STANDING ADVISORY COMMITTEE

AGENDA

Tuesday, April 6, 2021 at 3:00 p.m.
Truckee Meadows Water Authority
Virtual Meeting Only

MEMBERS OF THE PUBLIC MAY ATTEND VIA THE WEB LINK, OR
TELPHONICALLY BY CALLING THE NUMBER, LISTED BELOW.
NO PHYSICAL LOCATION IS BEING PROVIDED FOR THIS MEETING
(be sure to keep your phones on mute, and do not place the call on hold)

Please click the link below to join the webinar:
https://tmwa.zoom.us/j/92234759061?pwd=VDJVSkVBTHFHNGVyWmEvQkMzbFV6QT09
Password: 486974
Or call:
Phone: (888) 788-0099
Webinar ID: 922 3475 9061

NOTES:

1. Unless and until the Governor issues a Directive or Order requiring a physical location be designated for meetings of public bodies where members of the public are permitted to attend and participate, no members of the public will be allowed in the TMWA's Corporate Office due to concerns for public safety resulting from the COVID-19 emergency and pursuant to the Governor of Nevada's Declaration of Emergency Directive 006 Section 1 which suspends the requirement in NRS 241.023(1)(b) that there be a physical location designated for meetings of public bodies where members of the public are permitted to attend and participate and subsequent directives related to social distancing. This meeting 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 Committee 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 Committee 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 Committee 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 SAC 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**).

1. Roll call*
2. Public comment — limited to no more than three minutes per speaker*

3. Approval of the agenda **(For Possible Action)**

4. Approval of the minutes of March 2, 2021 meeting **(For Possible Action)**

5. Discussion, recommendation, and possible action regarding TMWA's Standing Advisory Committee meeting schedule — Michele Sullivan and Andy Gebhardt **(For Possible Action)**

6. Water Supply Update — Bill Hauck*

7. Presentation on the TMWA Tentative Budget for the Fiscal Year ending June 30, 2022 and Draft Capital Improvement Plan for Fiscal Years 2022 through 2026 and possible recommendation to Board — Matt Bowman and Sandra Tozi **(For Possible Action)**

8. Informational presentation on local government Special Assessment Districts (SADs) — Scott Estes*

9. Presentation and possible recommendation to the Board, of applications to fill the Multi-Family Residential Primary Customer Class vacancy, Senior Citizen Alternate Customer Class vacancy, and Residential Representative 3 Customer Class Alternate vacancy and other possible vacancies from the following pool of candidates listed in alphabetical order: Al Black, Russ Foreman, Jordan Graham, Tom Kurtz, Kevin Ryan and Alex Talmant — Sonia Folsom **(For Possible Action)**

10. Discussion and possible requests for agenda items for future meetings **(For Possible Action)**

11. Staff Items* (Unless otherwise listed with a topic description, this portion of the agenda is limited to announcements)

12. Committee Items* (Unless otherwise listed with a topic description, this portion of the agenda is limited to announcements)

13. Public Comment — limited to no more than three minutes per speaker*

14. Adjournment **(For Possible Action)**

TRUCKEE MEADOWS WATER AUTHORITY

STANDING ADVISORY COMMITTEE
DRAFT MINUTES
March 2, 2021

The Standing Advisory Committee (SAC) met via Zoom. Vice Chair Schulewitch called the meeting to order at 3:02 p.m.

1. ROLL CALL

Primary Members and Voting Alternates Present: Kristine Brown, Robert Chambers, Harry Culbert, Jordan Hastings, Colin Hayes, Don Kowitz, Carol Litster, Neil McGuire, Ken McNeil, ***Jonnie Pullman, and Jerry Wager.

Alternates Present: Fred Arndt, Ken Becker, Susan Hoog, **Karl Katt, John Krmpotic, Dale Sanderson, and *Jim Smith.

Primary Members and Alternates Absent: Chris Melton, and Ann Silver.

Staff Present: Matt Bowman, Robert Charpentier, John Enloe, Scott Estes, Sonia Folsom, Mark Foree, Andy Gebhardt, Bill Hauck, Pat Nielson, Laura Rader, Danny Rotter, Michele Sullivan, Chuck Swegles, Sandra Tozi, John Zimmerman, and Legal Counsel Michael Pagni (McDonald Carano).

*Member Jim Smith arrived at 3:07 p.m.
**Member Karl Katt left at 3:33 p.m.
***Member Jonnie Pullman left at 4:33 p.m.

2. PUBLIC COMMENT

There was no public comment.

3. APPROVAL OF THE AGENDA

Upon motion duly made by Member Kowitz, and seconded by Member Chambers, and carried by unanimous consent of the members present, the Committee approved the agenda.

4. APPROVAL OF THE MINUTES OF THE DECEMBER 1, 2020 MEETING

Upon motion duly made by Member Hayes and seconded by Member Chambers, and carried by unanimous consent of the members

present, the Committee approved the December 1, 2020 meeting minutes with amendment.

5. RECOGNITION OF MIKE SCHULEWITCH, SAC VICE CHAIR

Chair McGuire recognized former Vice Chair Mike Schulewitch for his service sitting on the Standing Advisory Committee and his part representing the former South Truckee Meadows General Improvement District (STMGID) during the merger and his dedication to the Committee.

Mr. Schulewitch thanked everyone and for being given the opportunity to represent former STMGID during the merger, which was a better deal for all involved and made for a better water company.

Mark Foree, TMWA General Manager, expressed staff's appreciation for everything Mr. Schulewitch did in working on the merger with STMGID; finalizing the efforts was mainly a credit to him in communicating with all the residents in his area.

6. DISCUSSION AND POSSIBLE RECOMMENDATION REGARDING BILLS IN THE 2021 LEGISLATIVE SESSION THAT MAY IMPACT TMWA

John Zimmerman, TMWA Water Resources Manager, introduced Leo Drozdoff, TMWA Lobbyist, who is the former director of the Department of Conservation and Natural Resources. They highlighted a few bills that are significant to TMWA: AB3 (allows parcel maps and documents be sent electronically), support; AB5 (attempts to clarify what actions State Engineer can be judicially reviewed), has received numerous negative comments as drafted and may need to address those concerns, monitor; AB6 (does not require a hearing on a temporary application), support; AB87 (proposes to streamline the process by which certain easements of cities and counties can be vacated and abandoned without a hearing), since the law includes public utility and staff wants to ensure TMWA is involved in the process, oppose; AB97 (revises provisions governing toxic chemicals), specifically related to chemicals found in fire suppression foam and fire retardant clothing used which is not found in Nevada and when TMWA staff has sampled in the past the results were "non detect", but staff is working with the bill sponsor on addressing issues that may impact TMWA, monitor; AJR2 (recognizes that forest health is directly related to water quality), support; SB67 (increases the threshold that an agency can self-perform a public work from 100k to 250k), 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. Staff has been working with Clark County on the amendment that would address their concerns, support; AB146 (related to regulating water from diffuse/non-point sources of water), Mr. Drozdoff plans to meet with the bill sponsor, Assemblywoman Sarah Peters, to better understand the purpose of the bill, monitor; and SB149 (allows for rural counties to create groundwater boards within their jurisdictions), monitor.

Mr. Zimmerman informed the Committee on a bill draft request (BDR), that has yet to become a bill, sponsored by Governor Sisolak. Michael Pagni, TMWA General Counsel, stated the BDR is a proposal by Blockchains that would essentially create autonomous districts that would function as a county within a county taking over responsibilities such as tax collection, k-12 education and other services that would

otherwise be provided by government; the innovation zones could only be created by a private developer who owns more than 50k acres of land and promises to invest over $1B of his own and would agree to levy a tax on innovative technology based in their zone.

Member Brown asked about AB93 and what implications for TMWA as well as the fiscal impacts of SB67. Mr. Zimmerman replied that it would impact how TMWA responds if an emergency was declared and there's been no mention yet of a fiscal impact on SB67.

Chair McGuire asked about AB97 and if the fire retardant used in the area contain the chemicals that negatively impact water quality. Mr. Drozdoff replied yes, and the firefighting foam is very effective for its purpose, but comes with some potential health concerns and there is a desire to not ban this product, but to allow for firefighters not to train with this, but use a proxy.

7. WATER SUPPLY UPDATE

Bill Hauck, TMWA Water Supply Administrator, informed the Committee that the snowstorms in late January increased the snowpack levels from about 50% to about 80% and the storms in February weren't as significant, but kept the snowpack levels stable; upstream reservoir storage is at about 40% capacity (which is before the spring runoff); TMWA has almost 41k acre feet (AF) in storage including about 15k AF in Lake Tahoe, and about 12k AF in other federally operated reservoirs in addition to the water owned by TMWA in Donner and Independence lakes; Lake Tahoe has about 2.6 feet of storage and is expected to end the year about 2 feet above the rim; and, despite the limited runoff expected to occur this spring, we will have normal river flows this year and into next year.

Member Krmpotic asked if there is still an opportunity for a miracle March to add snowpack or if it could happen in April. Mr. Hauck replied there is still time and they have seen snowpack being built well into May, but statistically there is less than 20% chance of ending the year on an average note.

8. 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 was higher due to water sales which 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 expenditures 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).

Chair McGuire asked if water sales were higher because of the pandemic and if staff anticipates an increase in supply costs next year. Mr. Bowman replied that it could be, in addition to the warmer

temperatures in the summer, they saw an increase in residential water sales, and a decrease in commercial water sales, and staff is finalizing the services and supplies budget for next year and do not see a substantial increase, about 2%, from current budget.

9. PRESENTATION ON MAJOR CAPITAL IMPROVEMENT PROJECTS

Danny Rotter, TMWA Engineering Manager, highlighted a few major TMWA capital improvement projects: Mt. Rose Water Treatment Plant, contract value $20.2M, is anticipated to be completed by the end of March 2021, then a 60-day demonstration period; Boomtown Booster Pump Station (BPS), contract value $2.1M, is expected to be completed by the end of May 2021; Washoe Flume Reconstruction, contract value $4.8M (original contract was for $3.3M) change order was submitted to add upper flume rehabilitation, hillside removal and protection, anticipated completed date is June 2021; Disc Drive BPS, contract value $4.7M, adding a 20 inch main and a 30 inch main, one of the largest system pump stations by total flow, anticipated completion date is October/November 2021; and Orr Ditch BPS, contract value $15M over FY22 and FY23, currently in the design phase (30% complete) and will go out to Construction Manager at Risk request for proposals soon.

Member McNeil expressed his concerns regarding the Mortenson-Garson development's proposed special assessment district (SAD) and the possibility of Reno taxpayers having to be responsible if the development does not move forward. Mr. Rotter replied they have requested an annexation for which TMWA provided a draft annexation agreement, but TMWA is not directly involved in SADs; TMWA's position is that growth pays for growth and customer rates are not impacted. Mr. Pagni provided a short explanation of how special assessment districts are established by cities and counties, not TMWA, as a conduit for financing by the property owners. Mr. Pagni also expressed concern that specific discussion on SAD's appeared outside the scope of the agenda item.

Member Krmpotic, agreed with Mr. Pagni, and added that he spent time with Member McNeil on this topic and further explained that the assessment goes to the people that benefit from the SAD and anyone outside of the district would not be financially impacted unless you buy a house of which is serviced by this benefit district. He encouraged Member McNeil to meet with somebody from the City of Reno Finance Department.

Member Pullman noted Member McNeil is correct on the principle about who is paying for it, but if a homeowner has bought the land from a developer whether it is through a SAD or price on the housing, they will pay for it. It is only a mechanism and it is a complicated issue, but it is outside of TMWA's area because it is the city that approves development.

10. 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% of active shares, which were inherited from Sierra Pacific Power Co. 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 again, and approaches TMWA again, staff will bring it to the Board for consideration and direction.

Member Wager asked when NRCS approached TMWA regarding this project, as it would appear that TMWA would have known about it from the beginning since so many staff are involved, how would TMWA benefit from the project; if the pipeline was constructed it would eliminate seepage and would it potentially create more water; the Western Regional Water Commission (WRWC) approved funding of $270k for the study to identify issues in the urban corridor section of the Steamboat Ditch in relation to flooding, seepage, and other issues; and how does TMWA monitor flooding, and if TMWA has identified specific wells that might be impacted if the ditch was piped. Mr. Zimmerman replied that NRCS first approached TMWA in January 2021, not from the start, and as a cooperating agency, TMWA could be either a proponent or opponent of the project, but are neutral and TMWA has no interest in using Steamboat Ditch for delivery of municipal water, but will continue, as is required, to use some of the ditch water to fill the ponds at Hunter Creek, and the letter submitted to NRCS referenced a potential environmental impact, but it was in the early stages and no environmental or studies have been conducted at this time, WRWC looks at flooding region wide as a result of the 2017 flooding issues that arose at that time, and TMWA has not identified wells that may be impacted because the project was halted before any recommended improvements were determined.

Member Kowitz asked where the Hunter Creek reservoirs are located. Mr. Zimmerman replied it is TMWA's old Hunter Creek Treatment Plant located west of McCarran, which is now a covered reservoir with a water tank as well. TMWA inherited the special use permit from the mid-1990s, approved by the Washoe County Commission that required Sierra Pacific at the time to maintain a green area with some ponds to provide a buffer between the water facilities and the neighborhood.

Member Hoog said she heard during the 2017 flooding, the ditch gates were open to help take water out of the Truckee River and is that something they would do. Mr. Zimmerman replied he had heard that as well, but was not sure if ditch companies open their gates in non-irrigation season to take flood water.

Member Hoog also clarified, for those unfamiliar with Steamboat Ditch, is it has become a walking trail in the residential area, which is why so many became upset with the possibility of piping the ditch.

11. DISCUSSION AND POSSIBLE ACTION REGARDING AMENDMENTS TO THE 2021 MEETING SCHEDULE

Sonia Folsom TMWA SAC Liaison, presented the 2021 meeting scheduled for discussion.

No action was taken.

12. DISCUSSION AND POSSIBLE DIRECTION TO STAFF REGARDING AGENDA ITEMS FOR FUTURE MEETINGS

Next meeting:

1. Legislative Session Update
2. Water Supply Update
3. Presentation of TMWA's tentative FY2022 budget and draft 2022-2026 CIP
4. Presentation on how special assessment districts work in relation to TMWA
5. Presentation of application to fill SAC vacancies
6. *Future Meeting:* Presentation of the impact of an extensive fire and impact on water supply; how would we approach restoration if it happened

Upon motion duly made by Member Wager and seconded by Member Kowitz, and carried by unanimous consent of the members present, the Committee approved the following agenda items for future meetings.

13. STAFF ITEMS

There were no staff items.

14. COMMITTEE ITEMS

There were no committee items.

15. PUBLIC COMMENT

Chair McGuire reiterated TMWA is a great water company and sees that when he is out in the public; he is approached numerous times with questions and concerns, and thanked Scott Estes, TMWA Engineering Director, for being available to answer his questions or direct him to a TMWA employee.

16. ADJOURNMENT

With no further items for discussion, Chair McGuire adjourned the meeting at 4:49 p.m.
Approved by the Standing Advisory Committee in session on _____.

Sonia Folsom, Recording Clerk

Member Jim Smith was present for agenda items 5 thru 16 only.

