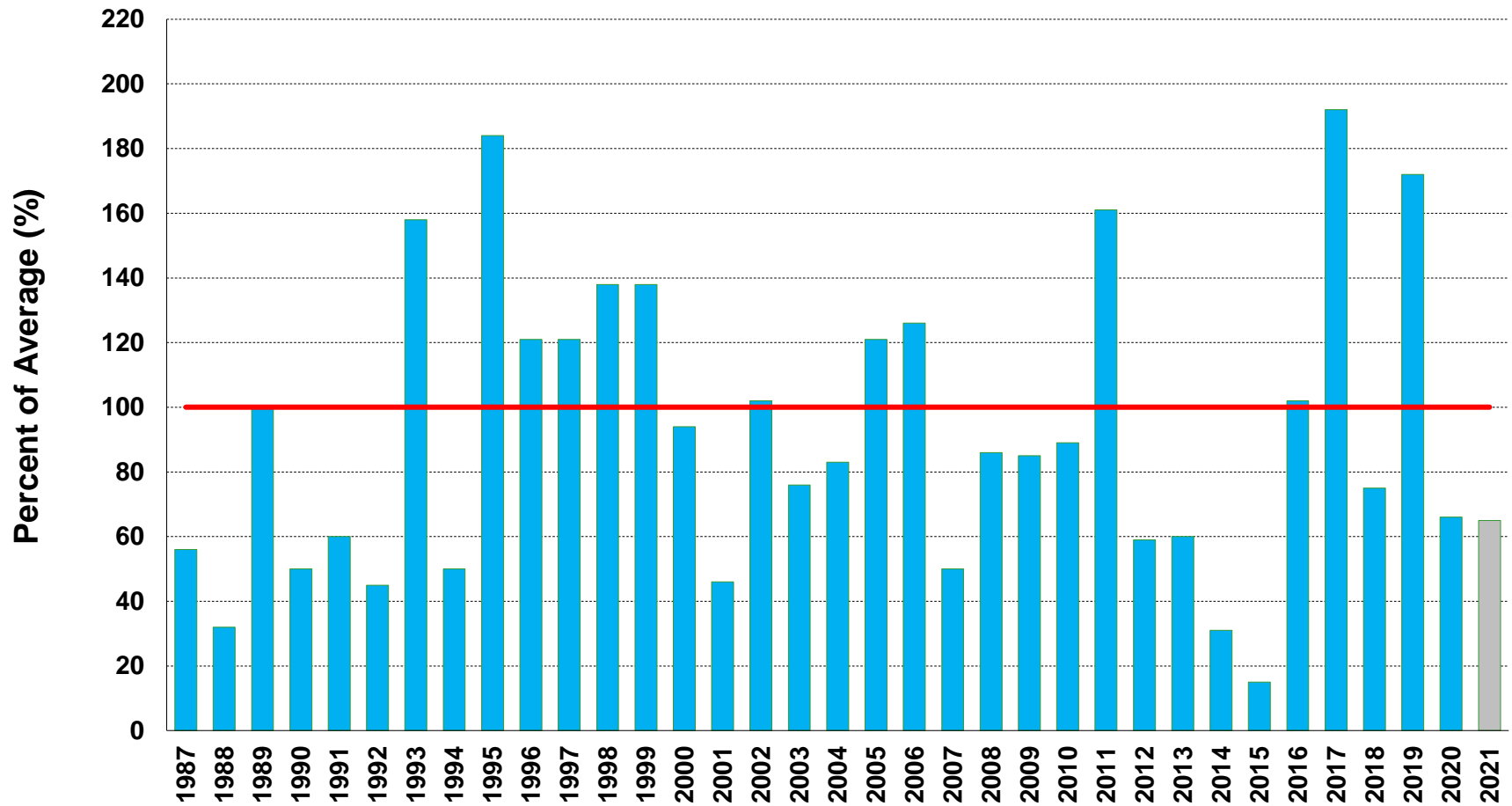
0.59' (45% Avg.) 70% COE (Apr-High)

- Truckee River at Farad, CA

135 KAF (53% Avg.) 50% COE (Apr-Jul)

105 KAF (41% Avg.) 70% COE (Apr-Jul)

April 1 Truckee River Basin Snowpack (last 35 years)

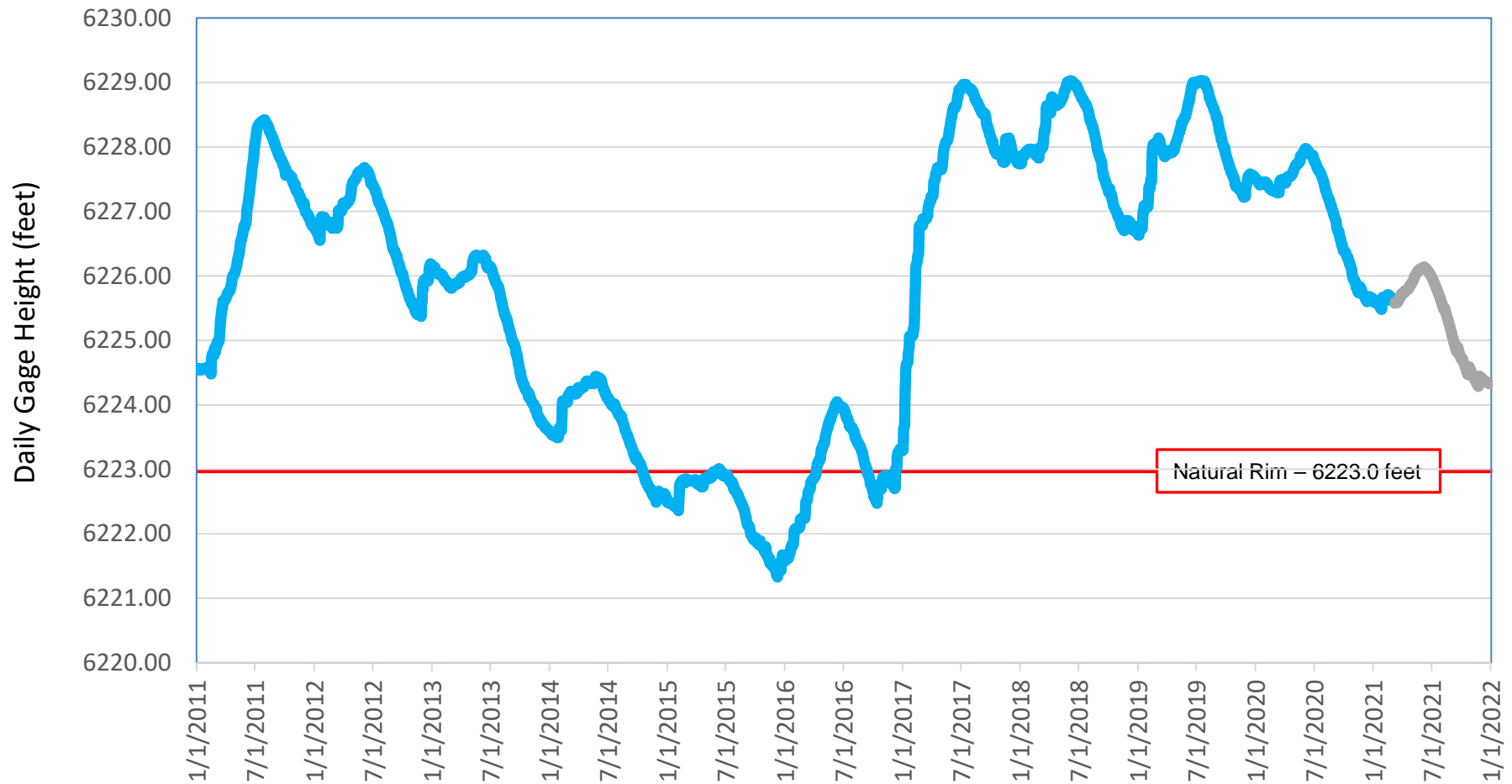




Truckee River System



Actual and Projected Lake Tahoe Elevation through 2021





Truckee River Operating Agreement (TROA)

SECTION 3.D - DETERMINING A DROUGHT SITUATION

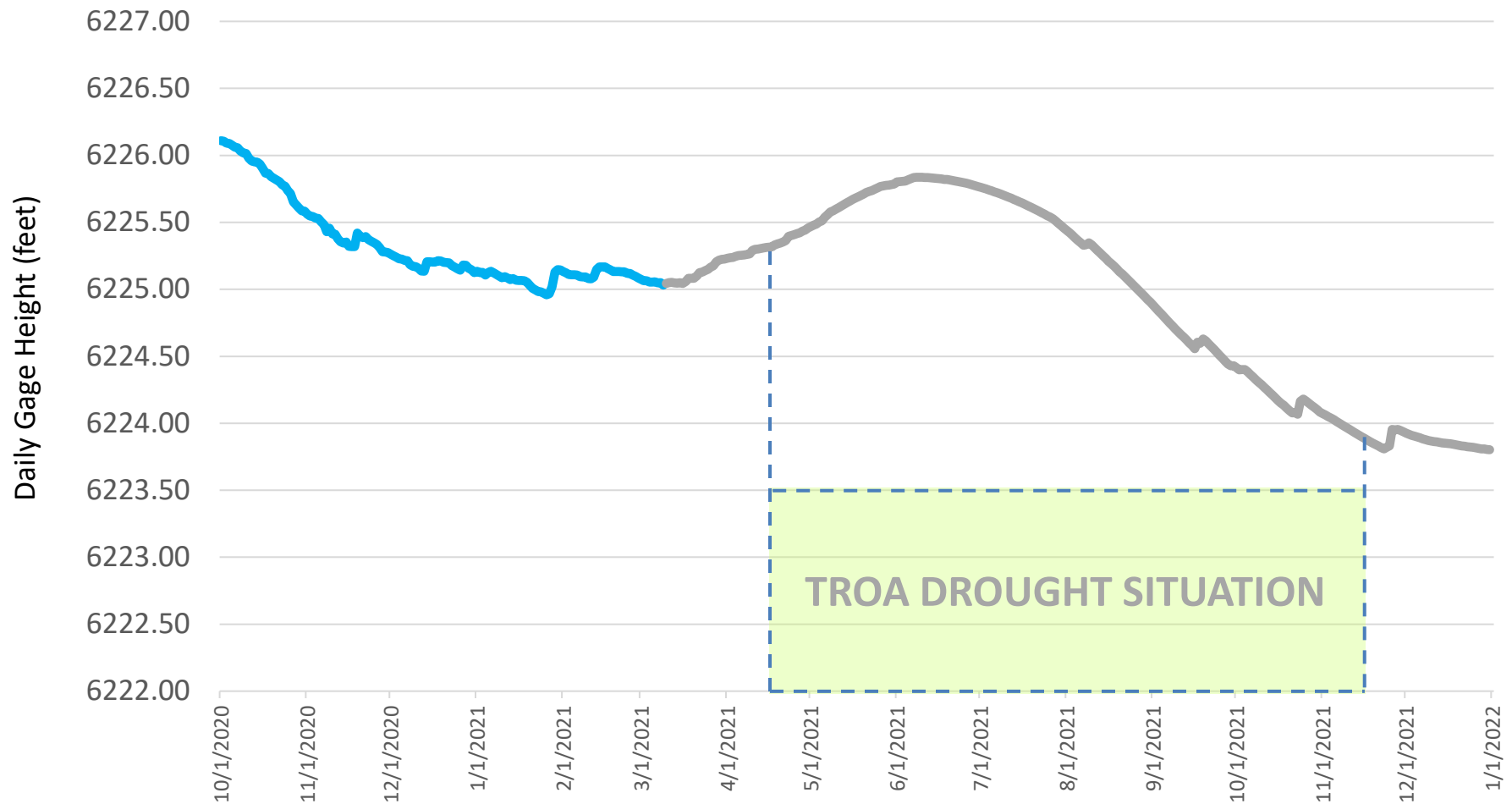
“No later than April 15 of any year, for the purpose of determining whether a **Drought Situation** exists, the **Administrator** shall project operation of the Truckee River system, considering all relevant operations criteria and utilizing the April 1 Natural Resources Conservation Service (NRCS) median forecast in combination with runoff forecasts based upon median climatic conditions for basins and periods not included in the Natural Resources Conservation Service median forecast.”

Truckee River Operating Agreement (TROA)

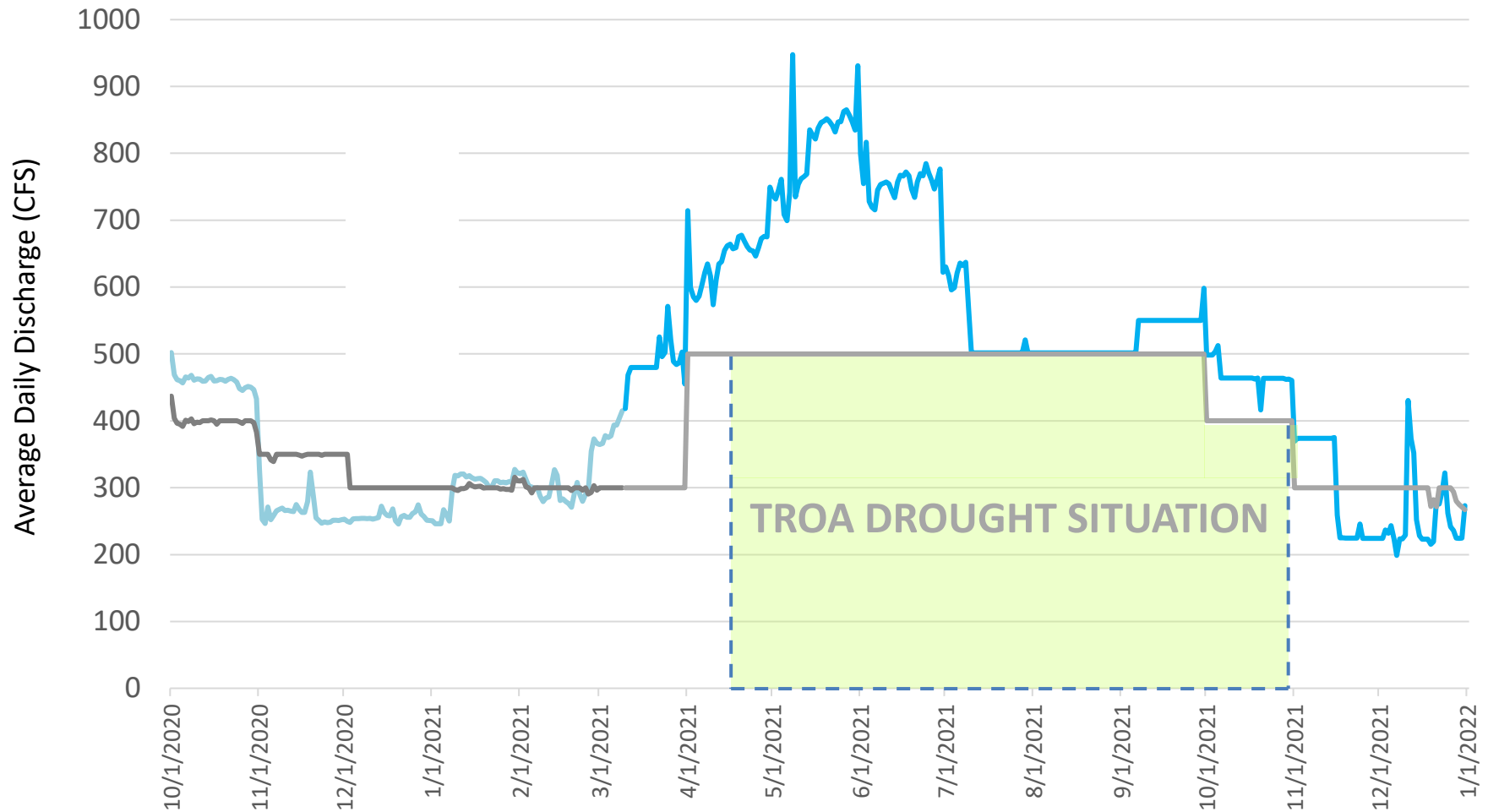
DEFINITION NO. 26 “DROUGHT SITUATION”

“Means a situation under which it is determined by April 15, based on procedures set forth in Section 3.D, either that there will not be sufficient **Floriston Rate Water** to maintain **Floriston Rates** through October 31, or the projected amount of **Lake Tahoe Floriston Rate Water** in Lake Tahoe, and including **Lake Tahoe Floriston Rate Water** in other **Truckee River Reservoirs** as if it were in Lake Tahoe, on or before the following November 15 will be equivalent to an elevation less than 6223.5 feet Lake Tahoe datum.”

Actual and Projected Lake Tahoe Paper Elevation through 2021



Total Projected Discharge and Projected FR Water at Farad through 2021

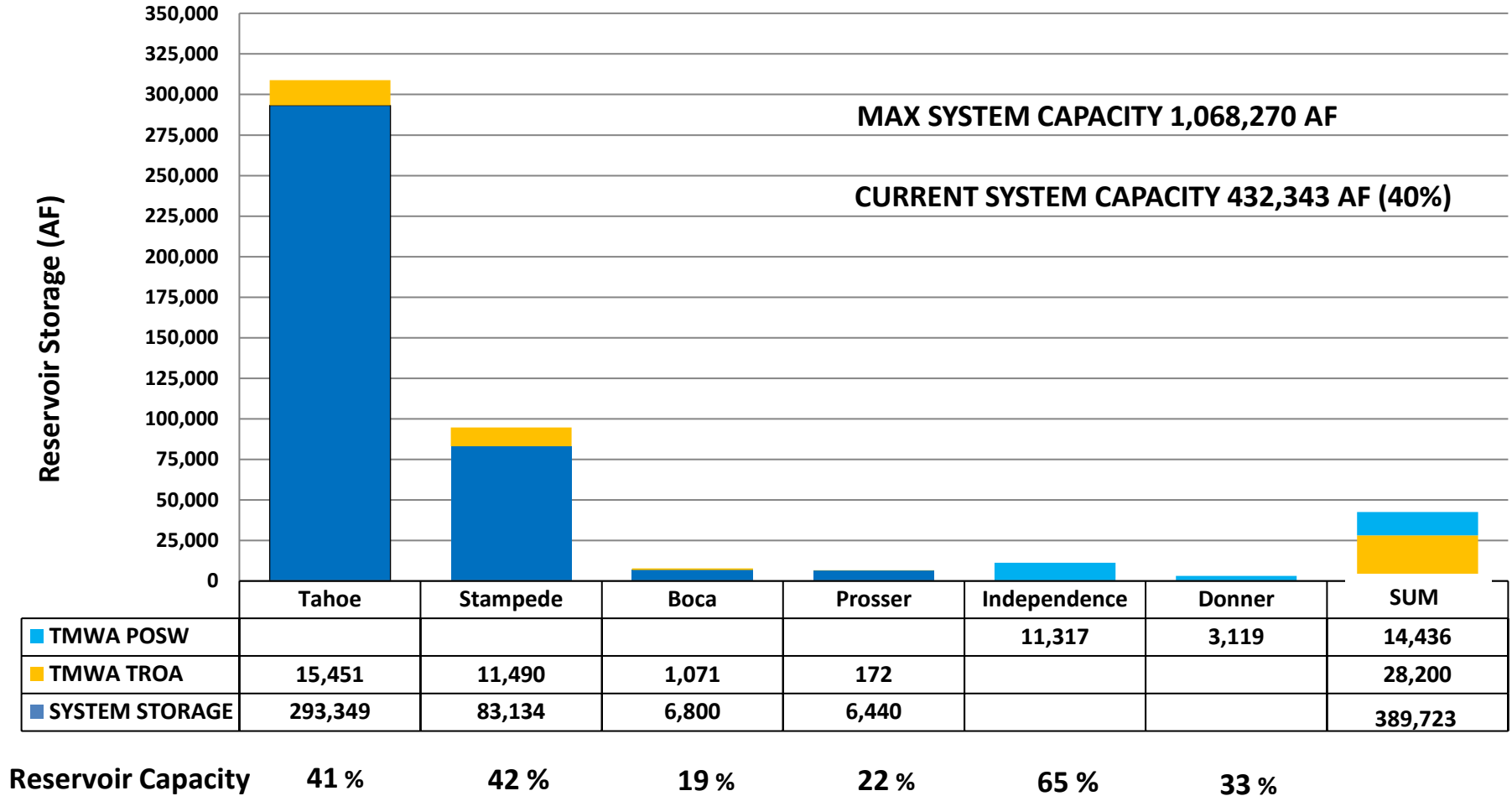




“TMWA’s response to a **DROUGHT SITUATION** is tied directly to projected Truckee River flows and the time of year”

Once a **DROUGHT SITUATION** has been determined, TMWA would plan for one of four different response measures based on the severity of the drought, i.e., if drought reserves are projected to be used or not, and if so, at what point during the peak customer demand season they would be needed (see TMWA’s 2020-2040 Water Resource Plan, Chapter 4., pages 52-55). Standard or enhanced demand-side management practices would be implemented accordingly.

Truckee River System Storage (03/16/2021)





Thank you!
Questions?

Bill Hauck, Water Supply Administrator
Email: bhauck@tmwa.com
O: (775) 834-8111 M: (775) 250-1333



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: John Enloe, Director of Natural Resources & Planning
 Janet Phillips, Chairman, Truckee River Fund Advisory Committee
DATE: March 8, 2021
SUBJECT: Discussion and possible action on Resolution No. 291: A Resolution to approve funding for one or more of the projects recommended by the Truckee River Fund Advisory Committee and an authorization for the Community Foundation to fund such projects from Fund proceeds (Resolution may reflect action taken in one or more votes on recommended projects)

Recommendation

The Truckee River Fund (TRF) Advisors recommend that the TMWA Board authorize by resolution the funding of the following projects from the TRF. This recommendation stems from a Fund Advisors' meeting held on February 19, 2021 where six grant proposals from the spring request for proposal (RFP) process were reviewed and discussed. Please refer to the table below to review amount of funding available, description of the RFPs submitted, and projects recommended for funding.

Description	Funding Requested	TRF Budget
Available Funds		\$389,589.32
6 Requested Projects	\$404,820.36	
5 Projects for Approval		\$311,245
Funds Remaining		\$78,344.32

RFPs Submitted for Consideration

Project #	Grantee	Description	Proposal Amount	Amount Recommended	Monetary Match	In-Kind Match	Match Total
245	Sierra Nevada Journeys	Watershed Education Initiative (WEI) for the Urban Truckee River Corridor	\$31,035	\$31,035	\$7,765	\$ -	\$7,765
246	Truckee River Watershed Council	Bear Creek Lower Meadow Restoration Project – Phase 2 Construction	\$51,250	\$51,250	\$12,812.50	\$1,357,606	\$1,370,418.50
247	Truckee River Foundation for One Truckee River	One Truckee River (OTR) Partnership, River-Friendly Landscape pilot, & engagement with the public	\$259,090	\$196,590	\$91,425	\$ -	\$91,425
248	Friends of Nevada Wilderness	Mt. Rose Noxious Weed Monitoring, Treatment, & Re-Seeding #9	\$16,445	\$16,445	\$5,000	\$5,040	\$10,040
249	Great Basin Outdoor School	Lower Truckee Snapshot Day, Spring & Summer Day Camp WEI	\$15,925	\$15,925	\$15,003.20		\$15,003.20
250	Truckee Meadows Parks Foundation	Doggie Ambassador Project Awareness Campaign	\$31,075	\$ 0	\$10,750	\$24,100	\$34,850
Amount Totals:			\$404,820.36	\$311,245			\$1,529,501.70

PROJECTS RECOMMENDED FOR FUNDING

Project #245: Watershed Education Initiative for the Urban Truckee River Corridor

Project Description:

Deliver high-quality, experiential watershed education programs based on water quality issues and invasive species along the urban Truckee River corridor to empower youth to take action for the protection and enhancement of the water quality of the Truckee River. To meet schools' needs in case of closures, we have a distance learning program in place called Sierra Nevada Journeys Virtual Classrooms that will still significantly engage students, teachers and parents with watershed education.

During the past 11 years, Sierra Nevada Journeys' (SNJ) Watershed Education Initiative (WEI) has impacted approximately 12,080 students and 577 educators. This has been made possible thanks to the generous support of the Truckee River Fund. WEI educates students about the local watershed, including human impacts on the watershed, water quality, and watershed protection. While in-class and field-based lessons reach students and educators, WEI's additional outreach components serve to engage families and community volunteers.

TMWA Benefit:

WEI is an education program that addresses water, water quality and watershed protection for K-8th grade students, directly aligning with grant priority VI: *Stewardship and Environmental Awareness*. Students gain first-hand experience determining water quality, explore human impacts on their water source, and obtain skills, knowledge and a field experience to connect them to their local river. The overall long-term program impacts include:

- Students understand important science concepts related to the Truckee River watershed and can articulate how their actions affect the Truckee River watershed and local ecosystems.
- Teachers use extension lessons and implement more hands-on exploration of the watershed. Parents and community members engage in watershed education directly through WEI volunteer.
- Health of the Truckee River watershed and local ecosystems improves as students and their families adopt environmental stewardship practices that help reduce water pollution and human impacts.

Project #246: Bear Creek Lower Meadow Restoration Project – Phase 2 Construction

Project Description:

The goals of the Bear Creek Lower Meadow Restoration Project are to restore channel and meadow functions, enhance meadow hydrology and habitat, reduce sources of instream sediment from bank erosion, and promote aggradation within the incised channel. A primary result of the project is reduced sedimentation to the main stem of the Truckee River.

The measurable outcomes of this project are:

- Restore 30 acres of montane meadow
- Restore 3,000 feet of incised channel within Bear Creek

- Reduce 20 tons of sediment per year

These outcomes will be monitored via the project's pre/post project monitoring program, which includes groundwater, surface water, vegetation, and rapid assessment parameters.

TMWA Benefit:

Watershed Improvements: If fully implemented, the project will decrease sedimentation by 20 tons per year to the mainstem Truckee River and support attainment of the TMDL for Truckee River. Restoration will enhance watershed function and habitat by reducing erosion, restoring sensitive ecosystems.

Local Stormwater Improvements: The project site receives stormwater inputs from adjacent roads, residential, and commercial developments. The project's approach and engineered solutions provide natural treatments for those inputs before reaching the main stem of the Truckee River.

Meet Multiple Objectives: The project meets the watershed and water quality objectives listed above. It also benefits meadow, riparian, and in-stream habitat, native fish and wildlife species, and carbon sequestration.

Leverage Stakeholder Assets and Participation: The projects leverage significant stakeholder participation and cost share from USFS. They were critical in designing this project, completing environmental compliance, and contributing cost-share. Additional stakeholder input and prioritization is documented in the Bear Creek Watershed Assessment as well as in the Truckee River TMDL (LRWQCB, 2008).

Project #247: OTR Partnership, River-Friendly Landscape Pilot, & Engagement with the Public

Project Description:

Project Goal 1: Lead, coordinate and fundraise for the OTR partnership

- Track number of OTR Partnership Council Meetings, OTR Partnership Working Groups, and small meetings with partners, other relevant agencies, and the public.
- OTR will apply for funding to further the OTR Management Plan implementation.

***Not Funded at this Time: Project Goal 2:** River-Friendly Landscape pilot certification program and adult education initiative to reduce residential stormwater runoff and non-point source pollutants

- Implement a pilot River-Friendly Landscaping Certification Program that will target homeowners in the Chalk Creek Watershed. The program will include a free landscape consultation that will provide site specific recommendations of management practices and residential low impact development strategies to implement and achieve a "River-Friendly Landscaping certification".
- A River-Friendly Landscaping OTR website page will be developed
- Continue River-Friendly Landscaping adult education and outreach campaigns in 2022.

Project Goal 3: Utilize social media platforms, OTR website, and cross-promotions with OTR partners to increase the public's understanding of the Truckee River, OTR and partners' river efforts.

- Monthly social media content planned & executed
- 3 posts boosted per month to increase OTR social media followers
- Maintain blog posts on OTR website

TMWA Benefit:

Project Goal 1:

- *Priority VII Meet Multiple Objectives and VIII Leverage Stakeholder Assets and Participation* because OTR is a collaboration of public and private partners focused on the implementation of the OTR Management Plan. The OTR Plan describes 103 action items devoted to protecting the Truckee River and working to meet multiple objectives.

***Not Funded at this Time: Project Goal 2:**

- *Priorities II Watershed Improvements, III Local Stormwater Improvements, V Support to Rehabilitation of Local Tributary Creeks and Drainage Courses, and VI Stewardship and Environmental Awareness* because it provides water quality and watershed protection in adult education programming, is designed to mitigate residential stormwater runoff and nonpoint source (NPS) pollution, and concentrates efforts in a 303(d) impaired section of the Truckee River Watershed upstream of two TMWA water intake structures (Chalk Bluff and Glendale).

Project Goal 3:

- *Priorities II Watershed Improvements, III Local Stormwater Improvements, V Support to Rehabilitation of Local Tributary Creeks and Drainage Courses, and VI Stewardship, Environmental Awareness, Meet Multiple Objectives and VIII Leverage Stakeholder Assets and Participation* by supporting all of the Project Goals described above to be effectively distributed and communicated to Truckee Meadow's residents along with increasing the overall understanding of the Truckee River and the OTR and partners' river efforts.

Project #248: Mt. Rose Noxious Weed Monitoring, Treatment, & Re-Seeding #9

Project Description:

The goal of the 2021 Mt. Rose Wilderness Noxious Weed Monitoring, Treatment, and Re-Seeding project is to protect the water quality of the Truckee River and its watershed by removing noxious weeds from the heavily used Hunter Creek watershed and reseeding treated areas with native seeds. With the help of volunteers, we will mitigate the spread of musk thistle (*Carduus nutans*), monitor known weeds sites for changes and growth, and identify any new infestations. In 2020. We expanded our weed treatment program to include re-seeding efforts as directed by the U.S. Forest Service (USFS). We look forward to continuing this effort in 2021 in addition to monitoring and removing invasive weeds.

Staff will monitor known weed sites during April and early May tracking spread of plants and efficacy of the previous year's treatment. During May and June, staff will lead volunteer's noxious weeds sites and remove them with shovels and by hand. If plants have produced flowers, we will clip the seed heads and pack them out to be safely disposed of. In the fall, staff will lead volunteers to previously identified sites to disperse native seeds by hand.

TMWA Benefit:

Our projects are in line with many of the grant priorities, specifically priority *II Watershed Improvements, IV Re-Forestation & Re-Vegetation Projects, VI Stewardship & Environmental Awareness, and VII Meet Multiple Objectives*. Noxious weeds, specifically Musk Thistle, pose a significant threat to the health of the Truckee River Watershed. Through volunteer stewardship projects, we seek to improve the health of the Truckee River Watershed by removing noxious weeds and replacing them with native plants. Reducing the number of weeds in the Hunter Creek area (a main tributary to the Truckee River) will improve the water quality, reduce soil erosion, and slow the spread further downstream, as well as enhance the recreation qualities of the Hunter Creek Trail. Our long-standing Wilderness Weed Warriors program seeks to both engage and educate the public on the importance of noxious weed management. By educating the public on these issues, we can inspire ore stewardship and environmental awareness of the entire watershed.

Project #249: Lower Truckee Snapshot Day, Spring & Summer Day Camp WEI**Project Description:**

Great Basin Outdoor School is taking on the responsibility of hosting the Lower Truckee River Snapshot Day. Our first-year goals are to achieve continuity in keeping this citizen science data collection project alive and to educate members of our community on the importance of conserving our watershed via a hands-on sampling experience while also keeping participants safe. The success of this event will be measured by sites successfully sampled and more importantly, by volunteers reached. Specifically, we plan to host at least five sampling sites, and reach at least 20 participants assuming we will be operating during a pandemic. We plan to keep all participants safe by sending members of each household to separate sites, targeting families as volunteers. Results are to be reported in the collective Tahoe Truckee Snapshot Day Annual Report, as well as within Great Basin Outdoor School's own annual report.

Great Basin Outdoor Schools Watershed Education Initiative goal during both our Spring Break Adventure Day Camp and our Summer Break Day Camp is to educate our students on the importance of protecting our watershed through hands-on lessons and activities while meeting state standards. During these programs we will also be reaching underserved students of Washoe County, providing them with the often-overlooked opportunity to attend camp while engaging in hands-on science in the outdoors. Our goal for 2021 is to educate 210 students at our Spring and Summer Break Adventure Day Camps along the Truckee River and to reach at least 30 children who attend schools with a free and reduced lunch percentage of 50% or greater. Spring and Summer Break Day Camps Watershed Education Initiative's success will be measured with pre & post assessments taken by the students upon arrival and post departure. The number of children whose knowledge is enhanced as a direct result of our program will be detailed in our annual report.

TMWA Benefit:

Hosting the 2021 Lower Truckee River Snapshot Day event as well as our Watershed Education Initiative during our Spring and Summer Break Adventure Day Camp advances the Truckee River

Fund's grant priority number *VI Stewardship and Environmental Awareness*. Snapshot Day's entire focus is to get citizens involved in hands-on water quality monitoring and to better understand what impacts water standards. The public's involvement in the Lower Truckee River Snapshot Day will promote community interest and inspire future conservancy. At both our Spring and Summer Break Day Camps we implement educational programs that are centered around the hydrosphere, perform a water quality monitoring day, trace the Truckee River watershed, introduce point and non-point source pollution via a visual experiment, and teach children various ways to protect their watershed. Students contribute via community service clean up events in Mayberry Park where they collect data on trash collected to see first-hand what ends up in their drinking water source. Both projects implement education directly relating to water quality and watershed conservation and promote students and community members becoming environmentally aware stewards.



Grant Priorities

Based upon the aforementioned discussion, TMWA recommends that the Advisors give preference to well-prepared and thought out grant requests for projects and programs that mitigate substantial threats to water quality and the watershed, particularly those threats upstream or nearby treatment and hydroelectric plant intakes:

- I. **Aquatic Invasive Species (AIS):** Projects/Programs that support the prevention or control of aquatic invasive species in the main stream Truckee River, Lake Tahoe, other tributaries and water bodies in the Truckee River system.
- II. **Watershed Improvements:** Projects that reduce erosion or sediment, suspended solids, or TDS discharges to the River. Projects or programs that are located within 303d (impaired waters) sections of the River should be considered, both in California and Nevada. Innovative techniques should be encouraged.
- III. **Local Stormwater Improvements:** Projects that are well designed which mitigate storm water run-off due to urbanization of the local watershed. Priority should be given to those improvement projects in close proximity to TMWA's water supply intakes and canals and which will improve the reliability and protect the quality of the community's municipal water supply.
- IV. **Re-Forestation and Re-Vegetation Projects:** Projects to restore forest and upland areas damaged by fire and historical logging operations, and to improve resiliency in drought situations. Projects/programs in this category should be given a high priority due to urbanization of the watershed and increased susceptibility of the urban and suburban watershed to wildfire.
- V. **Support to Rehabilitation of Local Tributary Creeks and Drainage Courses:** Practical projects to support water quality improvement in Gray Creek, Bronco Creek, Mogul Creek, Chalk Creek, Steamboat Creek and the North Truckee Drain.
- VI. **Stewardship and Environmental Awareness:** Support to Clean-Up programs and the development and implementation of educational programs relative to water, water quality and watershed protection.
- VII. **Meet Multiple Objectives:** Projects/Programs should identify opportunities to meet multiple water quality and watershed objectives as outlined above with preference given to those achieving multiple benefits.
- VIII. **Leverage Stakeholder Assets and Participation:** Projects/Program selection should include an assessment of various stakeholder interests in all aspects of river water quality, watershed protection, source water protection and species enhancement thereby leveraging available funds and other assets.



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Cover Sheet

Date: January 28, 2021

Organization Name:		Sierra Nevada Journeys	
Type:		501(c)(3) EIN#01-0881587	Governmental entity? No
Address:		190 E. Liberty Street, Reno NV 89501	
Project Name:		Watershed Education Initiative for the Urban Truckee River Corridor	
Amount requested: \$31,035		Website: www.sierranevadajourneys.org	
This funding will be used to (complete this sentence with a max of 2 sentences):		Deliver high-quality, experiential watershed education programs based on water quality issues and invasive species along the urban Truckee River corridor to empower youth to take action for the protection and enhancement of the water quality of the Truckee River. To meet schools' needs in case of closures, we have several distance learning programs in place that will significantly engage students, teachers and parents with watershed education.	
Key People:	Director:	Eaton Dunkelberger, CEO	
	Board Chair:	Dan Klaich	
	Project Contact:	Name:	Sean Hill
		Position:	Education Director
		Phone:	775-355-1688
		Fax:	775-329-1689
Email:		sean@sierranevadajourneys.org	
Organization Mission:			
Has your organization received other grants from the Truckee River Fund? Yes No (use additional page if necessary)	If yes,		
	Date awarded:	September 2020	
	Project title:	Watershed Education Initiative	
	Amount of Award:	\$32,041	
	Date awarded:	April 2020	
	Project title:	Watershed Education Initiative	
	Amount of Award:	\$30,912	
	Date awarded:	October 2019	
Project title:	Watershed Education Initiative		
Amount of Award:	\$37,200		

DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

- ☐ A. Projects that improve bank or channel stabilization and decrease erosion.
- ☐ B. Structural controls or Low Impact Development (LID) projects on tributaries and drainages to the Truckee River where data supports evidence of pollution and/or sediments entering the Truckee River.
- ☐ C. Projects that remove pollution from the Truckee River.



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- ☐ D. Projects that remove or control invasive aquatic species or terrestrial invasive plant species that are adverse to water supply.¹
- ☒ E. Other projects that meet the evaluation criteria.

1. Specific project goals and measurable outcomes and how you will measure and report them.

During the past 11 years, Sierra Nevada Journeys' (SNJ) Watershed Education Initiative (WEI) has impacted approximately 12,080 students and 577 educators. This has been made possible thanks to the generous support of the Truckee River Fund. WEI educates students about the local watershed, including human impacts on the watershed, water quality, and watershed protection. While in-class and field-based lessons reach students and educators, WEI's additional outreach components serve to engage families and community volunteers. With the specific focus of impacting the urban Truckee River corridor this Spring 2021 through WEI, we will successfully meet the following objectives:

Outputs	Outcomes
<p>Deliver WEI to 1,286 K-8th grade students specifically from along the urban Truckee River corridor.</p> <p>All students receive first-hand experience with the local watershed through a field-study on the Truckee River or one of its tributaries, or, in the case of a distance learning model, a virtual field trip or case study of the Truckee River.</p> <p>Provide 48 teachers with WEI extension lessons.</p>	<p>80% of students can correctly identify, label, and diagram the Truckee River Watershed.</p> <p>70% of students will use knowledge of storm drains to describe how individuals and communities can protect watersheds.</p> <p>70% of students will define what happens to rainwater and associated non-point source pollutants after they enter a storm drain.</p> <p>95% of students participating in "Hands in the River" curriculum complete a Truckee River issue case study on water quality in the watershed.</p> <p>95% of teachers will report that the program is helping to build critical thinking skills among their students.</p>

Methods to measure outcomes: Pre- and post-assessments are completed by each participating student. Each teacher completes a survey. Both are scored and compiled by SNJ staff. A third-party consultant from the NV Department of Education's assessment office designed the assessment tool.

Methods to measure outputs: SNJ's Education Department manages an internal database that tracks details on participating students, schools, parents and volunteers.

If Sierra Nevada Journeys WEI continues on a virtual platform due the COVID-19 crisis, we still anticipate reaching 48 teachers and 1,286 students with Virtual Classrooms. Overall, even with hybrid learning restrictions we have reached 500+ teachers, 20,000 students and over 10,000 unique page views with Sierra Nevada Journeys at Home, which provides hands-on (including watershed) activities for use at

¹ For proposals related to weed control/eradication, contact Lauren Renda at the Community Foundation of Western Nevada for additional criteria. lrenda@nevadafund.org; 775-333-5499.



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Quality. Delivered.

home. Sierra Nevada Journeys is committed to being part of the solution in filling any unexpected education gaps created by the pandemic. Sierra Nevada Journeys will continue to deliver a successful education model, whether through traditional or virtual platforms, with the blend of fundraising dollars, program fees and community support, especially with the generous funding of the Truckee River Fund.

2. Project location. During Spring 2021, the three main field sites for this program will be located through and downstream of the urban corridor of the Truckee River; Mayberry Park, Oxbow Nature Study Area and the McCarran Ranch Preserve. These locations are convenient and close to home for local students, increasing their sense of ownership, awareness and comfort with accessible nature areas, and highlight regions along the Truckee River that are impacted by urban growth and development. In instances of distance learning programming, students will be guided through a “Virtual Field Trip” to the McCarran Ranch Preserve.

3. Project Description. A study from The Nature Conservancy reveals that students who have had a personal experience in nature are:

- Significantly more likely to express concern about water pollution, air pollution, climate change, and the condition of the environment;
- More than twice as likely to “strongly agree” that protecting the environment is “cool;”
- More than twice as likely to consider themselves a “strong environmentalist;” and
- Substantially more likely to express interest in studying the environment in college, working in a job related to nature, or joining an environmental club at their school. ²

Through WEI, SNJ provides local youth with opportunities to have an interactive experience outdoors, increasing their likelihood to cherish nature, engage with it and become stewards of their natural resources.

With this funding, SNJ will serve 1,286 students in 48 classrooms within 10 miles of the urban corridor of the Truckee River. Conducted over a four-week period, WEI includes three in-class lessons, one field-study experience, pre- and post-assessments, classroom extension lessons for teachers, and family and community engagement. Curriculum developed and delivered by SNJ’s team of credentialed teachers aligns to state and national standards and the North American Association for Environmental Education’s Guidelines for Excellence.

SNJ’s Watershed Education Initiative Overview

The **school-based** component includes three in-class lessons (4.5) hours of engaging instruction. Students participate in hands-on lessons that incorporate the Truckee River watershed, the water cycle, point and non-point source pollution, invasive species, sources and impacts of erosion, water conservation and stewardship.

The **field-based** component includes approximately one day of outdoor science education as students hike along the Truckee River. Students seek clues related to the health of the watershed and determine water quality by collecting and identifying macro-invertebrates or conducting chemical tests such as pH, dissolved oxygen, or turbidity. Students use evidence to make a conclusion about the health of the Truckee River Watershed.

SNJ provides five ready-to-use classroom **extension lessons for teachers** that help students prepare for and review learning objectives, as well as extend and reinforce each SNJ-directed lesson. By explicitly modeling teaching methods and reinforcing with SNJ’s classroom lessons, we strive to support educators and multiply the effects of our student programming.

To encourage **family engagement**, SNJ provides teachers with a template to email parents with a summary and pictures of their child’s experience after each unit along with information for family-based

² The Nature Conservancy, Connecting America’s Youth to Nature, 2012 Retrieved from: <http://www.nature.org/newsfeatures/kids-in-nature/youth-and-nature-poll-results.pdf>



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discussion of the curriculum. This increases parent involvement, which allows individuals within families to reinforce the attitudes, motivations, skills and behaviors learned, and to foster parent-student communication about watershed-related topics.

The **volunteer component** of the program builds our capacity to involve the local community and broadens accessibility to our programming for low-income schools by helping to keep costs low. Volunteers, who are primarily comprised of retired educators, naturalists, and parent chaperones, also consistently report learning tremendously in their participation with WEI.

4. Grant priorities. WEI is an education program that addresses water, water quality and watershed protection for K-8th grade students, directly aligning with grant priority VI: *Stewardship and Environmental Awareness*. Students gain first-hand experience determining water quality, explore human impacts on their water source, and obtain skills, knowledge and a field experience to connect them to their local river. The overall long-term program impacts include:

- Students understand important science concepts related to the Truckee River watershed and can articulate how their actions affect the Truckee River watershed and local ecosystems.
- Teachers use extension lessons and implement more hands-on exploration of the watershed. Parents and community members engage in watershed education directly through WEI volunteer.
- Health of the Truckee River watershed and local ecosystems improves as students and their families adopt environmental stewardship practices that help reduce water pollution and human impacts.

5. Permitting. - N/A

6. Future land use. – N/A

7. If future phases of the project will be needed, identify anticipated sources of funding. - N/A



8. Principals involved:

Credentialed science educators on the SNJ staff will be directly responsible for coordination and delivery of watershed education programs. Sean Hill, SNJ's Vice President of Education, will oversee the implementation of WEI. Sean is a former science teacher and holds a Bachelor of Science degree from Montana State University and a Master of Science degree in Human Dimensions of Natural Resources from Colorado State University. His passion for outdoor science education was inspired by his service as a Graduate Fellow for the Walking Mountains Science School in Avon, Colorado, and from his time spent as a science teacher in the inner-city during his service with Teach For America.

9. Number of staff positions involved in project: Fulltime **4** Part-time **1**

10. Number of volunteers involved: If the project runs in-person, over **100** volunteers (including field educators and parent volunteers) will donate **time** during WEI's field-study portion of the program, increasing parents and community member access to watershed education.

11. Time Line of Project.

Deliverables	2021					
	Jan	Feb	Mar	Apr	May	Jun
Recruitment/Scheduling: SNJ outreach efforts are continuous. Outreach is now underway for the spring semester. SNJ targets schools that participated in watershed programming in the past and new schools that have not received WEI.						
Program Delivery: SNJ instructors will deliver engaging watershed education lessons to 1,286 students through school-based and field-based programs.						



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Evaluation: SNJ staff will compile student assessment data throughout the grant period. These results will inform any changes to the curriculum to ensure effective programming in the future.

Final Report: Submit the final report to the Community Foundation of Western Nevada. This report will include a summary of the work completed, student assessment data, and a budget update.

12. Success.

Outputs

Tracking

Deliver watershed education to 1,286 K-8th grade students from throughout northern Nevada.

All students receive first-hand experience with the local watershed through a field-study on the Truckee River or one of its tributaries, or, in the case of a distance learning model, a virtual field trip or case study of the Truckee River.

Internal SNJ database – Updated regularly throughout the year

Provide 48 teachers with WEI extension lessons.

Outcomes

Tracking

80% of students can correctly identify, label, and diagram the Truckee River Watershed.

70% of students will use knowledge of storm drains to describe how individuals and communities can protect watersheds.

70% of students will define what happens to rainwater and associated non-point source pollutants after they enter a storm drain.

95% of students participating in “Hands in the River” curriculum complete a Truckee River issue case study on water quality in the watershed.

95% of teachers will report that the program is helping to build critical thinking skills among their students.

Pre- and post-assessments – reviewed after the end of each program and presented in report at end of grant period

Teacher surveys

13. Grant Match

Match amount to be provided:		\$7,765 (25% of requested funds)
Match details:	Match is:	
	Cash	\$7,765
	In-kind	Note: Volunteer and in-kind hours may be calculated at a maximum rate of \$20/hour per individual. Indirect cost may not be counted as match.
		For the cash portion of your match, is the funding already being held by the applicant for this project? Yes __ No <u>X</u>
Description of matching funds/in-kind donations:	\$7,765 from the Nevada Division of Environmental Protection	



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14. Project Budget

Watershed Education Initiative (WEI) Budget

Program Budget for Classrooms Unleashed						
Item	Description	School Year Expense 2021	Expense Per Student	WEI Fall 2020 Expenses 1286 students	Match	TRF Request
Education Personnel	Education Instructors, Program Directors and Coordinators	\$ 290,870	\$ 24	\$ 31,184	\$ 1,500	\$ 29,684
Direct Program Expenses	Direct program expenses, including: program and field day supplies, printing and paper, uniforms, etc.	\$ 12,613	\$ 1	\$ 1,351		\$ 1,351
Occupancy Expense	Rent and utilities	\$ 31,051	\$ 3	\$ 3,332	\$ 3,332	
Administration Expense	Marketing, office supplies, postage, outside printing services, internet and telephone	\$ 27,315	\$ 2	\$ 2,933	\$ 2,933	
Total Expenses		\$ 361,849	\$ 30	\$ 38,800	\$ 7,765	\$ 31,035

Bear Creek Lower Meadow Restoration Project – Phase 2 Construction

Organization Name:	Truckee River Watershed Council (TRWC)																				
Type: Non-Profit	501(c)(3) EIN# 91-1818748	Governmental entity? No																			
Address:	P.O. Box 8568, Truckee, CA 96162																				
Project Name:	Bear Creek Lower Meadow Restoration Project – Phase 2 Construction																				
Amount requested: \$51,250	Website: www.truckeeriverwc.org																				
This funding will be used to (complete this sentence with a max of 2 sentences):	Fill a critical funding gap in the Bear Creek Lower Meadow Restoration Project in support of the Truckee River TMDL by reducing excess sedimentation and improving hydrologic connectivity and watershed function.																				
Key People:	Director:	Lisa Wallace																			
	Board Chair:	Jake Hudson																			
	Project Contact:	Name:	Michele Prestowitz																		
		Position:	Program Manager																		
		Phone:	530-550-8760, 4#																		
		Fax:	NA																		
		Email:	mprestowitz@truckeeriverwc.org																		
Organization Mission:	We bring the community together for the Truckee to restore, protect, and enhance the Truckee River watershed.																				
Has your organization received other grants from the Truckee River Fund? Yes X No (use additional page if necessary)	If yes, <table border="1"> <tr> <td>Date awarded:</td> <td>September 2020</td> </tr> <tr> <td>Project title:</td> <td>Restoration for Coldstream Canyon</td> </tr> <tr> <td>Amount:</td> <td>\$86,500</td> </tr> <tr> <td>Date awarded:</td> <td>October 2019</td> </tr> <tr> <td>Project title:</td> <td>Truckee River Invasive Species Control Project</td> </tr> <tr> <td>Amount:</td> <td>\$19,250</td> </tr> <tr> <td>Date awarded:</td> <td>March 2019</td> </tr> <tr> <td>Project title:</td> <td>Mclver Dairy Meadow Restoration Project</td> </tr> <tr> <td>Amount:</td> <td>\$161,000</td> </tr> </table> Please see Attachment A for a full list of awarded grants			Date awarded:	September 2020	Project title:	Restoration for Coldstream Canyon	Amount:	\$86,500	Date awarded:	October 2019	Project title:	Truckee River Invasive Species Control Project	Amount:	\$19,250	Date awarded:	March 2019	Project title:	Mclver Dairy Meadow Restoration Project	Amount:	\$161,000
Date awarded:	September 2020																				
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Amount:	\$19,250																				
Date awarded:	March 2019																				
Project title:	Mclver Dairy Meadow Restoration Project																				
Amount:	\$161,000																				

DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

- ☒ A. Projects that improve bank or channel stabilization and decrease erosion.
- ☒ B. Structural controls or Low Impact Development (LID) projects on tributaries and drainages to the Truckee River where data supports evidence of pollution and/or sediments entering the Truckee River.
- ☒ C. Projects that remove pollution from the Truckee River.
- ☐ D. Projects that remove or control invasive aquatic species or terrestrial invasive plant species that are adverse to water supply.¹
- ☐ E. Other projects that meet the evaluation criteria.

Bear Creek Lower Meadow Restoration Project – Phase 2 Construction**1. Specific project goals and measurable outcomes and how you will measure and report them.**

The goals of the Bear Creek Lower Meadow Restoration Project are to restore channel and meadow functions, enhance meadow hydrology and habitat, reduce sources of instream sediment from bank erosion, and promote aggradation within the incised channel. A primary result of the project is reduced sedimentation to the main stem of the Truckee River.

The measurable outcomes of this project are:

- Restore 30 acres of montane meadow
- Restore 3,000 feet of incised channel within Bear Creek
- Reduce 20 tons of sediment per year

These outcomes will be monitored via the project's pre/post project monitoring program, which includes groundwater, surface water, vegetation, and rapid assessment parameters.

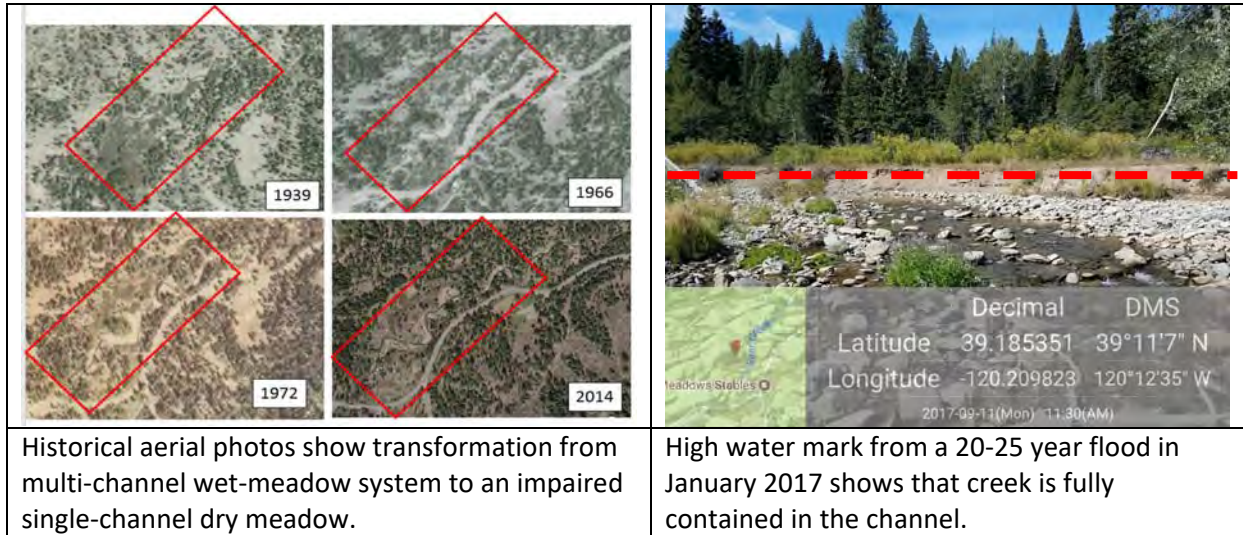
The Middle Truckee River watershed is listed under the Clean Water Act (303)d as impaired for sediment with an approved TMDL (Lahontan Water Board, 2008). Additionally, Bear Creek, a tributary to the Truckee River, was listed in 1991 as impaired by sedimentation and siltation. The Truckee River is the primary source of water supply for the Reno/Sparks metropolitan area via the Truckee Meadows Water Authority.

We completed restoration design, environmental compliance and permitting, pre-project monitoring, and phase 1 of construction. This request is to fill a critical funding gap in phase 2 construction.

- 2. Project location.** The Project site is located approximately 11 miles south of Truckee, CA and 3.5 miles northwest of Tahoe City, CA adjacent to Alpine Meadows Road in an unincorporated area of Placer County. The project reach is located roughly 2,500 feet upstream of the confluence with the Truckee River. The meadow and channel are within the U.S. Forest Service Tahoe National Forest (USFS). Please see attached location map.

- 3. Project description.** The project is a meadow and stream restoration project that seeks to reduce excess sedimentation of the Truckee River by addressing degradation caused by modern and historic land uses. We are requesting funding to help complete the implementation of the project.

The Problem: Bear Creek is a known source of sediment pollution that drains directly to the Truckee River (Bear Creek Watershed Assessment, 2018). We identified several sources of impairment and degradation within the meadow. Most significantly, road construction beginning in the 1960s cut through this multi-threaded wet-meadow system and transformed it into an impaired, single-channel dry meadow. Prior to restoration, the creek was incised and actively eroding, and meadow functions and habitats were actively degrading, affecting water quality in Bear Creek and the mainstem of the Truckee River.

Bear Creek Lower Meadow Restoration Project – Phase 2 Construction

The Solution: TRWC worked closely with the landowner and project partner, the USFS, to develop a restoration project to address the degradation. We completed restoration design, environmental compliance and permitting, pre-project monitoring, and phase 1 of construction. This request is to fill a critical funding gap in phase 2 construction.

The project is designed to encourage the spread of flows and channel aggradation, provide bank stability, and re-establish multiple secondary flow paths across the meadow surface. Augmenting instream wood and cobble in the channel and riffle structures and re-engaging existing secondary channels will restore channel and meadow function, enhance meadow hydrology and habitat, and reduce sources of instream sediment. Please see attached site map.

Specific work components for the Bear Creek Project include:

- Install bank log structures to stabilize eroding banks and dissipate energy from flows;
- Augment existing riffles to increase bed and water surface elevation, thus connecting to the floodplain, spreading and slowing flows, and encouraging sediment to drop out;
- Activate remnant channels to further water the meadow and decrease flow velocity from eroding stream banks; and
- Revegetate with salvaged material and a native seed mix.

Filling a Critical Funding Gap. TRWC successfully raised approximately \$1.5 million in funding for assessment, design, construction, and monitoring via cost share from project partners, private foundations, and the California Department of Fish and Wildlife (CDFW). However, we have gap in construction funding that we seek to fill. The funding requested in this proposal leverages a much larger result.

Phase 2 work includes critical stabilization and re-vegetation to achieve the full reduction of 20 tons of sedimentation per year. Adjusting for changes to the system from phase 1, we will augment a riffle at the downstream end of the project, add debris jams to re-activated remnant channels in the meadow, and install willow fascines to address stormwater inputs. Additional revegetation in phase 2 will take advantage of soil sorting and deposition, particularly in backwatered areas.

4. Grant priorities. The project addresses:

Bear Creek Lower Meadow Restoration Project – Phase 2 Construction

- **Watershed Improvements:** If fully implemented, the project will decrease sedimentation by 20 tons per to the mainstem Truckee River and support attainment of the TMDL for Truckee River. Restoration will enhance watershed function and habitat by reducing erosion, restoring sensitive ecosystems.
 - **Local Stormwater Improvements:** The project site receives stormwater inputs from adjacent roads, residential, and commercial developments. The project's approach and engineered solutions provide natural treatments for those inputs before reaching the main stem of the Truckee River.
 - **Meet Multiple Objectives:** The project meets the watershed and water quality objectives listed above. It also benefits meadow, riparian, and in-stream habitat, native fish and wildlife species, and carbon sequestration.
 - **Leverage Stakeholder Assets and Participation:** The projects leverages significant stakeholder participation and cost share from USFS. They were critical in designing this project, completing environmental compliance, and contributing cost-share. Additional stakeholder input and prioritization is documented in the Bear Creek Watershed Assessment as well as in the Truckee River TMDL (LRWQCB, 2008).
5. **Permitting.** All environmental compliance and permits are complete. The USFS was NEPA lead and Placer County was CEQA lead. Project permits include FEMA CLOMR, Section 401 Water Quality Certification, Section 404 Nationwide 27, California Department of Fish and Wildlife 1600, and Placer County Grading and Encroachment permits.
6. **Future Land Uses.** There are no foreseeable zoning, land use, or development plans that will affect the project. The USFS owns and manages the site as open space and ensures the long-term sustainability of site.
7. **Future phases.** From 2022 on, the project work includes monitoring and maintenance. These will be funded by secured funding from CDFW and USFS (see match description).
- In the Bear Creek Basin, for future projects, TRWC and various partners will continue to pursue funding, project design, and implementation per the watershed assessment listed above.
8. **Principals involved.** Michele Prestowitz, TRWC Program Manager, will oversee the implementation of the project.
9. **Number of staff positions involved in project:** Michele Prestowitz and Lisa Wallace from TRWC will work part-time on this project, with additional support from the USFS.
10. **Number of volunteers involved in project and an estimated number of volunteer hours.** Volunteers participated in building debris jams and planting native vegetation during phase 1 construction. Approximately 10 volunteers (40 person hours) will participate in the same activities as a Truckee River Day project in 2021.
11. **Time Line.** The project timeline is included below. Please note that for the sake of clarity and context, the timeline includes several completed project tasks as well as the current and upcoming work. There are no anticipated delays for phase 2 construction or completing post-project monitoring and adaptive management.

Bear Creek Lower Meadow Restoration Project – Phase 2 Construction

	Task	Start Date	Completion Date
Completed work	Assessment	August 2017	January 2018
	Pre-project monitoring	October 2017	August 2020
	Environmental compliance & permitting	March 2019	August 2020
	Restoration design	December 2017	December 2019
	Construction phase 1	August 2020	November 2020
Current and upcoming work	Construction phase 2	September 2021	October 2021
	Post-project monitoring	October 2020	October 2023
	Adaptive management	October 2020	November 2022
	Stakeholder coordination and project management	2018	2024

12. Success. Project success will be confirmed by the post-project monitoring for hydrologic (groundwater and stream flow), vegetation, biological, and rapid assessment parameters. This monitoring program is funded by outside sources. Early observations following phase 1 construction suggest the project has been successful towards these goals thus far.

13. Collaboration. This project is a collaboration between TRWC and USFS.

14. Grant match.

Match amount to be provided:		\$12,812.50	
Match details:	Match is:	Cash	\$12,812.50
	For the cash portion of your match, is the funding already being held by the applicant for this project? Yes		
Description of matching funds/in-kind donations:	The matching funds are from the California Department of Fish and Wildlife (CDFW) Watershed Restoration Grant Program, Grant Agreement #Q2096010 for \$1,357,606. These funds are allocated for personnel services, restoration construction, post-project monitoring, and adaptive management. TRWC will manage all funds provided by the CDFW and the Truckee River Fund to ensure maximum project efficiency and cost effectiveness.		

ATTACHMENTS

- A. Extended list of past TRWC projects funded by the Truckee River Fund.
- B. Bear Creek Lower Meadow Restoration Project Location and Site Map

Nonprofits submit:

Documents noted below are available and can be submitted upon request.

- ☒ Last audited financial statements if your organization has been audited
- ☒ List of Board of Directors
- ☒ Copy of agency's IRS 501(c)(3) Tax Determination Letter
- ☒ Copy of the agency's most recent IRS Form 990

Bear Creek Lower Meadow Restoration Project – Phase 2 Construction**15. PROJECT BUDGET**

ITEM	TRF \$	OTHER FUNDING NAME	MATCH \$	TOTAL
Phase 1 Construction	\$0	California Dept. of Fish & Wildlife	\$1,086,000.00	\$1,086,000.00
Phase 2 Construction	\$51,250	California Dept. of Fish & Wildlife	\$12,812.50	\$62,812.50
Total	\$51,250		\$1,098,812.50	\$1,150,062.50

- **If awarded, all funds from TRF will go to construction of the project.**
- If we do not receive funding from the Truckee River Fund, we will not be able to augment the downstream riffle, construct debris jams, install willow fascines and re-vegetation, thus decreasing the amount of sediment reduction to the Truckee River/not achieving the full reduction of 20 tons of sedimentation per year.

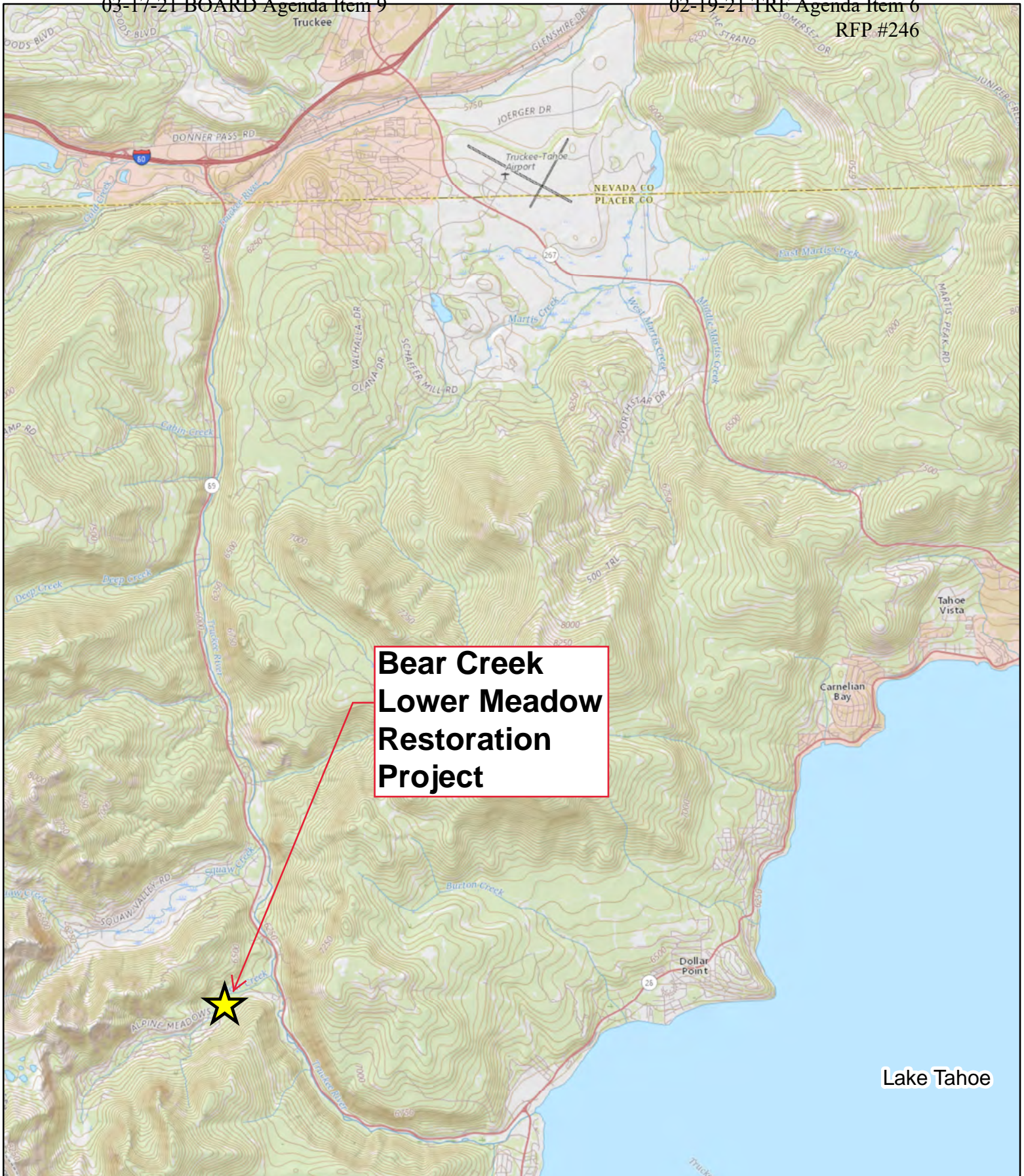
Grant application to the *Truckee River Fund*
from the Truckee River Watershed Council

Attachment A
Continued list of grants to TRWC from the Truckee River Fund

Date awarded:	September 2020
Project title:	Restoration for Coldstream Canyon
Amount of Award	\$86,500
Date awarded:	October 2019
Project title:	Truckee River Invasive Species Control Project
Amount of Award	\$19,250
Date awarded:	March 2019
Project title:	Mclver Dairy Meadow Restoration Project
Amount of Award	\$161,000
Date awarded:	October 2018
Project title:	Truckee River Water Quality Monitoring Program
Amount of Award	\$25,000
Date awarded:	October 2018
Project title:	Restoration Projects: Donner Creek and Dry Creek Meadow
Amount of Award	\$92,000
Date awarded:	March 2018
Project title:	Truckee Meadows Restoration Project – Phase 2 Construction
Amount of Award	\$30,000
Date awarded:	October 2017
Project title:	Truckee River Tributaries Sediment Reduction Project
Amount of Award	\$165,000
Date awarded:	March 2017
Project title:	Big Chief, F4M Restoration Culvert Outflows
Amount of Award	\$50,000
Date awarded:	September 2016
Project title:	Donner Creek Bank Stabilization Downstream of Railroad Culvert Final Design
Amount of Award	\$90,000
Date awarded:	March 2017
Project title:	F4M Restoration Culvert Outflow
Amount of Award	\$50,000
Date awarded:	September 2016
Project title:	Donner Creek Concept Designs
Amount of Award	\$40,000
Date awarded:	September 2016
Project title:	Donner Creek Bank Stabilization
Amount of Award	\$92,000
Date awarded:	April 2016
Project title:	Johnson Canyon West #2
Amount of Award	\$67,000
Date awarded:	October 2015
Project title:	Johnson Canyon West #1
Amount of Award	\$25,000

Grant application to the *Truckee River Fund*
from the Truckee River Watershed Council

Date awarded:	September 2014
Project title:	Donner Lake Watershed Assessment
Amount of Award	\$70,000
Date awarded:	March 2014
Project title:	Truckee Wetlands Restoration – Phase 3,4, & 5 – Design
Amount of Award	\$50,000
Date awarded:	October 2013
Project title:	Truckee River Big Chief Corridor –Restoration
Amount of Award:	\$150,000
Date awarded:	March 2013
Project title:	Truckee River Big Chief Corridor – Implementation
Amount of Award	\$11,000
Date awarded:	March 2013
Project title:	Middle Martis Wetland Restoration – planning and design
Amount of Award:	\$120,000
Date awarded:	August 2012
Project title:	Phase 2 Coldstream Canyon Floodplain Restoration
Amount of Award:	\$196,000
Date awarded:	March 2012
Project title:	Lacey Creek and Meadow Assessment
Amount of Award	\$50,000
Date awarded:	March 2012
Project title:	Negro Canyon Restoration – pre-project monitoring
Amount of Award:	\$25,000
Date awarded:	October 2010
Project title:	Coldstream Canyon Floodplain Restoration Project
Amount of Award:	\$135,000
Date awarded:	August 2010
Project title:	Truckee Wetlands Restoration Project – Phase 2
Amount of Award:	\$40,000
Date awarded:	July 2006
Project title:	“This Drains to the Truckee River” Storm Drain Stenciling Pilot Project
Amount of Award:	\$9,300



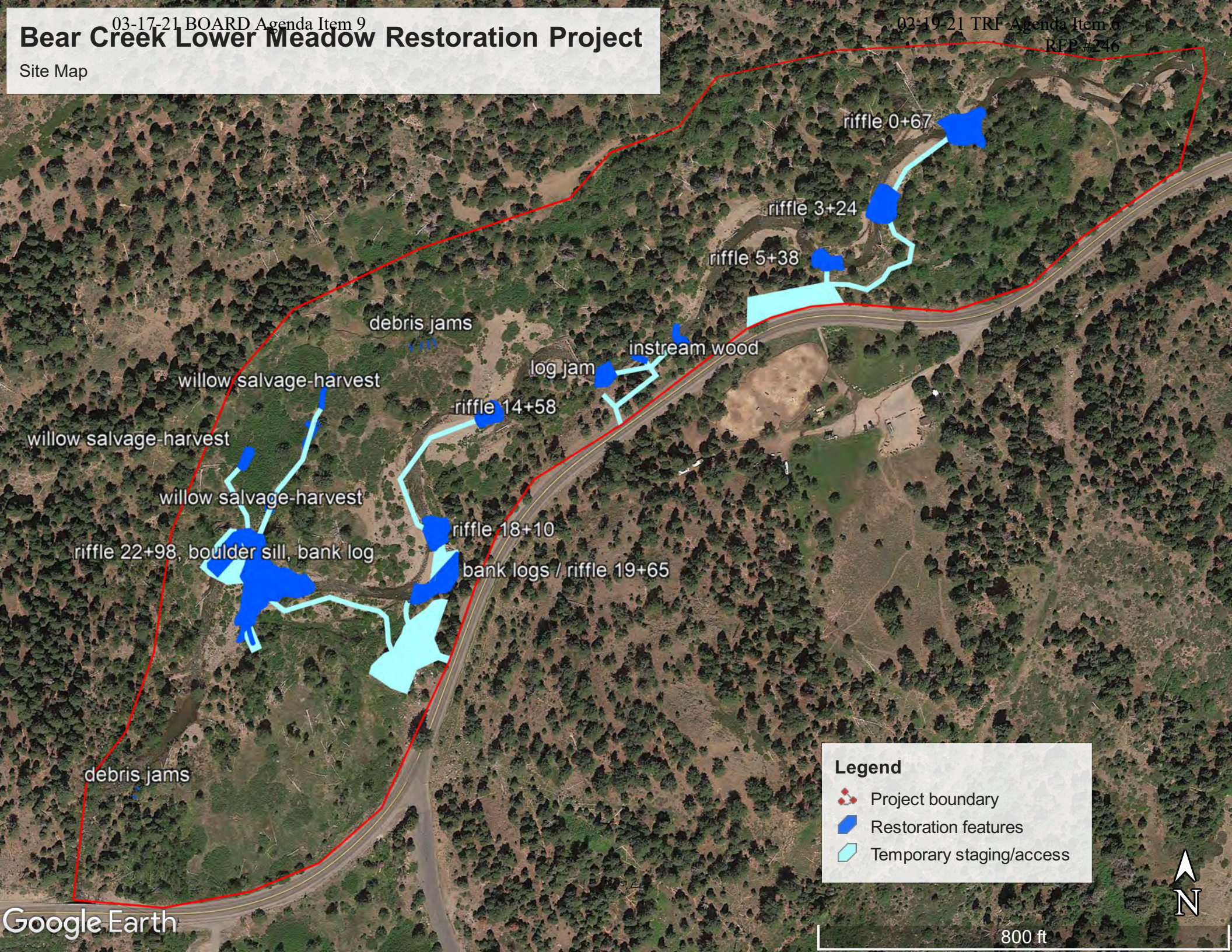
**Bear Creek
Lower Meadow
Restoration
Project**

Bear Creek Lower Meadow Restoration Project: Location Map

foriver
TRUCKEE RIVER WATERSHED COUNCIL

1.5 0.75 0 1.5 Miles



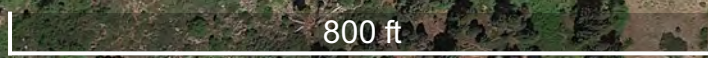


Legend

Project boundary

Restoration features

Temporary staging/access





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Truckee River Fund 2021 Request for Proposals

The Community Foundation of Western Nevada is accepting proposals for grants from the Truckee River Fund. Proposals will be considered by the Truckee River Fund Advisory Committee and grant recommendations must be approved both by the TMWA Board and the Board of Trustees of the Community Foundation. The fund advisors may recommend up to a total of \$650,000 in grant awards but may choose to award less than the amount available.

The mission of the Truckee River Fund is to **protect and enhance water quality or water resources of the Truckee River** or its watershed. To be considered for funding, project proposals must demonstrate measurable impact in accordance with this mission. Please note that land and/or water rights acquisition projects are not considered to be a Truckee River Fund priority. To see projects funded by the Truckee River Fund, please go to <http://www.truckeeriverfund.org>.

Projects must begin within 180 days of award. Applicants must be registered 501(c)(3) nonprofit agencies, nonprofit educational institutions, or governmental entities. Grants are paid on a reimbursable basis for actual expenditures.

