

**TRUCKEE MEADOWS WATER
AUTHORITY**



July 13, 2021

Nevada Department of Taxation
Local Government Finance
1550 College Pkwy, Suite 115
Carson City, NV 89701

Washoe County Clerk
PO Box 11130
Reno, NV 89520-0027

In accordance with NRS 350.013, Truckee Meadows Water Authority is enclosing its Indebtedness Report for FY 2021-2022; its Debt Management Policy dated June 30, 2021, and its 2022-2026 Five Year Capital Improvement Plan.

Also, please find a copy of Resolution No.293 authorizing the refunding of our 2021 Series Bonds.

Furthermore, we are anticipating no additional debt offerings in FY 2021-2022.

Please contact us should you have any questions.

Sincerely,

Michele Sullivan
Chief Financial Officer / Treasurer

st



Entity: Truckee Meadows Water Authority

Date: July 8, 2021

DEBT MANAGEMENT COMMISSION ACT (NRS 350.013)

1. Has your local government issued any new General Obligation Bond issues since July 1, 2020? Yes No

If so, amount: \$13,000,000.00 Date: 6/3/2021
(Refunding of 2021 Revenue Bonds)

2. Has your local government approved any new Medium-Term Obligation issues since July 1, 2020? Yes No

If so, amount: _____ Date: _____

3. Has your local government updated its debt management policy? (Per NRS 350.013) **If Yes, submit updated policy with Indebtedness Report or prepare a statement discussing the following areas:** Yes No

- A. Discuss the ability of your entity to afford existing and future general obligation debt.
- B. Discuss your entity's capacity to incur future general obligation debt without exceeding the applicable debt limit.
- C. Discuss the general obligation debt per capita of your entity as compared with the average for such debt of local governments in Nevada.
- D. Discuss general obligation debt of your entity as a percentage of **assessed valuation** of all taxable property within the boundaries of your entity. (REDBOOK FY 2020-2021)
- E. Present a policy statement regarding the manner in which your entity expects to sell its debt.
- F. Discuss the sources of money projected to be available to pay existing and future general obligation debt.
- G. Discuss the operating costs and revenue sources with each project.

If No, please provide a brief explanation.

4. Has your local government updated its five-year capital improvement plan? (Required pursuant to NRS 350.013, 354.5945 & 354.5947) Yes No

Submitted By: Michele Sullivan
(signature)

775-834-8284
(Phone number)



SCHEDULE OF INDEBTEDNESS REPORT

For June 30, 2021

Postmark Deadline 8/1/2021

Entity: Truckee Meadows Water Authority

CHECK HERE IF YOUR ENTITY HAS NO OUTSTANDING DEBT

GENERAL OBLIGATION BONDS

- 1. General obligation _____
- 2. General obligation/revenue _____
- 3. General obligation special assessment _____

Total general obligation bonded debt _____

MEDIUM-TERM OBLIGATIONS

- 1. General Obligation bonds _____
- 2. Negotiable notes or bonds _____
- 3. Capital lease purchases _____

Total medium-term obligation debt _____

REVENUE BONDS

353,883,471

OTHER DEBT

- 1. Capital lease purchases-MTO not required or prior to law change _____
- 2. Mortgages _____
- 3. Warrants _____
- 4. Special Assessments _____
- 5. Other (specify) _____
- 6. Other (specify) _____

Total other debt _____

TOTAL INDEBTEDNESS

353,883,471

Authorized but unissued general obligation bonds _____

Note: Please explain and provide documentation for any differences between the amounts reported on this **schedule** and those reported on **Schedule C-1** of your **Final Fiscal Year 2021-2022 budget**.



Form **4410LGF**

SCHEDULE OF FIVE YEAR DEBT SERVICE REQUIREMENTS

as of June 30, 2021

Postmark Deadline 8/1/2021

Entity: Truckee Meadows Water Authority

For the next five years, list the total dollar requirement for principal and interest broken down for each type of indebtedness the entity currently has outstanding.

	<u>2021-2022</u>	<u>2022-2023</u>	<u>2023-2024</u>	<u>2024-2025</u>	<u>2025-2026</u>
<u>General Obligation Bonds</u>					
G/O Bonds	_____				
G/O Revenue	_____				
G/O Special Assessment	_____				
<u>Medium-Term Obligation</u>					
G/O Bonds	_____				
Notes/Bonds	_____				
Leases/ Purchases	_____				
<u>Revenue Bonds</u>	\$ 31,894,236	\$ 32,323,640	\$ 32,305,512	\$ 32,304,461	\$ 29,886,326
<u>Other Debt</u>					
Other Lease Purchases	_____				
Mortgages	_____				
Warrants	_____				
Special Assessments	_____				
Other Debt	_____				
TOTAL	<u>\$ 31,894,236</u>	<u>\$ 32,323,640</u>	<u>\$ 32,305,512</u>	<u>\$ 32,304,461</u>	<u>\$ 29,886,326</u>



SCHEDULE OF DEBT REPAYMENT

As of June 30, 2021

Postmark Deadline 8/1/2021

The repayment schedules should start with the payment of principal and interest due after June 30, 2021 and continue until any particular issue is retired.

NET REVENUE SUPPORTED DEBT (1)(2)
Currently Outstanding and Proposed Bonds
Truckee Meadows Water Authority, Nevada
June 30, 2021

Table with 4 columns: Fiscal Year Ending June 30, Currently Outstanding (Principal, Interest), and Total. Rows include years 2022 through 2040 and a Total row.

Totals may not add due to rounding.

(1) Currently Outstanding Combined Debt includes TMWA Water Revenue Refunding Bonds, Series 2015A, Series 2016, Series 2017, Series 2018 and Series 2021; Drinking Water SRF loans Series 2005, Series 2010A, Series 2014 and Series 2015B; and the DWSRF ARRA Loan, Series 2009A.

(2) TMWA does not propose to issue any long-term debt during FY 2021-22.



Entity: Truckee Meadows Water Authority

CONTEMPLATED GENERAL OBLIGATION DEBT

(1) PURPOSE	(2) TYPE	(3) AMOUNT	(4) TERM	(5) FINAL PAYMENT DATE	(6) INTEREST RATE

SPECIAL ELECTIVE TAX

PURPOSE	TYPE	RATE	ELECTION DATE	EXPIRATION DATE	IMPLEMENTATION DATE



Debt Management Policy
In Accordance With NRS 350.013

June 30, 2021

TMWA Board of Directors

Vaughn Hartung, Washoe County Commissioner, Chairman of the Board

Kristopher Dahir, City of Sparks Council Member, Vice Chairman

Paul Anderson, City of Sparks Council Member

Jenny Brekhus, City of Reno Council Member

Naomi Duerr, City of Reno Council Member

Alexis Hill, Washoe County Commissioner

Neoma Jardon, City of Reno Council Member

Authority Administration

Mark Foree, PE

General Manager

John Enloe

Director of Natural Resources

Scott Estes, PE

Director of Engineering

Andy Gebhardt

Director of Operations and Water Quality

Pat Nielson

Director of Distribution, Maintenance and Generation

Michele Sullivan, CPA

Chief Financial Officer / Treasurer

DEBT MANAGEMENT POLICY

SECTION I DEBT MANAGEMENT POLICY

NRS 350.013 (1) (c)

Listed below are excerpts from Nevada Law which requires local governments to submit a debt management policy:

350.013 Municipalities to submit annually statement of current and contemplated general obligation debt and special elective taxes, statement of debt management policy, plan for capital improvement or alternate statement and certain information regarding chief financial officer; update of information; exceptions.

1. Except as otherwise provided in this section, on or before August 1 of each year, the governing body of a municipality which proposes to issue or has outstanding any general obligation debt, other general obligations or special obligations, or which levies or proposes to levy any special elective tax, shall submit to the department of taxation and the commission:

- (c) A written statement of the debt management policy of the municipality; which must include, without limitation:
- 1) A discussion of its ability to afford existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt;
 - 2) A discussion of its capacity to incur authorized and proposed future general obligation debt without exceeding the applicable debt limit;
 - 3) A discussion of its general obligation debt that is payable from property taxes per capita as compared with such debt of other municipalities in this State;
 - 4) A discussion of its general obligation debt that is payable from property taxes as a percentage of assessed valuation of all taxable property within the boundaries of the municipality;
 - 5) Policy regarding the manner in which the municipality expects to sell its debt;
 - 6) A discussion of its sources of money projected to be available to pay existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt; and
 - 7) A discussion of its operational costs and revenue sources, for the ensuing 5 fiscal years associated with each project included in its plan for capital improvement submitted pursuant to paragraph (d), if those costs and revenues are expected to affect the tax rate.

This document is intended to meet the requirements of NRS 350.013 subsection 1 (c), it is not a review of the Truckee Meadows Water Authority's ("TMWA" or "Authority") total financial position.

General Policy Statement

The purpose of the Truckee Meadows Water Authority's Debt Management Policy is to manage the issuance of TMWA's debt obligations and maintain the ability to incur debt and other long-term obligations at favorable interest rates for capital improvements, facilities, and equipment that are beneficial to the residents of TMWA's service territory.

Ability to Afford Existing, Future and Proposed General Obligation Debt

Response to NRS 350.013 (1) (c)

- (1) *A discussion of its ability to afford existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt; and*
- (6) *A discussion of its sources of money projected to be available to pay existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt.*

TMWA has authority pursuant to a cooperative agreement entered into pursuant to Nevada state statutes to issue special obligation bonds. TMWA does not have the authority to issue general obligations.

Bonded Indebtedness

The following table illustrates the outstanding bond issues (the "Bonds") currently being supported by operational revenues at June 30, 2021.

Truckee Meadows Water Authority
SPECIAL OBLIGATION BONDS
Supported by Net Revenues
June 30, 2021

	Issuance Date	Original Amount	Amount Outstanding June 30, 2021
Drinking Water SRF Loan, Series 2005	06/09/2005	\$4,669,565	\$1,254,482
DWSRF American Recovery and Reinvestment Act Loan, Series 2009A	08/14/2009	2,401,120	1,051,184
Drinking Water SRF Loan, Series 2010A	02/11/2010	4,381,614	2,615,367
Drinking Water SRF Loan, Series 2014	12/31/2014	9,109,437	3,788,098
TMWA Water Revenue Refunding Bond, Series 2015A	05/14/2015	28,750,000	24,290,000
Drinking Water SRF Loan, Series 2015B	07/30/2015	8,971,562	7,379,340
TMWA Water Revenue Refunding Bond, Series 2016	04/12/2016	124,790,000	124,790,000
TMWA Water Revenue Refunding Bond, Series 2017	04/11/2017	147,415,000	136,880,000
TMWA Water Revenue Refunding Bond, Series 2018	05/15/2018	38,835,000	38,835,000
TMWA Water Revenue Refunding Bond, Series 2021	06/03/2021	13,000,000	13,000,000
			<u>\$353,883,471</u>

Totals may not add due to rounding.

Bonds Are Special Obligations of the Authority

The principal of and interest on the Bonds is payable solely from and secured by an irrevocable pledge of the Net Revenues derived by TMWA from the operation of the Water System, together with certain interest income and other amounts as provided in the Bond Resolution. The Bonds constitute an irrevocable pledge of the Net Revenues and the Bond Fund and the Reserve Account established by the Bond Resolution. The Bonds do not constitute a general obligation of TMWA. Owners of the Bonds may not look to any funds or accounts of TMWA other than those specifically pledged to the payment of the Bonds. The Bonds do not constitute a debt of the City of Reno, the City of Sparks, Washoe County, or the State of Nevada. TMWA has no taxing power. Payment of the Bonds is dependent upon the generation of sufficient Net Revenues of the Water System.

The Truckee Meadows Water Authority's guidelines for the execution and management of interest rate swaps or similar products ("Swap Products") and related transactions to meet the financial and management objectives of the Authority are included as Appendix A.

[The remainder of this page is intentionally left blank.]

Current and Proposed Debt Service Requirements

The following table illustrates the debt service to maturity on TMWA’s currently outstanding special obligation bonds, the Drinking Water State Revolving Fund (the “DWSRF”) loans and the Drinking Water American Recovery and Reinvestment Act loan.

During Fiscal Year 2021-22, the Authority does not propose to issue any additional debt. However, if an unanticipated need arises, TMWA reserves its authority to pursue additional debt consistent with applicable Nevada Revised Statutes. These bonds and loans are supported by Net Revenues.

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NET REVENUE SUPPORTED DEBT (1)(2)
Currently Outstanding and Proposed Bonds
Truckee Meadows Water Authority, Nevada
June 30, 2021

Fiscal Year Ending June 30,	Currently Outstanding		Total
	Principal	Interest	
2022	\$15,384,193	\$16,510,043	\$31,894,236
2023	16,494,081	15,829,559	32,323,640
2024	17,200,578	15,104,934	32,305,512
2025	17,958,730	14,345,731	32,304,461
2026	16,299,237	13,587,088	29,886,326
2027	18,161,146	12,820,498	30,981,644
2028	18,988,693	11,988,032	30,976,725
2029	17,881,897	11,121,007	29,002,904
2030	18,698,944	10,229,251	28,928,195
2031	19,111,442	9,298,416	28,409,857
2032	25,740,588	8,190,144	33,930,732
2033	27,025,108	6,884,374	33,909,482
2034	28,360,011	5,513,471	33,873,482
2035	29,765,307	4,074,425	33,839,732
2036	14,463,515	2,975,476	17,438,991
2037	14,860,000	2,246,000	17,106,000
2038	15,490,000	1,487,250	16,977,250
2039	10,750,000	831,250	11,581,250
2040	11,250,000	281,250	11,531,250
Total	\$353,883,471	\$163,318,198	\$517,201,669

Totals may not add due to rounding.

(1) Currently Outstanding Combined Debt includes TMWA Water Revenue Refunding Bonds, Series 2015A, Series 2016, Series 2017, Series 2018 and Series 2021; Drinking Water SRF loans Series 2005, Series 2010A, Series 2014 and Series 2015B; and the DWSRF ARRA Loan, Series 2009A.

(2) TMWA does not propose to issue any long-term debt during FY 2021-22.

Operational Costs and Revenue Sources

The TMWA revenues and expenses are accounted for in an Enterprise Fund. TMWA has no General Fund or any other Governmental Fund. It is anticipated that the operational costs associated with TMWA's capital improvement program will be paid from the Enterprise Fund for the next five years and beyond. The revenues that support TMWA's Enterprise Fund that are currently in place are expected to continue. It is the policy of TMWA to review water service rates and facility charges annually.

Debt Capacity

Response to NRS 350.013 (1) (c):

- (2) *A discussion of its capacity to incur authorized and proposed future general obligation debt without exceeding the applicable debt limit.*

Introduction and Purpose

Analysis of TMWA's debt position is important, as growth in the service territory has resulted in an increased need for capital financing. The Debt Capacity Analysis is premised on the idea that resources, as well as need, should drive TMWA's debt issuance program. Proposed long-term financings are linked with the economic, demographic and financial resources expected to be available to pay for that debt. The primary emphasis of the analysis is the impact of TMWA's projected capital financing requirements on the credit quality of its debt obligations. TMWA strives to ensure that, as it issues further debt, its credit quality and market access will not be impaired.

No Statutory Debt Limit

TMWA does not have the statutory authority to issue general obligations, and, therefore, does not have a statutory debt limit.

General Obligation Debt Comparison

Response to NRS 350.013 (1) (c):

- (3) *A discussion of its general obligation debt that is payable from property taxes per capita as compared with such debt of other municipalities in this State;*
- (4) *A discussion of its general obligation debt that is payable from property taxes as a percentage of assessed valuation of all taxable property within the boundaries of the municipality.*

TMWA does not have the authority to issue general obligations and does not have the authority to levy property taxes.

Policy Statement for Sale of Debt

Response to NRS 350.013 (1) (c):

(5) Policy regarding the manner in which the municipality expects to sell its debt.

Administration of Policy

The General Manager and Chief Financial Officer are responsible for administration of TMWA's financial policies. The TMWA Board of Directors (the "Board") is responsible for the approval of any form of TMWA borrowing and the details associated therewith.

The General Manager will coordinate the size of issuance, debt structuring, repayment sources and determination of mix and method of sale, with the approval of the Board.

Types of Debt

Special Obligation Bonds

TMWA may issue as special obligations any of the following types of securities:

1. Notes
2. Interim debentures
3. Bonds
4. Commercial Paper
5. Variable Rate Demand Obligations

Debt will be used to finance or refinance only those capital improvements and long-term assets, or other costs directly associated with financing a project, which have been determined to be beneficial to a significant proportion of the citizens in the service territory and for which repayment sources have been identified.

Refunding – A refunding of outstanding bonds generally involves issuing a new bond issue whose proceeds are used to redeem an outstanding issue. Key definitions follow:

1. Current Refunding – The refunding bonds are issued within 90 days of the initial call date of the outstanding bonds to be refunded.
2. Advance Refunding – The refunding bonds are issued more than 90 days before the initial call date of the outstanding bonds to be refunded. An advance refunding is accomplished by issuing a new bond, and/or using available funds, to invest in an escrow account composed of a portfolio of U.S. government securities that are structured to provide enough cash flow to pay debt service on the refunded bonds. The escrow legally defeases the outstanding bonds.

3. Gross Savings - Difference between the debt service on refunding bonds and refunded bonds less any contribution from other available funds, including a reserve or debt service fund.
4. Present Value Savings - Present value of gross savings discounted at the refunding bond arbitrage yield to the closing date, plus accrued interest less any contribution from available funds, including a reserve or debt service fund.

Prior to beginning a refunding bond issue, TMWA will review an estimate of the savings achievable from the refunding. TMWA may also review a pro forma schedule to estimate the savings assuming that the refunding is done at various points in the future.

TMWA will generally consider refunding outstanding bonds if one or more of the following conditions exist:

1. For an advance refunding, present value savings are at least 5% of the par amount of the refunded or refunding bonds (whichever is greater) and escrow efficiency of at least 60%. Escrow efficiency is defined as net present value savings divided by the sum of net present value savings and negative arbitrage in the escrow. For example, an escrow with 50% escrow efficiency means that TMWA would double savings if there were no negative arbitrage.
2. For a current refunding, present value savings are at least 3% of the par amount of refunded or refunding bonds (whichever is greater).
3. The bonds to be refunded have restrictive or outdated covenants.
4. Restructuring the debt is deemed to be desirable.

TMWA may pursue a refunding that does not meet the above criteria if present value savings exceed the costs of issuing the bonds and the date of maturity of the bonds is less than 3 years from the call date, and the bonds can be currently refunded.

Method of Sale

There are two ways bonds can be sold: competitive or negotiated sale. Competitive and negotiated sales provide for one or more pricings, depending upon TMWA's need for funds, market conditions or other factors. Either method can provide for changing issue size, maturity amounts, term bond features, etc. The timing of competitive and negotiated sales is generally related to the requirements of the Nevada Open Meeting Law.

Competitive Sale - With a competitive sale, any interested underwriter is invited to submit a proposal to purchase an issue of bonds. Pursuant to NRS Chapter 350, if a municipality is required to sell the bonds it issues by competitive bid, it must cause an invitation for competitive bids, or notice thereof, to be published before the date of the sale in the daily or weekly version of *The Bond Buyer*. The bonds are then awarded to the underwriter(s) presenting the best bid according to stipulated criteria set forth in the notice of sale. The best bid is usually determined based on the lowest overall interest rate. Competitive bids are preferred unless market or other circumstances lead TMWA to conduct a negotiated sale.

Negotiated Sale - A negotiated sale is a sale of securities through an exclusive arrangement between the issuer and an underwriter or underwriting syndicate. The underwriter and underwriting syndicate will market the bonds for sale to investors as well as underwrite bonds that have not been sold on a given day or day. TMWA and the underwriters will agree on the appropriate coupons, interest rates and price for the bonds to be sold. At the end of successful negotiations, the bond issue is awarded (sold) to the underwriters.

Selection of an underwriter will be determined based upon criteria contained in NRS 350.185. TMWA also reserves the right to consider additional criteria that relate to TMWA's business objectives.

Procedure for the Request for Proposal for Underwriting Services – If a negotiated sale is deemed appropriate and permitted pursuant to State statute, TMWA will follow the procedures in NRS 350.175, and as set forth below.

Underwriter Selection for Negotiated Sale

1. TMWA will issue a request for proposals either on its own or on its behalf through TMWA's Independent Registered Municipal Advisor to a qualified pool of underwriters.
2. The book-running senior manager and other members of the underwriting syndicate will be designated by the General Manager, and ratified by the Board. It is TMWA's intent, once a team is established, to provide equal opportunity for the position of book-running senior manager. The General Manager may rotate the book-running senior manager on a deal by deal basis (i.e., when more than one issue is being sold for the same project having different dated dates), to provide equal opportunity to all members of the syndicate.
3. The underwriting team should be balanced with firms having institutional, retail, and regional sales strengths. TMWA is committed to equal opportunity for qualified minority and/or woman owned firms to be included on the underwriting team.
4. The selected underwriter(s) may be used for negotiated transactions for a period of up to five years. TMWA may issue a Request for Proposals more frequently and as needed to ensure efficient execution of transactions and to reflect market changes over time.
5. TMWA's selection of an underwriter will take into consideration the criteria listed in NRS 350.185.
6. The General Manager shall certify that the procedure for selecting a proposal for the negotiated sale pursuant to NRS 350.175 was conducted in an open and fair manner.