****Member Karl Katt was present for agenda items 1 thru 6 only.***

*****Member Jonnie Pullman was present for agenda items 1 thru 11 only.***

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STAFF REPORT

TO: Standing Advisory Committee
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer
Andy Gebhardt, Operations & Water Quality Director
DATE: March 31, 2021
SUBJECT: **Discussion, recommendation, and possible action regarding TMWA's Standing Advisory Committee meeting schedule.**

Recommendation

The Standing Advisory Committee (SAC) was formed for the express purpose to review and make recommendations concerning rates, tolls, charges, rate design and budget, and to facilitate and participate in public workshops and public meetings on rate adjustments. Staff would recommend that the SAC change their meeting schedule to further align with that charter and purpose in mind.

Background

In May of 2004, TMWA's Rate Making Review Committee (RMRC) had a specific recommendation; "TMWA should form an advisory committee made up of professionals, development community representatives and citizens to advise the Board on rate-making and rate design issues as those issues arise."

The objective of the committee would be to ensure that rates are designed and set in a manner that is reasonable and equitable among customer classes (or user types), to ensure that rates are set at the lowest possible level, but with the additional viewpoint of stakeholders, and to ensure the long-term financial stability of the Authority and reliability of the water system through review of such items as budgets, expenditures, reserve account levels and facility plans. The SAC should begin meeting on a monthly basis as soon as they are selected, in order to begin their education regarding TMWA's financials.

After discussion and meetings with the Board, in March of 2005 the TMWA Board approved and directed Staff to establish the SAC, with the purpose being to review budgets, rate proposals and other matters as directed by the Board.

In September of 2005, the first SAC members were appointed, and the committee was created.

Discussion

While the SAC is currently scheduled to meet on a monthly basis, that hasn't actually happened for a few years now. In 2018 and 2019, the SAC met 5 times. In 2020, the SAC met 4 times. With the original purpose and charter of the SAC in mind, Staff would recommend that the SAC meeting schedule be changed accomplish the goals of reviewing TMWA's financial matters.

Staff proposes that the SAC meet 4 times per year: February, April, June, and October.

February is the best time to review the final CAFR, or audited financial statements. The CAFR is filed on November 30 and presented to the TMWA Board in mid-December. Since this is during the holidays, we would suggest meeting to review the CAFR in February. Reserve account levels and results of the CIP plan could also be reviewed at this time.

April is the optimal month for the SAC to review the budget and five-year CIP plan and make recommendations. The budget is due in May to the State of Nevada, and this gives staff time to present any SAC recommendations to the Board at its April meeting and make any changes that the Board requests before the final review of the budget in May.

June would be a good time to meet before the summer months. Actual financial results compared to budget and prior year could be reviewed at this meeting.

October is when the Board generally reviews the five-year funding plan at the October board meeting. The SAC could also meet in October to review the financial models and give input to staff to bring to the Board.

Staff feels these 4 meetings would be sufficient for the SAC to review and discuss TMWA's ongoing financial matters. While the standard SAC schedule would be the 4 months mentioned above, additional meetings could be scheduled should additional financial matters arise, such as new rate proposals.

Informational items not related to TMWA financials may either be added to the agenda or distributed individually to SAC members, dependent on availability and at Staff's discretion. Existing TMWA Board policy states that Board members will not request from the General Manager any staff project that entails over two hours of staff work without seeking approval of the full Board. All members of any TMWA subcommittee are expected to adhere to that same standard.

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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

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Truckee Meadows Water Authority (TMWA)

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

Fiscal Planning Timeline

March

- **Tentative** Budget and CIP approved by TMWA BOD

April

- **Tentative** Budget and CIP approved by TMWA SAC
- **Tentative** Budget ("State Doc") filed with State of Nevada Department of Tax by April 15th *(NRS 354.596)*

May

- **Final** Budget and CIP approved by TMWA BOD
- **Final** Budget ("State Doc") filed with State of Nevada Department of Tax by June 1st *(NRS 354.598)*

October

- Funding Plan Presented to BOD and SAC

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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)*

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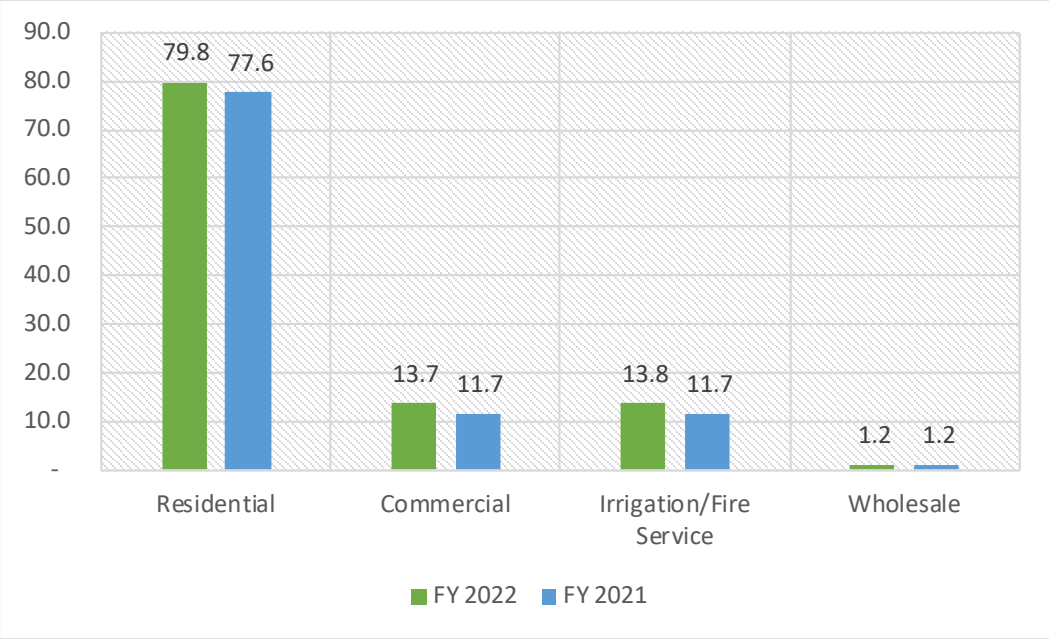
Truckee Meadows Water Authority (TMWA)

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

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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

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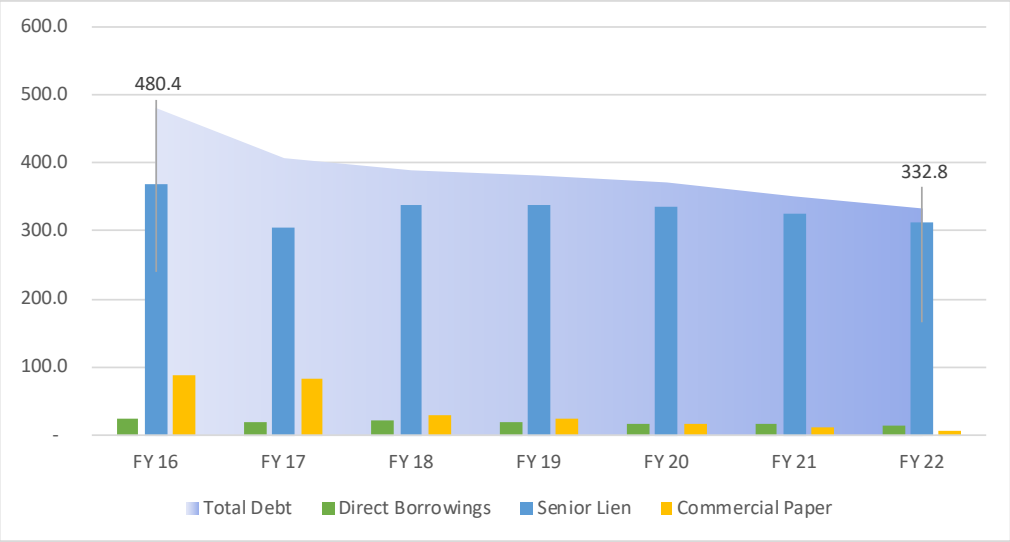
Truckee Meadows Water Authority (TMWA)

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%



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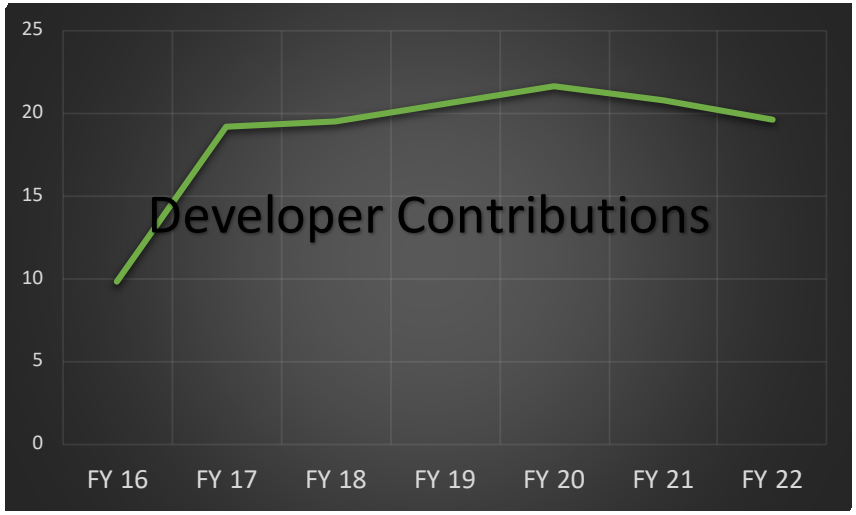
Truckee Meadows Water Authority (TMWA)

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%



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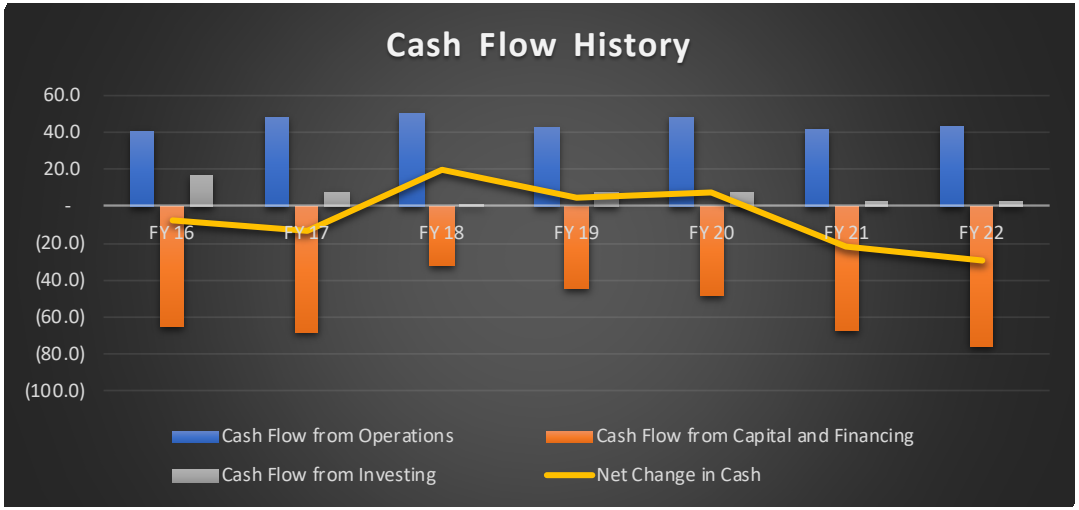
Truckee Meadows Water Authority (TMWA)

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



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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.

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Truckee Meadows Water Authority (TMWA)

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

Project Number	Capital Expenditure by Funciton	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
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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.

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Thank you!

Questions?

TRUCKEE MEADOWS WATER AUTHORITY

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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.

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

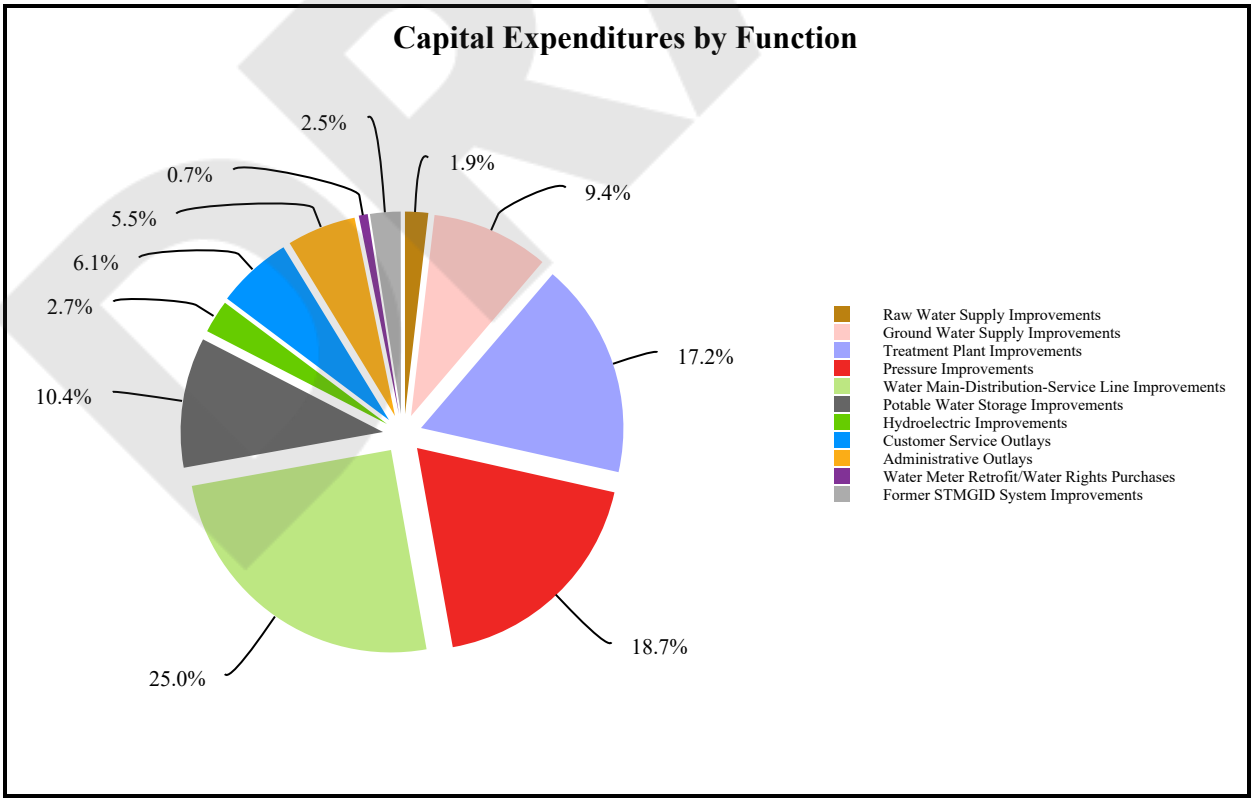
Project Summary for FY 2022 (continued)	Amount
Lemmon Valley Sand Yard	530
Verdi Hydro Main Extension	320
Watt Area Main Replacements	2,000
Oddie Wells Main Replacements	1,100
Lemmon Drive - Double Diamond Interchange (DDI)	500
Shriver and G Streets Main Replacement	500
Total	**12,830**
Potable Water 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	Year 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**