Please **submit 1 pdf copy¹ via email** of your proposal. Proposals are encouraged for the following:

- A. Projects that improve bank or channel stabilization and decrease erosion.
- B. Structural controls or Low Impact Development (LID) projects on tributaries and drainages to the Truckee River where data supports evidence of pollution and/or sediments entering the Truckee River.
- C. Projects that remove pollution from the Truckee River.
- D. Projects that remove or control invasive aquatic species or terrestrial invasive plant species that are adverse to water supply.²
- E. Other projects that meet the grant priorities listed on page 2.

Applicants must provide a minimum 25 percent match for funds requested. Guidelines for requests of matching funds are provided in the attached application form. For larger grant requests, priority will be given to projects that significantly leverage the grant with funding from other sources. Indirect/overhead expenses cannot exceed 25 percent.

The deadline for submitting **your completed proposal is Friday, February 5, 2021, at noon**. Applications must be confirmed as received by the Community Foundation of Western Nevada by the deadline to be considered for funding. For questions, additional information, or an electronic copy of the application, contact the Community Foundation. The application is also available online at www.truckeeriverfund.org.

The application may be reproduced, retyped, or sections increased or reduced in length but must follow the same order. Please use the following checklist to ensure your application is complete:

- X Proposal, including Cover Sheet and narrative, is a maximum of 5 pages on 8 ½" x 11" paper in readable font (i.e. Times New Roman 12 pt.)
- X Budget is page 6
- X Pages are numbered
- X You are submitting 1 pdf copy
- X You have emailed the pdf to lrenda@nevadafund.org so it is received no later than **Friday, February 5, 2021, at noon**

¹ Note: Put your application page, budget, and any photos into ONE Pdf file. Submit your required attachments via email as individual files clearly labeled with your organization's name in the file name. Send your files to lrenda@nevadafund.org.

² For proposals related to weed control/eradication, contact Lauren Renda at the Community Foundation of Western Nevada for additional criteria: lrenda@nevadafund.org; 775-333-5499.



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Cover Sheet Page 1

Grant Priorities

TMWA recommends that the Advisors give preference to well-prepared and thought out grant requests for projects and programs that mitigate substantial threats to water quality and the watershed, particularly those threats upstream or nearby treatment and hydroelectric plant intakes:

- I. **Aquatic Invasive Species (AIS):** Projects/Programs that support the prevention or control of aquatic invasive species in the main stream Truckee River, Lake Tahoe, other tributaries and water bodies in the Truckee River system.
- II. **Watershed Improvements:** Projects that reduce erosion or sediment, suspended solids, or TDS discharges to the River. Projects or programs that are located within 303d (impaired waters) sections of the River should be considered, both in California and Nevada. Innovative techniques should be encouraged.
- III. **Local Stormwater Improvements:** Projects that are well designed which mitigate storm water run-off due to urbanization of the local watershed. Priority should be given to those improvement projects in close proximity to TMWA's water supply intakes and canals and which will improve the reliability and protect the quality of the community's municipal water supply.
- IV. **Re-Forestation and Re-Vegetation Projects:** Projects to restore forest and upland areas damaged by fire and historical logging operations, and to improve watershed resiliency in drought situations. Projects/programs in this category should be given a high priority due to urbanization of the watershed and increased susceptibility of the urban and suburban watershed to wildfire.
- V. **Support to Rehabilitation of Local Tributary Creeks and Drainage Courses:** Practical projects to support water quality improvement in Gray Creek, Bronco Creek, Mogul Creek, Chalk Creek, Steamboat Creek and the North Truckee Drain.
- VI. **Stewardship and Environmental Awareness:** Support to Clean-Up programs and the development and implementation of educational programs relative to water, water quality and watershed protection.
- VII. **Meet Multiple Objectives:** Projects/Programs should identify opportunities to meet multiple water quality and watershed objectives as outlined above with preference given to those achieving multiple benefits.
- VIII. **Leverage Stakeholder Assets and Participation:** Projects/Program selection should include an assessment of various stakeholder interests in all aspects of river water quality, watershed protection, source water protection and species enhancement thereby leveraging available funds and other assets.



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Cover Sheet

Date: 2/5/21

Organization Name:	One Truckee River under the Truckee River Foundation	
Type:	501(c)(3) EIN# 20-3378838	Governmental entity? No
Address:	P.O. Box 18153, Reno, NV 89511	
Project Name:	One Truckee River Partnership, River-Friendly Landscape pilot, and engagement with the public.	
Amount requested: \$259,090	Website: www.onetruckkeeriver.org	
This funding will be used to (complete this sentence with a max of 2 sentences):	Continue to 1) Lead, coordinate, and fundraise for the One Truckee River partnership; 2) run a River-Friendly Landscape pilot certification program and adult education initiative to reduce residential stormwater runoff and non-point source pollutants; and 3) increase the public's understanding of the Truckee River, OTR and partners' river efforts.	
Key People:	Director: Iris Jehle-Peppard Board Chair: Lynn Zonge Project Contact: Name: Iris Jehle-Peppard Position: Executive Director Phone: 775-450-5489 Fax: 775-851-5182 Email: iris@onetruckkeeriver.org	
Organization Mission:	One Truckee River (OTR) mission is to ensure a healthy, thriving, sustainable river connected to the hearts and minds of its community.	
Has your organization received other grants from the Truckee River Fund? Yes X No (use additional page if necessary)	If yes, Date awarded: Please, See Attachment A Project title: Amount of Award:	

DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

- X A. Projects that improve bank or channel stabilization and decrease erosion.
- X B. Structural controls or Low Impact Development (LID) projects on tributaries and drainages to the Truckee River where data supports evidence of pollution and/or sediments entering the Truckee River.
- ☐ C. Projects that remove pollution from the Truckee River.
- ☐ D. Projects that remove or control invasive aquatic species or terrestrial invasive plant species that are adverse to water supply.³
- ☐ E. Other projects that meet the evaluation criteria.

³ For proposals related to weed control/eradication, contact Lauren Renda at the Community Foundation of Western Nevada for additional criteria. lrenda@nevadafund.org; 775-333-5499.



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NARRATIVE REQUIREMENTS

Provide answers for all 11 sections below; use the numbers and topics (in **bold**) to label each section in your response. Your application is limited to 5 narrative pages, including the cover sheet. Your budget is page 6. **All projects are required to have measurable outcomes:**

1. Specific **project goals and measurable outcomes and how you will measure and report them.**

Project Goal 1: Lead, coordinate, and fundraise for the One Truckee River partnership.

Goal 1 Measurable Outcomes:

- a) OTR will track number of OTR Partnership Council Meetings, OTR Partnership Working Groups, and small meetings with partners, other relevant agencies, and the public.
- b) OTR will apply for funding to further the OTR Management Plan implementation.

How Goal 1 Outcomes will be Measured:

- a) OTR will conduct **eight** Partnership Council meetings a year with **12-18** OTR partner agencies participating, **four** Partnership Working Groups organized (meeting frequency and size determined by the group) and **35** small meetings with partners, other relevant agencies and the public.
- b) OTR Proposal Writing Team will apply for **\$350K to \$600K** in funding to further the implementation of the OTR Management Plan.

Project Goal 2: River-Friendly Landscape pilot certification program and adult education initiative to reduce residential stormwater runoff and non-point source pollutants.

Goal 2 Measurable Outcomes:

- a) OTR will implement a pilot River-Friendly Landscaping Certification Program that will target homeowners in the Chalk Creek Watershed. The program will include a free landscape consultation that will provide site specific recommendations of management practices and residential low impact development strategies to implement and achieve a "River-Friendly Landscaping certification". A certification score card will be developed to outline the River-Friendly landscaping standards to be met. If the River-Friendly standards are met, then homeowners will receive a yard sign to display and encourage others to participate. This pilot certification program will be adapted from a similar program that was successfully implemented by the Truckee River Watershed Council in Truckee, CA.
- b) A River-Friendly Landscaping OTR website page will be developed and continual online resources will be developed to support homeowners in their efforts to achieve River-Friendly Landscaping certification.
- c) Continue River-Friendly Landscaping adult education and outreach campaigns in 2022. This program was initiated with Western Regional Water Commission (WRWC) funding and includes public workshops, social media posts, and articles/blogs.

How Outcomes will be Measured:

- a) The pilot certification program will engage **25 households** to participate in the pilot. Data will be collected via participant surveys to quantify which River-Friendly landscaping measures were implemented. This data will inform future efforts to scale the program and whether incentives are necessary for strategies that were not implemented.
- b) A minimum of **5 online resources**, such as "how-to" guides or landscape design templates, will be added to the OTR River-Friendly Landscaping webpage. Web data analytics will be used to track the number of people who utilize the resources.
- c) Adult education and outreach efforts will include a minimum of **69 social media posts, 23 workshops, and 14 articles/blogs**. Reach of social media and blogs/articles will be measured with web analytics. Workshop attendance will be tallied, and attendees will be surveyed to evaluate the knowledge gained.

Project Goal 3: Utilize social media platforms, OTR website, and cross-promotions with OTR partners to increase the public's understanding of the Truckee River, OTR and partners' river efforts.



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Measurable Outcomes:

- a) Monthly social media content planned and executed with 2 posts per week highlighting the Truckee River, OTR and partner river efforts.
- b) 3 posts boosted per month to increase OTR social media followers and go to the OTR website for more information on the Truckee River and the River-Friendly Landscaping Program.
- c) Maintain blog posts on OTR website to keep the information provided to the public current.

How Outcomes will be Measured: Goal 3 efforts will be measured with online analytics data.

- a) 2 post a week for 104 weeks equaling a total of 208 posts for Face Book and Instagram.
- b) Specific analytics data including number of total followers, post impressions, and post engagements will be captured and reviewed monthly to measure effectiveness of posts and inform future content.
- c) OTR increases its social media followers by 3-5% per month for 24 months.

2. **Project location.** The Truckee River corridor in the Reno/Sparks urban core.
3. **Project description.** Include site map and aerial photos if applicable/possible. Maps and photos must fit on 8-1/2" x 11" paper. Cite any studies that support your project. **See attachments.**

Reports that have informed this work are: One Truckee River Management Plan, Phase I, Nevada 2016-2018 Water Quality Integrated Report, and the Truckee Meadows Stormwater Monitoring Annual Report Fiscal Year 2020.

4. **Grant priorities.** Explain how the proposed project advances the TRF's grant priorities (page 2 of the cover sheet); refer to the priorities by number in your narrative.

Project Goal 1 meets TRF's Grant Priority VII Meet Multiple Objectives and VIII Leverage Stakeholder Assets and Participation because OTR is a collaboration of public and private partners focused on the implementation of the OTR Management Plan. The OTR Plan describes 103 action items devoted to protecting the Truckee River and working to meet multiple objectives. In 2017, the OTR Partnership Council (consisting of 18 local agencies) prioritized nine out of 103 action items. Out of those nine, three are under Goal 1 to *ensure and protect water quality and ecosystem health in the Truckee River*. In 2020, OTR accomplished four out of the nine prioritized action items while the other five continue to move forward. One prioritized action item completed was the *Watershed Management and Protection Plan for Tributaries to the Truckee River* by Truckee Meadows Stormwater Permit Coordinating Committee and 2020 Integrated Source Water and 319(h) Watershed Protection Plan for Public Water Systems and the Truckee River in the Truckee Meadows by Nevada Division of Environmental Protection. In 2021, OTR Partnership Council is working on re-examining priorities, which gives space for multiple water-quality agencies to come together to discuss and build consensus on collaborative multiple water quality and watershed objectives.

OTR always works to leverage available funding and assets. In 2020, OTR Proposal Writing Team applied for a total of \$633,581 and secured \$561,713. In 2019, the Team applied for a total of \$665,678 and secured \$415,762 for OTR operations and priority action items.

Project Goal 2 meets TRF's Grant Priority II Watershed Improvements, III Local Stormwater Improvements, V Support to Rehabilitation of Local Tributary Creeks and Drainage Courses, and VI Stewardship and Environmental Awareness because it provides water quality and watershed protection in adult education programming, is designed to mitigate residential stormwater runoff and nonpoint source (NPS) pollution, and concentrates efforts in a 303(d) impaired section of the Truckee River Watershed upstream of two TMWA water intake structures (Chalk Bluff and Glendale).

The River-Friendly Landscaping program was initiated with funding from WRWC as an adult education initiative to teach homeowners about residential low-impact development and landscape maintenance practices that reduce stormwater runoff and NPS pollution. We propose to continue this education initiative because it increases community water quality environmental awareness and has great potential to expand on what has already been achieved. The social media campaign had 4,600+ views in the first two months with an average of 32 engagements (clicks, comments, shares) per post. The public workshops attendance averages 10 participants per session with 88% of participants reporting



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improved knowledge of stormwater runoff and NPS pollution prevention. This program also directly supports OTR Management Plan Goal 3: Create an aware and engaged community that protects and cares for the river.

In addition to the continued education and outreach, we will launch a new pilot River-Friendly Landscaping Certification Program. This builds on the basic education presented in workshops and social media by meeting with homeowners one-on-one and giving them site-specific recommendations for landscape improvements they can make to reduce stormwater runoff and NPS pollution. This program will mitigate stormwater runoff from residential landowners, and while individual residential parcels are small, they have great potential for stormwater runoff reduction when assessed cumulatively across the watershed. According to the Nevada 2016-2018 Water Quality Integrated Report, "Pollution from nonpoint sources is the leading cause of water quality impairments in Nevada." This River-Friendly Landscaping Certification Program would help to address NPS pollution and support Nevada Division of Environmental Protection (NDEP) 2015-2019 Nonpoint Source Management Plan goals and strategies to "implement best management practices that minimize or prevent urban nonpoint source pollution."

The Chalk Creek sub-watershed has been selected for the pilot River-Friendly Landscaping Certification Program because it is tributary to the Truckee River just upstream of the river diversion at the Chalk Bluff Dam to the Chalk Bluff Water Treatment Plant. The creek is impaired for several beneficial uses (water quality standards NAC 445A.1684):

- support of "aquatic life" due to Temperature, Selenium, and Nitrate.
- support of "aquatic life" and "recreation involving water contact" due to Orthophosphate and Total Phosphorus.
- "municipal or domestic supply" due to Total Dissolved Solids (TDS) and Sulfate.

Three of these impairments (total nitrogen, total phosphorus, and total dissolved solids) have established total maximum daily loads (TMDL) for the Truckee River Watershed. Prior to development within the watershed, Chalk Creek was ephemeral, indicating that hydromodification has increased flows in the tributary. Irrigation seepage through desert soils, that were not previously irrigated, can mobilize salts (TDS), which in turn can lead to perennial flows with poor water quality in drainages that were originally ephemeral. Water quality concerns in Chalk Creek (TDS, Sulfate, Selenium, and Nitrate) maybe related to this type of seepage.

The River-Friendly Landscaping Certification Program will encourage low-impact development techniques and landscape maintenance practices that reduce sediments, phosphorus, and nitrogen in direct support of efforts to meet the TMDL requirements. The Chalk Creek sub-watershed's geographic location in the foothills of Peavine also makes it ideal for implementing sediment reduction techniques because the sloped terrain is more susceptible to erosion and sediment discharge. The program also encourages techniques to reduce stormwater runoff volumes, mitigating hydromodification of channels and water temperature increases due to surface runoff across hot pavement. Furthermore, Chalk Creek's confluence with the Truckee River is in close proximity to the TMWA Chalk Bluff Water Treatment Plant and upstream of the Glendale intake. Concentrating efforts in this sub-watershed helps protect our municipal water supply. This Program compliments City of Reno work soon to be under way at Chalk Creek support by NDEP 319 funding and supports the OTR prioritized Action Item 1.4.c) *Develop and implement a coordinated vegetation management plan along the river.*

Project Goal 3 meets TRF's Grant Priorities listed above by supporting all of the Project Goals described above to be effectively distributed and communicated to Truckee Meadow's residents along with increasing the overall understanding of the Truckee River and the OTR and partners' river efforts.

5. **Permitting.** Provide a permitting schedule for your project along with your plan for getting the required permits. Be sure to include the cost of permitting as a line item in your budget. **N/A**
6. **Future land use.** List any known or foreseeable zoning, land use, or development plans that may affect your proposed project.



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The majority of the Chalk Creek watershed is zoned residential and it is not yet completely built out. It is imperative that homeowner education regarding protecting their drinking water is conveyed as the problem may otherwise get worse as development expands.

7. If **future phases** of the project will be needed, identify anticipated sources of funding.

OTR continues to look for additional funding sources for OTR operations and OTR Management Plan implementation. We anticipate securing more funding from these sources: Western Regional Water Commission, Renown Health, Nevada Division of Environmental Protection, Nevada Division of State Parks and others as they are identified.

8. **Principals involved** in leading or coordinating the project or activity.
Project Goal 1: Iris Jehle-Peppard, OTR Executive Director
Project Goal 2: Carrie Jensen, Landscape Architect, Urban Ecology Solutions, LLC under the supervision of the OTR Executive Director and Board
Project Goal 3: Maren Rush, Maren Rush Designs under the supervision of the OTR Executive Director and Board

9. Number of **staff positions involved** in project: Fulltime **2** Part-time **2** ("Fulltime" means 100% of their staff position will be dedicated to this project; "part-time" means only a portion of their staff position will be dedicated to this project)

10. Number of **volunteers involved** in project and an estimated number of volunteer hours.

5 volunteers with an estimate of 40 hours per quarter provided.

11. **Time Line** of Project. List key dates and include project milestones. *Note:* Be realistic in your estimate of dates and milestones. List any factors that may cause a delay in implementing and/or completing the project.

- 12.

Project Milestones	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022
Project Goal 1: Lead, coordinate, and fundraise for the One Truckee River partnership.								
Coordinate and facilitate quarterly Partnership Council Meetings. <i>Note: TRF #235 supports these meetings until 2022</i>	x	x	x	x	x	x	x	X
OTR Partnership Council re-prioritizes OTR action items to focus further implementation of the OTR Management Plan			x					X
Two Partnership Working Groups topics defined to support OTR Partnership Council prioritized Action Items from the OTR Plan	X				x			
Working Group participants identified and engaged	x				x			
Working Group start meeting and working on effort identified		x	x	x		x	x	X
Small meeting with partners, other relevant agencies and the public to support the implementation of the OTR Plan	x	x	x	x	x	x	x	X
Apply for funding to further the implementation of the OTR Plan	x	x	x	x	x	x	x	X



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Project Goal 2 - River-Friendly Landscape pilot certification program and adult education initiative to reduce residential stormwater runoff and non-point source pollutants								
Adult education and outreach campaign			x	x	x	x	x	X
OTR River-Friendly Landscaping website page developed		x						
Implement pilot River-Friendly Landscaping Certification Program	x	x	x	x	x	x	x	X
Develop online resources to support River-Friendly Certification Program	x	x	x	x				
Project Goal 3: Utilize social media platforms, OTR website, and cross-promotions with OTR partners to increase the public's understanding of the Truckee River, OTR and partners' river efforts.								
Develop and complete OTR Communication Plan	x							
Increases its social media followers by 12-20%	x	X	x	x	x	x	x	X
Increase social media engagements by 8-10%	x	X	x	x	x	x	x	x

12. **Success.** Tell the committee how we will know you succeeded in what you proposed to do.

Immediate success will be evident if we meet the measurable outcomes for each goal. These are simple metrics as detailed earlier in this application. Longer-term success, and the ultimate goal of our actions, will be evident if the water quality of Chalk Creek improves. This will take longer to assess since water quality data is often highly variable due to innumerable natural factors such as precipitation.

13. **Collaboration.** List partnerships or collaborations with other entities in relation to your proposal, if any.

Project Goal 1 will collaborate with OTR partners (18 local agencies) and other relevant local stakeholders depending on the work prioritized by OTR Partnership Council. Project Goal 2 as already partnered with the following public agencies, community groups, businesses and non-profits to collaborate on outreach: Lahontan Audubon Society, Moana Nursery, Reno Sunrise Rotary Club, Reno Kayakers, The Nature Conservancy, Reno Food Systems, Living With Fire (UNR), Nevada Land Trust, Keep Truckee Meadows Beautiful, Sierra Club Toiyabe Chapter, Galena Creek Visitor Center, University of Nevada Reno Cooperative Extension, May Arboretum Society, the Osher Lifelong Learning Institute of UNR, the American Society of Landscape Architects Nevada Chapter, and Washoe County Green Team. We are always pursuing additional partnerships, and as part of River-Friendly Landscaping Certification Program pilot, we'll concentrate on outreach to neighborhood groups and home owners' associations in the Chalk Creek sub watershed. Project Goal 3 will collaborate with OTR partners to cross-promote material to the public.

14. **Grant match.** All applicants must provide a match of at least 25 percent for dollars requested. The match may be with funding and/or in-kind services. For larger grant requests, priority will be given to projects that significantly leverage the grant with funding from other sources. Complete the Grant Match section.

15. **Project budget** (see Sample Budget Template on page 5 of this RFP). Provide detail on line-item expenditures and show which costs are to be paid for by the Truckee River Fund grant, which expenses will be paid for by other sources, and which will be paid for with in-kind services. Other sources of funding should be provided.
Note 1: Project budget must be a stand-alone, one-page attachment.
Note 2: Indirect/overhead expenses cannot exceed 25 percent.

Grants from the Truckee River Fund are paid on a reimbursable basis for actual expenditures only. Craft your budget in such a way that requests for reimbursement correspond to the original budget.



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**Grant Match**

Match amount to be provided:	\$91,425
Match details:	<p>Please provide the form of your matching funds. If match is made up of both cash and in-kind, fill in both sections.</p> <p>Match is: Cash \$91,425 In-kind \$0</p> <p>Note: Volunteer and in-kind hours may be calculated at a maximum rate of \$20/hour per individual. Indirect cost may not be counted as match.</p> <p>For the cash portion of your match, is the funding already being held by the applicant for this project? Yes X No ___</p>
Description of matching funds/in-kind donations:	Western Regional Water Commission

ATTACHMENTS

You may be asked to submit the following attachments via email. If you are asked to submit the attachments, clearly label each file with your organization's name. If you do not have the ability to email them, place each of the items listed below on a separate page and submit just one copy.

Nonprofits submit:

N/A Last audited financial statements if your organization has been audited. **OTR/Truckee River Foundation has not yet been audited.**

- x List of Board of Directors
- x Copy of agency's IRS 501(c)(3) Tax Determination Letter
- x Copy of the agency's most recent IRS Form 990

Governmental entities submit:

N/A Departmental budget in lieu of audited financial statements



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ONE TRUCKEE RIVER BUDGET

Budget Item Description*	ORIGINAL PROJECT BUDGET				REIMBURSEMENT REPORT	
	TRF \$	Other Funding Name**	Match \$	Total	Expenditure s to date TRF	Expenditur es to date (other sources)
OTR partnership leadership, coordination, and facilitation of 18 local agencies to prioritize Truckee River efforts- OTR Executive Director Labor	\$137,272	WRWC	\$44,728	\$182,000	\$0	\$0
River-Friendly Landscaping – support reduction in residential stormwater run-off - Urban Ecology Solutions Labor	\$47,800	WRWC	\$22,947	\$70,747	\$0	\$0
Materials costs including yard signs, printing costs, and mileage to support River-Friendly Landscaping Certification Program	\$2,200	None	\$0	\$2,200	\$0	\$0
Truckee River Outreach Maren Rush Designs - Labor	\$15,000	WRWC	\$15,000	\$30,000	\$0	\$0
Truckee River Promotions – Social Media expansion	\$5,000	WRWC	\$8,750	\$13,750	\$0	\$0
In-Direct Costs at 25% includes printing and reproductions, postage, office supplies, payroll services, insurance, tel-communications, utilities, dues, subscriptions, fees and staff time to execute contracts, process invoices, input data, prepare, and review financial statements.	\$51,818	N/A	N/A	\$51,818	\$0	\$0
TOTAL	\$259,090		\$91,425	\$350,505	\$0	\$0



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GRANTEE REQUIREMENTS

To be eligible for funding, grantees must adhere to the following requirements:

- Funds are to be used and/or disbursed exclusively for the charitable uses and purposes.
- The Fund shall be used exclusively for projects that protect and enhance water quality or water resources of the Truckee River, or its watershed.
- The Charitable Beneficiaries may include 501(c)(3) organizations and governmental entities. Any grants to governmental entities must be made exclusively for public benefit purposes.
- All grantees will be required to sign a grant agreement stipulating their agreement with all of the terms, conditions, and reporting requirements.
- Organizations or entities sponsoring proposals are prohibited from ex parte communications regarding such proposals with members of the Truckee River Fund Advisory Committee while such proposals are pending before the Committee, and such communications may be grounds for rejecting a proposal.
- To maintain eligibility to receive grant funds, each Charitable Beneficiary must comply at all times with the following requirements:
 1. Charitable Beneficiaries must be exempt from federal income taxation under Section 501(c)(3) of the Code;
 2. Charitable Beneficiaries shall use all Fund distributions toward projects that are appropriate and legal public expenditures;
 3. Charitable Beneficiaries must provide financial details and/or reports of their organizations upon request;
 4. Charitable Beneficiaries must not use any Fund distributions for political contributions or political advocacy;
 5. Charitable Beneficiaries must either implement the projects, activities, and/or programs for which they received Fund distributions within six months of the date in which such distributions are received or by date(s) as agreed upon in the grant acceptance agreement, or must return all such distributions to the Community Foundation forthwith;
 6. Charitable Beneficiaries must provide the Community Foundation a report detailing the completion of their projects, activities, and/or programs; and
 7. Charitable Beneficiaries must sign an agreement regarding their compliance with the qualifications hereof.

PROJECT EVALUATION

Each proposal will be evaluated on criteria that include but are not limited to:

- Measurable outcomes in accordance with stated grant priorities.
- Readiness of sponsoring organization to undertake and complete project.
- Consistency with established Truckee River operations.
- Impact on other River stakeholders.
- Absence of negative or unintended consequences.
- Solutions to known problems as identified through past research.
- Prior performance on grants from the Truckee River Fund.

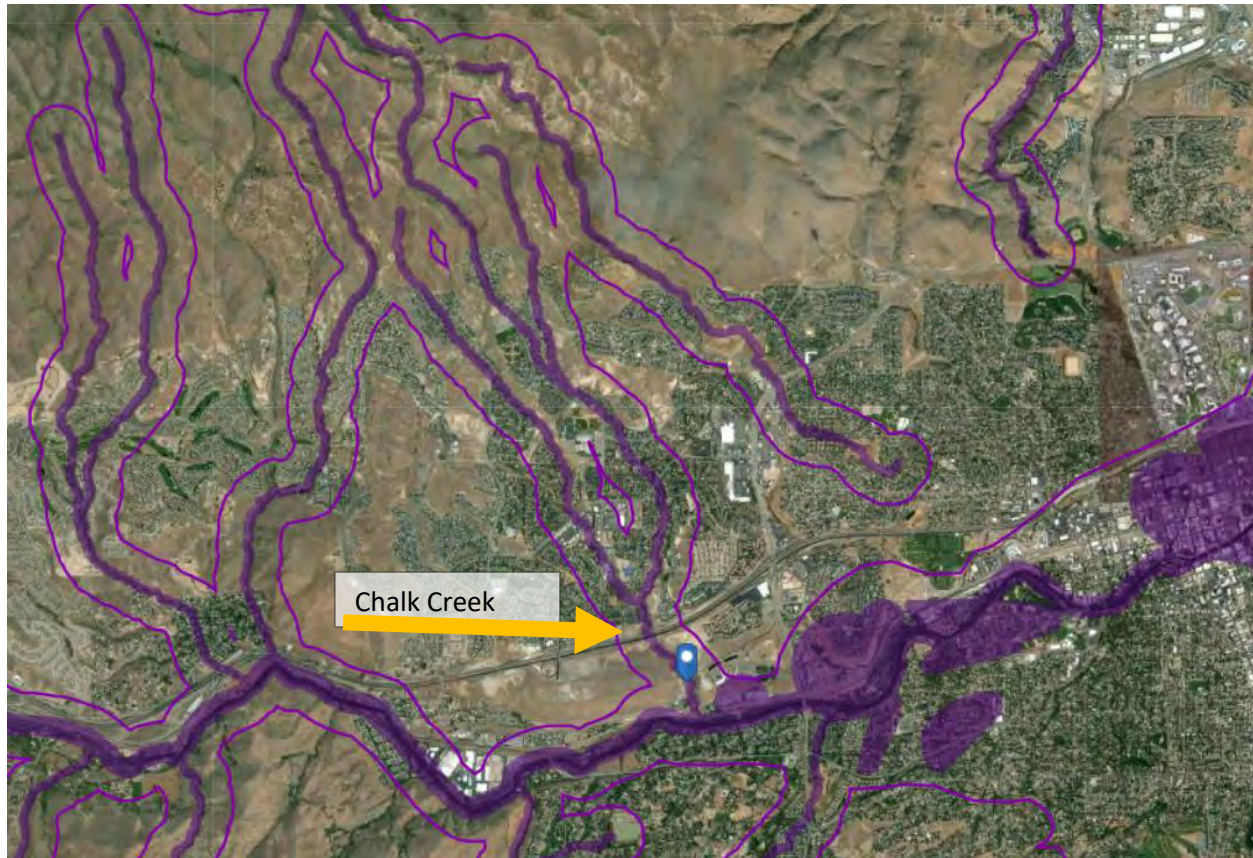
The Nature Conservancy and Truckee River Watershed Council have conducted assessments of the Truckee River and the Donner Lake watersheds and have presented their findings to the Truckee River Fund advisory committee. The results of these assessments may influence the advisors' decision-making during proposal review. Copies of the assessments are available at www.truckeerriverfund.org.

Attachment A: Nevada Land Trust/One Truckee River Fund Grant History

Note: The 2021 proposal is the first submitted from the Truckee River Foundation/One Truckee River.

Date Awarded:	One Truckee River Overall Support
Project Title:	TRF #235
Amount of Award:	\$74,293
Date Awarded:	August 16, 2019
Project Title:	TRF #221: River Restroom Project
Amount of Award:	\$124,976
Date Awarded:	March 22, 2017
Project Title:	TRF #188: One Truckee River – Phase 1 Action
Amount of Award:	\$256,220
Date Awarded:	September 23, 2016
Project Title:	TRF #180: One Truckee River – Phase 1 Implementation
Amount of Award:	\$98,534
Date Awarded:	March 21, 2012
Project Title:	TRF #104: Washoe Drive Fire Stabilization and Restoration Effort
Amount of Award:	\$115,000
Date Awarded:	December 12, 2011
Project Title:	TRF #99: Caughlin Fire Emergency Watershed Stabilization & Restoration Effort
Amount of Award:	\$219,856
Date Awarded:	October 11, 2011
Project Title:	TRF #90: Weed Treatments & Revegetation, Truckee River & Tributaries
Amount of Award:	\$127,500
Date Awarded:	July 21, 2009
Project Title:	TRF #70: Weed Treatments & Revegetation, Truckee River & Tributaries
Amount of Award:	\$125,000
Date Awarded:	July 21, 2009
Project Title:	TRF #66: Scope of Work for Truckee River Ecosystem Restoration Coordination, Creation of a Five-Year Weed Control and Restoration Plan for the Truckee River
Amount of Award:	\$10,000
Date Awarded:	July 17, 2008
Project Title:	TRF #46: Weed Treatments & Revegetation, Truckee River & Tributaries
Amount of Award:	\$112,500





Aerial photo illustrating the location of Chalk Creek and the surrounding source water protection areas surrounding the creek (within the purple lines) and the critical source water protection areas (solid dark



INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: **FEB 06 2012**

TRUCKEE RIVER FOUNDATION
1835 FRANKLIN RD
CARSON CITY, NV 89706

Employer Identification Number:
20-3378838
DLN:
17053104325011
Contact Person:
JENNIFER NICOLIN ID# 95152
Contact Telephone Number:
(877) 829-5500
Accounting Period Ending:
December 31
Public Charity Status:
170(b)(1)(A)(vi)
Form 990 Required:
Yes
Effective Date of Exemption:
April 11, 2011
Contribution Deductibility:
Yes
Addendum Applies:
No

Dear Applicant:

We are pleased to inform you that upon review of your application for tax exempt status we have determined that you are exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code. Contributions to you are deductible under section 170 of the Code. You are also qualified to receive tax deductible bequests, devises, transfers or gifts under section 2055, 2106 or 2522 of the Code. Because this letter could help resolve any questions regarding your exempt status, you should keep it in your permanent records.

Organizations exempt under section 501(c)(3) of the Code are further classified as either public charities or private foundations. We determined that you are a public charity under the Code section(s) listed in the heading of this letter.

Please see enclosed Publication 4221-PC, Compliance Guide for 501(c)(3) Public Charities, for some helpful information about your responsibilities as an exempt organization.

Sincerely,



Lois G. Lerner
Director, Exempt Organizations

Enclosure: Publication 4221-PC

Form **990-N****Electronic Notice (e-Postcard)**OMB No. 1545-2085
REP #247Department of the Treasury
Internal Revenue Service**for Tax-Exempt Organization not Required to File Form 990 or 990-EZ****2019**

Open to Public Inspection

A For the **2019** Calendar year, or tax year beginning **2019-01-01** and ending **2019-12-31****B** Check if available☐ **Terminated for Business**☒ **Gross receipts are normally \$50,000 or less****C** Name of Organization: **TRUCKEE RIVER FOUNDATION****1835 FRANKLIN RD.****CARSON CITY, NV, US,****89706****D** Employee IdentificationNumber **20-3378838****E** Website:**F** Name of Principal Officer: **kimberlee zonge****1835 FRANKLIN RD.****CARSON CITY, NV, US,****89706**

Privacy Act and Paperwork Reduction Act Notice: We ask for the information on this form to carry out the Internal Revenue laws of the United States. You are required to give us the information. We need it to ensure that you are complying with these laws.

The organization is not required to provide information requested on a form that is subject to the Paperwork Reduction Act unless the form displays a valid OMB control number. Books or records relating to a form or its instructions must be retained as long as their contents may become material in the administration of any Internal Revenue law. The rules governing the confidentiality of the Form 990-N is covered in code section 6104.

The time needed to complete and file this form and related schedules will vary depending on the individual circumstances. The estimated average times is 15 minutes.

Note: This image is provided for your records only. Do Not mail this page to the IRS. The IRS will not accept this filing via paper. You must file your Form 990-N (e-Postcard) electronically.

*Updated 1-13-2021***One Truckee River Board of Directors**

#	Officers	Position	E-Mail	Phone Number
1	Lynn Zonge	President	lynnzonge3@gmail.com	775-720-5872
2	TBD	Vice President	TBD	TBD
3	Susan Lynn	Treasurer	sblynn@sbcglobal.net	775-530-0260
4	Tracy Turner	Secretary	turner.tracy33@gmail.com	775-636-0951
#	Board Members	Focus	E-Mail	Phone Number
5	Brain Bonnenfant	Identify new revenues and projects for river improvements	bonnen@unr.edu	775-303-4316
6	Alicia Reban	Signage and veg. management	a.reban@nevadalandtrust.org	775-742-5332
7	Christi Cakiroglu	Board recruitment	christi@ktmb.org	775-815-6885
8	Birgit Widegren	Review and advise on River Friendly-Landscaping	bwidegren@ndep.nv.gov	775-687-9550
#	Board Support	Focus	E-Mail	Phone Number
9	Sonia Folsom	Supports Secretary and Facilitating Meetings	sfolsom@tmwa.com	775-8332-8002



FRIENDS of NEVADA WILDERNESS

Cover Sheet

Date: 02/05/2021

Organization Name:		Friends of Nevada Wilderness																															
Type:		501(c)(3) EIN# 88-0211763	Governmental entity? N																														
Address:		1360 Greg St. #111 Sparks Nevada 89431																															
Project Name:		Mount Rose Noxious Weed Monitoring, Treatment, and Re-seeding #9																															
Amount requested: \$28,549		Website: www.nevadawilderness.org																															
This funding will be used to (complete this sentence with a max of 2 sentences):		Friends of Nevada Wilderness will treat and re-seed approximately 75 acres of noxious weeds on Humboldt-Toiyabe National Forest lands within the Truckee River Watershed.																															
Key People: Nora Richter Chris Cutshaw Darcy Shepard	Director:	Shaaron Netherton																															
	Board Chair:	Roger Scholl																															
	Project Contact:	Name:	Nora Richter																														
		Position:	Northern Nevada Stewardship Manager																														
		Phone:	775-324-7667																														
		Fax:	775-324-2677																														
Email:		nora@nevadawilderness.org																															
Organization Mission:		Friends of Nevada Wilderness is dedicated to preserving all qualified Nevada public lands as Wilderness, protecting all present and potential Wilderness from ongoing threats, educating the public about the values of and need for wilderness, and improving the management and restoration of wild lands.																															
Has your organization received other grants from the Truckee River Fund? Yes X No _ (use additional page if necessary)		If yes, <table border="1"> <tr> <td>Date awarded:</td> <td>March 2020</td> </tr> <tr> <td>Project title:</td> <td>Mount Rose Noxious Weed Monitoring, Treatment, and Re-seeding #8</td> </tr> <tr> <td>Amount of Award:</td> <td>\$28,549</td> </tr> <tr> <td>Date awarded:</td> <td>March 2019</td> </tr> <tr> <td>Project title:</td> <td>TRF #219- Mt Rose Noxious Weed Monitoring and Treatment #7</td> </tr> <tr> <td>Amount of Award:</td> <td>\$24,094</td> </tr> <tr> <td>Date awarded:</td> <td>March 2018</td> </tr> <tr> <td>Project title:</td> <td>TRF #196- Mt Rose Noxious Weed Monitoring and Treatment #6</td> </tr> <tr> <td>Amount of Award:</td> <td>\$23,500</td> </tr> <tr> <td>Date awarded:</td> <td>March 2017</td> </tr> <tr> <td>Project title:</td> <td>TRF #185- Mount Rose Noxious Weed Monitoring and Treatment #5</td> </tr> <tr> <td>Amount of Award:</td> <td>\$22,405</td> </tr> <tr> <td>Date awarded:</td> <td>April 2016</td> </tr> <tr> <td>Project title:</td> <td>TRF #168- Mount Rose Noxious Weed Monitoring and Treatment #4</td> </tr> <tr> <td>Amount of Award:</td> <td>\$21,002</td> </tr> </table>		Date awarded:	March 2020	Project title:	Mount Rose Noxious Weed Monitoring, Treatment, and Re-seeding #8	Amount of Award:	\$28,549	Date awarded:	March 2019	Project title:	TRF #219- Mt Rose Noxious Weed Monitoring and Treatment #7	Amount of Award:	\$24,094	Date awarded:	March 2018	Project title:	TRF #196- Mt Rose Noxious Weed Monitoring and Treatment #6	Amount of Award:	\$23,500	Date awarded:	March 2017	Project title:	TRF #185- Mount Rose Noxious Weed Monitoring and Treatment #5	Amount of Award:	\$22,405	Date awarded:	April 2016	Project title:	TRF #168- Mount Rose Noxious Weed Monitoring and Treatment #4	Amount of Award:	\$21,002
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Amount of Award:	\$21,002																																

DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

- ☐
- A. Projects that improve bank or channel stabilization and decrease erosion.



FRIENDS of NEVADA WILDERNESS

- ☐ B. Structural controls or Low Impact Development (LID) projects on tributaries and drainages to the Truckee River where data supports evidence of pollution and/or sediments entering the Truckee River.
- ☐ C. Projects that remove pollution from the Truckee River.
- ☒ D. Projects that remove or control invasive aquatic species or terrestrial invasive plant species that are adverse to water supply.¹
- ☐ E. Other projects that meet the evaluation criteria.

NARRATIVE REQUIREMENTS

Provide answers for all 11 sections below; use the numbers and topics (in **bold**) to label each section in your response. Your application is limited to 5 narrative pages, including the cover sheet. Your budget is page 6. **All projects are required to have measurable outcomes:**

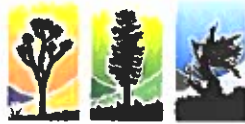
1. Project goals, Measurable Outcomes, and how you will measure and report them:

Goals: The goal of the 2021 Mount Rose Wilderness Noxious Weed Monitoring, Treatment, and Re-Seeding project is to protect the water quality of the Truckee River and its watershed by removing noxious weeds from the heavily used Hunter Creek watershed and reseeded treated areas with native seeds. With the help of volunteers, we will mitigate the spread of musk thistle (*Carduus nutans*), monitor known weeds sites for changes and growth, and identify any new infestations. In 2020, we expanded our weed treatment program to include re-seeding efforts as directed by the U.S. Forest Service (USFS). We look forward to continuing this effort in 2021 in addition to monitoring and removing invasive weeds.

Methods: Our methods include monitoring/scouting, direct removal, and re-seeding with native seeds. Friends of Nevada Wilderness (FNW) will host three volunteer weed removal events, three weed monitoring trips, and three volunteer re-seeding projects. During the spring, FNW staff and AmeriCorps members will monitor known weed sites to assess outcomes and monitor changes in known populations. Weed removal will take place during May and June before plants have gone to seed. We will use shovels and clippers to pull Musk Thistle which is listed on the state noxious weed list and the Truckee Meadow's Dirty Dozen Noxious Weed list. Mechanical removal is the most appropriate way to treat these weeds in Wilderness. Re-seeding will take place in the fall throughout 10 acres of the affected watershed with a USFS Botanist- approved graminoid mix with pollinator-attracting perennial forbs. The re-seeding mix will be purchased by FNW.

Measurable Outcomes: FNW staff and volunteers will treat noxious weeds throughout and area of approximately 75 acres, monitor existing weed sites, scout the Hunter Creek Drainage for appropriate re-seeding sites, and re-seed approximately 10 acres where weeds have been removed. With funding from the Truckee River Fund we will host three volunteer weed- pulling events, three weed monitoring trips, and three re-seeding volunteer projects. We have identified our focus areas from years of monitoring and direction from the Carson Ranger District. We anticipate removing 5,000-10,000 invasive weeds that each have the potential to germinate and create thousands more plants. On each weed removal project, we hope to average 6 volunteers for about 6 hours of on-the-ground work, and on each re-seeding project we hope to average 2 volunteers for about 6 hours of on-the-ground work. We will also use matching funds to complete at least three additional weed removal projects with 6 volunteers for 6 hours each, and we anticipate removing at least another 5,000-10,000 weeds.

These projects will not only engage and educate volunteers but will give citizens a chance to take part in the stewardship of their watershed. To date we have removed over 215,000 weeds from the Truckee River Watershed, resulting in a decrease in density of noxious weeds, and we hope to continue our momentum by augmenting these weed treatments with the reseeded of native bunch grasses and perennial forbs for the second year in a row.



FRIENDS of NEVADA WILDERNESS

2. **Project location:** Project locations are in the northern section of the Mount Rose Wilderness, an area approximately 5,000 acres in size. The majority of the noxious weeds are located within Hunter Creek and Belli Front drainages of the Wilderness. All of the identified noxious weed locales are within the Truckee River Watershed and are 2-4 miles from the Truckee River. Many identified locations are directly adjacent to the heavily used and highly impacted Hunter Creek Trail and Steamboat Ditch Trail. Areas of concern are the helicopter loading points used by the Carson City Ranger District to fight the Hunter Falls Fire of 2014 and the Hunter Creek Fire of 2017, which we will continue to monitor closely for any further invasive weed developments. Musk Thistle can easily spread downstream and increase erosion, so treatment of these locations improves water quality downstream.
3. **Project description.** Staff will monitor known weed sites during April and early May tracking spread of plants and efficacy of the previous year's treatment. During May and June, staff will lead volunteers to noxious weeds sites and remove them with shovels and by hand. If plants have produced flowers, we will clip the seed heads and pack them out to be safely disposed of. In the fall, staff will lead volunteers to previously identified sites to disperse native seeds by hand. Snacks, water, and all necessary tools and personal protective equipment will be provided by FNW. Please see map, included on page 7.
4. **Grant priorities.** Our projects are in line with many of the grant priorities, specifically priority #2 (Watershed Improvements), priority #4 (Re-Forestation and Re-Vegetation Projects,) priority #6 (Stewardship and Environmental Awareness), and priority #7 (Meet Multiple Objectives). Noxious weeds, specifically Musk Thistle, pose a significant threat to the health of the Truckee River Watershed. Through volunteer stewardship projects, we seek to improve the health of the Truckee River Watershed by removing noxious weeds and replacing them with native plants. Reducing the number of weeds in the Hunter Creek area (a main tributary to the Truckee River) will improve the water quality, reduce soil erosion, and slow the spread further downstream, as well as enhance the recreation qualities of the Hunter Creek Trail - the most popular trail within the Reno/Sparks urban interface. Our long-standing Wilderness Weed Warriors program seeks to both engage and educate the public on the importance of noxious weed management. We have seen firsthand, that even after one project, volunteers have a basic understanding of the negative effects of noxious weeds and the importance of controlling them. By educating the public on these issues, we can inspire more stewardship and environmental awareness of the entire watershed.
5. **Permitting.** This project does not require any special permits, and we will be taking direction from our Carson Ranger District contacts with the U.S. Forest Service.
6. **Future land use.** Our program sites are all within public land managed by the US Forest Service and the majority of the sites are within the Mt Rose Wilderness. There are no foreseeable zoning or development plans that will affect this project.
7. **Future Phases:** The COVID 19 pandemic significantly reduced the number of volunteers we were able to bring out in 2020, and thus, reduced the amount of weeds we were able to remove. This makes 2021 even more important in the ongoing battle against invasive plants and their negative effects on our watershed. The unfortunate truth about invasive plants is that there may always be weeds to pull, but a reduction in weed density allows native plants to take hold and ultimately thrive. In 2021, we will work with the Carson Ranger District to continue our removal and reseeding efforts. The danger of Musk Thistle is that these plants create dense monocultures, drive out native plants and animals, disrupt the local ecology, degrade the soil, and enhance erosion. A single Musk Thistle flower can produce over 1,200 seeds and can stay dormant in the soil for up to 15 years, resulting in a need for continued management. For these reasons, the success of invasive weed management in the Truckee River corridor is dependent upon continued annual removal and monitoring.



FRIENDS of NEVADA WILDERNESS

At sites we have treated for multiple years, we have seen a reduction in the annual number of plants. We hope to build on this success through continued treatment and our new addition of re-seeding efforts. Friends of Nevada Wilderness has consistently outperformed our goals, controlling invasive weeds at these study sites, and slowly reducing numbers. Our institutional knowledge of this portion of the watershed is invaluable to its long-term health. We will continue working with the USFS Carson Ranger District to build upon our successes and move the program forward.

As requested by the Truckee River Fund Board in 2020, we have pursued additional funding for this project in 2021 to make it more sustainable and reduce our requested amount from the Truckee River Fund. With these matching funds included in the overall budget, we will be able to perform at least six weed removal projects with volunteers, treat approximately 75 acres, remove 15,000-20,000 weeds, and re-seed 10 acres of treated area. The Truckee River Fund has generously supported these efforts in past years and, hopefully, will continue to be an important part of this program for years to come.

8. **Principals Involved:** Stewardship Coordinators, GIS Mapping Technician, and one-two seasonal AmeriCorps Service Members will be involved. We will be taking direction from the USFS Carson District Botanist, and Rangeland Management/Invasive Weeds Specialist.
9. **Staff Positions Involved:** Fulltime 0 Part-time 4
10. **Volunteers Involved:** We anticipate involving at least 42 volunteers, who will donate approximately 252 hours of volunteer time. We will host 3 volunteer weed removal projects with an average of 6 volunteers per project, and 3 re-seeding projects with an average of 2 volunteers per project using Truckee River Fund funding. Our outings are typically day trips about 6 hours in length. We will host three additional weed removal projects with an average of 6 volunteers per project using matching funds which have already been secured from the Charles H. Stout Foundation. In 2019, we had great success working with Patagonia Inc. employees, REI employees, and the Midtown Rotary Club. Unfortunately, due to the pandemic we did not work with any of these groups in 2020, however, we look forward to working with them again this year. We will also reach out to other businesses, UNR clubs, local Meetups, the Reno Hiking Group, Keep Truckee Meadows Beautiful, and the Truckee Meadows Weed Coordinating Group during our quarterly meetings. We use a variety of outreach methods to recruit volunteers including our monthly e-newsletter, tabling, flyer placement, social media, and volunteer recruitment websites such as www.volunteermatch.com and www.idealists.org.
11. **Timeline:** Outreach for volunteers and partner groups will start immediately upon project approval. Logistical planning and monitoring will begin in April. Our first weed treatment project will be part of the Great Community Clean Up with Keep Truckee Meadows Beautiful on May 1st, 2021, provided they do not cancel the event this year. The other weed removal projects will be held May-July. We will host re-seeding projects in October & November. Any additional monitoring will be completed by December 2021. Final reporting will occur in early 2022.
12. **Success:** We will inform the committee of our successes with written quarterly reports accompanied by photographs and any earned press. We consider our program successful if everything is completed safely, we reach our target number of weeds removed, and the volunteers learn about the importance of invasive weeds and the Truckee River Watershed. We will communicate our efforts through press releases, bi-annual newsletters, monthly E-newsletters, and we will update our accomplishments often on our social media platforms. We will continue to pursue media coverage next year to highlight the program and the Community Foundation's generous community support.
13. **Collaboration:** Each year, we collaborate with Keep Truckee Meadows Beautiful (KTMB) to accomplish 1 to 2 weed removal projects. They assist with volunteer recruitment; provide extra tools, and some management support for these projects. Partners who provide employees or members as volunteers include Patagonia Inc., REI, International Gaming Technologies (IGT), Midtown Rotary, NV Energy, UNR, and TMCC. Imbibe Brewery,

4



FRIENDS of NEVADA WILDERNESS

Eclipse Pizza, and Nature Valley Bars provide free or discounted food products as part of our volunteer appreciation efforts. And of course, the US Forest Service collaborates with us to accomplish all of these projects. They provide guidance, oversight, approval, and on-going monitoring.

14. **Grant match.** Please see Grant Match Template on page 5 (below).
15. **Project budget:** Please see Budget Template on Page 6

Grant Match

Match amount to be provided:	\$10,040				
Match details: We have secured a grant from the Charles H Stout Foundation, which we will use to host three additional weed removal projects. These funds will help support and enhance the Mt. Rose Wilderness noxious weed program. We will also contribute \$5,040 in-kind from on-the-ground volunteer labor.	<p>Please provide the form of your matching funds. If match is made up of both cash and in-kind, fill in both sections.</p> <p>Match is:</p> <table border="1"> <tr> <td>Cash</td> <td>\$5,000</td> </tr> <tr> <td>In-kind</td> <td>\$5,040</td> </tr> </table> <p>Note: Volunteer and in-kind hours may be calculated at a maximum rate of \$20/hour per individual. Indirect cost may not be counted as match.</p> <p>For the cash portion of your match, is the funding already being held by the applicant for this project? Yes <u>X</u> No <u> </u></p>	Cash	\$5,000	In-kind	\$5,040
Cash	\$5,000				
In-kind	\$5,040				
Description of matching funds/in-kind donations:	<p>Cash match will be used to support 3 additional weed removal projects in the Mt. Rose Wilderness. This includes planning and recruitment, staff time, transportation costs, tools, and other volunteer supplies.</p> <p>The in-kind match will be met with volunteer labor donations during on-the-ground weed removal and re-seeding projects.</p>				



FRIENDS of NEVADA WILDERNESS

BUDGET

Budget Item Description	Truckee River Fund	Match Source	Match Amount	Total
Payroll Expenses	\$8,500	Charles H. Stout Foundation	\$4,045	\$12,545
AmeriCorps Stipend	\$1,500			\$1,500
Volunteer Labor (252 hrs at \$20/hr)		In-Kind Volunteer Labor	\$5,040	\$5,040
Project Supplies	\$4,200			\$4,200
Training Expenses	\$450		\$500	\$950
Vehicle Travel (150 miles at 5.75/mile)	\$100			\$100
Volunteer Food	\$200			\$200
Subtotal	\$14,950		\$9,585	\$24,535
Overhead (at 10%)	\$1,495		\$455	\$1,950
		<i>Cash Match Total</i>	<i>\$5000</i>	
TOTAL	\$16,445	TOTAL	\$10,040	\$26,485

BUDGET NARRATIVE

Payroll Expenses: Payroll expenses include all project planning, facilitation, data entry, program oversight, as well as follow up, volunteer recruitment, outreach and communications, GIS, and Truckee Meadows Weed Coordinating Group meetings.

AmeriCorps Stipend: This helps cover the cost of one of our AmeriCorps Service members who will be integral to the implementation of this project.

Volunteer Labor: 6 volunteer weed removal projects with 6 volunteers each for 6 hours at \$20 in-kind/hr; 3 volunteer re-seeding projects with 2 volunteers each for 6 hours at \$20 in-kind/hr.

Project Supplies: Used to purchase native seed mix from Comstock Seed and help cover costs of routine gear replacement for first aid kits, tool/supply updates and maintenance, etc.

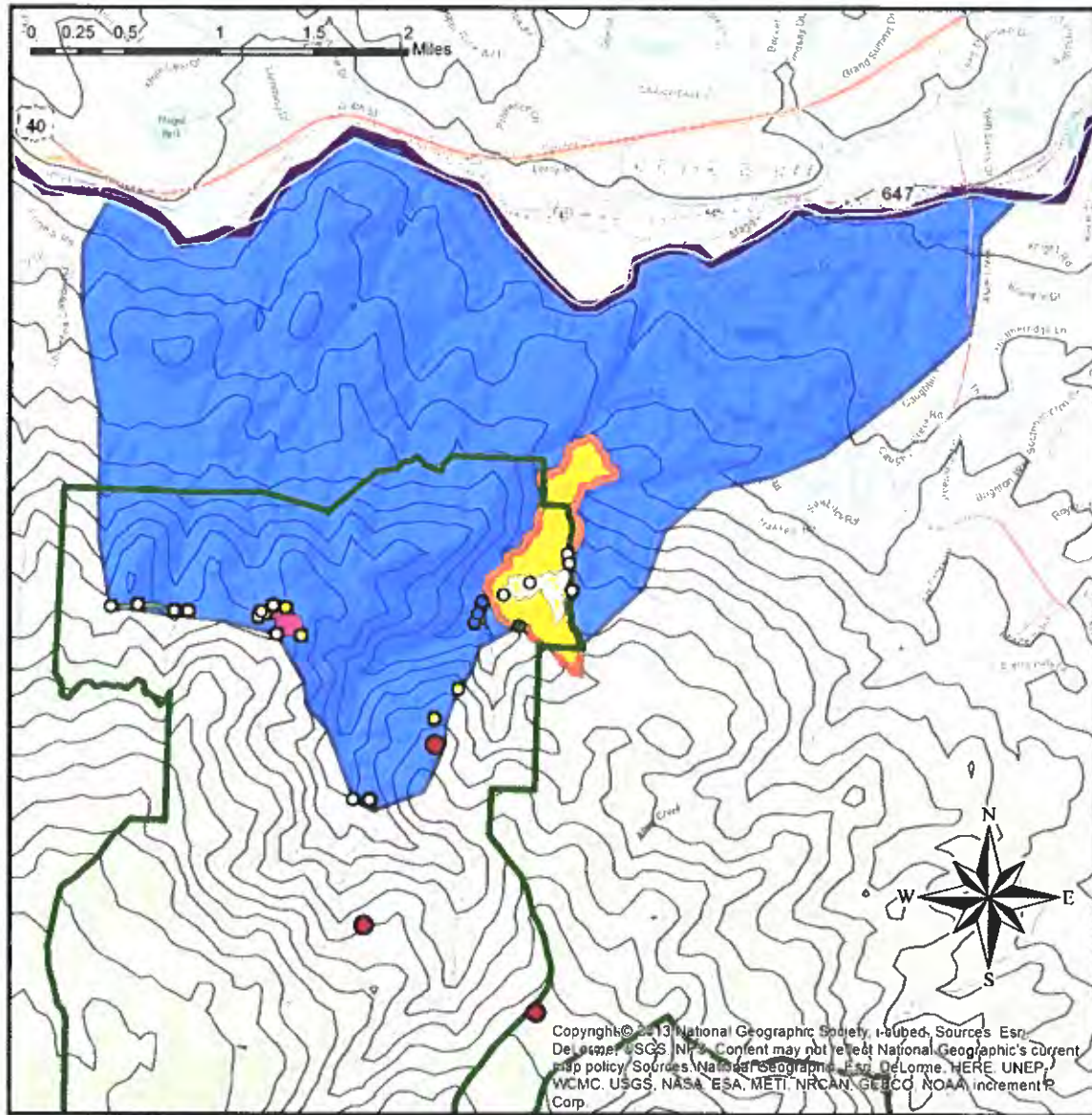
Training Expenses: This will cover relevant classes and conferences, possibly the Weed Warrior class hosted by the University of Nevada, Reno Cooperative Extension, and a portion of the Wilderness First Aid training for our seasonal AmeriCorps and staff. In addition, we will continue to update our invasive weed reference materials for staff/volunteers.

Vehicle Travel and Volunteer Food: This portion accounts for the use of a company vehicle as well as mileage reimbursement for distances driven with personal vehicles. It also accounts for volunteer food such as trail snacks and our end of season volunteer appreciation event.



FRIENDS of NEVADA WILDERNESS

Mt. Rose Wilderness Noxious Weed Monitoring and Treatment Project: Impacted Watershed



- | | | |
|-----------------------------|----------------------------------|----------------------------------|
| ● Medusahead | East Slope Monitoring Site | Impacted Watershed ~ 5,582 acres |
| ○ Musk Thistle | Above Waterfall Monitoring Site | 200ft Contour |
| ● Pepperweed | Belli Front East Monitoring Site | |
| ● Aviation Sites | Belli Front West Monitoring Site | |
| — Truckee River | Mt. Rose Wilderness Boundary | |
| — East Fork Monitoring Site | Hunter Creek Fire | |



Friends of Nevada Wilderness
1360 Greg St #111 / Sparks, NV 89431
Mount Rose Noxious Weed Monitoring, Treatment, and Re-seeding #9



United States
Department of
Agriculture

Forest
Service

Humboldt-Toiyabe National Forest

Carson Ranger District
1536 South Carson Street
Carson City, NV 89701
775-882-2766

File Code: 1580
Date: January 28, 2021

Truckee River Fund
Community Foundation of Western Nevada
50 Washington St Suite #300
Reno, NV 89503

To whom it may concern,

On Behalf of the Carson Ranger District, Humboldt-Toiyabe National Forest, I am expressing my support of Friends of Nevada Wilderness' (FNW) proposed projects in and around the Mt. Rose Wilderness. FNW has been working closely with the Carson Ranger District for over 10 years to treat invasive plants. As a result of this work, we have seen a reduction in in musk thistle which is of direct benefit to the habitat and ecosystem of the Truckee River Watershed. I highly value our partnership which goes beyond invasive weed treatment and monitoring to include education projects, solitude monitoring, impact monitoring, trail maintenance, and other projects. FNW has a track record of effectively executing many grants from a variety of sources. I am confident that FNW will do the same with this funding.

Please accept this letter in support of the proposed projects, and we thank you for your generous consideration and support of these important restoration efforts. If you have additional questions, please contact Brian Hansen, Recreation Officer, at brian.c.hansen@usda.gov or 775-224-9960.

Sincerely,

A handwritten signature in black ink, appearing to read "M. D. Zumstein", written over a horizontal line.

MATTHEW D. ZUMSTEIN
District Ranger



Cover Sheet

Date: 02/05/2021

Organization Name:	Great Basin Outdoor School		
Type:	501(c)(3) EIN# 88-0396516	Governmental entity? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
Address:	1000 Bible Way #53, Reno, NV 89502		
Project Name:	Lower Truckee Snapshot Day, Spring & Summer Day Camp Watershed Education Initiative		
Amount requested: \$15,925.36	Website: https://www.greatbasin-os.org/		
This funding will be used to (complete this sentence with a max of 2 sentences):	Support organizing the Lower Truckee Snapshot Day Event. Advance watershed education to elementary aged students at our Spring & Summer Break Day Camps.		
Key People: Program Director: Meghan Walsh Outreach Coordinator: Madeleine Alberdi Board Members: Sue Jacox John Himmel Caleb S. Jensen Michael Hackett	Director:	Sue Jacox	
	Board Chair:	Sue Jacox	
	Project Contact:	Name:	Meghan Walsh
		Position:	Program Director
		Phone:	775-324-0936
		Fax:	N/A
		Email:	program@greatbasin-os.org
Organization Mission:	To ignite children's passion for learning and foster cooperation, respect, and responsibility through hands-on discovery in the outdoor classroom.		
Has your organization received other grants from the Truckee River Fund? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (use additional page if necessary)	If yes,		
	Date awarded:		
	Project title:		
	Amount of Award:		
	Date awarded:		
	Project title:		
	Amount of Award:		
	Date awarded:		
	Project title:		
Amount of Award:			

DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

- ☐ A. Projects that improve bank or channel stabilization and decrease erosion.
☐ B. Structural controls or Low Impact Development (LID) projects on tributaries and drainages to the Truckee River where data supports evidence of pollution and/or sediments entering the Truckee River.
☐ C. Projects that remove pollution from the Truckee River.
☐ D. Projects that remove or control invasive aquatic species or terrestrial invasive plant species that are adverse to water supply.
☒ E. Other projects that meet the evaluation criteria.

1. Project goals and measurable outcomes and how you will measure and report them.

Great Basin Outdoor School is taking on the responsibility of hosting the Lower Truckee River Snapshot Day. Our first-year goals are to achieve continuity in keeping this citizen science data collection project alive and to educate members of our community on the importance of conserving our watershed via a hands-on sampling experience while also keeping participants safe. The success of this event will be measured by sites successfully sampled and more importantly, by volunteers reached. Specifically, we plan to host at least five sampling sites, and reach at least 20 participants assuming we will be operating during a pandemic. We plan to keep all participants safe by sending members of each household to separate sites, targeting families as volunteers. Results are to be reported in the collective Tahoe Truckee Snapshot Day Annual Report, as well as within Great Basin Outdoor School's own annual report.

Great Basin Outdoor Schools Watershed Education Initiative goal during both our Spring Break Adventure Day Camp and our Summer Break Day Camp is to educate our students on the importance of protecting our watershed through hands-on lessons and activities while meeting state standards. During these programs we will also be reaching underserved students of Washoe County, providing them with the often-overlooked opportunity to attend camp while engaging in hands-on science in the outdoors. Our goal for 2021 is to educate 210 students at our Spring and Summer Break Adventure Day Camps along the Truckee River and to reach at least 30 children who attend schools with a free and reduced lunch percentage of 50% or greater. Spring and Summer Break Day Camps Watershed Education Initiative's success will be measured with pre & post assessments taken by the students upon arrival and post departure. The number of children whose knowledge is enhanced as a direct result of our program will be detailed in our annual report.

2. Project location

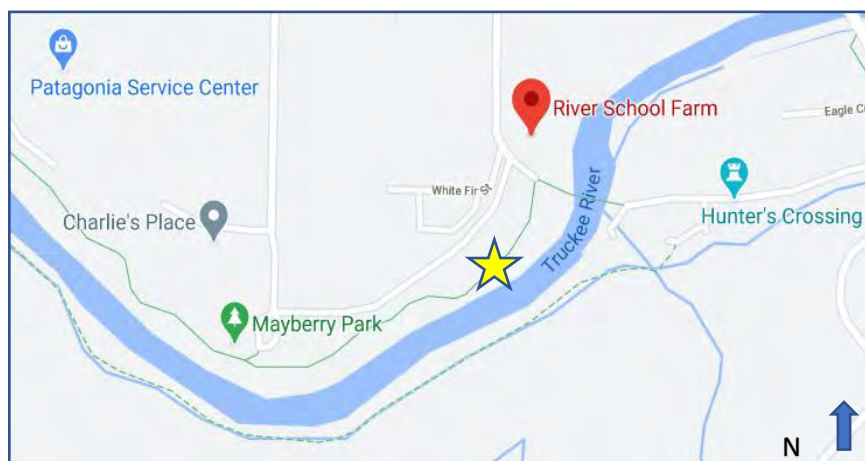
The Lower Truckee River Snapshot Day Headquarters will be at Mayberry Park, right along the Truckee River. This event requires participants to sample priority sites both along the Truckee River and some of its tributaries. The overall event will take place in the Lower Truckee River Watershed.

The Watershed Education Initiative at our Spring & Summer Break Day Camps will occur at the River School Farm as well as Mayberry Park and the surrounding areas. This location provides easy access for children to observe the Truckee River firsthand and truly track their watershed in real time.

3. Project description

Below is a map displaying both Mayberry Park, headquarters for the Lower Truckee River Snapshot Day (marked by the star), and the River School Farm which is where the Watershed Education Initiative will take place during Spring and Summer Break Day Camp. Both projects are located along the Truckee River.

Please see more Project description in Item #1.



4. Grant priorities.

Hosting the 2021 Lower Truckee River Snapshot Day event as well as our Watershed Education Initiative during our Spring and Summer Break Adventure Day Camp advances the Truckee River Fund's grant priority number VI. Stewardship and Environmental Awareness.

Snapshot Day's entire focus is to get citizens involved in hands-on water quality monitoring and to better understand what impacts water standards. The public's involvement in the Lower Truckee River Snapshot Day will promote community interest and inspire future conservancy.

At both our Spring and Summer Break Day Camps we implement educational programs that are centered around the hydrosphere, perform a water quality monitoring day, trace the Truckee River watershed, introduce point and non-point source pollution via a visual experiment, and teach children various ways to protect their watershed. Students contribute via community service clean up events in Mayberry Park where they collect data on trash collected to see first-hand what ends up in their drinking water source.

Both projects implement education directly relating to water quality and watershed conservation and promote students and community members becoming environmentally aware stewards.

5. Permitting.

Neither the Lower Truckee River Snapshot Day Event nor the Watershed Education Initiative that occurs at Spring and Summer Break Day Camps require permitting at this time.

6. Future land use.

There are no foreseeable zoning, land use, or development plans that would impact the operation of the Lower Truckee River Snapshot Day or our Watershed Education Initiative that occurs at Spring and Summer Break Camps during the current year, 2021.

7. Future phases

At this time there are no future phases anticipated for either the Lower Truckee River Snapshot Day Event or the Watershed Education Initiative that will occur during our Spring and Summer Break Day Camps during the current year, 2021.

8. Principals involved

The current Great Basin Outdoor School Program Director, Meghan Walsh, will be responsible for leading and coordinating the 2021 Lower Truckee River Snapshot Day event, with assistance from our Outreach Coordinator, Madeleine Alberdi as well as our prospective Day Camp Director.

The current Program Director will also oversee the execution and operation of the Watershed Education Initiative at the Spring and Summer Break Day Camp. The Camp Director who is amid being hired will be the on-site principal, in charge of leading and coordinating our naturalist educators at both camps.

9. Staff positions involved

For Great Basin Outdoor School to successfully host the 2021 Lower Truckee Snapshot Day event, five staff members will be involved in the project, all part time.

Our organization's Spring & Summer Break Day Camp Watershed Education Initiative will involve five staff for Spring Break Adventure Day Camp and five staff for the Summer Break Day Camp, dedicated to this project part time.

10. Volunteers involved

For the 2021 Lower Truckee River Snapshot Day we plan to have at least 20 participants dedicating 3 hours each and totaling 60 volunteer hours. In the event that COVID-19 restrictions are less limiting we can plan to have more volunteers.

At our Spring and Summer Break Day Camps we plan to have at least one volunteer each week totaling seven volunteers doing a minimum of five hours per week. This lower end estimate would give the Watershed Education Initiative a total of 35 volunteer hours.

11. Timeline

The 2021 Lower Truckee River Snapshot Day will take place on May 15th, with a Tahoe Truckee Snapshot Day Committee meeting occurring in March (TBD), an instrument calibration day occurring at the end of April (TBD), and a team leader training occurring in April (TBD).

The Watershed Education Initiative will kick start employee training on March 9, 11 & 12 and will be executed at Spring Break Day Camp on March 15- 19 & March 22- 26. Further employee training will occur on June 7 – 11, and the education portion will occur again on June 14-18, June 21- 25, June 28 – July 2, July 12-16, July 19-23.

12. Success

Although this will be the first year that Great Basin Outdoor School hosts Snapshot Day for the Lower Truckee River, the background of our employees and good relationship with community members and collaborators is sure to make it a success. The current Program Director gained experience with the preparation and planning for hosting a successful Snapshot Day event while working for the League to Save Lake Tahoe and assisting in the 2018 South Lake Tahoe Snapshot Day. Part of her duties were to calibrate the instruments used for the event, train team leaders who in turn supervise volunteers on how to properly collect water samples and collect data, and act as a team leader herself in the 2018 and 2020 sampling events. She wrote the Quality Assurance Project Plan for the Southshore Snapshot Day event while working for the League to Save Lake Tahoe, making her familiar with all the procedures necessary to put on this monitoring event. She plans to use her past familiarity with the event to help her plan Great Basin Outdoor School's approach. The Program Director is on the Tahoe Truckee Snapshot Day Committee with the other regional coordinators, and has their support should any issues arise, as well as the support of the Nevada Division of Environmental Protection which has hosted the Lower Truckee portion in the past, ensuring a smooth transfer of materials and documents.

Great Basin Outdoor School has been educating students on watershed science since it was established in 1998, hiring qualified educators with education and experience in the natural sciences. In 2015 the Nevada Division of Environmental Protection presented us with the Wendell McCurry "Excellence in Water Quality Award" for "exceptional hands-on outdoor education programs that teach students how to understand, improve and protect water quality" with programs at Lake Tahoe, on the Truckee River, and at Galena Creek.

13. Collaboration

The Lower Truckee River Snapshot Day event is part of the larger Tahoe Truckee Snapshot Day event which occurs over the states of California and Nevada and has many partners including but not limited to: the California Water Boards, the League to Save Lake Tahoe, Tahoe Water Suppliers Association, Tahoe Regional Planning Agency, South Tahoe Public Utility District, Nevada Division of Environmental Protection, Truckee River Watershed Council, and the Pyramid Lake Paiute Tribe.

Great Basin Outdoor School's Watershed Education Initiative occurring over the Spring & Summer Break Day Camps collaborates with many local agencies and non-profits to bring guest presenters to our students to further their education on environmental science. These collaborations include: Envirolution, Nevada Division of Environmental Protection, Keep Truckee Meadows Beautiful, Geological Society of Nevada members, etc.

14. Grant Match

Match amount to be provided:	\$ 15,003.20					
Match details:	<p>Please provide the form of your matching funds. If match is made up of both cash and in-kind, fill in both sections.</p> <p>Match is:</p> <table border="1"> <tr> <td>Cash</td> <td>\$ 15,003.20</td> </tr> <tr> <td>In-kind</td> <td>\$ 0.00</td> </tr> </table> <p>Note: Volunteer and in-kind hours may be calculated at a maximum rate of \$20/hour per individual. Indirect cost may not be counted as match.</p> <p>For the cash portion of your match, is the funding already being held by the applicant for this project? Yes __ No <u>X</u></p>		Cash	\$ 15,003.20	In-kind	\$ 0.00
Cash	\$ 15,003.20					
In-kind	\$ 0.00					
Description of matching funds/in-kind donations:	<p>The matching funds are the cost of labor covered by Great Basin Outdoor School to their employees and will be covered by enrollment fees collected at programs throughout the year.</p>					

ATTACHMENTS

You may be asked to submit the following attachments via email. If you are asked to submit the attachments, clearly label each file with your organization's name. If you do not have the ability to email them, place each of the items listed below on a separate page and submit just one copy.

Nonprofits submit:

- ☐ Last audited financial statements if your organization has been audited
- ☒ List of Board of Directors
- ☒ Copy of agency's IRS 501(c)(3) Tax Determination Letter
- ☒ Copy of the agency's most recent IRS Form 990

Governmental entities submit:

- ☐ Departmental budget in lieu of audited financial statements

15. Project Budget: Lower Truckee River Snapshot Day & Watershed Educationat Spring & Summer Break Day Camps
Truckee River Fund, February 2021

Budget Narrative: The Truckee River Fund can assist Great Basin Outdoor School to host the citizen science water quality event, the Lower Truckee River Snapshot Day in which citizen scientists learn about their watershed through a hands-on sampling experience. Additionally, we ask that the Truckee River Fund support our watershed education initiative by enabling us to hire staff educators for our Spring & Summer Break Day Camps who will advance local students' knowledge of watershed science through lessons and activities that take place along the Truckee River.

Budget Item	Calculation	Amount Requested from TRF	Match	Total
Lower Truckee River Snapshot Day (citizen science water quality event) Labor Costs: employee hours spent planning & preparing, hosting, and wrapping up.	60 hrs. Prep. x \$15/hr. + Event Labor 4.5 hrs. x 3 senior employees \$15/hr. + Event Labor 4.5 hrs. x 2 employees \$12/hr. + 20 hrs. Event Wrap Up x \$15/hr.	\$1,132.88	\$377.63 (25%)	\$1510.50
Spring Break Day Camp-Watershed Education Initiative Labor Costs	Director \$150/day x 10 days + Lead Naturalist \$150/day x 10 days + 3 Naturalists 120/day x 10 days	\$3,660	\$3660 (50%)	\$7320
Summer Break Day Camp-Watershed Education Initiative Labor Costs	Director \$150/day x 25 days + Lead Naturalist \$150/day x 25 days + 3 Naturalists 120/day x 25 days	\$8,250	\$8,250 (50%)	\$16,500
Fringe	11% for FICA, UI, Workers Comp, etc.	\$1,434.72	\$1,351.64	\$2,786.36
Subtotal		\$14,477.60	\$13,639.27	\$28,116.86
Indirect Expenses	10% x subtotal	\$1,447.76	\$1,363.93	\$2,811.69
TOTAL		\$15,925.36	\$15,003.20	\$30,958.56



Great Basin Outdoor School Board of Directors



A message from founding director Sue Jacox on "Why Great Basin Outdoor School?":

I want children to have what I have and cherish myself. Every day I want them to look at the mountains and the sky and feel inspired and excited. I want them to love Nevada and the earth and to feel a part of their community. I want them to have the skills and the will to make positive choices and to recognize that every choice and every action can make a difference. And finally, I want them to be stimulated by lifelong learning and nurtured by a sense of connection to the natural world.

SUE JACOX, President

Washoe County School District Educator,
retired

775-250-1894 c.

suejacox@nvcbell.net

JOHN HIMMEL, Secretary

Washoe County School District Educator,
retired

775-849-1890 h.

jbob1@charter.net

CALEB S. JENSEN, CPA, Treasurer

Certified Public Accountant at Pangborn &
Co., Ltd.