Debt Structuring

Maturity Structures - The term of TMWA debt issues should not extend beyond the useful life of the project or equipment financed. The repayment of principal on special obligation bonds should

generally not extend beyond 30 years unless there are compelling factors which make it desirable to extend the term beyond 30 years, such as asset life, market efficiencies, cash flow considerations, etc. Special obligations must mature within 50 years.

Debt issued by TMWA should be structured to provide for either level principal or level debt service. Deferring the repayment of principal (e.g., interest only structures) should be avoided except in select instances where it will take a period of time before project revenues are sufficient to pay debt service or if such a structure will help levelize all-in debt service. Ascending debt service should generally be avoided.

Bond Insurance – Bond insurance is an insurance policy purchased by an issuer or an underwriter for either an entire issue or specific maturities, which guarantees the payment of principal and interest. When the cost of the insurance is less than the benefit (in terms of lower yields on the issuer's bonds), the higher credit rating afforded by the insurance would result in a lower net borrowing cost for an issuer.

Bond insurance can be purchased directly by TMWA prior to the bond sale (direct purchase) or at the underwriter's option and expense (bidder's option). Insurance will only be utilized in the case where the premium is less than the savings achieved through lower interest rates resulting from the insurance.

The decision to purchase insurance directly versus at the bidder's option is based, among other things, on:

- volatile markets,
- current investor demand for insured bonds of different maturities,
- level of insurance premiums,
- ability of TMWA to purchase bond insurance from bond proceeds, and
- security and covenant terms required by the insurer.

When insurance is purchased directly by TMWA, the present value of the estimated debt service savings from insurance should be greater than the insurance premium. The insurer will usually be chosen based on an estimate of the greatest net present value insurance benefit (present value of debt service savings less insurance premium).

Reserve fund and coverage policy - A debt service reserve fund is created from the proceeds of a bond issue and/or other available funds to provide a ready reserve to meet debt service payments should moneys not be available from current revenues. TMWA will fund a debt service reserve fund pledged to the payment of outstanding debt consistent with the authorizing resolution and as required to ensure the most effective pricing of the bonds. To the extent that bonds can be issued without a debt service reserve, TMWA will evaluate the benefit of such a structure, and may issue bonds without funding a debt service reserve.

Coverage is the ratio of pledged revenues to related debt service for a given year. For each bond issue the General Manager shall determine the appropriate reserve fund and coverage requirements, if any.

Interest Rate Limitation

Under NRS 350.2011, the maximum rate of interest for special obligations must not exceed the Index of Revenue Bonds, which was most recently published before the bids are received or a negotiated offer is accepted, plus 3%

Summary of Debt Issuance Policies

- A. Bond proceeds will be used to finance or refinance only those capital improvements and long-term assets, or other costs directly associated with financing of a project, which have been determined to be beneficial to a significant proportion of the citizens in the service territory, and for which repayment sources have been identified.
- B. TMWA may issue fixed or variable rate debt, including Commercial Paper, as appropriate, to fund construction activities.
- C. Debt shall not be issued to fund operating and maintenance expenses.
- D. Certificates of participation/other leases should be used only when appropriate (i.e., when no other adequate means of financing is available under State law).
- E. The General Manager shall consider refunding outstanding bonds if one or more of the following conditions exist:
 - i. for advance refundings, present value savings are estimated to be at least 5% of the par amount of the refunded or refunding bonds (whichever is greater) and escrow efficiency if at least 60%;
 - ii. for current refunding, present value savings are at least 3% of the par amount of refunded or refunding bonds (whichever is greater);
 - iii. the bonds to be refunded have restrictive or outdated covenants; or
 - iv. restructuring debt is deemed to be desirable.
- F. The General Manager shall consider purchasing bond insurance when the present value of the estimated debt service savings from insurance is greater than the insurance premium.
- G. Nevada law generally requires competitive sales of bonds. When a negotiated sale is determined to be the preferred method of sale, and as permitted by law, it will be considered by the General Manager under the conditions set forth herein.
- H. The General Manager shall establish a list of pre-qualified underwriters when a negotiated sale is anticipated.
- I. For negotiated sales, TMWA is committed to equal opportunity for qualified minority and/or woman owned firms to be included in the underwriting team, and equal opportunity will be provided to all members of the team, including minority and/or woman-owned firms to hold the position of book-running senior manager. The book-running senior manager and other members of the underwriting syndicate will be recommended by the General Manager and ratified by the Board.

Operation Costs and Revenue Sources in Capital Improvement Plan

Response to NRS 350.013 1 (c)

(7) A discussion of its operational costs and revenue sources for the ensuing 5 fiscal years, associated with each project included in its plan for capital improvement submitted pursuant to paragraph (d), if those costs and revenues are expected to affect the property tax rate.

TMWA's Capital Improvements Program (the "CIP") is a five-year plan for maintaining existing infrastructure and building new facilities to meet demands from growth. It is used to link TMWA's physical development planning with fiscal planning.

TMWA's CIP includes major projects requiring the expenditure of public funds, over and above annual operating expenses, for the purchase, construction, or replacement of the physical assets of TMWA. Major capital projects are normally non-recurring (e.g., new buildings, investment in new technology, etc.).

The CIP program identifies project costs associated with the planning/design/engineering, land acquisition, and construction of new facilities and/or major remodels and maintenance projects. The CIP project submittal process also requests and evaluates information relating to any ongoing operation/maintenance costs associated with projects. (These expenses are not included in the total project cost.).

Some CIP projects reduce operations and maintenance costs. Many infrastructure maintenance projects will reduce long-term operations and maintenance costs through preventative measures that extend the useful life of TMWA's infrastructure. Certain projects in the technology/equipment categories may also reduce operating and maintenance costs by automating functions or by reducing energy costs and maintenance contracts on obsolete equipment.

Project evaluation by TMWA Staff includes consideration of the operations and maintenance impacts of the project. Priority is awarded to projects that reduce operating impacts on TMWA's operating budget.

New facilities can have a direct and long-lasting impact on TMWA's operating budget. New facilities call for additional operating and maintenance costs including, but not limited to, staff, computers and other equipment, utilities, and other maintenance costs. Increased expenditures must be anticipated for not only the direct costs associated with the new facility, but for any additional indirect costs that will be incurred, including administrative support, carrier services, etc. TMWA does not levy a property tax rate, operations costs associated with any project in the CIP will be supported within existing revenue resources.

Ongoing Disclosure of Authority Financial Information Policy Statement

In November 1994, the Securities and Exchange Commission (the "SEC") amended Rule 15c2-12 (the "Rule") to prohibit any broker, dealer, or municipal securities dealer from acting as an underwriter in a primary offering of municipal securities unless the issuer promises in writing to provide certain ongoing information (unless the offering satisfies certain exemptions).

The Authority will comply with SEC Rule 15c2-12 (the “Rule”) by providing the secondary market disclosure required in any case in which the Rule applies to the Authority as an obligated person as defined in the Rule.

Chief Financial Officer Information

Response to NRS 350.013 1 (e)

A statement containing the name, title, mailing address and telephone number of the chief financial officer of the municipality.

The TMWA financial reporting responsibilities are performed by the Chief Financial Officer.

Name: Michele Sullivan, CPA
Title: Chief Financial Officer / Treasurer

Address: Truckee Meadows Water Authority
P.O. Box 30013
Reno, NV 89520-3013

Telephone: (775) 834-8284

Email: msullivan@tmwa.com

Appendices

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Procedures for Debt Issuance / Timetable	23

APPENDIX A

Truckee Meadows Water Authority, Nevada INTEREST RATE SWAP POLICY June 30, 2021

1. Introduction

The purpose of this Interest Rate Swap Policy (the “Policy”) is to establish guidelines for the execution and management of the Truckee Meadows Water Authority’s (“TMWA” or the “Authority”) use of interest rate swaps or similar products (“Swap Products”) and related transactions to meet the financial and management objectives as outlined herein.

This policy confirms the commitment of Authority management to adhere to sound financial and risk management practices.

2. Scope

The Authority recognizes that Swap Products can be appropriate financial management tools to achieve the Authority’s financial and management objectives. This Policy sets forth the manner in which the Authority shall enter into transactions involving Swap Products. The Authority shall integrate Swap Products into its overall debt and investment management programs in a prudent manner in accordance with the parameters set forth in this Policy.

This Policy applies to any interest rate swap; swap option or related transaction that the Authority may undertake.

3. Authorizations and Approvals; Compliance with Bond Documents and Covenants

The Authority shall obtain the approval of the Truckee Meadows Water Authority Board of Directors (the “Directors”) prior to entering into any interest rate swap, swap option or related transaction. The Authority, in consultation with its Bond Counsel, and financial advisors will determine whether a proposed swap agreement complies with State law and any other applicable law and any other applicable provisions of the Authority’s bond resolutions and agreements with respect to its outstanding debt. All swap transactions will be subject to an independent finding that the terms and conditions are fair and reasonable at the time of trade execution.

4. General Objectives

The Authority may execute an interest rate swap, swap option or related transaction to the extent the transaction can be reasonably expected to achieve one or more of the following objectives:

- Result in a lower net cost of borrowing with respect to the Authority’s debt, or achieve a higher net rate of return on the investment of Authority moneys.
- Reduce exposure to changes in interest rates either in connection with a particular debt financing or investment transaction or in the management of

interest rate risk with respect to the Authority's overall debt and investment portfolios.

- Enhance financing flexibility for future capital projects.

5. Prohibited Uses of Interest Rate Swaps and Related Instruments

The Authority shall not execute interest rate swaps agreements or related instruments under the following circumstances:

- When a swap or other financial instrument is used for speculative purposes, such as potential trading gains, rather than for managing and controlling interest rate risk in connection with Authority debt or investments;
- When a swap or other financial instrument creates extraordinary leverage or financial risk;
- When the Authority lacks sufficient liquidity to terminate the swap at current market rates; or
- When there is insufficient price "transparency" to permit the Authority and its financial advisors to reasonably value the instrument, as a result, for example, of the use of unusual structures or terms.

6. Permitted Financial Instruments

The Authority may utilize the following financial products, if then permitted by law, on either a current or forward basis, after identifying the objective(s) to be realized and assessing the attendant risks:

- Interest rate swaps, including fixed, floating and/or basis swaps.
- Interest rate caps, floors and collars.
- Options, including on swaps, caps, floors and/or collars and/or cancellation or index-based features.

7. Identification and Evaluation of Financial and Other Risks

Prior to execution of an interest rate swap, swap option or related transaction, the Authority and its financial advisors shall identify and evaluate the financial risks involved in the transaction, and summarize them, along with any measures that will be taken to mitigate those risks. The types of questions that should be evaluated in connection with the identification and evaluation of financial risks shall include:

- Market or Interest Rate Risk: Does the proposed transaction hedge or create exposure to fluctuations in interest rates?

- **Tax Law Risk:** Is the proposed transaction subject to rate adjustments, extraordinary payments, termination or other adverse consequences in the event of a future change in Federal income tax policy?
- **Termination Risk:** Under what circumstances might the proposed transaction be terminated (other than at the option of the Authority)? At what cost? Does the Authority have sufficient liquidity to cover this exposure?
- **Risk of Uncommitted Funding (“Put” risk):** Does the transaction require or anticipate a future financing(s) that is dependent upon third party participation? What commitments can be or have been secured for such participation?
- **Legal Authority:** Is there any uncertainty regarding the legal authority of any party to participate in the transaction?
- **Counterparty Credit Risk:** What is the credit-worthiness of the counterparty? What provisions have been made to mitigate exposure to adverse changes in the counterparty credit standing?
- **Ratings Risk:** Is the proposed transaction consistent with the Authority’s current credit ratings or its desired future ratings and with related rating agency policies?
- **Basis Risk:** Do the anticipated payments that the Authority would make or receive match the payments that it seeks to hedge?
- **Tax Exemption on Authority Debt:** Does the transaction comply with all Federal tax law requirements with respect to the Authority’s outstanding tax-exempt bonds?
- **Accounting Risk:** Does the proposed transaction create any accounting issues that could have a material detrimental effect on the Authority’s financial statements? Would the proposed transaction have any material effect on the Authority’s rate covenant calculation or compliance? How are any such effects addressed?
- **Administrative Risk:** Can the proposed transaction be readily administered and monitored by the Authority’s finance team consistent with the policies outlined in the Authority’s Interest Rate Swap Policy?
- **Subsequent Business Conditions:** Does the proposed transaction or its benefits depend upon the continuation or realization of specific industry or business conditions?

8. Risk Limitations

The total notional amount and term of all Swap Transactions executed by the Authority shall not exceed the notional amount and term specified from time to time by the Authority's Chief Financial Officer (the "CFO"). It is expected that the Authority's total variable rate exposure, net of Swap Transactions which have the economic effect of reducing variable rate exposure, will be established from time to time based upon an evaluation of all relevant factors, including investment allocations, risk tolerance, credit strength, and market conditions.

9. Form of Swap Agreements

Each interest rate swap executed by the Authority shall contain terms and conditions as set forth in the International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement, including the Schedule to the Master Agreement and a Credit Support Annex, as supplemented and amended in accordance with the recommendations of the Authority's finance team. The swap agreements between the Authority and each qualified swap counterparty shall include payment, term, security, collateral, default, remedy, termination, and other terms, conditions and provisions as the Authority, in consultation with its financial advisors and Bond Counsel deems necessary or desirable.

10. Qualified Swap Counterparties

The Authority shall be authorized to enter into interest rate swap transactions only with qualified swap counterparties. At least one of the ratings of the Authority's counterparties (or their guarantors) must be in the "A" category. In addition, each counterparty must have a demonstrated record of successfully executing swap transactions as well as creating and implementing innovative ideas in the swap market. Each counterparty (or guarantor) shall have a minimum capitalization of at least \$250 million.

In order to diversify the Authority's counterparty credit risk, and to limit the Authority's credit exposure to any one counterparty, limits will be established for each counterparty based upon both the credit rating of the counterparty as well as the relative level of risk associated with each existing and proposed swap transaction. The guidelines below provide general termination exposure guidelines with respect to whether the Authority should enter into an additional transaction with an existing counterparty. The Authority may make exceptions to the guidelines at any time to the extent that the execution of a swap achieves one or more of the goals outlined in these guidelines or provides other benefits to the Authority. In general, the maximum Net Termination Exposure to any single Counterparty should be set so that it does not exceed a prudent level as measured against the gross revenues, available assets or other financial resources of the Authority.

Such guidelines will also not mandate or otherwise force automatic termination by the Authority or the counterparty. Maximum Net Termination Exposure is not intended to impose retroactively any terms and conditions on existing transactions. Such provisions will only act as guidelines in making a determination as to whether or not a proposed transaction should be executed given certain levels of existing and projected net termination exposure to a specific counterparty. Additionally, the guidelines below are not intended to require retroactively additional collateral

posting for existing transactions. Collateral posting guidelines are described in the “Collateral” section above. The calculation of net termination exposure per counterparty will take into consideration multiple transactions, some of which may offset the overall exposure to the Authority.

Under this approach, the Authority will set limits on individual counterparty exposure based on existing as well as new or proposed transactions. The sum of the **current market value** and the **projected exposure** shall constitute the Maximum Net Termination Exposure. For outstanding transactions, current exposure will be based on the market value as of the last quarterly swap valuation report provided by the Financial Advisor. Projected exposure shall be calculated based on the swap’s potential termination value taking into account possible adverse changes in interest rates as implied by historical or projected measures of potential rate changes applied over the remaining term of the swap.

For purposes of this calculation, the Authority shall include all existing and projected transactions of an individual counterparty and all transactions will be analyzed in aggregate such that the maximum exposure will be additive.

The exposure thresholds, which will be reviewed periodically by the Authority to ensure that they remain appropriate, will also be tied to credit ratings of the counterparties and whether or not collateral has been posted as shown in the table below. If a counterparty has more than one rating, the lowest rating will govern for purposes of the calculating the level of exposure. A summary table is provided below.

Counterparty Credit Exposure Recommended Limits			
Credit Ratings	Maximum Collateralized Exposure	Maximum Uncollateralized Exposure	Maximum Net Termination Exposure
Aaa/AAA	NA	\$100.0 million	\$100.0 million
Aa/AA Category	\$70.0 million	\$30.0 million	\$100.0 million
A/A Category	\$50.0 million	\$20.0 million	\$70.0 million
Below A3/A-	\$50.0 million	None	\$50.0 million

If the exposure limit is exceeded by counterparty, the Authority shall conduct a review of the exposure limit per counterparty. The Authority, in consultation with its Swap Counsel and Financial Advisor, shall explore remedial strategies to mitigate this exposure.

The Authority’s swap exposure to any single counterparty will be limited to 25% of the counterparty’s capitalization.

11. Procurement Process

The Authority may either negotiate or competitively bid interest rate swap transactions with qualified swap providers. The qualified swap providers will be selected by the Chief Financial Officer of the Authority and General Manager for consideration by the TMWA Board.

12. Termination Provisions and Authority Liquidity

Optional Termination: All interest rate swap transactions shall contain provisions granting the Authority the right to optionally terminate a swap agreement at any time over the term of the agreement. In general, exercising the right to optionally terminate an agreement produces a benefit to the Authority, either through receipt of a payment from a termination, or if a termination payment is made by the Authority, in connection with a corresponding benefit from a change in the related Authority debt or investment, as determined by the Authority. The CFO, as appropriate, in consultation with the Authority's finance team, shall determine if it is financially advantageous for the Authority to terminate a swap agreement.

Termination Events: A termination payment to or from the Authority may be required in the event of termination of a swap agreement due to a default by or a decrease in the credit rating of either the Authority or the counterparty. Prior to entering into the swap agreement or making any such termination payment, as appropriate, the CFO shall evaluate whether it would be financially advantageous for the Authority to enter into a replacement swap as a means of offsetting any such termination payment.

Any swap termination payment due from the Authority shall be made from available Authority monies. The CFO shall report any such termination payments to the Authority's Board of Directors.

Available Liquidity: The Authority shall consider the extent of its exposure to termination payment liability in connection with each swap transaction, and the availability of sufficient liquidity to make any such payments that may become due.

13. Term and Notional Amount of Swap Agreement

The Authority shall determine the appropriate term for an interest rate swap agreement on a case-by-case basis. The slope of the interest rate swap curve, the marginal change in swap rates from year to year along the swap curve, and the impact that the term of the swap has on the overall exposure of the Authority shall be considered in determining the appropriate term of any swap agreement. For any swap agreement entered into in connection with the issuance or carrying of bonds, the term of such swap agreement shall not extend beyond the final maturity date of such bonds.

14. Collateral Requirements

As part of any swap agreement, the Authority may require collateralization or other credit enhancement to secure any or all swap payment obligations of the counterparty. As appropriate, the Authority may require collateral or other credit enhancement to be posted by each swap counterparty under the following circumstances:

- Each counterparty shall be required to post collateral, in accordance with its (or its guarantor's) credit rating, equal to the positive net termination value of the swap agreement
- Collateral shall consist of cash, U.S. Treasury securities and U.S. Agency securities.
- Collateral shall be deposited with a custodian, acting as agent for the Authority, or as mutually agreed upon between the Authority and each counterparty.
- The market value of the collateral shall be determined on at least a monthly basis.
- The Authority will determine reasonable threshold limits for the initial deposit and for increments of collateral posted thereafter.
- The CFO shall determine on a case-by-case basis whether other forms of credit enhancement are more beneficial to the Authority.

In connection with any collateralization requirements that may be imposed upon the Authority in connection with a swap agreement, the Authority may post collateral or it may seek to obtain swap insurance in lieu of posting collateral. The CFO shall recommend a preferred approach to the Authority on a case-by-case basis.

15. Reporting Requirements

The Authority's financial advisors will monitor any interest rate swaps that the Authority enters into on at least a monthly basis.

The Authority's CFO will provide a written report to the TMWA Board regarding the status of all interest rate swap agreements on at least a quarterly basis and shall include the following information:

- Highlights of all material changes to swap agreements or new swap agreements entered into by the Authority since the last report.
- Market value of each of the Authority's interest rate swap agreements.
- For each counterparty, the Authority shall provide the total notional amount position, the average life of each swap agreement, the available capacity to enter into a swap transaction, and the remaining term of each swap agreement.
- The credit rating of each swap counterparty and credit enhancer insuring swap payments, if any.

- Actual collateral posting by each swap counterparty, if any, under each swap agreement and in total by that swap counterparty.
- A summary of each swap agreement, including but not limited to the type of swap, the rates and dollar amounts paid by the Authority and received by the Authority, and other terms.
- Information concerning any default by a swap counterparty under a swap agreement with the Authority, and the results of the default, including but not limited to the financial impact to the Authority, if any.
- A summary of any planned swap transactions and the projected impact of such swap transactions on the Authority.
- A summary of any swap agreements that were terminated.

16. Swaps Accounting Treatment

The Authority shall comply with any applicable accounting standards for the treatment of swaps and related financial instruments. The Authority and the Authority's external auditors shall implement the appropriate accounting standards.

17. Periodic Review of Interest Rate Swap Policy

The CFO and the Authority's financial advisors shall review its swap policy on a periodic basis and recommend appropriate changes to the General Manager and TMWA Board.

APPENDIX B**Procedures for Debt Issuance/Timetables**

Revenue Bonds
Sample Schedule

Number of Weeks	
From Start	Event
0	Board adopts Sale Resolution
3	Due Diligence Meeting
5	Board adopts Bond Resolution
10	Bond Sale
13	Bond Closing



Photo: Chalk Bluff Filter Underdrain System

Photo By: Jason Phinney, TMWA Sr. Construction Engineer

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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan

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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

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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

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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.