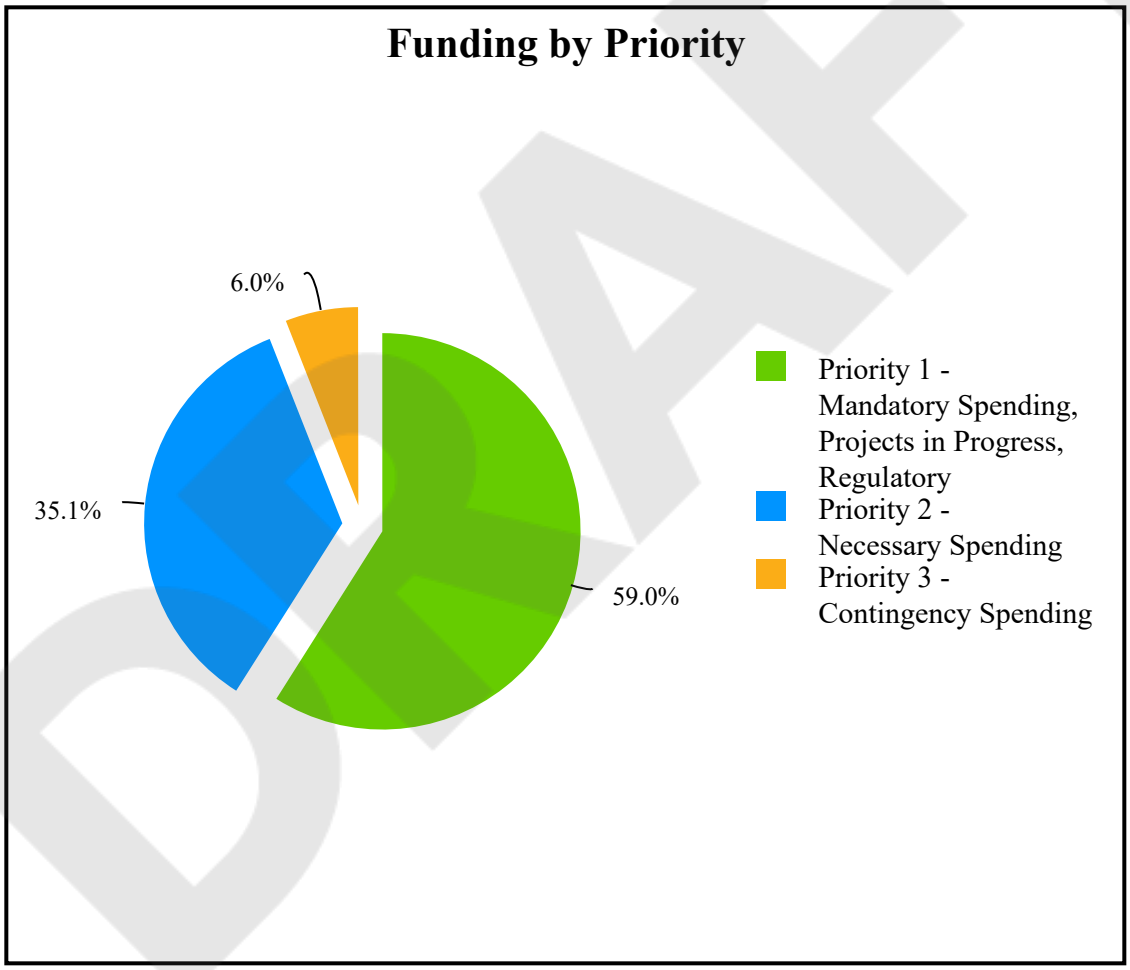


PRELIMINARY FUNDING PLAN
FUNDING SOURCES
(Amounts in thousands of dollars)

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.


HIGHLAND CANAL UPGRADES
HIGHLAND CANAL DIVERSION
TROA DROUGHT STORAGE/IMPLEMENTATION
ADVANCED PURIFIED WATER DEMONSTRATION FACILITY
INDEPENDENCE LAKE SYSTEM IMPROVEMENTS
DONNER LAKE OUTLET IMPROVEMENTS PHASE 2
MARLETTE LAKE SYSTEM IMPROVEMENTS
WASHOE LAKE SYSTEM IMPROVEMENTS
Sun Valley
Sparks
Reno
Truckee
Kings Beach
Dayton
Carson City
Minden
TRUCKEE RIVER
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
RAW WATER SUPPLY IMPROVEMENTS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 6 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

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.

SCHEUDLE: 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

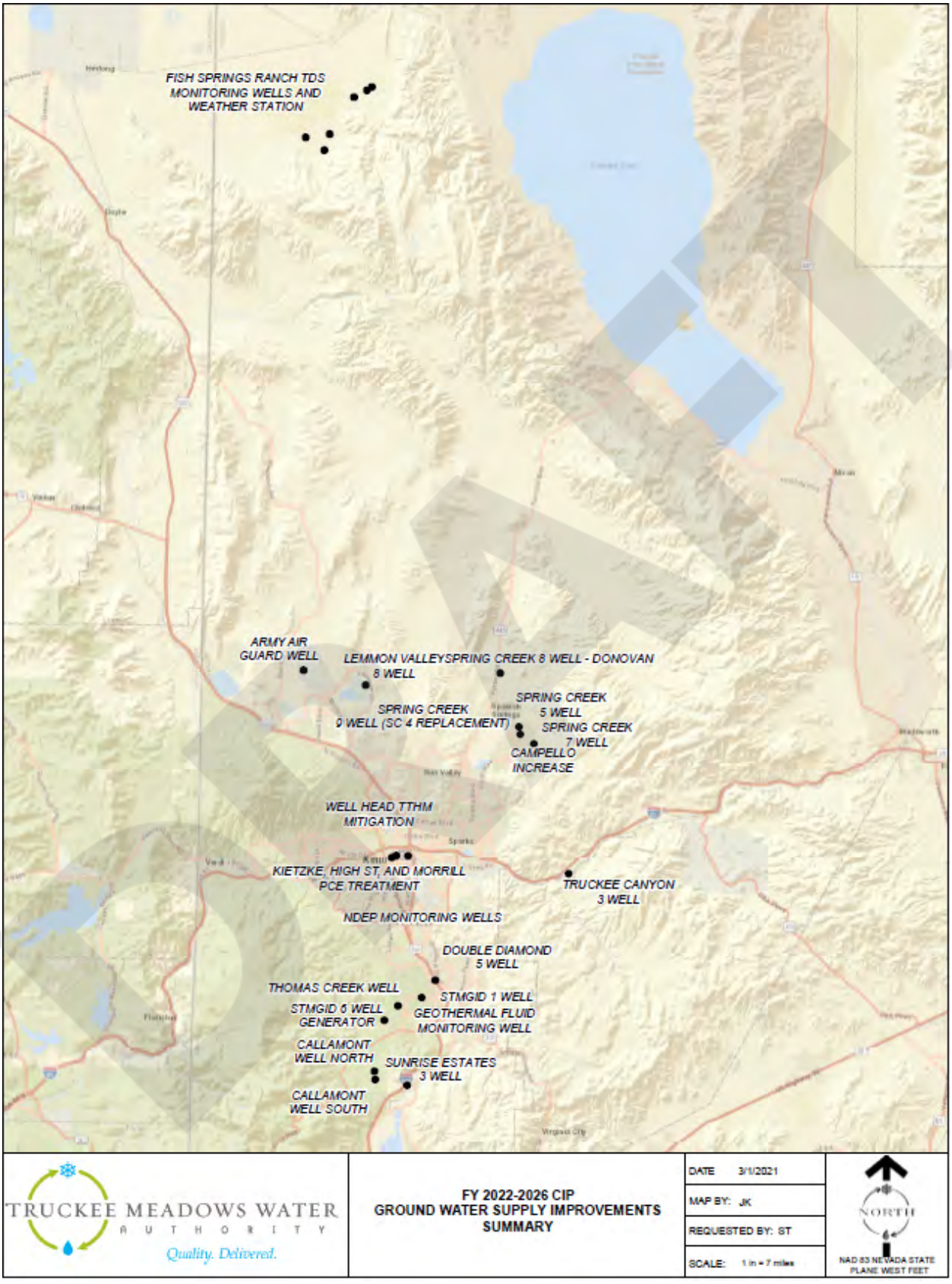
PROJECT DESCRIPTION: Improvements as necessary to Washoe Lake Dame and related infrastructure to monitor, capture, store and deliver raw water as necessary to meet regional water supply objectives.

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.


FISH SPRINGS RANCH TDS MONITORING WELLS AND WEATHER STATION
ARMY AIR GUARD WELL
LEMMON VALLEY 8 WELL
SPRING CREEK 8 WELL - DONOVAN
SPRING CREEK 9 WELL (SC 4 REPLACEMENT)
SPRING CREEK 5 WELL
SPRING CREEK 7 WELL
CAMPELLO INCREASE
WELL HEAD TTHM MITIGATION
KIETZKE, HIGH ST, AND MORRILL PCE TREATMENT
TRUCKEE CANYON 3 WELL
NDEP MONITORING WELLS
DOUBLE DIAMOND 5 WELL
THOMAS CREEK WELL
STMGID 1 WELL
STMGID 6 WELL GENERATOR
GEOTHERMAL FLUID MONITORING WELL
CALLAMONT WELL NORTH
SUNRISE ESTATES 3 WELL
CALLAMONT WELL SOUTH
TRUCKEE MEADOWS WATER AUTHORITY
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FY 2022-2026 CIP
GROUND WATER SUPPLY IMPROVEMENTS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 7 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

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.

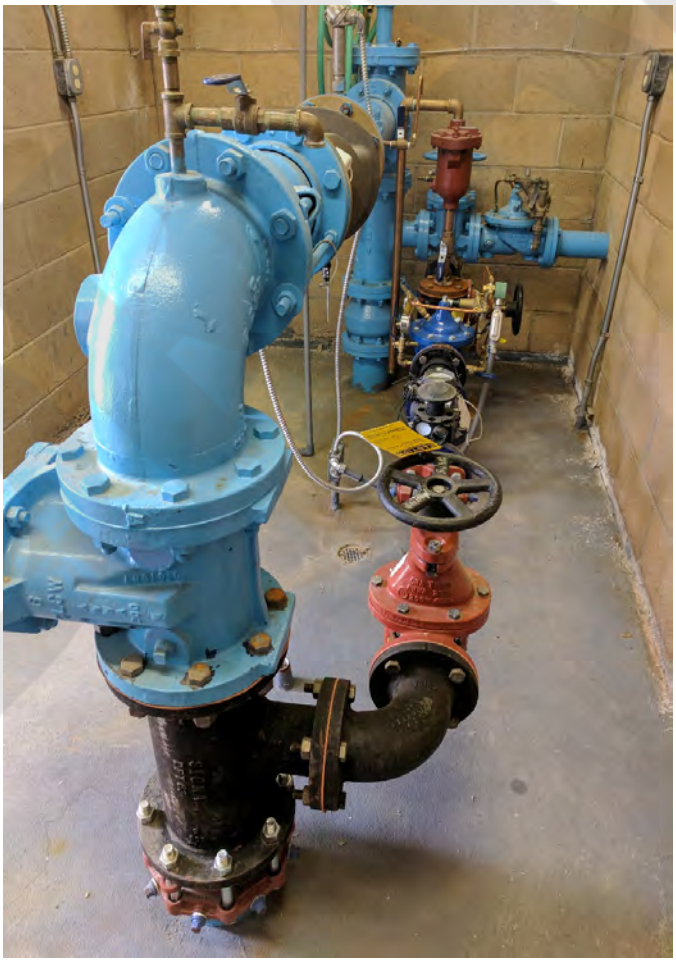
Ground Water Supply Improvements
Well Head TTHM Mitigation

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 feet 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 being 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.


Spanish Springs
SPANISH SPRINGS NITRATE TREATMENT FACILITY
Sun Valley
SPARKS GROUND WATER TREATMENT PLANT
Sparks
Reno
CHALK BLUFF TREATMENT PLANT
ORR DITCH PUMP STATION
GLENDALE TREATMENT PLANT
LONGLEY TREATMENT PLANT
TRUCKEE CANYON
MT ROSE TREATMENT PLANT
Virginia City
Washoe Valley
Incline Village
Crystal Bay
LIGHTNING W
Dayton
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
TREATMENT PLANT IMPROVEMENTS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 4 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

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.

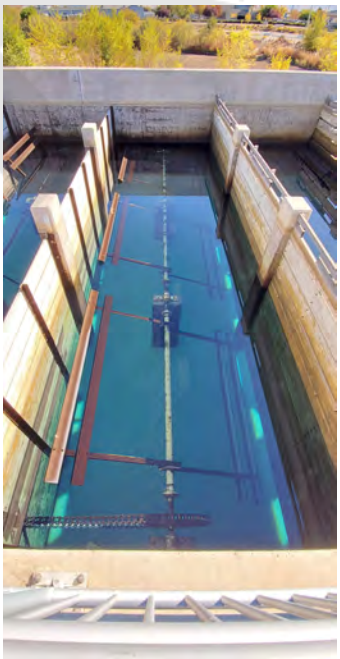
Treatment Plant Improvements
Glendale Treatment Plant Improvements

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.

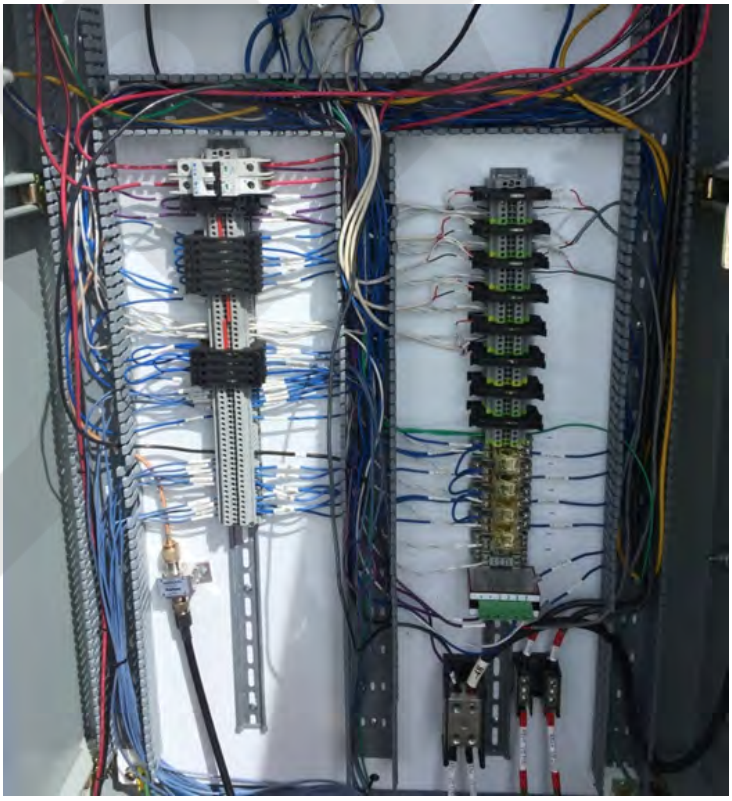
Treatment Plant Improvements
SCADA Rehab/Plant Operating Software

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.