775-328-1040 w.

caleb@pangborncpa.com

MICHAEL HACKETT

Government Relations Consultant

775-849-0594 h.

michael@alrus.com

We are currently taking applications for additional board members and would welcome applicants.



Great Basin Outdoor School | 1000 Bible Way #53, Reno, Nevada 89502 | 775-324-0936 | greatbasin-os.org

Internal Revenue Service**Date:** December 26, 2006

GREAT BASIN OUTDOOR SCHOOL
% SUE JACOX
5125 ESCUELA WAY
RENO NV 89502-6706 250

Department of the Treasury
P. O. Box 2508
Cincinnati, OH 45201

Person to Contact:

David Harry ID# 31-08704
Customer Service Representative

Toll Free Telephone Number:

877-829-5500

Federal Identification Number:

88-0396516

Dear Sir or Madam:

This is in response to your request of December 26, 2006, regarding your organization's tax-exempt status.

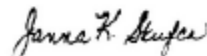
In September 1998 we issued a determination letter that recognized your organization as exempt from federal income tax. Our records indicate that your organization is currently exempt under section 501(c)(3) of the Internal Revenue Code.

Our records indicate that your organization is also classified as a public charity under sections 509(a)(1) and 170(b)(1)(A)(vi) of the Internal Revenue Code.

Our records indicate that contributions to your organization are deductible under section 170 of the Code, and that you are qualified to receive tax deductible bequests, devises, transfers or gifts under section 2055, 2106 or 2522 of the Internal Revenue Code.

If you have any questions, please call us at the telephone number shown in the heading of this letter.

Sincerely,



Janna K. Skufca, Director, TE/GE
Customer Account Services

Form 990 (Rev. January 2020) Department of the Treasury Internal Revenue Service	Return of Organization Exempt From Income Tax Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations) ▶ Do not enter social security numbers on this form as it may be made public. ▶ Go to www.irs.gov/Form990 for instructions and the latest information.	OMB No. 1545-0047 2019 Open to Public Inspection																								
A For the 2019 calendar year, or tax year beginning _____, and ending _____																										
B Check if applicable: <input type="checkbox"/> Address change <input type="checkbox"/> Name change <input type="checkbox"/> Initial return <input type="checkbox"/> Final return/terminated <input type="checkbox"/> Amended return <input type="checkbox"/> Application pending	C Name of organization <div style="text-align: center; font-weight: bold;">THE GREAT BASIN OUTDOOR SCHOOL</div> Doing business as _____ Number and street (or P.O. box if mail is not delivered to street address) Room/suite <div style="display: flex; justify-content: space-between;"> 1000 BIBLE WAY #53 </div> City or town, state or province, country, and ZIP or foreign postal code <div style="display: flex; justify-content: space-between;"> RENO NV 89502 </div>	D Employer identification number <div style="text-align: center; font-weight: bold;">88-0396516</div> E Telephone number <div style="text-align: center; font-weight: bold;">775-324-0936</div>																								
F Name and address of principal officer: <div style="text-align: center;">SUE JACOX 1000 BIBLE WAY #53 RENO NV 89502</div>		G Gross receipts 144,328 H(a) Is this a group return for subordinates? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No H(b) Are all subordinates included? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No," attach a list. (see instructions)																								
I Tax-exempt status: <input checked="" type="checkbox"/> 501(c)(3) <input type="checkbox"/> 501(c) () (Insert no.) <input type="checkbox"/> 4947(a)(1) or <input type="checkbox"/> 527																										
J Website: GREATBASIN-OS.ORG																										
K Form of organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Trust <input type="checkbox"/> Association <input type="checkbox"/> Other ▶		L Year of formation: 1998																								
M State of legal domicile: NV																										
Part I Summary																										
Activities & Governance	1 Briefly describe the organization's mission or most significant activities: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">TO IGNITE CHILDREN'S PASSION FOR LEARNING AND FOSTER COOPERATION, RESPECT, AND RESPONSIBILITY THROUGH HANDS-ON DISCOVERY IN THE OUTDOOR CLASSROOM.</div>																									
	2 Check this box <input type="checkbox"/> if the organization discontinued its operations or disposed of more than 25% of its net assets.																									
	3 Number of voting members of the governing body (Part VI, line 1a)	3 4																								
	4 Number of independent voting members of the governing body (Part VI, line 1b)	4 4																								
	5 Total number of individuals employed in calendar year 2019 (Part V, line 2a)	5 14																								
	6 Total number of volunteers (estimate if necessary)	6 0																								
	7a Total unrelated business revenue from Part VIII, column (C), line 12	7a 0																								
	b Net unrelated business taxable income from Form 990-T, line 39	7b 0																								
Revenue	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: right;">Prior Year</th> <th style="text-align: right;">Current Year</th> </tr> </thead> <tbody> <tr> <td>8 Contributions and grants (Part VIII, line 1h)</td> <td style="text-align: right;">85,918</td> <td style="text-align: right;">52,328</td> </tr> <tr> <td>9 Program service revenue (Part VIII, line 2g)</td> <td style="text-align: right;">90,732</td> <td style="text-align: right;">74,504</td> </tr> <tr> <td>10 Investment income (Part VIII, column (A), lines 3, 4, and 7d)</td> <td style="text-align: right;"></td> <td style="text-align: right;">0</td> </tr> <tr> <td>11 Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)</td> <td style="text-align: right;">5,098</td> <td style="text-align: right;">15,281</td> </tr> <tr> <td>12 Total revenue - add lines 8 through 11 (must equal Part VIII, column (A), line 12)</td> <td style="text-align: right;">181,748</td> <td style="text-align: right;">142,113</td> </tr> </tbody> </table>			Prior Year	Current Year	8 Contributions and grants (Part VIII, line 1h)	85,918	52,328	9 Program service revenue (Part VIII, line 2g)	90,732	74,504	10 Investment income (Part VIII, column (A), lines 3, 4, and 7d)		0	11 Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)	5,098	15,281	12 Total revenue - add lines 8 through 11 (must equal Part VIII, column (A), line 12)	181,748	142,113						
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Part II Signature Block																										
Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than officer) is based on all information of which preparer has any knowledge.																										
Sign Here	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;"> Signature of officer <div style="text-align: center; font-weight: bold;">CALEB JENSEN</div> </td> <td style="width: 30%;"> Date _____ </td> </tr> <tr> <td colspan="2"> Type or print name and title <div style="text-align: center; font-weight: bold;">TREASURER</div> </td> </tr> </table>		Signature of officer <div style="text-align: center; font-weight: bold;">CALEB JENSEN</div>	Date _____	Type or print name and title <div style="text-align: center; font-weight: bold;">TREASURER</div>																					
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May the IRS discuss this return with the preparer shown above? (see instructions) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																										
For Paperwork Reduction Act Notice, see the separate instructions.																										



**COMMUNITY
FOUNDATION**
of Western Nevada

TRUCKEE RIVER FUND
Enhancing and protecting our water resources.



Cover Sheet

Date: February 5, 2021

Organization Name:	Truckee Meadows Parks Foundation				
Type:	501(c)(3) EIN# 45-4837735			Governmental entity? Y/N	
Address:	50 Cowan Dr. Reno, NV 89509				
Project Name:	Doggie Ambassador Project Awareness Campaign				
Amount requested: \$31,075			Website: https://www.tmparksfoundation.org/		
This funding will be used to (complete this sentence with a max of 2 sentences):			Create and promote a successful and widespread Awareness Campaign to encourage positive stewardship actions to keep dog waste out of parks and the Truckee River watershed.		
Key People:	Director :	Heidi Anderson			
	Board Chair:	Sarah Chvilicek			
	Project Contact:	Name:	Heidi Anderson		
		Position:	Executive Director		
		Phone:	(775) 453-0278		
		Fax:	N/A		
Email:		heidi@tmparksfoundation.org			
Organization Mission:	Truckee Meadows Parks Foundation (TMPF) protects and enhances our communities' livability through public engagement, education, and the sustainability of our parks, open spaces, and trails. TMPF accomplishes this by offering innovative parks-based education and recreation programs designed to empower youth in pursuing STEAM (science, technology, engineering, art, mathematics) learning and to increase community-wide awareness, appreciation, and stewardship of Truckee Meadows parks. The Parks Foundation also serves as a fiscal sponsor for new and existing community-led park infrastructure projects as a way of increasing access to outdoor spaces and activities.				
Has your organization received other grants from the Truckee River Fund? Yes No (use additional page if necessary)	If yes, Date awarded: 10/02/2019 Project title: TRF #226- Truckee Meadows Nature Study Area: First Year Operational Amount of Award: \$101,526 Date awarded: 3/26/2019 Project title: TRF#215- Truckee Meadows Nature Study Area: First Year Operational Phase Amount of Award: \$61,400 Date awarded: 10/04/2018 Project title: Truckee Meadows Nature Study Area: Planning Phase Amount of Award: \$38,400				



TRUCKEE MEADOWS PARKS FOUNDATION

AWARENESS • APPRECIATION • STEWARDSHIP

DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

- ☐ A. Projects that improve bank or channel stabilization and decrease erosion.
- ☐ B. Structural controls or Low Impact Development (LID) projects on tributaries and drainages to the Truckee River where data supports evidence of pollution and/or sediments entering the Truckee River.
- ☒ C. Projects that remove pollution from the Truckee River.
- ☐ D. Projects that remove or control invasive aquatic species or terrestrial invasive plant species that are adverse to water supply.³
- ☒ E. Other projects that meet the evaluation criteria.

NARRATIVE REQUIREMENTS

1. Specific project goals and measurable outcomes

The goal of this project is to increase awareness and actions of community members in disposing of dog waste on the Reno/Sparks trails, and in parks and open spaces. To determine the success of this campaign, the Parks Foundation will track and review social media and marketing analytics including reach, impressions, click rates, open rates, engagement, and views (video and webpage). As additional awareness metrics, the Parks Foundation will measure and record the number of dog waste bags distributed, as well as the number of people reached through presentations at in-person programs. To further measure impact, the Parks Foundation will create and distribute a survey at the beginning and end of the campaign to gauge increased awareness of the issue as well as increased commitment to action and change.

The Parks Foundation has the goals to reach 10,000 views across social media platforms, partner with 3 local organizations to cross promote content, increase dog waste pick-up in parks by 5%, distribute 350,000 dog waste bags, and host a service day recruiting 20 volunteers.

2. Project location.

The Doggie Ambassador Project currently maintains dog waste stations in the City of Reno, City of Sparks, and Washoe County. The Awareness Campaign is intended to reach audiences in these three locations to mitigate the impacts of dog waste on the Truckee River watershed. Despite being separated by borders on a map, the Truckee River winds through and connects these three communities. It is crucial that all three locations are targeted for the Awareness Campaign to promote collective stewardship, and support the health of the Truckee River Watershed.

3. Project description.

Truckee Meadows Parks Foundation's Doggie Ambassador Project serves as a free community resource providing and maintaining a network of dog waste stations throughout the greater Truckee Meadows area. Stations are maintained by 49 volunteers who consistently restock stations with dog waste bags and educate the public about the harmful environmental effects dog waste can have on local watersheds. The project, which has been active since 2017, comprises 74 stations across 45 parks, trails, and open spaces in Reno, Sparks, and Washoe County. As an extension of this pre-existing project, the Parks Foundation will be commencing an awareness and education campaign to encourage stewardship actions to keep dog waste out



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of the Truckee River watershed. The Doggie Ambassador Project Awareness Campaign will be promoted with Facebook and Instagram posts, video advertisements on TikTok and Youtube, and newsletters encouraging interaction with the Parks Foundation's Doggie Ambassador Project webpage. The goal of this awareness campaign is to grow the amount of park goers reached, by increasing impressions, views, and clicks over all of our various mediums of advertising. By promoting a strong, cohesive message of stewardship to a wide audience, Truckee Meadows Parks Foundation will influence more members of the community to participate in conservation actions regarding dog waste, and keep dog waste off the ground and out of the Truckee River. In the year of 2020 alone, the Doggie Ambassador Project distributed 461,400 dog waste bags. This number nearly doubled from 2019, in which 242,400 waste bags were distributed. With over an 100% increase in dog waste bag distribution, each bag distributed represents dog waste picked up and prevented from washing into the Truckee River watershed.

The Doggie Ambassador Project and now the Awareness Campaign have been designed to protect the Truckee River watershed from the harmful effects of dog waste. Everytime it rains or snow melts, dog waste is washed away into drains and storm sewers. The waste, full of unhealthy bacteria, flows with the stormwater directly into ponds, lakes, and rivers. Stormwater is rarely treated before entering any natural body of water, resulting in all waste being directly deposited into the watershed carrying dangerous bacteria, such as salmonella, giardia, and parasites, like hookworm and ringworm (Rahim, Barrios, McKee, et al. 2017). In high enough quantities, these bacteria and parasites cause bodies of water to become unsafe for human recreation, including common activities like swimming and fishing. According to the Environmental Protection Agency, dog waste is considered a nonpoint source environmental pollutant. In terms of harmfulness, this categorizes dog waste with herbicides, pesticides, oil, grease, toxic chemicals, and acid drainage from abandoned mines (US EPA, 2017). Furthermore, when dog waste begins to decay in a body of water, it releases an excess amount of nutrients such as phosphorus and nitrogen. In turn, the nutrient excess promotes an overabundance of algal growth (Stevens & Hussmann, 2017). If algal growth continues for a long duration of time, the body of water suffers significant oxygen depletion as well as a higher rate of unnatural fish mortality (Hallegraeff, 1993; Svircev et al., 2016). Lastly, in the event that the dog waste is not washed away with stormwater, it becomes susceptible to seeping deep into the ground and contaminating groundwater.

In addition to the negative environmental impact, excessive dog waste creates an unpleasant experience for park-goers. Through the Awareness Campaign, positive stewardship actions will become commonplace, and the negative environmental effects of excessive dog waste, listed above, will be prevented.

4. Grant priorities.

The Doggie Ambassador Project Awareness Campaign advances TRF's grant priority VI of Stewardship and Environmental Awareness: Support to Clean-Up programs and the development and implementation of educational programs relative to water, water quality and watershed protection. For many, the connection between neglected dog waste and it's negative impact on the Truckee River is unknown or not well understood. Through the Awareness Campaign, the public will be educated about the harmful effects of dog waste on the Truckee River watershed. By means of education and a distinct call to action, the awareness campaign will lead to community stewardship, and encourage park and trail goers to use the resources provided through our Dog Waste Stations and clean up their pet's waste. These actions, inspired by our Awareness Campaign, will ultimately reduce the amount



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of harmful fecal matter entering the watershed.

5. Permitting.

There are no permits required for the Doggie Ambassador Project Awareness Campaign.

6. Future land use.

There are no foreseeable zoning, land use, or development plans that may affect the Doggie Ambassador Project in its pursuance of the Awareness Campaign.

7. Future phases

The Doggie Ambassador Project Awareness Campaign is set to occur in 2021. Should the awareness campaign be relaunched in the future, Truckee Meadows Parks Foundation will reapply for AmeriCorps funding to continue the positions associated with the Doggie Ambassador Program.

8. Principals involved

Truckee Meadows Parks Foundation Executive Director, Heidi Anderson; Program and Events Manager, Chantel Dominguez; and Operations and Communications Director, Karly Bristol will be the principals involved in the coordination of the project.

9. Number of staff positions involved

Full-time: 0 Part-time: 2

10. Volunteers involved

Currently, the Doggie Ambassador Project is driven by 49 individual volunteers who collectively volunteer an average of 90 hours per month. In addition to stocking dog waste stations, volunteers educate other park goers about the project and its positive effects on the Truckee River watershed. Additionally, Truckee Meadows Parks Foundation intends to hold a service day at the end of the Awareness Campaign in which volunteers will remove dog waste from local parks and trailheads. The Parks Foundation anticipates approximately 20 volunteers for this service day and 2 hours of service per volunteer.

11. Timeline

February 2021: Begin drafting plans, scripts and themes for the Awareness Campaign.

March 2021: Begin filming of videos and creating a social media calendar.

April 2021: Unveil improved Doggie Ambassador Program page on the Parks Foundation website, share 1-2 awareness campaign videos on social media, distribute social media promotion, send out an initial survey via newsletter and social media to gauge baseline numbers for awareness, action, and advocacy.

May 2021: Share 1-2 awareness campaign videos via social media and newsletters while working with



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community partners to increase campaign reach through additional distribution.

June 2021: Share 1 awareness campaign video via social media. Utilize “elevator pitch” at dog-friendly parks and in-person events.

July 2021: Partner with three local organizations to post produced videos as original content on respective social media platforms and websites.

August 2021: Host service day with volunteers (pending COVID restrictions) and send out the final awareness survey.

September-December 2021: Continue to repost content and identify partner organizations to distribute content to a wider audience.

12. Success.

Success will be measured by utilizing data from social media and web page analytics, survey responses, event attendance, and the number of dog waste bags distributed to show an increase in action from the community. The campaign’s success will be indicated by an increase in overall reach and impressions (social media and digital ads), web page visits, and video views. The Parks Foundation hopes to see a 5% increase in advocacy and action statements measured by pre and post campaign surveys. As this will be the first awareness campaign to drive the need for poo-free parks, the Parks Foundation will consider each poop scooped a success in the overall mission of dog-waste awareness and disposal. While measuring tangible results like increased web page visits, social media interactions, and higher amounts of dog bags distributed, the Parks Foundation will also regard the value of sharing in-person stewardship at park-based events and seeing that investment passed through word of mouth.

13. Collaboration.

The Parks Foundation will collaborate with one to three community organizations in Reno, Sparks, and Washoe County to spread the mission and re-share newsletters, videos, and other media materials from the Dog Waste Awareness Campaign, as well as invites to events or service days. Some entities for consideration include the City of Reno, the SPCA of Northern Nevada, Nevada Humane Society, and the Biggest Little Dog Park.

14. Grant match.

Please see page 7.

15. Project budget

Please see page 6.



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REF #250

Truckee Meadows Parks Foundation Doggie Ambassador Project Awareness Campaign Budget

Budget Item Description	Truckee River Fund	Other Funding Name	Match Funds	Total Funds
Programs & Events Manager	\$9,450	AmeriCorps	\$6,750	\$16,200
Operations and Communications Director	\$10,800	AmeriCorps	\$0.00	\$10,800
AmeriCorps VISTA Communications Coor.	\$0	AmeriCorps	\$2,000	\$2,000
AmeriCorps VISTA Community Engagement Coor.	\$0	AmeriCorps	\$2,000	\$2,000
Doggie Ambassador Volunteers (\$20/hr.)	\$0.00	TMPF	\$21,600	\$21,600
Supplies	\$8,000	-	\$2,500	\$10,500
Administrative	\$2,825	-	\$0	\$2,825
TOTAL	\$31,075	-	\$34,850	\$65,925



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Grant Match

Match amount to be provided:	\$34,850
Match details:	<p>Please provide the form of your matching funds. If match is made up of both cash and in kind, fill in both sections.</p> <p>Match is: Cash \$ 10,750 In-kind \$ 24,100</p> <p>Note: Volunteer and in-kind hours may be calculated at a maximum rate of \$20/hour per individual. Indirect cost may not be counted as match.</p> <p>For the cash portion of your match, is the funding already being held by the applicant for this project? Yes <u>X</u> No <u> </u></p>
Description of matching funds/in-kind donations:	<p>Truckee Meadows Parks Foundation has secured funding from various sources to assist in the execution of the project. The Parks Foundation will utilize funds from AmeriCorps for a cash match. Volunteer labor hours will be used as in-kind match and calculated at \$20/hour. Match is estimated at 49 volunteers contributing a collective 90 hours each month.</p>

ATTACHMENTS

Nonprofits submit:

- ☒ 2020 profit and loss statement and balance sheet in lieu of an audited financial statement
- ☒ List of Board of Directors
- ☒ Copy of agency's IRS 501(c)(3) Tax Determination Letter
- ☒ Copy of the agency's most recent IRS Form 990

Governmental entities submit:

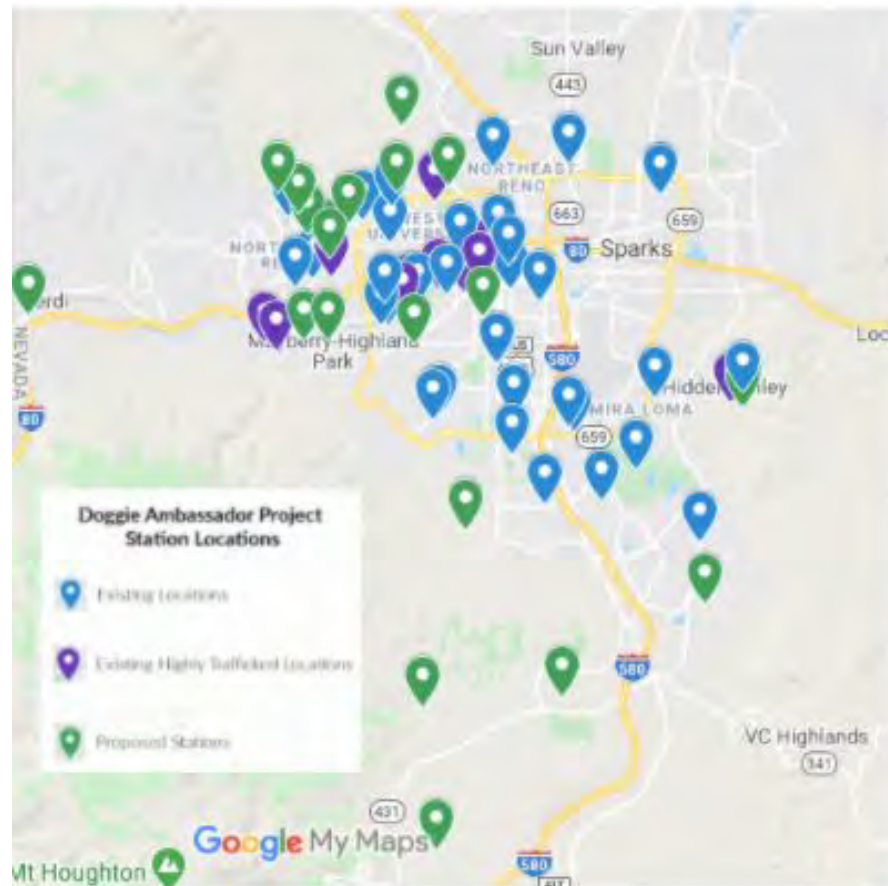
Departmental budget in lieu of audited financial statements



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Doggie Ambassador Project Site Map



Existing Locations: Bicentennial Park, Biggest Little Dog Park, Canyon Creek Park, Church Park, Crissie Caughlin Park, Cyan Park, Crystal Lake Park, Hilltop Park, Horsemans Park, Huffaker Park, Huffaker Hills Trailhead, Idlewild Park, Idlewild and Riviera Dr., Ivan Sack Park, Jamaica Park, Link Piazza Dog Park, Manzanita Park, Mary Gojack Park, Mayberry Park, Melody Lane Park, Miguel Ribera Park, Mira Loma Park, Northgate Park, Northwest Park, Rancho San Rafael Off Leash Dog Area, Rainbow Ridge Park, Riverside Drive, Schiappacasse River Pathway, Sky Country Park, Sparks Parks & Recreation Complex, Stewart Park, Summit Ridge Park, Terrace Sports Complex, Tom Cooke Trail, University Ridge Park, Virginia Lake Park, Virginia Lake Dog Park, Wheatland Park, Whitaker Park, Wilkinson Park, Wingfield Park, and 8th Street Park.

Existing Highly Trafficked Locations: Biggest Little Dog Park, Link Piazza Dog Park, Rancho San Rafael Off-Leash Dog Area, Barbara Bennett Park, Idlewild Park, Ivan Sack Park, Rainbow Ridge, Riverside Drive, Wingfield Park, Tom Cooke Trail, and Mayberry Park.

Proposed Station Locations: Crystal Peak Park, Peavine Peak Trailhead, Plumas Street Gym, East and West Keystone Canyon, Broadhead Park, Damonte Ranch Park, Chalk Bluff Trail, Reno Sports/Softball Complex, Dorosktar Park, Rivermont Park, Whites Creek Trailhead, Thomas Creek Trailhead, Browns Creek Trailhead, Hidden Valley Regional Park, Las Brisas Park, and Ballardini Ranch Trail.



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Citations

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TRUCKEE MEADOWS WATER AUTHORITY
(TMWA)

RESOLUTION NO. 291

**A RESOLUTION APPROVING PROJECTS
FOR FUNDING UNDER THE TRUCKEE RIVER FUND**

WHEREAS, the Truckee Meadows Water Authority and the Community Foundation of Western Nevada (the "Community Foundation"), a Nevada non-profit corporation, have entered into an agreement creating The Truckee River Fund (the "Fund") to foster projects that protect and enhance water quality or water resources of the Truckee River, or its watershed;

WHEREAS, pursuant to the Fund Agreement, an Advisory Committee has solicited proposals from prospective beneficiaries of the Fund;

WHEREAS, the Advisory Committee has recommended projects for funding, as listed on Exhibit A, attached hereto;

WHEREAS, the Advisory Committee has the responsibility of securing preliminary approval for projects from the TMWA Board, which may disapprove projects for any reason, or may approve projects by resolution, subject to Community Foundation Board approval;

WHEREAS, the Community Foundation has advised the Advisory Committee that the projects' applicants are eligible beneficiaries of the Fund;

WHEREAS, the Board has reviewed the recommendation of the Advisory Committee and has found that the projects as listed on Exhibit A are consistent with the purposes of the Fund and merit funding; and

NOW THEREFORE, BE IT RESOLVED by the Board of Directors of the Truckee Meadows Water Authority:

The projects set forth on **Exhibit A** are approved for funding under the Truckee River Fund in the amount set forth in such Exhibit, subject to final authorization by the Community Foundation Board, and subject to the provisions of the Fund Agreement, including without limitation the requirements set forth in Article VC.

Truckee Meadows Water Authority
Resolution No. 291 (continued)

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Truckee Meadows Water Authority,

Upon motion of _____, seconded by _____, the foregoing Resolution was passed and adopted on March 17, 2021 by the following vote of the Board:

Ayes: _____

Nays: _____

Abstain: _____ Absent: _____

Approved March 17, 2021

Vaughn Hartung, Chairman

EXHIBIT A

Project #245: Watershed Education Initiative for the Urban Truckee River Corridor

Organization: Sierra Nevada Journeys (SNJ)

Amount Requested: \$31,035

Amount Recommended: \$31,035

Organizational Match: \$7,765 (Cash)

Project Description:

Deliver high-quality, experiential watershed education programs based on water quality issues and invasive species along the urban Truckee River corridor to empower youth to take action for the protection and enhancement of the water quality of the Truckee River. To meet schools' needs in case of closures, we have a distance learning program in place called Sierra Nevada Journeys Virtual Classrooms that will still significantly engage students, teachers and parents with watershed education.

During the past 11 years, Sierra Nevada Journeys' (SNJ) Watershed Education Initiative (WEI) has impacted approximately 12,080 students and 577 educators. This has been made possible thanks to the generous support of the Truckee River Fund. WEI educates students about the local watershed, including human impacts on the watershed, water quality, and watershed protection. While in-class and field-based lessons reach students and educators, WEI's additional outreach components serve to engage families and community volunteers.

TMWA Benefit:

WEI is an education program that addresses water, water quality and watershed protection for K-8th grade students, directly aligning with grant priority VI: *Stewardship and Environmental Awareness*. Students gain first-hand experience determining water quality, explore human impacts on their water source, and obtain skills, knowledge and a field experience to connect them to their local river. The overall long-term program impacts include:

- Students understand important science concepts related to the Truckee River watershed and can articulate how their actions affect the Truckee River watershed and local ecosystems.
- Teachers use extension lessons and implement more hands-on exploration of the watershed. Parents and community members engage in watershed education directly through WEI volunteer.
- Health of the Truckee River watershed and local ecosystems improves as students and their families adopt environmental stewardship practices that help reduce water pollution and human impacts.

Project #246: Bear Creek Lower Meadow Restoration Project – Phase 2 Construction

Organization: Truckee River Watershed Council

Truckee Meadows Water Authority
Resolution No. 291 (continued)

Amount Requested: \$51,250

Amount Recommended: \$51,250

Organizational Match: \$12,812.50 (Cash) \$1,357,606 (In-Kind)

Project Description:

The goals of the Bear Creek Lower Meadow Restoration Project are to restore channel and meadow functions, enhance meadow hydrology and habitat, reduce sources of instream sediment from bank erosion, and promote aggradation within the incised channel. A primary result of the project is reduced sedimentation to the main stem of the Truckee River.

The measurable outcomes of this project are:

- Restore 30 acres of montane meadow
- Restore 3,000 feet of incised channel within Bear Creek
- Reduce 20 tons of sediment per year

These outcomes will be monitored via the project's pre/post project monitoring program, which includes groundwater, surface water, vegetation, and rapid assessment parameters.

TMWA Benefit:

Watershed Improvements: If fully implemented, the project will decrease sedimentation by 20 tons per year to the mainstem Truckee River and support attainment of the TMDL for Truckee River. Restoration will enhance watershed function and habitat by reducing erosion, restoring sensitive ecosystems.

Local Stormwater Improvements: The project site receives stormwater inputs from adjacent roads, residential, and commercial developments. The project's approach and engineered solutions provide natural treatments for those inputs before reaching the main stem of the Truckee River.

Meet Multiple Objectives: The project meets the watershed and water quality objectives listed above. It also benefits meadow, riparian, and in-stream habitat, native fish and wildlife species, and carbon sequestration.

Leverage Stakeholder Assets and Participation: The projects leverage significant stakeholder participation and cost share from USFS. They were critical in designing this project, completing environmental compliance, and contributing cost-share. Additional stakeholder input and prioritization is documented in the Bear Creek Watershed Assessment as well as in the Truckee River TMDL (LRWQCB, 2008).

Project #247: OTR Partnership, River-Friendly Landscape Pilot, & Engagement with the Public

Organization: Truckee River Foundation for One Truckee River

Amount Requested: \$259,090

Amount Recommended: \$196,590

Organizational Match: \$91,425 (Cash)

Truckee Meadows Water Authority
Resolution No. 291 (continued)

Project Description:

Project Goal 1: Lead, coordinate and fundraise for the OTR partnership

- Track number of OTR Partnership Council Meetings, OTR Partnership Working Groups, and small meetings with partners, other relevant agencies, and the public.
- OTR will apply for funding to further the OTR Management Plan implementation.

Project Goal 3: Utilize social media platforms, OTR website, and cross-promotions with OTR partners to increase the public's understanding of the Truckee River, OTR and partners' river efforts.

- Monthly social media content planned & executed
- 3 posts boosted per month to increase OTR social media followers
- Maintain blog posts on OTR website

TMWA Benefit:

Project Goal 1:

- *Priority VII Meet Multiple Objectives and VIII Leverage Stakeholder Assets and Participation* because OTR is a collaboration of public and private partners focused on the implementation of the OTR Management Plan. The OTR Plan describes 103 action items devoted to protecting the Truckee River and working to meet multiple objectives.

Project Goal 3:

- *Priorities II Watershed Improvements, III Local Stormwater Improvements, V Support to Rehabilitation of Local Tributary Creeks and Drainage Courses, and VI Stewardship, Environmental Awareness, Meet Multiple Objectives and VIII Leverage Stakeholder Assets and Participation* by supporting all of the Project Goals described above to be effectively distributed and communicated to Truckee Meadow's residents along with increasing the overall understanding of the Truckee River and the OTR and partners' river efforts.

Project #248: Mt. Rose Noxious Weed Monitoring, Treatment, & Re-Seeding #9

Organization: Friends of Nevada Wilderness

Amount Requested: \$16,445

Amount Recommended: \$16,445

Organizational Match: \$5,000 (Cash) \$5,040 (In-Kind)

Project Description:

The goal of the 2021 Mt. Rose Wilderness Noxious Weed Monitoring, Treatment, and Re-Seeding project is to protect the water quality of the Truckee River and its watershed by removing noxious weeds from the heavily used Hunter Creek watershed and reseeding treated areas with native seeds. With the help of volunteers, we will mitigate the spread of musk thistle (*Carduus nutans*), monitor known weeds sites for changes and growth, and identify any new infestations. In 2020. We expanded our weed

Truckee Meadows Water Authority
Resolution No. 291 (continued)

treatment program to include re-seeding efforts as directed by the U.S. Forest Service (USFS). We look forward to continuing this effort in 2021 in addition to monitoring and removing invasive weeds.

Staff will monitor known weed sites during April and early May tracking spread of plants and efficacy of the previous year's treatment. During May and June, staff will lead volunteer's noxious weeds sites and remove them with shovels and by hand. If plants have produced flowers, we will clip the seed heads and pack them out to be safely disposed of. In the fall, staff will lead volunteers to previously identified sites to disperse native seeds by hand.

TMWA Benefit:

Our projects are in line with many of the grant priorities, specifically priority *II Watershed Improvements, IV Re-Forestation & Re-Vegetation Projects, VI Stewardship & Environmental Awareness, and VII Meet Multiple Objectives*. Noxious weeds, specifically Musk Thistle, pose a significant threat to the health of the Truckee River Watershed. Through volunteer stewardship projects, we seek to improve the health of the Truckee River Watershed by removing noxious weeds and replacing them with native plants. Reducing the number of weeds in the Hunter Creek area (a main tributary to the Truckee River) will improve the water quality, reduce soil erosion, and slow the spread further downstream, as well as enhance the recreation qualities of the Hunter Creek Trail. Our long-standing Wilderness Weed Warriors program seeks to both engage and educate the public on the importance of noxious weed management. By educating the public on these issues, we can inspire ore stewardship and environmental awareness of the entire watershed.

Project #249: Lower Truckee Snapshot Day, Spring & Summer Day Camp WEI

Organization: Great Basin Outdoor School

Amount Requested: \$15,925

Amount Recommended: \$15,925

Organizational Match: \$15,003.20 (Cash)

Project Description:

Great Basin Outdoor School is taking on the responsibility of hosting the Lower Truckee River Snapshot Day. Our first-year goals are to achieve continuity in keeping this citizen science data collection project alive and to educate members of our community on the importance of conserving our watershed via a hands-on sampling experience while also keeping participants safe. The success of this event will be measured by sites successfully sampled and more importantly, by volunteers reached. Specifically, we plan to host at least five sampling sites, and reach at least 20 participants assuming we will be operating during a pandemic. We plan to keep all participants safe by sending members of each household to separate sites, targeting families as volunteers. Results are to be reported in the collective Tahoe Truckee Snapshot Day Annual Report, as well as within Great Basin Outdoor School's own annual report.

Truckee Meadows Water Authority
Resolution No. 291 (continued)

Great Basin Outdoor Schools Watershed Education Initiative goal during both our Spring Break Adventure Day Camp and our Summer Break Day Camp is to educate our students on the importance of protecting our watershed through hands-on lessons and activities while meeting state standards. During these programs we will also be reaching underserved students of Washoe County, providing them with the often-overlooked opportunity to attend camp while engaging in hands-on science in the outdoors. Our goal for 2021 is to educate 210 students at our Spring and Summer Break Adventure Day Camps along the Truckee River and to reach at least 30 children who attend schools with a free and reduced lunch percentage of 50% or greater. Spring and Summer Break Day Camps Watershed Education Initiative's success will be measured with pre & post assessments taken by the students upon arrival and post departure. The number of children whose knowledge is enhanced as a direct result of our program will be detailed in our annual report.

TMWA Benefit:

Hosting the 2021 Lower Truckee River Snapshot Day event as well as our Watershed Education Initiative during our Spring and Summer Break Adventure Day Camp advances the Truckee River Fund's grant priority number *VI Stewardship and Environmental Awareness*. Snapshot Day's entire focus is to get citizens involved in hands-on water quality monitoring and to better understand what impacts water standards. The public's involvement in the Lower Truckee River Snapshot Day will promote community interest and inspire future conservancy. At both our Spring and Summer Break Day Camps we implement educational programs that are centered around the hydrosphere, perform a water quality monitoring day, trace the Truckee River watershed, introduce point and non-point source pollution via a visual experiment, and teach children various ways to protect their watershed. Students contribute via community service clean up events in Mayberry Park where they collect data on trash collected to see first-hand what ends up in their drinking water source. Both projects implement education directly relating to water quality and watershed conservation and promote students and community members becoming environmentally aware stewards.



STAFF REPORT

TO: TMWA Board of Directors
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer/Treasurer
Matt Bowman, Financial Controller
Sandra Tozi, Senior Financial Analyst
DATE: March 9, 2021
SUBJECT: **Discussion and possible action on the TMWA Tentative Budget for the Fiscal Year ending June 30, 2022 and Draft Capital Improvement Plan for Fiscal Years 2022 through 2026**

Recommendation

Staff recommends the TMWA Board and SAC review the revised tentative budget report for the fiscal year ending June 30, 2022 and preliminary Five-Year Capital Improvement Plan 2022-2026 (CIP). This allows the Board and SAC to provide input and direction to TMWA management in advance of the public hearing on the budget and CIP at the May 2021 Board meeting. The tentative budget will be filed with the Nevada Department of Taxation by April 15, 2021 in compliance with statutory requirements.

Schedule of Revenues, Expenses and Changes in Net Position- See Attachment A

Operating Revenues

Water demands have been projected based on historical average water usage per service type and by service size. This methodology projects water sales revenue at \$108.5 million for FY 2022. This is an increase from the FY 2021 budget of \$6.2 million or 6%.

The FY 2022 water sales includes two 2.5% rate increases in May 2021 and May 2022. The increase scheduled for May 2021 was presented to the Board along with the five-year funding plan at the October 2020 Board meeting. The FY 2022 budget anticipates an increase in service connections of approximately 2%.

Hydroelectric revenues are expected to be \$3.2 million in FY 2022. This is an increase from the FY 2021 budget of approximately \$46 thousand or 1%. Hydro operations are expected to be relatively normal, with adequate river flows throughout the year. Minimal, recurring maintenance is expected at each of the facilities.

Other operating revenues are estimated at \$2.2 million. This line item primarily consists of late payment fees, turn-on and turn-off fees, construction water sales, cell phone tower lease revenues, and inspection services on new business projects. Depending on the pace of residential/commercial construction there could higher or lower construction water and inspection fees than projected. The FY 2022 budget is approximately \$0.6 million less than the FY 2021 budget. This is due to actuals trending lower than budget in recent years.

Operating Expenses

Total operating expenses are expected to increase by \$4.5 million or 5% from the FY 2021 budget. This change consists of an increase of \$3.8 million in operating expenses before depreciation, and a \$0.7 million increase in depreciation. Comprising the change from the FY 2021 budget in operating expenses before depreciation, salaries and wages are up \$2.1 million (8%), employee benefits are up 1.0 million (9%), and services and supplies are up \$0.8 million (2%).

Salaries and wages expense is expected to increase from budget by 8% in FY 2022 compared to FY 2021. Total headcount is increasing by nine from 231 in FY 2021 to 240 in FY 2022. The percentage increase is comprised of approximately 2% cost of living increase, 2.6% step increases and 3.4% for additions to headcount.

Below is a listing of headcount increases by position.

Position	Group	Additional Headcount
Analyst, GIS	MPAT	1
Analyst, MIS	MPAT	1
Hydro & Facilities Manager	MPAT	1
Associate Hydrogeologist	MPAT	1
Specialist, Water Supply	IBEW	1
Mechanic, Spec, M/C-W/P	IBEW	1
Operator, Water Plant III	IBEW	2
Associate Microbiologist	MPAT	1
		9

Employee benefits are expected to increase by \$1.0 million or 8% from the FY 2021 budget. This increase is in line with the increase in salaries and wages as expected.

Services and supplies are increasing by approximately \$0.8 million or 2% from the FY 2021 budget due to several factors. A summary of costs by expense item is included at ***Attachment C***, where the most notable changes are discussed.

Nonoperating Revenues and Expenses

Investment income is expected to decrease by \$0.3 million due to lower expected interest rates and lower cash balances than in FY 2021.

Interest expense is expected to decrease by \$0.6 million in FY 2022 due primarily to principal reductions in debt. During FY 2021 TMWA will have reduced outstanding debt principal by \$18.5 million, of which \$5.0 million was commercial paper. As shown in ***Attachment B*** we expect to pay down \$13.6 million of DWSRF and Senior Lien debt plus \$5.5 million of commercial paper for a total debt reduction of \$19.1 million in FY 2022.

Capital Contributions

Grant revenue consists of one FEMA project anticipated to be reimbursed for a total of \$1.4 million during FY 2022.

Developer contributions are expected to increase overall from FY 2021, however, this is due to an increase in non-cash developer infrastructure contributions. Excluding this line item, developer contributions are expected to decrease slightly, about 5%. This estimate is developed based on expected capacity increases in each area as part of TMWA's facility plan. Actuals can vary as development increases or decreases in the service territory.

Cash Position and Coverage Ratios

TMWA expects to begin FY 2022 with approximately \$212.0 million in total cash and investments and end the fiscal year with \$182.5 million. These projections can be found in ***Attachment B***.

This is a projected decrease in cash of \$29.5 million and includes pay down of Commercial Paper notes by \$5.5 million.

To begin FY 2022, TMWA's Rate Stabilization Reserve will be \$11.1 million which is fully funded at 3% of three years' expected revenue.

TMWA's senior lien debt coverage ratio (DSC ratio), excluding system development charges, is estimated to be 1.65x by the end of FY 2022. This level of debt service coverage preserves the ability to access senior lien capital markets, if necessary, under favorable terms. TMWA's senior lien bond covenants require a minimum coverage ratio of 1.25x. TMWA's financial goals adopted in August 2003 established a debt coverage goal of approximately 1.50x (excluding developer fees) to maintain mid-level to higher level investment grade credit ratings and pay-as-you-go funding for water system rehabilitation construction projects. TMWA has maintained its credit ratings from Standard and Poor's and Moody's of AA+ and Aa2, respectively. In August 2020, Fitch upgraded TMWA's rating from to AA- to AA.

Draft Capital Improvement Plan for Fiscal Years 2022-2026

TMWA plans to spend \$254.2 million over the next five years on a variety of construction projects and capital outlays of which \$62.2 million is expected to be spent in fiscal year 2022 and \$60.2 million in fiscal year 2023. Capital spending funded by customer rates has increased \$33 million since the prior funding plan and totals \$187 million over the five years.

Of the total \$62.2 million in capital spending in fiscal year 2022, Treatment Plant Improvements account for \$7.5 million (12%) with \$4.4 million comprising the construction phase of the Orr Ditch Pump Station Rehab.

Pressure Improvements account for \$11.6 million (19%) with \$3.8 million and \$2.2 million comprising Disc Drive Low Head Pump Station and Common (Stonegate) Booster Pump Station, respectively.

Water Main Distribution System Improvements are \$12.8 million (21%), will be for several distribution system improvements. The Spring Creek South Zone Conversion project totaling \$750 thousand is to construct 2,800 linear feet of various size water mains. Boomtown Water System Improvements are \$1.3 million. The Watt Area Main Replacement's will retire and replace approximately 5,400 linear feet of cast iron and steel water main. The Oddie Wells Main Replacement project is to replace approximately 3,500' of cast iron water main.

Hydroelectric Improvements account for \$2.9 million (5%) with \$2.5 million for the construction of the Orr Ditch Hydro Facility.

Customer Service Outlays account for \$7.6 million (12%) with \$7.1 million for the installation of Automated Meter Infrastructure.

Administrative Outlays account for \$1.9 million (3%) with \$750 thousand for new crew trucks and vehicles.

For FY 2022 and FY 2023 capital spending increases significantly while capital spending for FY 2024 - 2026 is reduced, relatively the same as compared to FY 2021 once you back out \$7 million in for the Automated Meter Infrastructure work that is being completed by contractors. The increase is also largely due to the increase in storage tank recoats that need to be completed annually, for a five-year plan increase of \$10.6 million. An analysis was performed by engineering showing the need to service and repair approximately 5 tanks annually based on the total quantity (95) and age of tanks and the lifespan of a typical coating being around 20 years. This will allow for TMWA to be able to keep up with the tanks within our infrastructure to extend the life of the assets to service our customers. The increase also includes a combination of rehabilitation construction projects and construction to expand water system capacity to accommodate growth in the community. Total spending on water system rehabilitation projects (funded by customer water sales) is expected to be \$187 million over five years. This is significantly higher than prior year's five-year plan which included \$153.8 million in rehabilitative projects. The bulk of the remaining balance of project spending will be for water system expansion.

TRUCKEE MEADOWS WATER AUTHORITY

Comparative Statements of Revenues, Expenses and Changes in Net Position
Tentative Budget

	Tent. Budget FY 2022	Final Budget FY 2021	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	\$ 108,503,854	\$ 102,260,229	\$ 6,243,625	6%
Hydroelectric Sales	3,239,970	3,193,880	46,090	1%
Other Operating Sales	2,219,679	2,800,120	(580,441)	-21%
Total Operating Revenues	113,963,503	108,254,229	5,709,274	5%
OPERATING EXPENSES				
Salaries and Wages	26,634,314	24,563,727	2,070,587	8%
Employee Benefits	11,622,696	10,661,572	961,124	9%
Services and Supplies	32,188,000	31,419,113	768,887	2%
Total Operating Expenses Before Depreciation	70,445,010	66,644,412	3,800,598	6%
Depreciation	34,234,118	33,518,852	715,266	2%
Total Operating Expenses	104,679,128	100,163,264	4,515,864	5%
OPERATING INCOME	9,284,375	8,090,965	1,193,410	15%
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	2,583,886	2,854,243	(270,357)	-9%
Loss on Disposal of Assets	(750,000)	-	(750,000)	0%
Debt Issuance Costs	(133,000)	(87,400)	(45,600)	52%
Interest Expense	(11,880,610)	(12,514,133)	633,523	-5%
Total Nonoperating Revenues (Expenses)	(10,179,724)	(9,747,290)	(432,434)	4%
Gain (Loss) Before Capital Contributions	(895,349)	(1,656,325)	760,976	-46%
CAPITAL CONTRIBUTIONS				
Grants	1,350,000	1,900,000	(550,000)	-29%
Water Resource Sustainability Program	607,168	869,696	(262,528)	-30%
Developer Infrastructure Contributions	18,177,481	11,226,546	6,950,935	62%
Developer Will-serve Contributions (Net of Refunds)	2,884,048	4,185,412	(1,301,364)	-31%
Developer Capital Contributions - Other	9,360,299	10,242,156	(881,857)	-9%
Developer Facility Charges (Net of Refunds)	7,301,331	5,998,608	1,302,723	22%
Contributions from Other Governments	200,000	275,000	(75,000)	-27%
Net Capital Contributions	39,880,327	34,697,418	5,182,909	15%
CHANGE IN NET POSITION	38,984,978	33,041,093	5,943,885	18%
NET POSITION, BEGINNING PERIOD	816,011,810	760,033,398		
NET POSITION, END OF PERIOD	\$ 854,996,788	\$ 793,074,491		

TRUCKEE MEADOWS WATER AUTHORITY

Statements of Cash Flows

Tentative Budget

	Tent. Budget FY 2022	Final Budget FY 2021	Tent. Budget FY 2022	Tent. Budget FY 2022
OPERATING ACTIVITIES				
Cash Received From Customers	\$ 113,963,503	\$ 108,254,229	\$ 5,709,274	5%
Cash Paid to Employees	(38,257,010)	(35,225,299)	(3,031,711)	9%
Cash Paid to Suppliers	(32,188,000)	(31,419,113)	(768,887)	2%
Net Cash From Operating Activities	43,518,493	41,609,817	1,908,676	5%
CAPITAL AND RELATED FINANCING ACTIVITIES				
Acquisition & Construction of Capital Assets	(62,205,000)	(54,720,000)	(7,485,000)	14%
Interest Paid on Financing	(16,391,528)	(17,165,004)	773,476	-5%
Principal Paid on Financing	(13,599,193)	(13,460,867)	(138,326)	1%
Redemptions of Commercial Paper Notes	(5,500,000)	(5,000,000)	(500,000)	10%
Grants	1,900,000	2,401,825	(501,825)	-21%
Contributions for Water Resource Sustainability Program	607,168	869,696	(262,528)	-30%
Contributions From Developers-Will-Serve Letters	2,884,048	4,185,412	(1,301,364)	-31%
Contributions from Developers - Other	9,360,299	10,242,156	(881,857)	-9%
Contributions from Developers - Facility Charges	7,301,331	5,998,608	1,302,723	22%
Contributions from (to) Other Governments	200,000	-	200,000	0%
Bond/Note Issuance Costs	(133,000)	(87,400)	(45,600)	52%
Net Cash Used For Capital & Relating Financing Activities	(75,575,875)	(66,735,574)	(8,840,301)	13%
INVESTING ACTIVITIES				
Interest Received	2,583,886	2,854,243	(270,357)	-9%
Net Cash From Investing Activities	2,583,886	2,854,243	(270,357)	-9%
NET CHANGE IN CASH AND CASH EQUIVALENTS	(29,473,496)	(22,271,514)	(7,201,982)	32%
CASH AND CASH EQUIVALENTS, BEGINNING PERIOD	211,972,331	198,132,592	13,839,739	7%
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 182,498,835	\$ 175,861,078	\$ 6,637,757	4%

Truckee Meadows Water Authority

Summary of changes by Expense Element

FY 22 vs FY 21

Expense Element	FY 22	FY 21	Variance \$	Variance %	
Contracted Services	\$ 7,276,264	\$ 6,569,399	\$ 706,865	11%	A
Chemicals	2,462,701	2,061,099	401,602	19%	B
Supplies/Equipment Rental	3,390,160	3,176,000	214,160	7%	C
Sponsorships/Community	1,166,500	1,025,000	141,500	14%	D
Insurance/Claims	1,282,000	1,159,000	123,000	11%	E
Electric Power	5,567,028	5,488,850	78,179	1%	
Internet/Other Utility	840,600	787,900	52,700	7%	
Resource Fees	1,059,000	1,007,000	52,000	5%	
Property Taxes	752,400	710,400	42,000	6%	
Street Repairs	255,000	215,000	40,000	19%	
Bank/Investment Fees	50,000	31,000	19,000	61%	
Agency Reimbursements	(227,656)	(224,800)	(2,856)	1%	
Hardware/Software	2,420,714	2,440,470	(19,756)	-1%	
Overhead Allocations	(571,976)	(509,945)	(62,031)	12%	
Professional Services	2,808,840	2,886,716	(77,876)	-3%	
Project Related	1,486,000	1,572,000	(86,000)	-5%	
Land/Leases/Permitting	841,175	953,125	(111,950)	-12%	
Employee Related/Training	549,800	675,904	(126,104)	-19%	
Miscellaneous Expenses	2,400	279,183	(276,783)	-99%	
Postage/Printing	777,050	1,115,812	(338,762)	-30%	
	\$ 32,188,000	\$ 31,419,113	\$ 768,887	2%	

A True increase is only ~\$200k, which is primarily due to the transition away from temporary internal labor to contracted services for facilities and landscape maintenance during the summer months. Remaining increase is a reclassification of expenses between software and contracted services related to the new customer service system. Specifically, the billing and call center expenses were previously billed under the software contract with the previous vendor. Software costs are actually increasing slightly in FY 22, with hardware costs increasing more substantially due to timing of expected computer warranty replacements and additional network infrastructure associated with projects coming online.

B Chemical costs are increasing due to higher usage associated with actual costs from FY 2021, increased chemical prices, and the addition of the Mt. Rose Water Treatment plant, although chemical usage is expected to be relatively minimal at the new facility.

C Increase in supplies/equipment rental is due primarily to timing of replacement of old meter boxes. To help reduce costs of responding to leaks, TMWA has become more proactive in replacing these boxes, which helps to lower the cost of installations. Additionally, the TMWA standard meter boxes are longer lived than the boxes being replaced so the maintenance cost is expected to be reduced in future years.

D Sponsorship expenses are increasing to fund a portion of DRI's cloud seeding program.

E Insurance expenses are increasing due to higher premiums, primarily in the property insurance category, which is estimated to see a 14% or approximately \$105k. To estimate insurance expenses, TMWA received preliminary estimates from providers for the renewal period in May.

TMWA Fiscal Year 2022 (Tentative) Budget

FY 22 Operating Budget and FY 22-26 CIP

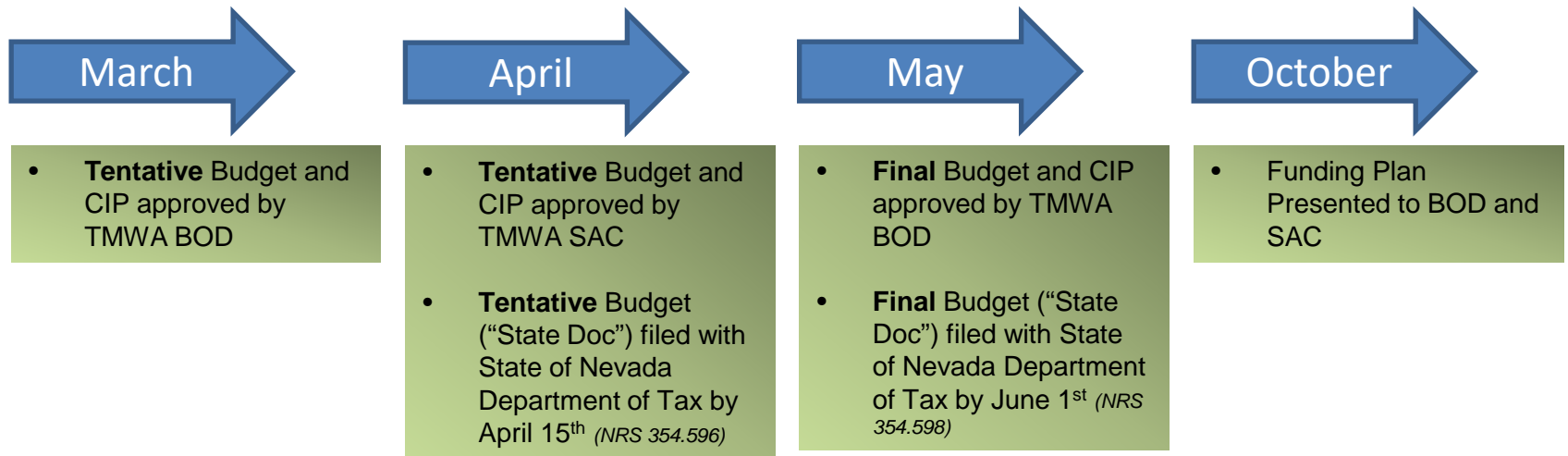
*Presentation by Truckee Meadows Water Authority
March 17, 2021*



Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Budget *(amounts in millions)*

Fiscal Planning Timeline



Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Operating Budget *(amounts in millions)*

Summary – Year over Year Budgets

	FY 2022	FY 2021	Change \$	Change %
Operating Revenue	114.0	108.3	5.7	5.3%
Operating Expense	104.7	100.2	4.5	4.5%
Operating Income	9.3	8.1	1.2	14.8%
Nonoperating Revenues (Expenses)	(10.2)	(9.7)	(0.5)	5.2%
Capital Contributions	39.9	34.7	5.2	15.0%
Change in Net Position	39.0	33.1	5.9	17.8%
Net Change in Cash	(29.5)	(22.3)	(7.2)	32.3%

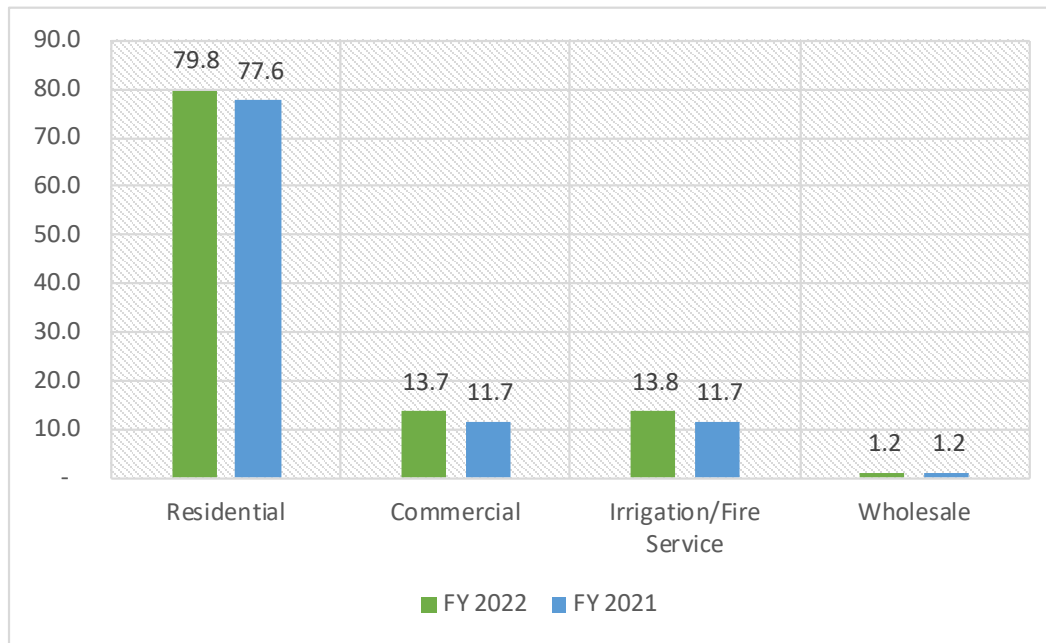
- *Change in net position increasing while cash is decreasing (higher capital spending required)*

Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Operating Budget *(amounts in millions)*

Operating Revenue

	FY 2022	FY 2021	Change \$	Change %
Charges for Water Sales	108.5	102.3	6.2	6.1%
Hydroelectric Sales	3.2	3.2	-	0.0%
Other Operating Sales	2.3	2.8	(0.5)	-17.9%
Total Operating Revenue	114.0	108.3	5.7	5.3%



- Water sales model assumes rate increases in May, 2021 and May, 2022 of 2.5%.
- Water sales model estimates approximately 2,000 new services
- Water sales model assumes average weather year with all history/data available

Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Operating Budget *(amounts in millions)*

Operating Expenses

	FY 2022	FY 2021	Change \$	Change %
Salaries and Wages	26.6	24.6	2.0	8.1%
Employee Benefits	11.6	10.7	0.9	8.4%
Services and Supplies	32.2	31.4	0.8	2.5%
Operating Expenses Before Depreciation	70.4	66.7	3.7	5.5%
Depreciation	34.3	33.5	0.8	2.4%
Total Operating Expenses	104.7	100.2	4.5	4.5%

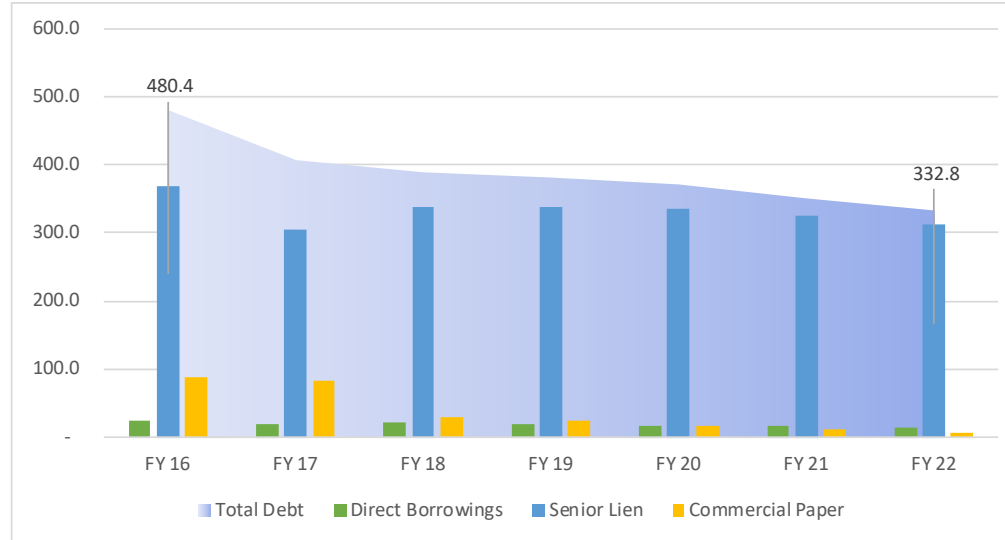
- 3% headcount
- 3% step increases
- 2% cost of living
- Increase in commodity prices, chemicals, electric power (minimal)
- Estimate of Mt. Rose Water Treatment Plant operating costs (may be offset)
- Sponsorship costs increase

Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Operating Budget *(amounts in millions)*

Nonoperating Revenues and Expenses

	FY 2022	FY 2021	Change \$	Change %
Investment Earnings	2.6	2.9	(0.3)	-10.3%
Loss on Disposal of Assets	(0.8)	-	(0.8)	0.0%
Debt Issuance Costs	(0.1)	(0.1)	-	0.0%
Interest Expense	(11.9)	(12.5)	0.6	-4.8%
Nonoperating Expenses	(10.2)	(9.7)	(0.5)	5.2%

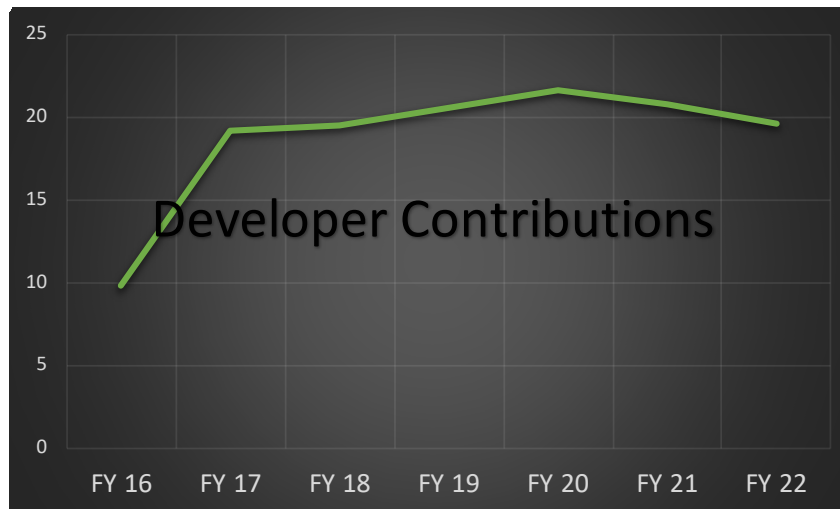


Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Operating Budget *(amounts in millions)*

Capital Contributions

	FY 2022	FY 2021	Change \$	Change %
Grants	1.4	1.9	(0.5)	-26.3%
Water Resource Sustainability Program	0.6	0.9	(0.3)	-33.3%
Developer Infrastructure Contributions	18.2	11.2	7.0	62.5%
Developer Will-serve Contributions	2.9	4.2	(1.3)	-31.0%
Developer Capital Contributions - Other	9.4	10.2	(0.8)	-7.8%
Developer Facility Charges	7.3	6.0	1.3	21.7%
Contributions from Other Governments	0.2	0.3	(0.1)	-33.3%
Total Capital Contributions	40.0	34.7	5.3	15.3%



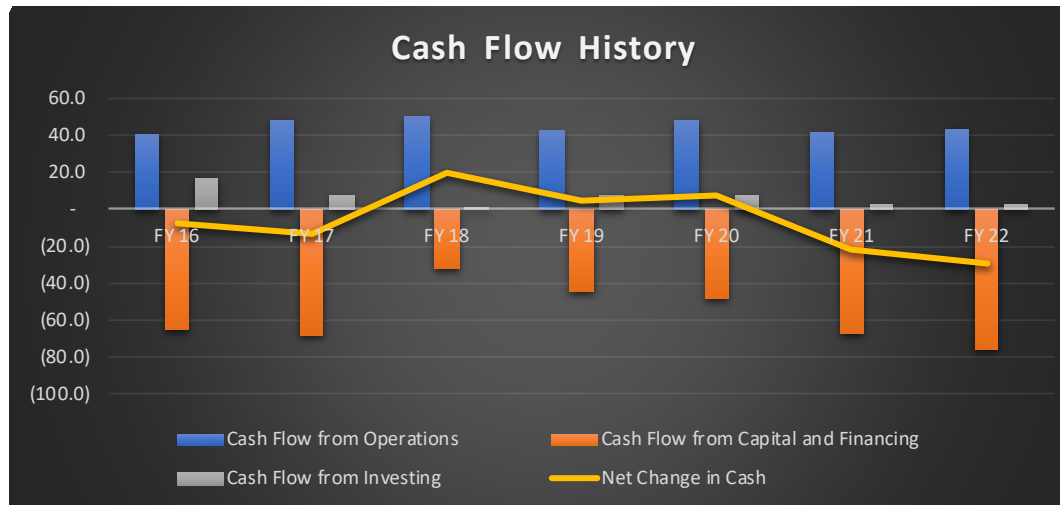
Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Operating Budget *(amounts in millions)*

Cash Flows

	FY 2022	FY 2021	Change \$	Change %
Cash Flow from Operations	43.5	41.6	1.9	4.6%
Cash Flow from Capital and Financing	(75.6)	(66.7)	(8.9)	13.3%
Cash Flow from Investing	2.6	2.9	(0.3)	-10.3%
Net Change in Cash	(29.5)	(22.2)	(7.3)	32.9%

- Increase in capital spending of \$7.5m year over year



Truckee Meadows Water Authority (TMWA)

Capital Improvement Plan FY 2022 – 2026 (tentative) *(amounts in millions)*

Summary of Funding Sources	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Five Year CIP FY22-26	% of Five Year CIP Total	Five Year CIP FY21-25	% of Five Year CIP Total	Inc(Dec) \$	Inc(Dec) %
Customer Rates	36.3	46.0	40.5	34.6	29.5	187.0	73.5%	153.8	67.1%	33.2	6.4%
Developer Fees	10.5	9.3	7.8	5.8	10.5	43.8	17.2%	49.0	21.4%	(5.2)	-4.2%
Developer Reimbursements	3.1	-	-	-	-	3.1	1.2%	3.9	1.7%	(0.8)	-0.5%
STMGID Reserve Funds	2.1	0.6	2.5	-	-	5.2	2.0%	6.6	2.9%	(1.4)	-0.8%
Water Meter Retrofit / Developer Fees	5.7	-	-	-	-	5.7	2.2%	6.2	2.7%	(0.5)	-0.5%
Sustainability	2.0	1.3	0.3	0.3	0.3	4.0	1.6%	4.0	1.7%	(0.0)	-0.2%
Farad Insurance Settlement - Applied to Orr Ditch Hydro project	2.5	3.0	-	-	-	5.5	2.2%	5.6	2.4%	(0.1)	-0.3%
Grants	-	-	-	-	-	-	0.0%	-	0.0%	-	0.0%
Total	62.2	60.2	51.0	40.6	40.3	254.2	100.0%	229.1	100.0%	25.1	

- Customer Rate Funded Projects increased \$33.2M over the five-year Plan.
- Funding Plan will incorporate these changes in the Fall.
- This increase is due to rehabilitation construction projects on existing infrastructure.

Truckee Meadows Water Authority (TMWA)

Capital Improvement Plan FY 2022 – 2026 (tentative) *(amounts in millions)*







Project Number	Capital Expenditure by Function	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Five Year CIP Total
NEW PROJECTS							
Independence Lake Bathymetric Survey and Monitoring	Raw Water Supply Improvements	0.1	0.1	-	-	-	0.2
Marlette Lake System Improvements	Raw Water Supply Improvements	0.1	0.1	0.1	0.1	0.1	0.5
Washoe Lake System Improvements	Raw Water Supply Improvements	0.1	0.2	0.3	0.3	0.3	1.0
Spring Creek Well 9 (Spring Creek 4 Replacement)	Ground Water Supply Improvements	0.9	1.1	-	-	-	2.0
Spring Creek Wells PH Adjustment	Ground Water Supply Improvements	0.3	-	-	-	-	0.3
Caughlin 2 Tanks	Pressure Improvements	0.5	2.0	-	-	-	2.5
7th Street High & Low BPS Replacement	Pressure Improvements	0.5	1.5	1.0	-	-	3.0
Watt Area Main Replacements	Water Main-Distribution-Service Line Improvements	2.0	-	-	-	-	2.0
Oddie Wells Main Replacements	Water Main-Distribution-Service Line Improvements	1.1	-	-	-	-	1.1
Lemmon Drive - Double Diamond Interchange (DDI)	Water Main-Distribution-Service Line Improvements	0.5	-	-	-	-	0.5
Shriver & G Streets Main Replacements	Water Main-Distribution-Service Line Improvements	0.5	-	-	-	-	0.5
Prater Tank Rehabilitation	Potable Water Storage Improvements	1.4	-	-	-	-	1.4
Verdi Canal Sandgate Improvements	Hydroelectric Improvements	0.3	-	-	-	-	0.3
Washoe Plant Tailraces Unit 1 and Unit 2	Hydroelectric Improvements	-	0.3	-	-	-	0.3
Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 1	Hydroelectric Improvements	-	2.9	-	-	-	2.9
Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 2	Hydroelectric Improvements	-	-	-	-	2.9	2.9
Total		8.3	8.1	1.4	0.4	3.3	21.4
INCREASED AMOUNTS FROM PRIOR PLAN							
Donner Lake Outlet Improvements Phase 2	Raw Water Supply Improvements	-	0.2	0.3	3.0	3.0	6.4
Storage Tank Recoats; Access; Drainage Improvements	Potable Water Storage Improvements	0.7	2.1	2.6	2.6	2.6	10.6
Total		0.7	2.3	2.9	5.6	5.6	17.0
STMGID RESERVES MOVED TO CUSTOMER RATE FUNDED							
Well Fix & Finish	Ground Water Supply Improvements	0.2	0.2	0.2	0.2	0.2	0.8
STMGID Well #1 Re Drill and Equipping	Ground Water Supply Improvements	-	1.0	1.0	-	-	2.0
Total		0.2	1.2	1.2	0.2	0.2	2.8
COMPLETED PROJECTS							
Mount Rose Surface Water Treatment Plant	Treatment Plant Improvements						(4.0)
Spanish Springs Main Replacement	Water Main-Distribution-Service Line Improvements						(2.3)
Stewart-Taylor Main Replacements	Water Main-Distribution-Service Line Improvements						(2.0)
Roberts-Wilson-Moran Main Replacements	Water Main-Distribution-Service Line Improvements						(2.3)
Total							(10.6)
Other							2.7
Net Change from Prior five year Plan in Customer Rate funded projects							33.2

- Spring Creek Well 9 – construction of a new well in Spanish Springs Valley.
- Caughlin 2 tanks – provide redundancy, expand emergency storage to a fire prone area.
- 7th Street BPS – replace two underground pump stations in an unsafe highly traveled intersection.
- Washoe Plant Turbine Rebuild Units 1 and 2 – replace turbine and rewind generator.
- Donner Lake – extend outlet channel further into the lake.
- Storage tanks – 5 tanks need to be repaired annually based on a total of 95 in our system, age of tanks etc., typical coating every 20 years.
- STMGID reserves – reclass to customer rates as reserves are being depleted.

Truckee Meadows Water Authority (TMWA)

FY 2022 (Tentative) Budget *(amounts in millions)*

Summary/Take-aways

- Water Sales 
 - Increased services
 - 2.5% rate increase
 - Increased usage assumptions
- Operating Expenses 
 - Increase to employee headcount
 - Step increases
 - Minimal services and supplies increase
- Nonoperating Expenses 
- Capital Contributions 
- Net Change in Cash 
 - Increased capital spending
- 5 Year Capital Spending 
 - Increased focus on major rehabs, mitigating risk.

Thank you!
Questions?



Five Year Capital Improvement Plan

Fiscal Year 2022 - 2026

Truckee Meadows Water Authority is a not-for-profit, community-owned water utility, overseen by elected officials and citizens from Reno, Sparks and Washoe County

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INTRODUCTION

The Truckee Meadows Water Authority's (TMWA's) Five-Year Capital Improvement Plan 2022-2026 (CIP), describes all infrastructure construction and major capital outlays that will take place between July 1, 2021 and June 30, 2026. Guidance for identifying and scheduling projects in the CIP is provided by TMWA's 2015-2035 Water Facility Plan (WFP) and the 2020-2040 Water Resource Plan (WRP). The updated Plans will reflect the acquisition of West Reno Water Company, and other small connections in Verdi.

TMWA is a joint powers authority formed in November 2000, pursuant to a Cooperative Agreement (as amended and restated as of February 3, 2010, the "Cooperative Agreement") among the City of Reno, Nevada ("Reno"), the City of Sparks, Nevada ("Sparks") and Washoe County, Nevada (the "County"). The Authority owns and operates a water system (the "Water System") and develops, manages and maintains supplies of water for the benefit of the Truckee Meadows communities. On January 1, 2015, TMWA, the WCWU and STMGID consolidated to create a regional water system under TMWA. TMWA has a total of 162 square miles of service area, which includes the cities of Reno and Sparks and other surrounding populated areas of the County (except certain areas in the vicinity of Lake Tahoe and other small areas bordering California). TMWA has no authority to provide water service outside of its service area; however, may provide service in the future to developments that are annexed into its service area.

The CIP incorporates a comprehensive compilation of water system improvements for TMWA. A major feature of the CIP is the construction of several projects that will expand the conjunctive use of the region's water resources. The philosophy behind conjunctive use of local water resources is to maximize the use of surface water while preserving the integrity of groundwater resources which are drawn upon during periods of persistently dry weather. Another aspect of the CIP is to expand the Aquifer Storage and Recovery Program (ASR Program) which is the recharge of groundwater basins with treated surface water, and explore the possibilities related to Advanced Purified Water (APW). In addition, this CIP includes several major projects to extend limited water service to the Verdi area, made possible by cost effective oversizing of developer main extensions. Full capacity water service for the entire Verdi area will not be available until an additional \$17.0 million of new backbone water facilities are constructed.

The CIP constitutes an essential component in TMWA's system of planning, monitoring and managing the activities of purveying water and generating hydroelectric power. The CIP is incorporated into a broader, constantly-updated Five-Year Funding Plan (FP) for a comparable period. This Funding Plan (FP) will determine adequate levels and sources of funding for projects contained in the CIP.

The 2021-2025 FP indicates that TMWA can fund the CIP in light of a significant funding gap. This situation is the result of substantial reductions in water demands resulting from the drought that ended in the spring of 2017. Otherwise there appears to be adequate treasury and revenues

from various sources to fund operations, pay principal and interest on existing debt, and capital improvements as presented in the CIP.