Photo: Washoe Flume Reconstruction

Photo By: Corine Lucich, TMWA Accounts Payable Representative

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 \$60.1 million for fiscal year 2022, the first year of the FY 2022-2026 CIP. Of this total \$34.2 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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan

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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan

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
Washoe Plant Tailraces Unit 1 and Unit 2	420
Total Hydroelectric	3,355
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	4,565
Total Customer Service Outlays	5,100
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 Management Projects	150
System Wide Asphalt Rehabilitation	450
Physical Access Control System Upgrade	250
Total Administrative Outlays	1,920

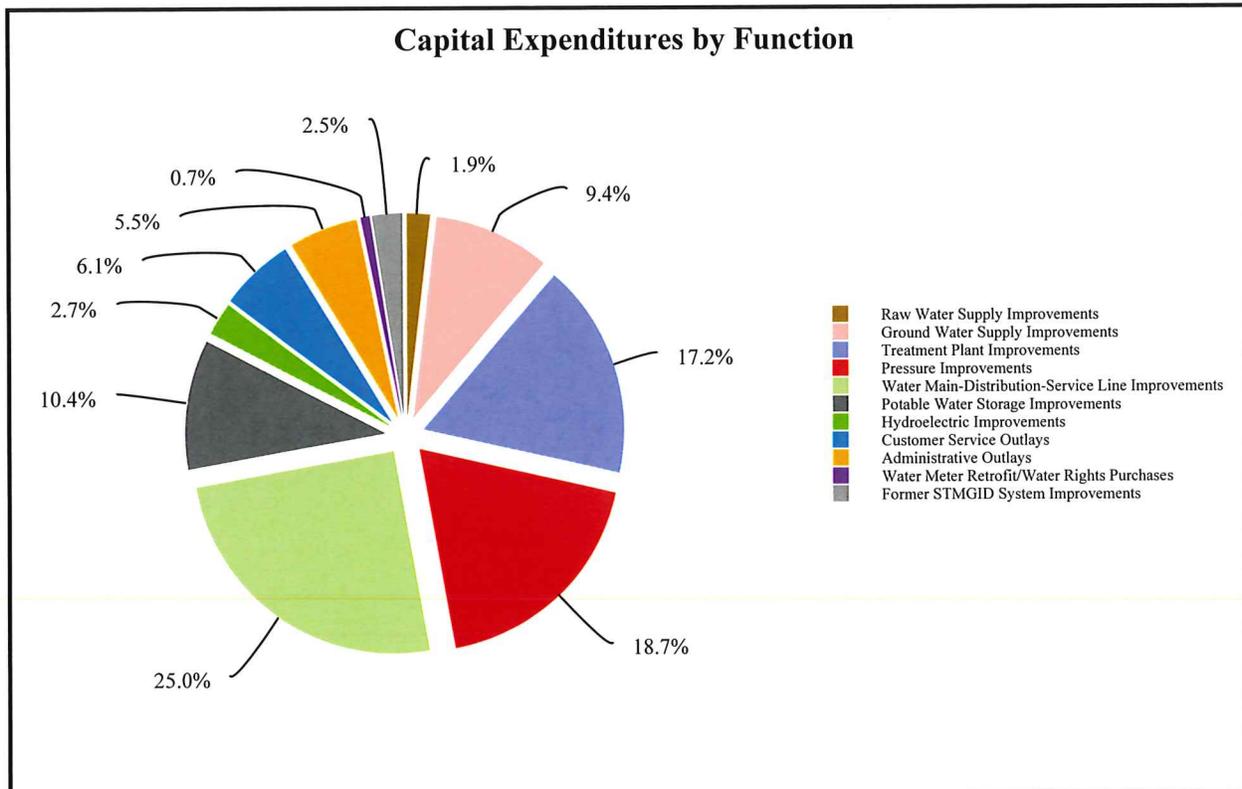
Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan

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	60,125

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	Five 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	3,355	6,305	100	750	3,455	13,965
Customer Service Outlays	5,100	7,505	7,600	3,010	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	58,025	59,255	48,470	43,110	40,175	249,035
Former STMGID System Improvements	2,100	600	2,500	—	—	5,200
Total Projected Capital Spending, Including STMGID	60,125	59,855	50,970	43,110	40,175	254,235

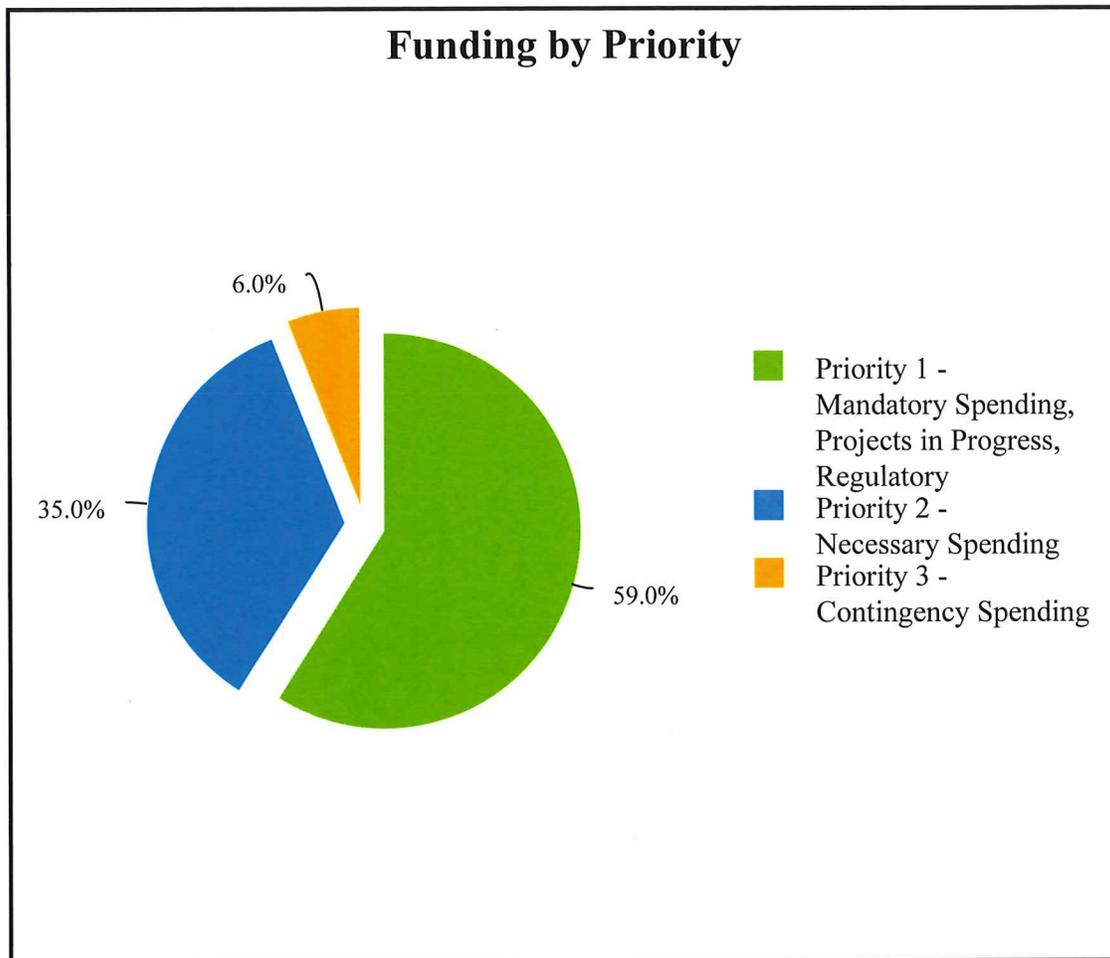


**PRELIMINARY FUNDING PLAN
FUNDING SOURCES
(Amounts in thousands of dollars)**

Summary of Funding Sources	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Five Year CIP Total
Capital Improvements Funded by Customer Rates	34,240	45,713	40,455	37,098	29,463	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	60,125	59,855	50,970	43,110	40,175	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	38,395	30,840	34,210	19,875	26,735	150,055
Priority 2 - Necessary Spending	17,920	24,015	14,835	20,985	11,290	89,045
Priority 3 - Contingency Spending	3,810	5,000	1,925	2,250	2,150	15,135
Total Projected Capital Spending	60,125	59,855	50,970	43,110	40,175	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.

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



 <p>TRUCKEE MEADOWS WATER AUTHORITY <i>Quality. Delivered.</i></p>	<p>FY 2022-2026 CIP RAW WATER SUPPLY IMPROVEMENTS SUMMARY</p>		<p>DATE: 3/1/2021</p>	 <p>NORTH</p> <p>NAD 83 NEVADA STATE PLANE WEST FEET</p>
			<p>MAP BY: JK</p>	
			<p>REQUESTED BY: ST</p>	
			<p>SCALE: 1 in = 8 miles</p>	

Raw Water Supply Improvements Highland Canal-Upgrades-Downstream

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



Raw Water Supply Improvements TROA Drought Storage/Implementation

FUNDING TIMELINE:

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

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

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



Raw Water Supply Improvements Donner Lake Outlet Improvements Phase 2

FUNDING TIMELINE:

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

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

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



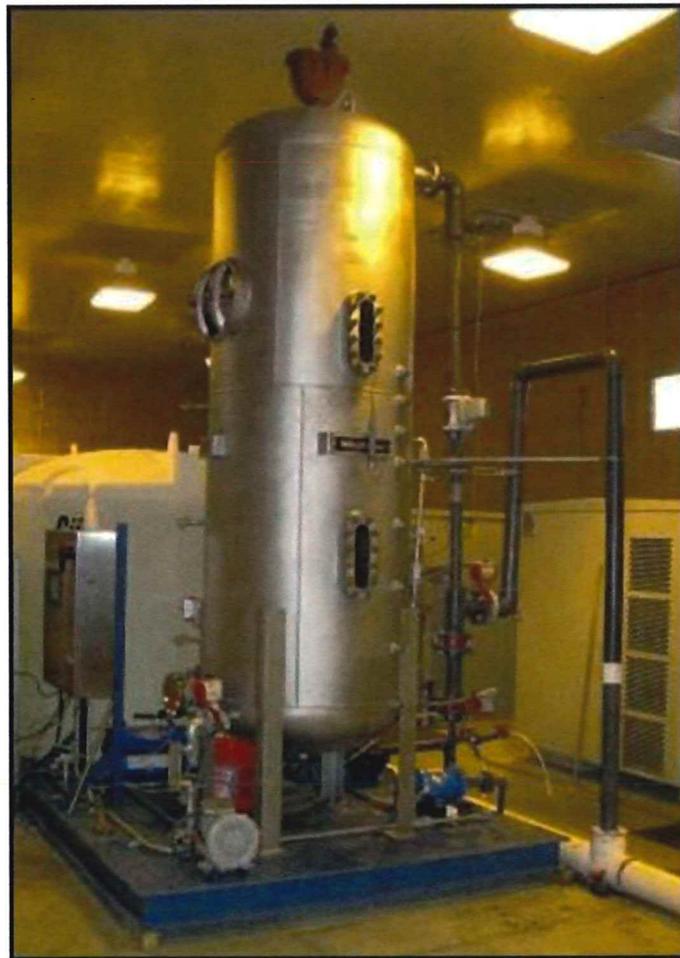
Raw Water Supply Improvements Advanced Purified Water Demonstration Facility

FUNDING TIMELINE:

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

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

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



**Raw Water Supply Improvements
Independence Lake Bathymetric Survey and Monitoring**

FUNDING TIMELINE:

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

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

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



Raw Water Supply Improvements Marlette Lake System Improvements

FUNDING TIMELINE:

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

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

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



Raw Water Supply Improvements Washoe Lake System Improvements

FUNDING TIMELINE:

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

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

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

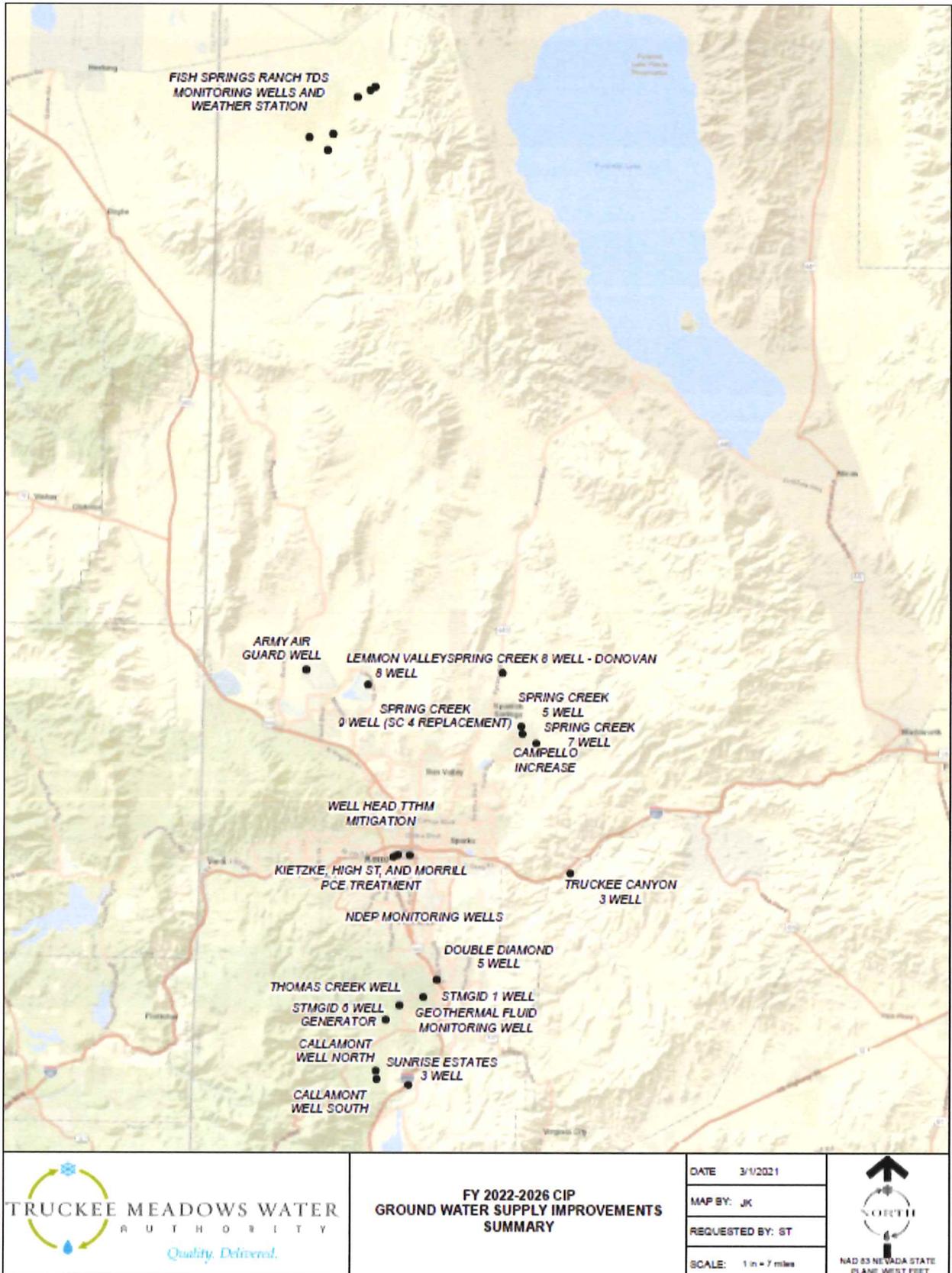


GROUND WATER SUPPLY IMPROVEMENTS Summary

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

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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



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 2025 is for constructing the pumping facilities including the well building, pump and motor, valves and piping, electrical and controls, etc.

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



Ground Water Supply Improvements Lemmon Valley Well #8 Replacement

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Well Fix & Finish

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Well Plugging / Conversion

FUNDING TIMELINE:

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

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

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



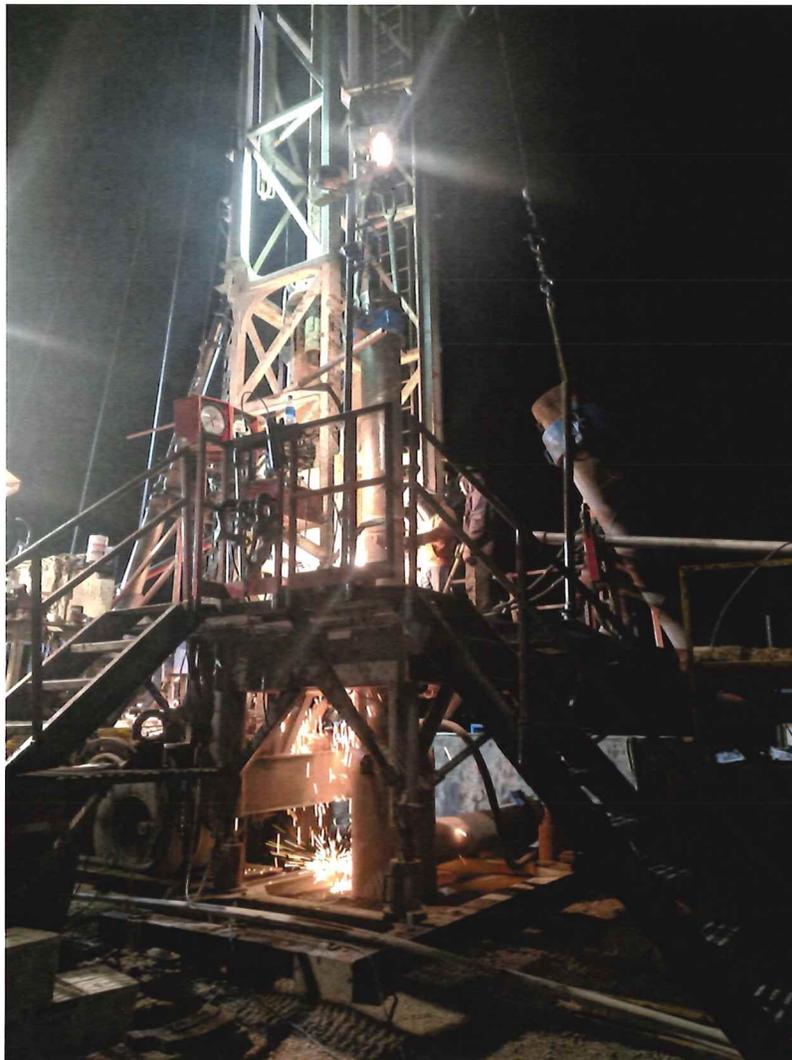
Ground Water Supply Improvements Thomas Creek Well & Spring Creek 5 Equipping

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Truckee Canyon Well #3 Site Modifications

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Well Head TTHM Mitigation

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Spring Creek Well #7 Recharge

FUNDING TIMELINE:

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

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

SCHEDULE: Construction will begin in FY 2022.



Ground Water Supply Improvements Callamont Well North Equipping

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Spring Creek Well #10 - Donovan

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Fish Springs Ranch TDS Monitoring Wells

FUNDING TIMELINE:

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

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

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



Ground Water Supply Improvements Geothermal Fluid Monitoring Well

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



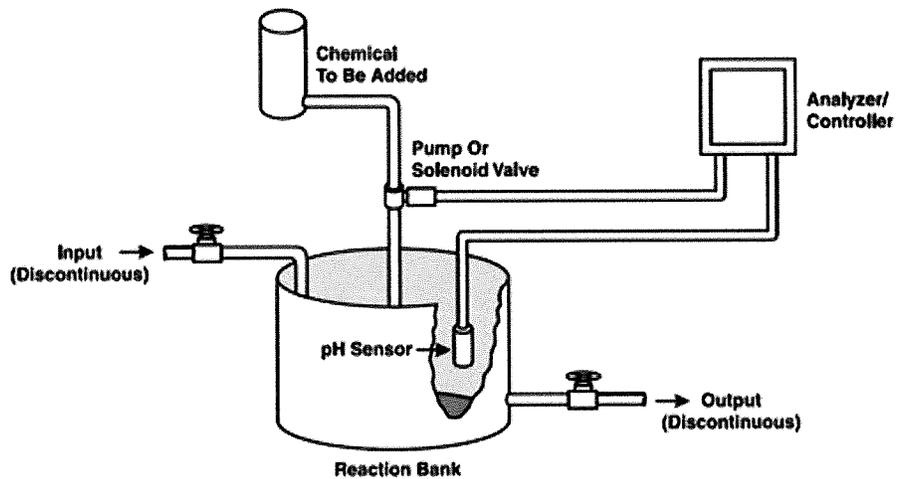
Ground Water Supply Improvements Spring Creek Wells pH Adjustment

FUNDING TIMELINE:

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

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

SCHEDULE: The project is scheduled for FY 2022.



**Ground Water Supply 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.

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



**FY 2022-2026 CIP
TREATMENT PLANT IMPROVEMENTS
SUMMARY**

DATE 3/1/2021
 MAP BY: JK
 REQUESTED BY: ST
 SCALE: 1 in = 4 miles



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.