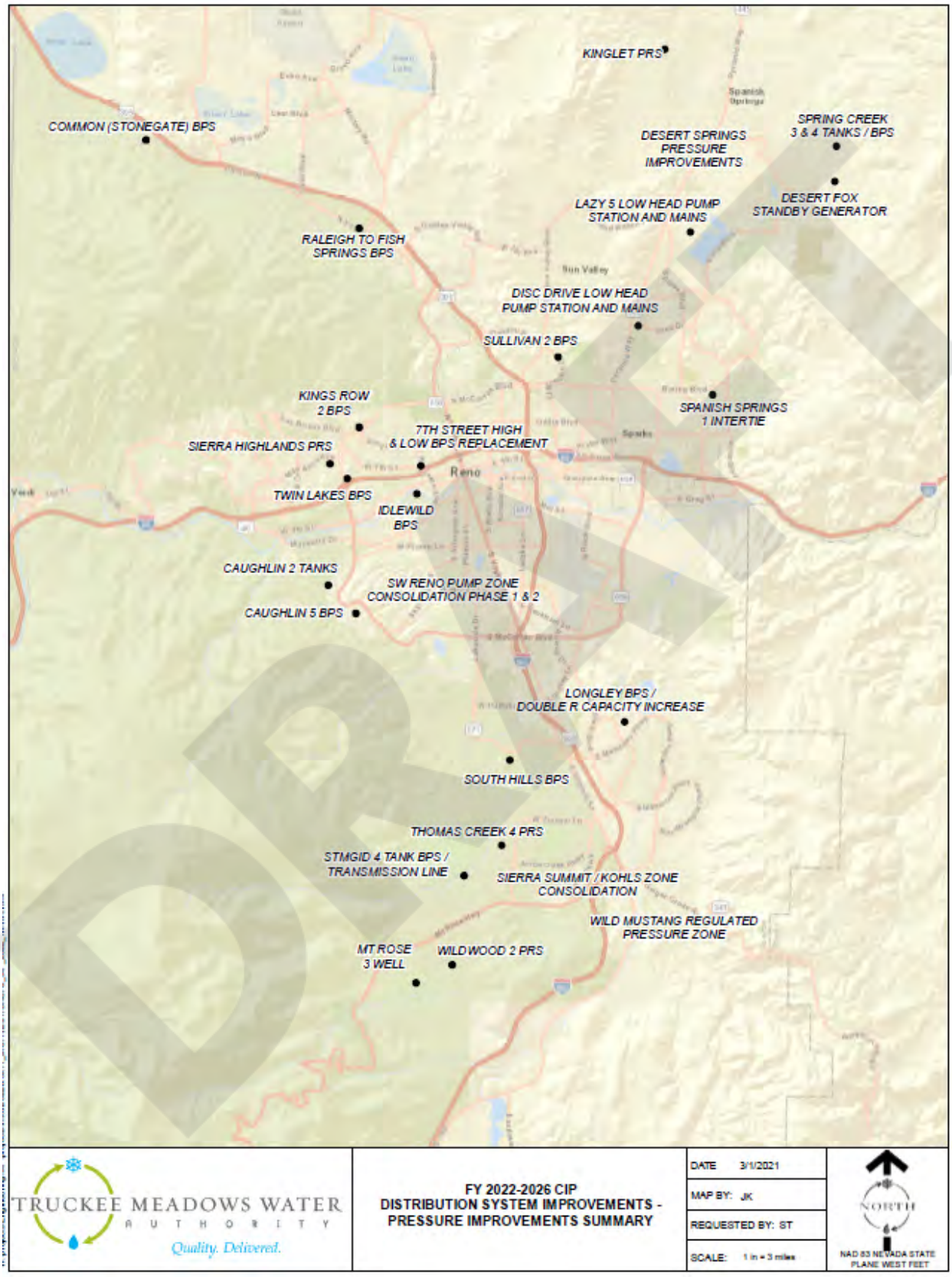
SCHEDULE: Electrical System upgrades are scheduled to be completed in FY 2023.

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.


KINGLET PRS
COMMON (STONEGATE) BPS
DESERT SPRINGS PRESSURE IMPROVEMENTS
SPRING CREEK 3 & 4 TANKS / BPS
DESERT FOX STANDBY GENERATOR
LAZY 5 LOW HEAD PUMP STATION AND MAINS
RALEIGH TO FISH SPRINGS BPS
DISC DRIVE LOW HEAD PUMP STATION AND MAINS
SULLIVAN 2 BPS
KINGS ROW 2 BPS
SPANISH SPRINGS 1 INTERTIE
7TH STREET HIGH & LOW BPS REPLACEMENT
SIERRA HIGHLANDS PRS
Reno
TWIN LAKES BPS
IDLEWILD BPS
CAUGHLIN 2 TANKS
SW RENO PUMP ZONE CONSOLIDATION PHASE 1 & 2
CAUGHLIN 5 BPS
LONGLEY BPS / DOUBLE R CAPACITY INCREASE
SOUTH HILLS BPS
THOMAS CREEK 4 PRS
STMGID 4 TANK BPS / TRANSMISSION LINE
SIERRA SUMMIT / KOHLS ZONE CONSOLIDATION
WILD MUSTANG REGULATED PRESSURE ZONE
MT ROSE 3 WELL
WILDWOOD 2 PRS
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
DISTRIBUTION SYSTEM IMPROVEMENTS -
PRESSURE IMPROVEMENTS SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 3 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

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.

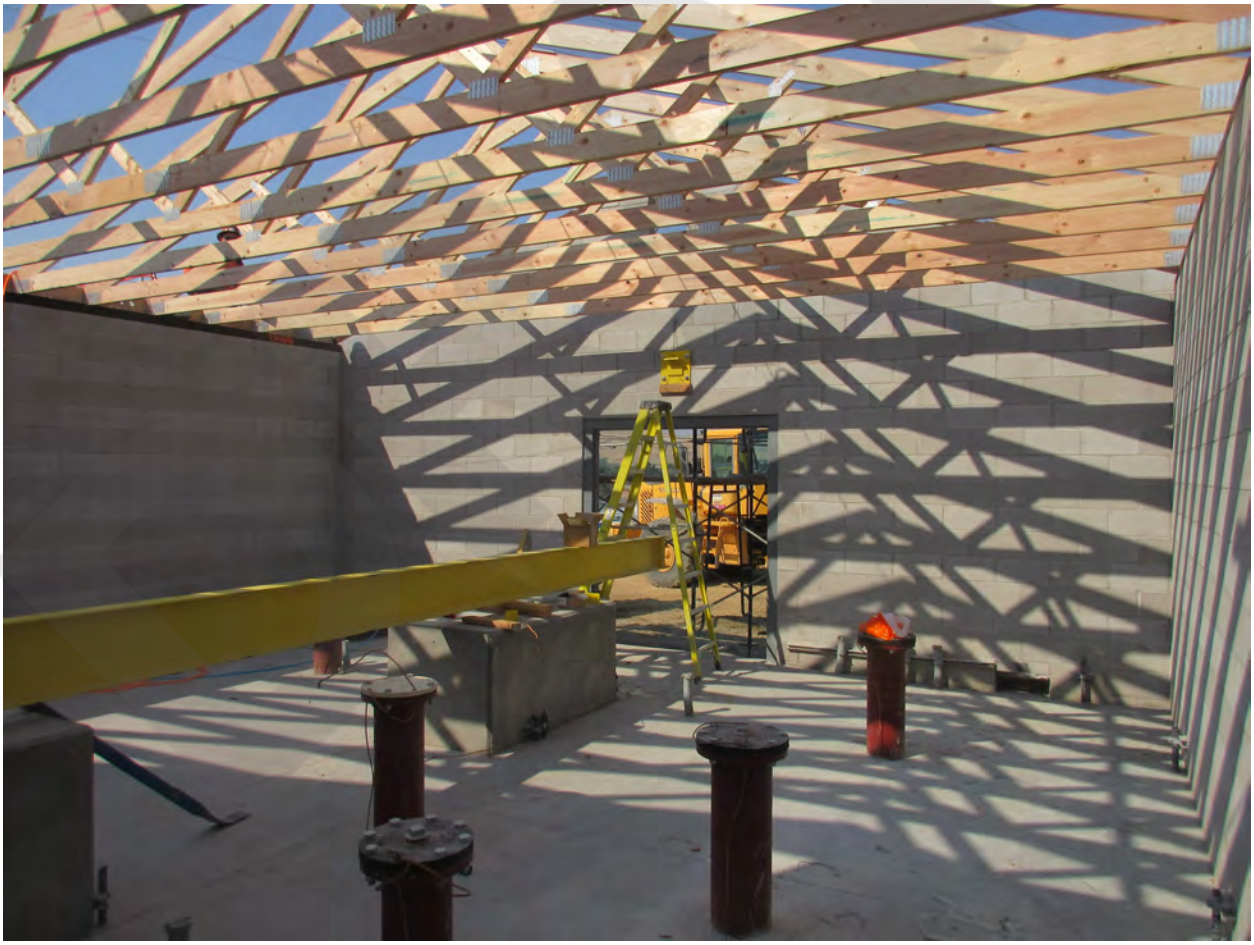
Distribution System Pressure Improvements
Kinglet Pump Station

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 l6-inch main, 250 feet of l4-inch main and 2,300 feet of l2-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.

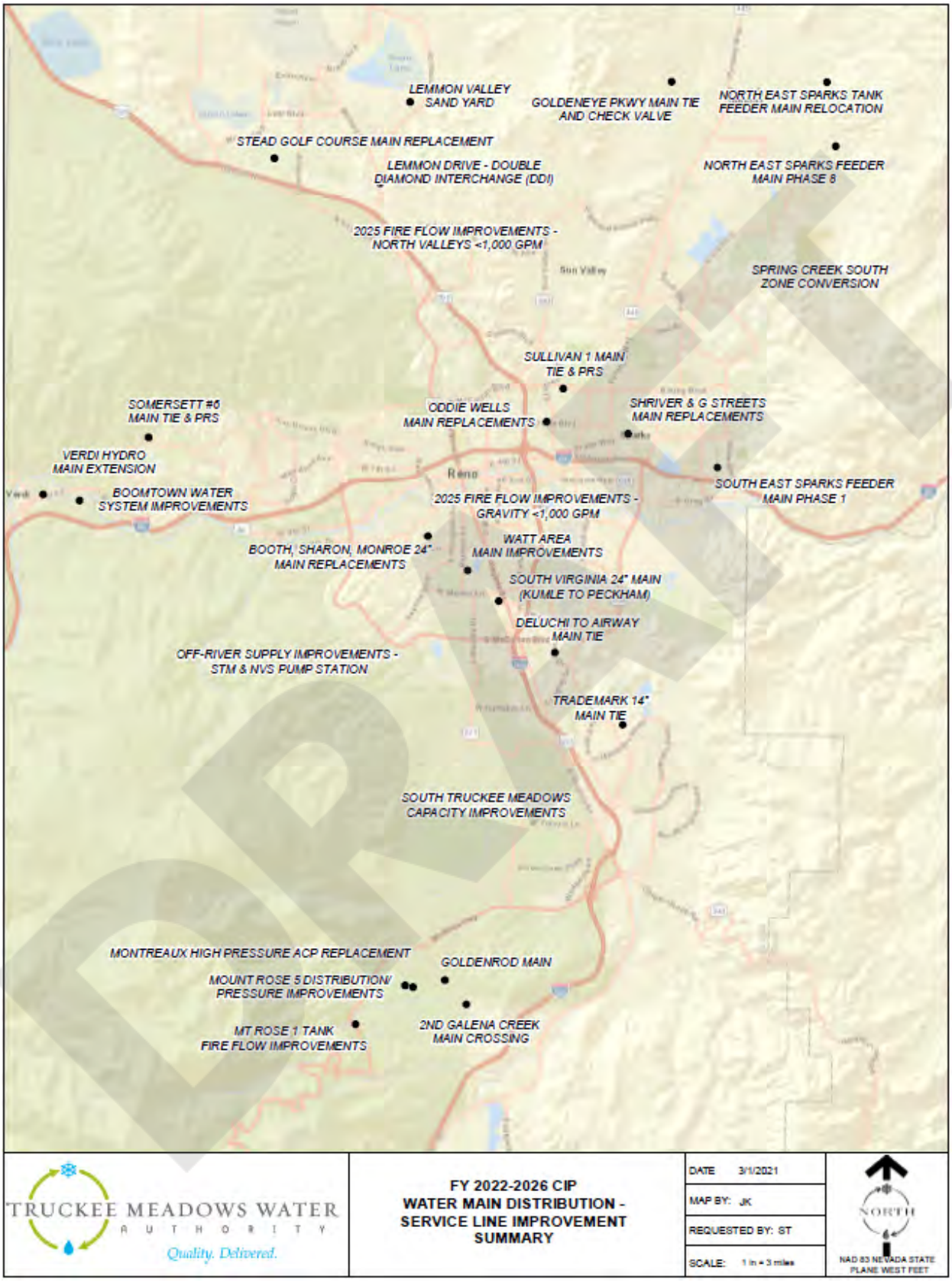
WATER MAIN DISTRIBUTION & SERVICE LINE IMPROVEMENTS

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.


LEMMON VALLEY SAND YARD
GOLDENEYE PKWY MAIN TIE AND CHECK VALVE
NORTH EAST SPARKS TANK FEEDER MAIN RELOCATION
STEAD GOLF COURSE MAIN REPLACEMENT
LEMMON DRIVE - DOUBLE DIAMOND INTERCHANGE (DDI)
NORTH EAST SPARKS FEEDER MAIN PHASE 8
2025 FIRE FLOW IMPROVEMENTS - NORTH VALLEYS <1,000 GPM
Sun Valley
SPRING CREEK SOUTH ZONE CONVERSION
SULLIVAN 1 MAIN TIE & PRS
SOMERSETT #6 MAIN TIE & PRS
ODDIE WELLS MAIN REPLACEMENTS
SHRIVER & G STREETS MAIN REPLACEMENTS
VERDI HYDRO MAIN EXTENSION
Reno
BOOMTOWN WATER SYSTEM IMPROVEMENTS
2025 FIRE FLOW IMPROVEMENTS - GRAVITY <1,000 GPM
SOUTH EAST SPARKS FEEDER MAIN PHASE 1
BOOTH, SHARON, MONROE 24" MAIN REPLACEMENTS
WATT AREA MAIN IMPROVEMENTS
SOUTH VIRGINIA 24" MAIN (KUMLE TO PECKHAM)
DELUCHI TO AIRWAY MAIN TIE
OFF-RIVER SUPPLY IMPROVEMENTS - STM & NVS PUMP STATION
TRADEMARK 14" MAIN TIE
SOUTH TRUCKEE MEADOWS CAPACITY IMPROVEMENTS
MONTREAUX HIGH PRESSURE ACP REPLACEMENT
GOLDENROD MAIN
MOUNT ROSE 5 DISTRIBUTION/ PRESSURE IMPROVEMENTS
2ND GALENA CREEK MAIN CROSSING
MT ROSE 1 TANK FIRE FLOW IMPROVEMENTS
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
WATER MAIN DISTRIBUTION - SERVICE LINE IMPROVEMENT SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 3 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

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 reguator 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
Somersett #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	Somersett #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 Somersett Village 6.

SCHEDULE: Project implementation and construction will occur in FY 2024.