The CIP includes total spending of \$254.2 million with approximately 73.5% or \$187.0 million dedicated to upgrades or replacement of existing infrastructure, and approximately 17.2% or \$43.8 million allocated to construction of new water system capacity projects, conjunctive use construction projects, retrofit of remaining unmetered services, and potential opportunistic acquisition of water rights. Construction and capital outlays associated with the former STMGID service area are estimated to be approximately 2.0% or \$5.2 million of total spending over fiscal years 2022-2026. Of the total projected spending over the next five years 6.0% or \$15.1 million is considered contingency spending which is dependent on certain events occurring to trigger spending. The \$254.2 million in projected spending is grouped into broad categories of improvements and spending outlays. These categories are described below with detailed project descriptions to be found in the Project Description Section.

Raw Water Supply Improvements contains 7.1% or approximately \$18.1 million of total spending in the CIP. Projects focus on improvements to the Highland Canal/Siphon raw water conveyance infrastructure, upstream storage improvements for Donner Lakes where TMWA stores Privately-Owned Stored Water (POSW) and expenses associated with the storage and implementation of the Truckee River Operating Agreement (TROA). Construction of an APW Demonstration Facility is also included in this category which will be built as a follow up to the OneWater NV advanced purified water feasibility study, and will be a joint effort with other agencies.

Ground Water Supply Improvements contains 7.5% or approximately \$19.1 million of total spending in the CIP. These projects focus on preserving existing well capacities, drilling and equipping of new wells and at times complete replacement of existing wells.

Treatment Plant Improvements contains 9.8% or approximately \$24.8 million of total spending in the CIP. The Orr Ditch pump station project will increase redundancy and reliability by enhancing the Truckee River source of supply to the Chalk Bluff Water Treatment Plant. Other spending in this category targets fix and finish projects with the primary focus on the Chalk Bluff and Glendale Surface Water Treatment Plants located on the Truckee River. Other improvements focus on satellite water system treatment upgrades and a complete upgrade of the Supervisory Control and Data Acquisition (SCADA) system which provides centralized automated system control and data storage for the distribution system and treatment plants.

Distribution System Pressure Improvements contains 17.4% or approximately \$44.2 million of total spending. This spending is bifurcated into pressure improvements and water main and service line improvements. Pressure improvements include pump station rebuilds and new construction, correction of pressure or fire flow deficiencies, pressure regulating station rebuilds and new construction, as well as reconstruction of pressure regulating valves.

Water Main Distribution & Service Line Improvements contains 23.4% or approximately \$59.6 million of total spending in the CIP. These improvements include replacement of aged water mains reaching end of service life, installation of new mains for new and expanded service, water main oversizing and extensions, off-river supply improvements, and two of the three major conjunctive use projects to extend surface water supplies to the areas that rely heavily on year round groundwater pumping. This last set of projects furthers the conjunctive use philosophy of water resource management, and include Mount Rose 5 Distribution/Pressure Improvements, Boomtown water system improvements, and STMGID Conjunctive Use Facilities (\$1.6 million to be funded by STMGID reserves).

Potable Water Storage Improvements contains 13.6% or approximately \$34.6 million of total spending in the CIP. These projects are comprised mainly of new treated water storage tank construction to serve new and expanded service (STMGID Tank East Zone 11 Tank), some replacement of existing treated water tank capacity as well as systematic recoating of treated water tank interiors and exteriors to extend service life of these facilities.

Hydroelectric Improvements contains 5.5% or approximately \$14.0 million of total spending in the CIP. Included in this category is the new Orr Ditch Hydro Facility, which will generate hydroelectric power for the Chalk Bluff Treatment Plant, and directly offset power costs at TMWA's largest treatment plant. Other spending centers on the three run-of-river hydroelectric facilities currently owned by TMWA. Efforts on these facilities focus primarily on flume, forebay, diversion and canal improvements as well as equipment upgrades.

Customer Service Outlays contains 9.3% or approximately \$23.7 million of total spending in the CIP. Spending in this category focuses on meter reading device replacements and meter replacement if required. The principal spending in this category focuses on consolidating the meter system to one format which will provide more frequent and automatic meter reading, and meter data management. Also, in this category is a spending provision for new business meters which is funded by development.

Administrative Outlays contains 3.8% or approximately \$9.7 million of total spending in the CIP. These outlays are primarily for Information Technology equipment, licenses, and hardware replacements as required. Included in this category of spending are fleet upgrades for heavy and light vehicles as well as excavation equipment.

Special Programs Funded by Development include outlays for opportunistic water rights purchases. They are separated from a presentation standpoint because in the case of water right acquisitions, spending is currently driven by pricing opportunity. These projects comprise 0.5% or approximately \$1.4 million of total spending in the CIP.

Former STMGID System Improvements are separated from a presentation standpoint because projects in this category are funded by the STMGID reserve, which TMWA acquired through the acquisition of former STMGID. It contains 2.0% or approximately \$5.2 million of total spending

in the CIP. Improvements in this category focus on conjunctive use, well replacement and improvements, and tank recoats. This reserve fund is expected to be depleted by the end of the five year plan.

DRAFT

DEFINITIONS

Capital Improvement Program Definitions

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

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

Definition of Capital Outlays

"Capital Outlays," which are in TMWA's capital budget, include construction projects that improve the life of current TMWA infrastructure, or are new additions to TMWA infrastructure, as well as computer equipment and software, vehicles, and heavy equipment needed to support TMWA's operations. These items are generally found in the Administrative category of projects. For Customer Service category, these outlays involve meter installations and related infrastructure, and acquiring meter reading equipment.

PRIORITIZATION OF PROJECTS/OUTLAYS

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

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

- * **PRIORITY 1 MANDATORY:** These are considered absolutely required, and are the highest priority of all capital projects. Mandatory projects include those in final design or already under construction, or those required by legislation or regulation for protection of public health and safety. These projects are generally found in the first fiscal year of the 2022-2026 CIP. Water demands or infrastructure conditions are such that if the project is not completed TMWA runs the risk of eventually being unable to reliably provide water service to its existing customers and/or new and expanded service, or incur extended outages.
- * **PRIORITY 2 NECESSARY:** A project that is important for providing water service to customers, yet timing of construction or spending outlay is not as critical as a mandatory project. These projects are required and are generally found in the last four years of the 2022-2026 CIP. External factors such as the pace of new development or the condition of existing infrastructure may delay or accelerate the timing of project construction.
- * **PRIORITY 3 CONTINGENCY:** These projects or capital outlays are not immediately critical to the operation of the water system. Expenditures in this category generally require a business case study or specific criteria to be met before spending can occur. If such criteria are not met, then spending may or may not be justified. Also, some projects are deferrable if spending is required in an area of higher priority. Even though these projects and outlays are in the 2022-2026 CIP the likelihood that spending will occur may be remote and is based upon future conditions that are difficult to predict.

FUNDING OF CAPITAL SPENDING

Funding Sources

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

Developer Contributions

TMWA looks to the development community for developer contributions in the form of system development charges or direct reimbursements to fund capital expenditures related to new or expanded water service, including pump station construction or expansions and feeder main extension projects. In June 2003, the TMWA Board adopted facility charges to pay for new treatment/supply capacity projects and new storage capacity projects. TMWA began collecting these facility charges in January 2004. Under TMWA's Rule 5 these proceeds are used to support new capacity construction. Rule 7 governs the purchase of water rights and reimbursement by developers for issuance of will-serve commitments for water service. However, because of the timing of certain growth driven capital projects, additional financial resources may be called upon as needed. The most recent update to the water system facility charges, which updated area fees, supply and treatment fees, as well as storage unit costs was approved by the TMWA Board in August, 2019 with an effective date of October, 2019. These fees are subject to periodic review for funding adequacy.

Financing Background

New money revenue bond issuance has been historically an integral part of funding construction spending. TMWA has also taken advantage of lower rate, subordinated debt financing obtained through the Drinking Water State Revolving Loan Fund (DWSRF) and a tax-exempt commercial paper program (TECP) due to lower cost of capital and

repayment subordination features of these funding vehicles. Federal and State Grants and loan forgiveness programs have also been identified in the past to fund projects. Customer water sales and various developer fees may not be immediately sufficient to pay for construction spending and capital outlays so there may be some reliance on new money debt and reliance on future tax-exempt commercial paper note sales. TMWA plans to avoid relying on additional debt whenever possible and reasonable. TMWA has been able to reduce debt by over \$105.5 million, and 20% during the last 5 years, and currently has no plan to increase debt to fund projects in this plan.

Rule 5 and Rule 7 Fees

These fees are collected from the development community. Rule 5 fees are paid by developers to TMWA for the construction of new water feeder mains, new treatment/supply capacity, new storage capacity, and for new or rebuilt pump stations to meet demand resulting from new and expanded service. Rule 7 Fees are derived from will-serve sales to development. TMWA historically purchased water rights on the open market and reserves these rights for will-serve letters to be sold to development. TMWA also recovers a modest amount of administrative and financing costs with the sale of each will-serve. The title to water rights are retained by and dedicated to TMWA. TMWA has sufficient inventory of water rights to meet the demands for new and expanded service for the foreseeable future.

Water Meter Retrofit Fees

TMWA has been retrofitting flat rate water services with meter boxes, setters and meters. The intent is to meter the entire water system which is now in the final stages. To accomplish this task TMWA has collected \$1,830 for each acre-foot of demand when will-serve commitments based on surface water right dedications are issued for new or expanded service. Proceeds from the fee are used to fund water meter retrofits. Pursuant to Resolution 272 passed by the Board of Directors on January 16, 2019, the fee was broadened to include other uses. The pre-January 16, 2019 balance of these fees will be used to complete any remaining water meter retrofits and other water meter replacement projects.

Water Resource Sustainability Fund Fees

Resolution 272, passed by the Board of Directors on January 16, 2019, broadened the purpose of the Water Meter Retrofit Fee to support projects such as expanded conjunctive use, aquifer storage and recovery, demonstration and validation of exceptional quality reclaimed water uses, future water resource identification and acquisition, and other projects that enhance water resource sustainability and drought resiliency. The fee has been reduced from \$1,830 to \$1,600 for each acre-foot of demand when will-serve commitments based on surface water right dedications are issued for new or expanded service.

Capital Contributions from Other Governments

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

Reserves from the Water Utility Consolidation

TMWA, the WCWU and STMGID consolidated on January 1, 2015. As a result of the consolidation, the respective treasuries of the WCWU and STMGID were transferred to TMWA. The WCWU treasury that was transferred to TMWA amounted to approximately \$43.4 million after the final transfer of funds (which was absorbed into TMWA's account) while the STMGID treasury transferred to TMWA was approximately \$15.7 million of which \$5.2 million remains. These cash and investment reserves will continue to be used to make necessary improvements in the former water utility service areas including conjunctive use enhancements.

Other Resources

One method of generating additional funds for capital improvements is to increase existing fees/charges or to add new fees/charges. However, future increases will be provisional if TMWA is able to meet revenue requirements and maintain bond coverage ratios that will suffice to maintain strong investment-grade credit ratings. TMWA has obtained many benefits of Aa2 and AA+ credit ratings from Moody's and S&P, respectively. The Board approved a five-year customer water rate plan in early 2017 which included a water rate increase of 3.0% in May of 2017 and 2018. TMWA Board deferred the 2.5% rate increases scheduled for 2019 through 2021 to 2020 through 2022, effectively delaying the rate increase plan by one year. They again deferred the 2.5% water rate increases scheduled for 2020 through 2022 to 2021 through 2023 due to the pandemic. Water rate increases are essential for TMWA to maintain sound credit ratings and to preserve access to opportunities in the capital markets. TMWA also funds rehabilitative capital projects in a meaningful manner due to water delivery being an essential municipal service.

FISCAL YEAR 2022 CAPITAL SPENDING-THE CAPITAL BUDGET

TMWA expects to spend \$62.2 million for fiscal year 2022, the first year of the FY 2022-2026 CIP. Of this total \$36.3 million will be paid for by customer rates for water system rehabilitation, hydroelectric improvements, pressure system improvements, water main distribution service line improvements, and administrative and customer service outlays. While \$13.6 million will be paid for by developer fees and will be dedicated to water system expansion, limited opportunistic acquisition of water rights and some water meter retrofit activities. The water meter retrofit fund will pay for \$5.7 million for meter replacements, and the Sustainability fund will pay for \$2.0 million in projects. Insurance settlements will pay for \$2.5 million in hydroelectric improvements, and STMGID reserves account for \$2.1 million of improvements in the STMGID area.

SUMMARY OF PROJECTS FOR THE FISCAL YEAR 2022 BUDGET

TMWA has established the following projects for the capital budget in fiscal year 2022 (Amounts presented in thousands of dollars):

Summary of Projects for FY 2022	Amount
Raw Water Supply Improvements	
Highland Canal-Upgrades-Downstream	225
Highland Canal-Upgrades-Diversion to Chalk Bluff	500
TROA Drought Storage / Implementation	150
Donner Lake Outlet Improvements Phase 2	150
Advanced Purified Water Demonstration Facility	3,000
Independence Lake Bathymetric Survey and Monitoring	100
Marlette Lake System Improvements	100
Washoe Lake System Improvements	100
Total Raw Water Supply	4,325
Ground Water Supply Improvements	
Well Rehabilitation Improvements	200
Double Diamond #5 and Equipping	50
Callamont Well South Equipping	60
Well Fix & Finish	350
Well Plugging/Conversion	150
Thomas Creek Well Replacement and Spring Creek 5	1,000
Truckee Canyon Well 3 Site Modifications	50
Well Head TTHM Mitigation	500
Spring Creek Well #7 Recharge	500
Fish Springs Ranch TDS Monitoring Wells	250
Geothermal Fluid Monitoring Well	100
Spring Creek Well 9 (Spring Creek 4 Replacement)	910
Spring Creek Wells PH Adjustment	300
Total Ground Water Supply	4,420

Summary of Projects for FY 2022 (continued)	
Treatment Plant Improvements	
Chalk Bluff Treatment Plant Improvements	750
Glendale Treatment Plant Improvements	375
Chalk Bluff Filter Underdrains	800
Orr Ditch Pump Station Rehab	4,400
Truckee Canyon Water Treatment Improvements	100
Lightning W Treatment Improvements	60
SCADA Rehab / Plant Operating Software	500
Longley Plant HV 3 and HV 4 Treatment Improvements	200
Spanish Springs Nitrate Treatment Facility	300
Total Treatment Plant	7,485
Pressure Improvements	
Pressure Regulators Rehabilitation	500
Land Acquisitions	250
Desert Fox Standby Generator	150
Disc Drive Low Head Pump Station and Mains	3,800
Pump Station Oversizing	100
Pump Station Rebuilds, Rehabilitations	250
Mount Rose Well #3 Pump Station Improvements	250
Standby Generator Improvements	150
Spanish Springs #1 Pump Zone Intertie	600
Twin Lakes Booster Pump Station	620
Kings Row 2 Booster Pump Station	150
Spring Creek Tanks #3 and #4 BPS Modifications	200
Lazy 5 Low Head Pump Station and Mains	300
Common (Stonegate) Booster Pump Station	2,200
Caughlin 5C Pump and Motor Replacement	150
Kinglet Pump Station	900
Caughlin 2 Tanks	500
7th Street High and Low BPS Replacements	500
Total Pressure Improvements	11,570
Water Main-Distribution-Service Line Improvements	
Street & Highway Main Replacements	4,500
Spring Creek South Zone Conversion	750
South Virginia 24" Main - Kumle to Peckham	700
Goldeney Parkway Main Tie and Check Valve	180
General Waterline Extensions	100
Mount Rose 5 Distribution/Pressure Improvements	400
Boomtown Water System Improvements	1,250

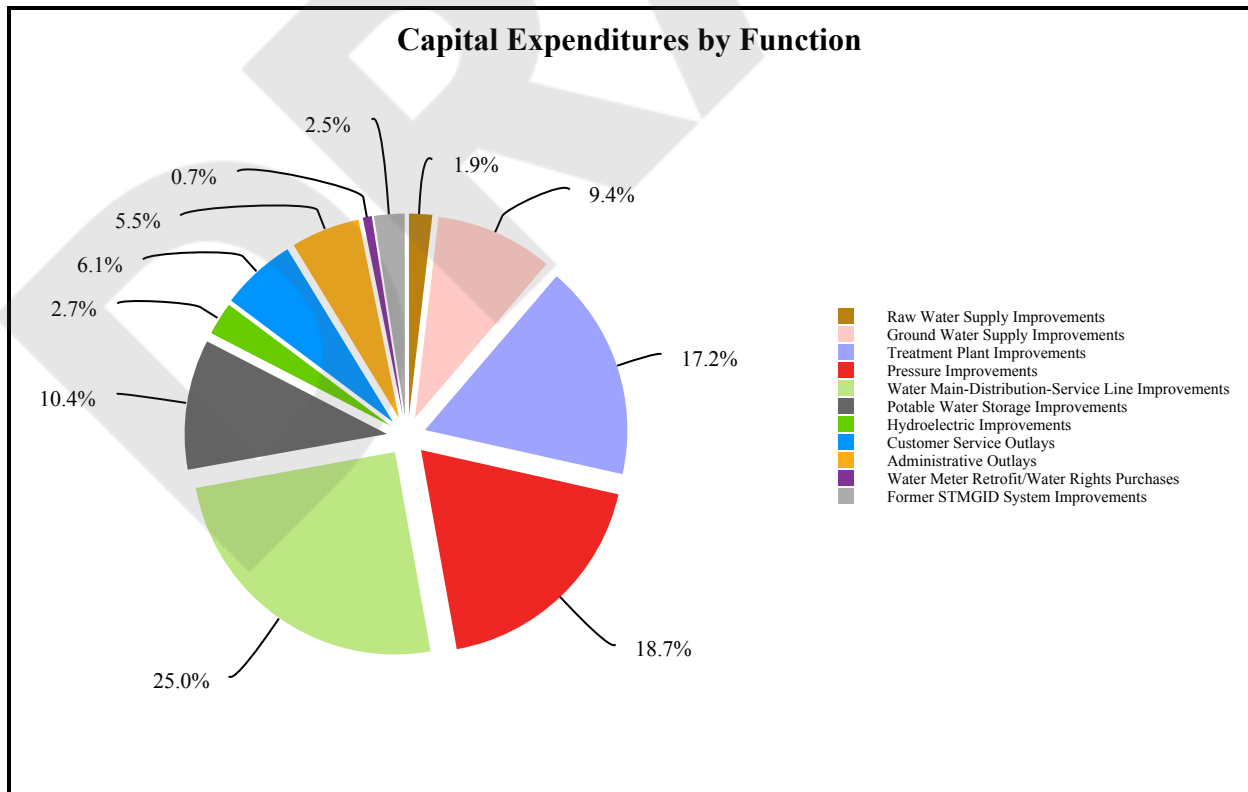
Project Summary for FY 2022 (continued)	Amount
Lemmon Valley Sand Yard	530
Verdi Hydro Main Extension	320
Watt Area Main Replacements	2,000
Oddie Wells Main Replacements	1,100
Lemmon Drive - Double Diamond Interchange (DDI)	500
Shriver and G Streets Main Replacement	500
Total	12,830
Potable Water Storage Improvements	
Storage Tank Recoats, Access, Drainage Improvements	1,600
Highland Reservoir Tank	3,700
US 40 Tank and Feeder Main	170
Prater Tank Rehabilitation	1,400
Total Potable Water Storage	6,870
Hydroelectric Improvements	
Forebay, Diversion, and Canal Improvements	100
Orr Ditch Hydro Facility	2,500
Verdi Canal Sandgate Improvements	335
Total Hydroelectric	2,935
Customer Service Outlays	
Meter Reading Equipment	60
New Business Meters	100
Mueller Pit Replacements former Washoe County	125
Galvanized / Poly Service Line Replacements	250
AMI Automated Meter Infrastructure	7,065
Total Customer Service Outlays	7,600
Administrative Outlays	
GIS/GPS System Mapping Equipment	20
IT Server Hardware	30
IT Network Security Upgrades	160
IT Physical Access Security Upgrades	60
Printer / Scanner Replacement	50
Crew Trucks / Vehicles	750
Emergency Response Projects	150
System Wide Asphalt Rehabilitation	450
Physical Access Control System Upgrade	250
Total Administrative Outlays	1,920

Project Summary for FY 2022 (continued)	Amount
Special Projects Funded by Development	
Water Right Purchases	150
Total Special Projects	150
Former STMGID System Improvements	
STMGID Conjunctive Use Facilities	1,600
STMGID NAC Deficiencies - Saddlehorn, Upper Toll, STMGID East	500
Total STMGID System Improvements	2,100
Total Capital Spend for FY 2022	62,205

Detailed project descriptions are provided for all projects in the CIP. These descriptions cover the fiscal year 2022 capital budget as well as the four additional years from 2023-2026.

CAPITAL EXPENDITURES BY FUNCTION (Amounts in thousands of dollars)

Summary of Capital Expenditures by Function	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total CIP Total
Raw Water Supply Improvements	4,325	3,325	2,925	3,775	3,775	18,125
Ground Water Supply Improvements	4,420	5,850	3,170	3,540	2,110	19,090
Treatment Plant Improvements	7,485	9,220	4,205	2,455	1,445	24,810
Distribution System Pressure Improvements	11,570	7,700	10,240	9,910	4,750	44,170
Water Main Distribution Service Line Improvements	12,830	9,625	11,830	13,800	11,520	59,605
Potable Water Storage Improvements	6,870	7,950	6,230	4,020	9,495	34,565
Hydroelectric Improvements	2,935	6,640	100	750	3,540	13,965
Customer Service Outlays	7,600	7,505	7,600	510	475	23,690
Administrative Outlays	1,920	1,475	1,870	1,550	2,850	9,665
Water Meter Retrofit / Water Rights Purchases	150	300	300	300	300	1,350
Sub-Total TMWA Construction Spending & Outlays	60,105	59,590	48,470	40,610	40,260	249,035
Former STMGID System Improvements	2,100	600	2,500	—	—	5,200
Total Projected Capital Spending, Including STMGID	62,205	60,190	50,970	40,610	40,260	254,235

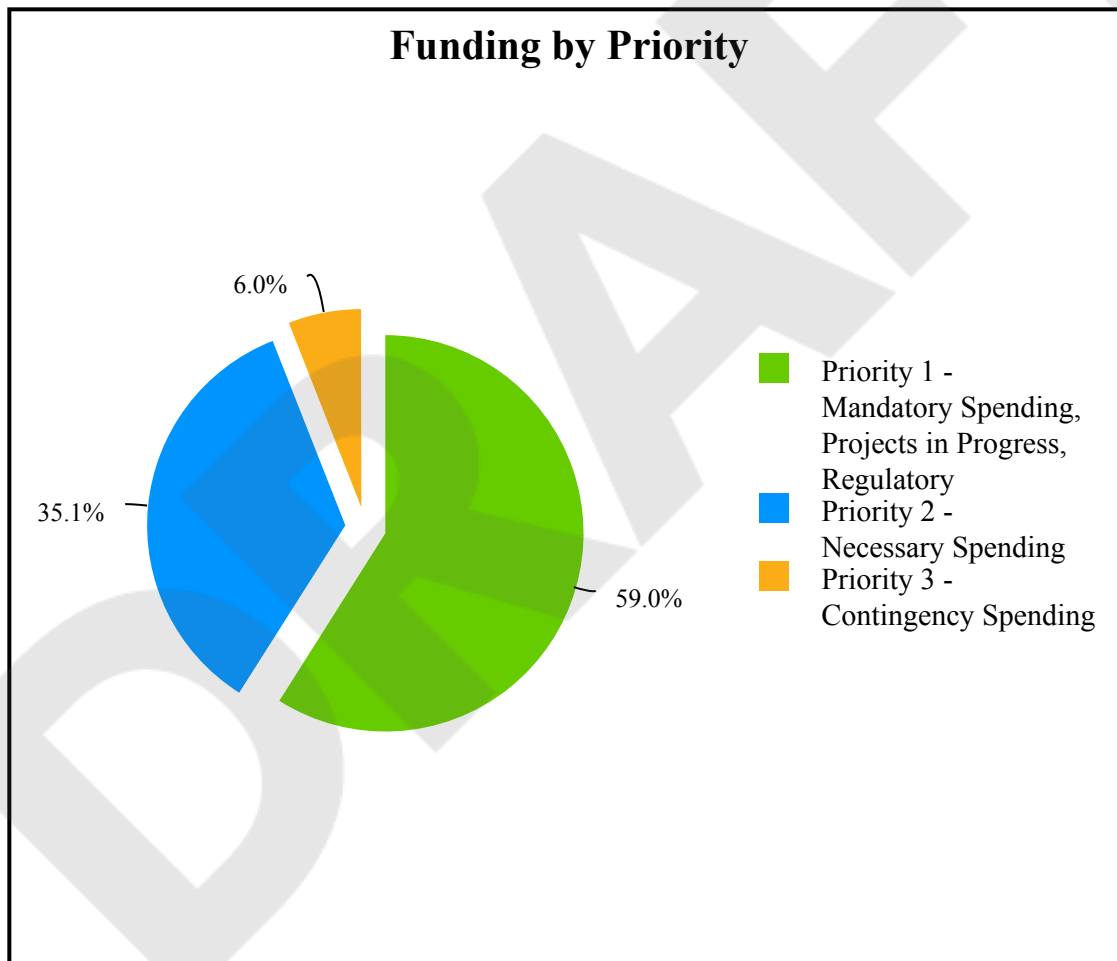


PRELIMINARY FUNDING PLAN
FUNDING SOURCES
(Amounts in thousands of dollars)

Summary of Funding Sources	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Five Year CIP Total
Capital Improvements Funded by Customer Rates	36,320	46,048	40,455	34,598	29,548	186,969
Capital Improvements Funded by Developer Fees	10,474	9,292	7,765	5,762	10,462	43,755
Capital Improvements Funded by Developer Reimbursements	3,100	—	—	—	—	3,100
Capital Improvements Funded with former STMGID Reserve Funds	2,100	600	2,500	—	—	5,200
Water Meter Retrofit / Water Rights Purchases	5,711	—	—	—	—	5,711
Capital Improvements Funded by Sustainability Fees	2,000	1,250	250	250	250	4,000
Farad Insurance Settlement - Applied to Orr Ditch Hydro	2,500	3,000	—	—	—	5,500
Total Projected Capital Spending	62,205	60,190	50,970	40,610	40,260	254,235

FUNDING BY PRIORITY (Amounts in thousands of dollars)

Summary of Funding by Priority	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Five Year CIP Total
Priority 1 - Mandatory Spending, Projects in Progress, Regulatory	40,475	31,175	34,210	17,375	26,735	149,970
Priority 2 - Necessary Spending	17,920	24,015	14,835	20,985	11,375	89,130
Priority 3 - Contingency Spending	3,810	5,000	1,925	2,250	2,150	15,135
Total Projected Capital Spending	62,205	60,190	50,970	40,610	40,260	254,235



PROJECT FUNCTIONS AND DESCRIPTIONS

RAW WATER SUPPLY IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Highland Canal- Upgrades-Downstream	225	225	225	225	225	1,125
1	Customer Rates	Highland Canal- Upgrades-Diversion to Chalk Bluff	500	500	2,000	100	100	3,200
1	Customer Rates	TROA Drought Storage / Implementation	150	150	100	100	100	600
2	Customer Rates	Donner Lake Outlet Improvements Phase 2	150	150	250	3,000	3,000	6,550
2	Developer Fees / Sustainability Fees	Advanced Purified Water Demonstration Facility	3,000	2,000	—	—	—	5,000
2	Customer Rates	Independence Lake System Improvements	100	50	—	—	—	150
2	Customer Rates	Marlette Lake System Improvements	100	100	100	100	100	500
1	Customer Rates	Washoe Lake System Improvements	100	150	250	250	250	1,000
Subtotal Raw Water Supply			4,325	3,325	2,925	3,775	3,775	18,125

Project Locations: Map of all *Raw Water Supply Improvements* projects are highlighted in the following map.



Raw Water Supply Improvements Highland Canal-Upgrades-Downstream

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Highland Canal-Upgrades-Downstream	225	225	225	225	225	1,125

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

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



Raw Water Supply Improvements Highland Canal – Upgrades – Diversion to Chalk Bluff

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Highland Canal-Upgrades-Diversion to Chalk Bluff	500	500	2,000	100	100	3,200

PROJECT DESCRIPTION: These improvements are for the stretch of canal between the diversion on the Truckee River and Chalk Bluff Water Treatment Plant. The proposed spending is to secure the canal from trespass to enhance public safety and prevent encroachment on TMWA property. Due to swift flows in the Highland Canal TMWA will also complete fencing along the canal for public safety, install security cameras and access barriers. The proposed FY 2022 budget is for replacement of the existing 54-inch siphon pipe under the Truckee River just downstream of the diversion installed in 1954.

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



Raw Water Supply Improvements TROA Drought Storage/Implementation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	TROA Drought Storage / Implementation	150	150	100	100	100	600

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

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



Raw Water Supply Improvements Donner Lake Outlet Improvements Phase 2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Donner Lake Outlet Improvements Phase 2	150	150	250	3,000	3,000	6,550

PROJECT DESCRIPTION: Dredging of a portion of the Donner Lake outlet channel was completed in FY2019. The project was scaled back to fit within the CEQA emergency permitting requirements. Additional work is required to extend and improve the outlet channel further into the lake, including possible bank stabilization improvements to minimize future dredging requirements.

SCHEDULE: Permitting and preliminary design will be conducted over the next three years. Construction of improvements is scheduled beyond FY 2025.



Raw Water Supply Improvements Advanced Purified Water Demonstration Facility

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees / Sustainability Fees	Advanced Purified Water Demonstration Facility	3,000	2,000	—	—	—	5,000

PROJECT DESCRIPTION: Funds are needed to continue the OneWater NV advanced purified water feasibility study. Following the small scale-pilot study, which will be completed in FY 2021, it is likely that a larger facility will be considered for demonstration purposes. There will likely be cost sharing on this project from other local agencies and outside funding sources.

SCHEDULE: Construction for this project will begin in FY 2022.



Raw Water Supply Improvements

Independence Lake Bathymetric Survey and Monitoring

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Independence Lake System Improvements	100	50	—	—	—	150

PROJECT DESCRIPTION: This project includes mapping of natural lake beds, inlet and outlet channel as required under Truckee River Operating Agreement for maintaining fish passage.

SCHEDULE: Construction for this project will begin in FY 2022.



Raw Water Supply Improvements Marlette Lake System Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Marlette Lake System Improvements	100	100	100	100	100	500

PROJECT DESCRIPTION: This project includes improvements as necessary to the Marlette and East Slope water systems to monitor, capture and deliver raw water as necessary to meet regional

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



Raw Water Supply Improvements Washoe Lake System Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Washoe Lake System Improvements	100	150	250	250	250	1,000

PROJECT DESCRIPTION: Improvements as necessary to Washoe Lake Dam and related infrastructure to monitor, capture, store and deliver raw water as necessary to meet regional water supply objectives.

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

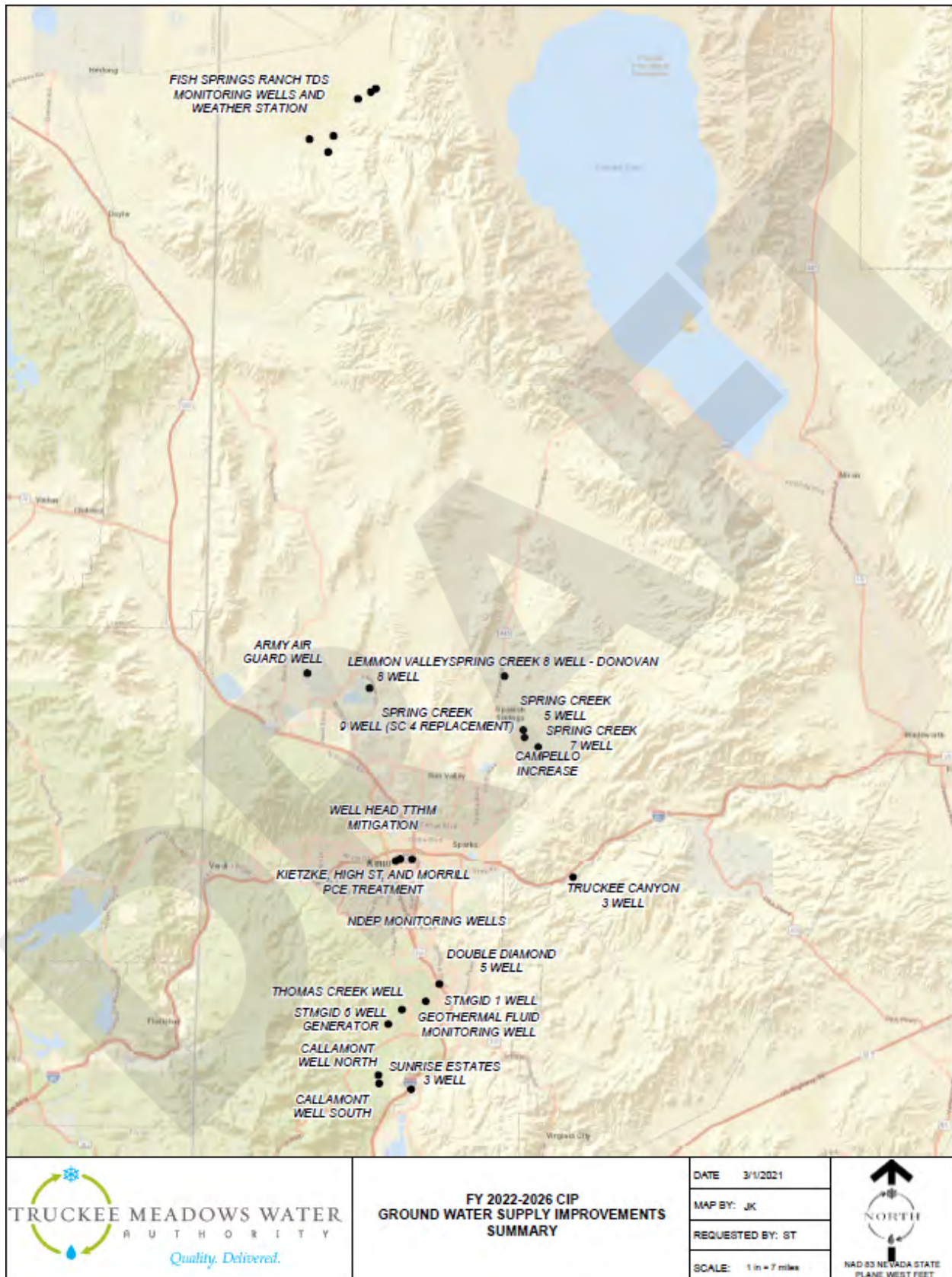


GROUND WATER SUPPLY IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Well Rehabilitation Improvements	200	200	200	200	200	1,000
1	Developer Fees	Double Diamond #5 Equipping & Blending Main	50	450	—	—	60	560
2	Developer Fees	Callamont Well South Equipping	60	1,140	—	—	—	1,200
2	Customer Rates	Replacement Equipping	—	—	—	1,100	—	1,100
2	Customer Rates	Lemmon Valley Well #8 Replacement	—	—	—	250	1,000	1,250
1	Customer Rates	Well Fix & Finish	350	350	350	350	350	1,750
2	Customer Rates	Well Plugging / Conversion	150	—	—	—	—	150
1	Customer Rates	Thomas Creek Well & Spring Creek #5 Equipping	1,000	1,000	—	—	—	2,000
2	Customer Rates	Truckee Canyon Well #3 Site Modifications	50	—	—	—	—	50
1	Customer Rates / Sustainability Fees	Well Head TTHM Mitigation	500	500	500	500	500	2,500
1	Customer Rates / Sustainability Fees	Spring Creek Well #7 Recharge	500	—	—	—	—	500
2	Developer Fees	Callamont Well North Equipping	—	—	60	1,140	—	1,200
2	Developer Fees	Spring Creek Well #10 - Donovan	—	150	1,060	—	—	1,210
1	Customer Rates	Fish Springs Ranch TDS Monitoring Wells	250	—	—	—	—	250
1	Customer Rates	Geothermal Fluid Monitoring Well	100	—	—	—	—	100
1	Customer Rates	Spring Creek Well 9 (Spring Creek 4 Replacement)	910	1,060	—	—	—	1,970
1	Customer Rates	Spring Creek Wells pH Adjustment	300	—	—	—	—	300
1	Customer Rates	STMGID Well #1 Re Drill and Equipping	—	1,000	1,000	—	—	2,000
Subtotal Ground Water Supply			4,420	5,850	3,170	3,540	2,110	19,090

Project Locations: Map of all *Ground Water Supply Improvements* projects are highlighted in the following map.



Ground Water Supply Improvements Well Rehabilitation Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Well Rehabilitation Improvements	200	200	200	200	200	1,000

PROJECT DESCRIPTION: Funds are budgeted to rehabilitate TMWA production wells as required. Typically for subgrade rehabilitation efforts, five to six wells are inspected, tested and evaluated every year to determine if rehabilitation is required. Typical subgrade rehab activities include but are not limited to pump and pump column pipe replacements; rehabilitation of well casing and screen; and other enhancements to maintain well function and capacities. Spending in fiscal years 2022-2026 will include improvements at several wells to provide general above grade well equipment and building and/or electrical upgrades. Some of the spending will go towards converting an oil lubed shaft vertical turbine to water lubed and eliminate any standing oil in the well. TMWA has over 90 production wells operating throughout the water system. TMWA relies on these wells to provide drought and emergency supply and as a supplemental source to meet peak demands on the water system.

SCHEDULE: Wells targeted for rehabilitation improvements in FY 2022 include Nugget Well, Corbett Well, STMGID 2 Well, and Boomtown 10.



Ground Water Supply Improvements Double Diamond #5 Equipping & Blending Main

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Double Diamond #5 Equipping & Blending Main	50	450	—	—	60	560

PROJECT DESCRIPTION: Construct pumping facilities for the existing Double Diamond Well #5 including the pump house building, electrical power, pump/motor and valves and piping to provide an additional 1,200 gallons per minute of peak period supply to the Double Diamond area. The project also includes construction of a blending main between Double Diamond Wells #4 & #5.

SCHEDULE: Based on current growth rates, it is anticipated that the additional capacity from the new well will be needed in the summer of FY 2027.



Ground Water Supply Improvements Callamont Well South Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Callamont Well South Equipping	60	1,140	—	—	—	1,200

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

SCHEDULE: This project is currently scheduled for construction in FY 2023, but may be constructed sooner (or later) depending on the actual schedule for the proposed 210 unit Callamont residential development.



Ground Water Supply Improvements Air Guard Well Replacement Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Air Guard Well Replacement Equipping	—	—	—	1,100	—	1,100

PROJECT DESCRIPTION: Replacement of the Air Guard Well in Stead was necessary to reduce sanding and provide additional capacity to the Stead system. The new/replacement well was drilled and constructed in FY 2016. Test pumping indicates the new well will have a capacity of about 2,500 gallons per minute which is twice the capacity of the old well. The budget for FY 2024 is for constructing the pumping facilities including the well building, pump and motor, valves and piping, electrical and controls, etc.

SCHEDULE: The pumping facilities are scheduled for construction in FY 2025.



Ground Water Supply Improvements Lemmon Valley Well #8 Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Lemmon Valley Well #8 Replacement	—	—	—	250	1,000	1,250

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

SCHEDULE: Well drilling will occur in FY 2025 and well equipping in FY 2026.



Ground Water Supply Improvements Well Fix & Finish

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Well Fix & Finish	350	350	350	350	350	1,750

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

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



Ground Water Supply Improvements Well Plugging / Conversion

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Well Plugging / Conversion	150	—	—	—	—	150

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

SCHEDULE: New monitoring well drilling and installation as well as old monitoring well plugging activities will occur in FY 2022.



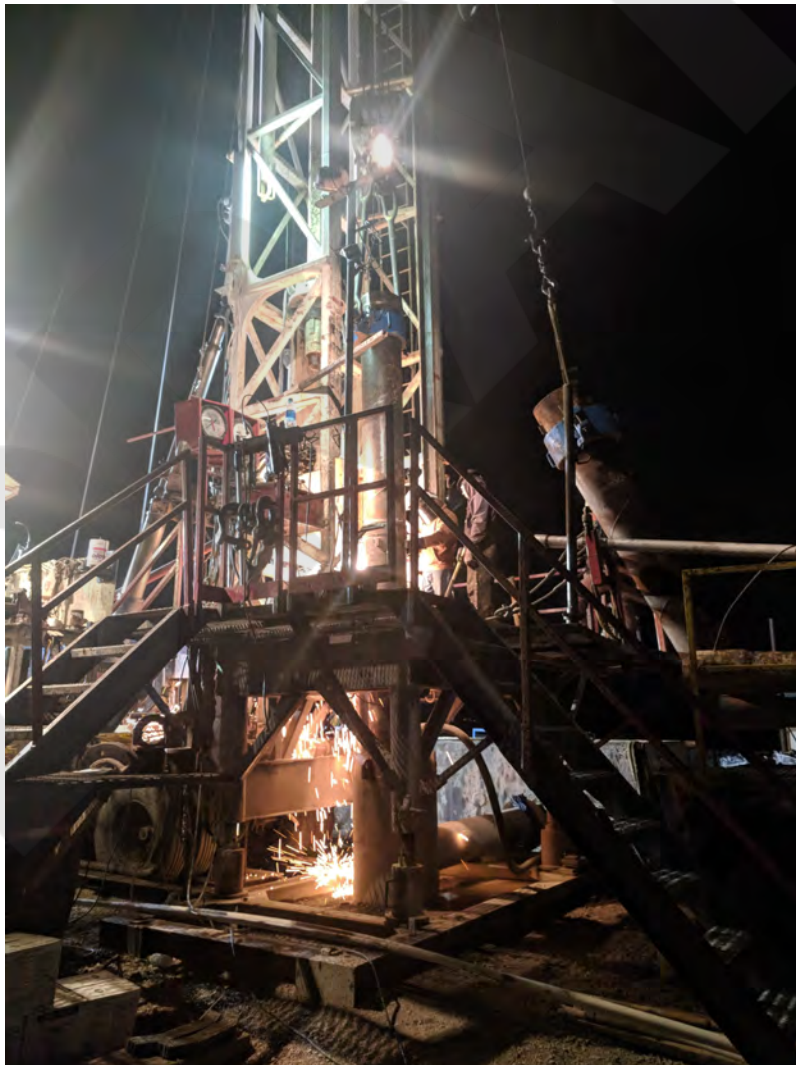
Ground Water Supply Improvements Thomas Creek Well & Spring Creek 5 Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Thomas Creek Well & Spring Creek #5 Equipping	1,000	1,000	—	—	—	2,000

PROJECT DESCRIPTION: The Thomas Creek and Spring Creek 5 production wells were both replaced in FY 2019. Each well will require new infrastructure prior to use. Allocated funds will be utilized for engineering and construction activities required to bring the wells online.

SCHEDULE: This project requires new well infrastructure in FY 2022 and well equipping in FY 2023.



Ground Water Supply Improvements Truckee Canyon Well #3 Site Modifications

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Truckee Canyon Well #3 Site Modifications	50	—	—	—	—	50

PROJECT DESCRIPTION: Project includes minor site modifications in cooperation with an A&K Earthmovers project to expand their equipment yard by backfilling an existing drainage channel, relocating the Truckee Canyon Well 3 pump to waste discharge, and installing a security fence and gate. The improvements will provide a new TMWA access point to the well site that does not require travel through the A&K equipment yard.

SCHEDULE: Design was completed in FY 2019 and construction will be completed in FY 2022.



Ground Water Supply Improvements Well Head TTHM Mitigation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Sustainability Fees	Well Head TTHM Mitigation	500	500	500	500	500	2,500

PROJECT DESCRIPTION: Planning, permitting and implementation of tank mixers and ventilation equipment technologies to reduce disinfection by product (DBP) formation in recharged water and receiving groundwater.

SCHEDULE: Planning and design began in FY 2018 and is ongoing. Construction of tank mixers and ventilation equipment at Zolezzi and Verdi Business Park tanks were completed in FY 2019 . Other technologies will be implemented at key recharge well sites in subsequent years based on priority.



Ground Water Supply Improvements Spring Creek Well #7 Recharge

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Sustainability Fees	Spring Creek Well #7 Recharge	500	—	—	—	—	500

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

SCHEDULE: Construction will begin in FY 2022.



Ground Water Supply Improvements Callamont Well North Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Callamont Well North Equipping	—	—	60	1,140	—	1,200

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

SCHEDULE: This project is currently scheduled for construction in FY 2025, but may be constructed sooner (or later) depending on the actual schedule for the proposed 210 unit Callamont residential development.



Ground Water Supply Improvements Spring Creek Well #10 - Donovan

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Spring Creek Well #10 - Donovan	—	150	1,060	—	—	1,210

PROJECT DESCRIPTION: The project involves construction and equipping of a new production well located just south of Indian Sage Court in Spanish Springs Valley. TMWA owns a 6,000 square foot parcel at this location where a test well was previously constructed but will need access and pipeline/utility easements. It is anticipated that the new well will produce up to 500 gallons per minute of new supply for the area.

SCHEDULE: This project schedule assumes the new well is drilled and constructed in FY 2023 and the pumping facilities are constructed in FY 2024.



Ground Water Supply Improvements Fish Springs Ranch TDS Monitoring Wells

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Fish Springs Ranch TDS Monitoring Wells	250	—	—	—	—	250

PROJECT DESCRIPTION: This project involves installing a network of wells that will monitor TDS concentrations and vertical gradients near the Fish Springs Ranch production wellfield in Honey Lake Valley. These monitoring locations will provide critical water quality information associated with increased groundwater production at Fish Springs Ranch. Allocated funds will be utilized to drill and construct three nested monitoring wells completed to approximately 450-feet below land surface.

SCHEDULE: Design and construction for the project is scheduled to be completed in FY 2022.



Ground Water Supply Improvements Geothermal Fluid Monitoring Well

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Geothermal Fluid Monitoring Well	100	—	—	—	—	100

PROJECT DESCRIPTION: This project involves drilling and constructing a new well that will monitor fluid flux on the boundary of the Steamboat Hills geothermal outflow zone in South Truckee Meadows. The well will be installed to monitor water quality changes that may eventually impact down gradient municipal supply wells. Allocated funds will be utilized to drill, construct and test a four- to six-inch monitoring well completed to approximately 600-feet below land surface.

SCHEDULE: New monitoring well drilling and construction will occur in FY 2022.



**Ground Water Supply Improvements
Spring Creek 9 (Spring Creek 4 Replacement)**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Spring Creek Well 9 (Spring Creek 4 Replacement)	910	1,060	—	—	—	1,970

PROJECT DESCRIPTION: The project involves construction and equipping of a new production well in Spanish Springs Valley, located north of the intersection of La Posada Dr. and La Posada Ct (pending land approvals). The well will be a dual purpose ASR/Production Well and it is anticipated that the new well will produce up to 1,500 gpm. 500 gallons per minute of new supply for the area.

SCHEDULE: Drilling and installation will be in FY2022 and equipping in FY2023.

Ground Water Supply Improvements Spring Creek Wells pH Adjustment

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Spring Creek Wells pH Adjustment	300	—	—	—	—	300

PROJECT DESCRIPTION: This project involves design, permit, and construct pH control systems at Spring Creek 6 & Spring Creek 7 wells.

SCHEDULE: The project is scheduled for FY 2022.

Distribution System Pressure Improvements STMGID Well #1 Re-Drill and Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	STMGID Well #1 Re Drill and Equipping	—	1,000	1,000	—	—	2,000

PROJECT DESCRIPTION: This project involves the complete replacement of STMGID 1. Recent rehabilitation work on the production well indicated the screens have deteriorated enough to allow sediment and gravel pack to pass through. The well is a critical groundwater supply asset as it currently accounts for ~24% of the max day demand in STMGID Tank Zone 1.

SCHEDULE: The well is estimated to be drilled and constructed in FY 2023 - FY2024.



TREATMENT PLANT IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Chalk Bluff Treatment Plant Improvements	750	550	365	360	350	2,375
1	Customer Rates	Glendale Treatment Plant Improvements	375	200	1,000	375	325	2,275
1	Customer Rates	Chalk Bluff Filter Underdrains	800	800	800	800	—	3,200
1	Customer Rates	Glendale Filter Underdrains	—	—	500	500	500	1,500
3	Customer Rates	Chalk Bluff Lighting Upgrade	—	—	350	—	—	350
3	Customer Rates	Glendale Lighting Upgrade	—	250	—	—	—	250
2	Customer Rates	Orr Ditch Pump Station Rehabilitation	4,400	5,250	—	—	—	9,650
1	Customer Rates	Truckee Canyon Water Treatment Improvements	100	100	20	20	10	250
1	Customer Rates	Lightning W Treatment Improvements	60	20	20	150	10	260
1	Customer Rates	SCADA Rehab / Plant Operating Software	500	500	250	250	250	1,750
2	Customer Rates	Longley Plant HV 3 & 4 Treatment Improvements	200	900	400	—	—	1,500
2	Customer Rates	Spanish Springs Nitrate Treatment Facility	300	500	500	—	—	1,300
1	Customer Rates	Chalk Bluff Electrical System Upgrades	—	150	—	—	—	150
Subtotal Treatment Improvements			7,485	9,220	4,205	2,455	1,445	24,810

Project Locations: Map of all *Treatment Plant Improvements* projects are highlighted in the following map.



Treatment Plant Improvements

Chalk Bluff Treatment Plant Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Chalk Bluff Treatment Plant Improvements	750	550	365	360	350	2,375

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

SCHEDULE: Major projects and timelines include: ice fighting improvements to maintain raw water supply via the Highland Canal will continue in FY 2022, instrumentation upgrades will continue within the next five years as obsolete instruments are no longer supported by suppliers. Work to isolate sections of the treatment plant influent trains began in FY 2019. Filter media replacement will occur when yearly filter media evaluation indicates that replacement will soon be necessary. Since the Chalk Bluff plant is operated year-round, most work will continue over the course of the five-year CIP and when system demands allow maintenance.



Treatment Plant Improvements

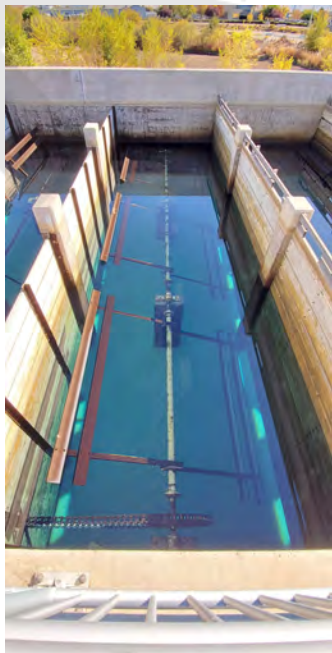
Glendale Treatment Plant Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Glendale Treatment Plant Improvements	375	200	1,000	375	325	2,275

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

SCHEDULE: The treatment plant maintenance shop and storage improvements are currently scheduled in FY 2024. Instrumentation upgrades will continue within the next five years as obsolete instruments are no longer supported by suppliers. Filter media replacement will occur when yearly filter media evaluation indicates that replacement will soon be necessary. Since the Glendale plant is used seasonally, most work will continue over the course of the five-year CIP and during the periods that the plant is not operating.



Treatment Plant Improvements Chalk Bluff Filter Underdrains

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Chalk Bluff Filter Underdrains	800	800	800	800	—	3,200

PROJECT DESCRIPTION: The dual media filters at Chalk Bluff are nearing 27 years old and maintenance and/or repairs are needed on filters that have experienced recent underdrain performance issues. An engineering evaluation of the filters has been completed and an entire replacement of one or more filter underdrains is recommended.

SCHEDULE: Due to cost and operational complexities associated with taking a filter out of service, this will be a multi-year effort beginning with design and bidding in FY 2021 and construction taking place in at least FY's 2022-25.



Treatment Plant Improvements Glendale Filter Underdrains

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Glendale Filter Underdrains	—	—	500	500	500	1,500

PROJECT DESCRIPTION: The dual media filters at Glendale are nearing 24 years old and maintenance and/or repairs are needed on filters that have experienced recent underdrain performance issues. An engineering evaluation of the filters has been completed and an entire replacement of one or more filter underdrains is recommended.

SCHEDULE: Due to cost and operational complexities associated with taking a filter out of service, this will be a multi-year effort beginning with design and bidding in FY 2024 and construction taking place in FY 2024-2026.



Treatment Plant Improvements Chalk Bluff Lighting Upgrade

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Chalk Bluff Lighting Upgrade	—	—	350	—	—	350

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

SCHEDULE: Lighting upgrade is scheduled to begin in FY 2024.



Treatment Plant Improvements Glendale Lighting Upgrade

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Glendale Lighting Upgrade	—	250	—	—	—	250

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

SCHEDULE: Lighting upgrade is scheduled to begin in FY 2023.



Treatment Plant Improvements Orr Ditch Pump Station Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Orr Ditch Pump Station Rehabilitation	4,400	5,250	—	—	—	9,650

PROJECT DESCRIPTION: This project will increase redundancy and reliability by enhancing the Truckee River source of supply to the Chalk Bluff Water Treatment Plant. Currently, there are very limited options to facilitate repairs or conduct preventative maintenance due to the location and arrangement of the intake structure and wet well. The project design may include modifying the existing proprietary wet well submersible pump design into a pedestal-style vertical turbine pump arrangement with non-submerged motors, may include the construction of a building over the top of the wet well to increase security and allow a safer means of performing maintenance activities and may also incorporate a system to eliminate silting issues within the intake structure.

SCHEDULE: Planning and design will be completed in FY 2022. Construction will commence in FY's 2022-23 and scheduled to be completed in FY 2023.



Treatment Plant Improvements

Truckee Canyon Water Treatment Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Truckee Canyon Water Treatment Improvements	100	100	20	20	10	250

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

SCHEDULE: Expenditures in FY's 2022 - 2026 are contingent spending related to treatment efficiency and for chemical changes in the raw water.



Treatment Plant Improvements

Lightning W Treatment Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Lightning W Treatment Improvements	60	20	20	150	10	260

PROJECT DESCRIPTION: The existing treatment process consists of two ion exchange resin pressure vessels to remove uranium. Previous work included change out/replacement of the filter media, disposal of the spent media. The remaining work includes miscellaneous improvements to the building that houses the treatment equipment.

SCHEDULE: The FY 2022 work includes miscellaneous building improvements.



Treatment Plant Improvements

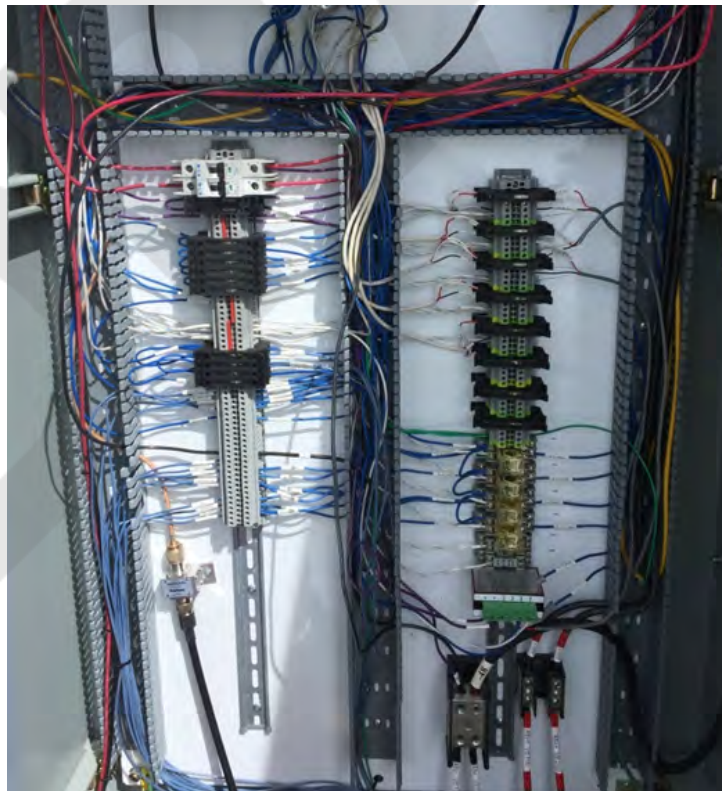
SCADA Rehab/Plant Operating Software

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	SCADA Rehab / Plant Operating Software	500	500	250	250	250	1,750

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

SCHEDULE: The improvements and replacements of the equipment and operating software have already begun and will continue through FY 2026.



Treatment Plant Improvements

Longley Lane HV 3 and HV 4 Treatment Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Longley Plant HV 3 & 4 Treatment Improvements	200	900	400	—	—	1,500

PROJECT DESCRIPTION: TMWA completed planning and preliminary design of an innovative UV disinfection / Arsenic blending water treatment process to treat the HV 3 and HV 4 groundwater wells that are out of service due to surface water influence and elevated arsenic. These wells were formerly treated at the Longley Lane WTP which is currently not being utilized as a treatment facility due to needed safety improvements on the chemical feed, membrane clean-in-place and the solids handling piping systems. An assessment of the plant was completed, and short-term improvements identified to modify the facility to serve as a booster pump station using either surface water or groundwater supply sources.

SCHEDULE: Planning and permitting to be completed in FY 2022. Design and construction to be performed in FY's 2022-2024.



Treatment Plant Improvements Spanish Springs Nitrate Treatment Facility

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Spanish Springs Nitrate Treatment Facility	300	500	500	—	—	1,300

PROJECT DESCRIPTION: Initiation of planning, permitting, site acquisition and design for a 3 MGD biological water treatment process to treat several groundwater wells in Spanish Springs that are out of service due to elevated nitrate and arsenic. Treatment is required to maintain and restore the service capacity of the wells.

TMWA completed the operation and testing of a 5 GPM pilot treatment plant in 2018. Biological treatment of nitrate in potable water is currently not permitted in Nevada. TMWA, working with Carollo Engineers, UNR and WaterStart, has evaluated this innovative technology and determined it to be a cost-effective treatment solution compared to traditional, high cost alternatives such as ion exchange.

SCHEDULE: Planning, permitting, site acquisition and design to be conducted in FY's 2022-2024.



Treatment Plant Improvements Chalk Bluff Electrical System Upgrades

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Chalk Bluff Electrical System Upgrades	—	150	—	—	—	150

PROJECT DESCRIPTION: Evaluation of the existing electrical system at the Chalk Bluff Treatment Plant to identify the cause of main breaker power disruption when electrical faults occur in auxiliary plant equipment.

SCHEDULE: Electrical System upgrades are scheduled to be completed in FY 2023.



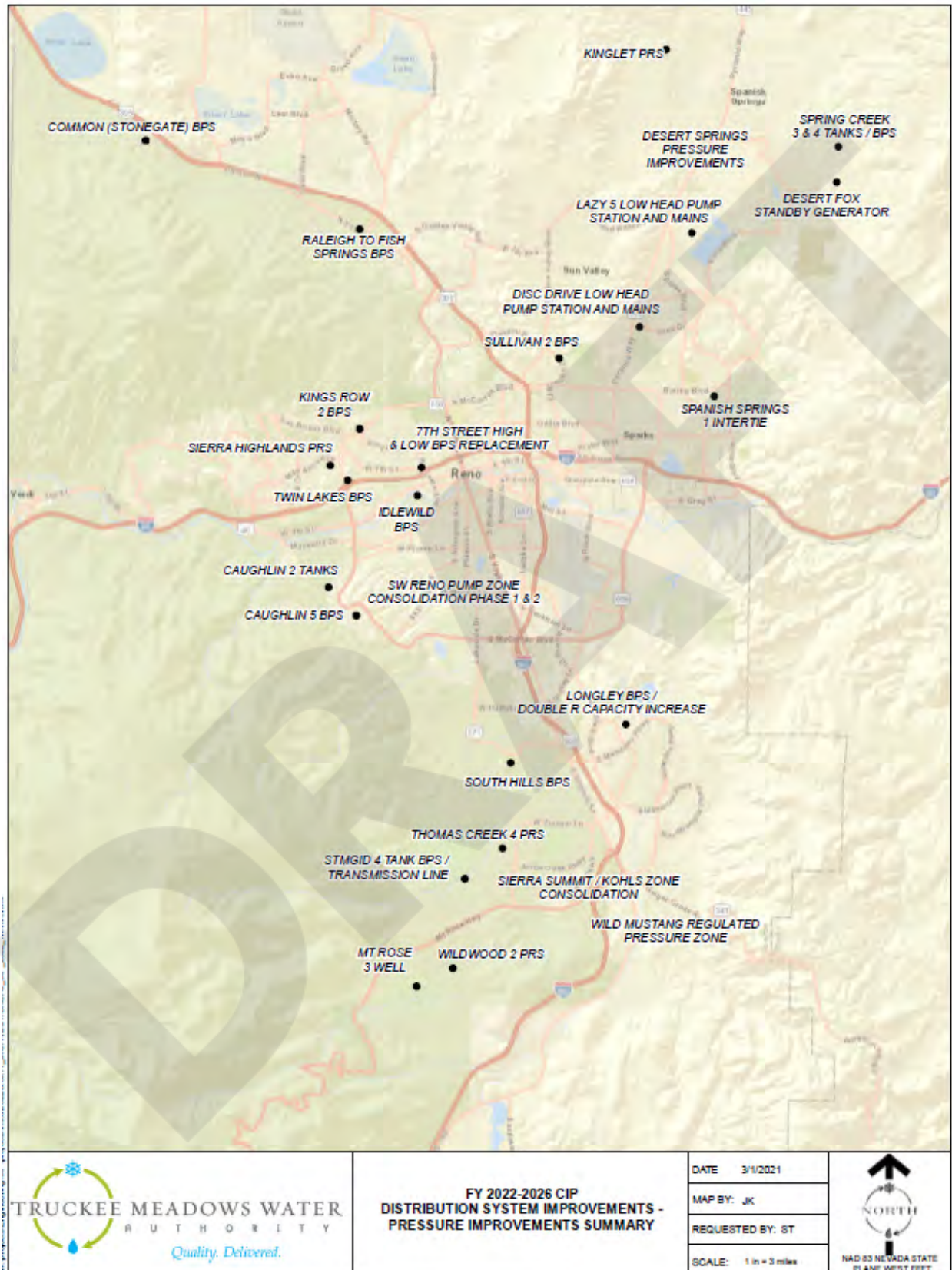
DISTRIBUTION SYSTEM PRESSURE IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Pressure Regulators Rehabilitation	500	500	500	500	500	2,500
2	Customer Rates	Land Acquisitions	250	250	250	250	250	1,250
2	Customer Rates	Desert Fox Standby Generator	150	—	—	—	—	150
1	Developer Fees	Disc Drive Low Head Pump Station & Mains	3,800	—	—	—	—	3,800
1	Developer Fees	Longley BPS / Double R Capacity Increase	—	—	250	1,000	—	1,250
3	Customer Rates	Pump Station Oversizing	100	100	100	100	100	500
1	Customer Rates	Pump Station Rebuilds, Rehabilitations	250	250	250	250	250	1,250
2	Customer Rates / Developer Fees	Sullivan #2 BPS Replacement	—	—	—	80	1,150	1,230
1	Customer Rates	Mount Rose Well #3 Pump Station Improvements	250	—	—	—	—	250
3	Customer Rates	Standby Generator Improvements	150	150	150	150	150	750
2	Customer Rates	Idlewild BPS Improvements	—	100	1,200	—	—	1,300
1	Developer Fees	Raleigh to Fish Springs BPS Station	—	—	—	—	300	300
2	Customer Rates / Developer Fees	South-West Reno Pump Zone Consolidation Phase 1	—	—	330	6,330	—	6,660
2	Customer Rates	Spanish Springs #1 Pump Zone Intertie	600	—	—	—	—	600
1	Developer Fees	STMGID Tank #4 BPS / Transmission Line	—	—	—	550	2,000	2,550
2	Developer Fees	Wildwood Pressure Regulating Station SCADA Control	—	100	—	—	—	100
2	Customer Rates / Developer Fees	South-West Reno Pump Zone Consolidation Phase 2	—	—	—	—	50	50

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Sierra Summit-Kohl's Zone Consolidation	—	380	400	—	—	780
2	Customer Rates	Wild Mustang Regulated Pressure Zone	—	50	380	—	—	430
1	Customer Rates	Twin Lakes BPS	620	—	—	—	—	620
2	Customer Rates	Thomas Creek #4 PRS	—	—	170	—	—	170
1	Customer Rates	Kings Row 2 BPS	150	150	1,500	—	—	1,800
2	Developer Fees	Spring Creek Tanks #3 & #4 BPS Modifications	200	900	—	—	—	1,100
2	Developer Fees	Lazy 5 Low Head Pump Station & Mains	300	1,200	—	—	—	1,500
1	Developer Reimbursements	Common (Stonegate) Booster Pump Station	2,200	—	—	—	—	2,200
2	Customer Rates	Caughlin 5C Pump and Motor Replacement	150	—	—	—	—	150
1	Developer Reimbursement	Kinglet Pump Station	900	—	—	—	—	900
2	Customer Rates	South Hills BPS Replacement	—	70	3,760	490	—	4,320
2	Customer Rates	Sierra Highlands PRS	—	—	—	210	—	210
1	Customer Rates	Caughlin 2 Tanks	500	2,000	—	—	—	2,500
2	Customer Rates	7th Street High & Low BPS Replacement	500	1,500	1,000	—	—	3,000
Sub-Total Pressure Improvements			11,570	7,700	10,240	9,910	4,750	44,170

Project Locations: Map of all *Distribution System Pressure Improvements* projects are highlighted in the following map.



Distribution System Pressure Improvements Pressure Regulators Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Pressure Regulators Rehabilitation	500	500	500	500	500	2,500

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

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



Distribution System Pressure Improvements Land Acquisitions

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Land Acquisitions	250	250	250	250	250	1,250

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

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



Distribution System Pressure Improvements Desert Fox Standby Generator

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Desert Fox Standby Generator	150	—	—	—	—	150

PROJECT DESCRIPTION: This project involves furnishing and installing a new standby generator and ATS to power one 50 Hp pump at the existing Desert Fox booster pump station. This alternative pumping capacity is needed when the existing 0.5 MG Spring Creek #5A Tank is out of service for recoating or other maintenance or if an extended power outage occurs in the area.

SCHEDULE: The installation of the generator is scheduled in FY 2022.



Distribution System Pressure Improvements Disc Drive Low Head Pump Station and Mains

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Disc Drive Low Head Pump Station & Mains	3,800	—	—	—	—	3,800

PROJECT DESCRIPTION: This involves construction of a new low head pump station located just north of the intersection of Disc Dr. and Sparks Blvd. in North-East Sparks/Spanish Springs Valley, along with suction and discharge mains. TMWA owns a 6,000 square foot parcel in this location and has obtained an easement out to Vista Blvd. A suction pipe must be extended from Disc Dr. to Sparks Blvd. The pump station is needed to maintain peak period distribution pressure in the area and to provide adequate suction pressure to the Vista #1 and Spanish Springs #2 pump stations. The low-head pumping option was determined to be more cost effective than oversizing of the Sparks Feeder Main projects.

SCHEDULE: Improvements are scheduled for design and construction in FY 2022.



Distribution System Pressure Improvements Longley Booster Pump Station/Double R Capacity Increase

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Longley BPS / Double R Capacity Increase	—	—	250	1,000	—	1,250

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

SCHEDULE: The improvements are scheduled for FY 2024 - 2025. The improvements are necessary when supply through the Double R Intertie must exceed 5,400 gallons per minute.



Distribution System Pressure Improvements Pump Station Oversizing

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Pump Station Oversizing	100	100	100	100	100	500

PROJECT DESCRIPTION: The project may consist of cash contributions towards construction of a new above ground booster pump stations. From time to time, TMWA may provide oversizing to certain booster stations that are development driven. Each is reviewed on a case by case basis.

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



Distribution System Pressure Improvements Pump Station Rebuilds, Rehabilitations

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Pump Station Rebuilds, Rehabilitations	250	250	250	250	250	1,250

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

SCHEDULE: In FY 2022, TMWA is preparing to reconstruct a number of booster stations above ground. Depending on land acquisition timing and priorities of rehabilitation, it could be the Seventh Street High Pump Station, Seventh Street Low Pump Station, Kings Row #2 Pump Station or the South Hills BPS.



Distribution System Pressure Improvements Sullivan #2 Booster Pump Station Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Sullivan #2 BPS Replacement	—	—	—	80	1,150	1,230

PROJECT DESCRIPTION: The project involves construction of a new above grade pump station at the site of the existing Sullivan Tank on El Rancho. The new pump station will pump to the proposed Sun Valley #2 Tank tentatively located off of Dandini Drive near the TMCC/DRI complex. Completion of these facilities should allow the retirement of the existing Sun Valley #1 pump station.

SCHEDULE: Construction is scheduled to begin in FY 2026 to reflect delays in obtaining a tank site due to unknowns with the US 395 Connector Project.



Distribution System Pressure Improvements Mt. Rose Well #3 Pump Station Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Mount Rose Well #3 Pump Station Improvements	250	—	—	—	—	250

PROJECT DESCRIPTION: The project involves rehab of the building, removal of pipe and valves that will no longer be necessary following completion of the Mt. Rose Well #3 improvements and upgrades to electrical and control systems.

SCHEDULE: Construction is scheduled in FY 2022.



Distribution System Pressure Improvements Standby Generator Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Standby Generator Improvements	150	150	150	150	150	750

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

SCHEDULE: No single project has been identified for the current 5-year CIP and no funds will be expended unless necessary.



Distribution System Pressure Improvements Idlewild Booster Pump Station Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Idlewild BPS Improvements	—	100	1,200	—	—	1,300

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

SCHEDULE: Design is scheduled for FY2023 and construction should begin in FY 2024. This schedule may be moved based on system needs.



Distribution System Pressure Improvements Raleigh to Fish Springs Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Raleigh to Fish Springs BPS Station	—	—	—	—	300	300

PROJECT DESCRIPTION: The project involves construction of a new pump station to pump water from the Raleigh Heights zone to the Fish Springs terminal tank when the Fish Springs Wells are off-line or if a main break occurs on the Fish Springs transmission line. In the future, there will be a number of customers served directly from the Fish Springs terminal tank; therefore, it is necessary to provide a secondary supply to maintain continuous water service.

SCHEDULE: Implementation will begin in FY 2026 and construction in FY 2027.



Distribution System Pressure Improvements South-West Reno Pump Zone Consolidation Phase 1

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	South-West Reno Pump Zone Consolidation Phase 1	—	—	330	6,330	—	6,660

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

SCHEDULE: Design of the improvements is scheduled to begin in FY 2024. Construction is scheduled for FY 2025.



Distribution System Pressure Improvements Spanish Springs #1 Pressure Zone Intertie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Spanish Springs #1 Pump Zone Intertie	600	—	—	—	—	600

PROJECT DESCRIPTION: The project consists of about 1,600 feet of 8-inch main from Rio Alayne Ct to Martini Rd. paralleling the Orr Ditch and a new pressure regulating station. Completion of the facilities will allow the retirement of the existing underground Spanish Springs #1 pump station.

SCHEDULE: The project is scheduled for FY 2022.



Distribution System Pressure Improvements

STMGID Tank #4 Booster Pump Station / Transmission Line

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	STMGID Tank #4 BPS / Transmission Line	—	—	—	550	2,000	2,550

PROJECT DESCRIPTION: The project includes a new booster pump station located near the STMGID Tank 4/5 site and approximately 6,000 feet of 12-inch discharge main to the Mt Rose WTP. The facilities will provide a supplemental source to the Mt Rose WTP that will back up plant production on the maximum day during drought and will also provide another source of supply for implementing conjunctive use in the area.

SCHEDULE: Design and construction will begin in FY 2025 and construction will continue into FY 2026. Schedule assumes that the STMGID Conjunctive Use Facilities are completed by FY 2024.



Distribution System Pressure Improvements Wildwood Pressure Regulating Station/Scada Control

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Wildwood Pressure Regulating Station SCADA Control	—	100	—	—	—	100

PROJECT DESCRIPTION: The project involves retrofitting an existing pressure regulating station to SCADA (remote) control to provide additional transfer capacity into the Mt Rose Tank #2 zone. It will be necessary to obtain electrical service to the existing vault; install a new PLC; and to equip the existing pressure regulating valve with solenoid control to allow the valve to be remotely operated from the Glendale control room.

SCHEDULE: The project is scheduled for FY 2023 but may be delayed or accelerated depending on the timing of growth and the need for the additional tank fill capacity.



Distribution System Pressure Improvements South-West Reno Pump Zone Consolidation Phase #2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	South-West Reno Pump Zone Consolidation Phase 2	—	—	—	—	50	50

PROJECT DESCRIPTION: The project is a continuation of Phase 1 and involves construction of additional water main to further integrate the new South-West Reno pump station and allow the retirement of one more existing underground pump station plus provide backup to two other pump zones.

SCHEDULE: Design of the facilities is scheduled to begin in FY 2026. Construction is scheduled to start in FY 2027.



Distribution System Pressure Improvements Sierra Summit-Kohl's Zone Consolidation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Sierra Summit-Kohl's Zone Consolidation	—	380	400	—	—	780

PROJECT DESCRIPTION: The project involves construction of a new pressure regulating station (PRS) at Old Virginia and Sutherland; a short main tie between the former STMGID Well #9 site and the distribution system; and about 950 feet of 8-inch main in Sutherland from the PRS to Sage Hill Road. The improvements will convert an area with very high distribution system pressures to the existing Kohl's Regulated Zone and would expand the regulated zone by consolidating the Kohl's, Walmart and Old Virginia #2 regulated pressure zones.

SCHEDULE: The project is scheduled for construction in FY 2024.



Distribution System Pressure Improvements Wild Mustang Regulated Pressure Zone

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Wild Mustang Regulated Pressure Zone	—	50	380	—	—	430

PROJECT DESCRIPTION: The project involves construction of a new pressure regulator station and approximately 750 LF of water main to create a new pressure zone in the Geiger Grade area of the South Truckee Meadows to reduce distribution system pressures in the area.

SCHEDULE: Design of the construction is scheduled to begin in FY 2023. Construction is scheduled to start in FY 2024.



Distribution System Pressure Improvements Twin Lakes Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Twin Lakes BPS	620	—	—	—	—	620

PROJECT DESCRIPTION: The project cost contains oversizing of a developer funded booster pump station to provide redundant supply to the Summit Ridge Regulated Zone which is currently fed off of the Chalk Bluff / Highland Zone. Supply will be provided from the Hunter Creek zone.

SCHEDULE: Construction is planned to be completed in FY 2022.