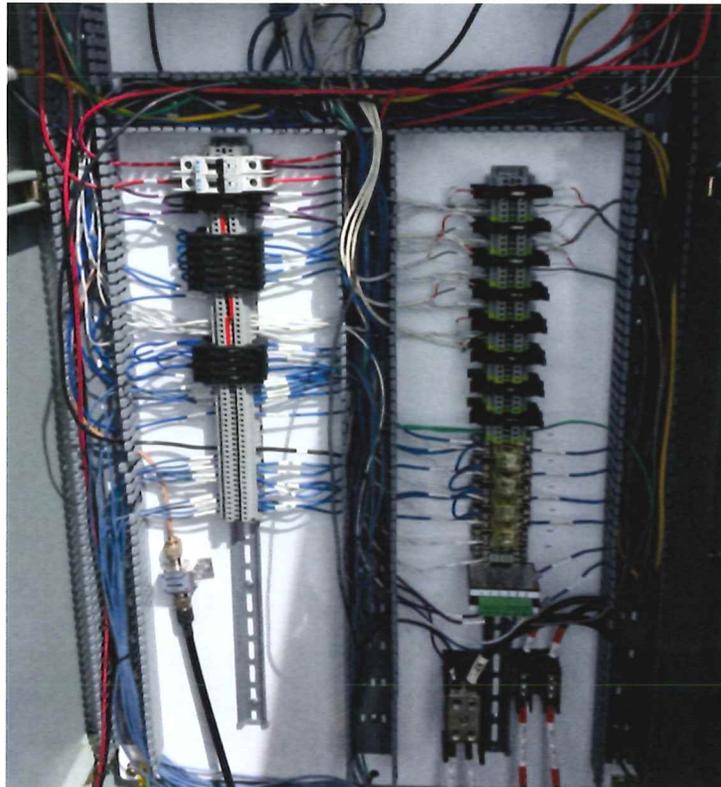
Treatment Plant Improvements SCADA Rehab/Plant Operating Software

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

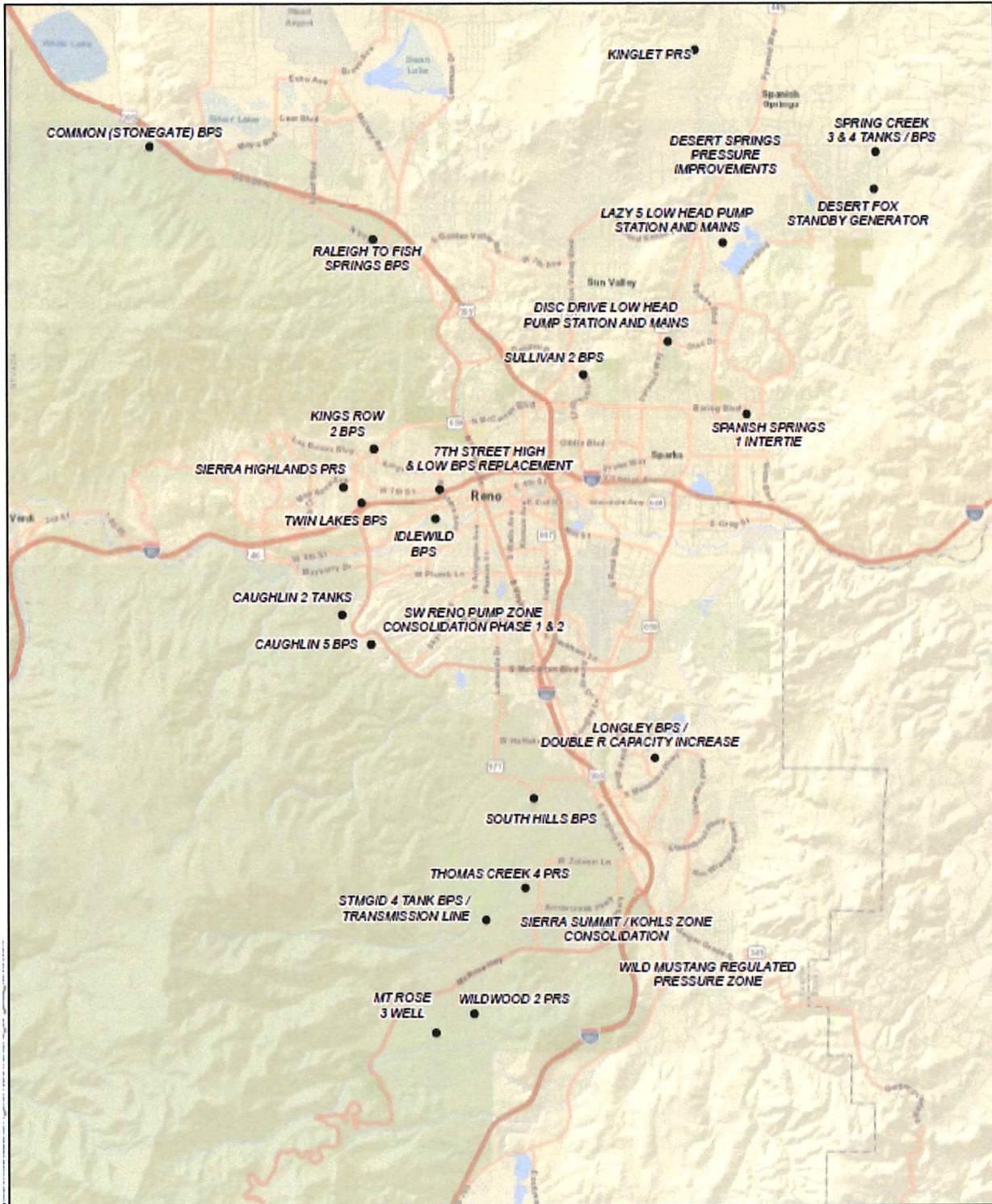
Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Pressure Regulators Rehabilitation	500	500	500	500	500	2,500
2	Customer Rates	Land Acquisitions	250	250	250	250	250	1,250
2	Customer Rates	Desert Fox Standby Generator	150	—	—	—	—	150
1	Developer Fees	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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan

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.

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



 <p>TRUCKEE MEADOWS WATER AUTHORITY Quality. Delivered.</p>	<p>FY 2022-2026 CIP DISTRIBUTION SYSTEM IMPROVEMENTS - PRESSURE IMPROVEMENTS SUMMARY</p>		<p>DATE: 3/1/2021</p>	 <p>NAD 83 NEVADA STATE PLANE WEST FEET</p>
			<p>MAP BY: JK</p>	
			<p>REQUESTED BY: ST</p>	
			<p>SCALE: 1 in = 3 miles</p>	

Distribution System Pressure Improvements Pressure Regulators Rehabilitation

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Land Acquisitions

FUNDING TIMELINE:

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

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

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



**Distribution System Pressure Improvements
Desert Fox Standby Generator**

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Pump Station Oversizing

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Pump Station Rebuilds, Rehabilitations

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Sullivan #2 Booster Pump Station Replacement

FUNDING TIMELINE:

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

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

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



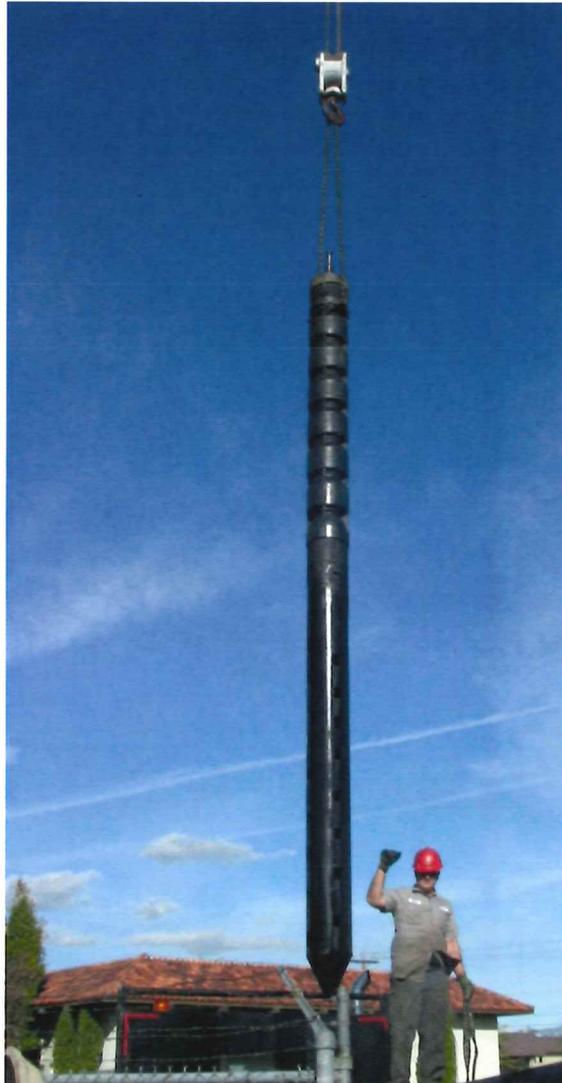
Distribution System Pressure Improvements Mt. Rose Well #3 Pump Station Improvements

FUNDING TIMELINE:

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

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

SCHEDULE: Construction is scheduled in FY 2022.



Distribution System Pressure Improvements Standby Generator Improvements

FUNDING TIMELINE:

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

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

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



**Distribution System Pressure Improvements
Idlewild Booster Pump Station Improvements**

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Raleigh to Fish Springs Booster Pump Station

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Spanish Springs #1 Pressure Zone Intertie

FUNDING TIMELINE:

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

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

SCHEDULE: The project is scheduled for FY 2022.



Distribution System Pressure Improvements STMGID Tank #4 Booster Pump Station / Transmission Line

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Wildwood Pressure Regulating Station/Scada Control

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



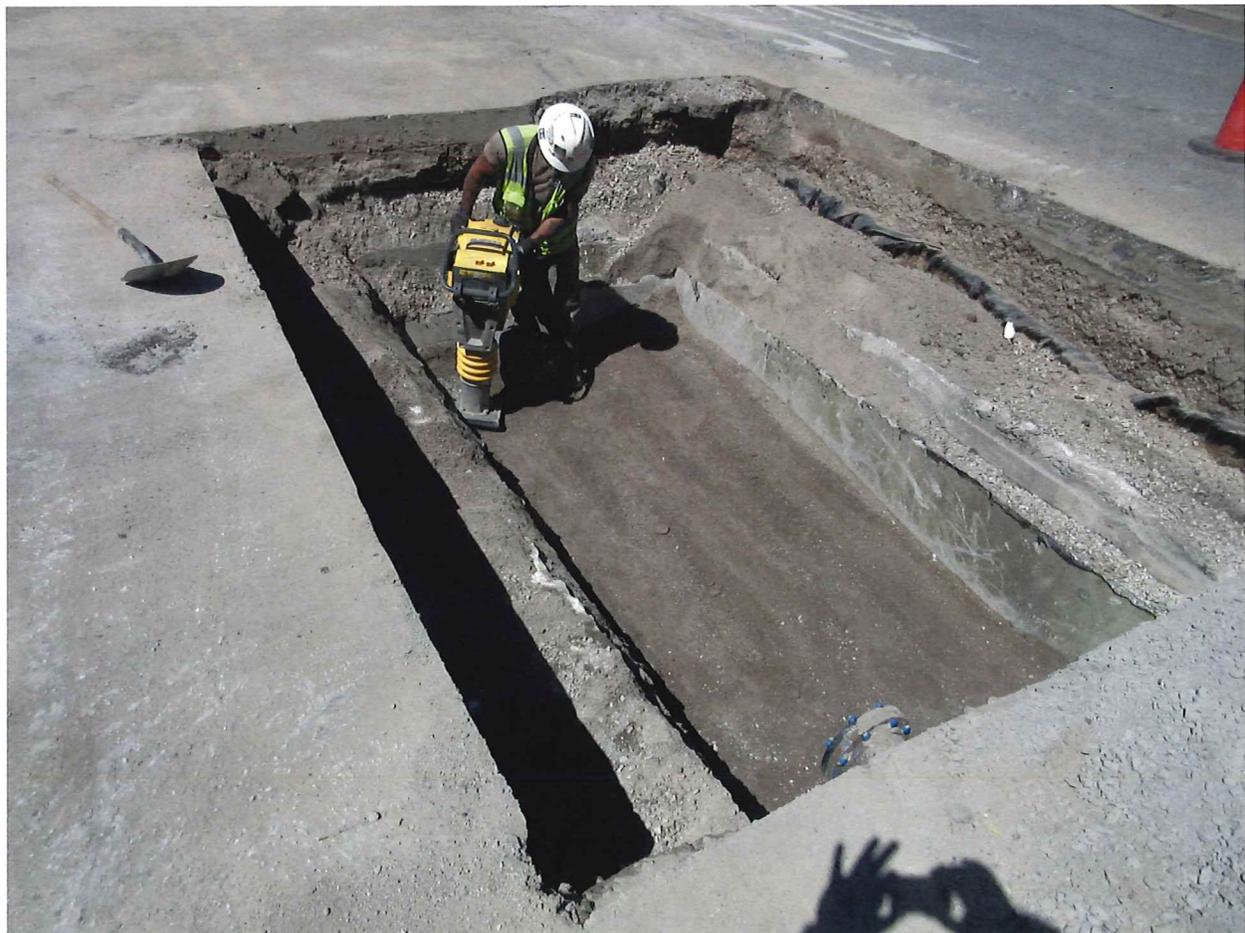
Distribution System Pressure Improvements Sierra Summit-Kohl's Zone Consolidation

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Wild Mustang Regulated Pressure Zone

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Twin Lakes Booster Pump Station

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Thomas Creek #4 PRS

FUNDING TIMELINE:

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

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

SCHEDULE: The project is scheduled for FY 2024.



Distribution System Pressure Improvements Kings Row 2 Booster Pump Station

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Common (Stonegate) Booster Pump Station

FUNDING TIMELINE:

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

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

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



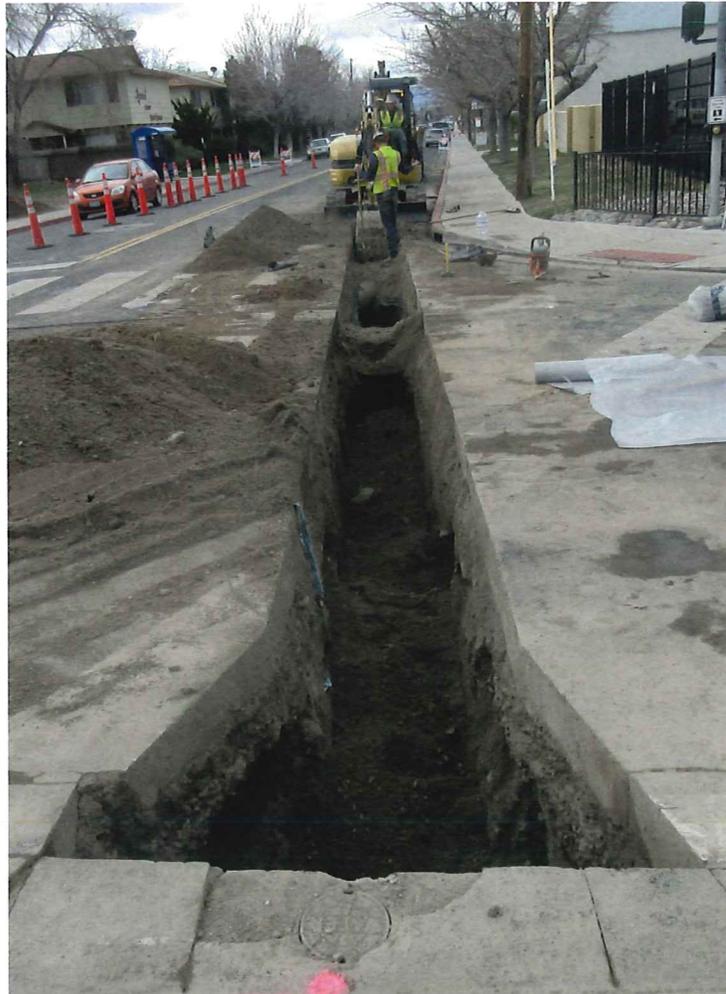
Distribution System Pressure Improvements Caughlin 5C Pump and Motor Replacement

FUNDING TIMELINE:

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

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

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



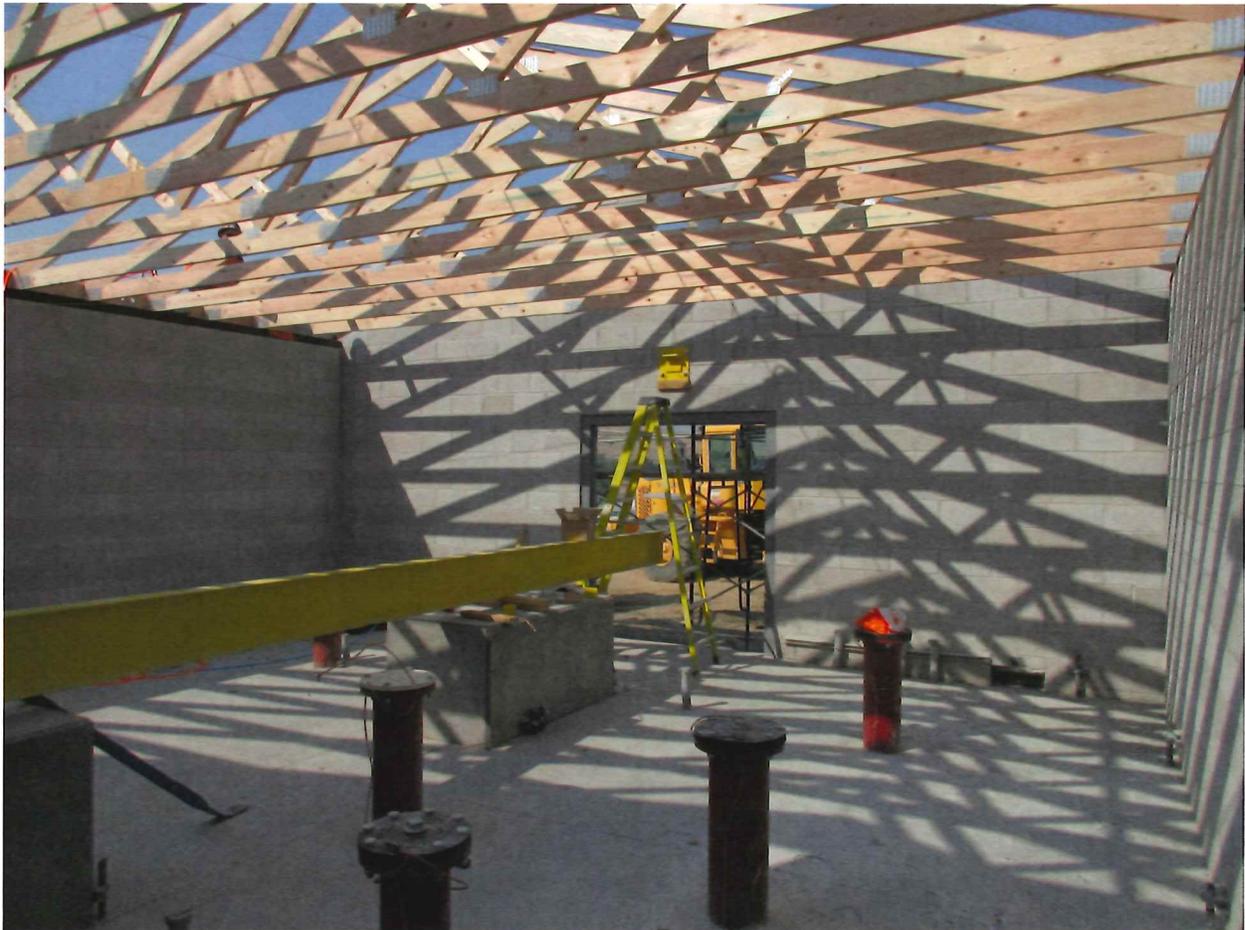
Distribution System Pressure Improvements Kinglet Pump Station

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements South Hills BPS Replacement

FUNDING TIMELINE:

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

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

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



**Distribution System Pressure Improvements
Sierra Highlands PRS**

FUNDING TIMELINE:

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

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

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



Distribution System Pressure Improvements Caughlin 2 Tanks

FUNDING TIMELINE:

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

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

SCHEDULE: Construction for the project is scheduled for FY 2023.



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 2023 - FY2024.