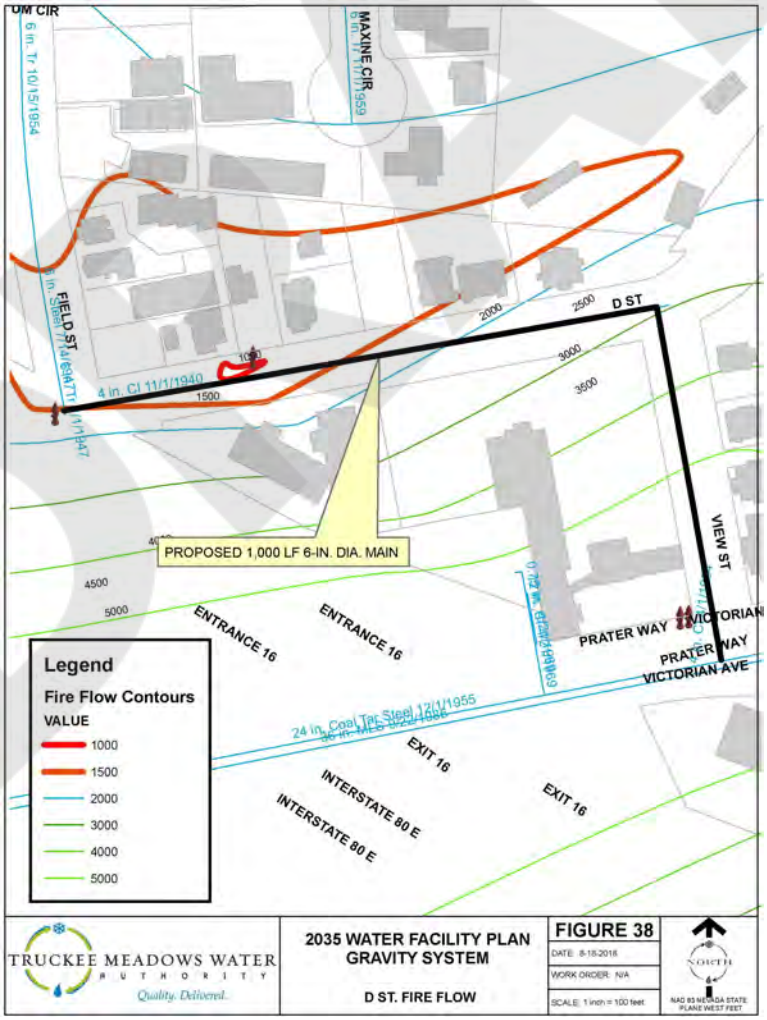
Water Main-Distribution Service Line Improvements
2025 Fire Flow Improvements - Gravity < 1,000 GPM

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.



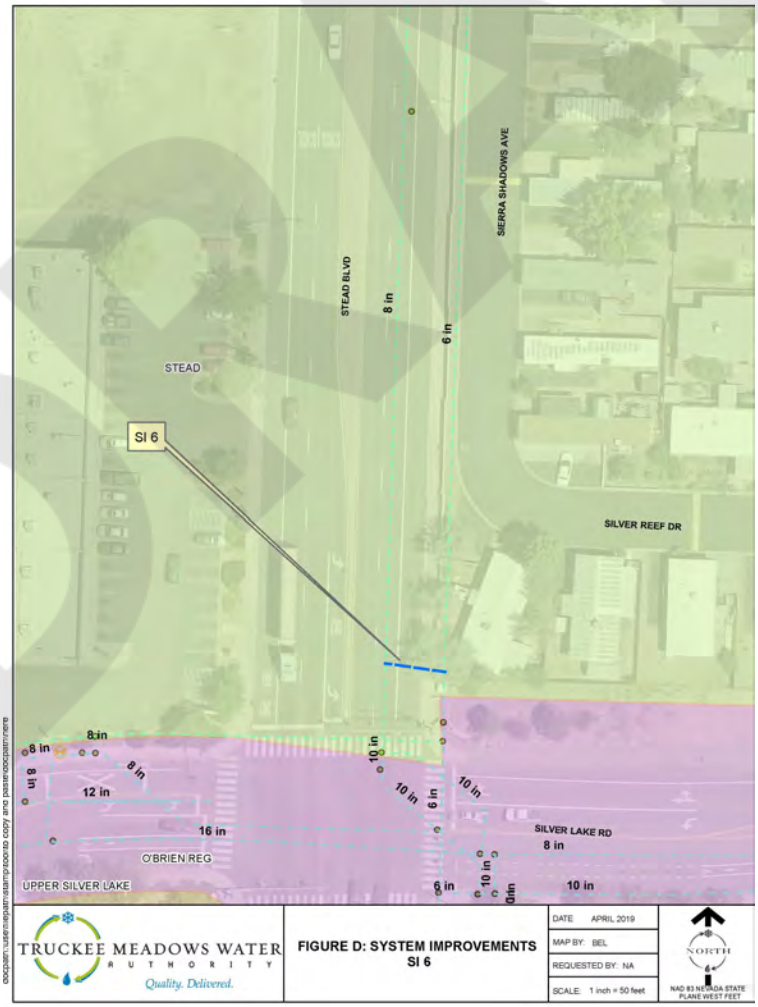
Water Main-Distribution Service Line Improvements
2025 Fire Flow Improvements - North Valleys < 1,000 GPM

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 l4-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.

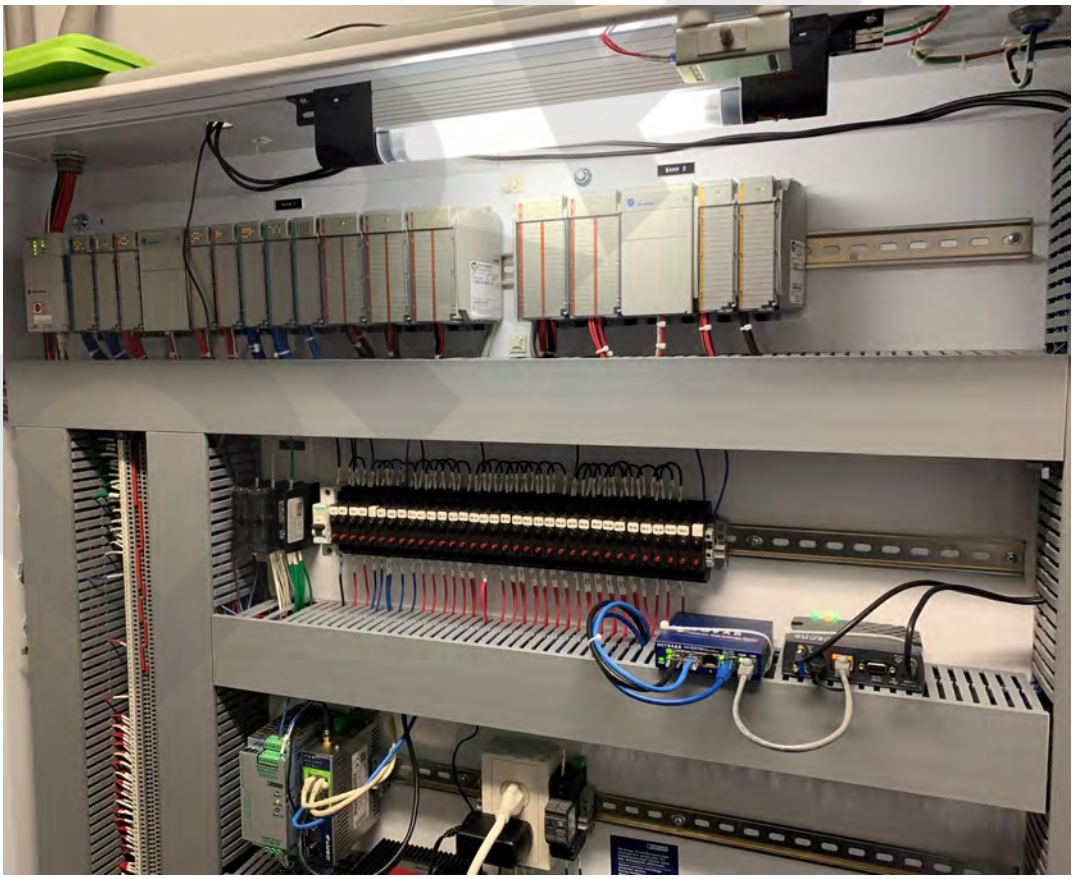
Water Main-Distribution Service Line Improvements
South Truckee Meadows Capacity Improvements

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 l4-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.

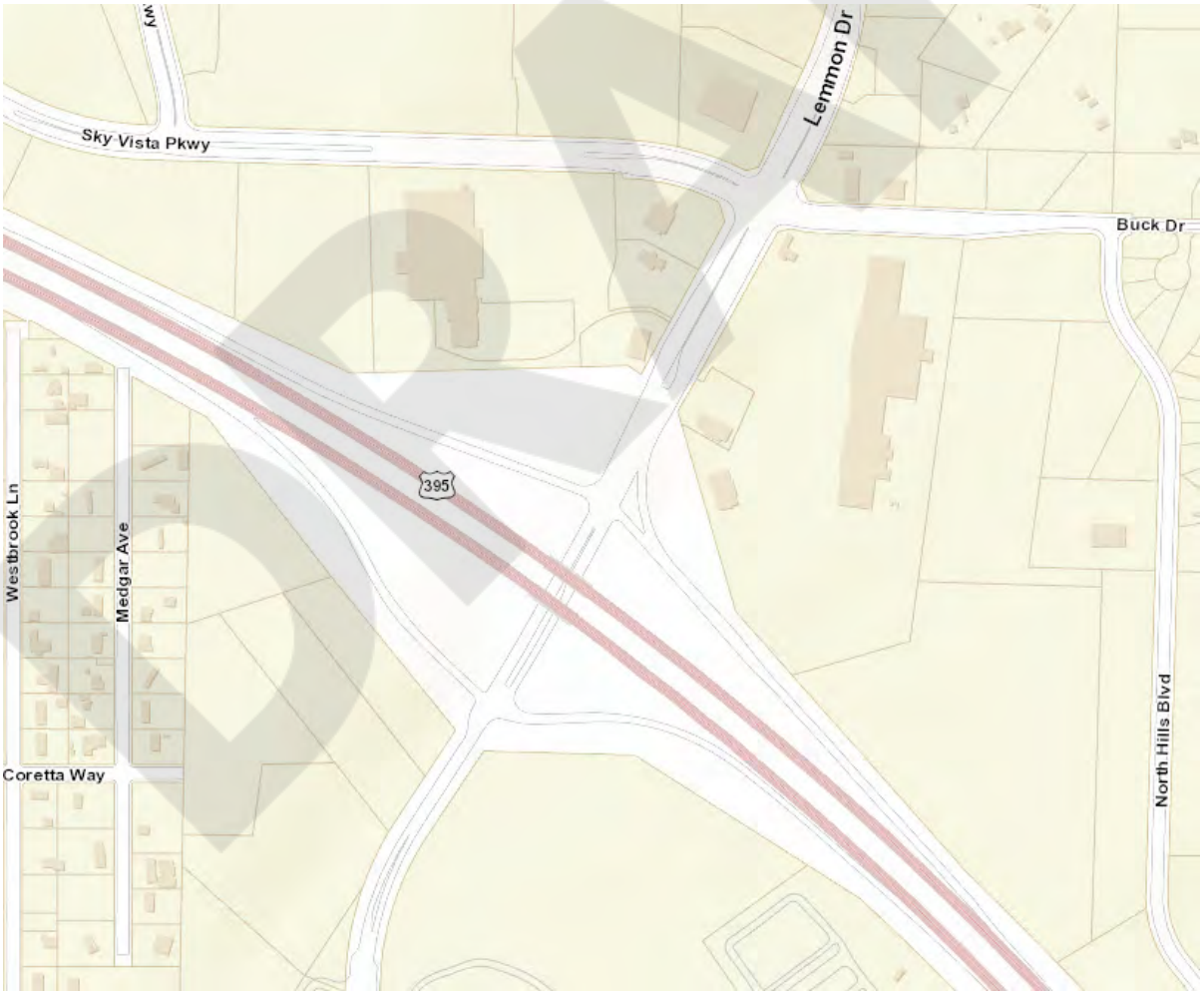
Water Main-Distribution Service Line Improvements
Lemmon Drive - Double Diamond Interchange (DDI)

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

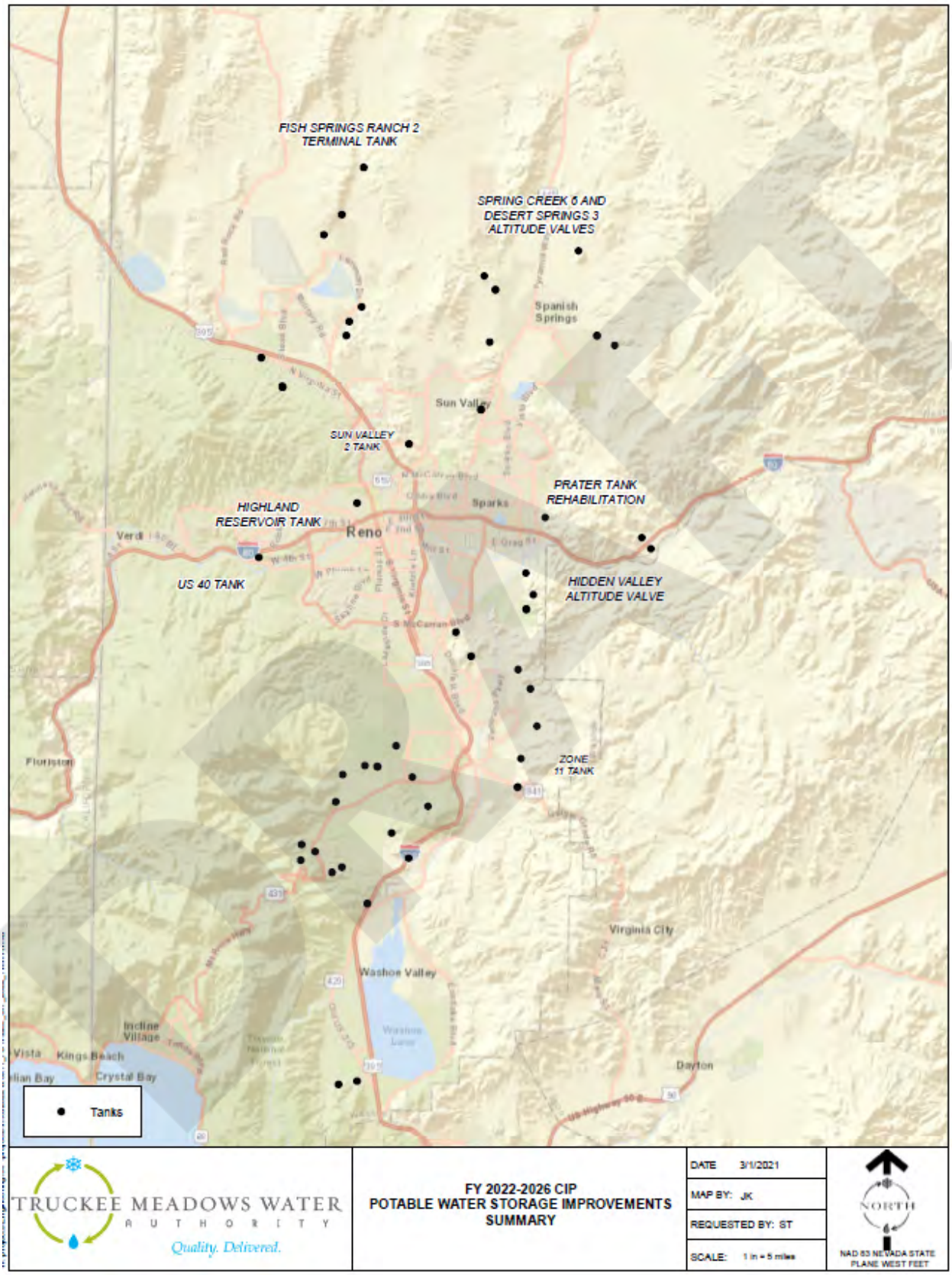
PROJECT DESCRIPTION: The project involves retiring and replacing approximately 5,200' of cast iron and steel water main. Existing services and main connections to be tied over to new water mains. Work to be completed ahead of COR street project which is tentatively scheduled for spring/summer 2021.