Distribution System Pressure Improvements Thomas Creek #4 PRS

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Thomas Creek #4 PRS	—	—	170	—	—	170

PROJECT DESCRIPTION: The project involves construction of a new PRS and approximately 160 LF of water main to increase capacity to the Moonrise pressure zone. The increase in capacity will help with replenishing storage in the STMGID Tank and increase fire flow within the zone.

SCHEDULE: The project is scheduled for FY 2024.



Distribution System Pressure Improvements Kings Row 2 Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Kings Row 2 BPS	150	150	1,500	—	—	1,800

PROJECT DESCRIPTION: This project will replace the existing underground Kings Row #1 pump station with a new above ground pump station on TMWA property. The project is part of annual booster pump station rehabilitation/replacement program focused on reconstructing existing pump stations above grade.

SCHEDULE: Planning and design will occur in FY 2022 - FY 2023 with construction scheduled in FY 2024.



Distribution System Pressure Improvements Spring Creek Tanks #3 & #4 Booster Pump Station Modifications

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Spring Creek Tanks #3 & #4 BPS Modifications	200	900	—	—	—	1,100

PROJECT DESCRIPTION: This project will replace an existing 200 GPM pump with a new pump/motor rated for 1800 GPM at the existing Spring Creek 3/4 Tanks site in Spanish Springs Valley. The existing regulated bypass will also be equipped for SCADA control. The improvements will provide redundant supply to the Desert Springs 3 and Spring Creek 6 tank zones.

SCHEDULE: Planning and design will occur in FY 2022 with construction scheduled in FY 2023.



Distribution System Pressure Improvements Lazy 5 Low Head Pump Station & Mains

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Lazy 5 Low Head Pump Station & Mains	300	1,200	—	—	—	1,500

PROJECT DESCRIPTION: The project involves construction of a new low head pump station located near the existing Lazy 5 Intertie in NE Sparks/Spanish Springs Valley along with suction and discharge mains. TMWA will need to acquire a parcel of land and pipeline easements out to the Pyramid Hwy. The project will increase TMWA's ability to transfer surface water to the Spanish Springs Valley and may defer more costly groundwater treatment options to increase capacity for growth.

SCHEDULE: Planning and design will occur in FY 2022 with construction scheduled in FY 2023.



Distribution System Pressure Improvements Common (Stonegate) Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Reimbursements	Common (Stonegate) Booster Pump Station	2,200	—	—	—	—	2,200

PROJECT DESCRIPTION: The project consists of design and construction of a new booster pump station to deliver the water supply for the proposed Stonegate development in Cold Springs. Suction and discharge pipelines on North Virginia and terminal storage facilities in Cold Springs will be constructed by Stonegate as applicant-installed projects. The pump station will be located on a parcel on North Virginia that has already been acquired by Stonegate. Stonegate is responsible for 100 percent of the project costs.

SCHEDULE: Design was initiated in FY 2020 with construction scheduled in FY 2022.



Distribution System Pressure Improvements Caughlin 5C Pump and Motor Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Caughlin 5C Pump and Motor Replacement	150	—	—	—	—	150

PROJECT DESCRIPTION: The project involves replacement of the existing Caughlin #5 pump station “C” Pump with a higher capacity unit and construction of a main tie near Foxcreek Trail and Village Green Parkway to avoid a 300+ customer outage when Caughlin #5 Pump Station is off-line.

SCHEDULE: The project will be designed and built in FY 2022.



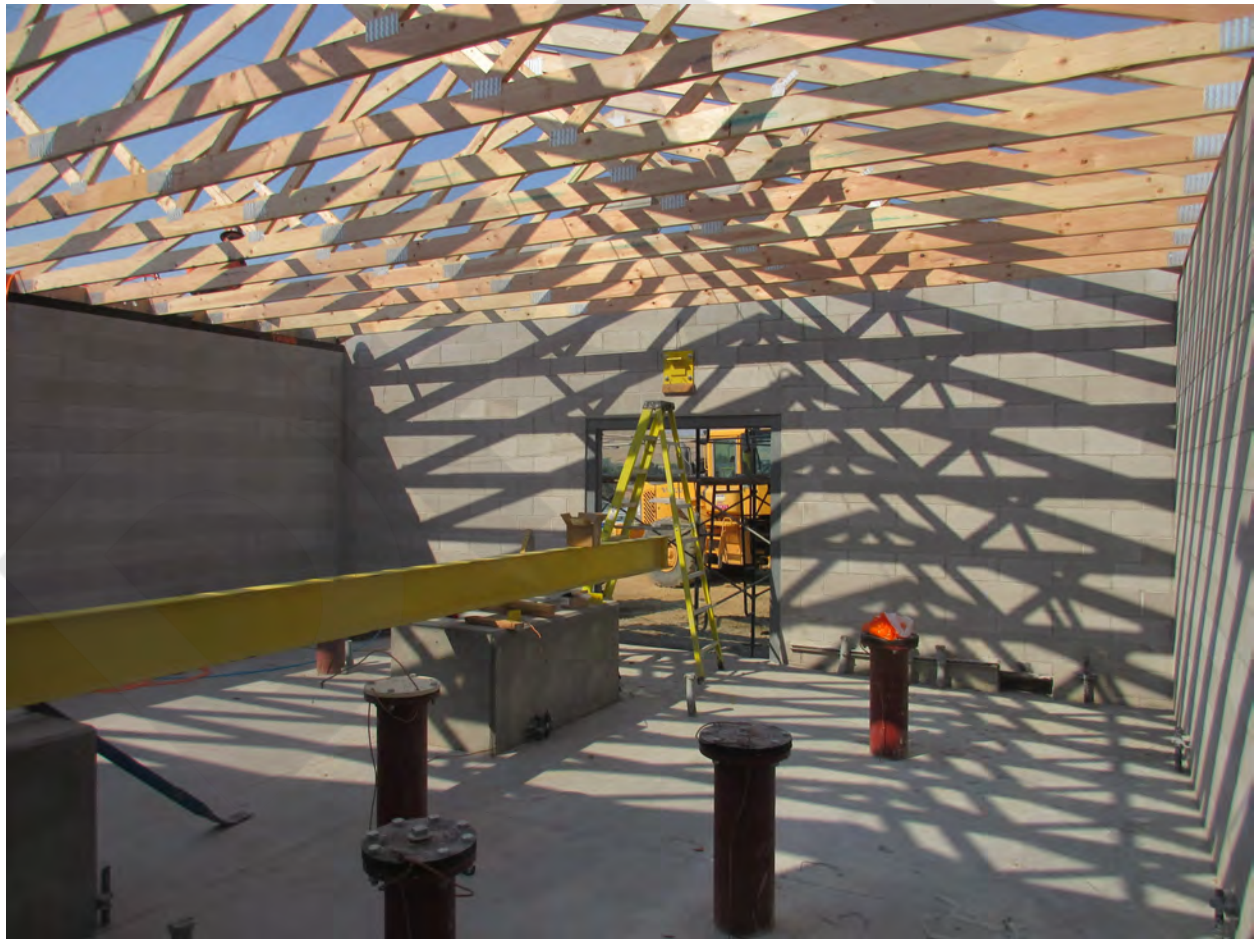
Distribution System Pressure Improvements Kinglet Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Reimbursement	Kinglet Pump Station	900	—	—	—	—	900

PROJECT DESCRIPTION: The project involves construction of a new, above grade Booster Pump Station with a standby generator to serve the Broken Hills residential development in Spanish Springs. The developer is responsible for 100% of the pump station project costs. The pump station will fill a developer designed and built water storage tank for the project.

SCHEDULE: Design work began in FY 2021 with construction scheduled in FY 2022.



Distribution System Pressure Improvements South Hills BPS Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	South Hills BPS Replacement	—	70	3,760	490	—	4,320

PROJECT DESCRIPTION: The project involves construction of a new, above grade BPS with genset; 3,700 feet of 16-inch main, 250 feet of 14-inch main and 2,300 feet of 12-inch main on Broken Hills Rd, Foothill Rd and Broili; a new Caribou PRS; and 9 each individual PRV'S on customer service lines.

SCHEDULE: Planning and design is scheduled to begin in FY 2023 and construction is scheduled to begin in FY 2024 with the project completing in FY 2025.



Distribution System Pressure Improvements Sierra Highlands PRS

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Sierra Highlands PRS	—	—	—	210	—	210

PROJECT DESCRIPTION: The project involves construction of a new PRS located near the intersection of Sierra Highlands Drive and North McCarran Blvd. to provide a secondary/supplemental supply from the Mae Anne-McCarran zone to the Chalk Bluff zone.

SCHEDULE: Construction for the project is scheduled for FY 2025.



Distribution System Pressure Improvements Caughlin 2 Tanks

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Caughlin 2 Tanks	500	2,000	—	—	—	2,500

PROJECT DESCRIPTION: The project involves the Caughlin 2 tanks that will provide redundancy for an existing continuous pumping zone and will expand emergency storage for the entire southwest area. The tanks will also provide a greater level of redundancy to a fire prone area by relying less on pumping and power, and more on elevated storage.

SCHEDULE: Construction for the project is scheduled for FY 2025.



Distribution System Pressure Improvements 7th Street High & Low BPS Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	7th Street High & Low BPS Replacement	500	1,500	1,000	—	—	3,000

PROJECT DESCRIPTION: The project will replace 2 underground pump stations in the intersection of Keystone Avenue and 7th Street in Northwest Reno. The pump stations need rehabilitation and accessing them for maintenance is unsafe and requires major traffic control in the highly traveled intersection. TMWA has been in discussions with NDOT for purchasing a remnant parcel on 7th street east of Keystone Avenue and West of Vine Street.

SCHEDULE: Construction for the project is scheduled for FY 2025 - FY2026.



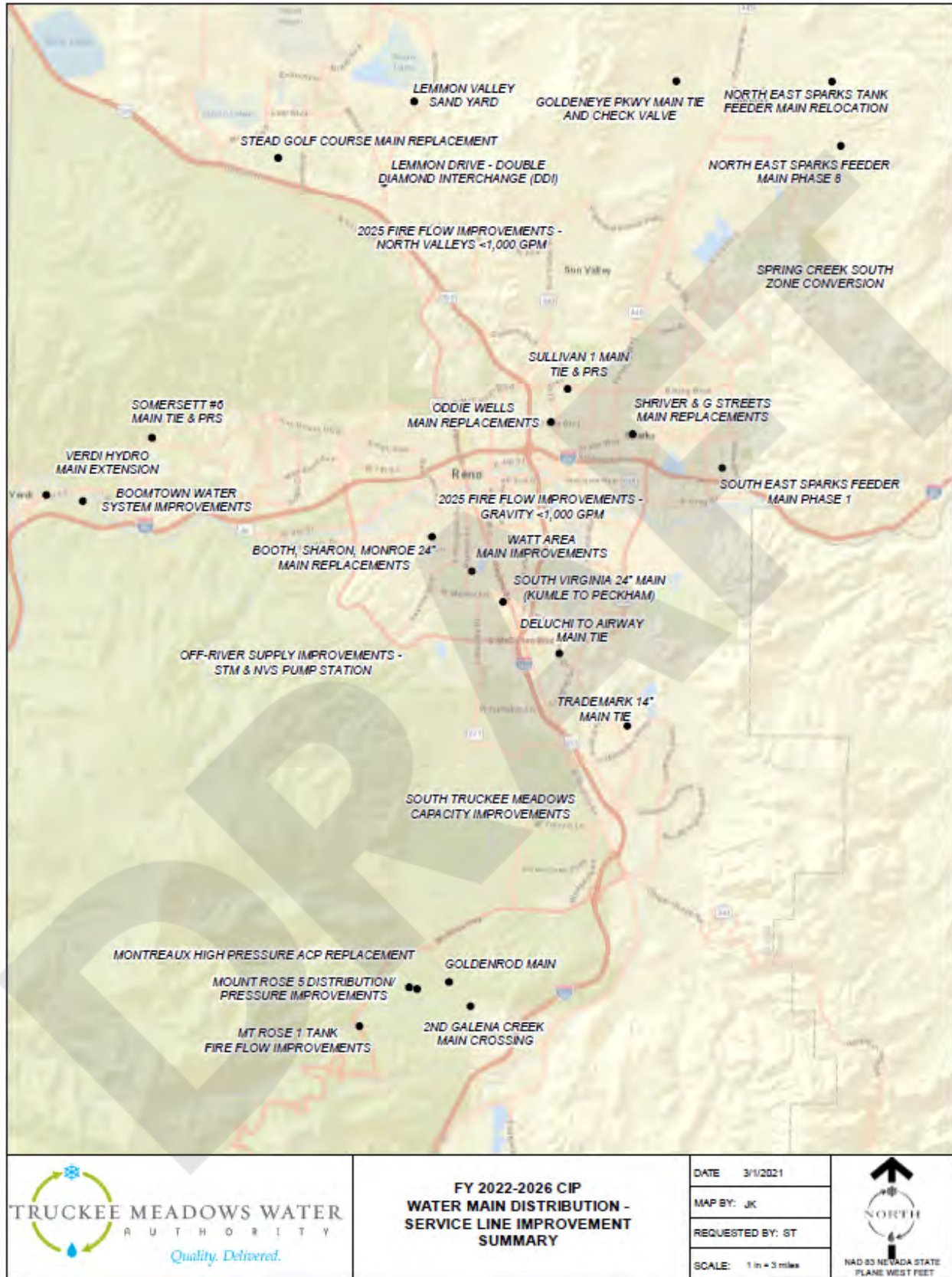
WATER MAIN DISTRIBUTION & SERVICE LINE IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Street & Highway Main Replacements	4,500	4,500	5,000	5,000	5,000	24,000
2	Customer Rates	Spring Creek South Zone Conversion	750	300	—	—	—	1,050
2	Customer Rates	Booth, Sharon Way, Monroe 24" Main Replacements	—	1,800	1,100	2,200	—	5,100
1	Developer Fees	South Virginia 24" Main - Kumle to Peckham	700	—	—	—	—	700
2	Customer Rates	North-East Sparks Feeder Tank Main Relocation	—	975	—	—	—	975
2	Customer Rates	Goldeneye Parkway Main & CV Tie	180	—	—	—	—	180
2	Developer Fees	Trademark 14" Main Tie	—	—	—	—	350	350
2	Customer Rates	Mt. Rose Tank 1 Fire Flow Improvements	—	400	570	—	—	970
2	Customer Rates / Developer Fees	Stead Golf Course Main Replacement	—	—	170	2,400	—	2,570
3	Customer Rates	General Waterline Extensions	100	100	100	100	100	500
1	Developer Fees	North-East Sparks Feeder Main Phase 8	—	50	2,050	—	—	2,100
1	Developer Fees	Mount Rose 5 Distribution / Pressure Improvements	400	—	—	—	—	400
2	Developer Fees	Goldenrod Main	—	50	1,200	—	—	1,250
1	Developer Fees	Boomtown Water System Improvements	1,250	1,250	—	—	—	2,500
2	Customer Rates	Lemmon Valley Sand Yard	530	—	—	—	—	530
2	Customer Rates / Developer Fees	Sullivan #1 Main Tie & PRS	—	—	—	50	570	620
2	Customer Rates	Montreux High Pressure ACP Replacement	—	—	520	1,060	—	1,580
2	Customer Rates	2nd Galena Creek Main Crossing	—	—	40	560	—	600
2	Customer Rates	Off-River Supply Improvements - STM	—	—	—	50	1,050	1,100
2	Customer Rates	Off-River Supply Improvements - NVS Pump Station	—	—	—	400	—	400

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Somersett #6 Main Tie & PRS	—	—	280	—	—	280
1	Customer Rates	2025 Fire Flow Improvements - Gravity <1,000 GPM	—	—	—	550	—	550
1	Customer Rates	2025 Fire Flow Improvements - North Valleys <1,000 GPM	—	—	—	940	—	940
2	Developer Fees	Deluchi to Airway Main Tie	—	—	—	440	—	440
1	Developer Fees	South-East Sparks Feeder Main Phase 1	—	—	—	50	4,450	4,500
1	Developer Fees	South Truckee Meadows Capacity Improvements	—	200	800	—	—	1,000
2	Customer Rates	Verdi Hydro Main Extension	320	—	—	—	—	320
1	Customer Rates	Watt Area Main Replacements	2,000	—	—	—	—	2,000
1	Customer Rates	Oddie Wells Main Replacements	1,100	—	—	—	—	1,100
1	Customer Rates	Lemmon Drive - Double Diamond Interchange (DDI)	500	—	—	—	—	500
1	Customer Rates	Shriver & G Streets Main Replacements	500	—	—	—	—	500
Subtotal Water Main Distribution Improvements			12,830	9,625	11,830	13,800	11,520	59,605

Project Locations: Map of all *Water Main Distribution Service Line Improvements* projects are highlighted in the following map.



Water Main-Distribution Service Line Improvements Street & Highway Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Street & Highway Main Replacements	4,500	4,500	5,000	5,000	5,000	24,000

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

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



Water Main-Distribution Service Line Improvements Spring Creek South Zone Conversion

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Spring Creek South Zone Conversion	750	300	—	—	—	1,050

PROJECT DESCRIPTION: The project involves construction of approximately 2,800 linear feed of various size water mains, several interties, retirement of several mains and facilities including the existing Spring Creek Tanks. New water mains include 2060 linear feet of 12-inch on Pyramid Highway and 300 linear feet of 8-inch main across Pyramid Highway at Spring Ridge.

SCHEDULE: Implementation and construction will be completed by FY 2023.



Water Main-Distribution Service Line Improvements Booth, Sharon Way, Monroe 24" Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Booth, Sharon Way, Monroe 24" Main Replacements	—	1,800	1,100	2,200	—	5,100

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

SCHEDULE: Construction is scheduled for FY 2023 - 2025. TMWA will attempt to coordinate construction with other municipal infrastructure projects if possible, but the existing pipes will be 73-years old by the proposed construction date.



Water Main-Distribution Service Line Improvements

South Virginia 24" Main (Kumle to Peckham)

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	South Virginia 24" Main - Kumle to Peckham	700	—	—	—	—	700

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

SCHEDULE: Construction is scheduled to be completed in FY 2022 subject to adjustment for actual growth or coordination with road improvements.



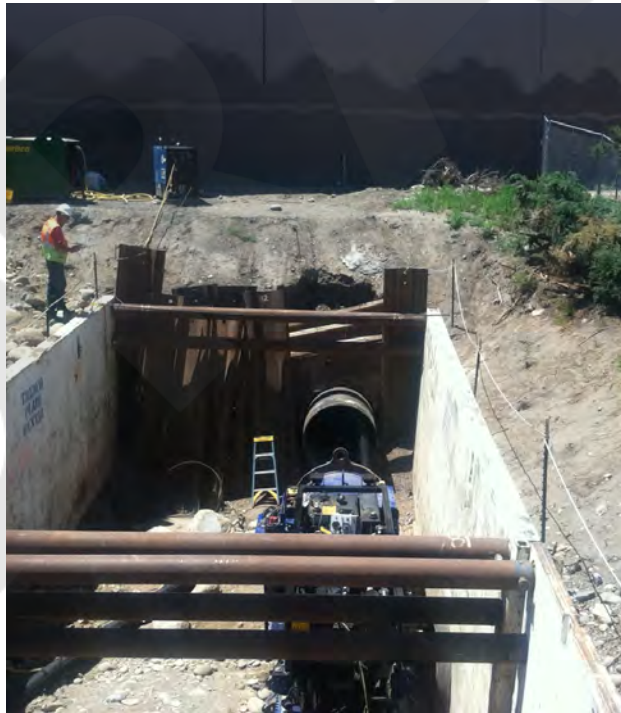
Water Main-Distribution Service Line Improvements North-East Sparks Tank Feeder Main Relocation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	North-East Sparks Feeder Tank Main Relocation	—	975	—	—	—	975

PROJECT DESCRIPTION: The North-East Sparks Tank Feeder Main was constructed in 1988 within private easements several years prior to the construction of South Los Altos Parkway. The final alignment selected for South Los Altos Parkway does not follow the alignment of the tank feeder main. As a result, the tank feeder main now runs through developed properties next to buildings, under parking areas and at considerable depth in some locations. This situation presents potential problems for access to the pipe for maintenance and repair of the critical pipeline. This project will relocate approximately 3,000 feet of the 18-inch tank feeder main out into the public right-of-way in South Los Altos Parkway.

SCHEDULE: Design and the improvements are scheduled for FY 2023.



Water Main-Distribution Service Line Improvements Goldeneye Parkway Main & CV Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Goldeneye Parkway Main & CV Tie	180	—	—	—	—	180

PROJECT DESCRIPTION: The project involves construction of approximately 450 linear of 8-inch water main with a Check Valve from the Eagle Canyon PRS to Longspur Way to provide a secondary supply to the Nightingale Regulated Zone and avoid customer outages when maintenance of the Nightingale pressure regulator station is required.

SCHEDULE: Implementation and construction will be completed in FY 2022.



Water Main-Distribution Service Line Improvements Trademark 14" Main Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Trademark 14" Main Tie	—	—	—	—	350	350

PROJECT DESCRIPTION: This project involves construction of approximately 350 LF of 14" water main from Trademark to South Meadows Parkway, including crossing of an existing major drainage channel. The project will increase transmission capacity in the Double Diamond system to meet the needs of growth.

SCHEDULE: Construction is scheduled to be completed in FY 2026.



Water Main-Distribution Service Line Improvements Mt. Rose Tank 1 Fire Flow Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Mt. Rose Tank 1 Fire Flow Improvements	—	400	570	—	—	970

PROJECT DESCRIPTION: The project involves reconstruction of an existing PRS at Mt. Rose Tank #1, a new PRS on Blue Spruce and approximately 3100 linear feet of 10-inch water main on Blue Spruce and Douglas Fir to increase system pressure and fire flow capacity to existing customers in Galena Forest Estates. Existing fire flows are currently less than 1,000 GPM in the area.

SCHEDULE: Planning and design will be completed in FY 2023. Construction will occur in FY's 2023-2024.



Water Main-Distribution Service Line Improvements Stead Golf Course Main Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Stead Golf Course Main Replacement	—	—	170	2,400	—	2,570

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

SCHEDULE: The project is scheduled for construction in FY 2025.



Water Main-Distribution Service Line Improvements General Waterline Extensions

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	General Waterline Extensions	100	100	100	100	100	500

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

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



Water Main-Distribution Service Line Improvements North-East Sparks Feeder Main Ph. 8

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	North-East Sparks Feeder Main Phase 8	—	50	2,050	—	—	2,100

PROJECT DESCRIPTION: The project involves construction of approximately 6,400 linear feet of 14-inch water main on Satellite Drive from Vista Blvd to Sparks Blvd to increase capacity for growth in Spanish Springs and maintain adequate suction pressure at the Satellite Hills booster pump station.

SCHEDULE: Design is scheduled for FY 2023 and the improvements will be constructed in FY 2024.



Water Main-Distribution Service Line Improvements Mount Rose 5 Distribution / Pressure Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Mount Rose 5 Distribution / Pressure Improvements	400	—	—	—	—	400

PROJECT DESCRIPTION: Improvements are intended to provide off-peak conjunctive use supply. The proposed improvements are intended to be consistent with future improvements to improve peaking supply to the Mt. Rose system and will reduce pressure in the high pressure pipeline downhill of Mt. Rose Well 5. It will also increase the off-peak pumping capacity of surface water into the Mt. Rose 1 and 4 tanks to 650 gpm from 400 gpm. Future phases are intended to increase system redundancy and further reduce high pressures in the system.

SCHEDULE: Construction is scheduled for FY 2022.



Water Main-Distribution Service Line Improvements Goldenrod Main

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Goldenrod Main	—	50	1,200	—	—	1,250

PROJECT DESCRIPTION: The project involves construction of approximately 4,500 LF of 12" water main from the Tessa West Well to the intersection of Goldenrod and Mountain Meadows Lane. This project will provide additional capacity between the Arrowcreek and Mt Rose systems for Mt Rose 2 tank fills and for on-peak supply from the Mt Rose Water Treatment Plant.

SCHEDULE: Design is planned in FY 2023 and construction is planned in FY 2024.



Water Main-Distribution Service Line Improvements Boomtown Water System Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Boomtown Water System Improvements	1,250	1,250	—	—	—	2,500

PROJECT DESCRIPTION: If TMWA successfully acquires the Boomtown water system assets, the system will initially be operated as a stand-alone system that will be 100 percent dependent upon local groundwater resources. To insure reliable water service to existing Boomtown customers, several high priority improvements are necessary to bring the system into compliance with NAC 445A regulations and TMWA standards and to allow efficient operation and maintenance of the water facilities. The improvements consist of upgrades to three existing wells (pump to waste facilities, SCADA, new pumps, new motors, new starters and arc flash analyses), tank site improvements (grading, drainage, overflow, fencing, paving, sampling vault, SCADA) and tank access improvements (improved gravel road, improvements to the existing bridge over Steamboat Ditch).

SCHEDULE: The improvements will be designed and constructed in FY's 2022-2023.



Water Main-Distribution Service Line Improvements Lemmon Valley Sand Yard

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Lemmon Valley Sand Yard	530	—	—	—	—	530

PROJECT DESCRIPTION: With continued growth in the area including the acquisition of the Lemmon Valley water system formerly owned by Washoe County, it is very inefficient for TMWA crews to respond to a main break or other major issue in the North Valleys and have to either return to the Truckee Meadows or call out a second crew to transport materials to the site to complete the repairs. To increase the efficiency of maintenance operations in the North Valleys, TMWA plans to improve the balance of the 1.25 acre lot surrounding Lemmon Valley Well #6 (near the intersection of Lemmon Drive and Arkansas Drive) to store the common materials such as sand and base rock normally used in water system maintenance. The improvements consist of import, grading, fencing, drainage, material storage bins, lighting and landscaping. The project has been designed and the building permit has been acquired.

SCHEDULE: Assuming flood water recede sufficiently, the project would be constructed in FY 2022.



Water Main-Distribution Service Line Improvements Sullivan #1 Main Tie & PRS

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Sullivan #1 Main Tie & PRS	—	—	—	50	570	620

PROJECT DESCRIPTION: The project involves construction of about 1,300 LF of 10” main on El Rancho and a new PRS to supply the Sullivan #1 zone. The project timeline assumes that the proposed Sun Valley #2 Tank and Sullivan #2 pump station are in service.

SCHEDULE: Planning and design is scheduled to begin in FY 2025 with construction scheduled in FY 2026.



Water Main-Distribution Service Line Improvements Montreux High Pressure ACP Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Montreux High Pressure ACP Replacement	—	—	520	1,060	—	1,580

PROJECT DESCRIPTION: The project involves replacement of approximately 6,500 linear feet of existing 10-inch transite water main between Mt Rose Well #5 and Joy Lake Road. The existing ACP pipe installed in the 1970's is currently operated at pressures between 120-250 psi.

SCHEDULE: Planning and design will occur in FY 2024 with construction to be completed in FY 2025.



Water Main-Distribution Service Line Improvements 2nd Galena Creek Main Crossing

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	2nd Galena Creek Main Crossing	—	—	40	560	—	600

PROJECT DESCRIPTION: The project involves construction of approximately 2,200 linear feet of 10-inch ductile iron water main between Breithorn Cir. and Piney Creek Parklet including a crossing of Galena Creek. The existing 10" ACP pipe that crosses Galena Creek is currently the only tie between well sources and storage tanks.

SCHEDULE: Design will occur in FY 2024 with construction to be completed in FY 2025.



Water Main-Distribution Service Line Improvements Off-River Supply Improvements - South Truckee Meadows

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Off-River Supply Improvements - STM	—	—	—	50	1,050	1,100

PROJECT DESCRIPTION: The project involves construction of four SCADA controlled, pressure reducing bypass stations in strategic locations in the South Truckee Meadows to allow excess well capacity and excess Mt. Rose Water Treatment Plant capacity to be provided to the Highland gravity zone in case of loss supply from the Truckee River. Two additional bypasses (Arrowcreek BPS & future Veteran's BPS) will be constructed separately under the budget for those facilities.

SCHEDULE: Planning and design will occur in FY 2025 with construction to be completed in FY 2026.



Water Main-Distribution Service Line Improvements Off-River Supply Improvements - North Virginia-Stead Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Off-River Supply Improvements - NVS Pump Station	—	—	—	400	—	400

PROJECT DESCRIPTION: The project involves construction of a SCADA controlled, pressure reducing bypass station at the North Virginia-Stead booster pump station to allow excess Fish Springs well capacity to be provided to the Highland gravity zone in case of loss supply from the Truckee River.

SCHEDULE: Project implementation and construction will occur in FY 2024.



Water Main-Distribution Service Line Improvements Somerset #6 Main Tie & Pressure Regulator Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Somerset #6 Main Tie & PRS	—	—	280	—	—	280

PROJECT DESCRIPTION: The project involves construction of about 600 linear feet of 10-inch main within improved paved pathway and a new pressure regulator station to provide a secondary source (looping) to Somerset Village 6.

SCHEDULE: Project implementation and construction will occur in FY 2024.



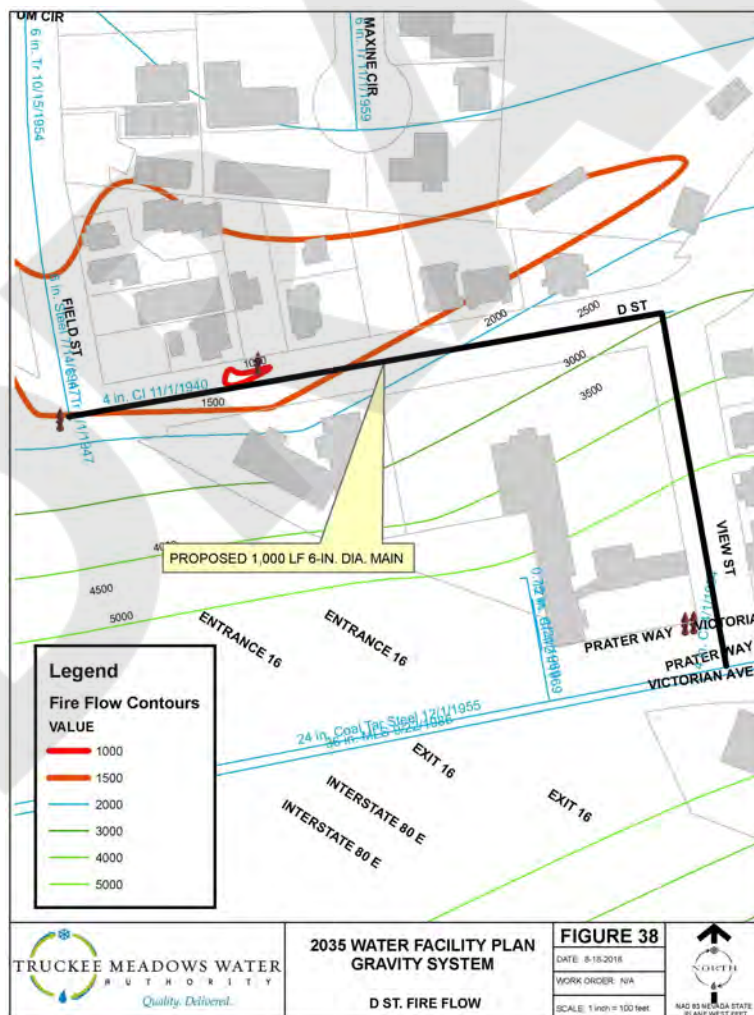
Water Main-Distribution Service Line Improvements 2025 Fire Flow Improvements - Gravity < 1,000 GPM

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	2025 Fire Flow Improvements - Gravity <1,000 GPM	—	—	—	550	—	550

PROJECT DESCRIPTION: The project involves improvements at 5 separate locations in the gravity zone that have an available fire flow of less than 1000 GPM. Reference Pages 20-22 of the 2035 WFP – Items 14,18,20,25,31 (also Figures 38,42,44,49,55). Construction consists of approximately 1,900 linear feet of new 6-inch & 8-inch main including new hydrant taps and laterals.

SCHEDULE: The improvements are scheduled for construction in FY 2025.



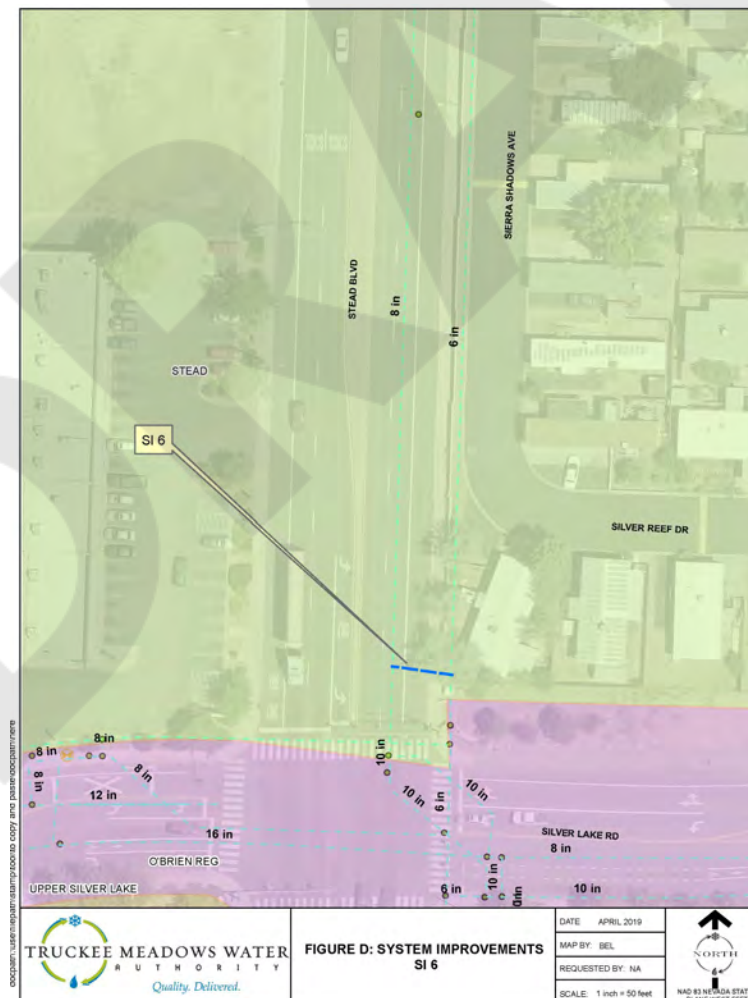
Water Main-Distribution Service Line Improvements 2025 Fire Flow Improvements - North Valleys < 1,000 GPM

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	2025 Fire Flow Improvements - North Valleys <1,000 GPM	—	—	—	940	—	940

PROJECT DESCRIPTION: This project involves improvements at two separate locations that have an available fire flow of less than 1,000 GPM. Reference Items SI6 and SI7 on pages 6-7 of the North Valleys section of the 2035 Water Facilities Plan (also Figures D and E). Construction of approximately 3,500 linear feet of new 6-inch and 8-inch main and new high pressure Regulating Station.

SCHEDULE: The improvements are scheduled for construction in FY 2025.



Water Main-Distribution Service Line Improvements Deluchi to Airway Main Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Deluchi to Airway Main Tie	—	—	—	440	—	440

PROJECT DESCRIPTION: The project involves construction of approximately 1,200 linear feet of 14-inch main from Deluchi to Airway including crossing a major storm drainage channel. The project promotes looping of the distribution system and provides additional North to South peak period capacity.

SCHEDULE: The project is scheduled for construction in FY 2025.



Water Main-Distribution Service Line Improvements South-East Sparks Feeder Main Phase 1

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	South-East Sparks Feeder Main Phase 1	—	—	—	50	4,450	4,500

PROJECT DESCRIPTION: The project involves construction of approximately 9,700 linear feet of 24-inch main on Greg Street between 21st Street and Stanford to provide additional capacity for future growth and to lower peak period pressure in the area.

SCHEDULE: Planning and design are scheduled to begin in FY 2025 and construction is scheduled to begin in FY 2026.



Water Main-Distribution Service Line Improvements South Truckee Meadows Capacity Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	South Truckee Meadows Capacity Improvements	—	200	800	—	—	1,000

PROJECT DESCRIPTION: The project involves construction of approximately 1,500 linear feet of 14-inch main on Offenhauser and Gateway with a SCADA controlled valve installed an underground vault to provide an intertie between the Longley and Double Diamond systems. Also included is a short 8-inch main tie at Bluestone and Portman. The improvements increase capacity to the South Truckee Meadows system.

SCHEDULE: Design for the project is scheduled to begin in FY 2023 and construction is scheduled for FY 2024.



Water Main-Distribution Service Line Improvements Verdi Hydro Main Extension

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Verdi Hydro Main Extension	320	—	—	—	—	320

PROJECT DESCRIPTION: The project involves construction of approximately 1,700 linear feet of 8-inch main and 750 linear feet of 6-inch main parallel to the penstock from Verdi Elementary School to the Hydro building. Approximately half of the cost will be reimbursed by growth in the area. Completion of the main will also provide fire protection for the hydro facility and will allow the existing water service from the Verdi Mutual Water Co. to be retired, saving about \$21,000 per year.

SCHEDULE: Construction is scheduled for FY 2022.



Water Main-Distribution Service Line Improvements Watt Area Main Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Watt Area Main Replacements	2,000	—	—	—	—	2,000

PROJECT DESCRIPTION: The project involves retiring and replacing approximately 5,400' of cast iron and steel water main. Existing services and main connections to be tied over to new water mains. Relocate 12 water meters from backyard to lot frontages. Work to be completed ahead of COR street project which is tentatively scheduled for spring 2022.

SCHEDULE: Construction is scheduled for FY 2022.



Water Main-Distribution Service Line Improvements Oddie Wells Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Oddie Wells Main Replacements	1,100	—	—	—	—	1,100

PROJECT DESCRIPTION: The project involves replacing approximately 3,500' of cast iron water main. Existing water main to be grouted in place.

SCHEDULE: Construction is scheduled for FY 2022.



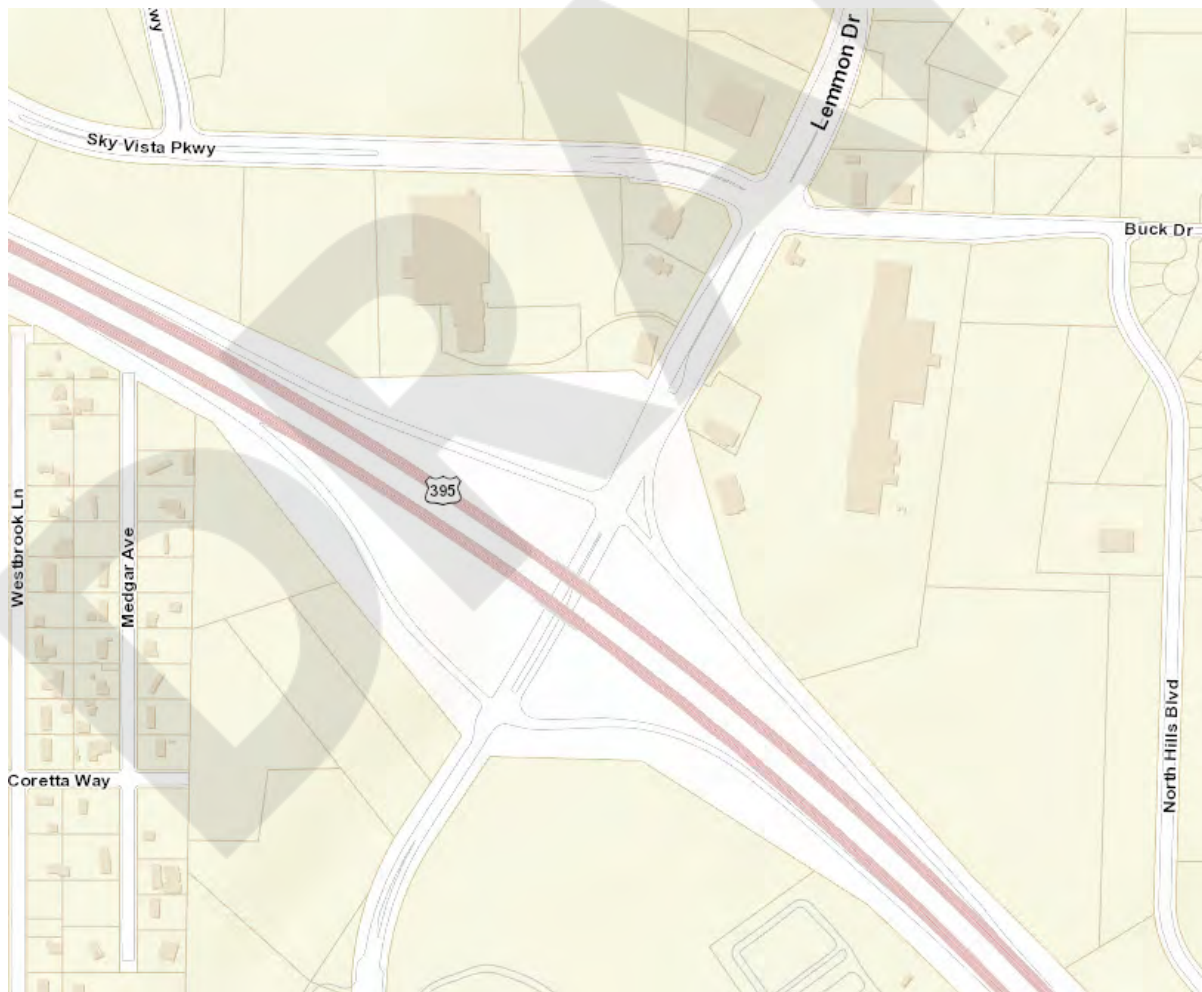
Water Main-Distribution Service Line Improvements Lemmon Drive - Double Diamond Interchange (DDI)

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Lemmon Drive - Double Diamond Interchange (DDI)	500	—	—	—	—	500

PROJECT DESCRIPTION: The project involves relocating (lower and offset) approximately 500' of 24" transmission main at Lemmon Dr/US395 intersection. Work being driven by NDOT/RTC redesign to create double divergent interchange/intersection, DDI.

SCHEDULE: Construction is scheduled for FY 2022.



Water Main-Distribution Service Line Improvements Shriver & G Streets Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Shriver & G Streets Main Replacements	500	—	—	—	—	500

PROJECT DESCRIPTION: The project involves retiring and replacing approximately 5,200' of cast iron and steel water main. Existing services and main connections to be tied over to new water mains. Work to be completed ahead of COR street project which is tentatively scheduled for spring/summer 2021.

SCHEDULE: Construction is scheduled for FY 2022.

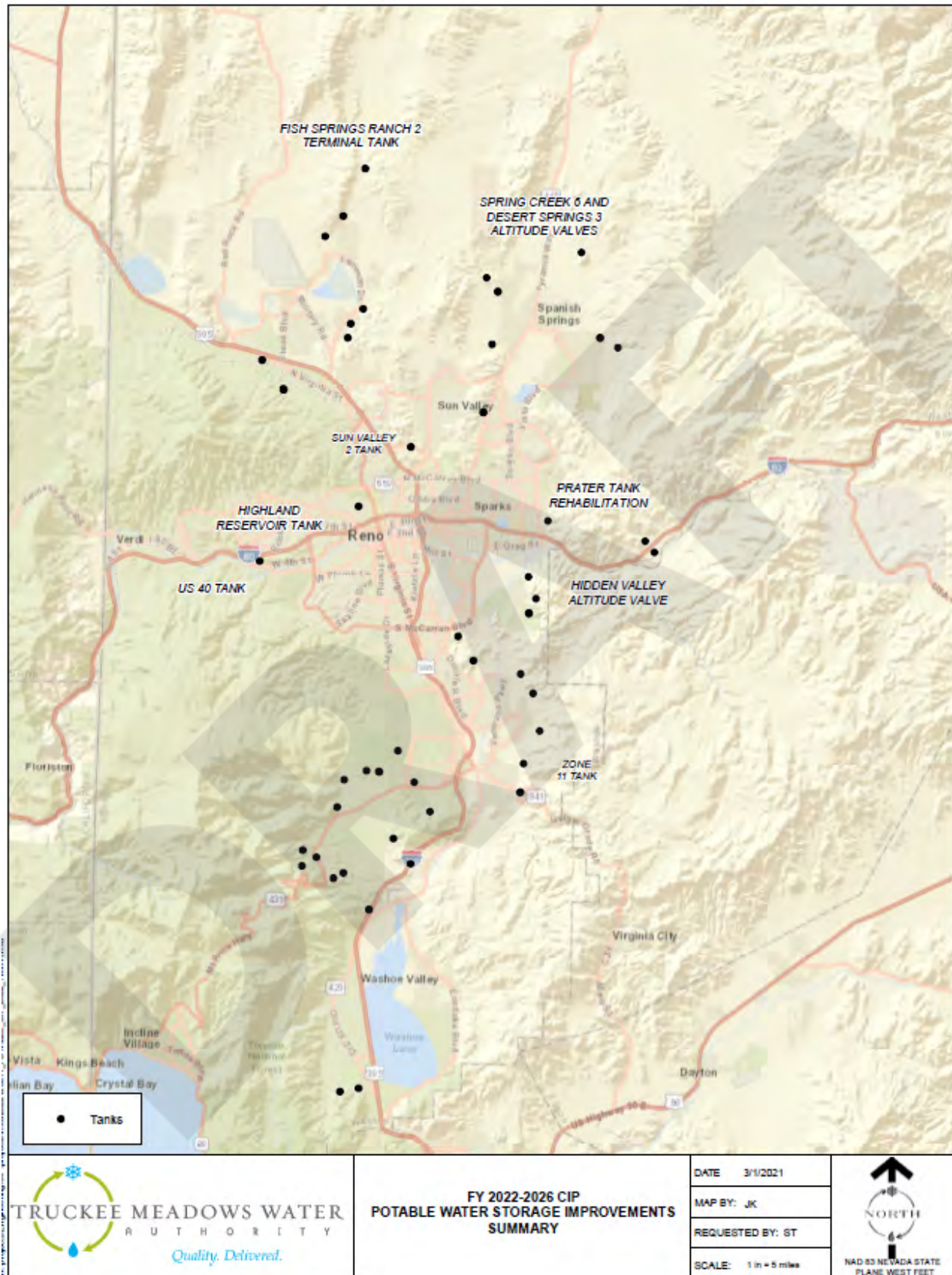


POTABLE WATER STORAGE IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Developer Fees	Sun Valley Tank #2	—	—	—	420	2,980	3,400
2	Developer Fees	Fish Springs Terminal Tank #2	—	—	—	—	40	40
1	Customer Rates	Storage Tank Recoats; Access; Drainage Improvements	1,600	3,000	3,500	3,500	3,500	15,100
2	Customer Rates / Developer Fees	Highland Reservoir Tank	3,700	4,000	—	—	—	7,700
1	Customer Rates / Developer Fees	STMGID Tank East Zone 11 Tank	—	—	—	100	2,975	3,075
1	Customer Rates / Developer Fees	US 40 Tank & Feeder Main	170	300	2,730	—	—	3,200
2	Customer Rates / Developer Fees	Spanish Springs Altitude Valves	—	300	—	—	—	300
2	Customer Rates	Hidden Valley Tank Altitude Valve	—	350	—	—	—	350
1	Customer Rates	Prater Tank Rehabilitation	1,400	—	—	—	—	1,400
Subtotal Storage Improvements			6,870	7,950	6,230	4,020	9,495	34,565

Project Locations: Map of all *Potable Water Storage Improvements* projects are highlighted in the following map.



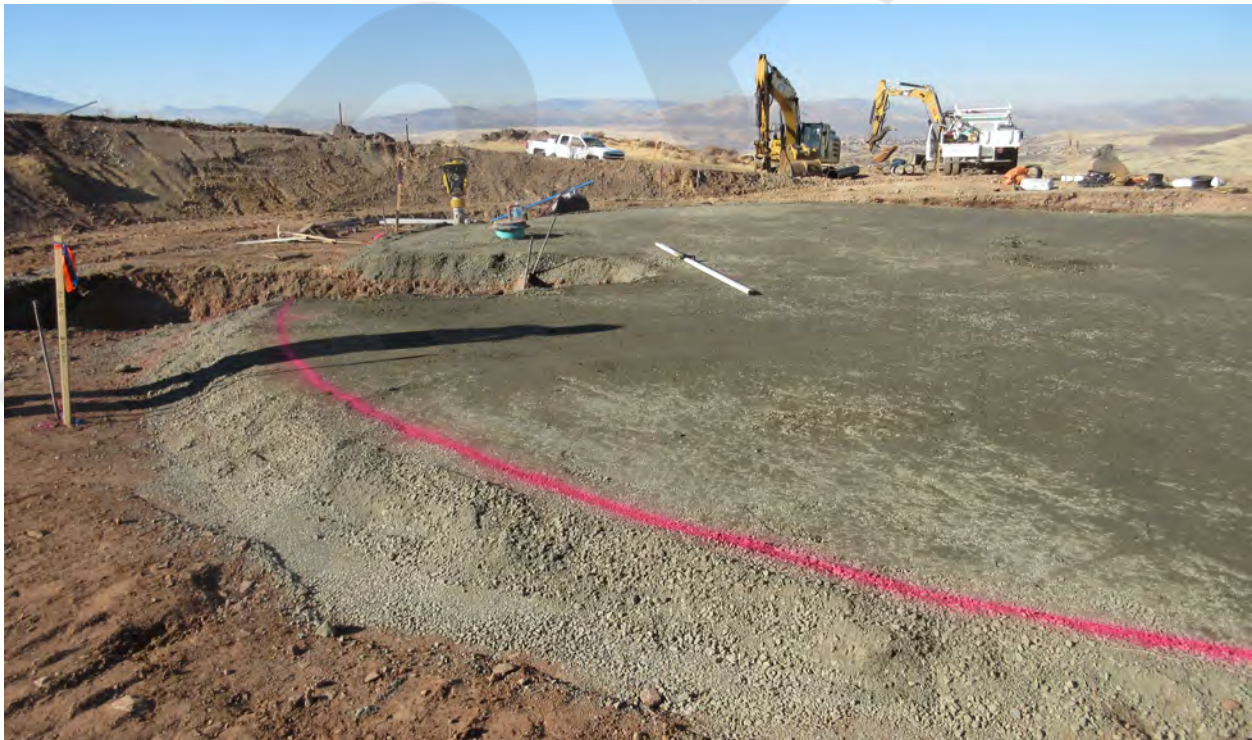
Potable Water Storage Improvements Sun Valley #2 Tank

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Developer Fees	Sun Valley Tank #2	—	—	—	420	2,980	3,400

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

SCHEDULE: The project is scheduled for construction in FY 2026 subject to successful acquisition of a suitable tank site which is elevation sensitive and is complicated by the US 395 Connector project alignment.



Potable Water Storage Improvements Fish Springs Terminal Tank #2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Fish Springs Terminal Tank #2	—	—	—	—	40	40

PROJECT DESCRIPTION: Ultimately, a second 2.5 MG storage tank is needed at the terminus of the Fish Springs pipeline at the north end of Lemmon Valley to equalize demand and supply during peak use periods.

SCHEDULE: The project is currently scheduled for design in FY 2026 with construction to follow in FY 2027. The actual schedule will be dependent upon the rate of growth in the North Valleys.



Potable Water Storage Improvements Storage Tank Recoats; Access; Drainage Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Storage Tank Recoats; Access; Drainage Improvements	1,600	3,000	3,500	3,500	3,500	15,100

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

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



Potable Water Storage Improvements Highland Reservoir Tank

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Highland Reservoir Tank	3,700	4,000	—	—	—	7,700

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

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



Potable Water Storage Improvements STMGID Tank East (Zone 11 Tank)

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Developer Fees	STMGID Tank East Zone 11 Tank	—	—	—	100	2,975	3,075

PROJECT DESCRIPTION: The project involves construction of a 3.7 MG above ground welded steel storage tank in the South Truckee Meadows area off of Geiger Grade formerly owned by STMGID. Due to growth in the area over the last several years, additional storage is required to meet the requirements of the NAC 445A regulations and TMWA standards. The tank will replace an existing 0.75 MG tank providing a net increase in storage of about 3 MG.

SCHEDULE: The project is currently scheduled for construction in FY 2026, subject to acquisition of the Special Use Permit and Bureau of Land Management (BLM) permitting.



Potable Water Storage Improvements US 40 Tank & Feeder Main

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Developer Fees	US 40 Tank & Feeder Main	170	300	2,730	—	—	3,200

PROJECT DESCRIPTION: The project involves construction of two 800,000 gallon steel tanks with site improvements, utilities, drain line and access road including about 2,100 LF of 20" feeder main. The project will improve reliability and hydraulic performance in the zone which experiences a lot of surge issues due to cycling of the Mae Anne pump train and the closed system on the Mogul end. This situation is only expected to worsen when pumping to Verdi begins.

SCHEDULE: The project is currently scheduled for design in FY's 2022-2023 and construction in FY 2024.



Potable Water Storage Improvements Spanish Springs Altitude Valves

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Spanish Springs Altitude Valves	—	300	—	—	—	300

PROJECT DESCRIPTION: The project involves the construction of altitude valves in underground vaults at the Desert Springs Tank #3 and at Spring Creek Tank #6. The altitude valves will keep the existing tanks from overflowing when well recharge operations are conducted in Spanish Springs Valley.

SCHEDULE: Implementation and construction will occur in FY 2023.



Potable Water Storage Improvements Hidden Valley Tank Altitude Valve

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Hidden Valley Tank Altitude Valve	—	350	—	—	—	350

PROJECT DESCRIPTION: The project involves installation of a new altitude valve in a vault on the Hidden Valley Tank #1 in/out line. Requires cutting into and rerouting existing piping, addition of new valves, etc.

SCHEDULE: The project is schedule for construction in FY 2023.



Potable Water Storage Improvements Prater Tank Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Prater Tank Rehabilitation	1,400	—	—	—	—	1,400

PROJECT DESCRIPTION: The project involves significant structural restoration to prater 1 tank which is failing, in addition to typical improvements for tank rehab projects. Project includes structural evaluation, structural engineering services, and likely replacement of structural steel members of the tank.

SCHEDULE: Construction is scheduled in FY 2022.



HYDROELECTRIC IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Forebay, Diversion, & Canal Improvements	100	100	100	100	100	500
3	Customer Rates	Flume Rehabilitation	—	—	—	150	150	300
3	Customer Rates	Hydro Plant Generator Rewinds	—	350	—	500	350	1,200
3	Insurance Settlement	Orr Ditch Hydro Facility	2,500	3,000	—	—	—	5,500
2	Customer Rates	Verdi Canal Sand Gate Improvements	335	—	—	—	—	335
1	Customer Rates	Washoe Plant Tailraces Unit 1 and Unit 2	—	250	—	—	—	250
1	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 1	—	2,940	—	—	—	2,940
2	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 2	—	—	—	—	2,940	2,940
Subtotal Hydroelectric Improvements			2,935	6,640	100	750	3,540	13,965

Project Locations: Map of all *Hydroelectric Improvements* projects are highlighted in the following map.



Hydroelectric Improvements Forebay, Diversion, and Canal Improvements

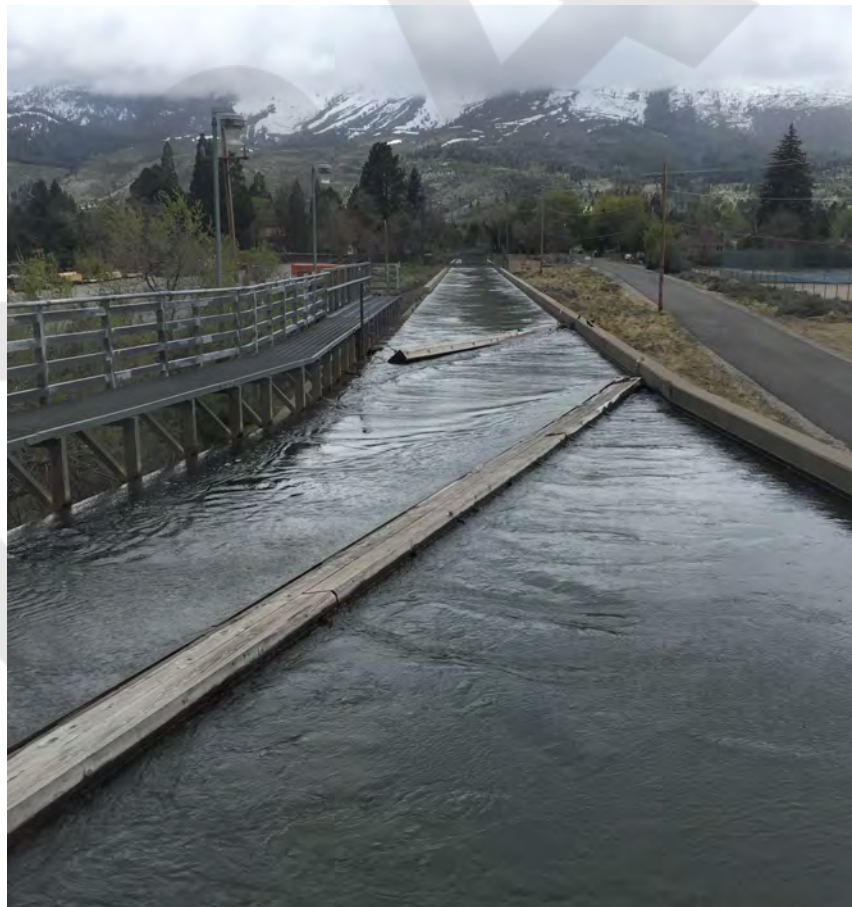
FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Forebay, Diversion, & Canal Improvements	100	100	100	100	100	500

PROJECT DESCRIPTION:

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

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



Hydroelectric Improvements Flume Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Flume Rehabilitation	—	—	—	150	150	300

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

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



Hydroelectric Improvements Hydro Plant Generator Rewinds

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Hydro Plant Generator Rewinds	—	350	—	500	350	1,200

PROJECT DESCRIPTION:

The Fleish generator was last rewound in 1958 and is still operational. The typical in-service life of this type of generator is about 50 years. The two Washoe generators were damaged in a flood in 2006. The units were cleaned and repaired but suffered damage to the core laminations that has shortened the operating life.

SCHEDULE: This schedule is assessed as needed and may be adjusted depending on river flows and generator condition evaluation.



Hydroelectric Improvements Orr Ditch Hydro Facility

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Insurance Settlement	Orr Ditch Hydro Facility	2,500	3,000	—	—	—	5,500

PROJECT DESCRIPTION: During periods of low demand, the Highland Canal has available capacity to bring water to the Chalk Bluff Facility. An existing pipeline brings water from the river via the Orr Ditch Pump Station up to Chalk Bluff. A feasibility and financial study will be completed to analyze the possibility of using existing infrastructure with the addition of power generation equipment to produce power for direct use at the Chalk Bluff Water Treatment Facility.

SCHEDULE: A feasibility study was completed in FY 2020. Construction on the projected is scheduled to begin in FY 2022 and be completed in FY 2023.



Hydroelectric Improvements Verdi Canal Sand Gate Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Verdi Canal Sand Gate Improvements	335	—	—	—	—	335

PROJECT DESCRIPTION: The project includes construction of a new concrete weir structure on the canal side of an existing sand gate. Included in the project will be the replacement of the sand gate itself as well as design and construction of a sediment sand trap.

SCHEDULE: The project is scheduled for FY2022.



Hydroelectric Improvements Washoe Plant Tailraces Unit 1 and Unit 2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Washoe Plant Tailraces Unit 1 and Unit 2	—	250	—	—	—	250

PROJECT DESCRIPTION: This project is to replace both Tailraces that discharge off of Hydroelectric Turbines 1 and 2. The canal in which the Tailraces discharge will be blocked off so as to isolate the Tailraces from the river. The Tailraces will be separated from the building foundation and removed from the drainage channel. Any needed repairs to the buildings foundation will be completed. Prefabricated Tailraces will then be installed and the drainage canal made ready for operations.

SCHEDULE: Construction on the project is scheduled to begin in FY 2023.



Hydroelectric Improvements

Washoe Plant Turbine Rebuild and Rebuild/Replacement of Unit 1

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 1	—	2,940	—	—	—	2,940

PROJECT DESCRIPTION: The project involves replacing the No. 1 Hydroelectric Turbine, complete a rewind of the Unit 1 Generator. To expedite completion of the project and minimize the plant outage time, procurement of the new No. 1 Turbine as well as fabrication of the two new Tailraces will be completed first as a separate project. Replace the No. 1 Plant Turbine and rewind the associated generator. The turbine will be dismantled with the pressure case and Turbine appurtenances removed from the building. Work for rewinding the No. 1 Generator will commence as soon as the plant is taken off line for the project. If work for replacing the Tailraces is completed prior to the No 1 Turbine replacement and Generator rewind work then the No. 2 Hydroelectric Turbine/Generator will be put back into service while work is underway for the No. 1 Turbine and Generator. The new No. 1 Turbine will be installed and the associated rewind generator re-installed.

SCHEDULE: Construction is scheduled for FY2023.



Hydroelectric Improvements

Washoe Plant Turbine Rebuild and Rebuild/Replacement of Unit 2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 2	—	—	—	—	2,940	2,940

PROJECT DESCRIPTION: The project involves This project will replace the No. 2 Hydroelectric Turbine and complete a rewind of the Unit 2 Generator. To expedite completion of the project and minimize the unit outage time, the No. 2 Turbine will be procured before work begins. Once equipment is procured, work will begin for completing the Unit 2 Generator rewind and dismantling of the No. 2 Turbine pressure cases and appurtenances. During this work, the Unit 1 Turbine/Generator will continue with generation as much as possible. The new No. 2 Turbine will be installed and the rewind generator re-installed.

SCHEDULE: Construction is scheduled for FY2026.

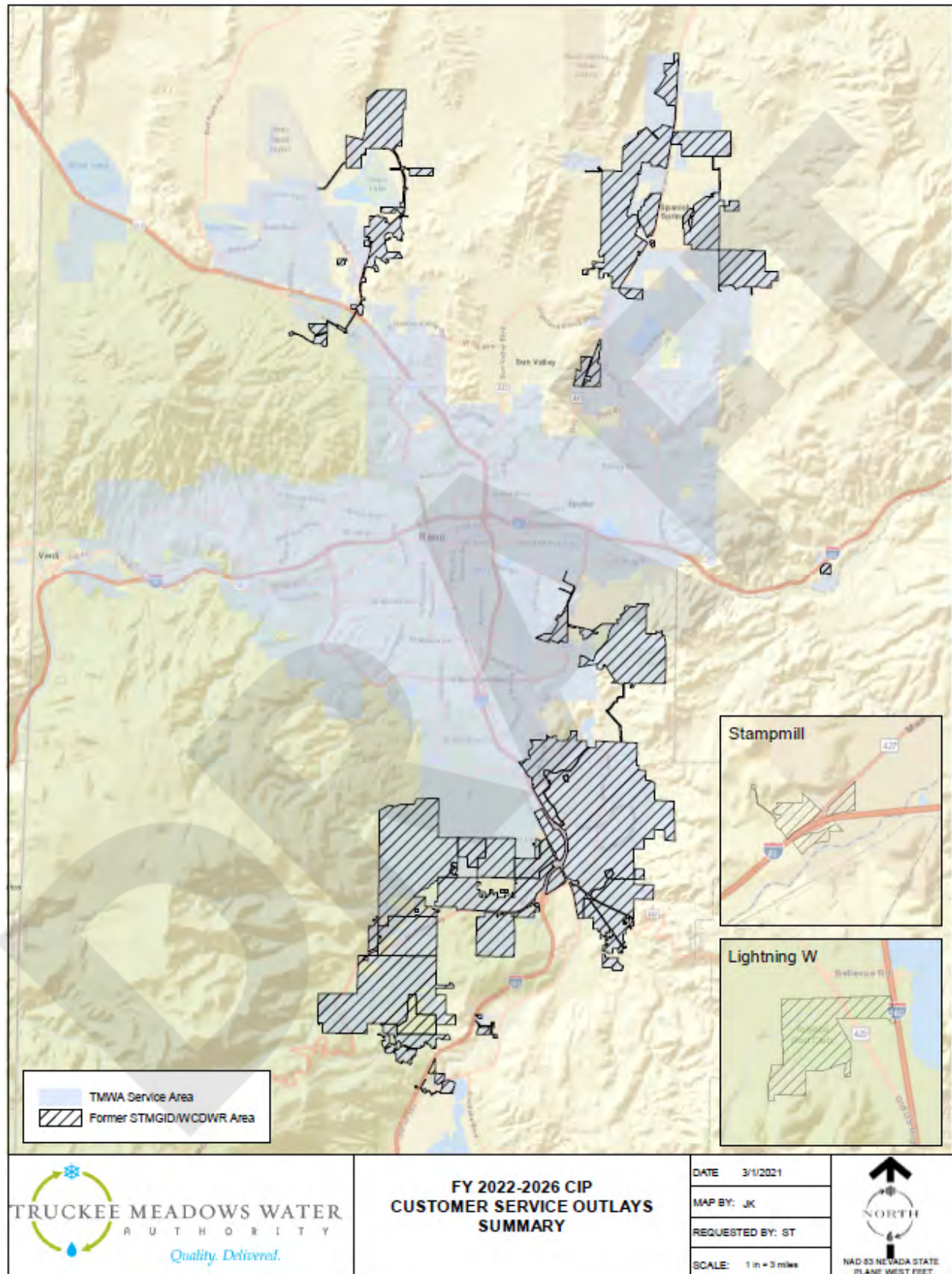


CUSTOMER SERVICE OUTLAYS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Meter Reading Equipment	60	—	75	—	—	135
2	Developer Fees	New Business Meters	100	100	100	100	100	500
1	Customer Rates	Mueller Pit Replacements former Washoe County	125	125	125	125	125	625
2	Customer Rates	Galvanized / Poly Service Line Replacements	250	250	250	250	250	1,250
1	Customer Rates / Meter Retrofit Fees	AMI Automated Meter Infrastructure	7,065	7,030	7,050	35	—	21,180
Subtotal Customer Service			7,600	7,505	7,600	510	475	23,690

Project Locations: Map of all *Customer Service Outlays* projects are highlighted in the following map.



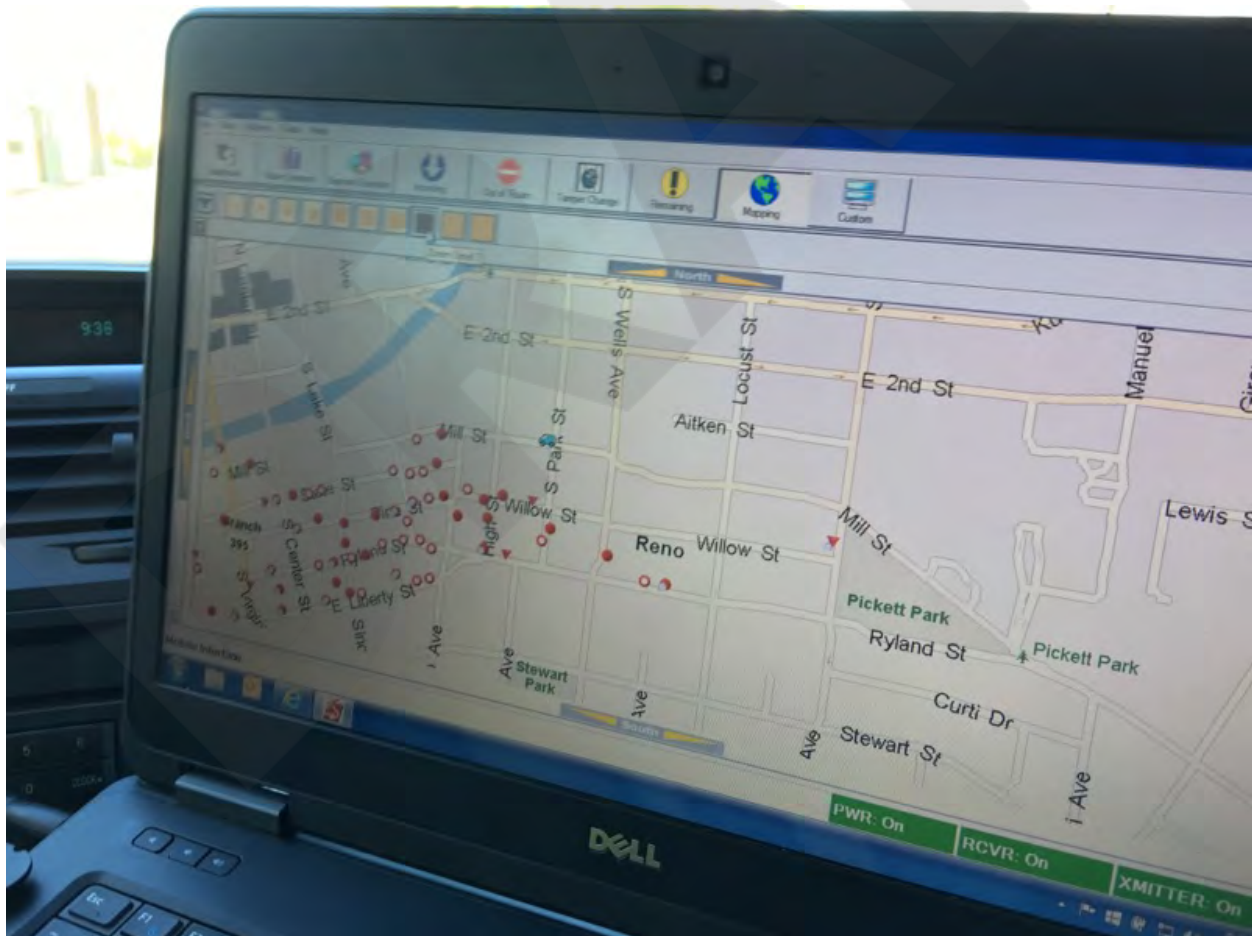
Customer Service Outlays Meter Reading Equipment

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Meter Reading Equipment	60	—	75	—	—	135

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

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



Customer Service Outlays New Business Meters

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	New Business Meters	100	100	100	100	100	500

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

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



Customer Service Outlays

Mueller Pit Replacements Former Washoe County

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Mueller Pit Replacements former Washoe County	125	125	125	125	125	625

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

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



Customer Service Outlays

Galvanized / Poly Service Line Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Galvanized / Poly Service Line Replacements	250	250	250	250	250	1,250

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

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



Customer Service Outlays

AMI Automated Meter Infrastructure

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Meter Retrofit Fees	AMI Automated Meter Infrastructure	7,065	7,030	7,050	35	—	21,180

PROJECT DESCRIPTION: TMWA utilizes multiple meter reading systems in which the transmitters attached to the meters send a signal out to be collected by data collectors. We currently are utilizing two separate systems to collect this data. TMWA utilized a drive-by data collection system and Washoe County used a radio read system. The technology in these systems have improved vastly over the last couple of years and we are currently analyzing both systems, with the goal to move to one system. We are currently using a consultant to assist TMWA in the move to one remote reading data collection system.

SCHEDULE: Once identified this project would be staged and implemented over the next 4 years, the equipment to be replaced or upgraded in many instances is already scheduled for replacement.

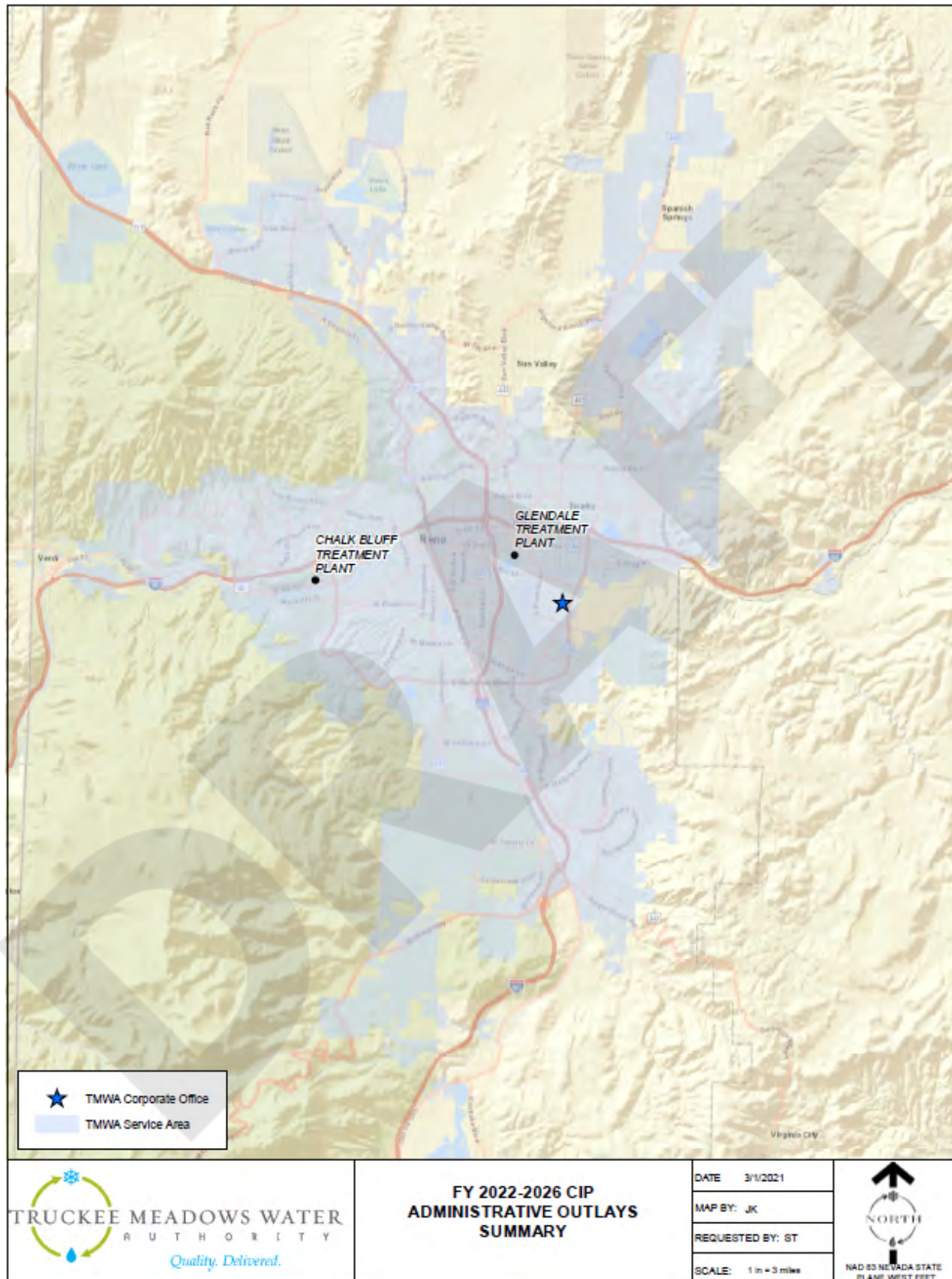


ADMINISTRATIVE OUTLAYS

Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	GIS / GPS System Mapping Equipment	20	—	20	—	—	40
2	Customer Rates	IT Server Hardware	30	45	30	—	—	105
2	Customer Rates	IT Network Security Upgrades	160	70	10	—	—	240
2	Customer Rates	IT Physical Access Security Upgrades	60	60	60	—	—	180
2	Customer Rates	Printer / Scanner Replacement	50	—	100	—	—	150
3	Customer Rates	Crew Trucks / Vehicles	750	750	850	950	1,000	4,300
1	Customer Rates	Emergency Response Projects	150	150	150	150	150	750
1	Customer Rates	Emergency Operations Annex Design / Construction	—	—	250	250	1,500	2,000
2	Customer Rates	System Wide Asphalt Rehabilitation	450	200	200	200	200	1,250
1	Customer Rates	Physical Site Security Improvements	250	200	200	—	—	650
Subtotal Administrative Outlays			1,920	1,475	1,870	1,550	2,850	9,665

Project Locations: Map of all *Administrative Outlays* projects are highlighted in the following map.