WATER MAIN DISTRIBUTION & SERVICE LINE IMPROVEMENTS

Summary

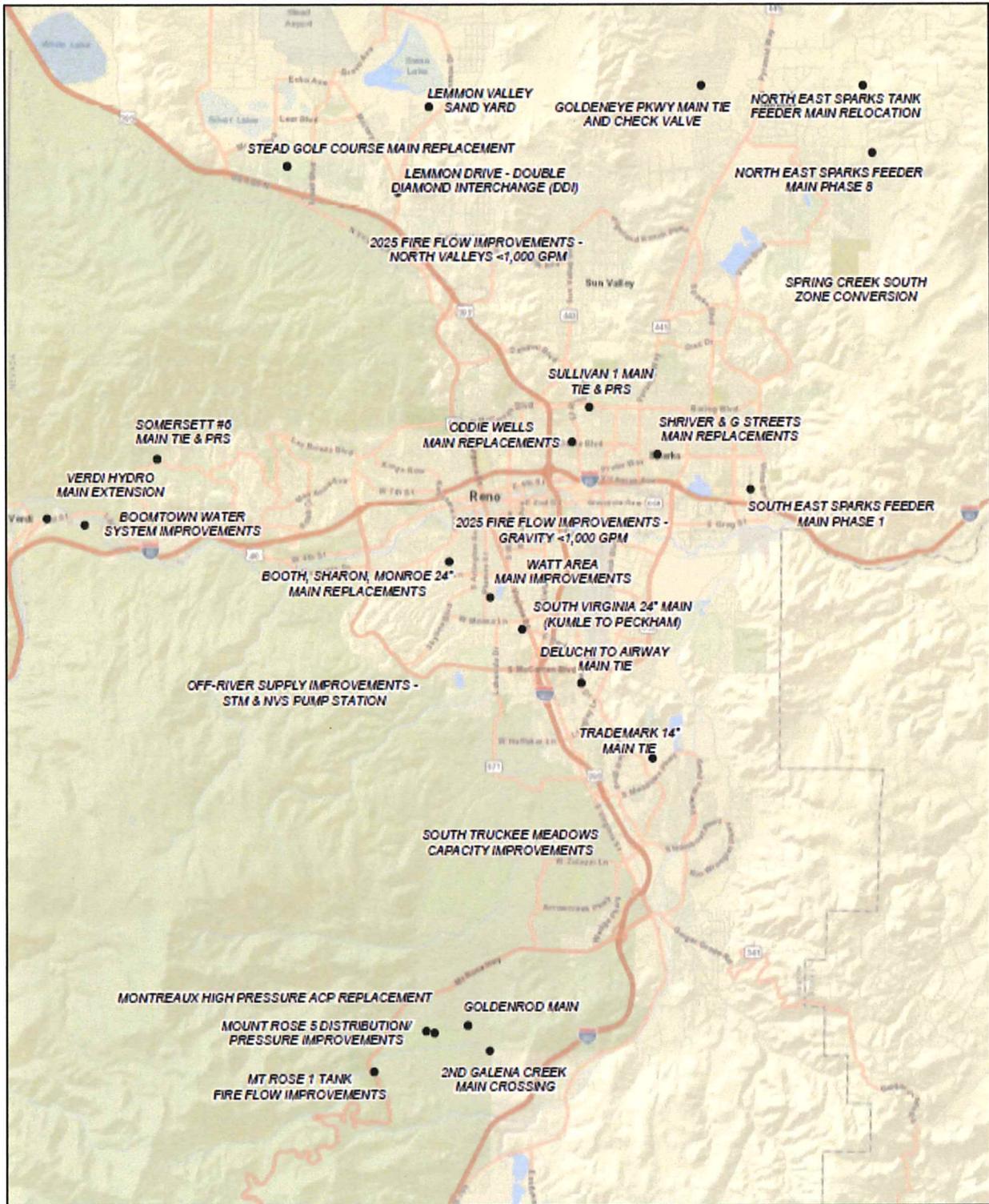
Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Street & Highway Main Replacements	4,500	4,500	5,000	5,000	5,000	24,000
2	Customer Rates	Spring Creek South Zone Conversion	750	300	—	—	—	1,050
2	Customer Rates	Booth, Sharon Way, Monroe 24" Main Replacements	—	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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Somerset #6 Main Tie & PRS	—	—	280	—	—	280
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 I	—	—	—	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.

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



 <p>TRUCKEE MEADOWS WATER AUTHORITY <i>Quality. Delivered.</i></p>	<p>FY 2022-2026 CIP WATER MAIN DISTRIBUTION - SERVICE LINE IMPROVEMENT SUMMARY</p>	DATE: 3/1/2021	 <p>NORTH NAD 83 NEVADA STATE PLANE WEST FEET</p>
		MAP BY: JK	
		REQUESTED BY: ST	
		SCALE: 1 in = 3 miles	

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

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



**Water Main-Distribution Service Line Improvements
South Virginia 24" Main (Kumle to Peckham)**

FUNDING TIMELINE:

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

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

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



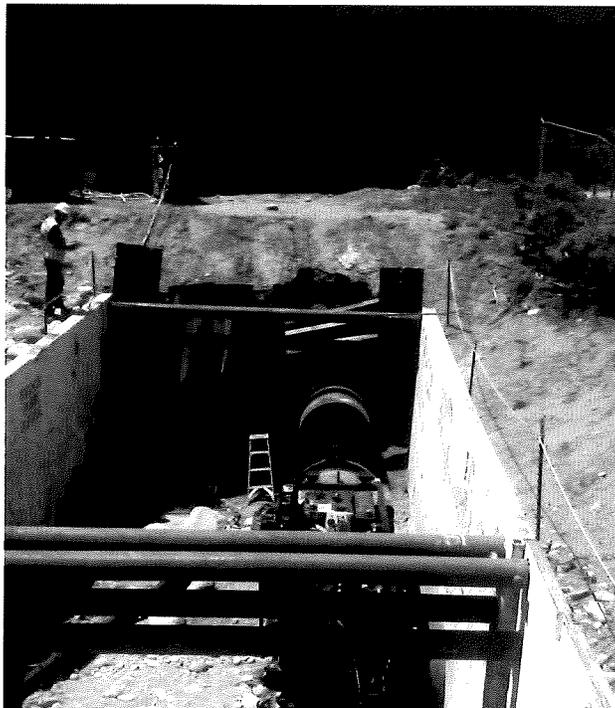
Water Main-Distribution Service Line Improvements North-East Sparks Tank Feeder Main Relocation

FUNDING TIMELINE:

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

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

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



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

FUNDING TIMELINE:

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

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

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



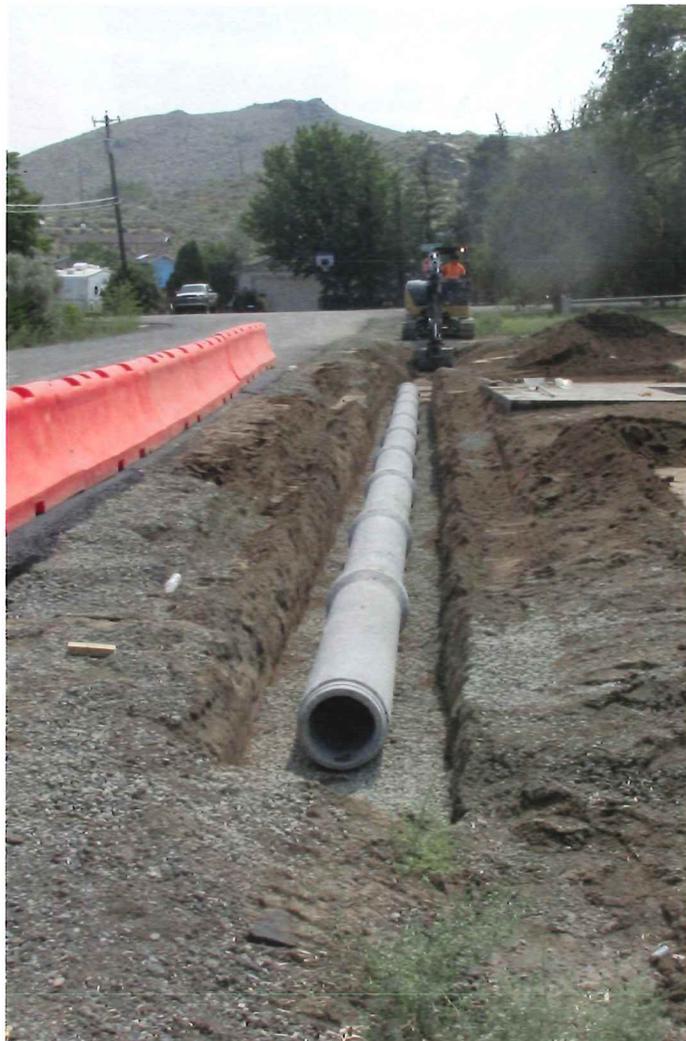
Water Main-Distribution Service Line Improvements Trademark 14" Main Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Trademark 14" Main Tie	—	—	—	—	350	350

PROJECT DESCRIPTION: This project involves construction of approximately 350 LF of 14” water main from Trademark to South Meadows Parkway, including crossing of an existing major drainage channel. The project will increase transmission capacity in the Double Diamond system to meet the needs of growth.

SCHEDULE: Construction is scheduled to be completed in FY 2026.



Water Main-Distribution Service Line Improvements Mt. Rose Tank 1 Fire Flow Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Mt. Rose Tank 1 Fire Flow Improvements	—	400	570	—	—	970

PROJECT DESCRIPTION: The project involves reconstruction of an existing PRS at Mt. Rose Tank #1, a new PRS on Blue Spruce and approximately 3100 linear feet of 10-inch water main on Blue Spruce and Douglas Fir to increase system pressure and fire flow capacity to existing customers in Galena Forest Estates. Existing fire flows are currently less than 1,000 GPM in the area.

SCHEDULE: Planning and design will be completed in FY 2023. Construction will occur in FY's 2023-2024.



Water Main-Distribution Service Line Improvements Stead Golf Course Main Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Stead Golf Course Main Replacement	—	—	170	2,400	—	2,570

PROJECT DESCRIPTION: The project consists of replacement of about 10,000 feet of 14-inch steel pipe installed around 1945. The pipe provides an important hydraulic tie between the Stead tanks and the northeast extremities of the Stead distribution system. The pipeline may also be useful to alleviate an existing bottleneck between the Stead wells and the distribution system.

SCHEDULE: The project is scheduled for construction in FY 2025.



Water Main-Distribution Service Line Improvements General Waterline Extensions

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	General Waterline Extensions	100	100	100	100	100	500

PROJECT DESCRIPTION: A nominal amount of funding is budgeted each year to accommodate water main extensions to correct pressure, dead ends and fire flow deficiencies as they are identified. Funds will not be expended unless determined necessary.

SCHEDULE: This is an ongoing annual project budget. Projects will not be constructed unless determined necessary to correct deficiencies identified above.



**Water Main-Distribution Service Line Improvements
North-East Sparks Feeder Main Ph. 8**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	North-East Sparks Feeder Main Phase 8	—	50	2,050	—	—	2,100

PROJECT DESCRIPTION: The project involves construction of approximately 6,400 linear feet of 14-inch water main on Satellite Drive from Vista Blvd to Sparks Blvd to increase capacity for growth in Spanish Springs and maintain adequate suction pressure at the Satellite Hills booster pump station.

SCHEDULE: Design is scheduled for FY 2023 and the improvements will be constructed in FY 2024.



Water Main-Distribution Service Line Improvements Mount Rose 5 Distribution / Pressure Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Mount Rose 5 Distribution / Pressure Improvements	400	—	—	—	—	400

PROJECT DESCRIPTION: Improvements are intended to provide off-peak conjunctive use supply. The proposed improvements are intended to be consistent with future improvements to improve peaking supply to the Mt. Rose system and will reduce pressure in the high pressure pipeline downhill of Mt. Rose Well 5. It will also increase the off-peak pumping capacity of surface water into the Mt. Rose 1 and 4 tanks to 650 gpm from 400 gpm. Future phases are intended to increase system redundancy and further reduce high pressures in the system.

SCHEDULE: Construction is scheduled for FY 2022.



Water Main-Distribution Service Line Improvements Goldenrod Main

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Goldenrod Main	—	50	1,200	—	—	1,250

PROJECT DESCRIPTION: The project involves construction of approximately 4,500 LF of 12" water main from the Tessa West Well to the intersection of Goldenrod and Mountain Meadows Lane. This project will provide additional capacity between the Arrowcreek and Mt Rose systems for Mt Rose 2 tank fills and for on-peak supply from the Mt Rose Water Treatment Plant.

SCHEDULE: Design is planned in FY 2023 and construction is planned in FY 2024.



**Water Main-Distribution Service Line Improvements
 Boomtown Water System Improvements**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	Boomtown Water System Improvements	1,250	1,250	—	—	—	2,500

PROJECT DESCRIPTION: If TMWA successfully acquires the Boomtown water system assets, the system will initially be operated as a stand-alone system that will be 100 percent dependent upon local groundwater resources. To insure reliable water service to existing Boomtown customers, several high priority improvements are necessary to bring the system into compliance with NAC 445A regulations and TMWA standards and to allow efficient operation and maintenance of the water facilities. The improvements consist of upgrades to three existing wells (pump to waste facilities, SCADA, new pumps, new motors, new starters and arc flash analyses), tank site improvements (grading, drainage, overflow, fencing, paving, sampling vault, SCADA) and tank access improvements (improved gravel road, improvements to the existing bridge over Steamboat Ditch).

SCHEDULE: The improvements will be designed and constructed in FY's 2022-2023.



Water Main-Distribution Service Line Improvements Lemmon Valley Sand Yard

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Lemmon Valley Sand Yard	530	—	—	—	—	530

PROJECT DESCRIPTION: With continued growth in the area including the acquisition of the Lemmon Valley water system formerly owned by Washoe County, it is very inefficient for TMWA crews to respond to a main break or other major issue in the North Valleys and have to either return to the Truckee Meadows or call out a second crew to transport materials to the site to complete the repairs. To increase the efficiency of maintenance operations in the North Valleys, TMWA plans to improve the balance of the 1.25 acre lot surrounding Lemmon Valley Well #6 (near the intersection of Lemmon Drive and Arkansas Drive) to store the common materials such as sand and base rock normally used in water system maintenance. The improvements consist of import, grading, fencing, drainage, material storage bins, lighting and landscaping. The project has been designed and the building permit has been acquired.

SCHEDULE: Assuming flood water recede sufficiently, the project would be constructed in FY 2022.



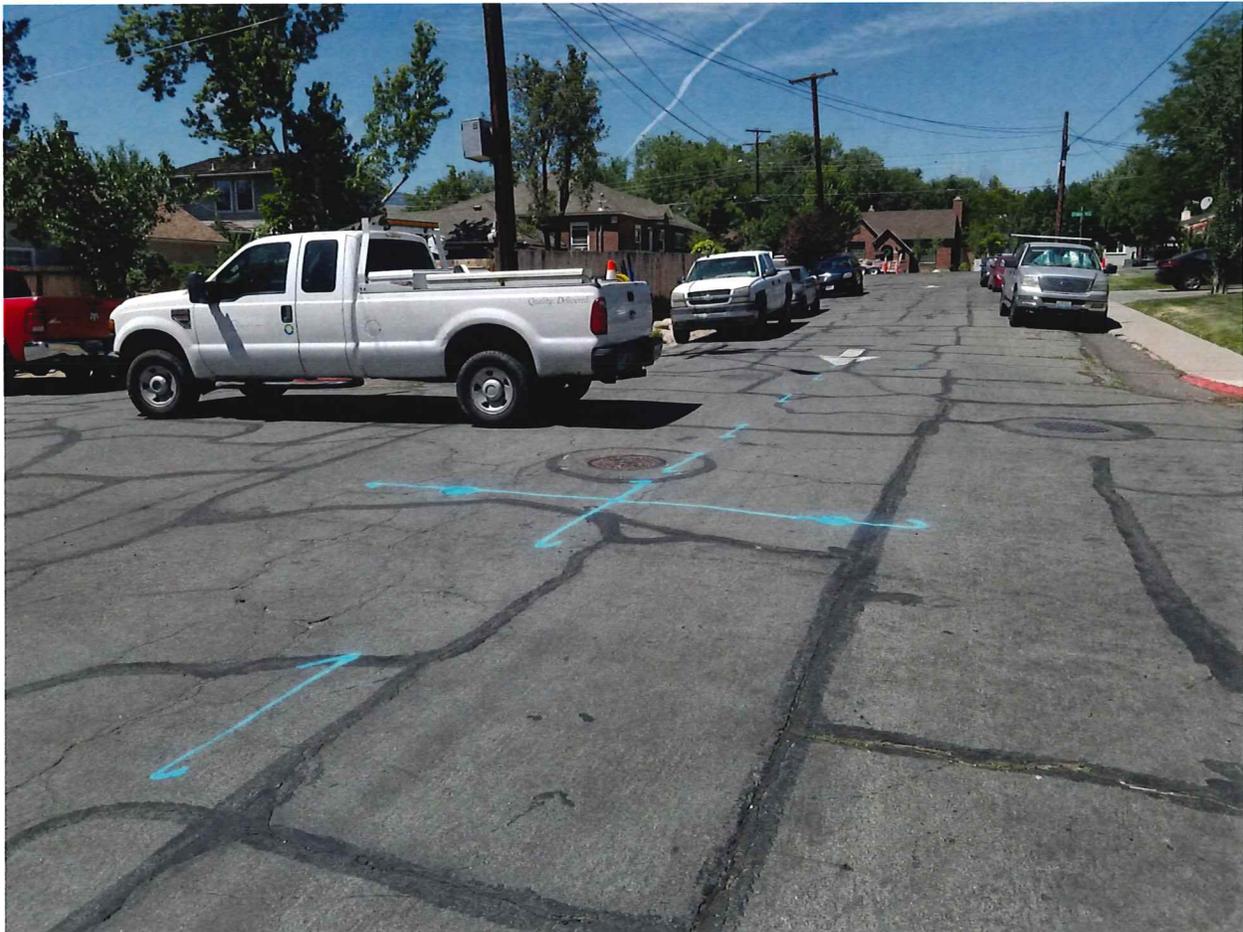
Water Main-Distribution Service Line Improvements Sullivan #1 Main Tie & PRS

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Sullivan #1 Main Tie & PRS	—	—	—	50	570	620

PROJECT DESCRIPTION: The project involves construction of about 1,300 LF of 10” main on El Rancho and a new PRS to supply the Sullivan #1 zone. The project timeline assumes that the proposed Sun Valley #2 Tank and Sullivan #2 pump station are in service.

SCHEDULE: Planning and design is scheduled to begin in FY 2025 with construction scheduled in FY 2026.



**Water Main-Distribution Service Line Improvements
Montreux High Pressure ACP Replacement**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Montreux High Pressure ACP Replacement	—	—	520	1,060	—	1,580

PROJECT DESCRIPTION: The project involves replacement of approximately 6,500 linear feet of existing 10-inch transite water main between Mt Rose Well #5 and Joy Lake Road. The existing ACP pipe installed in the 1970's is currently operated at pressures between 120-250 psi.

SCHEDULE: Planning and design will occur in FY 2024 with construction to be completed in FY 2025.



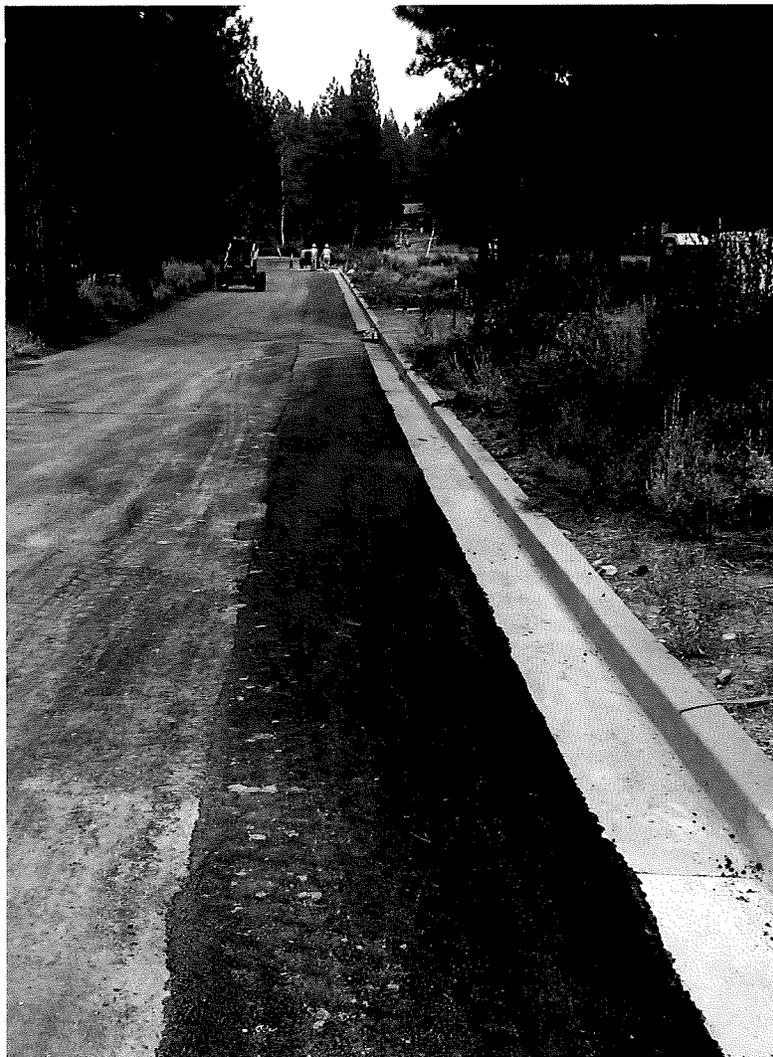
**Water Main-Distribution Service Line Improvements
2nd Galena Creek Main Crossing**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	2nd Galena Creek Main Crossing	—	—	40	560	—	600

PROJECT DESCRIPTION: The project involves construction of approximately 2,200 linear feet of 10-inch ductile iron water main between Breithorn Cir. and Piney Creek Parklet including a crossing of Galena Creek. The existing 10" ACP pipe that crosses Galena Creek is currently the only tie between well sources and storage tanks.

SCHEDULE: Design will occur in FY 2024 with construction to be completed in FY 2025.



**Water Main-Distribution Service Line Improvements
Off-River Supply Improvements - South Truckee Meadows**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Off-River Supply Improvements - STM	—	—	—	50	1,050	1,100

PROJECT DESCRIPTION: The project involves construction of four SCADA controlled, pressure reducing bypass stations in strategic locations in the South Truckee Meadows to allow excess well capacity and excess Mt. Rose Water Treatment Plant capacity to be provided to the Highland gravity zone in case of loss supply from the Truckee River. Two additional bypasses (Arrowcreek BPS & future Veteran's BPS) will be constructed separately under the budget for those facilities.