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.


FISH SPRINGS RANCH 2 TERMINAL TANK
SPRING CREEK 6 AND DESERT SPRINGS 3 ALTITUDE VALVES
Spanish Springs
Sun Valley
SUN VALLEY 2 TANK
PRATER TANK REHABILITATION
HIGHLAND RESERVOIR TANK
Sparks
Reno
Verdi
US 40 TANK
HIDDEN VALLEY ALTITUDE VALVE
ZONE 11 TANK
Floriston
Virginia City
Washoe Valley
Incline Village
Crystal Bay
Dayton
Tanks
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
POTABLE WATER STORAGE IMPROVEMENTS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 5 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

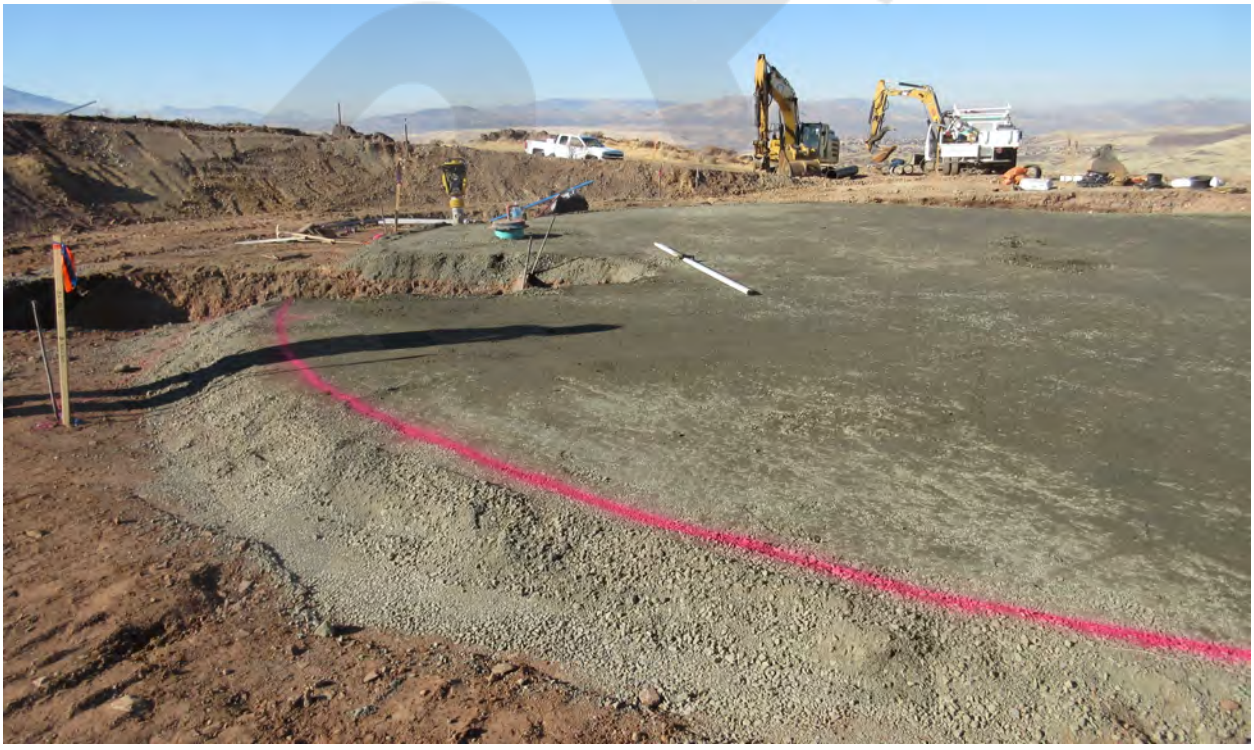
Potable Water Storage Improvements
Sun Valley #2 Tank

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 #l 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.


VERDI
POWER HOUSE
Verdi
FLUME REHABILITATION
AND RECONSTRUCTION
WASHOE
POWER HOUSE
ORR DITCH
HYDRO FACILITY
FLEISH
POWER HOUSE
TRUCKEE MEADOWS WATER
AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
HYDROELECTRIC IMPROVEMENTS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 1 miles
NORTH
NAD 83 NEVADA STATE
PLANE WEST FEET

Hydroelectric Improvements
Forebay, Diversion, and Canal Improvements

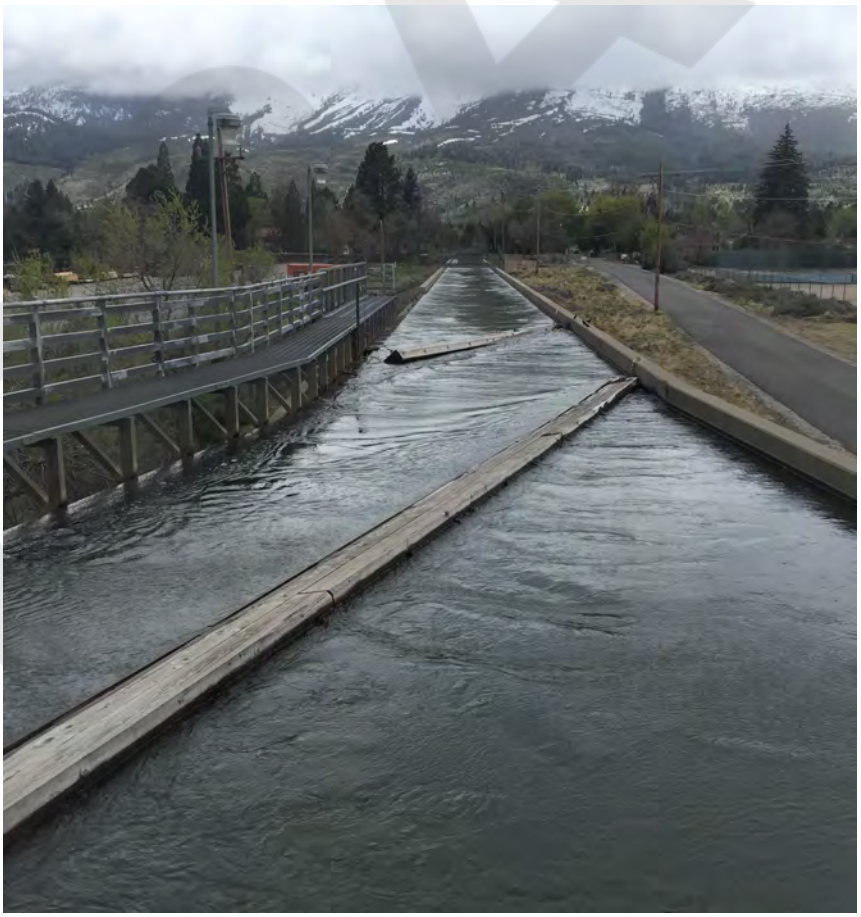
FUNDING TIMELINE:

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 rewound 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

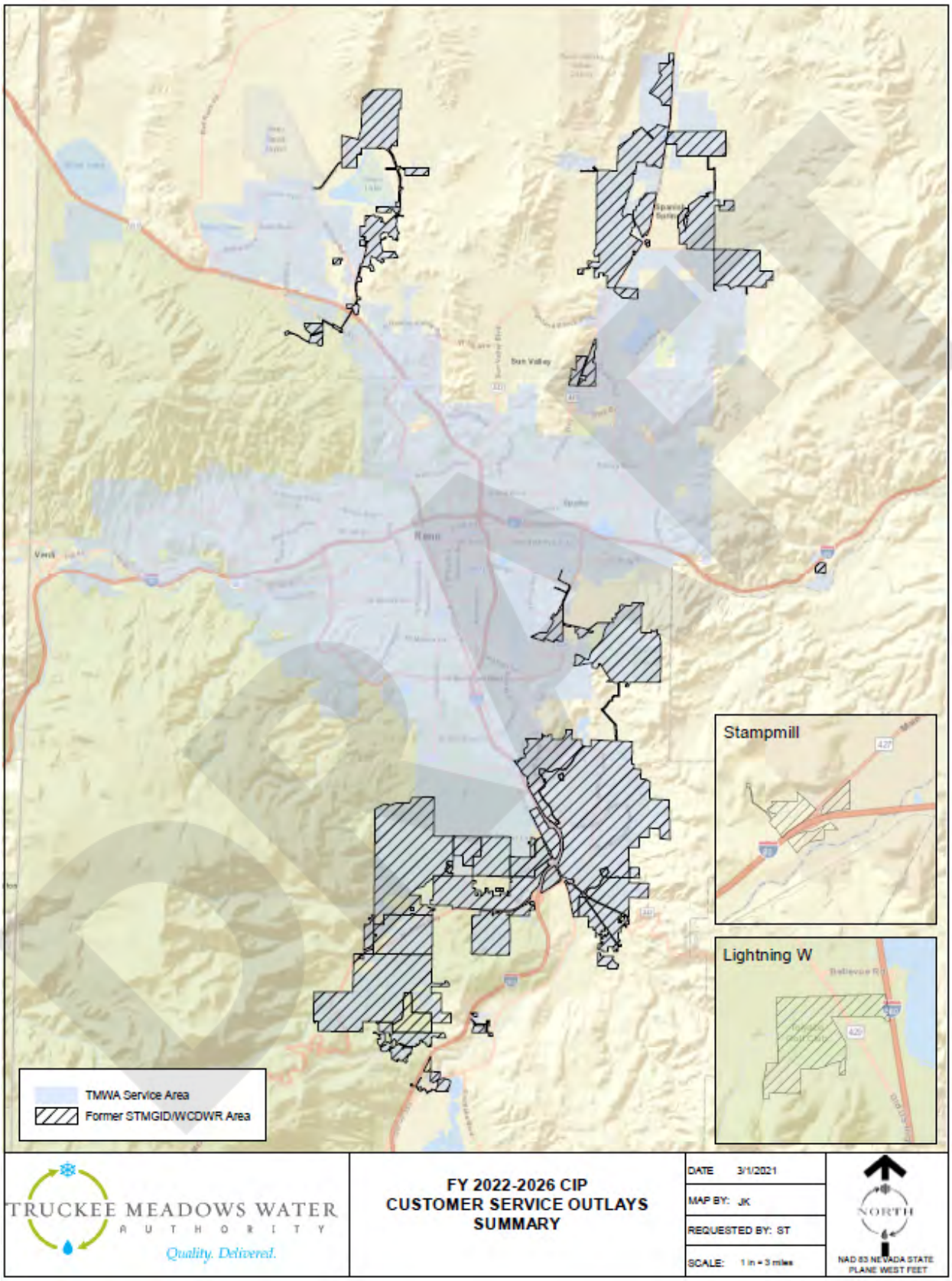
PROJECT DESCRIPTION: The project involves This project will replace the No. 2 Hydroelectric Turbine and complete a rewind of the Unit 2 Generator. To expedite completion of the project and minimize the unit outage time, the No. 2 Turbine will be procured before work begins. Once equipment is procured, 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 rewound 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.


Stampmill
Lightning W
TMWA Service Area
Former STMGID/WCDWR Area
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
CUSTOMER SERVICE OUTLAYS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 3 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

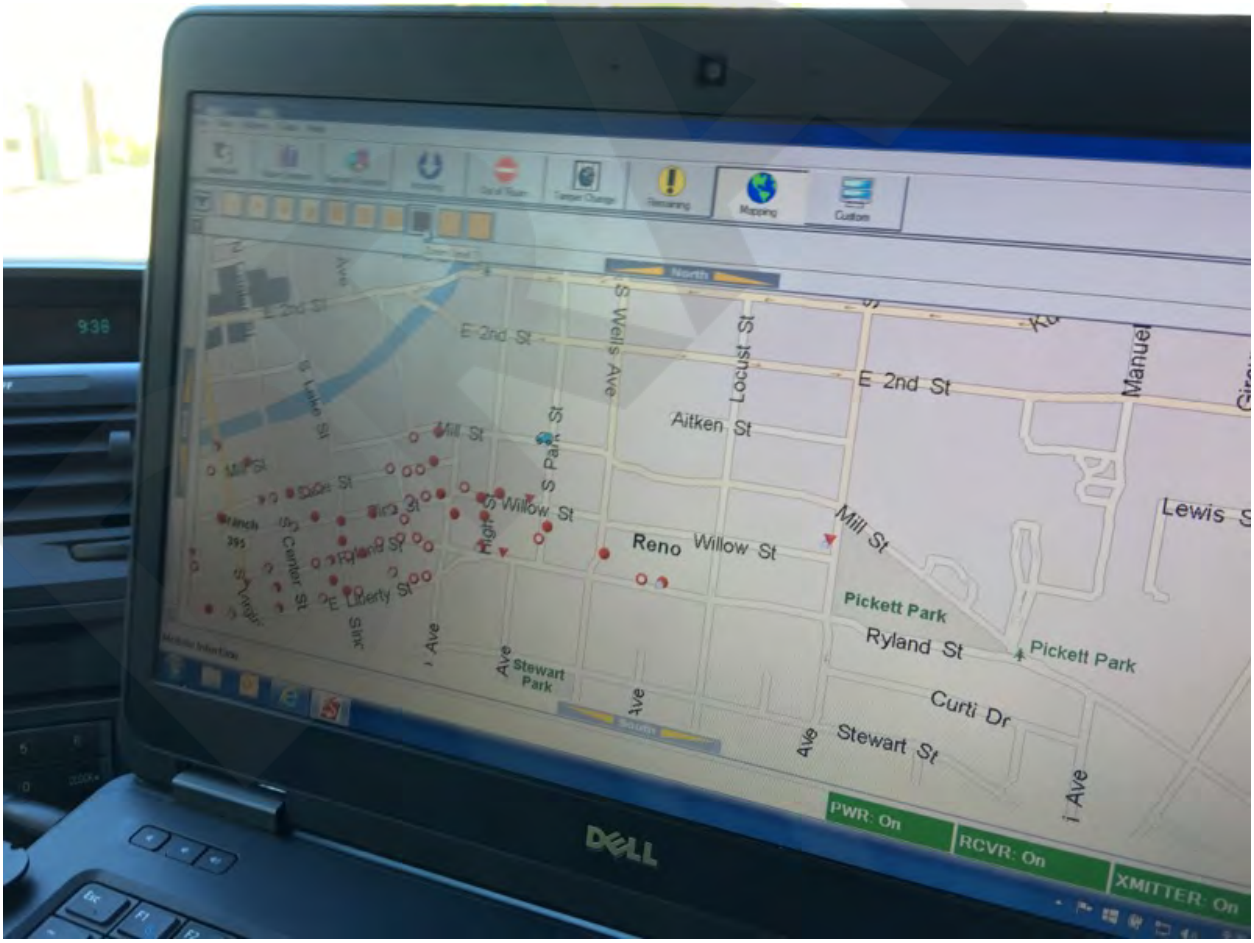
Customer Service Outlays
Meter Reading Equipment

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.