Administrative Outlays

GIS/GPS System Mapping Equipment

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	GIS / GPS System Mapping Equipment	20	—	20	—	—	40

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

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



Administrative Outlays IT Server Hardware

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	IT Server Hardware	30	45	30	—	—	105

PROJECT DESCRIPTION: TMWA currently has over 50 physical servers and 130 virtual servers, hosting a variety of enterprise software applications that support TMWA’s daily business operations. All physical servers are typically purchased with a three year warranty, with the expectation that they will reach the end of their system life cycle in a three to five year time frame, requiring a replacement. TMWA annually reviews its server platforms and can option a strategy of warranty extension, if cost effective, rather than outright hardware replacement. All servers require an Operating System Software license to run. Operating System Software is upgraded only when the current release is obsolete or a newer version offers a significant advantage over the current iteration.

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



Administrative Outlays IT Network Security Upgrades

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	IT Network Security Upgrades	160	70	10	—	—	240

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

SCHEDULE: Spending occurs only on an as needed basis.



Administrative Outlays

IT Physical Security Upgrades

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	IT Physical Access Security Upgrades	60	60	60	—	—	180

PROJECT DESCRIPTION: Security measures that are designed to deny unauthorized access to facilities, equipment and resources to protect personnel from damage or harm such as theft or attacks. Physical security involves the use of multiple layers of interdependent systems which can include surveillance, security guards, protective barriers, locks and other techniques.

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



Administrative Outlays

Printer / Scanner Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Printer / Scanner Replacement	50	—	100	—	—	150

PROJECT DESCRIPTION: TMWA currently has variety of printers and scanners that support TMWA's daily business operations. All printers are typically purchased with a three-year warranty, with the expectation that they will reach the end of their system life cycle in a three to five year time frame, requiring a replacement. TMWA annually reviews its printer/scanner performance and business needs and can option a strategy of warranty extension, if cost effective, rather than outright replacement.

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



Administrative Outlays Crew Trucks/Vehicles

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Crew Trucks / Vehicles	750	750	850	950	1,000	4,300

PROJECT DESCRIPTION: TMWA's service fleet consists of light duty and heavy duty crew trucks. TMWA plans to cycle the light crew fleet over a period of seven to ten years. Spending is determined annually depending on vehicle availabilities and other factors. Spending only occurs if justified. TMWA's fleet cycles older vehicles to the treatment plants or other less demanding activities prior to disposal at auction. TMWA has scaled back spending on light vehicles for the past several years and a number of vehicles will be in excess of ten years old and greater than 120,000 miles of duty.

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



Administrative Outlays Emergency Response Projects

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Emergency Response Projects	150	150	150	150	150	750

PROJECT DESCRIPTION: Various ongoing improvements to security infrastructure are required to protect TMWA facilities. TMWA has performed vulnerability assessment studies in the past and reviews the applicability of the findings to continually improve physical security as needed. In addition, TMWA is preparing a new disaster recovery plan with procedures to recover and protect water system operations.

SCHEDULE: Upgrades to security projects is ongoing and completed on a review of priorities each year.

PROJECT LOCATION: Various locations at treatment plants, at well sites, storage area for water fill station manifolds.



Administrative Outlays

Emergency Operations Annex-Design / Construction

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Emergency Operations Annex Design / Construction	—	—	250	250	1,500	2,000

PROJECT DESCRIPTION: TMWA is currently in the planning and conceptual design phase for a Primary Emergency Operations Center (EOC) including Disaster Recovery (DR) capacity. TMWA's EOC will relocate from the current location at the corporate office to the Chalk Bluff Water Treatment Plant. Which includes scope review, design, and contract bid packages, bid and award, construction, and testing. Potential emergency operations would include responding to earthquakes, floods, or other emergency related events.

SCHEDULE: Construction of water fill stations at four tank sites, standby power retrofits at four existing wells and ten portable water fill manifold stations to be completed in FY's 2024-2026.



Administrative Outlays

System Wide Asphalt Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	System Wide Asphalt Rehabilitation	450	200	200	200	200	1,250

PROJECT DESCRIPTION: TMWA has 93 tanks, 90 wells, 113 pump stations, 2 storage reservoirs and 3 treatment plants, most of which have some asphalt pavement. It is much more economical to extend the life of existing pavement with routine maintenance such as repairing cracks and applying slurry seals than it is to prematurely replace the pavement.

SCHEDULE: This is a new reoccurring maintenance item. It is originally assumed that up to 15 sites per year will receive some sort of rehabilitation that may include patching, crack repair, slurry seal and/or partial replacement.



Administrative Outlays

Physical Site Security Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Physical Site Security Improvements	250	200	200	—	—	650

PROJECT DESCRIPTION: Physical site security improvements for Chalk Bluff, Glendale and Corporate based on recommendations from the Department of Homeland Security Infrastructure Survey, Security & Resilience Report dated 18 July 2018. These recommendations were echoed in the Department of Emergency Managements Vulnerability Assessment completed in December 2019. Recommended priority improvements include:

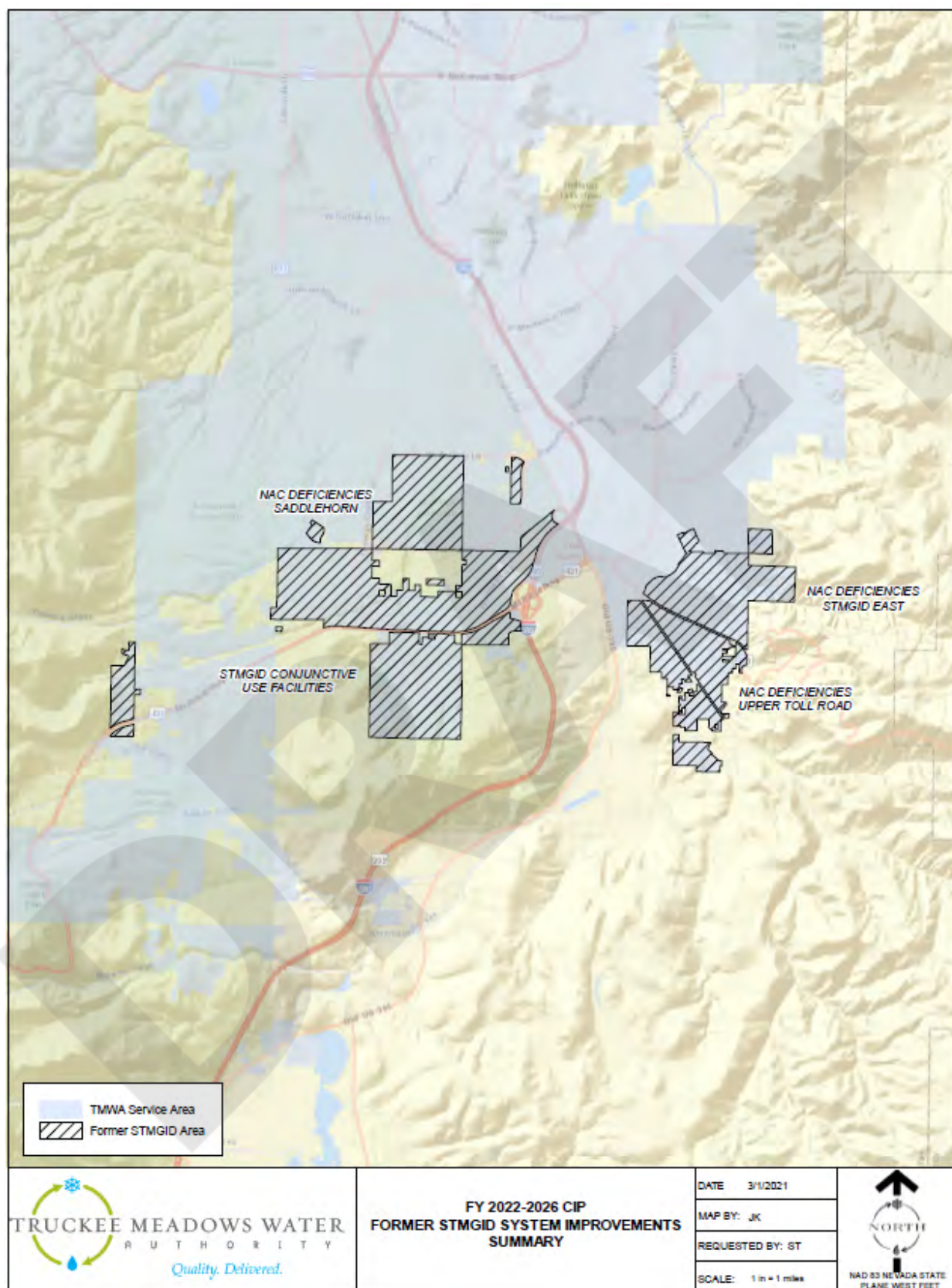
1. Enhanced perimeter fencing with outriggers and barbed wire around 100% of site perimeters, fencing secured into the ground, and repairs as needed to existing fencing.
2. Dedicated security camera system for perimeter fence coverage as well as critical points in and around key buildings.
3. Solar powered LED lighting with motion detection along full fence perimeter of both WTP's.
4. 3M window film application for windows on exteriors of Corporate building not within fenced perimeters.
5. Intrusion detection systems for perimeter fencing and gate areas to be used with the new security camera system.
6. Landscaping improvements including the placement of large boulders around the SE corner of the Chalk Bluff Control Room to protect against high speed vehicle ramming. Cleared areas along both sides of all perimeter fencing.

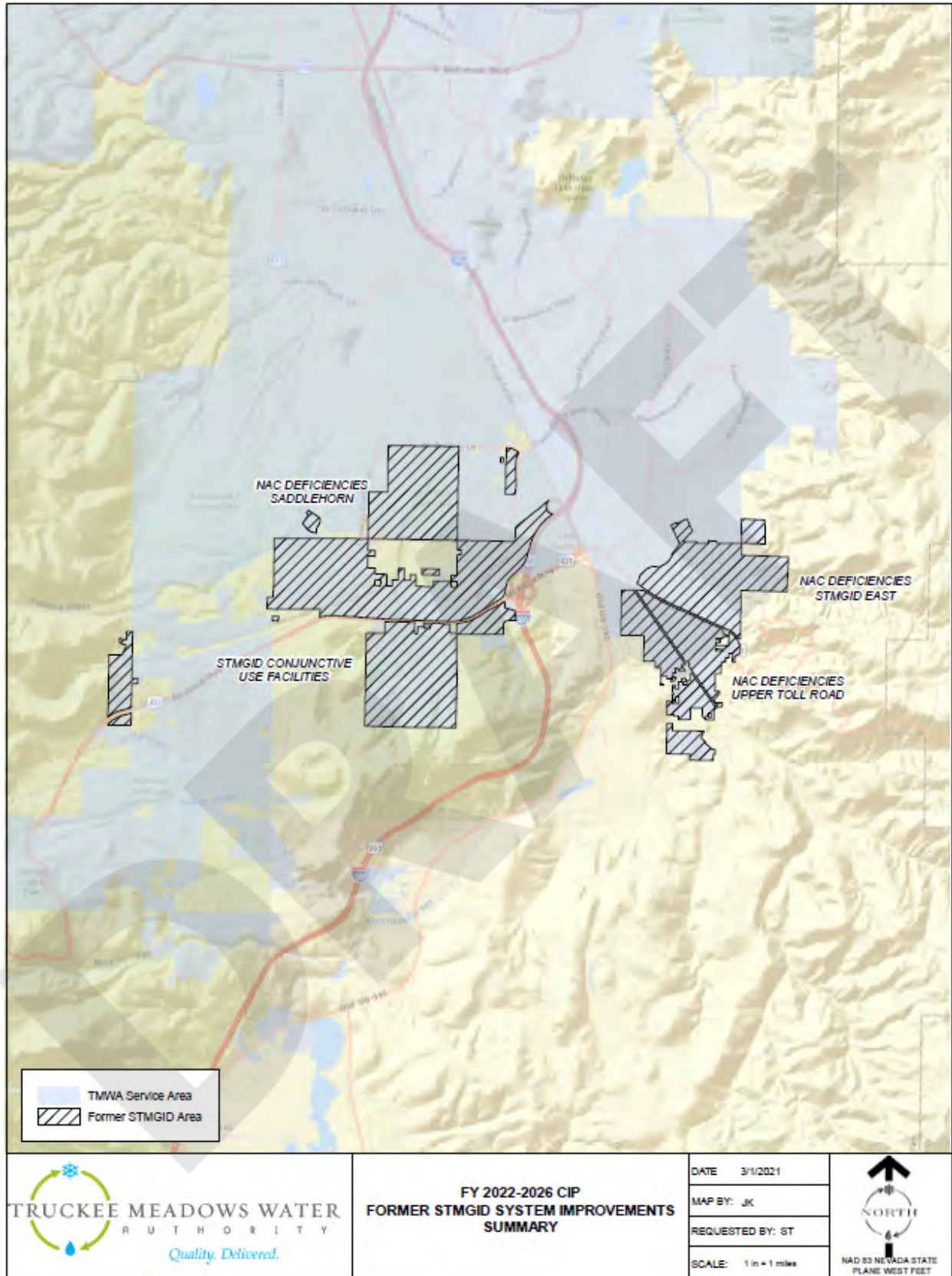
SCHEDULE: The project began in FY 2021 and will continue through FY 2024.

FORMER STMGID SYSTEM IMPROVEMENTS Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Reserve	STMGID Conjunctive Use Facilities	1,600	—	—	—	—	1,600
1	Reserve	STMGID NAC Deficiencies - Saddlehorn, Upper Toll, STMGID East	500	600	2,500	—	—	3,600
Subtotal STMGID System Improvements			2,100	600	2,500	—	—	5,200

Project Locations: Map of all *Former STMGID System Improvements* projects are highlighted in the following map.





Water Main-Distribution & Service Line Improvements STMGID Conjunctive Use Facilities

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Reserve	STMGID Conjunctive Use Facilities	1,600	—	—	—	—	1,600

PROJECT DESCRIPTION: The project involves construction of a new booster pump station on the reclaim water reservoir site on Arrowcreek Parkway and approximately 8,100 feet of 14-inch discharge pipe on Arrowcreek Parkway to the STMGID Tank 4/5 pressure zone. Approximately \$0.5 million of the \$3.6 million will be used for pipeline oversizing which will be allocated to new development. The facilities will provide off-peak supply which will allow TMWA to implement conjunctive use in the STMGID West system.

SCHEDULE: Construction of the pipeline was completed in FY 2019 and the booster station design/construction is scheduled to begin in FY 2022.



Distribution System Pressure Improvements NAC Deficiencies-Saddlehorn, Upper Toll Road, STMGID East

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Reserve	STMGID NAC Deficiencies - Saddlehorn, Upper Toll, STMGID East	500	600	2,500	—	—	3,600

PROJECT DESCRIPTION: The project consists of main ties, hydrant installations and individual booster pump systems to be constructed in multiple locations in former STMGID service areas to correct NAC pressure and fire flow deficiencies. In order to correct deficiencies in the upper Toll Road area, it will be necessary to create a new higher pressure zone by constructing a new tank, booster pump station and approximately 6,300 linear feet of 12-inch main.

SCHEDULE: The new pressure zone on upper Toll Road will be constructed in FY 2024 subject to acquisition of the tank site property which may be private or on BLM property.





STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: John Enloe, Director Natural Resources
John Zimmerman, Water Resources Manager
DATE: March 8, 2021
SUBJECT: **Discussion, action, and possible authorization to the General Manager and approval of Water Resource Exchange Agreement between TMWA, TRI General Improvement District and Tahoe-Reno Industrial Center in furtherance of the July 17, 2018 TMWA, TRIGID, Reno and Sparks Return Flow Management Agreement and reclaimed water service to the Tahoe Reno Industrial Center**

Recommendation

Staff recommends the Board authorize the General Manager to execute a Water Resource Exchange Agreement between TMWA, TRI General Improvement District (TRIGID) and Tahoe-Reno Industrial Center, LLC (TRIC) related to the acquisition of Truckee River water rights and issuance of a return flow will-serve.

Summary

On July 17, 2018 TMWA, TRIGID, Reno and Sparks entered the Return Flow Management Agreement (“RFMA”) in connection with the management of return flow resources to support reclaimed water service to the Tahoe Reno Industrial Center. Under the RFMA, TRIGID is required to provide 1,500 acre-feet (AF) of Truckee River water rights permitted for return flow purposes (“TRIGID Return Flow Resources”) to satisfy return flow obligations in connection with the reclaimed water supply to Tahoe Reno Industrial Center. Under the RFMA, TRIGID is required to deed or lease the TRIGID Return Flow Resources to TMWA to manage. Permitting the TRIGID Return Flow Resources for use at TRIC has unique complexities. Representatives of the Pyramid Lake Paiute Tribe (“Tribe”) provided input and raised a question regarding permitting more than the consumptive use duty (roughly 62.5%) of the TRIGID Return Flow Resources. In order to address the Tribe’s concern, TRIGID would need to provide additional Truckee River water rights (up to approximately 2,350 AF) in order to obtain permits for 1,500 AF of return flow supply, necessitating additional water rights acquisitions by TRIC or TRIGID.

At the time the RFMA was entered, TMWA was concerned about TRIGID competing with TMWA for Truckee River resources and attempting to move them downstream. As a result, the

RFMA requires TRIGID “to cooperate in good faith with TMWA to minimize acquisitions of additional Truckee River water rights or compete with TMWA for the acquisition of Truckee River water rights, and where such does not diminish the quality, quantity or availability of resources [to] cooperate with TMWA to facilitate exchange or other transfers of TRIGID water rights, acquired now or in the future, with TMWA water resources.”

Given TRIC’s and TRIGID’s need to acquire and dedicate additional Truckee River rights and their obligation to cooperate with TMWA before acquiring additional rights, TMWA initiated discussions with TRIC and TRIGID in 2020 pursuant to the RFMA to explore other alternatives. From the outset, TRIC and TRIGID were both amenable to discussions and cooperated with TMWA in these efforts.

After extensive discussions, TMWA, TRIGID and TRIC identified terms for a three-party Water Resource Exchange Agreement. Under the Exchange Agreement, TRIGID will convey Truckee River rights to TMWA, TRIC will pay TMWA cash, and TMWA will issue TRIGID a return flow will-serve of 1,500 AF, which will satisfy TRIGID’s obligations under the RFMA to secure and permit the TRIGID Return Flow Resources. The key elements of the Exchange Agreement are as follows:

- TRIGID will convey to TMWA 1,143.39 AF of Truckee River water rights (with a net consumptive use yield of 700 AF) (“TRIGID Rights”) held in TRIGID’s inventory which are acceptable to TMWA. TMWA anticipates using the TRIGID Rights in TMWA’s discretion, including for support of the return flow will-serve commitment as needed.
- TRIC will pay TMWA \$8,978,200 the (“TRIC Payment”). TMWA anticipates using the TRIC Payment to gradually acquire water resources to be held by TMWA for use in TMWA’s discretion, including for support of the return flow will-serve commitment as needed.
- TMWA will issue a return flow will-serve commitment to TRIGID, pursuant to which TMWA will commit to provide sufficient resources to supply the 1,500 AF of return flow required to be provided by TRIGID under the RFMA through the TRIGID Return Flow Resources. TMWA will have sole discretion to determine what resources it will use to satisfy the return flow will-serve commitment (likely to include the TRIGID Rights) and will have the right to substitute different types of TMWA water resources from time to time.
- Consistent with the RFMA and to maximize benefits under TROA, TRIGID will become a customer of TMWA and TMWA will deliver water for return flow resources to a point on the Truckee River near the Truckee Meadows Water Reclamation Facility (“TMWRF”) to satisfy the 1,500 AF requirement. TMWA will charge TRIGID for return flow service as contemplated under the RFMA and under TMWA’s ILVNPS rate tariff.
- TRIGID may elect to terminate the return flow will-serve commitment prior to delivery of reclaimed water from TMWRF, and in such event TMWA shall re-convey the TRIGID Rights to TRIGID and return the TRIC Payment to TRIC together with any water rights purchased with the TRIC Payment. TMWA does not anticipate purchasing very many

water rights prior to the start of the delivery of reclaimed water because TRIGID will not need the full amount at that time.

- The exchange is conditional on TMWA Board approval and TRIGID Board approval.

One key element that enabled TMWA to negotiate such a beneficial transaction while keeping TMWA customers whole is that TMWA is uniquely positioned under TROA and as a result of the wide variety of water resources under its control to satisfy the TRIGID Return Flow Resource obligation with fewer water rights than TRIGID would otherwise be required to commit¹. In other words, through more efficient management of a broader array of water resources, TMWA is able to provide 1,500 AF of return flow supply utilizing fewer water rights than TRIGID.

The Water Resource Exchange Agreement provides mutual benefits to all the parties consistent with and in furtherance of the intent and purpose of the RFMA, as summarized below:

1. TMWA gets the benefit of avoiding TRIC/TRIGID acquiring and attempting to move additional Truckee River water rights downstream, and acquires a large block of TRIGID Rights to support the return flow will-serve commitment and \$8.9 million to pursue other transactions to support the return flow will-serve and/or enhance TMWA's water resource portfolio, *all at no cost to TMWA customers*.
2. TRIGID gets the benefit of satisfying its obligation to provide 1,500 AF of return flow supply under the RFMA Return Flow Resources by dedicating far fewer water resources than it would be required to commit if it sought to permit Truckee River water resources for return flow purposes on its own, freeing up TRIGID resources for its municipal purposes and reducing the likelihood of competing against TMWA for future Truckee River water rights purchases.
3. TRIC gets the benefit of avoiding the time, expense and uncertainty associated with acquiring additional Truckee River water rights and permitting the TRIGID Truckee River resources at some point in the future and secures the benefits of immediately satisfying the TRIGID Return Flow Resource obligation facilitating up to 1,500 AF of reclaimed water service through TMWRF as soon as the pipeline is operational.
4. TMWRF, the Tribe and the river ecosystem realize the water quality benefit of less effluent discharged into the river while satisfying the unique water rights consumptive use reduction permitting requirements associated with reclaimed water use at TRIGID.

TRIC has approved and signed the Exchange Agreement. The Exchange Agreement was presented to the TRIGID Board for consideration, which was heard and approved on March 2, 2021. Staff recommends the Board authorize the General Manager to execute the Water Resource Exchange Agreement between TMWA, TRIGID and TRIC related to the acquisition of Truckee River water rights and issuance of a return flow will-serve commitment.

Attachment: Water Resource Exchange Agreement

¹ The exact amount will vary depending on hydrologic conditions and the specific rights used by TMWA to support the return flow will-serve commitment.

WATER RESOURCE EXCHANGE AGREEMENT

THIS WATER RESOURCE EXCHANGE AGREEMENT (“Agreement”), dated for identification purposes as of the date last executed below, is entered by and between TRUCKEE MEADOWS WATER AUTHORITY, a Joint Powers Authority entity created pursuant to a cooperative agreement among the cities of Reno, Nevada, Sparks, Nevada and Washoe County, Nevada, pursuant to N.R.S. Chapter 277 (“TMWA”), TRI GENERAL IMPROVEMENT DISTRICT, a political subdivision of the State of Nevada (“TRIGID”), and TAHOE-RENO INDUSTRIAL CENTER, LLC, a Nevada limited liability company (“TRIC”).

RECITALS

WHEREAS, TMWA, TRIGID, the City of Reno and City of Sparks entered into that certain Return Flow Management Agreement dated July 17, 2018 (the “RFMA”) pursuant to which TMWA is authorized to control and manage various water resources of the parties for return flow purposes to facilitate implementation of reclaim water delivery to TRIGID and in order to further regional water management objectives and provide indirect benefits to TMWA by reducing the demand for conversion of Truckee River water resources otherwise available for TMWA municipal supply to use in the Tahoe-Reno Industrial Center. Except as otherwise defined herein, capitalized terms shall have the meaning ascribed to them in the RFMA.

WHEREAS, pursuant to the RFMA, TRIGID is required to provide 1,500 acre feet annually (AFA) of Truckee River water rights (defined therein as the “TRIGID Return Flow Resources”) permitted for Return Flow Purposes for management by TMWA to satisfy certain return flow obligations set forth in the RFMA.

WHEREAS, TRIGID owns 1,143.39 AFA of Truckee River water rights more particularly described in Exhibit “A” attached hereto (“TRIGID Exchange Rights”) banked for the benefit of TRIC, which have not been committed to any will-serve commitment and which could be made available to TMWA for management as a portion of the TRIGID Return Flow Resources.

WHEREAS, TMWA, as allowed by TROA, holds certain water resources and may in the future acquire other resources that in TMWA’s sole discretion can be made available and used for Return Flow Purposes to satisfy the Return Flow Requirements associated with the TRIGID Return Flow Resources under the RFMA (“TMWA Return Flow Resources”).

WHEREAS, pursuant to the RFMA, TRIGID is required to cooperate in good faith with TMWA to minimize acquisitions of additional Truckee River water rights and minimize competition with TMWA for the acquisition of Truckee River water rights, and where such does not diminish the quality, quantity or availability of resources, to cooperate with TMWA to facilitate exchange or other transfers of TRIGID water rights with TMWA water resources.

WHEREAS, TMWA Rate Tariff ILVNPS authorizes TMWA to provide instream return flow services based on dedication of water resources and/or purchase of a will-serve commitment supported by other resources owned or managed by TMWA, as determined by TMWA in its sole discretion.

WHEREAS, TRIC and TRIGID desire to secure a will-serve commitment for return flow purposes through a combination of purchase and dedication pursuant to which TRIC will pay TMWA \$8,978,200 and TRIC and TRIGID will convey the TRIGID Exchange Rights to TMWA in exchange for TMWA issuing an irrevocable Return Flow Will-Serve Commitment to TRIGID in the amount of up to 1,500 AFA to satisfy TRIGID's obligation to provide the TRIGID Return Flow Resources under the RFMA on the terms and conditions below.

NOW THEREFORE, in consideration of the mutual promises and covenants herein contained, the parties hereto agree to the following terms and conditions:

1. WATER RESOURCE EXCHANGE AND RETURN FLOW WILL-SERVE COMMITMENT.

1.1 Conveyance of TRIGID Exchange Rights. Within fifteen (15) days after the execution of this Agreement by all the Parties (the "Closing Date"), TRIGID will convey all right, title and interest in the TRIGID Exchange Rights to TMWA by Water Rights Deed in the form attached hereto as Exhibit "B", TRIGID and TRIC will terminate any banking agreement encumbering the TRIGID Exchange Rights, and TRIC will assign to TMWA any beneficial interest held in the TRIGID Exchange Rights, if applicable. TRIGID and TRIC acknowledge and agree no money shall be paid for the TRIGID Exchange Rights and the sole consideration for the conveyance shall be the issuance of the Return Flow Will-Serve Commitment by TMWA pursuant to Section 1.2. TMWA acknowledges and agrees that it shall bear all fees and charges, if any, associated with any reports of conveyance or change applications sought by TMWA with respect to the TRIGID Exchange Rights. The Parties agree the TRIGID Exchange Rights shall not be construed as "water rights acquired after the Effective Date for use as TRIGID Return Flow Resources" for purposes of Section 5.2.1 of the RFMA, it being the express intent of the Parties that the TRIGID Exchange Rights shall not be governed by Section 5.2.1 of the RFMA and that TMWA shall have no obligation to commit or use the TRIGID Exchange Rights for Return Flow Purposes.

1.2 Additional Consideration for Will-Serve Purchase. On or before the Closing Date, TRIC shall pay to TMWA the sum of Eight Million Nine Hundred Seventy Eight Thousand Two Hundred Dollars (\$8,978,200.00) ("Purchase Price") in cash or other immediately available funds.

1.3 Issuance of Return Flow Will-Serve Commitment. In consideration of and conditional upon the conveyance of the TRIGID Exchange Rights and payment of the Purchase Price, concurrently with the conveyance of the TRIGID Exchange Rights to TMWA under Section 1.1 and payment of the Purchase Price under Section 1.2, TMWA shall issue to TRIGID a return flow will-serve commitment in the form attached hereto as Exhibit "C" ("Return Flow Will-Serve Commitment") pursuant to which TMWA irrevocably commits (except as provided in Section 1.4) sufficient water resources to provide up to 1,500 AFA for Return Flow Purposes in satisfaction of and compliance with the Return Flow Requirement associated with the TRIGID Return Flow Resources under the RFMA. Other than TRIGID being a beneficiary of the irrevocable Return Flow Will-Serve Commitment to satisfy its obligations under the RFMA, neither TRIC nor TRIGID shall have any right, title or interest in the TRIGID Exchange Rights and/or TMWA Return Flow Resources supporting the Return Flow Will-Serve Commitment, and TMWA shall

have sole and absolute discretion to identify, designate, use and substitute from time to time the specific TMWA Return Flow Resources supporting the Return Flow Will-Serve Commitment. Upon issuance of the Return Flow Will-Serve Commitment, and for purposes of implementing this Agreement, TRIGID shall become a customer of TMWA under TMWA's ILVNPS rate tariff, or such other tariff deemed applicable by TMWA, for purposes of delivering TMWA Return Flow Resources to meet the demands of TRIGID as a TMWA customer in connection with the Return Flow Will-Serve Commitment. The rates payable by TRIGID for the TMWA Return Flow Resources used to satisfy customer deliveries under the Return Flow Will-Serve Commitment (whether under the ILVNPS rate tariff or other tariff) shall be calculated in accordance with Section 4.6 of the RFMA (which TMWA shall incorporate by reference into such tariff for customers receiving service under or in connection with the RFMA). TMWA acknowledges and agrees the Return Flow Will-Serve Commitment and deliveries thereunder to TRIGID as a customer will satisfy TRIGID's obligations to provide the TRIGID Return Flow Resources under the RFMA, and that notwithstanding any provision of the ILVNPS tariff that subjects such service to interruption or curtailment in TMWA's discretion, TMWA will provide sufficient resources to support the Return Flow Will-Serve Commitment to ensure that deliveries thereunder are provided as and when necessary to satisfy the TRIGID Return Flow Resources obligation under the RFMA and in compliance with the Return Flow Requirement associated with the TRIGID Return Flow Resources under the RFMA. TRIGID may allocate all or any portion of the beneficial interest in the Return Flow Will-Serve Commitment to TRIC as separately agreed between TRIGID and TRIC.

1.4 Contingent Re-conveyance of Truckee River Rights.

(a) Prior to Delivery of Reclaimed Water. At any time prior to the completion of construction of the Pipeline Project and commencement of delivery of Reclaimed Water to TRIGID, TRIGID may deliver to TMWA written notice of its desire to terminate the Return Flow Will-Serve Commitment ("Termination Notice"). Within thirty (30) days of TMWA's receipt of the Termination Notice: i) TMWA will terminate the Return Flow Will-Serve Commitment and TRIGID shall acknowledge such termination, upon which termination neither party shall have any rights or liability in connection with the Return Flow Will-Serve Commitment; ii) TMWA will re-convey to TRIGID fee title to the TRIGID Exchange Rights; and iii) TMWA will refund to TRIC the Purchase Price (if none had been expended by TMWA as of the date of the Termination Notice), or if all or any portion of the Purchase Price has been used by TMWA to acquire water rights, TMWA will convey to TRIC all water rights purchased with the Purchase Price proceeds and will refund to TRIC the unspent balance of the Purchase Price.

(b) Following Delivery of Reclaimed Water. In the event TMWA terminates the RFMA pursuant to Section 7.2 of the RFMA after commencement of delivery of Reclaimed Water to TRIGID, at TRIGID's election: i) TMWA shall provide a resource credit in the amount of 1,500 acre feet for municipal service within TMWA's retail service area for the benefit of TRIC and TRIGID or their assignees, as mutually agreed by TRIC and TRIGID; or ii) the Return Flow Will-Serve Commitment shall remain in effect, provided service shall be delivered pursuant to the terms and conditions of TMWA's ILVNPS rate tariff (or other applicable tariff in effect at the time), and the timing and volume of water delivered under the Return Flow Will-Serve Commitment shall be determined in the sole discretion of TMWA and consistent with the applicable rate tariff; conditions and availability of water under the Truckee River Operating Agreement ("TROA");

requirements of the TROA Administrator/Federal Water Master; and applicable water rights. TMWA will reasonably cooperate with TRIGID on the timing and volume of water delivered under the Return Flow Will-Serve Commitment, provided TMWA shall retain final discretion over such decisions as set forth in the preceding sentence.

2. REPRESENTATIONS AND WARRANTIES OF TRIGID.

As a material inducement to the TMWA to enter into this Agreement, TRIGID represents and warrants to TMWA as follows:

2.1 Organization and Power. TRIGID is duly organized, validly existing and authorized to conduct business under the laws of the State of Nevada, and has full power and authority to own, sell and convey the TRIGID Exchange Rights to TMWA and to enter into and perform its obligations pursuant to this Agreement. This Agreement and all other documents delivered by TRIGID to TMWA, have been or will be duly executed and delivered by TRIGID and are or will be legal, valid and binding obligations of TRIGID, and are enforceable in accordance with their respective terms. Each of the persons signing this Agreement and other instruments required under this Agreement on behalf of TRIGID is or will be authorized to so sign; and the execution, consent or acknowledgment of no other person, entity, court or governmental authority is necessary in order to validate the execution and performance of this Agreement by TRIGID.

2.2 Property, Title and Related Matters. TRIGID owns all right, title and interest in the TRIGID Exchange Rights free and clear of all security interests, mortgages, liens, pledges, charges, claims or encumbrances of any kind or character other than the TRIC banking agreement, and has not, and will not sell, encumber, pledge, assign, convey or transfer any of the TRIGID Exchange Rights, except as set forth in this Agreement. The TRIGID Exchange Rights have not been committed to support any will-serve commitment by TRIGID.

2.3 Transferability. TRIGID has no knowledge of any condition or fact related to the TRIGID Exchange Rights which would prevent or impede the transfer and exchange of the TRIGID Exchange Rights to TMWA.

2.4 No Litigation. There are no pending or to the best of TRIGID's knowledge threatened actions which would materially and adversely affect the TRIGID Exchange Rights, or any portion thereof, nor are there any known specific facts which might give rise to such action or proceedings, or which would or could adversely change the use of the TRIGID Exchange Rights.

2.5 No Misstatement. No representation, statement or warranty by TRIGID contained in this Agreement or in any exhibit hereto contains any untrue statements or omits, any material fact necessary to make the statement of fact recited not misleading.

2.6 No Agreements. Neither the execution and delivery of this Agreement by TRIGID nor the consummation of the transactions contemplated hereby will result in any breach or violation of or default under any judgment, decree, order, mortgage, lease, agreement, indenture or other instrument to which TRIGID is a party, or to which it is bound.

3. REPRESENTATIONS AND WARRANTIES OF TRIC.

As a material inducement to the TMWA to enter into this Agreement, TRIC represents and warrants to TMWA as follows:

3.1 Organization and Power. TRIC is duly organized, validly existing and authorized to conduct business under the laws of the State of Nevada, and has full power and authority to sell and convey all its right, title and interest in the TRIGID Exchange Rights to TMWA and to enter into and perform its obligations pursuant to this Agreement. This Agreement and all other documents delivered by TRIC to TMWA, have been or will be duly executed and delivered by TRIC and are or will be legal, valid and binding obligations of TRIC, and are enforceable in accordance with their respective terms. Each of the persons signing this Agreement and other instruments required under this Agreement on behalf of TRIC is or will be authorized to so sign; and the execution, consent or acknowledgment of no other person, entity, court or governmental authority is necessary in order to validate the execution and performance of this Agreement by TRIC.

3.2 Transferability. TRIC has no knowledge of any condition or fact related to the TRIGID Exchange Rights which would prevent or impede the transfer and exchange of the TRIGID Exchange Rights to TMWA.

3.3 No Litigation. There are no pending or to the best of TRIC's knowledge threatened actions which would materially and adversely affect the TRIGID Exchange Rights, or any portion thereof, nor are there any known specific facts which might give rise to such action or proceedings, or which would or could adversely change the use of the TRIGID Exchange Rights.

3.4 No Misstatement. No representation, statement or warranty by TRIC contained in this Agreement or in any exhibit hereto contains or will contain any untrue statements or omits, or will omit, any material fact necessary to make the statement of fact recited not misleading.

3.5 No Agreements. Neither the execution and delivery of this Agreement by TRIC nor the consummation of the transactions contemplated hereby will result in any breach or violation of or default under any judgment, decree, order, mortgage, lease, agreement, indenture or other instrument to which TRIC is a party, or to which it is bound.

4. REPRESENTATIONS OF TMWA.

As a material inducement to TRIGID and TRIC to enter into this Agreement, TMWA represents and warrants to the TRIGID and TRIC as follows:

4.1 Organization and Power. TMWA is duly organized, validly existing and authorized to conduct business under the laws of the State of Nevada and has full power and authority to issue the Return Flow Will-Serve Commitment to TRIGID and to enter into and perform its obligations pursuant to this Agreement. This Agreement and all other documents delivered by TMWA, have been or will be duly executed and delivered by TMWA and are or will be legal, valid and binding

obligations of TMWA, and are enforceable in accordance with their respective terms. Each of the persons signing this Agreement and other instruments required under this Agreement on behalf of TMWA is or will be authorized to so sign; and the execution, consent or acknowledgment of no other person, entity, court or governmental authority is necessary in order to validate the execution and performance of this Agreement by TMWA.

4.2 No Misstatement. No representation, statement or warranty by TMWA contained in this Agreement or in any exhibit hereto contains or will contain any untrue statements or omits, or will omit, any material fact necessary to make the statement of fact recited not misleading.

4.3 No Agreements. Neither the execution and delivery of this Agreement by TMWA nor the consummation of the transactions contemplated hereby will result in any breach or violation of or default under any judgment, decree, order, mortgage, lease, agreement, indenture or other instrument to which TMWA is a party, or to which it is bound.

5. MISCELLANEOUS.

5.1 Time. Time is of the essence in the performance of all obligations under this Agreement.

5.2 Nevada Law. The validity, interpretation and performance of this Agreement shall be controlled and governed by and construed under the laws of the State of Nevada.

5.3 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Legible executed counterparts of this Agreement may be delivered by facsimile, PDF e-mail attachment, or any other electronic means.

5.4 Successors and Assigns. This Agreement shall be binding on and shall inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and/or assigns.

5.5 Entire Agreement. This Agreement contains the sole and only agreement between the parties hereto relating to their agreement regarding the subject matters and correctly sets forth the rights, duties and obligations of each to the other as of this date. Any prior agreements, promises, negotiations or representations not expressly set forth in this Agreement are of no force and effect.

5.6 Non-Merger. This Agreement and all of its conditions and covenants shall not merge with the deeds referred to herein but shall survive the recordation of such documents and remain in full force and effect.

5.8 Recitals. The above recitals are incorporated herein by reference.

5.9 Board Approval. This Agreement is contingent upon the approval of the terms by the Board of Directors of TMWA and the Board of Trustees of TRIGID.

[Signature Page Follows]

[Signature Page – Water Resource Exchange Agreement]

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

“TMWA”

TRUCKEE MEADOWS WATER
AUTHORITY, a Joint Powers Authority

By: _____
Mark Forcee, General Manager

Dated: _____

“TRIGID”

TRI GENERAL IMPROVEMENT DISTRICT,
a political subdivision of the State of Nevada

By: _____
Shari Whalen, General Manager

Dated: _____

“TRIC”

TAHOE-RENO INDUSTRIAL CENTER,
LLC, a Nevada limited liability company

By: Norman Properties, Inc., a California
corporation

By: _____
Don Roger Norman, President

Dated: _____

EXHIBIT “A”
LEGAL DESCRIPTION OF TRIGID EXCHANGE WATER RIGHTS

All of the rights of the Grantor to divert from the Truckee River and its tributaries the water appurtenant to the land situate in the County of Washoe, State of Nevada, more particularly describes as:

I.

A portion of Permit No. 64368 which consists of 192.22 acre-feet along with 1.265 cfs of diversion rate. Said water rights being a portion of the Lake Ditch heretofore allocated to James L. Hash, successor to D. C. Wheeler Inc. and to others, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 207, 207.5, 265.5 and as changed by Permit No. 11489, Certificate 4827.

II.

A portion of Permit No. 65134 which consists of 45.14 acre-feet along with 0.234 cfs of diversion rate. Said water rights being a portion of the Orr Ditch heretofore allocated to Dennis R. O’Sullivan, successor to J.D. O’Sullivan in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 311.

III.

All of Permit No. 67467 which consists of 128.38 acre-feet along with 0.392 cfs of diversion rate. Said water rights being a portion of Steamboat Canal heretofore allocated to D. C. Wheeler, Inc., in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 65.

IV.

A portion of Permit No. 72776 which consists of 40.0 acre-feet along with 0.157 cfs of diversion rate. Said water rights being a portion of the Steamboat Canal heretofore allocated to Leonidas Frederick Johnson, successor to L. Cardella and S. Capurro, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water

being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 50 and 50a.

V.

A portion of Permit No. 73061 which consists of 58.52 acre-feet along with 0.346 cfs of diversion rate. Said water rights being a portion of the Cochran Ditch heretofore allocated to W. H. Menke, D. P. Jones, successor to Mary De Remer, and E. L. Hall, successor to Mary De Remer, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NOS. 438, 443 and 444.

VI.

A portion of Permit No. 74330 which consists of 16.69 acre-feet along with 0.100 cfs of diversion rate. Said water rights being a portion of the Eastman Ditch and Pioneer Ditch heretofore allocated to Steele Corporation, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NOS. 524 and 596.

Reserving unto the Grantor any and all water and water rights over and above the 16.69 acre-feet and a proportionate rate of diversion under Permit No. 74330 specifically granted herein. It being the intent of the Grantor to convey 4.90 acre-feet under CLAIM NO. 524 and 11.79 acre-feet under CLAIM NO. 596 and to reserve the remainder.

VII.

All of Permit No. 74908 which consists of 8.60 acre-feet along with 0.029 of diversion rate. Said water rights being a portion of the Orr Extension Ditch heretofore allocated to Mrs. Adelina Trosi (formerly Mrs. Charles Trosi), in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NOS. 337 and 338.

VIII.

All of Permit No. 85734 which consists of 24.06 acre-feet along with 0.152 of diversion rate. Said water rights being a portion of the North Truckee Ditch heretofore allocated to Alex Crotta, successor to Lucy M. Uyatt, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United

States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NOS. 576 and 577.

IX.

Said water being a portion of the STEAMBOAT CANAL heretofore allocated to Peter Quillici, Intervenor, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 17.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 6.14 acre-feet, more or less, per season from STEAMBOAT CANAL in Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Numbers 038-810-03, 038-810-04, and 038-810-05 on Truckee River Mapping TR-.068

X.

Said water being a portion of the STEAMBOAT CANAL heretofore allocated to Domingo Gavica in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 19.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 16.0 acre-feet, more or less, per season from STEAMBOAT CANAL in Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Numbers 038-221-02, 038-221-03, and 038-221-04 on Truckee River Mapping TR-067.

XI.

Said water being a portion of the STEAMBOAT CANAL heretofore allocated to Mrs. Phillipine Mitchell in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 31.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 26.12 acre-feet, more or less, per season from STEAMBOAT CANAL in

Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Numbers 038-090-14 and 038-090-60 on Truckee River Mapping TR-067.

XII.

Said water being a portion of the STEAMBOAT CANAL heretofore allocated to Unknown Owner in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 33.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 6.0 acre-feet, more or less, per season from STEAMBOAT CANAL in Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Number 038-090-60 on Truckee River Mapping TR-067.

XIII.

Said water being a portion of the STEAMBOAT CANAL heretofore allocated to Paul Garson successor to Chris Theusen, Intervenor, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 46.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 222.855 acre-feet, more or less, per season from STEAMBOAT CANAL in Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Numbers 038-100-19, 038-100-21, and 038-120-13 on Truckee River Mapping TR-064.

XIV

Said water being a portion of the STEAMBOAT CANAL heretofore allocated to Chris Mortensen, Sophia Mortensen, and M. Mortensen, Jr., Intervenor, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court

of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 47.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 318.0 acre-feet, more or less, per season from STEAMBOAT CANAL in Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Numbers 038-100-27, 038-430-20, 038-430-21, and 038-420-22 on Truckee River Mapping TR-064.

.XV

Said water being a portion of the STEAMBOAT CANAL heretofore allocated to James Atcheson, L. R. McKenzie, successors to A. L. Laughton and Geo. Christensen, Intervenor, in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 48.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 11.07 acre-feet, more or less, per season from STEAMBOAT CANAL in Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Numbers, 038-430-24, Interstate I-80, and a portion of 038-430-03 on Truckee River Mapping TR-064.

.XVI

Said water being a portion of the ORR DITCH heretofore allocated to Mrs. Alice Chism in that certain action entitled United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, said water being distributed and allocated in said Decree under CLAIM OR RIGHT NO. 271.

Said right authorizing delivery of a pro-rata share of the rate of diversion not to exceed 23.60 acre-feet, more or less, per season from ORR DITCH in Washoe County, Nevada, together with the right to change the point of diversion and place and manner of use thereof.

Reference is made to Washoe County Assessor Parcel Numbers 006-183-42, 006-221-23, 006-222-02, and 006-222-22 on Truckee River Mapping TR-128.

Grantee does hereby agree to assume the payment of all water master fees and charges that may hereafter become due and payable in respect to said rights referred to herein by reason of the Decree in the *United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants*, the same in Equity Docket A-3 in the District Court of the United States in and for the District of Nevada, and Grantee does hereby further agree to pay all administration, operation and maintenance charges that may be herein payable arising for periods from and after the date hereof to Washoe County Water Conservation District and constitute a charge or lien against the lands herein described by reason of the Boca Dam construction.

Exhibit "B"
Form of Deed

APN: N/A
When Recorded mail Document to:
Truckee Meadows Water Authority
Water Resources Dept.
P.O. Box 30013
Reno, NV 89520-3013

The undersigned hereby affirms that this document submitted for recording does not contain the personal information of any person or persons per N.R.S. 239B.030.

WATER RIGHTS DEED

THIS INDENTURE, made and entered into this _____ day of _____, 2021 by and between TRI GENERAL IMPROVEMENT DISTRICT, a political subdivision of the State of Nevada hereinafter referred to as "Grantor", and the TRUCKEE MEADOWS WATER AUTHORITY, a Joint Powers Authority entity created pursuant to a cooperative agreement among the cities of Reno, Nevada, Sparks, Nevada and Washoe County, Nevada, pursuant to N.R.S. Chapter 277, hereinafter referred to as "Authority".

WITNESSETH:

That the Grantor, for good and valuable consideration, the receipt whereof is hereby acknowledged, does by these presents grant, bargain, sell and convey unto the Authority, and to its successors and assigns forever, all of Grantor's right, title, and interest in and to those certain water and water rights more particularly described in Exhibits "1" attached hereto and incorporated herein, including without limitation any and all rights arising in connection with pending Applications to Change, Permits and Certificates related to such Water Rights on file in the office of the Nevada State Engineer.

To have and to hold said Water Rights together with the tenements, hereditaments and appurtenances thereunto belonging or appertaining and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof unto The Authority, its successors and assigns, forever.

The Authority does hereby agree to assume the payment of all water master fees and charges that may hereafter become due and payable in respect to said rights referred to herein by reason of the Decree in The United States of America, Plaintiff, vs. Orr Water Ditch Company, et al, Defendants, the same in Equity Docket No. A-3 in the District Court of the United States in and for the District of Nevada, and the Authority does hereby further agree to pay all administration and operation and maintenance charges that may be herein payable to Washoe County Water Conservation District and constitute a charge or lien against the lands herein described by reason of Boca Dam construction.

IN WITNESS WHEREOF, the parties hereto have caused their names to be hereunto subscribed the day and year first above written.

“AUTHORITY”

TRUCKEE MEADOWS WATER
AUTHORITY, a Joint Powers Authority

By: _____
Mark Foree, General Manager

“GRANTOR”

TRI GENERAL IMPROVEMENT DISTRICT,
a political subdivision of the State of Nevada

By: _____
Shari Whalen, General Manager

STATE OF NEVADA)
) ss.
COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 2021,
by Shari Whalen, as General Manager of the TRI General Improvement District, as therein named.

Notary Public

STATE OF NEVADA)
) ss.
COUNTY OF WASHOE)

This instrument was acknowledged before me on _____, 2021 by Mark
Foree as General Manager of TRUCKEE MEADOWS WATER AUTHORITY, on behalf of said
Joint Powers Authority therein named.

Notary Public

Exhibit “C”
Return Flow Will-Serve Commitment



RETURN FLOW WILL SERVE COMMITMENT LETTER
(Tariff ILVNPS)

_____, 2021

TRI General Improvement District
Attn: Shari Whalen

Return Flow Demand: 1,500 AFA

Approval Date: _____

RE: Commitment for Return Flow Purposes/Return Flow Management Agreement

Dear Ms. Whalen:

Pursuant to that certain Water Resource Exchange Agreement between the Truckee Meadows Water Authority (TMWA), TRI General Improvement District (TRIGID) and the Tahoe-Reno Industrial Center dated _____, 2021, and in furtherance of the Return Flow Management Agreement dated July 17, 2018 between TMWA, TRIGID, the City of Reno and City of Sparks (“RFMA”), this letter constitutes an irrevocable commitment that TMWA has assumed a legal obligation to supply sufficient water resources to deliver water to the Truckee River for Return Flow Purposes under Tariff ILVNPS or such other tariff deemed applicable by TMWA to meet the return flow demand of TRIGID as a customer of TMWA up to the amount stated above. Notwithstanding any provision of the ILVNPS tariff or such other tariff deemed applicable which subjects such service to interruption or curtailment in TMWA’s discretion, TMWA will provide sufficient resources to support the Return Flow Will-Serve Commitment to ensure that deliveries hereunder are provided as and when necessary to satisfy the TRIGID Return Flow Resources obligation under the RFMA. TRIGID shall be the customer of record with TMWA in connection with water deliveries pursuant to this commitment and the rates payable by TRIGID for the TMWA Return Flow Resources used to satisfy customer deliveries under this Return Flow Will-Serve Commitment shall be governed by Section 4.6 of the RFMA (as incorporated by reference into the applicable tariff). Except as otherwise defined herein, capitalized terms shall have the meaning ascribed to them in the RFMA as of the date of this Commitment. This commitment is made subject to all

applicable TMWA Rules and payment of fees for water delivery in accordance with the Water Resource Exchange Agreement and RFMA. This commitment does not constitute an obligation to provide municipal water service.

Very truly yours,

cc: _____



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: March 8, 2021
SUBJECT: **General Manager's Report**

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

Included in your agenda packet are press clippings from February 10, 2020 through March 10, 2021.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
BY: Bill Hauck, Water Supply Administrator
DATE: Mar 09, 2021
SUBJECT: March 2021 Operations Report

Summary

- The water supply outlook for the region is fair
- Lake Tahoe storage is @ 42% of capacity
- Combined total upstream reservoir storage is 41% of maximum capacity
- Customer demands are at wintertime levels (~35 MGD)
- Hydroelectric revenue for February 2021 was \$169,516

(A) Water Supply

- **River Flows** - Truckee River flows at the CA/NV state line are slightly below normal for this time of year. Discharge was approximately 390 cubic feet per second (CFS) this morning.
- **Reservoir Storage** - Truckee River reservoir storage is for the most part the same as last month @ 41% of capacity. The elevation of Lake Tahoe is 6225.58 feet (3.52' below maximum storage elevation). Storage values for each reservoir as of March 9th are as follows:

Reservoir	Current Storage (Acre-Feet)	% of Capacity (Percent)
Tahoe	313,700	42%
Boca	7,588	19%
Stampede	96,242	42%
Prosser	6,581	22%
Donner	3,088	33%
Independence	11,252	64%

In addition to approximately 14,300 acre-feet of storage in Donner and Independence reservoirs, TMWA has about 27,300 acre-feet of water stored between Lake Tahoe, Boca, and Stampede

reservoirs under the terms of TROA. TMWA's total combined upstream reservoir storage is approximately 41,600 acre-feet (as of March 9th).

- **Snowpack** - Both the Lake Tahoe and Truckee River basins are reporting in at 66% of normal (as of March 9th). The last significant winter storm the region experienced was in mid-February, over three weeks ago, and the basin snowpack numbers reflect that fact. With no major winter storms in the immediate forecast, it is looking more and more likely that we'll end the season on a below average note once again, marking our second dry year in a row. Winter weather in the Sierra is extremely unpredictable however, and a couple of good storms later this month or into April could significantly improve this outlook.
- **Runoff Forecast** - Based on the fact that the Sierra Nevada hasn't experienced a significant winter storm in weeks, the runoff forecast has been downgraded, and is now noticeably below average for both Lake Tahoe @ 52% of normal, and the Truckee River at Farad @ 55% of normal.
- **Outlook** - Current snowpack conditions and projections for streamflow runoff are significantly below average. And while upstream storage numbers aren't as good as we've become accustomed to over the last 4 years, there is still enough carry-over storage in Lake Tahoe to help provide normal Truckee River flows for the rest of 2021 and into 2022. The odds of ending up with a normal winter at this point seem like a real long shot. But winter may not be done just yet, and the possibility still exists for some big storms to occur later this month and even into April, which could help to improve the overall water supply picture for the region. Despite how this water year ultimately unravels, TMWA is still in solid shape from a water supply perspective for the rest of this year and for many, many years to come.

(B) Water Production

- **Demand** - TMWA's customer demand averaged 35 million gallons per day (MGD) for the first full week of March. Overall, surface water is providing about 92% of our supply right now, and groundwater the other 8%.

(C) Hydro Production

Generation - Truckee River flows at Farad (CA/NV state line) for the month of February 2021 averaged 308 CFS. Both the Fleish and Verdi power plants were on-line and available the entire month (100% available). The Washoe Power plant was still out of service as the flume rebuild continues. Below average river flows once again last month are the main reason for the below normal generation at Fleish and Verdi. Statistics for the month as follows:

Hydro Plant	Days On-Line	Generation (Megawatt hours)	Est. Revenue (Dollars)	Est. Revenue (Dollars/Day)
Fleish	28	1,309	\$ 97,744	\$ 3,491
Verdi	28	970	\$ 71,772	\$ 2,563
Washoe	0	0	\$ 0	\$ 0
Totals	56	2,279	\$ 169,516	\$ 6,054



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager, Water Resources
DATE: March 10, 2021
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		3,995.74 AF
Purchases of water rights	0.00 AF	
Refunds	0.00 AF	
Sales	– 125.24 AF	
Adjustments	0.00 AF	
Ending Balance		3,870.50 AF

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

FISH SPRINGS RANCH, LLC GROUNDWATER RESOURCES

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

Beginning Balance		7,693.51 AF
Committed water rights	– 0.00 AF	
Ending Balance		7,693.51 AF

Price per acre foot at report date: \$41,500 (for SFR and MFR); \$36,000 (for all other services)¹

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

WATER SERVICE AREA ANNEXATIONS

There have been no annexations since the date of the last Board meeting.

INTERRUPTIBLE LARGE VOLUME NON-POTABLE SERVICE

The City of Sparks is a customer under this rate schedule and is purchasing water from TMWA to provide return flow to the Truckee River so that the City is able to provide treated effluent to the developer of the 5 Ridges development for dust control purposes.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: March 17, 2021
SUBJECT: **February Customer Service Report**

The following is a summary of Customer Service activity for February 2021.

Ombudsman

- No calls for the month of February

Communications

- Nothing for February

Conservation (2021 Calendar year)

- 4 Water Watcher Contacts
- 109 Water Usage Reviews

Customer Calls – February

- 6,625 phone calls handled
- Average handling time -3 minutes, 55 seconds per call
- Average speed of answer –9 seconds per call

Billing –February

- 132,764 bills issued.
- 6 (0.00%) corrected bills.
- 25,039 customers (18%) have signed up for paperless billing to date.

Service Orders –February (% is rounded)

- 5,664 service orders taken
- 2,866 (50%) move-ins / move-outs
- 331 (6%) cut-out-for-non-payment and cut-in after receiving payments, including deposits and checks for tamper only
- 568 (10%) zero consumption meter checks
- 572 (10%) re-read meters
- 670 (12%) new meter sets and meter/register/ERT exchanges and equipment checks
- 197 (3%) problems / emergencies, including cut-out for customer repairs, dirty water, no water, leaks, pressure complaints, safety issues, installing water meter blankets, etc.
- 50 (1%) high-bill complaints / audit and water usage review requests
- 410 (8%) various other service orders

Remittance –February

- 26,271 mailed-in payments
- 23,061 electronic payments
- 36,519 payments via RapidPay (EFT)
- 16,541 one-time bank account payments
- 6,681 credit card payments
- 187 store payments
- 969 payments via drop box or at front desk

Collections –February

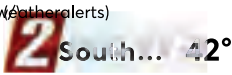
- 12,659 accounts received a late charge
- Mailed 6,159 10-day delinquent notices, 0.05% of accounts
- Mailed 1,622 48-hour delinquent notices, 0.01% of accounts
- 529 accounts eligible for disconnect
- 159 accounts were disconnected (including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection)
- 0.11% write-off to revenue

Meter Statistics – Fiscal Year to Date

- 0 Meter retrofits completed
- 3,523 Meter exchanges completed
- 1,966 New business meter sets completed
- 131,282 Meters currently installed

Weather Alert: Winter Weather

(/weather/alerts)



(/weather)

NEWS

Expanding Emergency Services for a Growing Community

As our area grows, local emergency services are adapting to continue to serve the needs of the community.

Wednesday, February 10th 2021, 3:43 AM PST

Updated: Wednesday, February 10th 2021, 3:43 AM PST

By **Chris Buckley**

As our area grows, local emergency services are adapting to continue to serve the needs of the community.

Last year Washoe County's fire department, Truckee Meadows Fire & Rescue, got a new name, logo, headquarters, and some new toys.

"We actually added 12 new pieces of apparatus," said Chief Charles Moore. "A ladder truck, a water tender, five new brush trucks and five new structural engines that are on the way."

And they've added to the crew. There's a new wildland fuels reduction team through a partnership with NV Energy.

"We have 17 new employees that are dedicated to removing fuels in the area," Moore said. "When they're working for NV Energy they're removing fuels in and around the electrical infrastructure, and when we have a fire we're able to use those employees to help fight the fire, as well as doing other public fuels reduction programs. This is an absolute game changer for our wildland threat going forward."

Though the population in Washoe County continues to grow, calls for service have remained steady over the past four years.

But being a first responder in the time of Covid means a whole new set of issues to deal with.

TMFR has expanded their peer support team during the pandemic.

"Our peer support team is designed to support one another; we're a family anyway," Moore said. "We've designed this team so when anyone needs to talk to somebody - and it doesn't even have to be about a bad fire call, it can be any struggle you're dealing with in life - that there are resources and support for that."

There's also plans to expand the Hidden Valley station, and build a new one in the coming years, most likely in the northern part of the district.

"We want to be a data-driven organization, so we're studying data to determine the best location for the station," Moore said. "Despite the pandemic, our financial resources are still in very good shape. We're still somewhere around 30% ending-fund balance, which means we have a lot of reserve capacity should revenues start to decline. But so far, that hasn't been the case for us."

You can find TMFR's latest community report [here](https://issuu.com/tmfpd/docs/2021_report_to_the_community_f48e2deee26b9f) (https://issuu.com/tmfpd/docs/2021_report_to_the_community_f48e2deee26b9f).

Supply & Demand



Foundation walls are lowered into place at the Pure Water Oceanside facility. Photo: Jeremy Kemp/City of Oceanside

Pure Water Oceanside Project Reaches Milestones

February 10, 2021

Pure Water Oceanside construction remains on schedule for completion in 2022, with several significant milestones recently completed. The Oceanside [project](https://www.waternewsnetwork.com/pure-water-oceanside-installing-new-pipelines-and-drilling-wells/) [\[https://www.waternewsnetwork.com/pure-water-oceanside-installing-new-pipelines-and-drilling-wells/\]](https://www.waternewsnetwork.com/pure-water-oceanside-installing-new-pipelines-and-drilling-wells/) will purify recycled water to create a new, local source of high-quality drinking water that is safe, drought-proof and environmentally sound.

"Construction has impacted many residents and businesses," said Cari Dale, City of [Oceanside](https://www.ci.oceanside.ca.us/) [\[https://www.ci.oceanside.ca.us/\]](https://www.ci.oceanside.ca.us/) water utilities director. "Please know the City of Oceanside appreciates your patience. We thank people for understanding the need for this project and bearing with us during these months of construction impacts. This work is temporary, but the benefits will last for generations."

Pure Water Oceanside Project foundation walls in place

The foundational work on the facility located in the San Luis Rey Water Reclamation Facility is complete. Pipelines, electrical conduits, equipment pads/pedestals, and wet wells have been constructed. Prefabricated walls have been installed. Installing the roof and additional wall stabilizing are next on the schedule.

The water purification equipment including pumps, membrane filters, and reverse osmosis canisters are currently being manufactured. Delivery is anticipated between this summer and fall.

Coco Farms Drive and Fireside Park construction update



Now under construction, the project will purify recycled water to create a new, local source of high-quality drinking water that is safe, drought-proof and environmentally sound. Photo: Jeremy Kemp/City of Oceanside



Work on the south side of Coco Palms Drive near the El Camino Real intersection begins this month. Parking in the area will be closed during this work period with “no parking” signs posted. Graphic: City of Oceanside

The two injection wells on Coco Palms Drive are complete. Sound walls will be removed. Construction on two planned monitoring wells is anticipated to begin within the next two months. Sound walls will be installed prior to extended hours construction into evenings and weekends to reduce the impact on the community.

Coco Palms Drive will continue to be closed for the next few months while pipeline construction is underway.

Work on the south side of Coco Palms Drive near the El Camino Real intersection begins this month. Parking in the area will be closed during this work period with “no parking” signs posted.

Monitoring well work in Fireside Park will take place primarily during the daytime, with possible evening and weekend work for critical activities. Sound walls will be installed to reduce noise. Drilling and development is estimated to take six weeks.

El Camino Real recycled water expansion pipeline work coming soon

Pipeline installation work will begin soon to install recycled water pipelines under El Camino Real. Traffic delays are expected and alternative routes are suggested.

Cones will be set up in work zones to redirect traffic from closed lanes and flag workers will help drivers safely navigate intersections. Regular working hours will be Monday through Friday, 7 a.m. to 5 p.m. with occasional work on Saturdays.

Work at the Mission Avenue and El Camino Real intersection will be at night to reduce commuter traffic impacts. Work hours will be from 8 p.m. to 4 a.m.

Oceanside Project benefits both residents and the environment

Approximately 90% of Oceanside’s drinking water is imported. Pure Water Oceanside will create three to five million gallons of drinking water each day, enough water to provide 32% of the City of Oceanside’s water supply.

The water purification process uses reverse osmosis and advanced oxidation to create safe drinking water. The technology removes pharmaceuticals, chemicals, hormones, microplastics, and personal care products.

The project protects sensitive ecosystems by reducing the amount of water siphoned by imported water sources. It decreases the amount of recycled water discharged into the ocean, and uses half the energy needed to transport imported water, reducing greenhouse gas emissions.

Residents are kept up to date on construction impacts to streets and other infrastructure through several outreach efforts including [an interactive construction map](https://www.google.com/maps/d/u/0/edit?mid=1bmd2PMxY3aUkHXVyc4nBzc_IG7dE4jE0&ll=33.24083213163355%117.32223937839751&z=14) [https://www.google.com/maps/d/u/0/edit?mid=1bmd2PMxY3aUkHXVyc4nBzc_IG7dE4jE0&ll=33.24083213163355%117.32223937839751&z=14], detailed online schedule, regular newsletters, and virtual open house presentations live on the City of Oceanside’s [YouTube channel](https://youtu.be/mkcGY1jninU) [https://youtu.be/mkcGY1jninU], offering residents the opportunity to ask questions.



REPORT MAKES CASE FOR FUNDING LONGER-RANGE WEATHER FORECASTING

BY ACWA STAFF FEB 10, 2021 WATER NEWS

Sub-seasonal to seasonal forecasts could someday give western water managers as much as a two-year head start in planning for either a wet or dry winter.

The scientific methodology already exists for what is known as S2S precipitation forecasting, but putting it to work requires improving weather and climate models and buying enough super-computer time to run the models to test them.

Now, a National Oceanic and Atmospheric Administration (NOAA) report could spur Congress to approve the \$15 million annual investment necessary to translate S2S forecasting from concept to implementation through pilot projects in the West.

An advocacy effort is underway to fund the NOAA report to Congress and includes the Atmospheric River Coalition, of which ACWA is a member, as well as ACWA member agencies Sonoma Water, Yuba Water Agency and Orange County Water District. The Western States Water Council is also supporting the call for funding. The idea is to make S2S as much a priority as improvements in hurricane forecasting on the East Coast.

The Western States Water Council and supporting agencies will work together on a support letter that will be distributed during February, when Congress will start considering funding requests, said Brad Sherwood, ACWA Region 1 Chair and Sonoma Water's Division Manager for Community and Government Affairs.

"It's a water management tool that will benefit every ACWA member," Sherwood said, explaining that it will dovetail with the ability to apply Forecast Informed Reservoir Operations, or FIRO, which allows for flexibility in reservoir storage in coordination with weather forecasts.

"FIRO is micro water management where as S2S is macro water management," Sherwood said.

Conventional weather forecasts are issued with lead times of out to about two weeks. Their skill degrades rapidly after the first week. S2S forecasts extend beyond the domain of a weather forecast, with lead times of up to six weeks (sub-seasonal) to a year or two (seasonal).

Seasonal forecasts do not extend to predicting individual weather events, such as atmospheric rivers, but answer a question frequently asked by water managers – will this winter be wet or dry? When the National Weather Service conducted a drought service assessment in 2014, the more than 100 managers surveyed overwhelmingly identified an accurate seasonal precipitation forecast as the high-priority service that should be provided, according to Jeanine Jones, Interstate Resources Manager for the California Department of Water Resources.

Jones, a longtime supporter of improving S2S forecasting, led the formation of a Western States Water Council S2S coalition that advocated for the Weather Research and Forecasting Innovation Act, passed by Congress in 2017. The act required NOAA to draft the report that encapsulates the value of S2S forecasting and why it should be funded.

“It’s a pretty big milestone for this effort,” Jones said. “It took a lot of work to get there.”

Drone Video: Winter Storm Dumps Foot Of New Snow On Tahoe Resorts

February 12, 2021 at 11:29 am Filed Under: [Sierra](#), [Tahoe](#), [weather](#)

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SAN FRANCISCO (CBS SF) — The slow migration of holiday weekend skiers from the San Francisco Bay Area to the Sierra resorts was well underway Friday as the first of two storm fronts dumped more than a foot of new snow at the higher elevations around Lake Tahoe.

MOST VIEWED



Oakland Chinatown Shop Owner
Arrested After Firing Handgun
During Robbery

As skies cleared Friday afternoon, chain requirements were lifted on I-80, according to the California Highway Patrol.

"The first of several storms will exit this morning with improving conditions," the weather service said "Much of the precipitation will be out of the region by daybreak, or shortly after, as the system moves quickly to the southeast...The next system will move into the region tonight and Saturday, starting across northeast CA/northwest NV by late this evening, the northern Sierra and much of northern NV overnight and finally the rest of the Sierra/western NV during the day Saturday. This storm is a little colder than the one exiting this morning. So expect several inches of accumulating snow."



Mammoth Mountain south of Yosemite National Park reported 18 inches of snow by early Friday with 16 inches at Alpine Meadows on Tahoe's west shore.

A foot was recorded at North Star, 11 inches at South Lake Tahoe and about a half-foot on the north shore at Incline Village and Mount Rose near Reno.

"Mother Nature lined this one up perfectly!" the resort said in its weather report.

Bluebird conditions were expected to be followed by a second storm late Friday into Saturday and then another storm late Sunday into Monday, "arguably the worst time during the holiday weekend," the National Weather Service's Reno office wrote.

"This third storm in the series will usher in more gusty winds, chances for snow and impacts to the end of the holiday weekend," the weather service said. "Forecaster confidence remains high for travel disruptions along the Sierra passes with all of these systems and some concerns for western Nevada roadways too."

Although modest, the storm added to the lagging Sierra snowpack, an important part of California's water supply. The Feb. 3 snowpack

Press Clips



Oakland Golf Course Still Buzzing About Extremely Rare "Condor" Score



COVID Reopenings: 3 Bay Area Counties Could Move To Red Tier Next Week



Family: Remains Found In Desert Identified As Missing Walnut Creek Woman



Oakland Police Source: Detectives Reluctant To Arrest Store Owner Who Foiled Robbery With Gun



Missing San Francisco Man Found Dead In Crawl Space Of His Home



Walnut Creek Officials Give Toyota Initial Green Light On Ygnacio Valley Road Housing Plan



East Bay School Trustees Caught on Video Disparaging Parents During Online Meeting



Transgender Mission College Hoops Player Keeps Head High



VIDEO: Good Samaritan Comes To Aid Of Woman In Fairfield Confrontation

More than \$750k awarded to Swan Lake flood plaintiffs to “admit the truth”

By Bob Conrad | February 16, 2021

Washoe County District Court Judge Barry Breslow last week sanctioned the City of Reno by fining city attorneys \$1,500 for failing to admit to facts in the Swan Lake flood case filed by Lemmon Valley residents.

The sanction is on top of awarding more than \$750,000 in damages to plaintiffs in the case. The award does not include attorney fees, which could double the amount owed to plaintiffs and attorneys. That on top of, likely, hundreds of thousands of dollars incurred by the city fighting the case.

A jury in 2019 found the city negligent and responsible for allowing development in a flood plain that ultimately damaged homes, rendering them unlivable, during the 2017 flooding of Swan Lake.

The flooding directly affected more than 150 Lemmon Valley residences, closed streets and caused hardship for Lemmon Valley residents whose road in and out of the valley was partially closed for extended periods after the flood. [Only last summer was dewatering of the lake determined a success](#)

Local officials blamed the extreme, unlikely amount of water from winter storms for the flooding. But impervious surfaces such as roads and parking lots — surfaces that divert water rather than absorb it — made the flooding worse, the court determined.

First reported by This Is Reno, [expert reports had warned for decades that increased development would create flood risks in Lemmon Valley](#). City officials refused to concede this point, despite their studies showing increased flood risks.

Hydrologic analyses of Lemmon Valley, [prepared in 1996 for the City of Reno](#), warned that, in regards to future development, “since Lemmon Valley is a closed basin with no outlet for flood runoff other than evaporation, increased impervious areas *anywhere* in the valley can cause the amount of water entering the playa, and thus the level of the playa to increase.” A jury and Judge Breslow agreed.

“In this case, the City caused a physical invasion of flood waters on the [plaintiffs’] properties,” Bres wrote.

The city, however, denied this occurred. City attorneys were asked to confirm the fact that “flood wa physically invaded upon [a Lemmon Valley property] between January 2017 and January 2018.”

A one word response — “deny” – from the city prompted Breslow to fine the city for refusal to recogn the facts of the case.

“The admitted evidence from the trial conclusively showed flood waters physically located upon the property...” he wrote. “The City had no reasonable factual basis to deny the truth ... and the City did provide any.

“The Court finds that the City should be sanctioned... as the Plaintiffs met their burden to show the truth of the matters requested were of substantial importance but denied by the City, the City lack reasonable ground to believe that it might prevail on its denials of the matters requested; and there no good reason for the failure to admit the truth of the matters requested,” Breslow added.

A class action suit

Breslow also chastised the city for what appears to be the city fighting plaintiffs on a number of issu even after a jury found in favor of the plaintiffs. These included making arguments with no legal bas citations.

“The City raised legal and inconsequential factual challenges to [a plaintiff’s] claims, but it failed to support those challenges with evidence that could be presented to the Court in a form that would be admissible and it conceded during oral argument that it had no evidence to offer in dispute of any of the claimed amounts,” he wrote.

The city also argued that damages should only be awarded for the rental value of properties.

Breslow disagreed. The award amounts will be greater than those stated since Breslow ordered the pay for damages of more than \$750,000 plus interest back to February of 2017.

The case is not over. There is a separate federal case, and the city previously said it would be appeal the verdict by the jury.

Deputy City Attorney Jon Shipman, who defended the city in the lawsuit, did not respond to a reque for comment by the time of publication. This story may be updated if a response is received.

Read the ruling below

1	
2	
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6	SECOND JUDICIAL DISTRICT COURT OF THE STATE
7	IN AND FOR THE COUNTY OF WASHOE
8	***
9	JEFFREY ALAN JOHNSON; JEFFREY Case No.: CV1
10	ALAN JOHNSON, JR; DONNA ROBINSON; Dept. 8
11	DAVID "MIKE" and LINDA WALLS, individually and on behalf of all persons similarly situated;
12	Plaintiffs,
13	vs.
14	THE CITY OF RENO, a political subdivision of the State of Nevada, and DOES individuals 1-10, and ROE corporations 1-10, inclusive;
15	Defendants.
16	
17	ORDER ON PENDING MOTIONS AND GRAN

More than \$750k awarded to Swan Lake flood plaintiffs, Reno city attorney fined for refusing to "admit the truth" from Bob Conrad, PhD



BOB CONRAD

Bob Conrad is publisher, editor, and co-founder of This Is Reno. He has served in communications positions for various state agencies and earned a doctorate from the University of Nevada, Reno in 2011, where he completed a dissertation on social media journalism and crisis communications. In addition to managing This Is Reno, he holds a part-time research appointment for the Mineral County University of Nevada Extension office.