SCHEDULE: Planning and design will occur in FY 2025 with construction to be completed in FY 2026.



Water Main-Distribution Service Line Improvements Off-River Supply Improvements - North Virginia-Stead Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Off-River Supply Improvements - NVS Pump Station	—	—	—	400	—	400

PROJECT DESCRIPTION: The project involves construction of a SCADA controlled, pressure reducing bypass station at the North Virginia-Stead booster pump station to allow excess Fish Springs well capacity to be provided to the Highland gravity zone in case of loss supply from the Truckee River.

SCHEDULE: Project implementation and construction will occur in FY 2025.



**Water Main-Distribution Service Line Improvements
Somerset #6 Main Tie & Pressure Regulator Station**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Somerset #6 Main Tie & PRS	—	—	280	—	—	280

PROJECT DESCRIPTION: The project involves construction of about 600 linear feet of 10-inch main within improved paved pathway and a new pressure regulator station to provide a secondary source (looping) to Somerset Village 6.

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



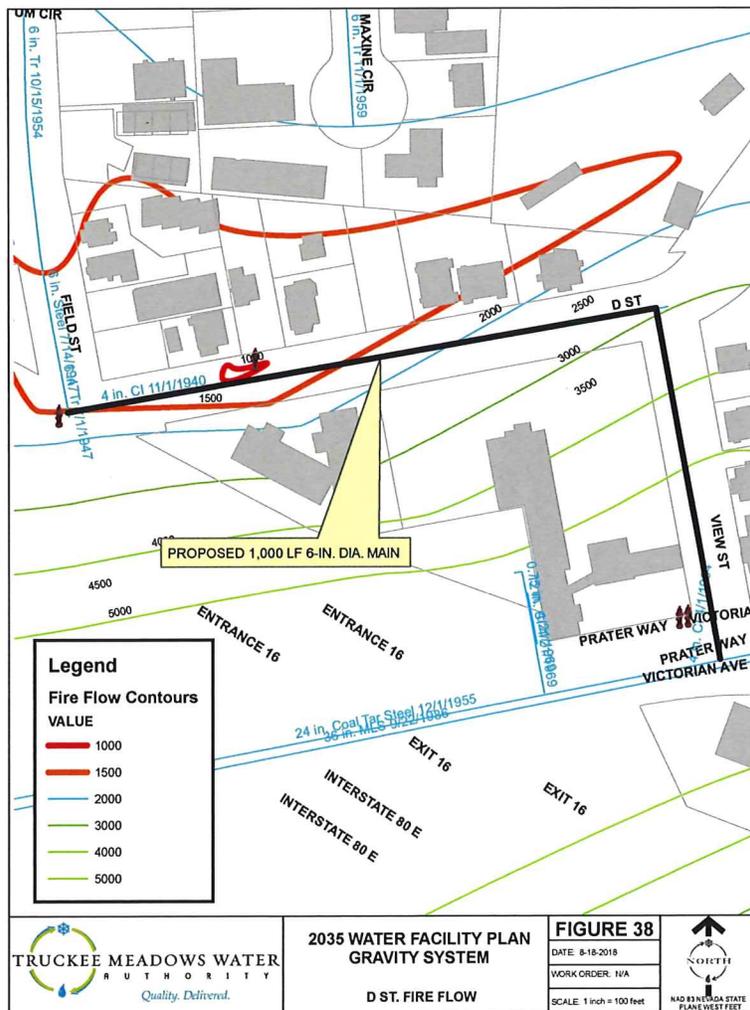
Water Main-Distribution Service Line Improvements 2025 Fire Flow Improvements - Gravity < 1,000 GPM

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	2025 Fire Flow Improvements - Gravity <1,000 GPM	—	—	—	550	—	550

PROJECT DESCRIPTION: The project involves improvements at 5 separate locations in the gravity zone that have an available fire flow of less than 1000 GPM. Reference Pages 20-22 of the 2035 WFP – Items 14,18,20,25,31 (also Figures 38,42,44,49,55). Construction consists of approximately 1,900 linear feet of new 6-inch & 8-inch main including new hydrant taps and laterals.

SCHEDULE: The improvements are scheduled for construction in FY 2025.



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

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	2025 Fire Flow Improvements - North Valleys <1,000 GPM	—	—	—	940	—	940

PROJECT DESCRIPTION: This project involves improvements at two separate locations that have an available fire flow of less than 1,000 GPM. Reference Items SI6 and SI7 on pages 6-7 of the North Valleys section of the 2035 Water Facilities Plan (also Figures D and E). Construction of approximately 3,500 linear feet of new 6-inch and 8-inch main and new high pressure Regulating Station.

SCHEDULE: The improvements are scheduled for construction in FY 2025.



Water Main-Distribution Service Line Improvements Deluchi to Airway Main Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Developer Fees	Deluchi to Airway Main Tie	—	—	—	440	—	440

PROJECT DESCRIPTION: The project involves construction of approximately 1,200 linear feet of 14-inch main from Deluchi to Airway including crossing a major storm drainage channel. The project promotes looping of the distribution system and provides additional North to South peak period capacity.

SCHEDULE: The project is scheduled for construction in FY 2025.



**Water Main-Distribution Service Line Improvements
South-East Sparks Feeder Main Phase 1**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	South-East Sparks Feeder Main Phase 1	—	—	—	50	4,450	4,500

PROJECT DESCRIPTION: The project involves construction of approximately 9,700 linear feet of 24-inch main on Greg Street between 21st Street and Stanford to provide additional capacity for future growth and to lower peak period pressure in the area.

SCHEDULE: Planning and design are scheduled to begin in FY 2025 and construction is scheduled to begin in FY 2026.



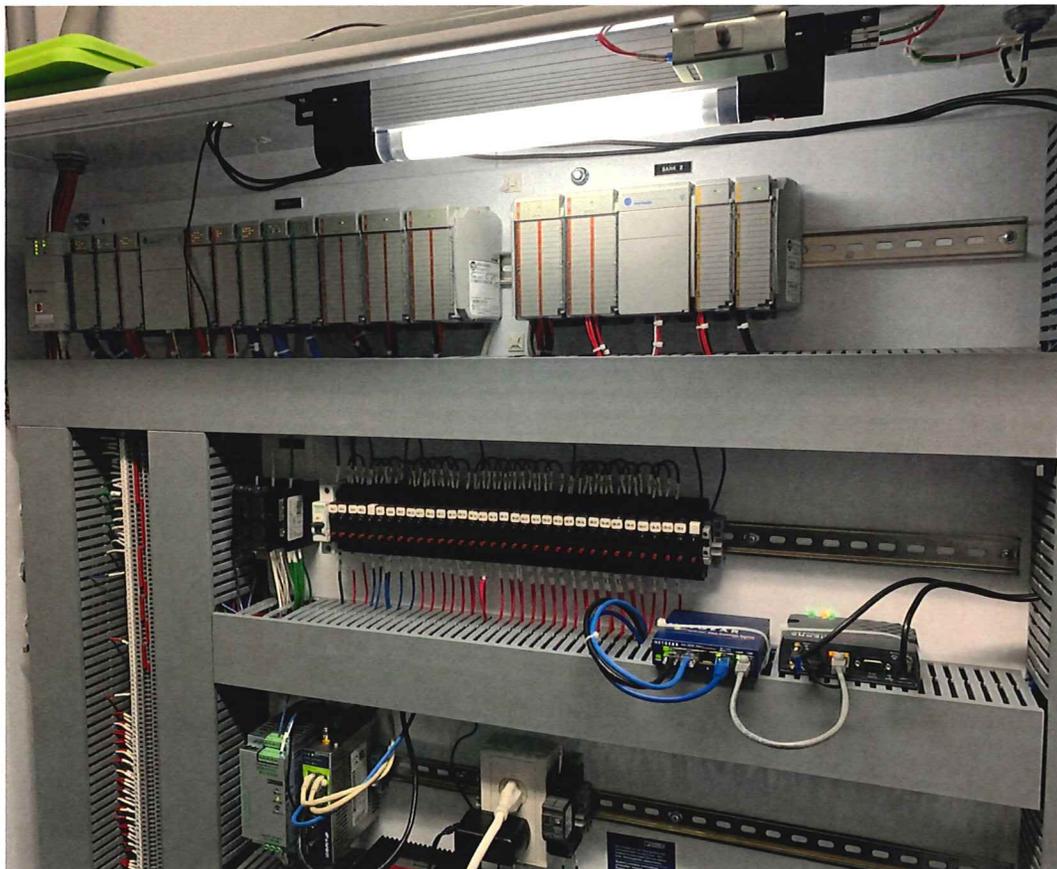
Water Main-Distribution Service Line Improvements South Truckee Meadows Capacity Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Developer Fees	South Truckee Meadows Capacity Improvements	—	200	800	—	—	1,000

PROJECT DESCRIPTION: The project involves construction of approximately 1,500 linear feet of 14-inch main on Offenhauser and Gateway with a SCADA controlled valve installed an underground vault to provide an intertie between the Longley and Double Diamond systems. Also included is a short 8-inch main tie at Bluestone and Portman. The improvements increase capacity to the South Truckee Meadows system.

SCHEDULE: Design for the project is scheduled to begin in FY 2023 and construction is scheduled for FY 2024.



Water Main-Distribution Service Line Improvements Verdi Hydro Main Extension

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Verdi Hydro Main Extension	320	—	—	—	—	320

PROJECT DESCRIPTION: The project involves construction of approximately 1,700 linear feet of 8-inch main and 750 linear feet of 6-inch main parallel to the penstock from Verdi Elementary School to the Hydro building. Approximately half of the cost will be reimbursed by growth in the area. Completion of the main will also provide fire protection for the hydro facility and will allow the existing water service from the Verdi Mutual Water Co. to be retired, saving about \$21,000 per year.

SCHEDULE: Construction is scheduled for FY 2022.



**Water Main-Distribution Service Line Improvements
Watt Area Main Replacement**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Watt Area Main Replacements	2,000	—	—	—	—	2,000

PROJECT DESCRIPTION: The project involves retiring and replacing approximately 5,400’ of cast iron and steel water main. Existing services and main connections to be tied over to new water mains. Relocate 12 water meters from backyard to lot frontages. Work to be completed ahead of COR street project which is tentatively scheduled for spring 2022.

SCHEDULE: Construction is scheduled for FY 2022.



Water Main-Distribution Service Line Improvements Oddie Wells Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Oddie Wells Main Replacements	1,100	—	—	—	—	1,100

PROJECT DESCRIPTION: The project involves replacing approximately 3,500’ of cast iron water main. Existing water main to be grouted in place.

SCHEDULE: Construction is scheduled for FY 2022.



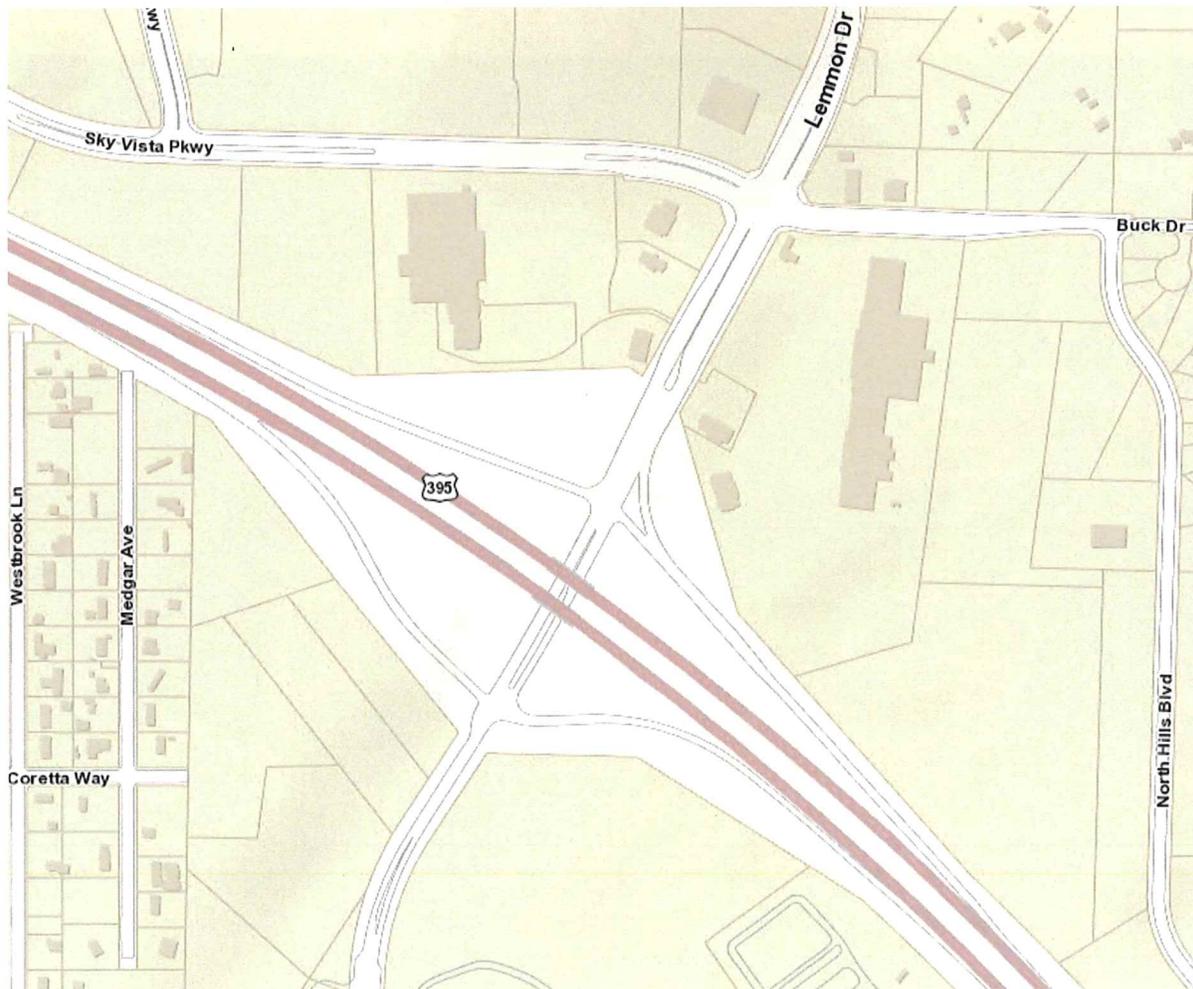
Water Main-Distribution Service Line Improvements Lemmon Drive - Double Diamond Interchange (DDI)

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Lemmon Drive - Double Diamond Interchange (DDI)	500	—	—	—	—	500

PROJECT DESCRIPTION: The project involves relocating (lower and offset) approximately 500’ of 24” transmission main at Lemmon Dr/US395 intersection. Work being driven by NDOT/RTC redesign to create double divergent interchange/intersection, DDI.

SCHEDULE: Construction is scheduled for FY 2022.



Water Main-Distribution Service Line Improvements Shriver & G Streets Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Shriver & G Streets Main Replacements	500	—	—	—	—	500

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

SCHEDULE: Construction is scheduled for FY 2022.

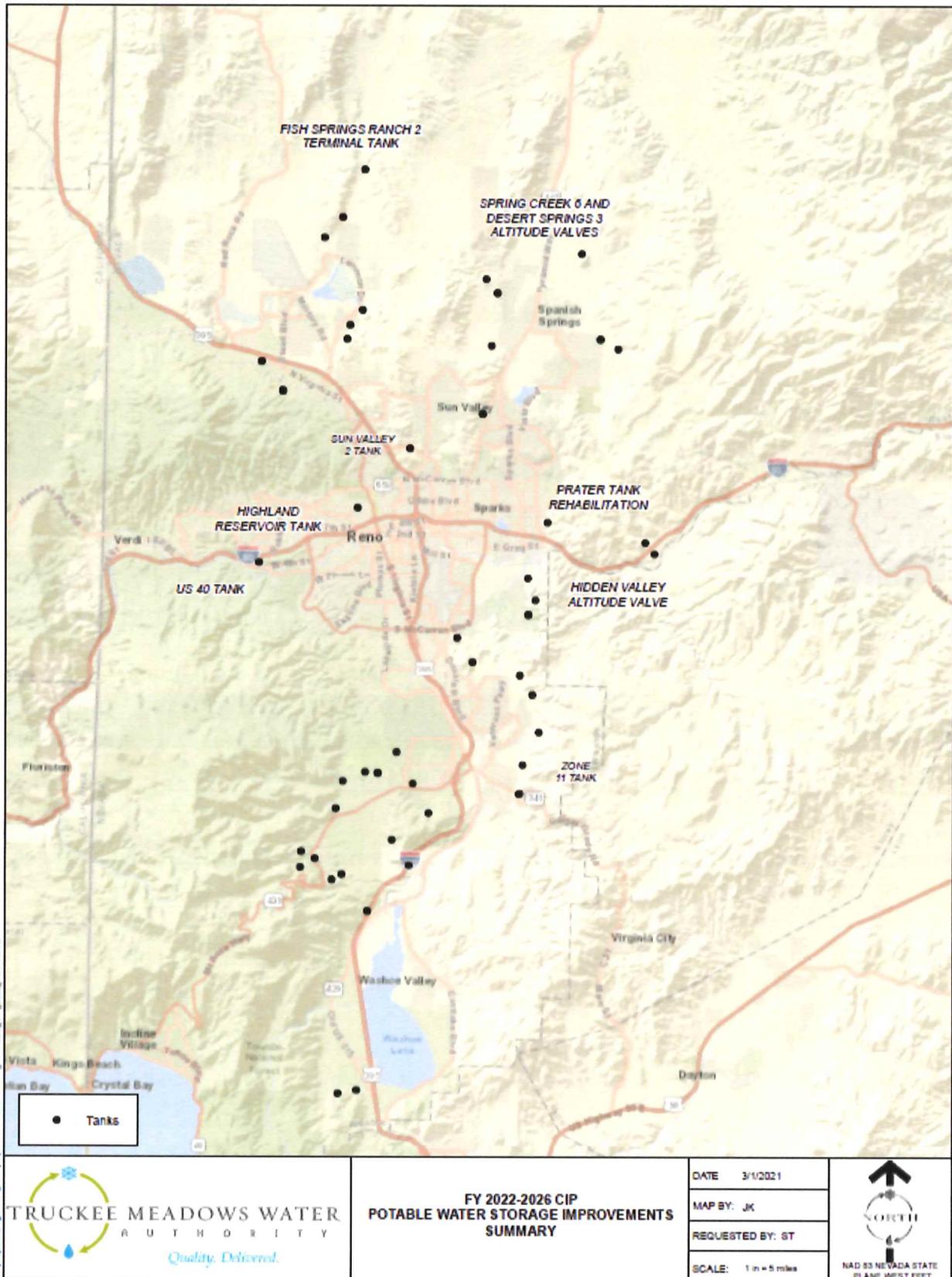


POTABLE WATER STORAGE IMPROVEMENTS
Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Developer Fees	Sun Valley Tank #2	—	—	—	420	2,980	3,400
2	Developer Fees	Fish Springs Terminal Tank #2	—	—	—	—	40	40
1	Customer Rates	Storage Tank Recoats; Access; Drainage Improvements	1,600	3,000	3,500	3,500	3,500	15,100
2	Customer Rates / Developer Fees	Highland Reservoir Tank	3,700	4,000	—	—	—	7,700
1	Customer Rates / Developer Fees	STMGID Tank East Zone 11 Tank	—	—	—	100	2,975	3,075
1	Customer Rates / Developer Fees	US 40 Tank & Feeder Main	170	300	2,730	—	—	3,200
2	Customer Rates / Developer Fees	Spanish Springs Altitude Valves	—	300	—	—	—	300
2	Customer Rates	Hidden Valley Tank Altitude Valve	—	350	—	—	—	350
1	Customer Rates	Prater Tank Rehabilitation	1,400	—	—	—	—	1,400
Subtotal Storage Improvements			6,870	7,950	6,230	4,020	9,495	34,565

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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



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 95 storage tanks in service, with combined storage of approximately 121 million gallons. Interior coating/liners are generally replaced every 20 years resulting in the need to recoat several tanks per year to maintain the rehabilitation cycle. The budget and plan also includes exterior painting of steel tanks and any replacement of any interior components that may be corroded.

SCHEDULE: This is an ongoing annual project. It is anticipated that several tanks will need to be recoated approximately every year.



Potable Water Storage Improvements Highland Reservoir Tank

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Highland Reservoir Tank	3,700	4,000	—	—	—	7,700

PROJECT DESCRIPTION: TMWA has two large finished water storage reservoirs, one at Hunter Creek and one at the Highland site just west of the intersection of Washington and College Drive. These reservoirs are lined and covered with flexible polyethylene or hypalon membranes. As such, they are more maintenance intensive and susceptible to damage than a conventional steel or concrete tank. To provide reliability during repairs or during extended outages for inspection and cleaning, it is proposed to construct a conventional 4 million gallon water storage tank at the reservoir site. Due to topography and proximity to residential areas the tank may need to be a buried pre-stressed concrete tank, which is reflected in the project budget. The tank will also provide additional storage capacity to meet future system requirements as required by the NAC regulations.

SCHEDULE: The tank is scheduled for construction in FY's 2022 - 2023.