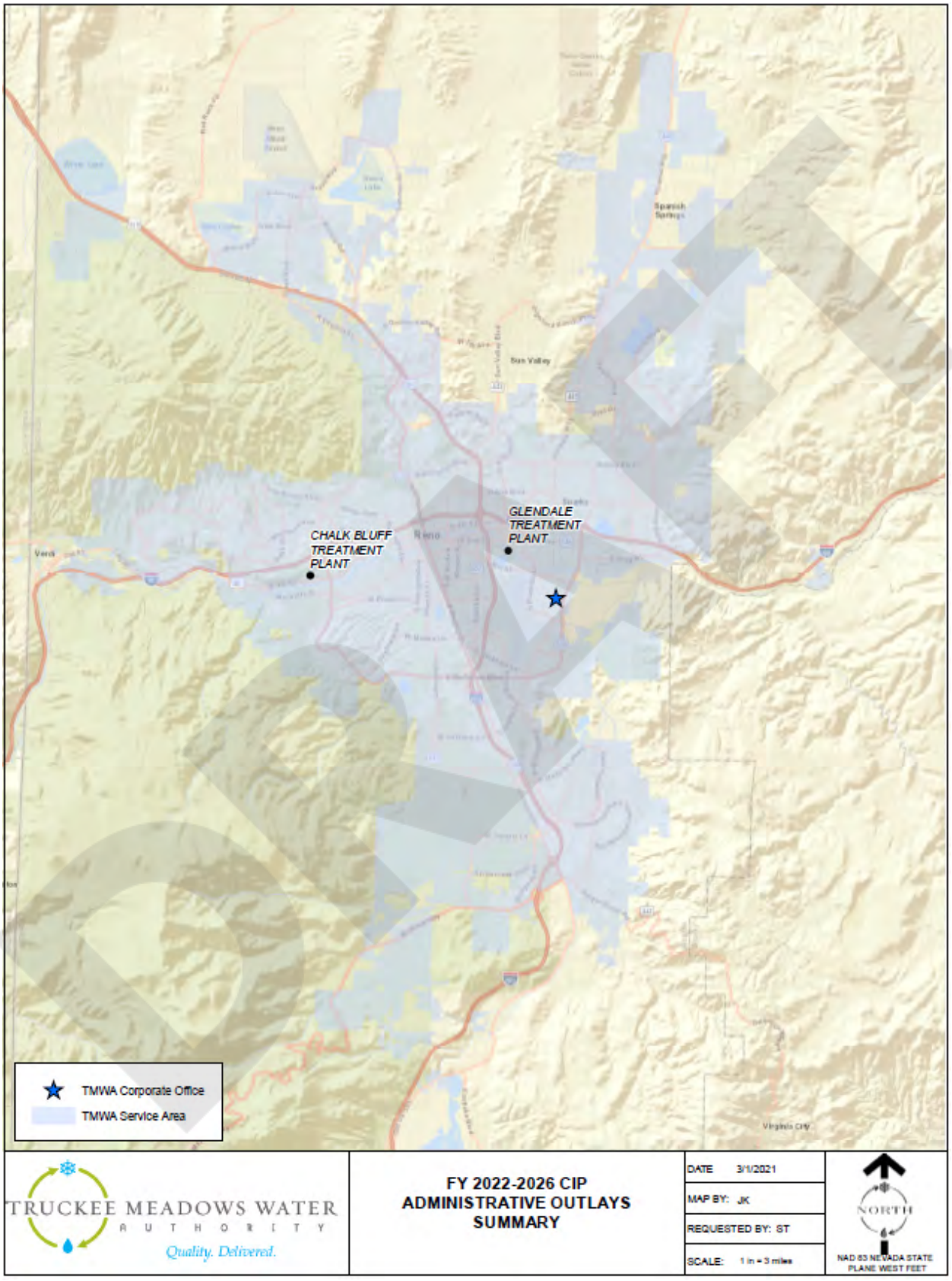
SCHEDULE: Once identified this project would be staged and implemented over the next 4 years, the equipment to be replaced or upgraded in many instances is already scheduled for replacement.

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.


CHALK BLUFF TREATMENT PLANT
GLENDALE TREATMENT PLANT
Sun Valley
Verdi
Reno
Virginia City
TMWA Corporate Office
TMWA Service Area
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
ADMINISTRATIVE OUTLAYS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 3 miles
NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

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.

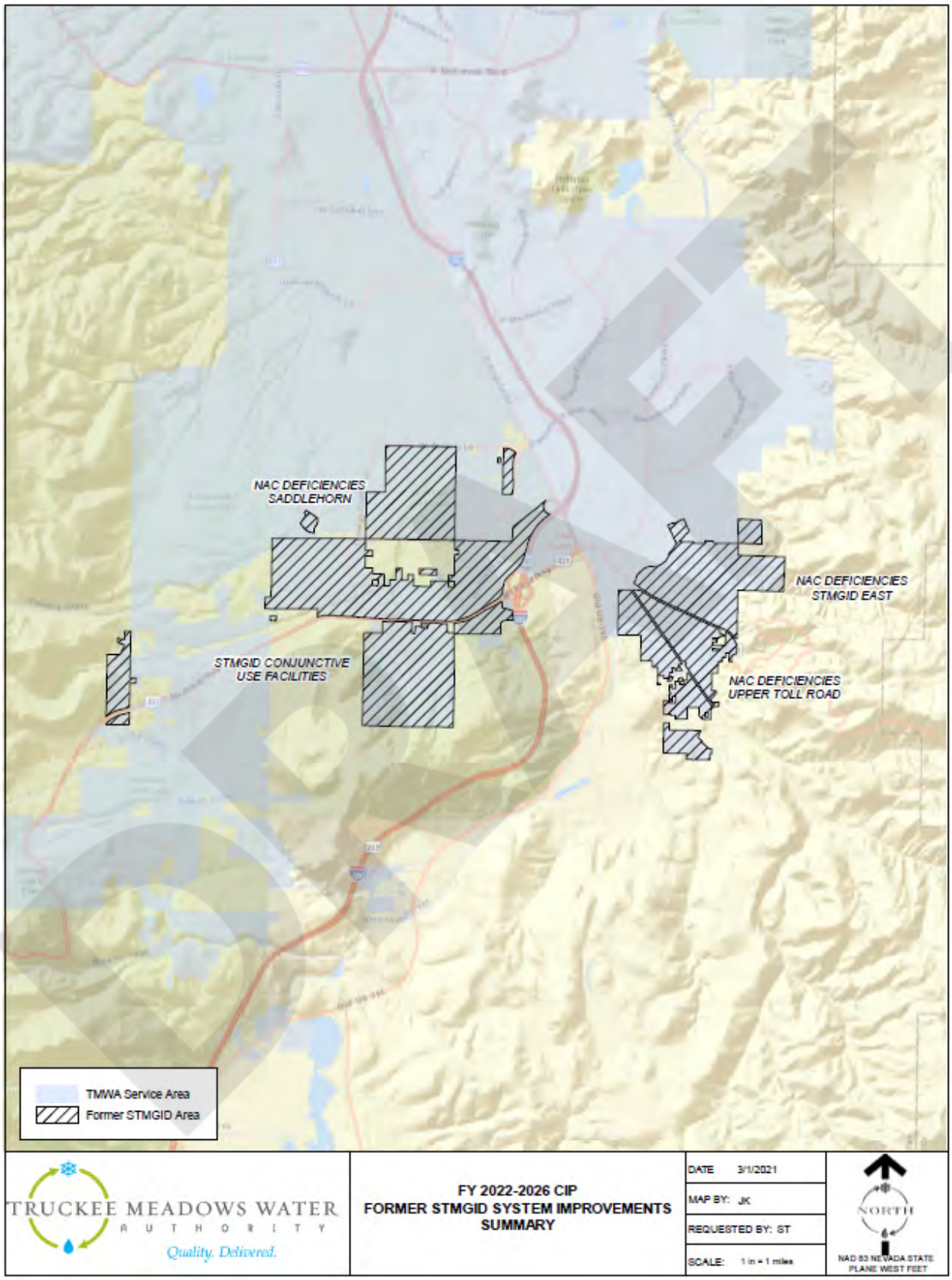
6. Landscaping improvements including the placement of large boulders around the SE corner of the Chalk Bluff Control Room to protect against high speed vehicle ramming. Cleared areas along both sides of all perimeter fencing.

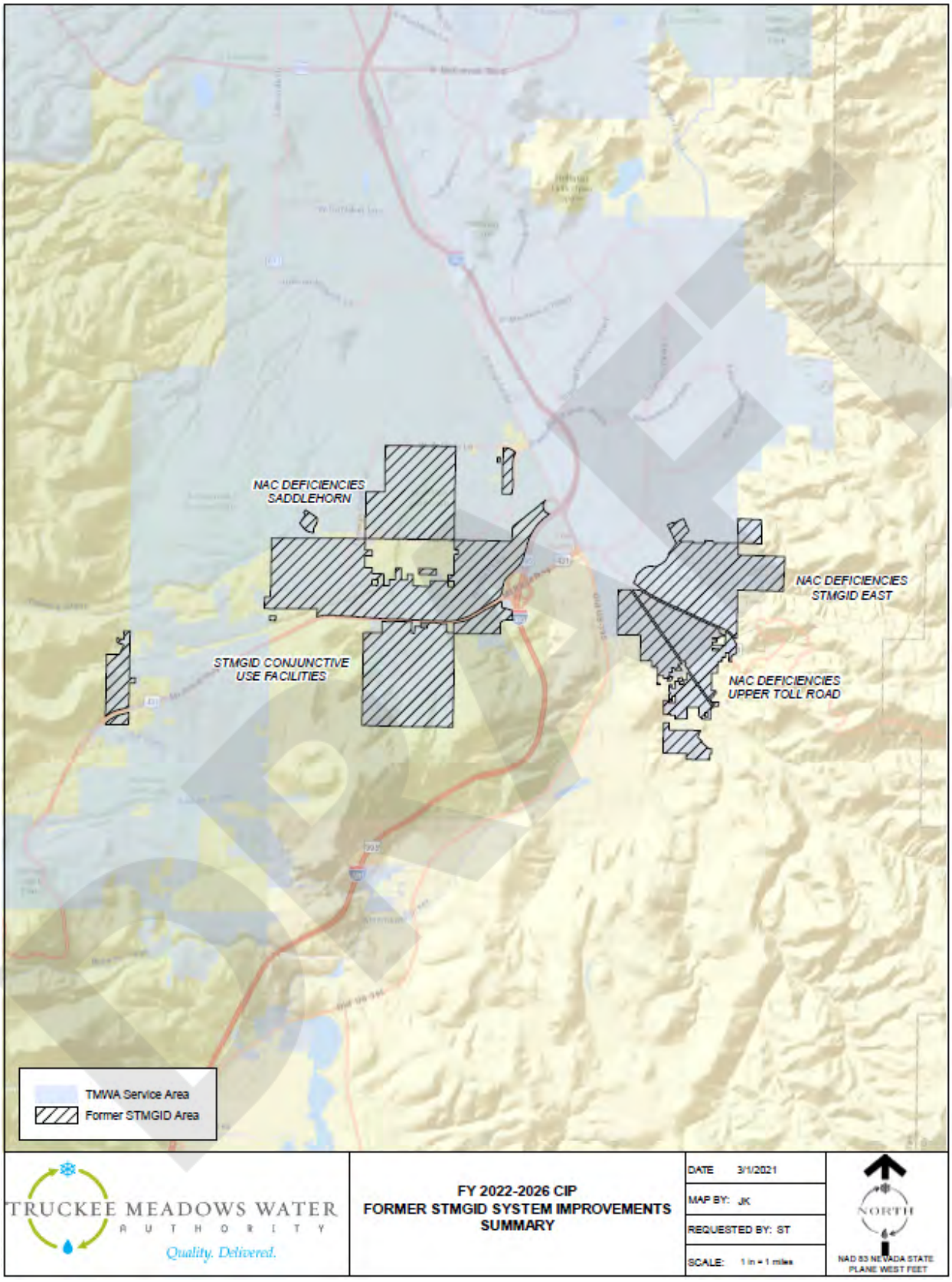
SCHEDULE: The project began in FY 2021 and will continue through FY 2024.

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.


NAC DEFICIENCIES
SADDLEHORN
NAC DEFICIENCIES
STMGID EAST
STMGID CONJUNCTIVE
USE FACILITIES
NAC DEFICIENCIES
UPPER TOLL ROAD
TMWA Service Area
Former STMGID Area
TRUCKEE MEADOWS WATER
AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
FORMER STMGID SYSTEM IMPROVEMENTS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 1 miles
NORTH
NAD 83 NEVADA STATE
PLANE WEST FEET


NAC DEFICIENCIES
SADDLEHORN
STMGID CONJUNCTIVE
USE FACILITIES
NAC DEFICIENCIES
STMGID EAST
NAC DEFICIENCIES
UPPER TOLL ROAD
TMWA Service Area
Former STMGID Area
TRUCKEE MEADOWS WATER
AUTHORITY
Quality. Delivered.
FY 2022-2026 CIP
FORMER STMGID SYSTEM IMPROVEMENTS
SUMMARY
DATE 3/1/2021
MAP BY: JK
REQUESTED BY: ST
SCALE: 1 in = 1 miles
NORTH
NAD 83 NEVADA STATE
PLANE WEST FEET

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.

TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.

STAFF REPORT

TO: SAC Committee
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
DATE: March 30, 2021
SUBJECT: **Informational presentation on local government Special Assessment Districts (SAD's)**

Summary:

A SAD is one way that developers can finance capital improvements for their projects. SAD's have been approved in the past by local governments and used to finance sewer, water, roadways and other infrastructure needs for new development. The creation/mechanics of a SAD are governed by provisions in NRS Chapter 271. TMWA does not have the authority to create a SAD on its own. Financing water improvements with a SAD does not conflict with TMWA's mantra that "growth should pay for growth" since a SAD will not result in higher water rates for existing customers. However, a home located in a SAD that financed infrastructure improvements will receive a property tax assessment from the SAD.

Background:

A recent City of Reno staff report for the Stonegate SAD contained the following quotes:

- The primary benefit of SAD financing is to reduce infrastructure construction costs so homes can be a sold at more affordable prices.
- The system also results in certain construction costs being recovered with property assessments rather than in the purchase price of new homes.
- With the SAD tool, mortgages and down payments in the assessment area should be reduced, which would benefit lower-income homebuyers.
- Interest rates for conventional financing are currently 7-10 percent whereas non-rated tax-exempt bonds are currently about 5 percent. For the 30-year Stonegate SAD, this rate would reduce Stonegate's expenses by $16.7-$44.2 Million compared to conventional financing.
- SAD financing is one tool the City can use to help reduce housing affordability challenges.

The only active SAD of this type in Reno is the *2002 Special Assessment District No. 4 (Somersett Parkway)*, which helped fund street improvements, utilities, sanitary sewer improvements and a potable water pump station for the Somersett project. Other examples of developer funded, property secured SADs in Northern Nevada include *Washoe County SAD 23 (Arrowcreek Water)* and *Washoe County SAD 39 (Lightning W Water Supply System)*. Like the proposed Stonegate SAD, these districts assisted with water infrastructure financing.

TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.

STAFF REPORT

TO: Standing Advisory Committee
FROM: Sonia Folsom, TMWA SAC Liaison
DATE: March 31, 2021
SUBJECT: **Presentation and possible recommendation to the Board, of applications to fill the Multi-Family Residential Primary Customer Class vacancy, Senior Citizen Alternate Customer Class vacancy, and Residential Representative 3 Customer Class Alternate vacancy and other possible vacancies from the following pool of candidates listed in alphabetical order: Al Black, Jordan Graham, Russ Foreman, Tom Kurtz, Kevin Ryan and Alex Talmant**

Recommendation

Staff is presenting to the Standing Advisory Committee (SAC) for its review, and possible recommendation to the Board, applications submitted by local residents to fill three vacancies.