Sparks making homeless people leave Gateway Park

By Bob Conrad | February 16, 2021

Sparks Police Officer Damon O'Connell today said homeless people who have been camping at Gateway Park are being asked to leave by tomorrow so the city can clean up the park.

The news of the cleanup was spread today on social media with homeless advocates criticizing the decision. It had been their understanding people could camp there, something that was reported by KRNK just last week. They said there is no viable place for the people to stay and freezing weather will complicate having to move their belongings.

Centers for Disease Control and Prevention guidelines recommend against moving the unsheltered if other options are available. City of Reno officials recently said some bed space is available at local shelters, but space is limited.

"If individual housing options are not available, allow people who are living unsheltered or in encampments to remain where they are," [the CDC maintains](#).

O'Connell said two people who were living at the park accepted services and help and are now living elsewhere.

Others remain.

[Our Town Reno](#) today reported the following:

On scene helping the folks get organized and ready to move was Kurt, who said he was with the Karma Box Project. "There are about 15 to 20 tents and about thirty people," he explained, "and we have until tomorrow to move these people out of here." However, he explained there were some issues. He does like to see the unhoused get pushed around nor have their stuff be taken.

[News Channel 4](#) recently featured Sparks' approach toward the unsheltered at the park.

"Instead of clearing out the homeless and throwing away their belongings like many other communities Sparks has taken a different approach. In fact, police welcome the homeless at Gateway Park at 21st and Greg streets," KRNK reported.

That appears to have changed since the story was aired last week. O'Connell said the removal and cleanup will start tomorrow, Wednesday at about 8 a.m.



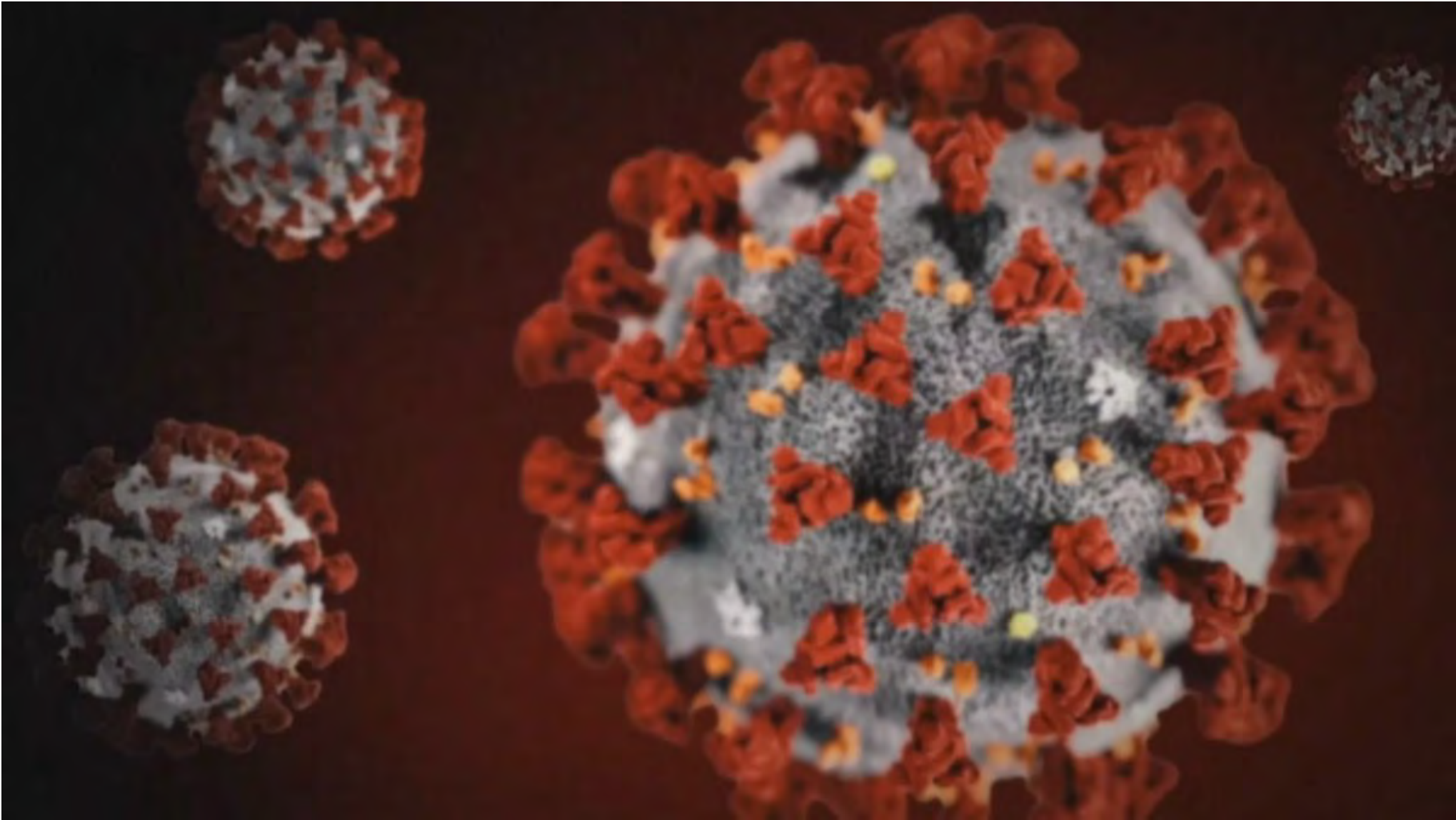
Bob Conrad is publisher, editor, and co-founder of This Is Reno. He has served in communications positions for various state agencies and earned a doctorate from the University of Nevada, Reno in 2011, where he completed a dissertation on social media journalism and crisis communications. In addition to managing This Is Reno, he has a part-time research appointment for the Mineral County University of Nevada Extension office.






Winter Weather Advisory Is In Effect



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First case of South African COVID variant confirmed in Reno



COVID (WDBJ7)
Published: Feb. 17, 2021 at 11:50 AM PST | Updated: Feb. 18, 2021 at 10:49 AM PST
    

RENO, Nev. (KOLO) - **UPDATE:** The Nevada State Public Health Lab has confirmed the first case of the South African variant of COVID-19 in the area.

The new strain was detected in a sample collected in Reno. The NSPHL sequenced the specimen on Saturday, Feb. 13, and through further analyzation of the data that detected the B.1.351 strain, confirmed it as the South African variant on Wednesday, Feb. 17.

According to the [Centers for Disease Control and Prevention](#), the variant has been detected in 10 U.S. states, to-date.

The B.1.351 strain was traced back to a traveler from South Africa who became symptomatic after arriving in Reno.

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Dr. Pandori says this strain “may be less susceptible to neutralizing antibody such as those generated by vaccines, but it is not yet known to cause a more severe illness and is not thought to be more lethal than the regular COVID-19 strain.” He added that “there is some evidence that it may be less susceptible to vaccine-mediated immunity, however it does not render the COVID vaccine totally ineffective.”

“The virus is copying itself very often now, and that is what leads to variation. It happens through a process called ‘mutating’,” says Pandori. “The more a virus spreads in a community, the more opportunities it has to make mistakes when it copies itself. This leads to what we see here and it’s a very natural part of viral evolution.”

More information is expected Thursday during a news conference.

ORIGINAL STORY: The Washoe County Health District says there is a possibility there may be a case of the South African variant of COVID-19 in the area.

A traveler returned from South Africa and has since tested positive for COVID. The state lab is working to confirm whether the patient has a variant of the disease.

Washoe County Health Officer Kevin Dick says, even if the variant has not been confirmed, “We do know that the variants are out there. We do have international travel occurring. We also have people in this country who have tested and have the UK variant who have not traveled, don’t have that travel history.” Dick adds if the variants are not in Northern Nevada yet, the variants will reach the area eventually because of how fast the variant forms spread.

The Health District says it has administered nearly 38,000 vaccines to date. 6.5% of Washoe County residents are now fully vaccinated against COVID-19.

Researchers are trying to determine if the current vaccinations against COVID-19 are also effective against the South African or other variants. Experts are concerned about the COVID mutations because they appear to spread more readily and there is concern about whether the vaccines in use will be effective against them.

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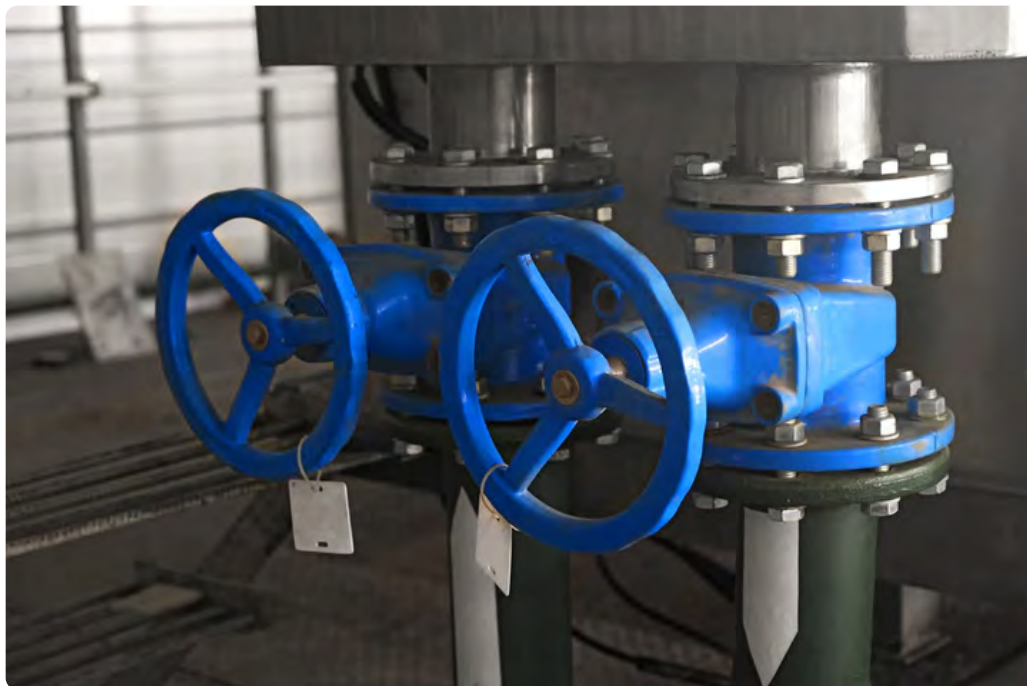


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Industrial wastewater treatment market set to grow through 2027, report finds

Feb 18th, 2021



Denis Trofimov | Dreamstime.com

The global industrial wastewater treatment market, valued at around \$89 billion in 2018, is anticipated to expand at a compound annual growth rate (CAGR) of more than 5% between 2019 and 2027, according to a report from Transparency Market Research.

The power end-use industry segment accounted for a prominent share of the global industrial wastewater treatment market in 2018. This led to an increase in the adoption of industrial wastewater treatment in the power industry in 2018.

The Asia Pacific industrial wastewater treatment market is anticipated to be one of the high-growth regions of the global industrial wastewater treatment market, led by the rise in scarcity of freshwater sources and increase in water pollution.

Rise in water pollution has resulted in a decline in the availability of freshwater for drinking and other human consumption purposes. Increasing scarcity of freshwater sources, rise in pollution, and industrialization have led to a water crisis across the globe, especially in developing and under-developed nations. Wastewater treatment and reuse of recycled water in industries can lower the pressure on existing freshwater sources from industrial applications. This can boost the availability of water for other purposes.

Increase in awareness about the environment and rising water scarcity have compelled authorities to implement stringent rules and regulations regarding industrial wastewater treatment across the globe. Countries are compelling industries to focus on wastewater treatment and recycling to reduce the burden on water sources.

Regulatory authorities are now making it essential for industries to opt for zero liquid discharge (ZLD) in order to recover 95% to 99% of water from waste streams, and reuse the water for industrial applications. The implementation of new technologies such as Forward Osmosis (FO) membranes and electro-separation systems in the field of ZLD presents new opportunities for the industrial wastewater treatment.

In terms of application, in the industrial wastewater treatment market, the boiler feed water segment constituted a prominent share of the global industrial wastewater treatment market in 2018. Boilers find application in almost every industry, either for power generation or steam generation, or for both. However, the cooling towers segment is anticipated to expand at a rapid pace during the forecast period.

The power end-use industry segment dominated the global industrial wastewater treatment market in 2018. However, the paper & pulp segment is estimated to expand at a rapid pace during the forecast period. The paper & pulp industry consumes large quantities of water. It also generates vast quantities of wastewater. Water is a major raw material in the pulp & paper industry; therefore, treating wastewater and reusing it can significantly lower the dependency of the industry on other sources of water.

For more information, go to
<https://www.transparencymarketresearch.com/pressrelease/industrial-wastewater-treatment-market.htm>

[View this email in your browser](#)



A truck loads rock into a hauler at a Northern Nevada mine in April 2017. (David Calvert/The Nevada Independent)

Indy Environment: Open government advocates worry proposed legislation will conceal deliberations about environmental issues. That's only half of the story.

Please tell your friends and colleagues about this newsletter by forwarding it along!

As always, we want to hear from readers. Let us know what you're seeing on the ground and how policies are affecting you. Email me with any tips at daniel@thenvindy.com

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The federal government requires them. Standard confidentiality clauses.

The agreements are rarely discussed. But they are central to [SB77, a proposed state Senate bill](#) that could exempt certain pre-decisional meetings and records involving environmental issues from the Open Meeting Law and Public Records Act. Eureka County, a main proponent of the bill, has argued a change is needed to comply with both the federal agreements and state law.

April Corbin Girnus wrote an [excellent piece about the issue for the Nevada Current](#): Right now, counties are often hampered by confidentiality rules. To discuss issues, they are stuck between following (or breaking) the federal confidentiality agreements and the state's transparency laws.

But open government advocates have argued that the proposed bill would limit transparency in a process that has real-world consequences — whether mines are approved or power lines are erected. Ahead of a recent hearing, a coalition representing

environmental groups, civil liberty advocates and news organizations, sent an opposition letter that's worth reading ([here's a link](#)).

It is worth noting, too, that Eureka County's natural resource manager, Jake Tibbitts, said the county opposes changes to the Public Records Act, and he is working to amend the drafted bill.

"If this were to move forward, we're totally open to stripping out all of that," he said.

What struck me was why this bill was proposed in the first place. When the legislation was [floated last fall](#), it was the first time I had heard of these federal confidentiality agreements. Given the federal government's large role in permitting projects, they struck me as significant.

Before I get into that, some incredibly technical (but important!) background:

Every year, dozens of local governments, tribes and state agencies participate in what is known as the NEPA process. NEPA stands for the Nevada Environmental Policy Act. A lot can be said about it, but for now, the most important thing is that it requires federal agencies to analyze the environmental consequences of projects on federal land — and the outcome is significant.

Nevada is about 85 percent federal land, so there are a lot of NEPA proceedings happening at any given time — and in many different corners of the state. When a federal agency starts the NEPA process, they invite local and state agencies to act as "cooperating agencies" during the crafting of an environmental analysis. It allows local and state agencies to convey opinions in an otherwise federal process. **But there's a downside: This is where confidentiality comes in.**

These cooperating agencies — Churchill County or the Nevada Department of Transportation, for instance — must sign agreements with federal land managers, like the U.S. Bureau of Land Management (BLM). But the agreements, a BLM spokesperson said, include standard language about confidentiality to prevent the "release of predecisional information or working documents."

That puts a jurisdiction like Eureka County, an entity governed by three county commissioners, in a tough position. The county, at the center of the state's gold mining activity, wants to have a say in the process for analyzing environmental impacts. To participate, they must agree to keep information confidential. At the same time, the Open Meeting Law requires that elected officials deliberate in public. But if they deliberate in public, they risk breaking the confidentiality clause.

In 2009, the [BLM chastised the county](#) for doing just that: The *Eureka Sentinel* disclosed a report that showed pumping associated with a controversial molybdenum mine would have

big effects on water. The disclosure suggested that the county broke its confidentiality agreement.

To avoid the issue, Tibbitts or one county commissioner typically represents the views of the county in the NEPA process. But state law limits their discussions with other elected officials.

“It's been a whole struggle for me the whole time I've been here,” Tibbitts said.

This is especially a problem in rural counties that have small staffs or lack departments devoted to natural resources issues. Instead, a single county commissioner might take the lead in representing a county's interests without being able to deliberate with their colleagues.

But is Open Meeting Law the best venue by which to address the issue? That's another question.

Open government advocates and environmentalists say no. They argue that a federal fix to the confidentiality language, stemming from the “deliberative process exemption,” might be needed.

“The answer isn't less transparency,” said Patrick Donnelly, the state director for the Center for Biological Diversity. “The answer is more transparency. Let's not make things worse.”

Donnelly sees SB77, as written, fitting into efforts to weaken state law around open government.

He is also watching [AB39, an Assembly bill](#) that would exempt agencies from disclosing their deliberations prior to making a decision. Such a move would make it harder for the public to understand the interagency process, and in some cases the science, informing decisions.

“It would eliminate transparency,” he said. “Most public records requests I've ever done, which have resulted in important finds for our conservation campaigns, would have been exempted.”



Native vegetation two miles north of Sloan Canyon National Conservation Area. (Jeff Scheid/The Nevada Independent)

Here's what else I'm watching this week:

CLIMATE CHANGE

The Clark County Commission meeting. Yes, I'm aware that everyone tuned into the Clark County meeting on Tuesday for a different item: To watch the commissioners vote to change the name of the Las Vegas airport, currently dedicated to former Sen. Pat McCarran, a virulent and well-documented bigot. Now, [with the FAA's approval](#), it will be named for one former Sen. Harry Mason Reid. But all that to say, there was another big item on Tuesday's commission agenda:

- **The Clark County Commission gave its unanimous approval to a climate action plan** ([here's a link to the plan](#)). It's a major step for the state's largest local government. With the majority of Nevada's population, Clark County could play a key role in planning for more extreme heat and drought. "The impacts of climate change are very real and they are upon us," commission Chairman [Marilyn Kirkpatrick said Tuesday](#). "As a county set in the Mojave Desert, we know what's at stake with our water and energy supply and intensifying heat island impacts. This plan recognizes those unique challenges."

“First-hand experience:” Assembly Speaker Jason Frierson cited “Nevada’s diverse population and first-hand experience in issues relating to climate change, public lands, immigration and health care” as reasons why we have “a unique voice that deserves to be heard first” in nominating presidential candidates. Why we aren’t already first? I don’t know. [POLITICO’s Tyler Pager and David Siders have more on that.](#)

Natural gas in the Legislature: Gov. Steve Sisolak’s climate strategy [recognized the need to transition away from natural gas](#) to meet a goal of reducing total greenhouse gas emissions to net-zero by 2050. As I’ve [written about before](#), this issue is coming to Carson City. Earlier this month, Assemblywoman Lesley Cohen (D-Henderson) wrote an [opinion piece for The Nevada Independent](#) about why she is proposing legislation that would require gas utilities to undergo a more rigorous regulatory process when building new infrastructure. The bill would also require that state utility regulators study natural gas in the context of the state’s climate goals. Nevada’s largest gas utility, Southwest Gas, responded to the op-ed on [Nevada Newsmakers last week.](#)

The natural gas PR-person Nextdoor: [Mother Jones climate reporter Rebecca Leber digs](#) into the tactics that the fossil fuel industry is using to influence customers to believe that natural gas stoves are preferable to electric stoves. The story includes an example from California, where an employee for a PR firm logged onto Nextdoor to stir up opposition to an electrification effort. Spoiler: There are Instagram influencers too. The reporting provides context for how the natural gas industry is doubling down on past efforts to sell gas stoves amid efforts to reduce fossil fuel use to combat climate change and a growing recognition of the health problems caused by indoor air pollution.

Texas, the electric grid, and climate change: The [L.A Times’ Sammy Roth writes](#) that “for all the differences between the events in Texas and California’s [more limited rolling blackouts](#) last year, there’s a common lesson: Extreme weather events are becoming more frequent and more severe as the climate crisis worsens. And the U.S. power grid is not prepared to handle the hotter heat storms, more frigid cold snaps and stronger hurricanes of a changing planet.”

- **No, frozen wind turbines were not the main culprit in Texas** ([via Texas Tribune](#)).
-



The Black Rock Desert in 2020. Blockchains purchased water in a nearby area. (David Calvert/The Nevada Independent)

WATER AND LAND

Shout it from the rooftop: You can't build a new city without water. When I heard Gov. Steve Sisolak tout Blockchains LLC in his State of the State — with the words “smart city” — I could not help but ask about the water. We started digging, and what we found was that Blockchains, a big donor to politicians (and *The Nevada Independent*), [wants to pipe water from rural Nevada](#). It scooped up water rights in northern Washoe County for more than \$30 million and has also looked elsewhere, including in Humboldt County. **The big takeaway here:** Development of any sort, though especially a new city, is a question of natural resources as much as anything else.

Rancher sues BLM over lithium mine: A Northern Nevada rancher is suing the U.S. Bureau of Land Management over the Trump administration's approval of the Thacker Pass lithium mine north of Winnemucca. The lawsuit alleges that the land agency's approval, in the final days of the administration, violated environmental laws, the [Sierra Nevada Ally's Scott King writes](#).

Judge rules against lifting mining moratorium: “A federal judge on Thursday overturned a Trump administration action that allowed mining and other development on 10 million acres (4 million hectares) in parts of six western states that are considered

important for the survival of a struggling bird species,” [Matthew Brown reported for the Associated Press last week](#). A District Court judge ordered the Bureau of Land Management to reconsider the Trump administration’s decision, which did not fully consider how it would affect the imperiled Greater sage grouse.

The commission to study water law: A few weeks ago, we reported that Supreme Court Chief Justice James Hardesty planned to empanel a commission to study how water law is viewed in the judicial system and examine whether to create speciality water courts. An order requesting the creation of such a commission [is now online](#), and a public hearing is scheduled for March 3.

Reno attorneys fined in Swan Lake flooding lawsuit: A Washoe County District Court judge fined City of Reno attorneys “\$1,500 for failing to admit to facts in the Swan Lake flood case filed by Lemmon Valley residents,” Bob Conrad reported for [This is Reno](#). “The sanction is on top of awarding more than \$750,000 in damages to plaintiffs in the case. The award does not include attorney fees, which could double the amount owed to plaintiffs and attorneys.”

Contact tracing in wastewater: “Findings from wastewater testing suggest the U.K. variant of the coronavirus is circulating in Southern Nevada, according to one UNLV researcher, but the prevalence of the more contagious variant is unclear,” the [Review-Journal’s Blake Apgar writes](#).

Some ranch sales are just [out of this world](#).

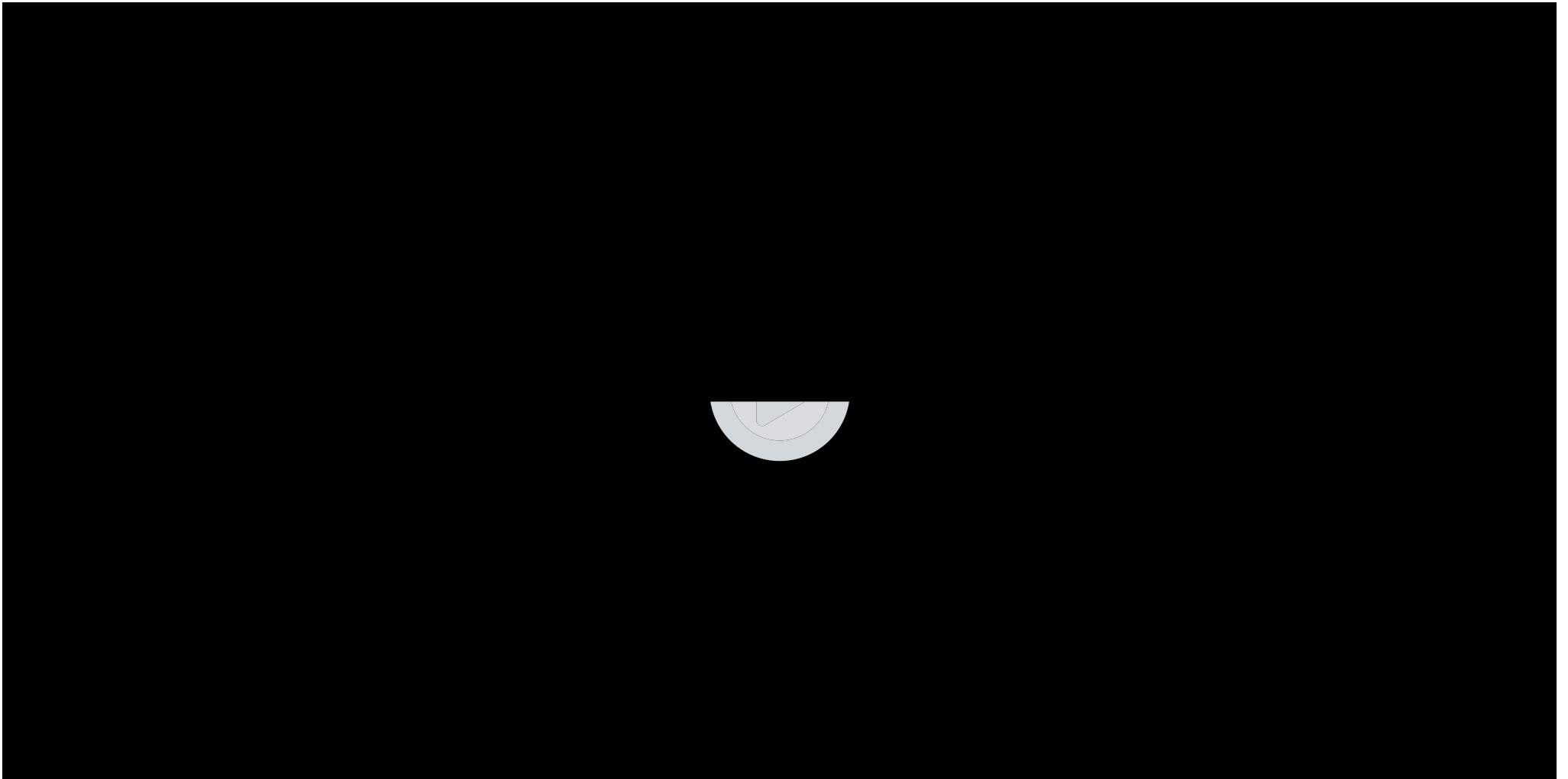
OUTDOOR RECREATION

Boost in outdoor activities: The Nevada Department of Wildlife (NDOW) saw a jump in hunting and fishing license sales during the pandemic — and 2021 is expected to be better, Sudhiti Naskar reports for [This is Reno](#). Our reporter Tabitha Mueller [broke down the numbers](#) in our legislative newsletter ([you should sign up](#) to receive it). “If there is a silver lining, it’s in people’s turning to nature for mental health, or physical health,” NDOW Director Tony Wasley said in January.

Where to see dark skies: The *Reno Gazette Journal* [has a few suggestions](#).



Sparks Police HOPE team offers services to illegal campers along Truckee River



By [Audrey Owsley](#)

Published: Feb. 17, 2021 at 11:31 AM PST

SPARKS, Nev. (KOLO) - More than 40 people illegally camped along the Truckee River in Sparks were moved and offered services Wednesday by the Sparks Police Homeless Outreach Proactive Engagement (HOPE) Team.

The HOPE Team's goal is to offer services and assist those experiencing homelessness by working with various organizations and charities to help those in need prior to any enforcement action being taken.

"For the safety of campers and patrons of the river and park, we coordinated efforts with our regional partners to provide services to those illegally camping at Gateway Park and along the river," said Sparks Police Chief Chris Crawforth. "We offered emergency shelter, transitional housing, food, medical care, behavioral health services, trash clean up assistance, relocation services, and other support to individuals at Gateway Park."

The HOPE team has visited Gateway Park to offer services 33 times since November 2020. Police said homeless camps in that area have led to calls for service for crimes committed including petty theft, illegal campfires, indecent exposure, threats, and drug sales.

Police said several people accepted services offered including five choosing to go into shelters, two accepting substance abuse treatment, and three given bus tickets to reunite with family members. No citations were issued, or arrests made.

Officers informed those who chose not to accept services that they could voluntarily go to the men's or women's shelters or other housing where beds are available.

Community organizations that helped with the outreach efforts include Health Plan of Nevada, Foundation for Recovery, Valley View Christian Church, Mobile Outreach Safety Team (MOST), Karma Box, Veterans Services, and Reno Initiative for Shelter and Equality (RISE).

Sparks Public Works maintenance crews also expect to remove about 200 yards of trash and debris from Gateway Park.

If you or someone you know is in need of the H.O.P.E. team's services, you can reach out to hope@cityofsparks.us or you can call Sparks dispatch at (775) 353-2231.

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News Releases from Headquarters › Water (OW)

EPA Takes Action to Address PFAS in Drinking Water

02/22/2021

Contact Information:

EPA Press Office (press@epa.gov)

WASHINGTON — Today, the U.S. Environmental Protection Agency (EPA) issued two actions to protect public health by addressing per- and polyfluoroalkyl substances (PFAS) in drinking water, highlighting the agency’s commitment to address these long-lasting “forever chemicals” that can enter drinking water supplies and impact communities across the United States. The Biden-Harris administration is committed to addressing PFAS in the nation’s drinking water and will build on these actions by advancing science and using the agency’s authorities to protect public health and the environment.

“All people need access to clean and safe drinking water. One way that EPA is committed to keeping our communities safe is by addressing PFAS,” **said EPA Acting Assistant Administrator for Water Radhika Fox.** “These actions will underpin better science, better future regulation, and improved public health protections.”

Taken together, these two actions will support the agency’s efforts to better understand and ultimately reduce the potential risks caused by this broad class of chemicals. EPA is reproposing the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) to collect new data on PFAS in drinking water and the agency is reissuing final regulatory determinations for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) under the Safe Drinking Water Act (SDWA). After a thorough review in accordance with Biden-Harris administration executive orders and other directives, the agency is reissuing these actions. EPA will build on them using a strong foundation of science while working to harmonize multiple authorities to address the impacts of PFAS on public health and the environment. EPA is also committed to a flexible approach and working collaboratively with states, tribes, water systems, and local communities that have been impacted by PFAS.

With the final Regulatory Determinations for PFOA and PFOS, EPA will move forward to implement the national primary drinking water regulation development process for these two PFAS. The Regulatory Determinations also outline avenues that the agency is considering to further evaluate additional PFAS chemicals and provide flexibility for the agency to consider groups of PFAS as supported by the best available science.

Additionally, the proposed UCMR 5 would provide new data that is critically needed to improve EPA’s understanding of the frequency that 29 PFAS are found in the nation’s drinking water systems and at what levels. EPA will accept public comment on the proposed UCMR 5 for 60 days, following publication in the Federal Register. EPA will also hold a virtual stakeholder meeting twice during the public comment period.

For more information, visit www.epa.gov/safewater.

LAST UPDATED ON FEBRUARY 22, 2021

Company Behind Proposed Tech City Already Owns Water Rights

Tweet Share on Facebook Share on Google+ Email

blockchains_llc.jpg



[eyrc.com/blockchains llc](http://eyrc.com/blockchains_llc)

[Link to audio](#)

Feb 22, 2021

by

Bert Johnson

A futuristic tech metropolis in the desert, [companies that operate their own governments](#) – and blockchains, the complicated technology that lies behind Bitcoin.

It sounds like science fiction, but a proposal to let Blockchains LLC start its own city in Nevada made national headlines, even though it hasn't officially been introduced in the Legislature yet.

If lawmakers approve the plan, it would allow developers to create so-called "innovation zones" as long as they own at least 50,000 acres of land. But in Nevada, the limiting factor for new development isn't land – it's water.

Daniel Rothberg is an environment reporter with the Nevada Independent. He just published an article looking at [water rights purchased by Blockchains LLC](#), the tech company pushing for the new law.

The water rights it purchased are from the northern part of Washoe County near Gerlach, best known for hosting the Burning Man Festival in the nearby Black Rock playa.

"What struck me was how far away it was from the land that they owned," Rothberg said.

The land where Blockchains plans on building its own city is about 100 miles south near the Tahoe Reno Industrial Complex.

The company bought 7,000 acre-feet of water from two different groundwater basins.

Water rights in the West are complicated, Rothberg said.

"Basically, what's important here is that the industrial center is on the Truckee River and in the Truckee River Watershed, which is where Reno and Sparks and Washoe County get its water," he said.

Which means, that Blockchains can't access the water it needs for its city because it is already been allotted.

"It's a classic case in the West where water is scarce in this area," he said.

Add to that, the Truckee River flows into Pyramid Lake, which is within the boundaries of the Pyramid Lake Paiutes land. The lake saw significant water loss when water was diverted to Fallon for agriculture.

That water loss threatened fish species in the lake. Rothberg said decades of work on every level of government, including from former Senator Harry Reid, led to the lake's recovery.

"As a result of that, there is a lot of rules and operating agreements and regulations that govern the Truckee River and that watershed. So, any new development on this scale that all comes into play," he said.

There is another layer to Blockchains plans. Pumping water from a rural area to feed an urban development often comes with pushback from the rural area, Rothberg said.

"Oftentimes when water is taken out of a rural area and transferred to a city, it impacts the economy of that rural area. It impacts, potentially, the future growth and the future uses of that water and that's a basis for why some of these rural areas often protest," he said.

To add to that, environmentalists point out there is environmental damage that comes with pumping water out of the ground for consumptive use in a city.

Pumping and moving water is expensive and difficult because water is very heavy, Rothberg said, which is why it will always be a stumbling block to developing large swaths of land in Nevada.

"If you're not getting your water from a Southern Nevada Water Authority or a Truckee Meadows Water Authority and sort of going off on your own, it can be very difficult to develop," he said.

What could be in it for the state are jobs outside of the tourism industry, which took an enormous hit during the coronavirus pandemic.

"Blockchains has promised to invest a significant amount of money and create jobs over time in this new city," Rothberg said.

But the company wants to manage its own affairs because of how local governments operate.

"Blockchains argues that they cannot undertake this sort of master-planned development within the confines of current local government. That local government moves too slowly, doesn't adopt technology quite as much," he said.

Rothberg said Gov. Sisolak's mention of Blockchains and its innovation zone plans in his State of State address is notable. He also pointed out that Blockchains has contributed money to Sisolak's campaign and to the political action committee connected to the governor.

If the Legislature does pass the innovation zone bill, Rothberg has a lot of questions about how it would operate besides just the water issue. For instance, how will it deal with services like sewer and waste collection? He pointed out that local governments struggle with these problems - so how will a new government, run by a corporation, do it?

Nevada Supreme Court to consider creating commission to study water law cases



View [View items](#)

Submitted by [Jeff Munson](#) on Mon, 02/22/2021 - 12:28pm



CARSON CITY, Nev. — Nevada Supreme Court Chief Justice James W. Hardesty filed a petition requesting the Nevada Supreme Court consider creating a commission to study the adjudication of water law cases in Nevada's courts.

The Supreme Court has scheduled a public hearing on the petition on March 3, 2021 at 3 p.m. The hearing will be conducted virtually and may viewed on the Nevada Supreme Court www.nvcourts.gov/supreme

Those that are interested in participating in the hearing may join at bluejeans.com, click on "join meeting," enter meeting ID 479 664 551, and enter the participant code, 1351.

A call-in option is also available at 1-408-419-1715, enter meeting ID 479 664 551, and use the participant passcode 1351.

The Court invites additional written comments from the bench, bar, and general public pertaining to ADKT 576. Interested parties may submit their comments electronically or in hard-copy format to Elizabeth A. Brown, Clerk of the Supreme Court, 201 South Carson Street, Carson City, Nevada 89701 or

nvscclerk@nvcourts.nv.gov. Comments must be submitted by February 23, 2021 at 5 p.m.

Go [here](#) to view and download the order on the Nevada Supreme Court's website.

NEWS

EPA steps in to extract boat possibly leaking oil in Lake Tahoe

Amy Alonzo Reno Gazette Journal

Published 4:07 p.m. PT Feb. 23, 2021 | Updated 1:18 p.m. PT Feb. 25, 2021

A submerged boat that was allegedly leaking oil was extracted Tuesday from Lake Tahoe.

After local and state agencies struggled for a month to locate the owner of a boat submerged off the shore of Lake Tahoe and enough funding to removal the vessel, the Environmental Protection Agency stepped in to remove the boat after someone reported on Facebook that it was leaking oil.

More: Tahoe officials: Oil leaking from sunken boat 'minuscule'; agencies working to extract vessel
The EPA contracted with High Sierra Marine Inc. for \$20,000 to extract the nearly 40-foot cabin cruiser, which sunk about 300 yards offshore from Pope Beach Road in South Lake Tahoe between the Tahoe Keys and Emerald Bay.

The boat, which was reportedly stripped and in the middle of being refurbished, appears to have sunk in about 15 feet of water due to heavy waves.

The boat was first reported as submerged on Jan. 15. On Feb. 15, a social media post showing the boat with a sheen of oil around it started circulating on Facebook.

When the Tahoe Regional Planning Agency was notified of the potential oil leak, the agency notified the California Department of Fish and Wildlife Office of Spill Prevention and Response. The office is affiliated with the EPA, and “within a day or two, they said we have funding available we are going to come get the boat,” TRPA Public Information Officer Jeff Cowen said.

Agencies including TRPA, Lahontan Regional Water Quality Board, the Coast Guard, the California Department of Fish and Wildlife’s Office of Spill Prevention and Response and the El Dorado County Sheriff’s Office were involved in trying to locate the boat’s owner, find funding for the extraction and monitor possible oil leaks.

More: Nonprofit hopes to restore Lake Tahoe's clarity with dog treats made of shrimp

When the boat was first reported, the U.S. Coast Guard responded and did not find any oil leaks, nor did they on subsequent visits, Cowen said.

But a Feb. 15 Facebook post by Michael Buchanan Clark showed a sheen on the water around the boat.

“We should all be absolutely outraged that this situation continues,” he wrote.

But “every time response agencies have gone out, they haven’t found a sheen,” Cowen said.

Agencies also struggled to locate the owner of the boat, who they eventually discovered is dead. His next of kin have not assisted with the boat’s removal.

Cowen said the boat will be disposed of.

The boat was removed Tuesday in a several-hour procedure.

“We are really looking forward to this being over,” Cowen said.

This story has been updated to remove a reference to the boat possibly being auctioned off.

Amy Alonzo covers the outdoors, recreation and environment for Nevada and Lake Tahoe. Reach her at aalonzo@gannett.com or (775) 741-8588. Here's how you can support ongoing coverage and local journalism.

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NV Energy's plan to avoid a Texas-sized energy supply disaster next summer



()

Power lines from Hoover Dam stretch through Eldorado Valley south of Boulder City on Friday, June 16, 2016. Photo: Jeff Scheid / The Nevada Independent

Riley Snyder | The Nevada Independent

As of Tuesday, February 23, 2021 (</news/2021/feb/23/nv-energys-plan-avoid-texas-sized-energy-supply-di/>)

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In Texas last week, a massive winter storm froze the state's electrical grid and left millions without access to reliable electricity, natural gas or even clean drinking water for days.



Water Bill Payment Assistance in Multiple Federal Coronavirus Relief Programs

FEBRUARY 22, 2021 / SHADI ESKAF / 0 COMMENTS

At the time of this writing, Congress is debating passing another economic stimulus bill to provide relief against the COVID-19 pandemic. As the pandemic created hardships throughout the country for a year, the U.S. government passed two stimulus bills in 2020 that created or funded multiple financial relief programs for various needs. While there is no program that specifically provides relief to water and wastewater utilities' losses in revenue, there are [several programs funded through the two federal relief bills](#) that can help customers pay past due or current water and/or wastewater bills ("water bills" for short). Water bill payment assistance relieves some of the financial burden on customers that are in most need, and also provides utilities needed revenues to cover [unpaid bills and prevent shutoffs](#) in many cases. While there is financial assistance to pay water bills, the fragmentation of the programs can be complicated to navigate. This blog post provides a summary and links to [our new factsheets](#) that describe several federally-funded coronavirus relief programs to date that may be used to pay water bills. Information about where customers can go for help is provided.

What and who do the federal coronavirus relief programs fund?

Most – all but one – of the programs described here do not provide specific financial relief to explicitly cover water/wastewater utilities ("water utilities"). In fact, the programs generally are funded to provide relief for multiple needs, of which payment to water utilities are included. Relief is usually tied to housing (mortgage or rent) and various other utilities (including electric, natural gas, etc.). This means that the funds available for water are shared with other basic needs and services, many of which impose a far greater financial burden on households than water and are expected to receive a much larger share of the relief funds.

There are also different eligibility criteria for the different programs. Whether a customer is residential or commercial, a homeowner or renter, low income or moderate income, and/or is or is not affected directly by the pandemic affects their eligibility for different programs. This complexity is only a consequence of funding multiple existing programs that have different purposes and priorities, but the distribution of funds across multiple programs in fact increases the chances that customers of various characteristics might be eligible for at least one source of financial relief to help pay for water bills.

Which programs received federal coronavirus relief funds that may be used to help pay for water bills?

As of February 2021, two economic stimulus bills have been passed while a third is being debated. This post summarizes the coronavirus relief funds in the two bills that were passed.

The Coronavirus Aid, Relief, and Economic Security (CARES) Act, signed in March 2020, provided funds for the following that may be partially used to assist customers with water bills:

- The Coronavirus Relief Fund (CARES Act assistance for State, Local, and Tribal Governments)
- Community Development Block Grant CARES Act (CDBG-CV)
- Emergency Solutions Grant CARES Act (ESG-CV)
- Small Business Paycheck Protection Program

In December 2020, the Consolidated Appropriations Act, 2021 extended those programs, and additionally funded:

- Low-Income Household Drinking Water and Wastewater Emergency Assistance Program (read more below)
- Emergency Rental Assistance Program

Both of which provide significantly more funds that can be used for utility payments.

Download one-page factsheets about each of these funds and how they relate to assistance for water bills.

The first-ever federal program providing financial relief to low-income households exclusively to pay for water and wastewater bills

Among the myriad of existing funding programs that the federal government infused with relief funds during the pandemic, a brand new program was created that – for the first time – provides financial relief exclusively for water and wastewater bills. In December 2020, \$638 million was designated in the Consolidated Appropriations Act, 2021 to a new nationwide Low-Income Household Drinking Water and Wastewater Emergency Assistance Program. The program will assist low-income households that pay a high proportion of their income for drinking water and wastewater services by paying the utilities to reduce the households' arrearages and bills. Details about this program are not yet announced. The U.S. Department of Health & Human Services (HHS) will administer the program at the federal level, and distribute the \$638 million to states and tribal governments based on the proportion of households in their jurisdictions that have income at or below 150% of the Federal poverty line, and the percentage of households that spend more than 30% of their monthly income on housing.

Household eligibility criteria, the application process, and even which state agencies or partnering organizations will be involved in this program to provide assistance to households are all yet to be determined. The Act encourages the use of existing programs to provide assistance to low-income households, but does not require those existing programs to be focused on water bill payment assistance programs. The Act requires that payments be made to the water and wastewater utilities directly on behalf of the eligible households to reduce their arrears and/or bills.

The creation of a national low-income household assistance program to help with water bills is welcome news since water rates have been [rising faster than inflation](#) and [faster than household income](#) in recent years. More and more households need assistance to afford their bills, and [the COVID-19 economic conditions have compounded the need](#).

Duplication and coordination

With multiple programs potentially available to assist customers pay for water bills, the program administrators are required to document the eligibility of the covered costs and to ensure there is no duplication of assistance. In other words, that customers are not “double dipping” to receive assistance for the same water bills across different programs. In addition, the relief programs will send payments directly to the water utilities on behalf of the people they are helping. For both reasons, there will likely be coordination and communication between the organizations assisting households and their water utilities.

Where should customers go for help?

Although the coronavirus relief programs are administered by federal agencies, the funds are distributed to states and territories, a few large local governments, and tribal governments (see the factsheets from [more info](#) and for links to see the allocations). Some of those grantees are administering the funds themselves, or partnering with local governments and/or other organizations to provide the assistance to people directly.

In addition to these coronavirus relief funded-programs, many water/wastewater utilities, municipal and County departments, charities, Community Action Agencies, and other non-pro had long before set up bill payment assistance programs that help low-income households locally. We have blogged about local customer assistance programs before, and whether water utilities are able to use their own revenues to fund a bill payment assistance program. (If your utility is considering starting a bill payment assistance program using funds from any source, you can use this [calculator](#) to estimate how much funding will be needed to meet the projected demand based on your program design). These local programs already have the processes in place to validate the need of households and assist them in paying their bills. Some may also be partnering with the government programs administering the federal coronavirus relief funds.

The multiplicity of assistance programs can lead to confusion among people and utilities, but also can enhance outreach and support. There are several websites that attempt to list the programs that people can go to for assistance with water bills; too many to list here. Please feel free to suggest useful links that list multiple bill payment assistance programs in the comments below.

In most cases, people should assistance program or has other ways to assist its customers. Next, they should contact local charities and the County’s human services or social services department to that might be providing bill payment assistance for those in need. Another avenue is to check 211 to see if the state, territory or tribal government has a regional program. For instance, United Way and 211 in North Carolina are hosting the applications for the State of North Carolina’s NC HOPE program that is set up to administer the federal coronavirus relief funds for utility assistance.

Updates, and more coronavirus relief funds on the way?

Water bill payment assistance programs will very likely continue to evolve and may receive additional funds in the future. As of now, Congress is debating a third relief bill which would include more financial assistance that can be used for water bills. While the details may change, additional funds are currently proposed to supplement some of the programs listed above (including the Low-Income Household Drinking Water and Wastewater Emergency Assistance Program) as well as to establish a Homeowner Assistance Fund that might provide assistance on utility bills. As more is determined on the existing or possibly new programs, particularly about the Low-Income Household Drinking Water and Wastewater Emergency Assistance Program, we will update the resources and blog.



Knapp-Sanders Building Campus Box 3330, UNC Chapel Hill Chapel Hill, NC 27599-3330
T: 919 966 5381 | F: 919 962 065

Weather Alert: Winter Storm

(/weather/alerts)



Reno

39°

(/weather)

NEWS

Local Researchers Help Make Snow Forecasting More Accurate

We usually think of 32 degrees for snow to fall, but one study is showing that can happen at Lake Tahoe with temperatures closer to 39 degrees.

Wednesday, February 24th 2021, 5:47 PM PST

Updated: Thursday, February 25th 2021, 3:02 PM PST

By **Angela Schilling**



We usually think of 32 degrees as the cutoff line between rain and snow, but one study is showing that can happen at Lake Tahoe with temperatures closer to 39 degrees. The reason why is very complex, and involves our elevation, as well as wind, evaporation, and melting processes.

"We get a lot of winter storms that are fairly on the warm end. They are near freezing so our ability to know how much water is falling from the sky changes if we do not have that threshold right," said Education Program Manager Meghan Collins at DRI.

Most computer models have that threshold wrong for the Lake Tahoe area. But a local study, done by the Desert Research Institute, Lynker Technologies, and citizen scientists from the Tahoe Rain or Snow Project, hopes to change that. They've been collecting observations since 2019. They have over 200 volunteers, and collected around 1000 observations last snow season. They've collected about 600 observations this season already. This not only helps us understand our water supply but will also improve our flood management skills. One day their data could be used in weather models by NASA.

"So we engaged over 200 volunteers to help make real time observations of whether it is raining, snow, or mixed right now. So it's a very simple question but that answer has a really powerful result," said Collins.

Tiny bubbles aid new push to kill invasive weeds at Lake Tahoe

Published February 24 | Sierra Tahoe | Associated Press

STATELINE, Nev. - Researchers at Lake Tahoe are using tiny bubbles to combat the spread of invasive weeds that rob the alpine lake of its clarity.

Conservationists are partnering with local property owners to expand the use of the so-called "bubble curtains" to halt the spread of non-native plants in the waters straddling the California-Nevada line, the [Tahoe Daily Tribune](#) reported last week.

Sparks Luxury Rehab Centers You Have To See To Believe

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The technology has been used in conjunction with hydropower operations and to protect aquaculture operations and remove floating debris in places such as Florida, Northern California, the northeastern U.S. and Canada. It's proven effective since it was implemented in a channel at the Tahoe Keys on the lake's south shore in 2018.

The new wall of coating bubbles created by a compressor-powered hose on the lake bottom help dislodge plant fragments from boats as they leave the lagoon near South Lake Tahoe, California.

Fragments then get pushed to the side to be removed by a skimmer or other collecting device.

Unlike some other approaches, the curtains don't pose any hazards for fish or birds, which can easily swim through. They also are relatively cheap compared to other methods, costing from \$20,000 to \$30,000, plus electricity and annual maintenance costs.

The League to Save Lake Tahoe plans to add another curtain on the Keys' east channel and a third one at the Elk Point Marina on the Nevada side of the lake in a partnership with the Tahoe Keys Property Owners Association, Tahoe Regional Planning Agency and Elk Point HOA.

Jesse Patterson, the league's chief strategy officer, said the curtains help reduce the spread of weeds as officials try to get rid of the 172-acre (70-hectare) infestation at the Keys.

"If we want to address aquatic invasive species, we have to go to the source," Patterson said.

Patterson said the property owners association is continuously monitoring the curtain and has removed tons of fragments since its installation from two types of weeds: curlyleaf pondweed and Eurasian watermilfoil. Those are the two primarily aquatic invasive plants that cause the most concern.

About 90% of the Tahoe Keys are filled with the weeds. If left alone, they could grow so thick that a person could almost walk on top of them, Patterson said.

"I would argue that this (aquatic invasive plants) is the biggest threat to Lake Tahoe," he said.

Patterson said plant fragments are most prevalent from late July through September. The new curtains are scheduled to be installed in April or May.

City Council votes to appeal Swan Lake

By Bob Conrad | February 24, 2021



City Attorney Karl Hall. Image: Bob Conrad.

Reno City Attorney Karl Hall today pushed city council members to appeal a \$750,000 verdict against the city in the lawsuit filed by plaintiffs whose homes were destroyed and damaged during the 2017 flooding in Lemmon Valley.

He succeeded.

Hall said Washoe District Court Judge Barry Breslow made “numerous errors” in ruling for the plaintiffs.

Hall said Breslow’s errors included how the class action was certified, how liability was determined the awarding of \$750,000 in damages “was in error.”

Hall also said he wanted the Nevada Supreme Court to grant the city a new trial.

“We don’t believe liability was appropriately established,” he said. “It would give us clarity on what needs to be paid.”

However, the city will be liable for more damages and attorney fees if the court does not rule in the favor.

“If we were to lose and we were to pay the attorneys’ costs for the appeal, we’d probably be looking [about] \$50,000 in that general range,” in addition to the current award and about \$1.5 million in attorney fees and costs, Hall said.

Luke Busby, the plaintiffs’ attorney, said earlier this week he hoped the city council would deny Hal request.

“This case is over four years old, and everyone’s costs will only continue to rise if litigation continue he said. “The Plaintiffs are still living with the consequences of the flooding since it happened in ear 2017. Continuing the case only creates needless suffering for our clients and increased burden on C taxpayers.”

“The more we talk and the more we try to settle, the more attorney bills go up.”

Council members Devon Reese, Neoma Jardon and Bonnie Weber, who represents Lemmon Valley constituents, each voted for the appeal and spoke in favor of it. Council member Oscar Delgado, without making any comment, also voted in favor.

Reese said that since he's an attorney, he supported the advice of the city attorneys. He said the plaintiffs' attorneys saw the case as "a cash cow."

"They see a number of plaintiffs, a government entity, and ... it is not [the city] who caused the increase in fees and costs," he said. "It is the complexity of the nature of class actions and in particular some the choices that were made by these defendants at various times."

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Judge Breslow, however, said city attorneys were to blame for drawing out the case for a number of reasons. He chastised the city for what appeared to be the city fighting plaintiffs on a number of issues even after a jury found in favor of the plaintiffs. These included making arguments with no legal basis. Canceled Allow citations.

"The City raised legal and inconsequential factual challenges to [a plaintiff's] claims, but it failed to support those challenges with evidence that could be presented to the Court in a form that would be admissible and it conceded during oral argument that it had no evidence to offer in dispute of any of the claimed amounts," he wrote.

Hall estimated the appeal will take about six months.

Mayor Hillary Schieve and Council members Naomi Duerr and Jenny Brekhus were opposed to the appeal.

Duerr said that the plaintiffs have been unable to live in their flooded homes, for years.

"They have been out of their homes and [suffered damages] not just to the value of their property ... four solid years," she explained. "And now we're into the fifth year. You have to get an attorney [to fight these cases] on contingency. That is a big risk to a law firm."

"The more we talk and the more we try to settle, the more attorney bills go up. I don't think the residents should wait any longer."



BOB CONRAD

Bob Conrad is publisher, editor, and co-founder of This Is Reno. He has served in communications positions for various state agencies and earned a doctorate from the University of Nevada, Reno in 2011, where he completed a dissertation on social media journalism and crisis communications. In addition to managing This Is Reno, he holds a part-time research appointment for the Mineral County University of Nevada Extension office.



NV ENERGY ON TRACK TO MEET 50 PERCENT RENEWABLES BY 2030

Audio: Thirty percent of electrical power currently comes from renewable sources

By **Brian Bahouth** - February 25, 2021



Silver State Solar Power plant South, adjacent to Primm, Nevada - image - Basin and Range Watch

There are several small electric utilities in Nevada, but for the state to meet its Renewable Portfolio Standard (RPS) goal of 50 percent from renewable sources by 2030, Nevada's largest utility has to be an integral participant in the transition to lower-carbon emission energy sources.

NV Energy currently serves 1.5 million electricity customers in Nevada with some 2,400 employees. They also provide natural gas service to roughly 175,000 consumers in the Reno/Sparks area.

On Tuesday February 23, NV Energy CEO Doug Cannon gave a presentation to the Nevada Assembly Committee on Growth and Infrastructure. In the wake of the devastating failure of Nevada. He also gave an update on efforts to meet the state's RPS goals and the Greenlink Nevada energy transmission project, and more – listen: the power grid in Texas, Cannon told lawmakers why a similar failure isn't likely to happen in

See music credits below.

"Right now we have 56 utility scale, renewable energy projects throughout the state. Those are geothermal projects. Those are solar projects. We have a wind project. We have some small hydro projects, but it's a broad portfolio of renewable energy projects," Cannon said.

"Right now. We're serving our customers with just under 30 percent renewable energy. So, you know, I think a lot of folks probably don't recognize that, but 30 percent of the energy they receive every single day is renewable. And we are on track to achieve a 50 percent renewable portfolio standard by 2030, as was proposed by the legislature in this last session, and we are certainly focused on driving even more renewables.

"We have an aspirational goal of someday serving our customers with 100 percent renewable. We need to do that in a thoughtful and deliberate way. But we do believe it's a goal that can be achieved at the right time."

"We have more than 40,000 roof-top solar systems on our system now, that provide energy to the grid, that we work with those homeowners and compensate them for the energy that they provide the grid," Cannon said. "Right now, those homeowners are providing more than 500 Megawatts of energy to our system. That's equivalent to one of the really big power plants that you see as you're driving through Apex or if you drive down I-80 and you go past our Tracy power plant in Innovation Park," said Cannon. "That 500 megawatts is equivalent to some of the size of those power plants, so that's a significant amount of energy."



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Reimagining the CCR: A Simple Way to Build Trust in Our Water

Joya Banerjee and Samantha Villegas | February 25, 2021

Each year, 50,000 water utilities across the United States provide customers with a Consumer Confidence Report (CCR), reporting on drinking water quality, regulated contaminants such as lead or arsenic found in the water, and any water violations. But many CCRs are out of touch with what consumers need to understand their water and whether it is safe to drink.

The news today shows that the United States is experiencing a crisis of trust in government and science (https://www.washingtonpost.com/health/covid-trust-in-science/2020/10/11/b6048c14-03e1-11eb-a2db-417cddf4816a_story.html). Utilities live at the intersection of government and science and have a meaningful opportunity to establish trust and build consumer confidence in water quality through CCRs, which are their only mandated non-crisis communication to customers. Building trust is even more important as utilities grapple with national attention on issues of water quality, aging infrastructure, and climate resilience.

Fortunately, through **better communication about water quality**, utilities can build trust with consumers, gain consumers' support for investments in their water infrastructure, and then ideally provide better water. But three major problems currently prevent better communication:

1. The current language of the CCR, although well-intended, is too advanced for the average customer who likely reads at a seventh-to-eighth grade level. From their technical terms and abbreviations to lengthy sentences and complex sentence structures, these reports are inaccessible to most readers. Even a sample CCR from the EPA website is around an 11th-grade reading level. Also, CCRs are rarely available in a language other than English.
2. The presentation of the data, while likely appealing to scientists and policy experts, is intimidating to the regular non-scientist consumer. Because of its dense information presented in tables and numbers without context, we're certain that most people would look at the "Is there a violation column?" and move on.
3. Finally, the CCR is designed as a print brochure. The layout intends to fit everything in a small space, a page or two at most, but makes the report cluttered and hard to digest. Print may have been the best option in the late '90s when the reports first became a requirement, but today most people are consuming digital information on mobile devices.

As a result, CCRs don't build customer confidence, but leaders and organizations in the water sector are reimagining the CCR to build trust in their water.

Awarding Innovation

To inspire water systems to redesign their CCRs, the Environmental Policy Innovation Center (EPIC) launched the Water Data Prize competition in 2019. More than 30 organizations and individuals in the water sector have submitted entries.

An esteemed panel of judges representing various voices in the water sector, including federal and state agencies, water utilities, trade associations, community organizations, and academic experts score the entries. Submissions have overwhelmingly showed that the answer to a better CCR isn't more data, it's more context and better design.

As Katie Henderson of the US Water Alliance, who served as a judge, noted: “The simplicity yet creativity employed in these reimaginings of the CCR prove that it really is a priceless opportunity to empower customers, giving them the data and information to guide decisions that impact their health. As EPA develops regulations to increase the ‘readability, clarity, and understandability’ and ‘accuracy’ of CCRs, they would do well to look at the work of the Water Data Prize winners.”

Setting a New Standard

Raftelis, a Charlotte, North Carolina-based consultancy, received first place in the Water Data Prize. Key strategies the team employed included:

- Using photography: Raftelis used images with people to help draw customers in—ensuring that the people represent the diversity of the community. Utilities often share infrastructure pictures over people, which can convey the investments they've made, but there's no emotion in them. Water quality is personal, it's about people's health.
- Keeping language simple: Even common words like “source water” or “flushing” can be barriers to people who aren't in the world of water. Raftelis edited the CCR to use active voice, short sentences, and simple words that most readers will understand, guided by the Flesch-Kincaid editing feature in Word that tracks reading level and the CDC's Clear Communication Index Tool to make sure that each page had a clear point, a call to action, and communicated the meaning behind the numbers.
- Embracing a clean design: Another major feature of Raftelis' entry was the intentional use of white space. White space is important when information is technical. It makes the content seem less intimidating and easier to read.
- Putting the customer into the CCR: Water quality is a shared responsibility, and customers need to understand that it's not just on the utility to make sure water is safe to drink. Once water enters the house, there are steps a resident can take. Raftelis included tips for customers, such as how to check the plumbing for lead and legionnaires, what to do when on vacation, and how to handle outside connections to help them understand their role in improving water quality.
- Making CCRs a minimal burden for a utility to produce: While meeting the needs of customers is crucial, any redesigned CCR must also meet the needs of the utilities. Larger utilities may have the time and resources on hand to create a website, but smaller utilities with tighter budgets need a low-cost way of communicating with their customers. As a simple solution for more resource-constrained utilities, Raftelis proposed a cleanly designed PowerPoint slide deck, posted as a PDF to a website so viewers can download and flip through and print if they want.

We believe CCRs can live up to their name—that they can build confidence. EPIC is committed to working with water utilities, regulators, and policymakers to help reimagine the 21st-century CCR and set a new, more consumer-friendly standard for all.

Learn more at www.waterdataprizeweb.com (<http://www.waterdataprizeweb.com>).

Joya is a senior fellow at the US Water Alliance and a senior advisor to the Environmental Policy Innovation Center.

Sam is the director of strategic communication services at Raftelis and has been providing communications counsel to utilities and the public sector for more than 25 years.



First Place: **Raftelis**



Winner: **Water Smart**

Winner: **Tip Top Tap**

Winner: **Philadelphia Water Department**

Winner: **Water Data Lab**

(<https://www.waterdataprizeweb.com/winners.html>)

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State Engineer prevails in Pahrump water order case



Special to the Pahrump Valley Times The Nevada State Engineer's Office has won its appeal over Order #1293A and the requirement to have two acre-feet of water relinquished for each new domestic well drilled in Pahrump stands.

By Robin Hebrock Pahrump Valley Times



February 25, 2021 - 3:48 pm

After 15 months of anxiously awaiting the outcome of the appeal on Pahrump Water Order #1293A, local property and business owners are gritting their teeth in frustration and disappointment, with the Nevada Supreme Court ultimately ruling in favor of the appellant, the Nevada State Engineer's Office.

As a result, water Order #1293A remains in effect, leaving area developers and property owners with no choice but to obtain two acre-feet of water rights for any new well they wish to drill on land that has not previously had said water rights relinquished in support of the new well.

However, the legal battle may not be over just yet, as the Nevada Supreme Court's ruling also included instructions dictating that a portion of the case not directly addressed by either the district court or the appeal before the Nevada Supreme Court, that which alleges Order #1293A to be an unconstitutional taking, be remanded back to the district court for resolution.

Background of the case

The case all started on Dec. 19, 2017 when, at the request of the Nye County Water District Governing Board, then-Nevada State Engineer Jason King issued Order #1293. The explanation from the water district centered on the idea that continued drilling of domestic wells in the valley simply could not be sustained, as Pahrump's water source, Basin #162, is highly over-appropriated in terms of water rights and already contains roughly 11,000 domestic wells.

Heeding that request, King issued Order #1293, creating a new mandate that called for the relinquishment of two acre-feet of water rights for every new domestic well drilled. The order specifically exempted existing wells in need of replacement or refurbishing, as well as undeveloped lots for which water rights had already been relinquished but still, thousands of Pahrump properties were affected by the order and the backlash that followed its issuance was immediate.

Riding a wave of anger and outrage, residents, property owners, developers, real estate agents and brokers, and well drillers all banded together to form Pahrump Fair Water LLC and less than a month after the order was issued, the group filed a lawsuit against the Nevada State Engineer's Office seeking to halt the order in its tracks.

Several months of legal maneuvering then ensued, with the state engineer issuing an amended version of the order, Order #1293A, in mid-2018 and then filing a motion to have Pahrump Fair Water's case thrown out on the grounds that the amended order superseded the original order. Pahrump Fair Water was not deterred by this, however, and the group entered into a settlement agreement that dropped the original lawsuit against Order #1293 while simultaneously filing a new petition against Order #1293A. In exchange, the state engineer's office agreed to an expedited case schedule.

The case ultimately ended up before a district court judge who, on Nov. 8, 2018, ruled in favor of Pahrump Fair Water. By December of 2018, the judge had officially signed off on an order rescinding Order #1293A, asserting that the state engineer's office had overreached its authority and violated constitutional due process by its lack of notice to those who were to be affected by the order. In addition, the ruling stated that there was no substantial evidence to support the order.

That was far from the end of the legal battle, however, and as expected, the Nevada State Engineer's Office filed an appeal with the Nevada Supreme Court, disputing each of the district court judge's findings. On top of this, the engineer's office also filed a motion to stay, requesting that the Nevada Supreme Court temporarily suspend the district court's ruling. That motion was granted in January of 2019, leaving those who had been celebrating their victory just a couple of months earlier dejected, but still eager to carry on their fight.

A flurry of briefing followed, with each side submitting its arguments over a period of 10 months. A hearing for oral argument was finally held on Nov. 5, 2019 and the case was turned over to the Nevada Supreme Court En Bank Court, which includes all seven Supreme Court justices rather than a panel of three justices as is more common, for a decision.

That was the start of an agonizing wait for Pahrump Fair Water members and many others with a stake in the Pahrump community and as the months slipped by, hopes for a quick decision dwindled. Now the wait is over at last, with the Nevada State Engineer's Office year legal battle.

Advance Opinion favors engineer

The ruling came yesterday, Thursday, Feb. 25 via an Advance Opinion issued by the court.

"This appeal involves a question of survival for certain rural communities in this, 'the driest state in the nation,' ... that is, the availability of groundwater sourced from domestic wells," the Advance Opinion reads. "By seeking to enforce the 2.0 afa (acre-feet annually) requirement, the state engineer raised interrelated questions of whether (1) Nevada law authorized the requirement in the designated the basin as in need of active management and determined that the drilling of new domestic wells would unduly impact existing wells, and (2) whether notice and hearing is required to impose the same, even in the face of the aforementioned determinations by the state engineer.

"We hold that Nevada law – specifically NRS 534.110(8)... authorized the 2.0 afa requirement under these particular circumstances, the state engineer's assessment of which is supported by substantial evidence," the Advance Opinion continues. "Moreover, water is a public resource in this state, not private property... and because Nevada's resulting system of prior appropriation neither envisions nor guarantees that there will be enough water to meet every demand for it, a landowner's unilateral assumptions to the contrary are not the sort of justified reliance that would demand notice and a hearing prior to the state engineer's imposition of the restriction at issue. Accordingly, we reverse the district court's decision, which invalidated Order #1293A as unlawful, and reinstate the same."

As detailed in the document, Pahrump Fair Water had requested that the Nevada Supreme Court, in the event of a reversal of the district court's decision, return the takings issue to the district court so that particular argument could be decided upon. That request was granted in the Advance Opinion, which reads, "... at PFW's request... (we) remand with instructions for the district court to consider its taking claim in the first instance."

At this time, David Rigdon of Taggart and Taggart LTD, the law firm representing Pahrump Fair Water in the case, said whether the group will continue forward with the takings argument has yet to be decided, as he must first review the case with Pahrump Fair Water members and determine how they wish to proceed.

The full Advance Opinion, along with all other documents relating to the water order case, can be found online at www.nvcourts.gov by searching for case number 77722.

Contact reporter Robin Hebrock at rhebrock@pvtimes.com

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Nevada Division of Water Resources to measure well water levels this March

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Submitted by [Jeff Munson](#) on Sun, 02/28/2021 - 4:17pm

CARSON CITY — This March, the Nevada Division of Water Resources will be measuring groundwater levels in irrigation and stock water wells throughout various regions across the state.

The data collection is part of an annual effort to assess and monitor hydrologic conditions throughout Nevada. While some of these are newer wells, others have been measured each year for over 30 years, providing extensive data on long-term changes in groundwater levels.

The measurements collected through annual “well runs” provide critical information that helps NDWR analyze trends and manage the health of Nevada's water basins.

To view water level measurements, please visit water.nv.gov.

[Outdoors](#)

A1 Cloud seeding on hold



Desert Research Institute Science Writer Kelsey McCutcheon Fitzgerald sits and takes in a view next to a cloud seeding generator at Alpine Meadows Ski Resort in California on Thursday. PHOTOS BY JASON BEAN

Program generates water for Reno households

Amy Alonzo

Reno Gazette Journal
USA TODAY NETWORK

In what looks to be the second consecutive below-average water year for Northern Nevada, a program that modifies cloud structures in the Tahoe area to increase the odds of precipitation is on hold due to lack of funding.

After more than four decades of nearly continuous operation, no ski resorts or state or local agencies rallied behind Desert Research Institute's cloud seeding program, likely due to financial concerns agencies are facing during the COVID-19 pandemic, said DRI Associate Research Scientist Frank McDonough.

Cloud seeding is a method of altering the amount of precipitation formed in clouds by adding substances such as silver iodide to increase rain or snowfall. Scientists use aircraft or ground generators strategically located in the mountains to introduce the silver iodide.

Other cloud seeding programs throughout the West overseen by DRI, including programs in southern Nevada



Desert Research Institute's Frank McDonough shows how weather moves over their cloud seeding generator at Alpine Meadows Ski Resort in California.

and the Colorado River Basin, remain funded. But McDonough had a hard time convincing Tahoe-area agencies to help fund the Tahoe Basin project, which can generate enough water for about 40,000 Reno households.

"This was a really weird year. The ski areas were interested but they had so

much uncertainty. When we were trying to get the project funded initially this year, they didn't even know if they were going to open. The other potential sponsors also had a lot of uncertainty," McDonough said.

See CLOUD, Page 2A

Cloud

Continued from Page 1A

Revenue uncertainty halted the program

The Tahoe-Truckee Basin Cloud Seeding Project relies on ground generators, most of which were installed in the 1980's to early 2000's with state funding, McDonough said.

There are eight generators that target the Tahoe Basin area. Costs to operate the generators for a season run around \$150,000 to \$200,000, and DRI relies on state and local agencies to fund the seeding.

The state funded the Tahoe-Truckee Basin Cloud Seeding Project from 1977 to 2009. Since then, agencies including the Truckee River Fund, Truckee Meadows Water Authority, Western Regional Water Commission, Mt. Rose Ski Tahoe and the Pennington Foundation have funded the project.

But after decades of near-continuous funding and operations, "This winter, there wasn't a sponsor for the project," McDonough said.

Revenue uncertainty due to COVID played a role in funding, said John Enloe, natural resources director for Truckee Meadows Water Authority.

"With COVID and everything else, it kind of shut everything down," Enloe said. "It would be great to spread the costs around to everyone that's benefiting."

Heading into the winter, McDonough reached out to various Tahoe ski resorts that benefit from the enhanced precipitation, but the resorts opted out.

"This year they asked, but with it being a COVID year, we weren't able to," said Mt. Rose Ski Tahoe Marketing Director Mike Pierce. He said going forward, the resort will continue to consider funding the project. "It's on behalf of



A vial of silver iodide is seen at the DRI cloud seeding generator at Alpine Meadows Ski Resort in California on Thursday. JASON BEAN

snow and moisture, which benefits our resort and our region."

McDonough said while understands financial concerns because of the pandemic, he's baffled that resorts that will pay for snowmaking – which can run up bills of millions of dollars, he said – but are hesitant to fund cloud seeding.

"All that (snowmaking) does is pull water out of a pond and pipes it up a hill and blasts it onto the mountain. It doesn't create anything new. What we do is put new snow on the ground," he said. "I think they need to be convinced what cloud seeding can do for them. And that's on us to show them that what we're doing is a benefit to them."

Generating water for up to 40,000 Reno households

DRI has been involved in cloud seeding since the early 1960's, roughly 20 years after it was developed. In addition to enhancing precipitation, it can alter lightning and thunderstorms, hurricanes

and fog.

DRI is instrumental in cloud seeding operations throughout the country, including projects on the Colorado River Basin and in Southern Nevada.

Over the past few decades, the target of DRI's Tahoe-Truckee Basin Cloud Seeding Project was to get more water into the Tahoe Basin and the Truckee River, McDonough said. The project can provide enhanced precipitation to about 200 square miles of the Tahoe Basin.

Cloud seeding can increase seasonal snowpack by about 10 to 15 percent. In years where the program operates in the Tahoe Basin, enough water is generated to benefit about 40,000 Reno-area households, according to McDonough.

Extensive testing at the Colorado State University Cloud Chamber shows that 1 gram of silver iodide can produce enough ice crystals to produce 1 acre-foot of water, McDonough said. Long-term analysis of the Tahoe-Basin project shows one additional inch of snowfall for every 10 inches that fall during seedable hours. On an average year, the generators run for about 200 hours, creating about 21,000 acre-feet of water, he said.

And in Nevada, the driest state in the nation, getting all the moisture possible is important, especially in a below-average year. As of Feb. 23, the Lake Tahoe Basin was only at 62 percent of average monthly precipitation, while the Truckee River Basin was at 61 percent, according to the Natural Resources Conservation Service Nevada.

"Putting water in the river keeps the river cooler, which helps fisheries," McDonough said. "The trees are happier. You get a couple extra weeks of snow on the ground. It keeps the streams running a little longer. It's important in a dry year."

How it works

During the West Coast's rainy season, dust from as far away as the Gobi Desert

in Asia will drift across the Pacific Ocean into the Sierra. When clouds over the Sierra form, moisture clings to those dust particles to form ice crystals, McDonough said. "And those ice crystals are a large part of snowflakes that fall to the ground."

Cloud seeding introduces additional special dust particles made of silver iodide molecules allowing additional ice crystals to form, grow and fall to the ground as additional snow. The silver iodide has a similar molecular structure to ice and encourages snow to form.

"If you can get this silver iodide into the clouds where these dust particles are, you can get them to freeze and then they grow, and you can create extra snow," McDonough said. "We are trying to get clouds that aren't as efficient as they could be to produce snow."

Introducing one gram of silver iodide – about a tablespoon or two – to passing clouds can help induce clouds to make one-acre foot of water. That's enough for two Reno households for a year.

Effectively cloud seeding hinges on a few different factors. Clouds must be below the tops of mountain peaks, temperatures must be within a specific range and wind must be blowing in the correct direction.

McDonough said no funding has come in yet to cloud seed the Tahoe Basin for the 2021-2022 water year, but that projects don't usually come together until the summer.

"I'm optimistic," he said. "We believe it's an important project to help. In dry years, water is super valuable. Even if you can't put a ton down, it's still super valuable. What usually brings it back is a dry winter – once water gets a little more scarce, people become more interested."

Amy Alonzo covers the outdoors, recreation and environment for Nevada and Lake Tahoe. Reach her at alonzo@gannett.com or (775) 741-8588. Here's how you can support ongoing coverage and local journalism.

Governor's Bowl Field to have shelter and open camping for homeless people

By Bob Conrad | March 1, 2021



Construction is ongoing March 1, 2021 at Governor's Bowl Park where a "super shelter" and campsites are being constructed to house the area's unsheltered population. Image: Bob Conrad / This Is Reno

Officials today said they are closer to having people start occupying a giant tent structure at Governor's Bowl Park. Two setbacks — February snowstorms, and clay soils at the field which have to be moved — may push the opening to mid-April.

Original estimates were for the shelter to open in March.

"Work has begun to establish a sanctioned camping area at the Governor's [Bowl] property," said A Assistant City Manager Arlo Stockham. "The county will be developing and operating that facility, a we're targeting, ideally, to have it available for use at the same time the shelter opens."

The camping area, located in the bowl part of the area, is for people who may not be interested in staying in the shelter, Stockham added.

Advocates for those living without shelters have pushed for a "safe camp" area, and models around country show it can work.