Potable Water Storage Improvements STMGID Tank East (Zone 11 Tank)

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Developer Fees	STMGID Tank East Zone 11 Tank	—	—	—	100	2,975	3,075

PROJECT DESCRIPTION: The project involves construction of a 3.7 MG above ground welded steel storage tank in the South Truckee Meadows area off of Geiger Grade formerly owned by STMGID. Due to growth in the area over the last several years, additional storage is required to meet the requirements of the NAC 445A regulations and TMWA standards. The tank will replace an existing 0.75 MG tank providing a net increase in storage of about 3 MG.

SCHEDULE: The project is currently scheduled for construction in FY 2026, subject to acquisition of the Special Use Permit and Bureau of Land Management (BLM) permitting.



**Potable Water Storage Improvements
US 40 Tank & Feeder Main**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates / Developer Fees	US 40 Tank & Feeder Main	170	300	2,730	—	—	3,200

PROJECT DESCRIPTION: The project involves construction of two 800,000 gallon steel tanks with site improvements, utilities, drain line and access road including about 2,100 LF of 20" feeder main. The project will improve reliability and hydraulic performance in the zone which experiences a lot of surge issues due to cycling of the Mae Anne pump train and the closed system on the Mogul end. This situation is only expected to worsen when pumping to Verdi begins.

SCHEDULE: The project is currently scheduled for design in FY's 2022-2023 and construction in FY 2024.



Potable Water Storage Improvements Spanish Springs Altitude Valves

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates / Developer Fees	Spanish Springs Altitude Valves	—	300	—	—	—	300

PROJECT DESCRIPTION: The project involves the construction of altitude valves in underground vaults at the Desert Springs Tank #3 and at Spring Creek Tank #6. The altitude valves will keep the existing tanks from overflowing when well recharge operations are conducted in Spanish Springs Valley.

SCHEDULE: Implementation and construction will occur in FY 2023.



**Potable Water Storage Improvements
Hidden Valley Tank Altitude Valve**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Hidden Valley Tank Altitude Valve	—	350	—	—	—	350

PROJECT DESCRIPTION: The project involves installation of a new altitude valve in a vault on the Hidden Valley Tank #1 in/out line. Requires cutting into and rerouting existing piping, addition of new valves, etc.

SCHEDULE: The project is schedule for construction in FY 2023.



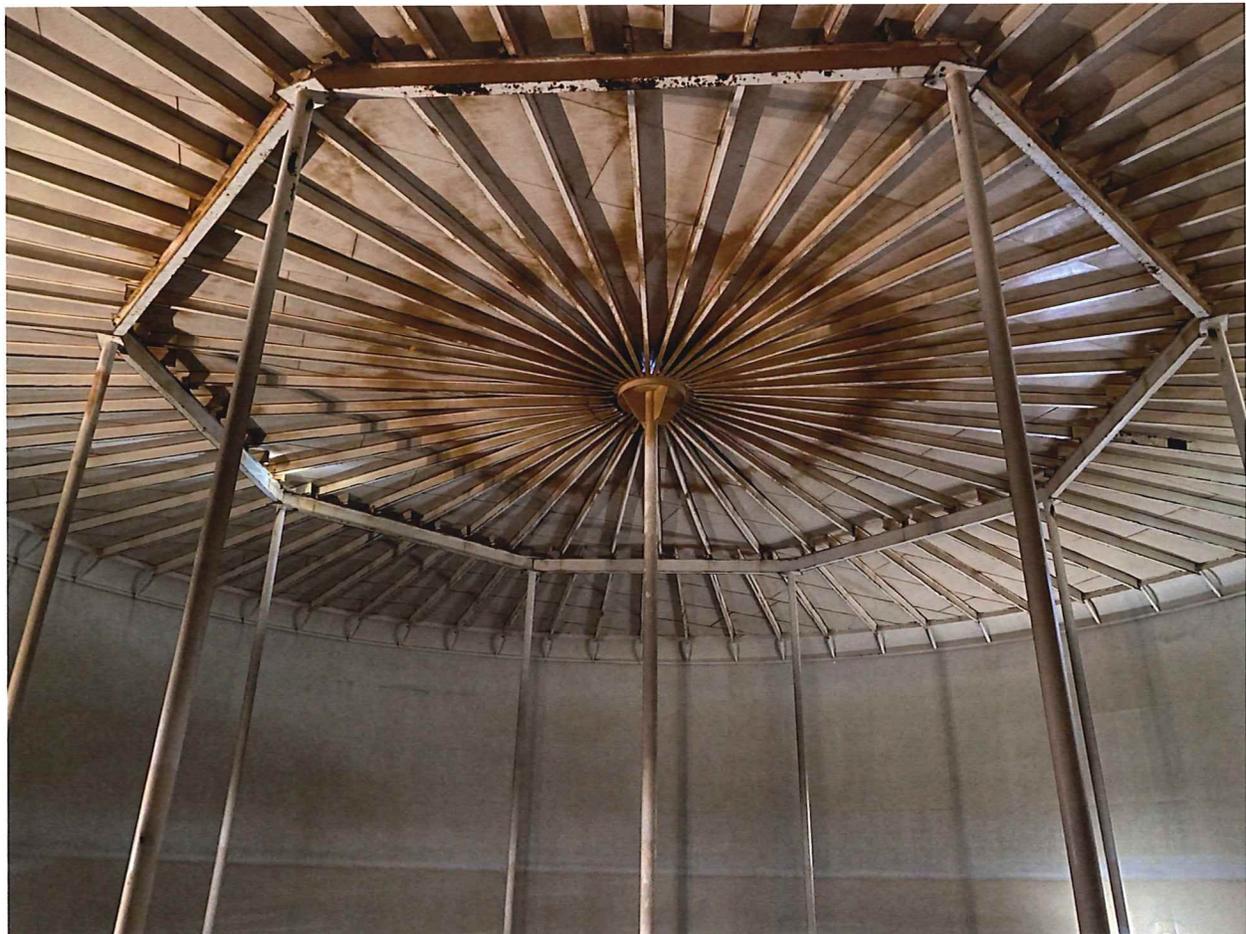
Potable Water Storage Improvements Prater Tank Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Prater Tank Rehabilitation	1,400	—	—	—	—	1,400

PROJECT DESCRIPTION: The project involves significant structural restoration to prater 1 tank which is failing, in addition to typical improvements for tank rehab projects. Project includes structural evaluation, structural engineering services, and likely replacement of structural steel members of the tank.

SCHEDULE: Construction is scheduled in FY 2022.

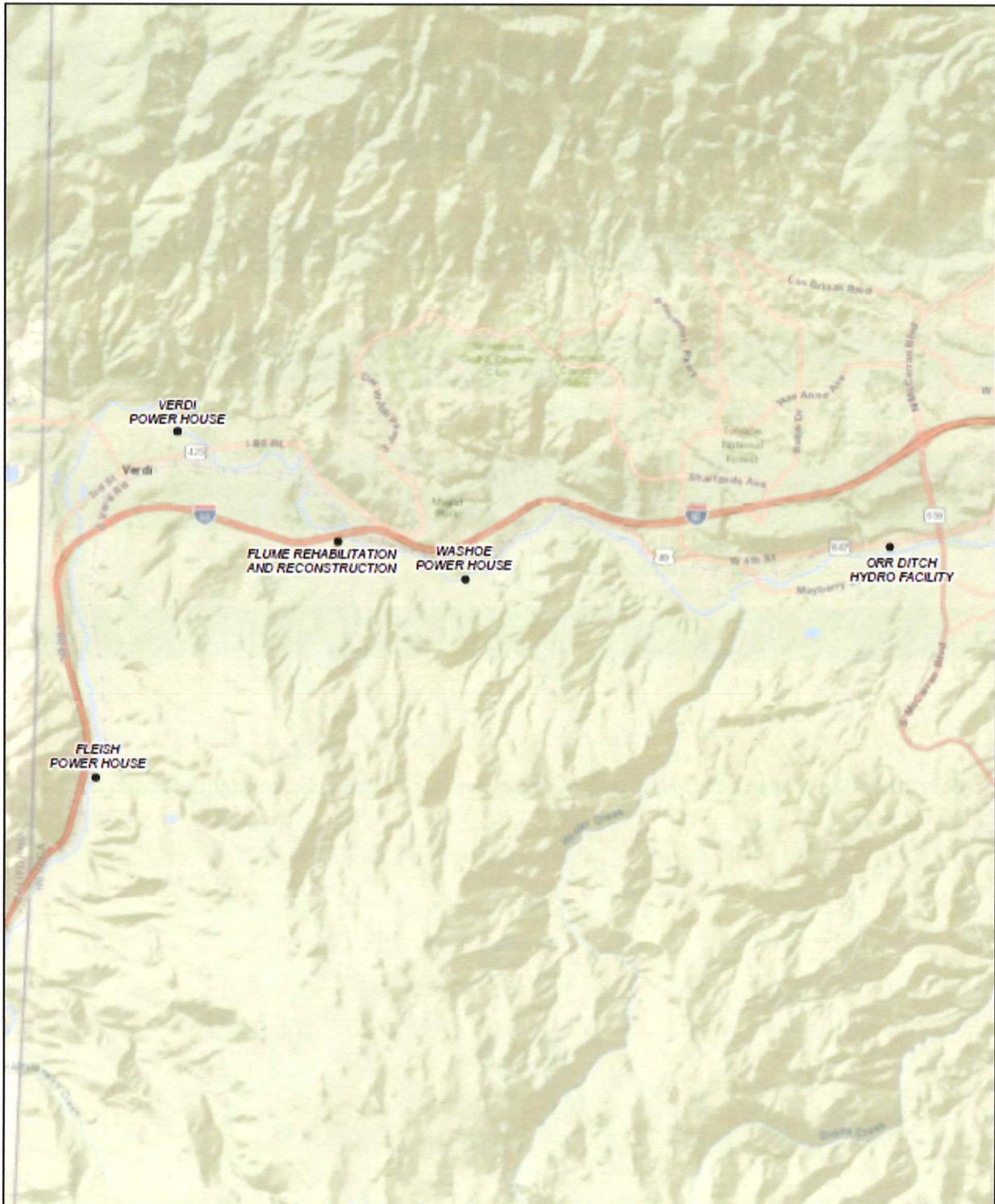


HYDROELECTRIC IMPROVEMENTS
Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
2	Customer Rates	Forebay, Diversion, & Canal Improvements	100	100	100	100	100	500
3	Customer Rates	Flume Rehabilitation	—	—	—	150	150	300
3	Customer Rates	Hydro Plant Generator Rewinds	—	350	—	500	350	1,200
3	Insurance Settlement	Orr Ditch Hydro Facility	2,500	3,000	—	—	—	5,500
2	Customer Rates	Verdi Canal Sand Gate Improvements	335	—	—	—	—	335
1	Customer Rates	Washoe Plant Tailraces Unit 1 and Unit 2	420	—	—	—	—	420
1	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 1	—	2,855	—	—	—	2,855
2	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 2	—	—	—	—	2,855	2,855
Subtotal Hydroelectric Improvements			3,355	6,305	100	750	3,455	13,965

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

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



 <p>TRUCKEE MEADOWS WATER AUTHORITY Quality Delivered.</p>	<p>FY 2022-2026 CIP HYDROELECTRIC IMPROVEMENTS SUMMARY</p>		<p>DATE 3/1/2021</p>	 <p>NORTH NAD 83 NEVADA STATE PLANE WEST FEET</p>
			<p>MAP BY: JK</p>	
			<p>REQUESTED BY: ST</p>	
			<p>SCALE: 1 in = 1 miles</p>	

Hydroelectric Improvements Forebay, Diversion, and Canal Improvements

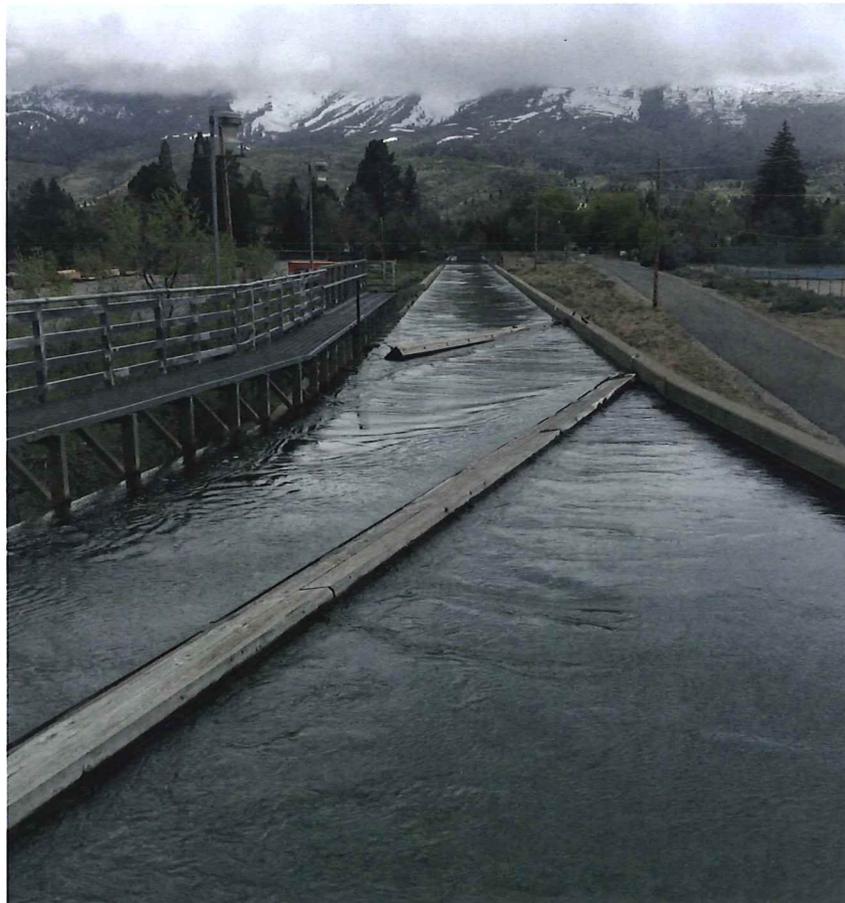
FUNDING TIMELINE:

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.



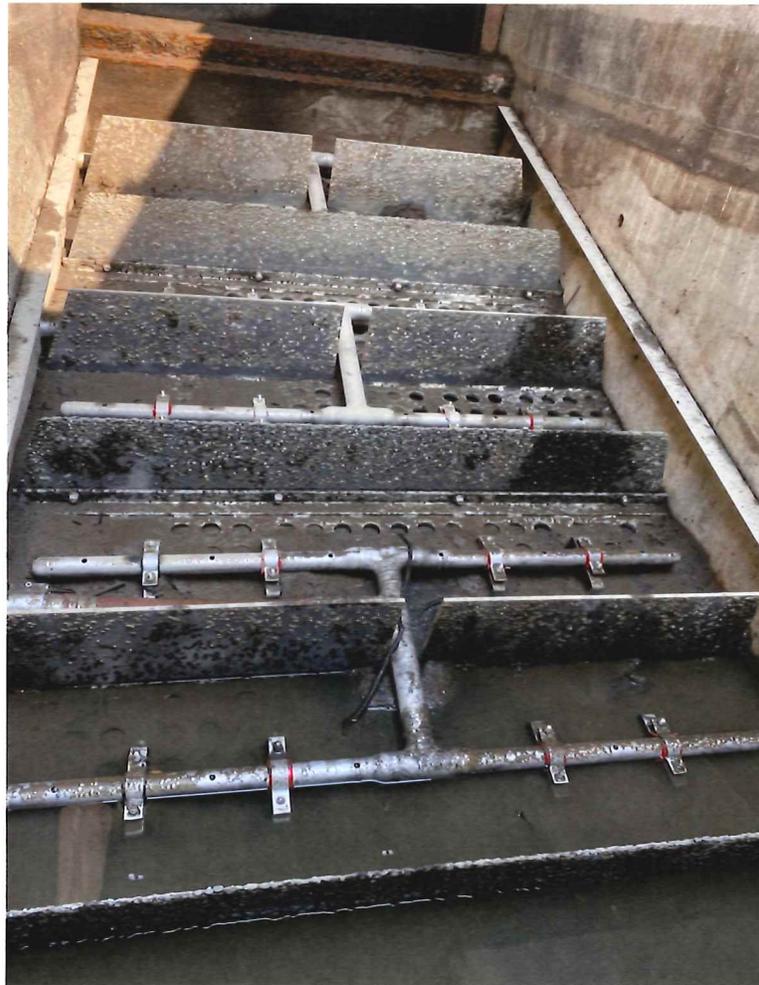
Hydroelectric Improvements Orr Ditch Hydro Facility

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	420	—	—	—	—	420

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 2022.



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	—	2,855	—	—	—	2,855

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	—	—	—	—	2,855	2,855

PROJECT DESCRIPTION: The project involves This project will replace the No. 2 Hydroelectric Turbine and complete a rewind of the Unit 2 Generator. To expedite completion of the project and minimize the unit outage time, the No. 2 Turbine will be procured before work begins. Once equipment is procured, work will begin for completing the Unit 2 Generator rewind and dismantling of the No. 2 Turbine pressure cases and appurtenances. During this work, the Unit 1 Turbine/Generator will continue with generation as much as possible. The new No. 2 Turbine will be installed and the rewind generator re-installed.

SCHEDULE: Construction is scheduled for FY2026.

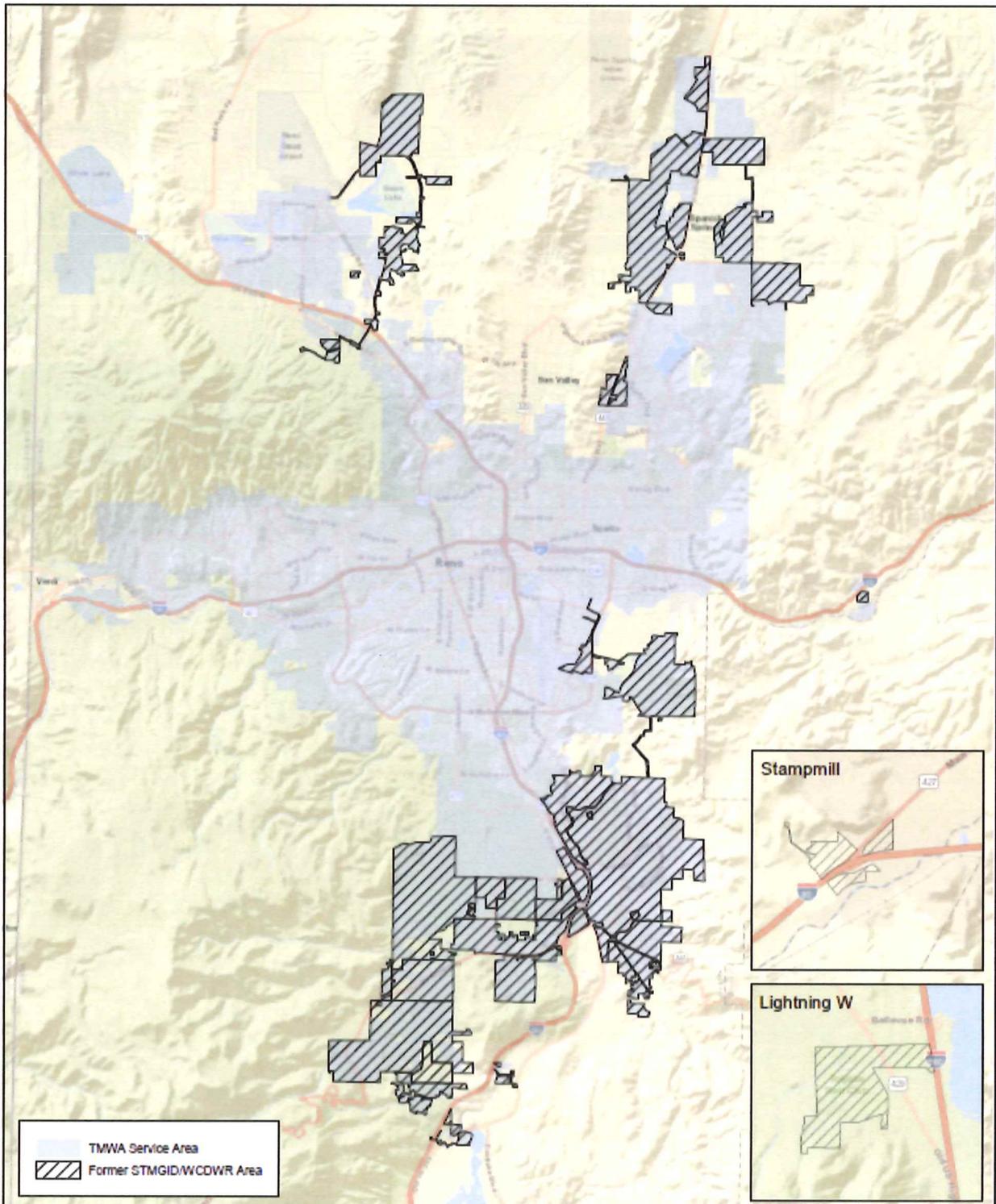


CUSTOMER SERVICE OUTLAYS
Summary

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
3	Customer Rates	Meter Reading Equipment	60	—	75	—	—	135
2	Developer Fees	New Business Meters	100	100	100	100	100	500
1	Customer Rates	Mueller Pit Replacements former Washoe County	125	125	125	125	125	625
2	Customer Rates	Galvanized / Poly Service Line Replacements	250	250	250	250	250	1,250
1	Customer Rates / Meter Retrofit Fees	AMI Automated Meter Infrastructure	4,565	7,030	7,050	2,535	—	21,180
Subtotal Customer Service			5,100	7,505	7,600	3,010	475	23,690