Background

The SAC was created in 2005 to review budgets, rate proposals and other matters as directed by the Board. In 2016, the TMWA Board decided to remove the two appointments made by the Northern Nevada Water Planning Commission and the Office of Consumer Advocate and replace those with two at-large positions. The committee currently consists of Board-appointed representatives of ten customer classes and four other seats held by representatives of community-interest groups (Attachment 1). TMWA customers interested in becoming a SAC member can submit a letter of interest at any time and will be presented to the SAC when a vacancy opens for consideration.

Discussion

TMWA received five applications for the three vacant positions:

- Multi-Family Primary – One (1) Vacancy; 0 Applicants
- Senior Alternate – One (1) Vacancy; 6 Applicants
- Residential Representative 3 Alternate – One (1) Vacancy; 2 Applicant

The applications submitted are compiled in Attachment 2. In addition, Attachment 3 is a map showing locations of all current SAC members, as well as all applicants.

Staff is pleased to have such skilled and diverse applicants express interest in representing customer issues to the TMWA Board as part of the SAC.

TMWA Standing Advisory Committee
Term Appointments
2021 Membership List

Customer Class	Primary Representative	Member Since	Term Ends	Alternate Representative	Member Since	Term Ends
Wholesale (Sun Valley)	Chris Melton	2020	12/31/2021	*Vacant*		
Irrigation	Neil McGuire	2005	12/31/2022	Karl Katt	2013	12/31/2022
Multi-family Residential	*Vacant*			Jonnie Pullman	2012	12/31/2021
Commercial	Donald Kowitz	2017	12/31/2022	John Krmpotic	2020	12/31/2021
Senior Citizen	Robert Chambers	2005	12/31/2022	*Vacant*		
At-Large 1	Ken McNeil	2013	12/31/2022	Ken Becker	2017	12/31/2022
At-Large 2	Jordan Hastings	2017	12/31/2022	Susan Hoog	2019	12/31/2021
Residential:						
Representative 1	Carol Litster	2014	12/31/2022	Dale Sanderson	2017	12/31/2022
Representative 2	Harry Culbert	2006	12/31/2022	Fred Arndt	2017	12/31/2022
Representative 3	Jerry Wager	2014	12/31/2022	*Vacant*		
Appointments:						
BANN	Colin Hayes	2010	12/31/2021	Jim Smith	2010	12/31/2021
Reno-Sparks Chamber	Kristine Brown	2020	12/31/2021	Ann Silver	2019	12/31/2021

March 22, 2021

Dear TMWA,

I would like to become the Senior member of the Standing Advisory Committee for TMWA. My name is Allen Black and I live in Caughlin Ranch. I have had extensive board experience. I have been on the board of Promontory Pointe HOA, Caughlin Ranch HOA, Hayward HOA, and The Museum of Early Trades and Crafts where I was also the Chair for four years. I am a 73 yr old who retired from the Chemical industry where I was a Global Procurement Manager, Marketing Manager, Product Manager, and Salesman. I have a Masters degree in Organic Chemistry and an MBA in Management. I was raised on a farm and have some knowledge of land management. I think I would provide knowledge to the board that could be useful in managing the water supply of Washoe county and the surrounding communities. Please let me know if you need further information.

Regards,

Al Black

[redacted]

Reno, NV 89519

February 20, 2021

Truckee Meadows Water Authority
P.O. Box 30013
Reno, NV 89520

Subject: Standing Advisory Committee Vacancies

Greetings,

I would like to be considered for the open voluntary position on the Standing Advisory Committee. I am a Truckee Meadows Water Authority residential customer, am considered a Senior Citizen as I am over the age of 65 and would be pleased to serve in either customer class. I hold Bachelor's and Master's degrees in Finance and Business Administration from UNLV, have worked as a computer software designer, a financial auditor for the State of Nevada, a construction project manager for McCarran Airport, and a financial manager for both the US Army and US Air Force.

I am interested in volunteering for the Standing Advisory Committee because I would like to get involved in Reno governmental activities on a volunteer basis and become more knowledgeable about Reno as a whole. As a Nevada native and a long-time resident of Las Vegas, I am acutely aware of the criticality of managing the water supply for the City of Reno. I look forward to the opportunity to work with the City of Reno.

Sincerely,

John Russell (Russ) Foreman
[redacted]
Reno, NV 89521
Home – [redacted]
Cell – [redacted]

Jordan W. Graham
[redacted]
Reno, NV 89519
[redacted]

March 30, 2021

Ms. Sonia Folsum
Truckee Meadows Water Authority
P. O Box 30013
Reno, NV 30013
(Sent via email: sfolsom@twma.com)

RE: Standing Advisory Board Membership Application

Dear Sonia:

Thank you very much for taking the time to talk with me regarding your current openings for the Standing Advisory Committee. Based on our conversation, I would like to express my interest in serving as either a resident (local homeowner) or senior (age 60) member of the Board.

In addition to having a strong interest our water supply, I believe the following relevant experience would be an asset to your Board:

- Seven years as head of a digital transformation consulting organization working with senior executives in several key industries including energy and utilities.
- Previous experience in land management working with geologist, landowners, and strategic partners to explore for natural resources.
- Six years of marketing and sales experience with a public utility (Pacific Telephone)
- Sixteen years as a public company board director serving as past Chairman of the Strategy Committee and current Chairman of the Finance and Investment Committee.
- Previous Board service as a Director of two non-profits—one with assets over $2B.
- Two years' experience working as a community board member for the Department of Planning and Building, County of San Mateo (California)
- CEO of two venture capital backed technology companies.
- Board Director and Advisor to eleven venture capital and private equity backed companies.
- Extensive operating and executive experience with AT&T, Sun Microsystems, Cisco Systems, and Citigroup

I have tried to highlight key elements of my background along with executive and governance related experience that I think would be helpful to your Board. Further background can be found in my LinkedIn profile at https://www.linkedin.com/in/jordan-graham-5890531.

Should you desire additional information, please feel free to contact me directly. I look forward to learning more about next steps.

Warmest regards,

Jordan W. Graham

Thomas S. Kurtz
[redacted]
Reno, NV 89523
[redacted]

February 25, 2021

Ms. Sonia Folsom
Truckee Meadows Water Authority
PO Box 30013
Reno, NV 89520

Subject: Standing Advisory Committee Vacancy

Dear Ms. Folsom:

I would be honored to be of service to the TMWA and our community by serving on the Standing Advisory Committee. I am a senior (age 79) and a residential customer of the Authority. My wife and I purchased our home here in Reno in 2011 and became full time residents in 2016. I have a strong interest in water service in the Truckee Meadows and have reviewed the TROA and some historical documents about water service in this area.

My professional career was as a municipal manager in State College, Pennsylvania, the host community for Penn State University. I served for 22 years as Manager of Patton Township (a suburb of State College with 15,000 residents), 5 years as the Assistant Manager for Community Services at State College Borough and 10 years as Director of Administration for the Centre Region Council of Governments, a consortium of 6 local governments including Patton Township and State College Borough. Water service in this area is provided by the State College Borough Water Authority, an authority similar to TMWA, but with a water supply consisting entirely of groundwater.

I have a BA in Political Science from the University of New Hampshire and an MA in Political Science from Penn State. I have served as President of the Association for Pennsylvania Municipal Management and as regional Vice President for the International City/County Management Association.

I am the author of the Intergovernmental Cooperation Handbook published by the Pennsylvania Department of Community and Economic Development, currently in its 7th edition (2018).

If you find my background and experience might be of service to the TMWA, I would be pleased to serve on the TMWA Standing Advisory Committee.

Sincerely

Thomas S. Kurtz

Kevin J. Ryan
[redacted] Sparks, NV 89434
[redacted]

March 29, 2021

To whom it may concern:

I am writing to express my interest in volunteering to serve on the Standing Advisory Committee for the **residential** or the **senior citizen representative** class vacancy. I understand that the monthly responsibilities may include reviewing budgets, rate proposals and other priorities of the Truckee Meadows Water Authority. I enjoy working with utilities and believe safe, affordable drinking water is vital to the health of communities.

As a certified Grade II Distribution Operator, and with over 35 years experience as an environmental scientist in the drinking water field, I have participated in numerous advisory committees, managed multi-million dollar drinking water infrastructure projects, and I am familiar with the SRF grant procedures. I am trained in emergency response and have been deployed multiple times to disaster areas where I worked with impacted public water systems.

I trust my experience with state, local, tribal and federal agencies, and my knowledge of the Safe Drinking Water Act, will provide an opportunity to be considered for this important stakeholder position. References available on request.

Respectfully,

Kevin J. Ryan

TO: Sonia Folsom 3/6/2021

sfolsom@TMWA.com

Subject: Standing Advisory Committee

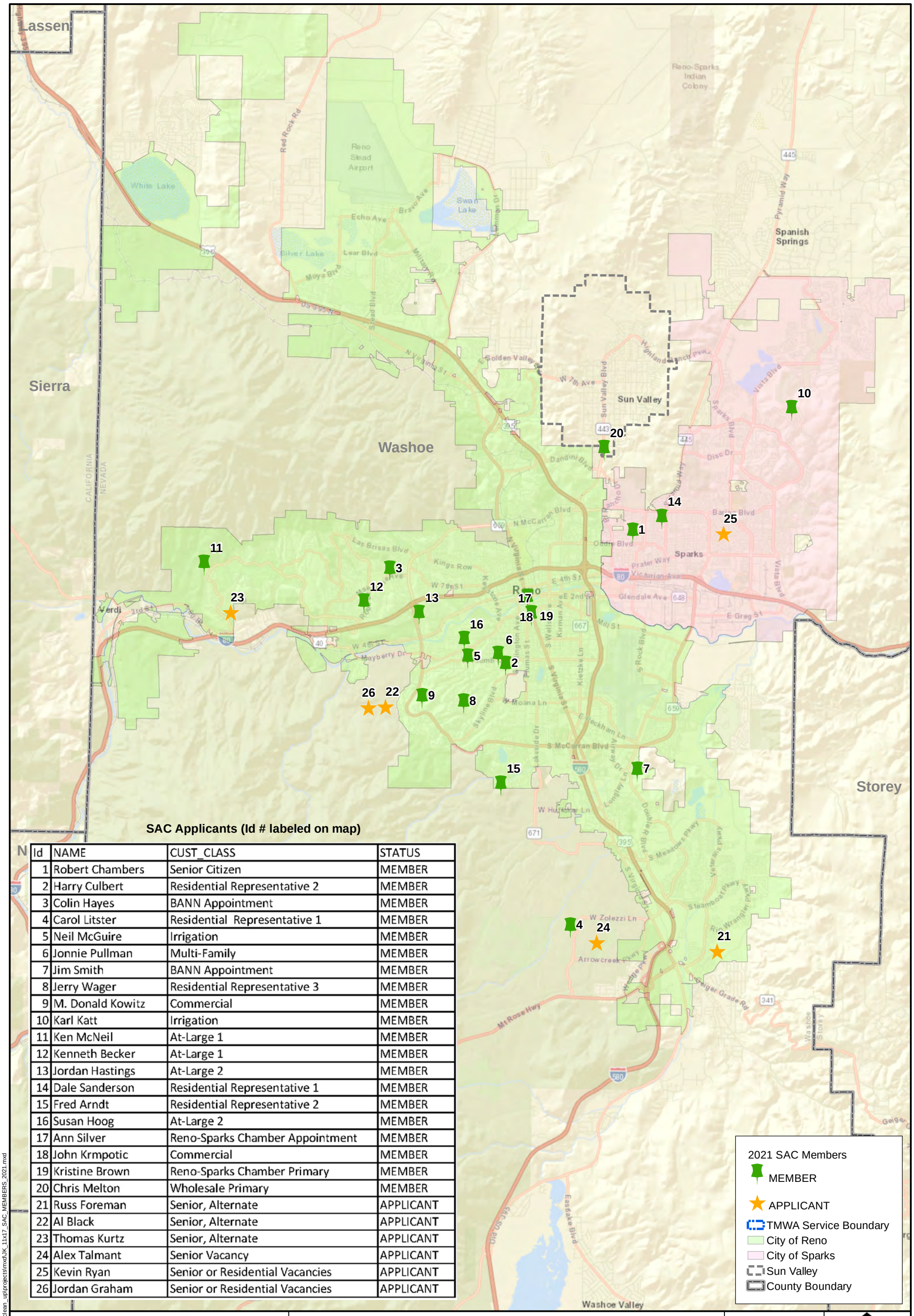
I am Alex W. Talmant Jr. residing at [redacted], Reno, NV 89511 for four and one half years. My customer class would be Senior and my contact information is [redacted], [redacted]. My education includes a BS in Business Administration from the University of Idaho and an MBA from Golden Gate University.

In 1975 I arrived in Reno where I was the office manger with New York Life Insurance Company until 1986 when I transitioned to Federal Civil Service with the Nevada Army National Guard. Over the next 24 years I held the positions of Budget Officer, Deputy Comptroller and Comptroller when I retired in 2010 with 34 years of combined military/Federal Civil Service.

My interest in volunteering led me to help at Fool 4 Thought in Carson City and Carson Tahoe Hospital. I served as a member of the Board of Directors at Greater Nevada Credit Union from 1996 until 2020. During my time on the Board I served on the Governance and Investment committees as well as Board Treasurer for six years. I have always had an interest in growth in the Truckee Meadows and hope I can be a contributing member of the Standing Advisory Committee.

Sincerely,

Alex W. Talmant Jr.



SAC Applicants (Id # labeled on map)

Id	NAME	CUST_CLASS	STATUS
1	Robert Chambers	Senior Citizen	MEMBER
2	Harry Culbert	Residential Representative 2	MEMBER
3	Colin Hayes	BANN Appointment	MEMBER
4	Carol Litster	Residential Representative 1	MEMBER
5	Neil McGuire	Irrigation	MEMBER
6	Jonnie Pullman	Multi-Family	MEMBER
7	Jim Smith	BANN Appointment	MEMBER
8	Jerry Wager	Residential Representative 3	MEMBER
9	M. Donald Kowitz	Commercial	MEMBER
10	Karl Katt	Irrigation	MEMBER
11	Ken McNeil	At-Large 1	MEMBER
12	Kenneth Becker	At-Large 1	MEMBER
13	Jordan Hastings	At-Large 2	MEMBER
14	Dale Sanderson	Residential Representative 1	MEMBER
15	Fred Arndt	Residential Representative 2	MEMBER
16	Susan Hoog	At-Large 2	MEMBER
17	Ann Silver	Reno-Sparks Chamber Appointment	MEMBER
18	John Krmpotic	Commercial	MEMBER
19	Kristine Brown	Reno-Sparks Chamber Primary	MEMBER
20	Chris Melton	Wholesale Primary	MEMBER
21	Russ Foreman	Senior, Alternate	APPLICANT
22	Al Black	Senior, Alternate	APPLICANT
23	Thomas Kurtz	Senior, Alternate	APPLICANT
24	Alex Talmant	Senior Vacancy	APPLICANT
25	Kevin Ryan	Senior or Residential Vacancies	APPLICANT
26	Jordan Graham	Senior or Residential Vacancies	APPLICANT

TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.

Distribution of SAC Members & Applicants

DATE 4/1/2021
MAP BY: JAK
REQUESTED BY: SF
SCALE: 1 in = 2 miles

NORTH
NAD 83 NEVADA STATE PLANE WEST FEET

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