"We very much intend to emphasize the provision of services and ... the humanitarian aspect of it."

County spokesperson Bethany Drysdale did not have details about how the camp area would be operated but said, "We are working quickly with regional partners to share the cost and get it launch in the next few months."

Part of the reason for the "safe camp" is to get people [away from living on the river](#), which has been [negatively impacted by encampments](#).

Local governments have had to [spend considerable resources](#) addressing riverbank erosion, needles clogging intakes into water treatment facilities, [garbage disposed in the river](#) and people defecating the river. Property owners have received health citations for conditions caused by human [waste](#) on properties adjacent to the river.



A needle left on the ground as unsheltered individuals had to move their belongings out of Gateway Park during a cleanup by Sparks Police Feb. 17, 2021. Image: Isaac Hoops / This Is Reno

Advocates say government agencies have not done enough to address these issues. They've called for better disposal services, more bathroom facilities and more needle disposal boxes.

Stockham the city and its partners will be conducting outreach when the shelter opens to encourage people to camp at the new location instead.

"We very much intend to emphasize the provision of services and ... the humanitarian aspect of it, not take a law-enforcement-focused approach," he said. "Although, there certainly needs to be support law enforcement."

That may be encouraging to homeless activists who submitted numerous letters as part of public comment to today's Community Homeless Advisory Board, a board comprising elected officials from Washoe County, Sparks and Reno.

"We demand that appropriate funding be allotted to hire professional social workers and mental health professionals experienced in harm reduction, substance abuse, suicide prevention and mental health disorders that can do outreach in support of our unhoused residents," Natalie Handler wrote for public comment. "The role of law enforcement can not also be the role of empathetic social worker as they contradict one another just as our community has seen time and time again. [An example is] the discriminatory and abusive action of Officer Ryan Gott who [led a sweep at the Wells camp](#) on June 2020 [slashing people's tents and using harassing and demeaning language.](#)"

Stockham said the safe camp area would be managed as a safe environment but people "could camp not be bothered."

The large tent structure being built, located southeast of the bowl, could house as many as 900 people while the campsites at the bowl could accommodate about 200. Stockham said those are peak capacity and the initial plan is for about 450 at the tent structure.

The so-called “super shelter” was funded with federal emergency COVID-19 relief funds, but to get complete services at the site could take years as part of phase two and three plans. A suite of service the people who use the facility are needed, including an intake center, pet facilities and a cafeteria. That will depend upon community support, such as private partnerships and funding support. Stockham said the first phase is focused on basic needs: shelter, food, heating, cooling, bathrooms a showers.

“There’s a lot going on, on a very short time frame,” he added.



BOB CONRAD

Bob Conrad is publisher, editor, and co-founder of This Is Reno. He has served in communications positions for various state agencies and earned a doctorate from the University of Nevada, Reno in 2011, where he completed a dissertation on social media journalism and crisis communications. In addition to managing This Is Reno, he holds a part-time research appointment for the Mineral County University of Nevada Extension office.



March 1st snowpack sits at 65% of normal

By [Ben Deach](#)

[LINK TO VIDEO](#)

Published: Mar. 1, 2021 at 4:51 PM PST|Updated: 15 hours ago

INCLINE VILLAGE, Nev. (KOLO) - It's a routine that hydrologist Jeff Anderson knows well. First he makes the trip to the SNOTEL site at Mount Rose summit. Then, he measures the snow depth. And finally, he weighs it to see how much water is in it.

"Right now 68 inches of snow depth with 21 inches of water content, and that is 65% of median for today," Anderson said.

Anderson also says while the snow isn't as deep as it was a month ago, there is 3 more inches of water in that snow, but also says a normal February should bring nine inches more.

Truckee Meadows Water Authority was on hand for today's measurement to try and get a sense of how or if our water supply will be affected.

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"We take the numbers that Jeff produces and a runoff forecast is produced based on the water in the snowpack," said Bill Hauck of TMWA.

Hauck says the situation isn't ideal, but it's also not dire.

"We are not quite where we should be this time of year," he said. "Fortunately for TMWA customers we aren't dependent on one or two dry years."

Hauck says that our reservoirs are currently at 42% capacity, and hopes for some march storms to add to them.

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"It is a dry year," he stated. "But we are OK."

The final snow survey of the season will be the first week of April.

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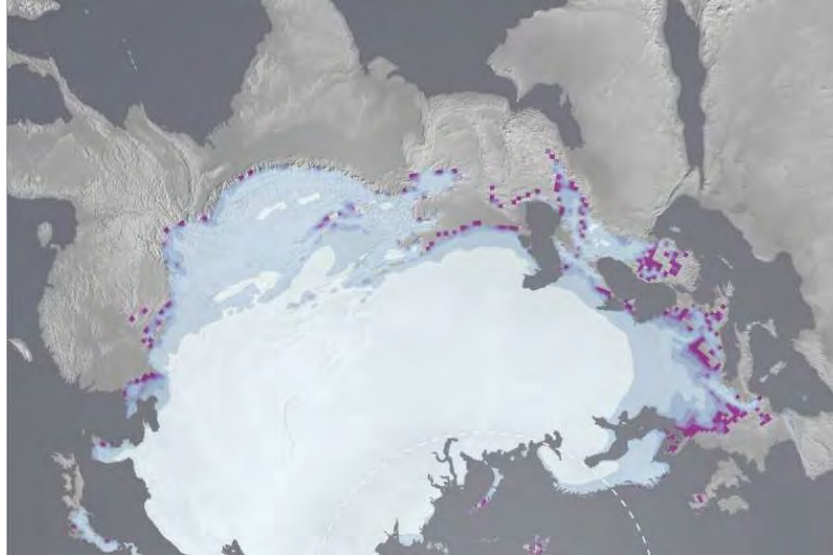


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MARCH 1, 2021

New study identifies mountain snowpack most 'at-risk' from climate change

by University of California - San Diego



This map shows the simulated change in snowpack disappearance date--the number of days earlier in the spring when all the winter snow melts--under one degree of warming, based on an idealized physical model. Darker shades of gray and pink show regions where the snowpack melt date is changing more rapidly and disappearing earlier. Credit: NOAA Climate.gov based on data from Evan and Eisenman, 2021.

As the planet warms, scientists expect that mountain snowpack should melt progressively earlier in the year. However, observations in the U.S. show that as temperatures have risen, snowpack melt is relatively unaffected in some regions while others can experience snowpack melt a month earlier in the year.

This discrepancy in the timing of snowpack disappearance—the date in the spring when all the winter snow has melted—is the focus of new research by scientists at Scripps Institution of Oceanography at the University of California San Diego.

In a new study published March 1 in the journal *Nature Climate Change*, Scripps Oceanography climate scientists Amato Evan and Ian Eisenman identify regional variations in snowpack melt as temperatures increase, and they present a theory that explains which mountain snowpacks worldwide are most 'at-risk' from climate change. The study was funded by NOAA's Climate Program Office.

Looking at nearly four decades of observations in the Western U.S., the researchers found that as temperatures rise, the timing of snowpack disappearance is changing most rapidly in coastal regions and the south, with smaller changes in the northern interior of the country. This means that snowpack in the Sierra Nevadas, the Cascades, and the mountains of southern Arizona is much more vulnerable to rising temperatures than snowpack found in places like the Rockies or the mountains of Utah.

The scientists used these historical observations to create a new model for understanding why the timing of snowpack disappearance differs widely across mountain regions. They theorize that changes in the amount of time that snow can accumulate and the amount of time the surface is covered with snow during the year are the critical reasons why some regions are more vulnerable to snowpack melt than others.

"Global warming isn't affecting everywhere the same. As you get closer to the ocean or further south in the U.S., the snowpack is more vulnerable, or more at-risk, due to increasing temperature, whereas in the interior of the continent, the snowpack seems much more impervious, or resilient to rising temperatures," said Evan, lead author of the study. "Our theory tells us why that's happening, and it's basically showing that spring is coming a lot earlier in the year if you're in Oregon, California, Washington, and down south, but not if you're in Colorado or Utah."

Applying this theory globally, the researchers found that increasing temperatures would affect the timing of snowpack melt most prominently in the Arctic, the Alps of Europe, and the southern region of South America, with much smaller changes in the northern interiors of Europe and Asia, including the central region of Russia.

To devise the model that led to these findings, Evan and Eisenman analyzed daily snowpack measurements from nearly 400 sites across the Western U.S managed by the Natural Resources Conservation Service Snowpack Telemetry (SNOTEL) network. They looked at SNOTEL data each year from 1982 to 2018 and focused on changes in the date of snowpack disappearance in the spring. They also examined data from the North American Regional Reanalysis (NARR) showing the daily mean surface air temperature and precipitation over the same years for each of these stations.

Using an approach based on physics and mathematics, the model simulates the timing of snowpack accumulation and snowpack melting as a function of temperature. The scientists could then use the model to solve for the key factor that was causing the differences in snowpack warming: time. Specifically, they looked at the amount of time snow can accumulate and the amount of time the surface is covered with snow.

"I was excited by the simplicity of the explanation that we ultimately arrived at," said Eisenman. "Our theoretical model provides a mechanism to explain why the observed snowmelt dates change so much more at some locations than at others, and it also predicts how snowmelt dates will change in the future under further warming."

The model shows that regions with very large swings in temperature between the winter and summer are less susceptible to warming than those where the change in temperature from winter to summer is smaller. The model also shows that regions where the annual mean temperature is closest to 0°C are less susceptible to early melt. The most susceptible regions are ones where the differences between wintertime and summertime temperatures are small, and where the average temperature is either far above, or even far below 0°C.

For example, in an interior mountain region of the U.S. like the Colorado Rockies, where the temperature dips below 0°C for about half the year, an increase of 1°C can lead to a quicker melt by a couple of days—not a huge difference.

However, in a coastal region like the Pacific Northwest, the influence of the ocean and thermal regulation helps keep the winter temperatures a bit warmer, meaning there are fewer days below 0°C in which snow can accumulate. The researchers hypothesize that in the region's Cascade Mountains, a 1°C increase in temperature could result in the snow melting about a month earlier in the season—a dramatic difference.

One of the most 'at-risk' regions is the Arctic, where snow accumulates for nine months each year and takes about three months to melt. The model suggests that 1°C warming there would result in a faster melt by about a week—a significant period of time for one of the fastest warming places on Earth.

This study builds upon previous work done by Scripps scientists since the mid-1990s to map out changes in snowmelt timing and snowpacks across the Western U.S. The authors said that a "shrinking" winter—one that is shorter, warmer, and with less overall precipitation—has adverse societal effects because it contributes to a longer fire season. This could have devastating impacts on already fire-prone regions. In California, faster snowpack melt rates have already made forest management more difficult and provided prime conditions for invasive species like the bark beetle to thrive.

More information: Evan, A., Eisenman, I. A mechanism for regional variations in snowpack melt under rising temperature. *Nat. Clim. Chang.* (2021). doi.org/10.1038/s41558-021-00996-w

Journal information: [Nature Climate Change](#)

Provided by [University of California - San Diego](#)

Citation: New study identifies mountain snowpack most 'at-risk' from climate change (2021, March 1) retrieved 11 March 2021 from <https://phys.org/news/2021-03-mountain-snowpack-at-risk-climate.html>

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Officials: Reno/Sparks area will have plenty of water, despite low snowpack

Amy Alonzo

Reno Gazette Journal



The Tahoe Basin's snowpack is substantially below average, but municipal water users can rest easy that they will have enough water going into the summer, according to Truckee Meadows Water Authority.

"Despite what's looking like our second dry year in a row, we're going to have normal river flows this year into the next. This means business as usual for TMWA customers," said Bill Hauck, water supply administrator for TMWA, municipal water supplier for the greater Reno/Sparks area.

TMWA serves more than 440,000 people.

This is because upstream reservoirs that supply water to the Reno-Sparks region have not yet seen the impacts of the below-average snow years, Hauck said.

"One or two dry years doesn't define the water supply for TMWA customers," Hauck said.

For the second year in a row, the Tahoe Basin's snowpack is below average — it currently sits at about 71 percent of median, according to the Natural Resources Conservation Service's monthly measurement conducted Monday.

The region is likely headed into its second consecutive dry summer unless heavy precipitation hits the region in March and April, according to Jeff Anderson, hydrologist for the Natural Resources Conservation Service.

With only a 10 to 20 percent chance of that happening, there is potential for an active wildfire season and impacts to recreational activities such as skiing and rafting, he said.

"We had a below average winter last year and another one going this year," Anderson said. "Things like wildfire, when the forest starts to get stressed, you're more susceptible to bigger fires."

As of March 1, snow at the Mt. Rose area measured 68 inches deep, with 21 inches of water content, according to the SNOTEL measurement Monday. That's about 65 percent of normal.

The lack of precipitation has left soil under the snow at near to record dry levels for this time of year, Anderson said. In the spring, snowmelt will percolate into the soil before heading into rivers and streams, likely leading to less runoff.

Anderson said forecasters are hoping for a Miracle March such as those in 1991 and 2020. In March of 1991, the Lake Tahoe Basin received 257 percent of average precipitation. From mid-March into early April 2020, the Lake Tahoe Basin received 192 percent of average precipitation.

“Hopefully we get some big storms sometime in March,” Anderson said.

“Things start to really taper off in April.”

Amy Alonzo covers the outdoors, recreation and environment for Nevada and Lake Tahoe. Reach her at aalonzo@gannett.com or (775) 741-8588. [Here's how you can support ongoing coverage and local journalism.](#)

TAHOE KEYS WEEDS

By **Tobi Tyler** - March 1, 2021



The Tahoe Keys from Mt. Tallac - photo: Glenn Gould, licensed under CC BY 2.0

Opinion

The Tahoe Keys Property Owners Association (TKPOA) has applied to the Lahontan Water Board (LWB) and the Tahoe Regional Planning Agency (permitting agencies) for a permit to use aquatic herbicides for the very first time in Lake Tahoe's waters. There have been many claims made about the need for this proposed one-time use of herbicides in the Tahoe Keys lagoon waters to treat the out-of-control invasive aquatic weeds there, which have been spreading to other parts of the Lake threatening the health of the crown jewel of the Sierra Nevada and national treasure that is Lake Tahoe. However, few if any answers have been provided. For instance:

1. Why are the permitting agencies insisting on herbicides when the draft environmental document clearly stated non-chemical methods testing was the environmentally superior alternative?
2. Everywhere else in the country where aquatic herbicides are used to control invasive weeds, herbicides are applied on a routine, regular basis. Why do the permitting agencies think that the Tahoe Keys would be any different unless they truly plan on using them on an on-going basis?
3. Why use herbicides in this "test" project when the use of herbicides going forward would be prohibited under federal non-degradation regulations that apply to Lake Tahoe's waters; i.e., why test it if on-going use is not intended or even an option?
4. Where is the anti-degradation analysis, critical for justifying degradation of Lake Tahoe's waters, that the permitting agencies stated one and a half years ago would be included in the draft environmental document?
5. And where's the justification for exempting this "test" project under LWB's Basin Plan regulations when TKPOA's application doesn't even mention laminar flow aeration and ultraviolet light, promising newer non-chemical technologies?

Very little to nothing has been said or provided to answer these questions, even the very lengthy Draft EIR/EIS, which was clearly intended to justify the use of herbicides. The permitting agencies should issue a revised Draft EIR/EIS, one that includes the anti-degradation analysis, before reaching a decision on the TKPOA permit.

Nutrients from Tahoe Keys lawns and South Lake Tahoe stormwater have been accumulating in the lagoon waters and bottom sediments and fueling weed growth for 60 years. Herbicides don't kill the turions and seeds. The weeds in the lagoons have become a self-sustaining ecosystem. The only thing this one-time herbicide test will do is offer a few private homeowner's false hope that there is an easy button to push for the inconvenience of weeds obstructing their boating pathway from their backyards to the Lake, all at the cost of the Lake's natural habitat and balance. The use of herbicides in no way benefits the general public, water quality or the health of the Lake.

The Sierra Club's primary concern is the health of the Lake. The Sierra Club believes that LWB and TRPA need to direct their staff toward a longer-term solution to the Keys' weeds nightmare – one that actually solves the weed problem instead of just managing it forever, and one that preserves Lake Tahoe's nationally treasured waters. This solution would be to restore the lagoons to marsh (i.e., the waterways, in particular the dead-end stagnant sections – leaving the houses intact) in order to provide filtration for the nutrient-rich stormwater that runs off the Keys' lawns, houses and streets as well as the surrounding community.

Tobi Tyler, Vice Chair Tahoe Area Group, Sierra Club Toiyabe Chapter is a career environmental engineer focused on protecting wetlands and other water resources. She retired from the Lahontan Water Board in 2017 and began contributing her time to the Sierra Club, her North Star on environmental issues.

The opinions expressed above are not necessarily those of the Sierra Nevada Ally. Our newsroom remains entirely independent of our opinion page. Published opinions further public conversation to fulfill our civic responsibility to challenge authority, act independently of corporate or political influence, and invite dissent.

Snowpack boost relies on “Miracle March”

By [ThisIsReno](#) March 1, 2021

By Kristen Hackbarth | Photos by Isaac Hoops

Officials are once again hoping for a “Miracle March” to boost the region’s snowpack and avoid a drought after measuring the Sierra snowpack at the Mt. Rose SNOTEL station Monday afternoon.

Natural Resources Conservation Service Hydrologist Jeff Anderson and Truckee Meadows Water Authority Water Supply Administrator Bill Hauck invited media along for another of their regular monitoring operations.

The snowpack, measuring in at 68 inches deep with 21.1 inches of water content, is about 65% of median for March 1. Only three inches of water content has been added to the snowpack since Feb. 1, about a third of normal.

Anderson said a Miracle March could turn things around. Last year on March 1 there was just 18.7 inches of water content, but precipitation from mid-March through early April was 192% of average, boosting the snowpack measure from 46% of median to 72% of median by April 7.

The situation is the same through most of northwestern Nevada—including the Tahoe, Truckee, Carson and Walker basins—with basin-wide snowpack percentages coming in anywhere from 63% to 71%. Precipitation in the region is only about 60% of normal.

Based on historical data, NCRS estimates the chance of recovering to normal snowpacks by April 1 is only about 10% to 20%.

What little water is on the mountain is unlikely to fill Lake Tahoe and Lahontan Reservoir. Officials said the lack of rain last fall has left the soils at near record dry levels, and snowmelt will first fill in the soil, leaving little as runoff.

The story is less grim in northeastern and central Nevada where mid-February snowfall picked up significantly. Both the Northern Great Basin and Lower Humboldt SNOTEL measurement areas normal, at 97% of median and 107% of median, respectively. Check out photos from today’s measurement in the gallery below.





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MARCH 1, 2021

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Water sector applauds House leadership for affordability program boost



On Friday, the House of Representatives passed the American Rescue Plan Act, legislation to deliver additional COVID-19 relief that contains \$500 million for low-income water utility bill assistance. This new funding for low income water assistance comes in addition to the initial \$638 million provided in the December 2020 FY21 Consolidated Appropriations Act.

In February, Nathan Gardner-Andrews, general counsel and chief advocacy officer for the National Association of Clean Water Agencies (NACWA), said the water sector applauds the efforts made to deliver the \$500 million funds to low-income customers, but added that the money comes “nowhere near to meeting the financial need facing millions of Americans right now who are struggling to pay water and sewer bills.”

NACWA and the Association of Metropolitan Water Agencies (AMWA) have issued the following joint statement

“The public water sector is grateful to the U.S. House of Representatives for including \$500 million in additional assistance to low-income water customers in the *American Rescue Plan Act*. This funding recognizes the critical role of public drinking water and clean water services and the increased strain many households are facing paying their water bills as a result of the COVID-19 pandemic and ensuing economic downturn.

“NACWA and AMWA are currently working to center this critical issue through our joint [Affordable Water, Resilient Communities](#) campaign. Increasing water rates continue to present an affordability challenge for many households across the country, particularly in light of increasing economic pressures which have been exacerbated by the COVID-19 pandemic.

“On behalf of public water utilities working around the country to maintain safe, reliable, and affordable water services, we strongly applaud the House for recognizing and addressing this need, and we look forward to the Senate doing the same. In the months ahead we will continue to work with the 117th Congress and Biden administration to further assist customers in need and local utilities that are suffering under the effects of these crises.”

NACWA and AMWA extend a special thanks to House Speaker Nancy Pelosi (D-Calif.) and Congressional leadership from both parties for their continued support of water sector funding.

Source: NACWA, AMWA

Tags: [Affordability](#), [AMWA](#), [COVID-19](#), [COVID19](#), [low-income affordability](#), [NACWA](#), [water finance](#)

BILL TO LIMIT JUDICIAL REVIEW OF STATE ENGINEER WATER DECISIONS DRAWS RE FROM ALL QUARTERS

An audio catalog of testimony

By **Brian Bahouth** - March 2, 2021



An abandoned fishing boat far from the water line on the east shore of Walker Lake. Lake level has dropped roughly 150 feet since agricultural diversions of water from the Walker River began in the early 20th century - photo: CC BY-NC-SA 4.0 Bob Tregilus Photography

The Assembly Committee on Natural Resources heard [Assembly Bill 5](#) yesterday, a measure put forward on behalf of the Nevada Division of Water Resources that would “limit the circumstances in which such an aggrieved person may have a determination of the State Engineer reviewed by a court ...”

Acting State Engineer Adam Sullivan and Deputy Administrator of the Nevada Division of Water Resources Micheline Fairbank presented the bill and explained that the goal of the legislation is to prevent litigation on a case, or aspect of a case, before the State Engineer issues a “nal” or “formal” decision regarding the use of ground and/or surface water in the state.

Fairbank told lawmakers that the legislation would not prevent citizens from legally challenging nal decisions but would prevent legal complaints from disputing aspects of the decision-making process, which both Fairbank and Sullivan said undermine the efficiency of their office.

“We’re a public service agency, and so part of that is providing insight and instruction and advice to individuals with regards to how to move forward or respond to questions; and to have some of those different types of processes that don’t necessarily result in a nality of the decision become subject of litigation is a significant impediment on the ability of the office to do our daily work,” Fairbank explained.

Assemblyman Howard Watts is chair of the Assembly Natural Resources Committee and had several questions regarding what constitutes a “nal” or “formal” decision. Assemblywoman Natha Anderson said the bill sends the wrong message.

“Got to be honest with you,” Anderson said. “I have problems with this bill. It gives the impression that the State Engineer’s decision is not open for any sort of review or a judicial item, and I have some real concerns. It gives the impression that the decisions handed down by the State Engineer need to be exempt. So I don’t know if you want to reply to that or not, but I do have some, some grave concerns about that impression being given.”

The initial draft of the bill excluded citizens not “materially” affected by the State Engineer’s decisions from taking legal actions, but the language was dropped in response to numerous requests for amendment.

No one testified in support of the bill. A diverse and unusual group of 13 people offered passionate and detailed testimony in opposition, to include the Progressive Leadership Alliance of Nevada, Eureka County, and the Nevada Farm Bureau. Adam Sullivan offered nal remarks on the hearing.

"The Division recognizes the importance in the value of the ability of the public to challenge decisions of the State Engineer. This bill is not intended to have any effect on who could bring these challenges," Sullivan said. "The division is simply asking that challenges brought forward are to final decisions, not to steps along the way of a deliberative process. If there are more appropriate ways to accomplish this end goal, then the division is open to amendment."

Testimony

Kyle Roerink, executive director Great Basin Water Network.

"Chairman Watts and members of the committee, the Great Basin Water Network opposes AB5 despite the proposed amendment. This bill will erode an important check and balance mechanism from state law. Other agencies and divisions are subject to similar appeals processes via the State Administrative Procedures Act, so we must ask why do officials want to remove this important safety net?"

"Right now and NRS 533.450 says any person feeling aggrieved by any decision from the State Engineer has a right to appeal to a district court. This is a valuable check on the unelected officials in the division. The Great Basin Water Network knows firsthand how important it is to have the provisions of the law remain intact.

"In 2006, during the beginning of the regulatory proceedings for the Las Vegas pipeline fight, we were concerned that the State Engineer was not properly noticing protestants as required by law. We asked the State Engineer to re-notice. The State Engineer issued an intermediate

order that denied our request. We then used the law to appeal to the district court and ultimately our case wound up in front of the Nevada Supreme Court. The High Court ruled that the State Engineer was derelict in his duty and denied Nevadans their due process rights. AB5 would have likely blocked us from seeking justice for those Nevadans.

"Next, current law does not require a decision to be formal and the inclusion of the word formal would overturn the Supreme Court's decision and Howell versus Ricci. The Nevada Supreme Court in Howell used the phrase 'final written determination of the issue' as opposed to AB5's broader final order. AB5 will block access to justice.

"Lastly, the division's intent as it relates to the word appellate makes this bill even worse, and that is why we need to keep the checks and balances that NRS 533.450 provides. Right now we have a Supreme Court ruling and other laws. We need to not go forward with this bill. Thank you so much."

Shenaya Marks, a member of the Ely Shoshone tribe.

"I'm a member of the Ely Shoshone tribe and I oppose AB5. I believe that AB5 will harm native communities by limiting access to the legal system and give unelected officials more power over who can appeal their decisions in the regulatory realm.

"Any effort to limit a tribal government's access to the justice system should give committee members pause. AB5 will make it harder to access the courts. Right now, we have an inclusive statute that has served Nevada well for more than a century. There is no need to change it.

"We should also look at history to consider what harm AB5 could do in the future. The Ely Shoshone tribe spent decades fighting the Las Vegas pipeline in regulatory and judicial proceedings. An important milestone in that case is all the non final interim decision by the State Engineer that was appealed under NRS 533.450.

"Ultimately, the Nevada Supreme Court ruled that the state engineer failed to uphold his duties as a public official by denying the due process rights of Nevadans when he issued that non final interim decision in 2006. AB5 would likely have prevented the Supreme Court from making such an important ruling that brought justice to the public. We must consider what damage this bill will do in the future. This bill will not serve the interests of tribes, it will only serve the interests of unelected officials."

Christine Saunders, policy director for the Progressive Leadership Alliance of Nevada.

Ainslee Archibald, coordinator of the Sunrise Movement, Las Vegas hub.

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Ashlee Forman a volunteer co-chair of the Sierra Club's Legislative Committee.

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Jake Tibbitts is natural resources manager for Eureka County, Nevada.

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John Hadder, executive director of Great Basin Resource Watch.

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Patrick Donnelly, Nevada state director Center for Biological Diversity.

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Neal Desai, program director for the National Parks Conservation Association.

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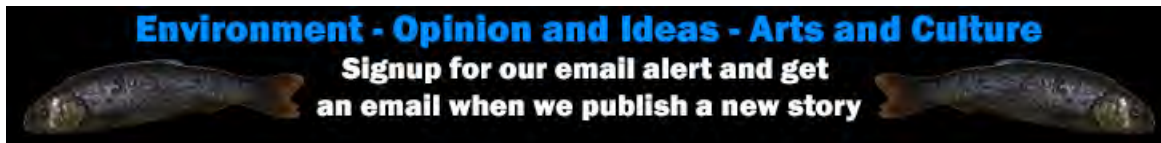
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"Let me get right to the point. We oppose AB5, and our members do not want their voices silenced. You're hearing from folks today and also in submitted written comments, including ours on the numerous problems that make this bill fundamentally awed and unsalvageable, even with the proposed amendments discussed today, so I won't, I won't repeat any of that.

"Instead, I'd like to talk about this bill in the context of the Nevada State Legislature's priorities in the first year since the end of the Trump era. Now, it's well documented that the Trump Administration spent considerable time and effort the past four years undermining the public interest by devising policies that limit access to justice, science and facts that protect our water, our land, our public health. And so it's incredible here that you the members of this esteemed Natural Resources Committee, you are being asked by the Division of Water Resources to carry on the mantle of limiting access to justice by advancing this bill.

"And this committee needs to ask itself if it's smart politics and smart policy to continue this legacy of the Trump administration to limit your constituents and all Nevadans access to justice on matters of water, which is the same as life and culture and state treasures such as the Great Basin National Park. Now's the time to be inclusive, and to help restore trust and engagement in government decision making. Now is the time to restore the public's involvement in the management of our public lands and our waters. We urge you to reject this bill. Thank you."

Close



Will Adler speaking on behalf of the Pyramid Lake Paiute tribe.

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Jeff Fontaine, Central Valley Regional Water Authority and the Humboldt River Water Authority.

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Emilia Cargill, on behalf of Coyote Springs Investment.

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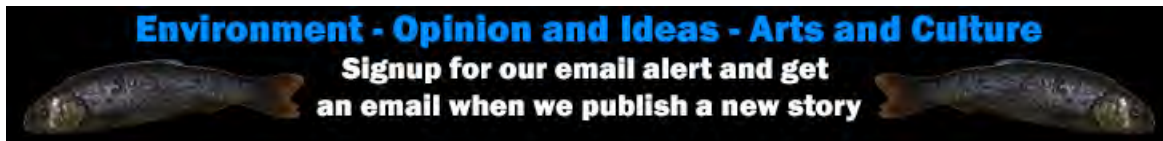
Doug Busselman, executive vice president of the Nevada Farm Bureau.

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Brian Bahouth is a career public media journalist. [Support his work in the Ally.](#)

Close



Measure to limit water ruling appeals gets icy reception

By **Jeniffer Solis** - March 2, 2021



A big bucket water activists deployed in front of the Legislature in 2019. (Photo: Great Basin Water Network twitter).

Rural county officials, development investors, conservationists and Nevada tribes turned out in opposition Monday to state legislation critics say would make it harder for Nevadans' to access the courts and protect their water rights.

The hearing in the Assembly Committee on Natural Resources Monday was the first chance the public had to testify before lawmakers about [Assembly Bill 5](#).

The bill, recommended by the Division of Water Resources, seeks to limit when a decision made by Nevada's state engineer, the state's top water official, can be challenged in court. Judicial review would be limited to formal orders, rulings, or decisions that are a "final determination." The bill would also limit the introduction of new evidence and testimony during appeals to the Division of Water Resources.

Officials from the Division of Water Resources said the proposed bill is needed to cut back on frivolous claims and unnecessary litigation.

"Over the past 10 years, the division has seen an increase in litigation over nonfinal decisions, advisory or general opinions, that have not resulted in a final decision," said acting State Engineer Adam Sullivan.

"We are starting to see courts erode and make findings (on issues) that may not necessarily be a final determination," said Micheline Fairbank, deputy administrator for the Nevada Division of Water Resources. "What happens is that we become mired in litigation in the process of getting to a final decision without actually getting to that final decision or that final determination."

Fairbank said the bill is rooted in supreme court precedent that restricts judicial review on water rights to "a final written determination on the issue" and is meant to codify prior supreme court rulings that lower courts have not honored.

"These provisions are not intended to hinder appropriate challenges to determinations by the division," Sullivan said. "The division recognizes that appropriately exercised judicial review is an essential check and balance to the decisions made by the executive branch of government. However, it is important to limit those challenges to final determinations that have a real and substantive, not hypothetical, impact on the interests of the challenging party."

Since at least 1915, Nevada water law has included language that allows aggrieved parties to appeal any decision made by the state engineer in court, but opponents said the bill would limit access to the justice system and place the work of the courts in the hands of the state engineer.

"Time and again, we have seen that our courts have different interpretations of the law than our unelected water officials in the Division of Water Resources," wrote Richard Howe, chairman of the White Pine County Board of Commissioners, in opposition. "AB5 is nothing more than an impediment to keep citizens from asking the courts to review their grievances with the state."

Jake Tibbitts, natural resources manager for Eureka County, argued that the language in the bill goes beyond what was determined in the supreme court decision cited by Division of Water Resources officials.

"If it's truly meant to find alignment with the supreme court case this bill does not do that," Tibbitts said.

Eureka County argued that interim orders and temporary permits could be interpreted as not being "final determinations" although those decisions can greatly affect the counties, adding that counties must be able to appeal and participate in all legal proceedings for waters on federal lands.

"Even without AB5 parties already have a heavy lift to challenge decisions of the state engineer. The state engineer is always considered correct ... the burden of proof falls on the party attacking," Tibbitts said.

The Central Nevada Regional Water Authority and the Humboldt River Basin Water Authority spoke in opposition as well.

Kyle Roerink, executive director of the Great Basin Water Network, argues that other agencies and divisions are subject to similar appeals.

In the past, the network has used the court to challenge intermediate orders by the state engineer. In 2010, the Nevada Supreme Court ruled in the group's favor after they filed a petition that challenged an intermediate order by the state engineer resulting in the extension of the protest period for water right applications in Snake Valley related to the [much opposed](#) Las Vegas pipeline.

Roerink argued that without the inclusive language in state law Nevadans would have been excluded from participating before a final decision was made.

"GBWN's own example highlights the fact that we have a statute that works well for the public. AB5, in contrast, risks blockading the halls of justice to current and future generations of Nevadans and as such is unacceptable," Roerink said.

Representatives for the Pyramid Lake Paiute Tribe, Ely Shoshone Tribe, and the Confederated Tribes of the Goshute Reservation opposed the bill as well.

"AB5 could also restrict our Tribes' ability to protect our own Federal reserved water rights and our indigenous ceremonial areas," wrote Rupert Steele, chairman of the Confederated Tribes of the Goshute Reservation, in opposition.

No action was taken on the bill Monday but lawmakers expressed some doubt of the bill's intent.

"I've got to be honest with you I've got problems with this bill. It gives the impression that the state engineer's decision is not open for any sort of review. I have some real concerns," said Assemblywoman Natha Anderson during the hearing. "It gives the impression that decisions handed down by the state engineer need to be exempt."

Jeniffer Solis

Reporter | Jeniffer was born and raised in Las Vegas, Nevada where she attended the University of Nevada, Las Vegas before graduating in 2017 with a B.A in Journalism and Media Studies. While at UNLV she was a senior staff writer for the student newspaper, the UNLV Scarlet and Gray Free Press, and a news reporter for KUNV 91.5 FM, covering everything from the Route 91 shooting to UNLV housing. She has also contributed to the UNLV News Center and worked as a production engineer for several KUNV broadcasts before joining the Nevada Current. She's an Aries.

TMWA Bill Payments Temporarily Stopped Due to System Upgrades

TMWA says you will see some of the changes made, starting next month.

Tuesday, March 2nd 2021, 10:30 AM PST



Courtesy: MGN

TMWA will not be able to process bill payments for the next few days due to a major upgrade to its customer information system.

TMWA says once complete, the new system will offer customers enhanced water use information and provide more ways to pay bills and save preferred payment options.

As a result, TMWA will stop bill payment processing between March 2 and March 8. If you have scheduled electronic payments or have already mailed in your check, processing will begin again on March 9. TMWA says no late fees will be assessed.

"We feel these changes will definitely make your interactions with TMWA smoother and help you get the most out of the service we provide," says TMWA.

You can read more below -



ABOUT

Customers

Your Water

Our Envir

Payments Will Not be Taken Between March 2 and March 8.

February 26, 2021

A major upgrade to TMWA's Customer Information System (CIS) will be implemented in the coming weeks.

Due to system upgrades, payments will not be taken between March 2 and March 8. While we update our system, no late fees will be assessed.

Among other things, the new system will offer customers convenient new payment options, redesigned bills, and enhanced water-use information. "The existing system has served our customers well—with incremental updates applied over the past 19 years," explained Marci Westlake, TMWA's manager of customer relations.

"However, the need for newer, more capable technology has made the upgrade a necessity," she added.

When the new system launches, customers will discover added online account management options and the flexibility to schedule and make payments in ways that the old system was never able to provide. "We feel these changes will definitely make your interactions with TMWA smoother and help you get the most out of the service we provide," Westlake said.

TMWA's CIS team is in the final phases of testing the system to ensure an easy transition for all customers. **For now, there is nothing for you to do. This is just a heads-up.** But starting next month, you will begin seeing some of the changes: from the way your bill looks, to your new online payment experience. Just keep an eye out for your new bill!



STOREY COUNTY BOARD, WATER DISTRICT OPPOSE EFFORT TO LET TECHNOLOGY COMPANY FORM LOCAL GOVERNMENT



DANIEL ROTHBERG

MARCH 3RD, 2021 - 2:00AM

Storey County commissioners voted Tuesday to oppose “separatist governing control” within their jurisdiction after Democratic Gov. [Steve Sisolak](#) backed a legislative effort that could result in a private tech company and major campaign donor forming its own local government.

Blockchains LLC, a company that owns roughly 67,000 acres of land in Storey County, is asking lawmakers to approve a program that would allow large-scale landowners to create “Innovation Zones.” [As described in draft legislation](#), Innovation Zones would operate as autonomous entities with governmental powers and focus on developing emerging technology.

A Storey County water district, governed by the commissioners, also voted to oppose the legislative effort Tuesday. Both motions direct staff to continue negotiating with the company.

“This would carve out a part of Storey County and create another county, in essence,” Austin Osborne, Storey County manager, said before commissioners voted on the motion Tuesday.

Osborne raised several concerns with the concept of letting Blockchains create a self-governing entity within the county. He argued that the Innovation Zones in the proposed legislation could place strain on the county’s resources and remove a portion of its potential tax base.

[In publicly released documents](#), Blockchains outlined plans to build a “Smart City” on a portion of its land. The proposed residential development, which a Page 74 of 95

a portion of its land. The proposed residential development, which a company executive said would be located in the Painted Rock area along the Truckee River, would include about 15,000 dwelling units.

For the past decade, Storey County has used tax breaks and expedited permitting to lure major companies, including Tesla, Google and Switch, to set up operations in the county's Tahoe Reno Industrial Center. The county has focused on growing commercial businesses with a small population. Most workers at the industrial center live in neighboring Washoe or Lyon counties.

But Blockchains wants to build a residential town, and in the past, county officials had told the company they were not interested in a development at the scale they proposed, [the AP reported](#).

"We have great respect for Storey County," said Pete Ernaut, a lobbyist representing the tech firm. "They have a remarkable track record on permitting commercial development. However, their history of permitting residential or mixed-use development is where we separate."

In an interview Tuesday, Osborne said the company's plans to build homes could potentially move forward within a traditional government structure. Storey County's 2016 Master Plan, he noted, discusses the construction of a residential and mixed-use development in Painted Rock.

"It's something, with an appropriate proposal, we would certainly look at," he said.

A Sisolak spokesperson did not respond to a request for comment. The governor unveiled the legislative proposal on Friday afternoon at a panel with his economic development czar and a private economic analyst. Sisolak asked for people to [keep an "open mind" about the concept](#). Blockchains and its CEO Jeff Berns [donated tens of thousands of dollars](#) to help elect Sisolak.

The legislation has not been formally introduced.

Osborne and the county commissioners also questioned whether the legislation was necessary, given that Storey County already has a permissive regulatory environment known for tilting in favor of encouraging private development, a trend dating back to

the Comstock mining boom.

“Storey County is the poster-child for this sort of thing,” Osborne said. “There is no place in Nevada that has fast permitting, permitting flexibility, nimbleness that Storey County does. We are well-known for that all over the United States as well as locally. We are the innovation zone.”

In 2019, *The Nevada Independent* reported on [how private and public interests were blurred](#) in the development of the industrial center, where Blockchains owns the majority of its land and is seeking even greater autonomy to pursue a master-planned development that includes housing.

Storey County Commission Clayton Mitchell echoed Osborne’s comments Tuesday, adding that unlike many local governments, Storey County looks for creative ways to enable development.

“We often take heat for being too flexible and moving too fast,” Mitchell said.

Mitchell, along with Storey County Commission Chairman Jay Carmona, signaled a willingness to work with Blockchains. The motion directs staff to engage in a “good-faith” dialogue with the company. The motion also asks staff to work with lawmakers to support blockchain technology.

“They’ve invested substantially in Storey County, and I’d like us to be able to welcome them and facilitate their success as a productive, contributing member of our community like we have with our other corporate citizens,” Mitchell said.

But the commissioners said they could not endorse the company forming its own government, adopting language that opposed “separatist governing control and carving up of Storey County.”

Mitchell and Carmona both voted for the motion. Commissioner Lance Gilman was not present at the meeting. Gilman, who represents the industrial park’s master developer and also serves on the County Commission, helped [sell the roughly 67,000 acres of land](#) to Blockchains in 2018.

In a statement, Ernaut said the company is open to working with the county moving forward: “A smart city with 35,000 residents is essential to the vision of this Innovation Zone, which makes permitting a city of this size key to this discussion. We understand their initial reaction to such a unique idea, and look forward to finding a path forward that works for everyone.”

The commissioners adopted a similar motion to oppose the legislation at a separate meeting on Tuesday. The Storey County Commission oversees the water district for the industrial center, a utility that serves the Tesla Gigafactory, a Switch data center and other commercial businesses.

According to a map that was presented at the meeting, all but 2,200 acres of Blockchains’ land is within the water district’s service territory, raising questions about how they would develop the residential land. The district was mainly formed to provide water connections for industrial use.

A map shows the land owned by Blockchains LLC (in blue) and the service territory of the Tahoe Reno Industrial Center's water district. The map was presented at a water district board meeting on

Tuesday, March 2, 2020.

The company owns a majority of land within the water district's service territory. There remains uncertainty about how the district would operate if Blockchains formed its own Innovation Zone.

"They would be a huge user of water in the area," Will Adler, a lobbyist for the water district, said at the meeting. "And it's kind of unclear whether you would have to provide that water initially or not, depending on how this is developed or not, because of that uncertainty."

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- Blockchains - \$35,000.00
- Jeff Berns - \$375,240.00
- Lance Gilman - \$16,000.00
- Steve Sisolak - \$3,200.00
- Switch - \$400,000.00
- Tahoe Reno Industrial Center (TRIC) - \$9,000.00
- Will Adler - \$131.58



Daniel Rothberg

Daniel Rothberg is a staff reporter covering water, public land and the environment. To read more of his coverage, [you can subscribe](#) to his weekly Indy Environment newsletter.



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Historic drought deepens in the West as window for rain, snow closes

Water supply and wildfire concerns grow for the dry season

By **Becky Bolinger** and **Andrew Freedman**

March 3, 2021 at 11:07 a.m. PST

The year 2020 is going to be remembered for a lot of things, many of them not so good. Included in the not-so-good list is the drought that has plagued the West, lasting into 2021. According to the U.S. Drought Monitor, which has published weekly maps since 2000, the 2020 drought is the worst, in terms of its geographical scope, in more than 20 years.

Almost 80 percent of the Western U.S. is in drought, with nearly 42 percent of the region in “extreme” or “exceptional” drought.

Much of the region experienced developing drought in the summer, following a warm and dry spring. Since then, conditions have deteriorated, and the precipitation deficits continue to build. At its maximum extent in January 2021, 47 percent of the West was in extreme drought or worse. Nearly a quarter of the area was in the worst drought category, an event with a probability frequency of once every 50 to 100 years.

February did bring an active weather pattern with it. The Pacific Northwest received more than 10 inches of precipitation last month. Much of the interior Rockies through Idaho, Montana, Wyoming, Utah, and Colorado received between 1 and 5 inches of moisture for the month. The Sierra Nevada in California received between 2 and 6 inches, much of that in the form of snow.

However, despite the precipitation, some areas are still struggling. Blue outlines in the map below show where snowpack increased last month. The Southwest was much drier in February.

Where the purple outlines overlap on this map, these areas are above average for snowpack now. Outside of the purple outlines, snowpack is still largely below average. Areas outlined in orange experienced a decline in the percentage of average snowpack since the beginning of February.

And red outlines show the areas where snowpack is extremely low compared to normal. The evidence is clear — February was beneficial for many, but it was not a drought buster, and drought continues to maintain its stranglehold on the West.

So, what would it take to get out of drought? To answer that, we first need to know the magnitude of these deficits. It's not as simple as comparing the past year's precipitation to normal and making up that difference.

Water in the West relies on a complicated relationship between what's in the ground, what's stored on the surface, what accumulates in the winter over the mountains, and what trickles down in the spring.

The deficit started in the spring of 2020. Snow water equivalent (commonly referred to as snowpack, this is the amount of water in the snow that's accumulated) in the Cascades and Sierra Nevadas peaked well below average.

Across the interior Rockies, snowpack usually reaches its peak in late March/early April and begins its slow melt — adding water to the rivers and eventually filling the reservoirs. While 2020 snowpack peaked around the time we'd expect, it melted out too fast, thanks to anomalously warm temperatures and no new snowstorms.

Does how it melts make a difference? You bet! Check out this water supply forecast for Lake Powell from the [Colorado Basin River Forecast Center](#).

Forecasts in the blue shading started out a bit below average (the green line is the average supply into Lake Powell). With each passing month, that forecast got a bit lower. And what actually happened was at the very low end of what was forecast (the orange line is the observed supply into Lake Powell for 2020). The actual inflow into Lake Powell was 3.4 million acre feet below average.

An acre foot, which is a measurement commonly used by water resource managers, is equivalent to more than 300,000 gallons of water. That's quite a big deficit to start things off!

Deficits for [Lakes Powell and Mead](#) are significant. Both are connected to the Colorado River Basin and supply water for millions throughout the West. Long-term deficits have been building since the turn of the century, and each drought exacerbates the situation.

Fast forward to a hot and dry summer. With the exception of a couple of isolated locations in the Pacific Northwest, Idaho, and Montana, most of the West experienced much above average temperatures and below average to record low precipitation for June-September last year.

In the Southwest, July-September typically ranks as the wettest time of year, which is largely a result of the North American Monsoon. Monsoon moisture in the late summer is key for replenishing soil moisture. Without an active monsoon, soils dry out just before the beginning of snow season. And unfortunately, [that happened in the fall of 2020](#).

[Modeled soil moisture](#) at the end of September shows the extremely dry soils in the West. As we entered the cold season, this soil moisture was "locked in."

The high elevation ground freezes, and that is the state the soil moisture will be at when the thaw begins in the spring. Start the season with dry soils, and that is the first "bucket" that needs to be filled when the snow starts melting.

The Colorado Basin River Forecast Center estimates that much of the Colorado River Basin needs 10 inches or more of precipitation for soil saturation. Averaged over watershed basins, normal snowpack peaks around at around 20-25 inches.

But to get the snowpack needed and cover the soil moisture deficits, these basins would potentially need 120-150 percent of average snowfall for the season. Can we expect that much snowpack this season? Unfortunately, no.

Climate change is playing a significant role in influencing water supplies in the West, with early spring snowmelt, hotter and drier summers and warming winters all acting to exacerbate drought conditions.

In fact, a [study published last year](#) found that a vast region of the western United States, extending from California, Arizona and New Mexico north to Oregon and Idaho, is in the grips of the first climate change-induced megadrought observed in the past 1,200 years. A megadrought is loosely defined as a severe drought that occurs across a broad region for a long duration, typically multiple decades.

The study found that warming temperatures and increasing evaporation, along with earlier spring snowmelt, have pushed the Southwest into its second-worst drought this millennium. The drought analyzed in the study dates back to the year 2000.

Within the context of this larger scale megadrought, there is still climate variability. There have been wetter winters, such as the heavy winter rains in 2017 that resulted in the failure of California's Oroville Dam, or the snow season of 2019 that resulted in Lake Powell inflows reaching 145 percent of average that summer.

But the dry years become more frequent. And, even by 21st century standards, this drought is particularly severe and widespread.

This map shows all the stations in the west that measure snowpack. As of Feb. 28, stations colored orange and red have below average snowpack for this time of year. The Sierra Nevadas in California are well below average for snowpack. With a typical peak date of April 1, there is only one month left to add to that snow cover. And considering they receive almost no moisture during the warm season, this month is extra critical.

For the mountain ranges throughout Utah, Wyoming, and Colorado, snowpack is also below average. For the Colorado Headwaters region, there are roughly 45 days until normal peak snowpack, but the likelihood of a normal snowpack is decreasing by the day.

For the areas that struggled this winter, the Climate Prediction Center's outlook is discouraging, with increased chances of below average precipitation and above average temperatures for the March-April-May time period.

The good news is that recent February moisture and a decent spring forecast have helped alleviate drought conditions in the Cascades and Pacific Northwest.

The bad news is that it's increasingly likely severe drought will continue in other parts of the West as we head toward summer. Agriculture, water supplies, and forests are likely to be impacted. Expect crop losses and selling of livestock; watering restrictions may begin as temperatures warm, and the risk of large wildfires will return again this summer.

Beyond that, let's hope for ample spring and summer soakers, a strong monsoon, and a fresh start to a better snowpack next fall!

Becky Bolinger is the assistant state climatologist for Colorado and a research scientist at Colorado State University.



JUSTICE | SUSTAINABILITY

Proposal to create state water court gets broad support

By **Jeniffer Solis** - March 4, 2021



Water law cases frequently involve the assessment of lengthy records, specific scientific concepts, conflicting expert testimony, and take years to adjudicate.

(Southern Nevada Water Authority Investor Relations website photo)

The Nevada Supreme court held a public hearing Wednesday to consider the creation of a commission to study the adjudication of water law cases, with an eye toward creating a water law specialty court.

The [petition](#) was filed by Chief Justice James Hardesty, who believes the study is “warranted to improve the education, training, specialization, timeliness, and efficiency” of the court’s approach to water law.

Water law cases frequently involve the assessment of lengthy records, specific scientific concepts, conflicting expert testimony, and years of relevant Nevada history, Hardesty noted in his petition.

Cases can take years to adjudicate, adversely delaying final water law decisions in the state. State water regulators say there’s been an increase in [frivolous claims and unnecessary litigation](#) over the past 10 years.

“While water law is a challenging, complex, and infrequently agreed upon subject in our law, what was a consistent theme in all the conversations I had was the perceived benefits of a study that would look at how the judicial system adjudicated water law matters in the future,” Hardesty said during the hearing.

The commission would consider the creation of water courts, giving the chief justice of the Supreme Court the authority to assign trained District Court judges to serve on water cases throughout Nevada.

Water regulators have looked into studies and approaches other states use to adjudicate water law cases.

According to a survey by the Division of Water Resources, four western states — Colorado, Idaho, Montana, and New Mexico — have created some kind of specialty court to handle water cases.

All states with water courts have also provided specialized education and training for judges who serve on water cases.

“We believe an understanding of the law and precedent is not only required but important to the ability and the desire to make sense of the technical-scientific data,” said Micheline Fairbank, deputy administrator for the Nevada Division of Water Resources.

Climate change and Nevada’s growing population and economy make the creation of the commission a priority for the division said Fairbank.

“Decisions of the state engineer are often highly technical and specialized,” said acting State Engineer Adam Sullivan, Nevada’s top water regulator. “Our division recognizes the need for the study to provide expedient judicial review of water cases, well into the future.”

Sullivan called for diverse and broad representation on the commission to represent the interests of all Nevadans, including Tribal Nations.

Representatives for the Truckee Meadows Water Authority also spoke in favor of the commission, as did several attorneys who specialize in water and natural resources law.

Attorney Paul Taggart said water cases have become a regular part of his firm's work.

"Many many times I have seen judges very interested in what other judges have done in similar cases," Taggart said. "If you had a panel of judges who were the ones who heard water cases I think they would already be aware of that and found some regularity there."

Conservationists also support the creation of a specialty water court.

"The better we are all able to come to the table on water law-making decisions the more well thought out those decisions will be and maybe ultimately will result in less litigation," said Patrick Donnelly, Nevada state director of the Center for Biological Diversity.

No action was taken on the proposal during Wednesday's hearing.

Jeniffer Solis

Reporter | Jeniffer was born and raised in Las Vegas, Nevada where she attended the University of Nevada, Las Vegas before graduating in 2017 with a B.A in Journalism and Media Studies. While at UNLV she was a senior staff writer for the student newspaper, the UNLV Scarlet and Gray Free Press, and a news reporter for KUNV 91.5 FM, covering everything from the Route 91 shooting to UNLV housing. She has also contributed to the UNLV News Center and worked as a production engineer for several KUNV broadcasts before joining the Nevada Current. She's an Aries.



Innovation zone project would qualify for federal tax write-offs

By Jeri Davis | March 8, 2021



Storey County Commissioners [voted last week](#) to “oppose separatist governing control” and the carving up of the county. It was the first official statement from the commission in response to

Gov. Steve Sisolak’s [proposed legislation creating “Innovation Zones”—cities built and governed, at initially, by tech companies.](#) County Commissioner Lance Gilman, from whom land in a proposed innovation zone adjacent to the Tahoe-Reno Industrial Center (TRIC) was purchased, was not present for the vote.

In news reports and social media posts, many people have referred to the proposal—and yet [to be introduced legislation](#)—for innovation zones as Sisolak’s idea.

But the push for innovation zones—and the one that is likeliest to come to fruition first through an effort led by the company Blockchains, LLC—predate the governor’s term in office. In fact, it was Gov. Brian Sandoval who first called Blockchains “one of the next big chapters” in Nevada history during a roundtable held at the TRIC back in October 2018.

Blockchains is one of a handful of big tech companies to make its home at the TRIC in Storey County east of Reno—joining Google, Switch and Tesla. But what has set Blockchains apart is its purchase of additional 67,000 acres of land adjacent to TRIC, land that Sandoval dubbed “Innovation Park.”

It was also Sandoval, in conjunction with then-Nevada U.S. Senator Dean Heller, who lobbied the US Treasury Department to designate Storey County as an “opportunity zone.”

Opportunity zones, created through the Tax Cuts and Jobs Act of 2017, are defined by the Internal Revenue Service as “economically-distressed communities where new investments, under certain conditions, may be eligible for preferential tax treatment.” Opportunity zone plans are now in place in communities in all 50 states.

A zone within a zone

Storey County, initially, didn't qualify for the designation because its average household income was high.

Governors in each state were able to nominate areas to be designated as opportunity zones. Sandoz had to remove his request for a part of Lyon County, including Dayton, to be designated an opportunity zone in order for Storey County to be considered.

Which brings us back to "Innovation Park." This is where Blockchains intends to build a "smart city" organized around blockchain technology—capitalizing on the independence of an innovation zone and exploiting the tax write-offs that come with being a development inside an opportunity zone. The smart city idea, too, was [announced in 2018 by Blockchains founder and CEO Jeffrey Berns](#).



A rendering of Blockchains LLC's proposed Painted Smart City concept. (Credit: EYRC Architects + T  Wiscombe Architecture)

During the announcement of the planned legislation for innovation zones, Sisolak said they wouldn't come at the cost of a huge tax handout from the state, [the variety that was given to Tesla](#) to lure it to Nevada. In fact, he said the legislation would include provisions requiring companies to put forth proposals for industry-specific taxes to be levied upon it—though no specifics regarding rates were discussed.

Sisolak made no mention of the fact that the first—and maybe only—innovation zone lies within an opportunity zone, qualifying it for a tax break from the federal government.

Right now, Blockchains will receive at least a temporary tax deferral from the feds on its capital gain. According to the opportunity zones rules, this could become a permanent exclusion of taxable income on new gains. Per the [Tax Policy Center](#), "For investments held for at least 10 years, investors pay no taxes on any capital gains produced through their investment in Opportunity Funds (the investment vehicle that invests in Opportunity Zones)."

Opportunity for whom?

Blockchains and its smart city may become the only innovation zone within an opportunity zone in Nevada. But it's not the only development within an opportunity zone to draw criticism and scrutiny. Federal legislators have been questioning how opportunity zones are being used to line the pockets of the wealthy since their inception under the Trump administration.

In 2019, House Ways and Means Committee Chairman Richard Neal and Senate Finance Committee Ranking Member Ron Wyden [launched an investigation](#) into the Treasury Department's Opportunity Zone designation of Storey County, exploring whether political appointees interfered in the process potentially steering millions in tax breaks to longtime associates.

In their request to then-Treasury Secretary Steven Mnuchin, the lawmakers wrote:

“The New York Times also released an internal memorandum from a career IRS official, which warn about the negative impact that this designation would have on the Opportunity Zone program. Among other things, the memorandum stated that the decision to allow Nevada to ‘deviate from’ the establish eligibility criteria ‘creates serious potential risks to both the IRS and the opportunity zone program,’ ‘demonstrably unfair to every other state (and the taxpayers and investors in those states),’ and ‘call[into question the legitimacy of the process by which designations were made.’ Despite these objection Treasury allowed for the designation of Storey County.”

This and [other investigations](#) done at the behest of Democrats have yielded no changes to the opportunity zone program.

So, it appears likely for now that if innovation zones are approved in Nevada, Blockchains’ smart cit will be ushered into reality in such a way as to guarantee it meets the requirements to take full advantage of the opportunity zone tax breaks.

Pete Ernaut of lobbying and marketing firm R&R Partners, who works with Blockchains and who had previously served as a senior advisor to both Gov. Sandoval and Sen. Heller, has [said that it will like take a decade](#) for Blockchains to finish securing the water rights to meet the number of acre-feet ne for a city the size of the one proposed.

Until the city’s infrastructure is built, and things like water rights are squared away and the company ready to take over providing governmental services—from schools to law enforcement—Blockchains needs only invest another \$1 billion into the innovation zone over the course of a decade to satisfy to state’s requirements, according to the proposed legislation.

If it does so through an opportunity fund, it will also meet the federal requirement for a permanent exclusion from taxes on its new gains going forward.



JERI DAVIS

Jeri Davis came to Reno from rural Nevada in 2004 to study anthropology at the University of Nevada, Reno. In 2012, she returned to the university for a master’s degree in journalism. She is the former associate and news editor of the Reno News Review and is a recipient of first-place Nevada Press Association awards for investigative and business reporting. Jeri is passionate about Nevada’s history, poli and communities.



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PICO Holdings, Inc. Announces Change of Name to Vidler Water Resources, Inc. and Results for the Fourth Quarter Of 2020

Article Stock Quotes (1)

March 8, 2021 9:00 AM EST

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CARSON CITY, Nev.--(BUSINESS WIRE)-- PICO Holdings, Inc. announced that its Board of Directors has amended the Company's Certificate of Incorporation and Bylaws and changed the name of the Company to Vidler Water Resources, Inc. with effect from March 8, 2021. The Company also announced, concurrent with the change of name of the corporation, it has changed its ticker symbol to VWTR on the Nasdaq Global Market, effective March 9, 2021. The Company also announced its reported results for the fourth quarter ended December 31, 2020. Our reported shareholders' equity was \$178.3 million (\$9.59 per share) at December 31, 2020, compared to \$178.3 million (\$9.01 per share) at December 31, 2019.

Fourth Quarter Results of Operations

Our fourth quarter results of operations were as follows (in thousands):

	Three Months Ended December 31,	
	2020	2019
Total revenue	\$ 3,466	\$ 10,360
Total cost and expenses	2,703	5,779
Gain from operations before income taxes	763	4,581
Benefit for federal and state income taxes	9,333	—
Net income attributable to PICO Holdings, Inc.	\$ 10,096	\$ 4,581
Net income per share	\$ 0.54	\$ 0.23

Full Year Results of Operations

Our full year results of operations were as follows (in thousands):

	Year Ended December 31,	
	2020	2019
Total revenue	\$ 9,612	\$ 29,398
Total cost and expenses	8,944	17,872
Gain from operations before income taxes	668	11,526
Provision for federal and state income taxes	9,333	—
Net income attributable to PICO Holdings, Inc.	\$ 10,001	\$ 11,526
Net income per share	\$ 0.52	\$ 0.57

Vidler Water Resource's President and Chief Executive Officer, Dorothy Timian - Palmer, commented:

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"Our 2020 results were, as in 2019, driven by sales transactions closed in all our service areas and reflect the demand in these high growth and water - scarce regions for long - term sustainable water resources. Our aggregate revenue of \$9.6 million in 2020 was comprised mainly from sales of our water rights inventory in northern Nevada and New Mexico. Further sales in the first quarter of 2021, that have either occurred or will shortly close, from our water assets at Dodge Flat, Nevada and the Middle Rio Grande, New Mexico, totaling \$2.6 million, means that we have now sold all of our assets in these two locations.

"As evidenced by the reduction in year over year revenue, our sales transactions can vary significantly across reporting periods. However, we believe our portfolio of sustainable water assets throughout the Southwest U.S. can provide residential and commercial developers with one of the few available assured water supplies they require to advance their projects in an environmentally conscious manner. We believe that it is important that the developments that bring growth and economic benefits to local communities are done using sustainable resources. Given the continued growth in demand throughout the Southwest U.S. for assured water supplies – arising from population and economic growth – we believe the continued monetizations of our water assets portfolio will provide an attractive return to investors through a stream of cash flows returned to shareholders. In addition, it appears that our real estate properties in Arizona, have the potential to become alternative energy sites due to their location near existing transmission, fiber optic, and natural gas lines as well as transportation corridors. We continue to explore these opportunities which may provide additional sources of on-going future cash flows.

"Furthermore, due to our existing net operating losses as of December 31, 2020 of \$155.3 million, we believe the corporate tax on [earnings](#) we generate from future assets sales can be offset by loss carry forwards for the next several years. This ~~will be particularly valuable in the future if~~ the corporate tax rate is increased from the current rate. These savings provide more capital that can to do under our current business plan. We have generated cumulative book income over the past three transactions, as of December 31, 2020 we released a portion of our total deferred tax valuation allowance on our balance sheet of \$9.3 million.

"Our total costs, excluding cost of sales, for 2020 were \$7 million compared to \$9.4 million for 2019. These costs include all our [acquisition](#), selling and project costs, including significant legal fees incurred in 2020 as a result of protecting our water rights and applications in Kane Springs, Lincoln County in southern Nevada. These costs also include the costs of operating Fish Springs Ranch in northern Nevada. Clearly, our main focus at Fish Springs Ranch is the sale of our sustainable water rights to developers in the North Valleys region of Reno, Nevada. However, we have been successful in generating different income streams from Fish Springs Ranch to help offset our operating costs and in 2020, in addition to our traditional agricultural income from the ranch, we entered in to a long – term lease of some of our property with an alternative energy provider. We are also exploring opportunities to lease or sell a small portion of our total inventory of water rights at Fish Springs Ranch to Truckee Meadows Water Authority ("TMWA") as well as other governmental agencies and private water users in the region outside of our service area in the North Valleys. We believe this arrangement, if finalized, demonstrates the benefit of the deep relationships we have with the stakeholders in the Reno community. If we are successful, this arrangement would not only allow us to facilitate the delivery of water to consumers beyond our current service area in the North Valleys but also assist TMWA and other governmental agencies to establish a more certain supply of water to the region for both environmental and growth purposes, as well as a back-up supply for dry years. Our aim is to keep our annual net operating costs (which we define as all costs not directly associated with asset monetizations or acquisitions net of operating income such as agricultural and lease income) as low as possible while we monetize and develop our water asset portfolio over the next several years. Our budget for net operating costs in 2021 is \$5.2 million compared to actual net operating costs of \$5.6 million in 2020.

"Our capital allocation in 2020 was exclusively focused on repurchasing shares and reflects our Board's belief that, at current market prices, our stock is significantly undervalued from our estimates of its intrinsic value and, consequently, repurchases should be beneficial to our continuing shareholders. In 2020 we repurchased a total of 1,199,357 shares for \$10.4 million (\$8.65 per share). From inception of the repurchase program (March 2017) to date we have repurchased a total of 4,702,464 shares for \$49.2 million. Our repurchases are responsible for our book value per share increasing to \$9.59 at December 31, 2020. Our total equity essentially remaining unchanged in 2020.

"Finally, our operations are, and have been for a few years, solely focused on the Vidler Water Company. To better reflect the Company's mission, brand and business, we are changing our name to Vidler Water Resources, Inc. and our Nasdaq ticker symbol will change to VWTR. We are standing environmental, social and governance (ESG) principles. Our mission, and our business, are sustainable and provide a beneficial use to the citizens of the regions we serve.

About Vidler Water Resources, Inc.

As of December 31, 2020, our primary holding was Vidler Water Company, Inc. ("Vidler") and operations primarily in the Southwestern U.S.

Our business is to source, develop and provide sustainable potable water resources to communities that lack, or are running short of, available water resources.

We conduct our business by working closely with many constituents in these communities including community leaders, residential and commercial developers and alternative energy providers. Our business is sustainable and provide benefit to the citizens of the communities and regions we serve.

TO OVERCOME UNCERTAINTY, PURSUE FIXED INCOME.

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Currently, we believe the highest potential return to shareholders is from a return of capital. As we monetize our water and real estate assets, rather than reinvest the proceeds, we intend to return capital to shareholders through a stock repurchase program or by other means such as special dividends. Nonetheless, we may, from time to time, reinvest a portion of proceeds from asset monetizations in further development of existing assets, if we believe the returns on such reinvestment outweigh the benefits of a return of capital.

OTHER INFORMATION

At December 31, 2020, we had a market capitalization of \$173.8 million, and 18,583,366 shares outstanding.

We remind all of our stockholders that questions regarding our operations may be submitted to info@vidlerwater.com, and, if appropriate, we will post on our website responses to these questions.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This press release contains statements that may constitute forward-looking statements, which are based on information currently available, usually identified by words such as "anticipates," "believes," "estimates," "plans," "projects," "expects," "hopes," "intends," "strategy," "focus," "outlook," "will," "could," "should," "may," "continue," or similar expressions, which speak only as of the date the statement was made. Such statements are forward-looking statements and are within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and such statements are subject to the safe harbor created by those sections and the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical or current fact, are statements that could be deemed forward-looking statements, including without limitation statements regarding our business objectives, our ability to monetize our water resources, the future demand for our water resources, our ability to reduce net operating cash use, our ability to source additional revenue streams, our ability to preserve and utilize NOLs to offset taxable income and reduce our federal income liability, and our ability to monetize assets and return capital to shareholders through stock repurchases or through other means. The forward-looking statements are based on current expectations and assumptions and are subject to risks and uncertainties.

A number of other factors may cause actual results to differ materially from our expectations, such as: any slow down or downturn in the housing or in the real estate markets in which Vidler operates; fluctuations in the prices of water and water rights; physical, governmental and legal restrictions on water and water rights; a downturn in some sectors of the stock market; general economic conditions; the impacts of the COVID-19 global pandemic on the demand for real estate, the pace of real estate development, and demand for water resources to support residential and commercial real estate development; prolonged weakness in the overall U.S. and global economies; the performance of the businesses in which Vidler operates; the continued service and availability of key management personnel; and potential capital requirements and financing alternatives.

For further information regarding risks and uncertainties associated with our business, please refer to the "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors" sections of our SEC filings, including our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, copies of which may be obtained by contacting us at (775) 885-5000 or at <http://vidlerwater.com>.

We undertake no obligation to (and we expressly disclaim any obligation to) update our forward-looking statements, whether as a result of new information, subsequent events, or otherwise, in order to reflect any event or circumstance which may arise after the date of this press release, except as may otherwise be required by law. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this press release.

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Source: PICO Holdings, Inc.

FEATURED

COVID-19 risk meter now in moderate range

By Bob Conrad March 9, 2021

Officials today said there is good news to share. The region's COVID-19 risk meter is at the moderate range, showing reduced hospital cases, a lower test positivity rate and, overall, fewer daily new cases of the coronavirus disease.

"They're averaging on the order from eight to 12 people in the ICU, which is different than we were several weeks back," said Jeremy Smith with the Truckee Meadows Regional Planning Agency, a partner on the risk meter. "So things are looking really good on the data front."

A potential hiccup in downward trends could be new strains of COVID-19.

"First of all ... the [United Kingdom variant](#) is spreading fast," said Dr. Ron Ayrel. "And it might be the predominant strain in the United States in a few weeks. Also, there's another [variant from South Africa](#) and ... one from Brazil, that appears to be evading the vaccine to some degree."

However, the more dangerous South African variant is not a predominant strain in the U.S.

Dr. John Hess said basic measures — in place since COVID-19 arrived in Washoe County a year ago — should still be maintained.

"We still need to do our preventative measures. We still need to socially distance; we still need to wear masks; we still need to wash our hands regularly; [and] really limit our size of gatherings," he said.

Hess also said the vaccinations are critical to reduce the spread of the virus, but it's too early to tell how much of an impact they are having.

"The vaccine is a huge advantage for us for the future," he explained. "But it's not really telling the story yet, where there's not enough of the population, even the high risk population, that's had it, to really be reflecting that. What we want to see is, if there are cases, we don't want to see the hospitalizations ... which means we still need to do our preventative measures."

StoneGate proposal doesn't meet all city requirements; here's why it's being recommended anyway

[FEATURED](#)

StoneGate proposal doesn't meet all city requirements; here's why it's being recommended anyway

By Bob Conrad March 9, 2021



Advertisement

[The proposal for the StoneGate development special assessment district \(SAD\) is coming back in front of the Reno City Council tomorrow for a second time.](#)

[A previous discussion to create a SAD](#) for the development was tabled in January because council members said they were confused about the agenda item.

The SAD seeks \$37 million to cover infrastructure costs, and the developer is requesting the city approve the [creation of a SAD and bonds](#) to help pay for streets, sewer and improvements to the Highway 395 interchange.

[The SAD's proposal has more information on the city's website than for prior meetings](#), including a list of criteria the project is expected to meet.

"The primary benefit of SAD financing is to reduce infrastructure construction costs so homes can be sold at more affordable prices," city staff noted. "With this tool, mortgages and down payments in the assessment area should be reduced, which would benefit lower-income home-buyers."

It is the largest SAD of its kind in Reno's history.

According to staff, "The only active SAD of this type in Reno is the 2002 Special Assessment District No. 4 (Somerset Parkway), which helped fund street improvements, utilities, sanitary sewer improvements and a potable water pump station for the Somerset project."

But staff also noted the proposal for StoneGate does not meet all of the city's criteria.

"The request is in substantial conformance with the SAD Guidelines," they said. "Minor deviations are supported with a finding that the deviation from the policy is in the best interest of the City."

Those deviations include the location — StoneGate is not in the city's high priority development area — and the request for the bonds to be issued over 30 years, not 20 years required by the city.

"Higher priority areas are primarily developed, which makes the requirement for 100% property owner consent very difficult to achieve," staff argued. In addition, "by issuing the bond with a 30 year amortization, it decreases the annual obligation on the assessments which would lower the overall cost for the housing and is therefore consistent with the requirement that any proposed deviation be in the best interest of the City."

The bond amount also exceeds the city's maximum of \$25 million.

"The proposed bonds total \$36.7 million, which exceeds the general range that is called for," staff said. "The analysis that determined the amount being funded with tax exempt bonds was based upon the appraised value as is and as improved."

The city maintains the SAD has little to no risk to the city and there are provisions for the city to sell the property if payments are missed.

The developers also suggest, within the proposal, that a second SAD may be needed "to fund costs over [the] amount available from bonds."

Public water decisions need more transparency, scrutiny | Jerry Wager

Jerry Wager **Subscribe:** [Read local news and views with a \\$1 subscription to the RGJ](#)
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This opinion column was submitted by Jerry Wager, a property owner adjacent to Steamboat Ditch and a member of the TMWA Steering Advisory Committee.

If you were a public official or one of their cohorts, and you wanted to throw a cloak of secrecy or disinformation over a sweetheart project, you couldn't have asked for a better year than 2020. Even before the pandemic played out through the year, the public's business was characterized by canceled monthly meetings and the lack of quorums except when something important needed a vote.

Take the [Washoe County Water Conservation District](#), for example — April, May, July, August and January meetings canceled, and two others where there was an insufficient quorum; but bless their hearts, they did manage to get four members to show up on [Aug. 18, 2020](#) to vote to sponsor the Steamboat Ditch piping project using an \$850,000 planning and design grant from the federal Natural Resources Conservation Service.

All the various actors involved in the NRCS project seemed to forget the Northern Nevada Water Planning Commission recommended using monies from the Regional Water Management fund to allow the Western Regional Water Commission to [finance a stormwater study](#) of the urban portion of Steamboat Ditch last spring. [The \\$170,000 study](#), approved at [WRWC's June 2020 meeting](#), aimed at identifying specific problems associated with overtopping of flood waters and seepage, and looking at a variety of fixes. One has to wonder then why the proposal to pipe the ditch came out of nowhere a couple months later. Even more surprising since there is so much overlap in membership on the [NNWPC](#), [WRWC](#), [WCWCD](#), [Truckee Meadows Water Authority](#) and the [Steamboat Canal and Irrigation Company](#) boards. An even bigger coincidence was that one firm, McDonald Carrano, in the form of attorney Michael Pagni, provides legal services to all these entities. How does one firm secure the contracts for all these agencies? Perhaps the answer lies in the firm's generous campaign contributions for several county commissioners and city council members.

More: [After public complaints, planning for Steamboat Ditch project on hold](#) Page 93 of 95

Such expensive legal services in total should have at least involved counseling the board and commission members on what constitutes conflict of interest and when it's appropriate to recuse oneself. At the TMWA board meeting on Feb. 17, it was disclosed that TMWA is the largest shareholder in the SCIC. Despite this, one of its employees was a deciding vote for the WCWCD to sponsor the piping project last August. Further, TMWA was identified in the Dec. 8, 2020 scoping meeting by project consultants as benefiting from the piping. Yet, it wasn't until a Jan. 14, 2021 letter to The Langdon Group (the consultant for the NRCS grant) that the agency took a public position.

Getting answers as to how the NRCS project came to be has proven very difficult for the more than 1,500 residents shocked by the scope and secrecy of the WCWCD-sponsored project. Just getting the Steamboat project on a public agenda for discussion has been difficult. Thanks go to Reno council member Jenny Brekhus who, over objections from other members, managed to shed at least some daylight on the whole fiasco at the February 2021 TMWA board meeting.

The Steamboat Ditch project is an example of the worst elements of our area's public processes. It is worth noting that the SCIC does not own the ditch, nor any real property along the ditch. The property, including the ditch, is owned by approximately 500 individual citizens who were kept in the dark about the piping proposal. The Canal Company has an easement to transport irrigation

water, not stormwater, even though the city and county pay for the privilege of doing so.

Ostensibly, the Steamboat piping project was about resolving stormwater issues, but other objectives, less apparent, were embedded in it. Piping area ditches would result in less water loss through evaporation, and particularly seepage — potentially amounting to thousands of “saved” acre feet of water. Would this water become available for sale to developers, supplementing water rights that could be reappropriated from agriculture to municipal and industrial water use? Although it may not always be apparent, stormwater and public water supply are closely linked. While public water supply is rightfully managed regionally, stormwater should be also. But any thought to developing a tax-funded regional stormwater utility should be avoided unless the public can be assured decisions will be made in the public interest. I hope elected officials will take a hard look at the boards of these (and similar) agencies and encourage broader representation and less overlap. In particular, insist that those members directly benefiting from decisions recuse themselves or refrain from participation altogether.

Jerry Wager is a property owner adjacent to Steamboat Ditch and a member of the TMWA Steering Advisory Committee.