Project Locations: Map of all *Customer Service Outlays* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



TMWA Service Area
 Former STMGID/WCDWR Area



**FY 2022-2026 CIP
CUSTOMER SERVICE OUTLAYS
SUMMARY**

DATE: 3/1/2021
 MAP BY: JK
 REQUESTED BY: ST
 SCALE: 1 in = 3 miles



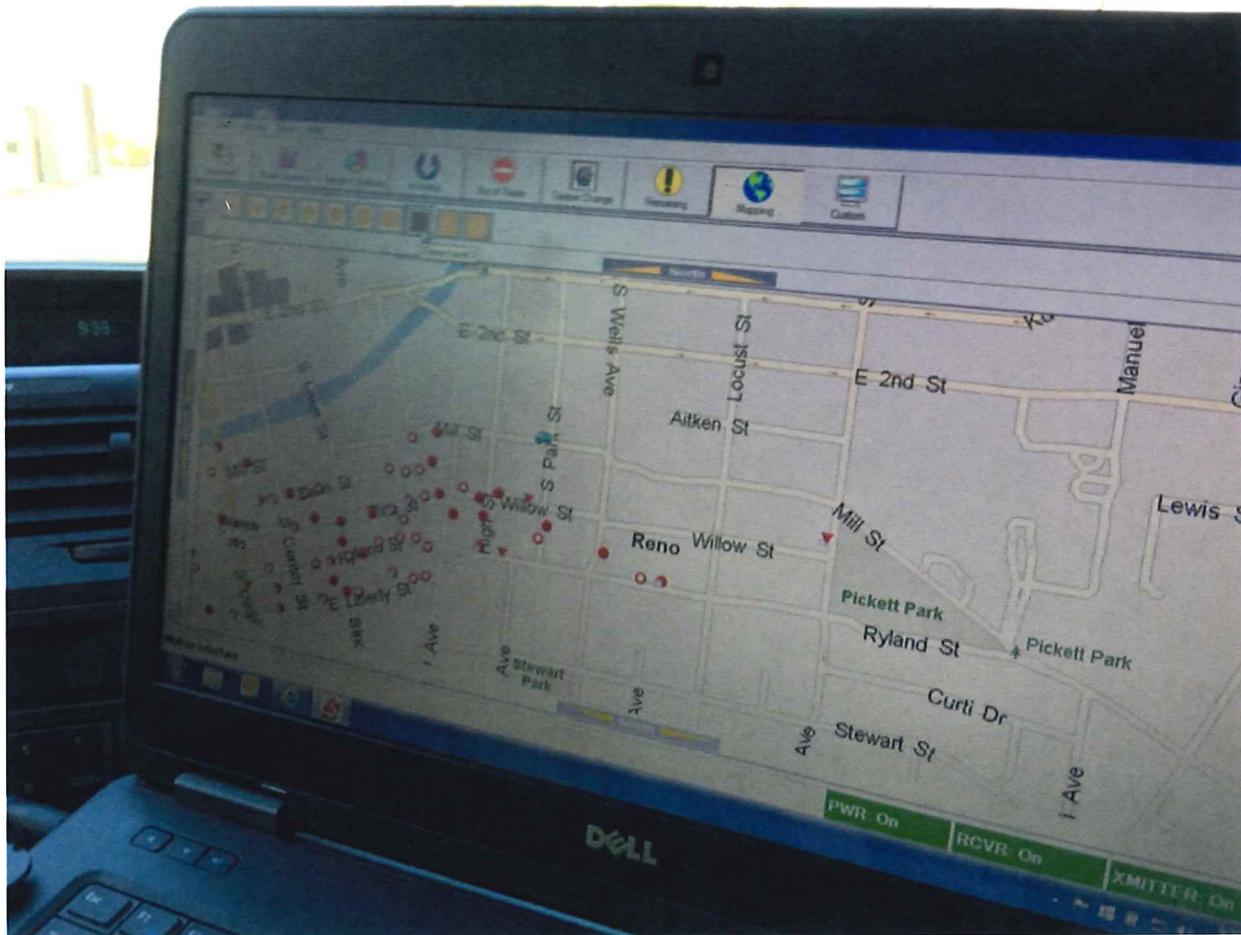
Customer Service Outlays Meter Reading Equipment

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	4,565	7,030	7,050	2,535	—	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.

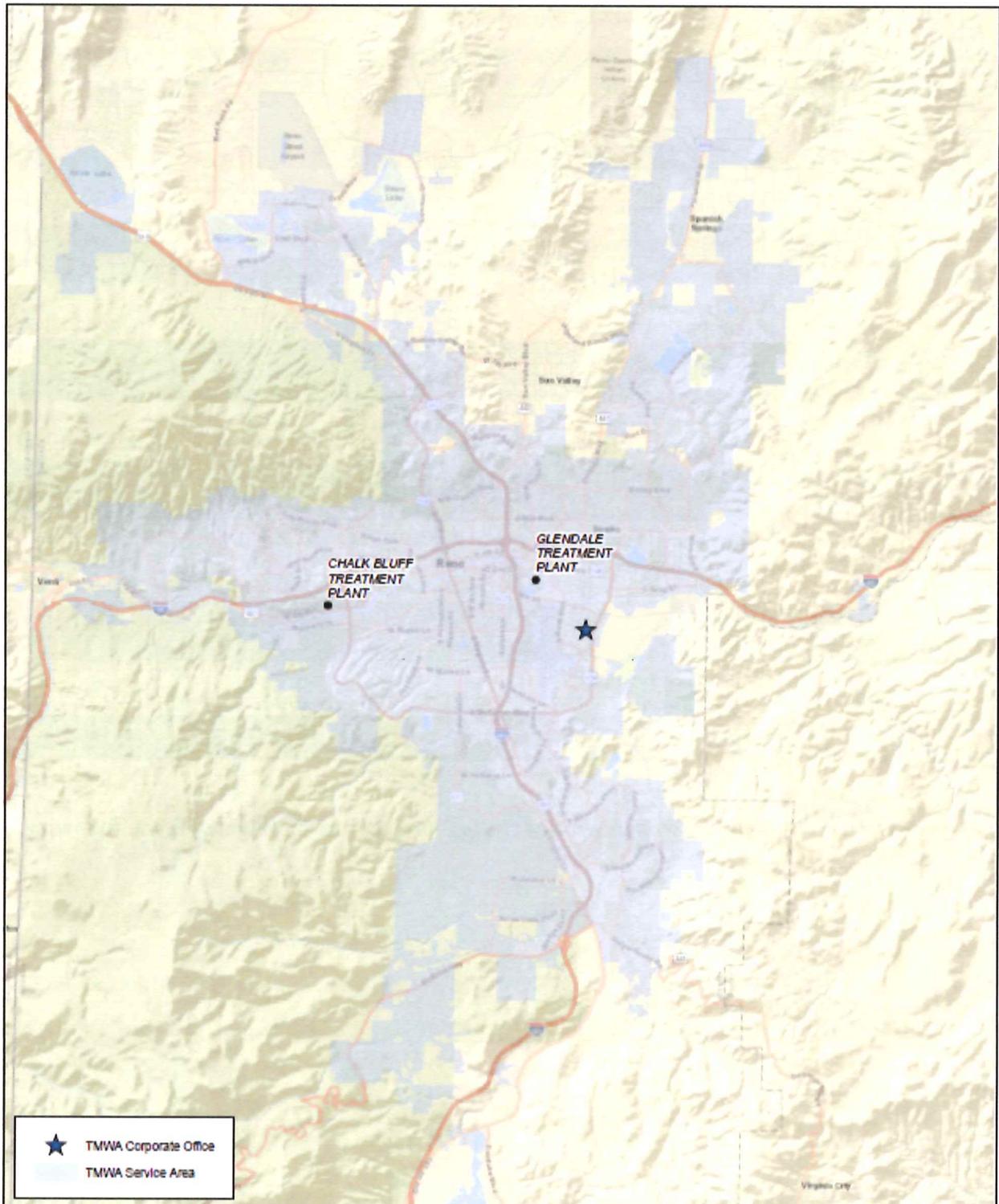


ADMINISTRATIVE OUTLAYS
Summary

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 Management 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.

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



**FY 2022-2026 CIP
ADMINISTRATIVE OUTLAYS
SUMMARY**

DATE	3/1/2021
MAP BY:	JK
REQUESTED BY:	ST
SCALE:	1 in = 3 miles



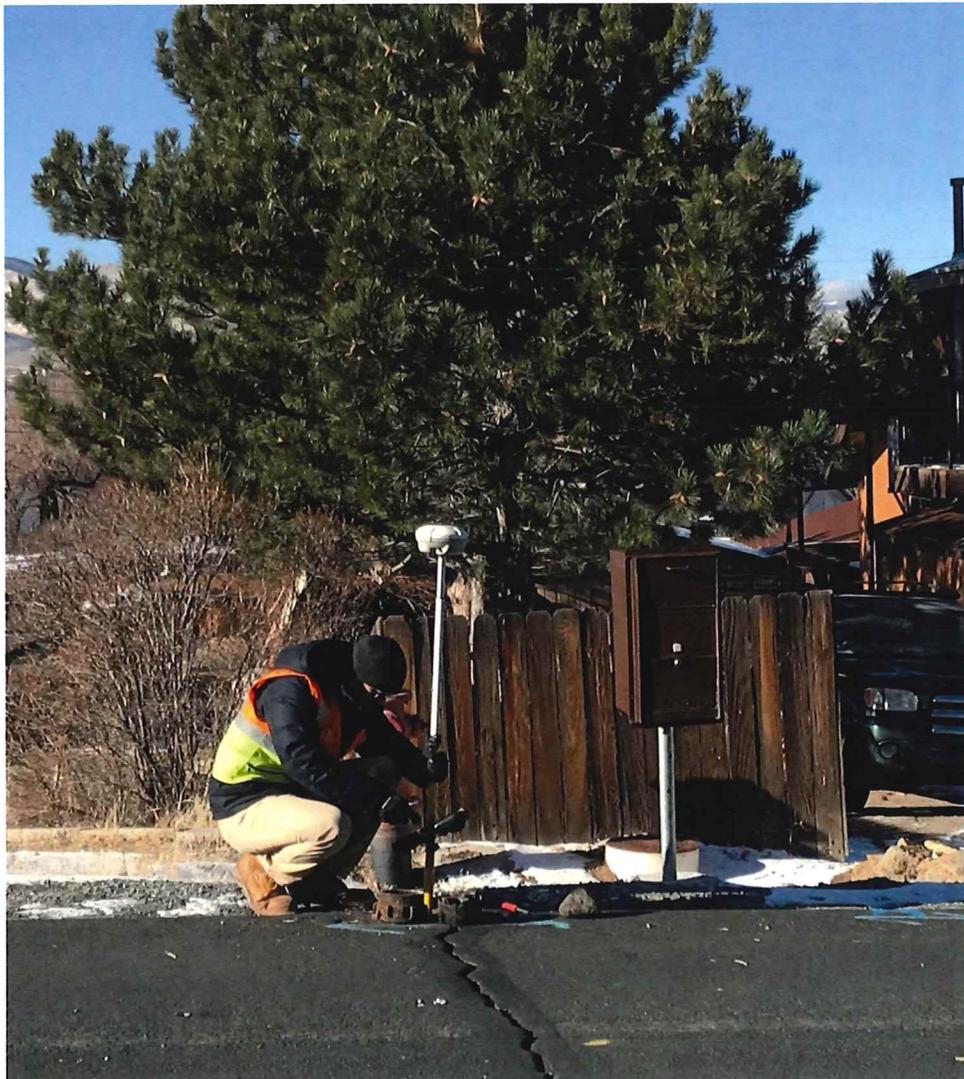
Administrative Outlays GIS/GPS System Mapping Equipment

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 Mangement Projects

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	CIP Total
1	Customer Rates	Emergency Management 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 95 tanks, 99 wells, 114 pump stations, 2 storage reservoirs and 4 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.

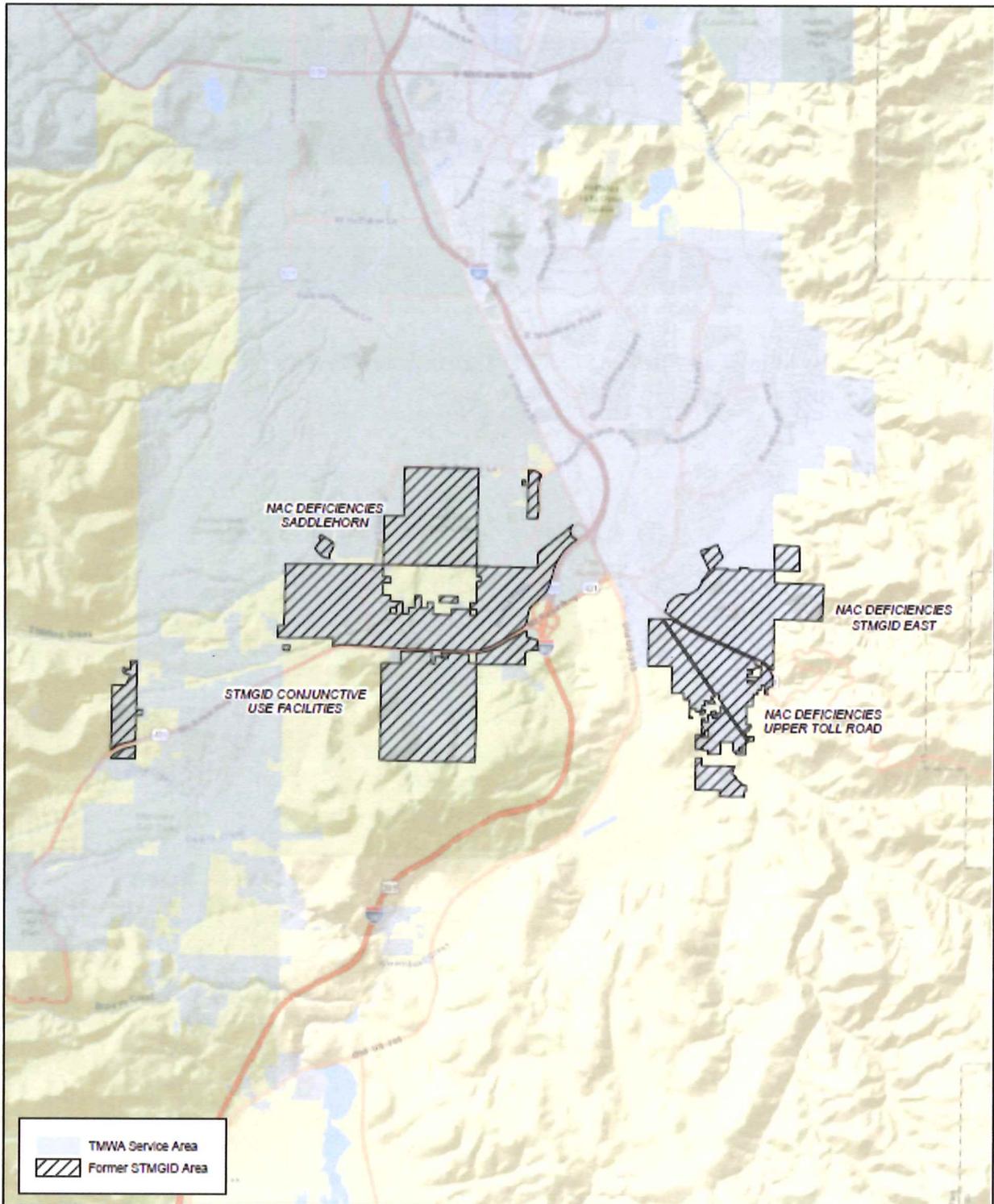
SCHEDULE: The project began in FY 2021 and will continue through FY 2024.

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.

Truckee Meadows Water Authority FY 2022 - 2026 Capital Improvement Plan



 <p>TRUCKEE MEADOWS WATER AUTHORITY <i>Quality. Delivered.</i></p>	<p>FY 2022-2026 CIP FORMER STMGID SYSTEM IMPROVEMENTS SUMMARY</p>	DATE: 3/1/2021	 <p>NORTH</p> <p>NAD 83 NEVADA STATE PLANE WEST FEET</p>
		MAP BY: JK	
		REQUESTED BY: ST	
		SCALE: 1 in = 1 miles	

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.



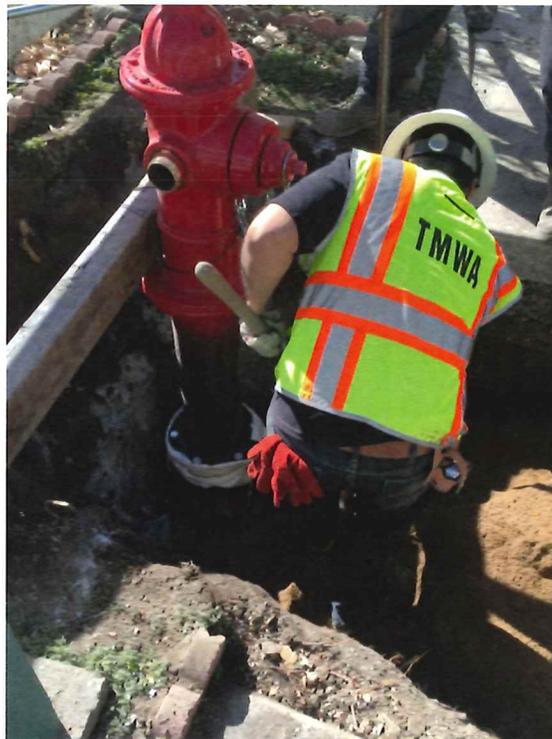
**Distribution System Pressure Improvements
NAC Deficiencies-Saddlehorn, Upper Toll Road, STMGID East**

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.



RESOLUTION NO. 293

A RESOLUTION DESIGNATED BY THE SHORT TITLE “2021 REFUNDING BOND RESOLUTION” AUTHORIZING THE ISSUANCE BY THE AUTHORITY OF ITS “TRUCKEE MEADOWS WATER AUTHORITY, SUBORDINATE WATER REVENUE REFUNDING BONDS, SERIES 2021” IN THE AGGREGATE PRINCIPAL AMOUNT NOT TO EXCEED \$13,350,000, FOR THE PURPOSE OF DEFRAYING WHOLLY OR IN PART THE COST OF REFUNDING CERTAIN OUTSTANDING COMMERCIAL PAPER NOTES; PROVIDING THE FORM, TERMS, AND CONDITIONS OF THE BONDS AND THE SECURITY THEREFOR; PROVIDING FOR THE COLLECTION AND DISPOSITION OF REVENUES DERIVED FROM THE OPERATION OF THE AUTHORITY’S WATER SYSTEM; PLEDGING SUCH REVENUES TO THE PAYMENT OF THE BONDS; APPROVING THE FORM OF A CONTINUING COVENANT AGREEMENT TO BE ENTERED INTO BETWEEN THE INITIAL PURCHASER AND THE AUTHORITY; PROVIDING OTHER COVENANTS, AGREEMENTS, DETAILS AND OTHER MATTERS RELATING THERETO.

WHEREAS, the Truckee Meadows Water Authority (the “Authority” or “TMWA”) was duly organized and is operating in accordance with the provisions of the “Truckee Meadows Water Authority Cooperative Agreement among City of Reno, City of Sparks, County of Washoe” dated December 4, 2000, as amended (the “TMWA Cooperative Agreement”) entered into pursuant to the provisions of Nevada Revised Statutes (“NRS”) 277.080 to 277.180, inclusive, as amended (the “Authority Act”); and

WHEREAS, the Board of Directors (the “Board”) of the Authority, in Washoe County, Nevada (the “County” and the “State,” respectively), has the authority to issue revenue and other bonds, notes and other obligations and incur liabilities for the purposes of refunding, paying and discharging all of the outstanding Truckee Meadows Water Authority, Water Revenue Commercial Paper Notes, Series 2006B” (the “2006B Notes”); and

WHEREAS, pursuant to the TMWA Cooperative Agreement, the Board is authorized to issue revenue bonds secured by revenues of the TMWA Water System (hereinafter defined); and

WHEREAS, the Authority is a body corporate and politic, a quasi-municipal corporation, and a political subdivision of the State, and the Authority and its Board are organized and operating under the Authority Act and all laws supplemental thereto; and

WHEREAS, pursuant to the Local Government Securities Law and all laws amendatory thereof (herein the “Bond Act”), cited as NRS 350.500 through 350.720, and all laws

supplemental thereto, the Authority has the power to issue its “Truckee Meadows Water Authority, Subordinate Water Revenue Refunding Bonds, Series 2021” (herein the “2021 Bonds” or the “Bonds”), which constitute special obligations of the Authority without the necessity of such revenue bonds being authorized at any election or of any other preliminaries being taken; and

WHEREAS, the Board hereby elects to have the provisions of Chapter 348 of NRS (the “Supplemental Bond Act”) apply to the 2021 Bonds; and

WHEREAS, after negotiating the purchase of the 2021 Bonds, the TMWA Manager, or, in his absence, the Chief Financial Officer of the Authority (the “Chief Financial Officer”), is hereby authorized to sell the Bonds to Wells Fargo Bank, National Association (or any wholly owned subsidiary thereof), as the initial purchaser thereof (the “Initial Purchaser”) in accordance with the purchase proposal submitted by the Initial Purchaser (the “Purchase Proposal”); to accept the Purchase Proposal by execution of a certificate dated on or before the date of delivery of the 2021 Bonds (the “Certificate of the Chief Financial Officer”); and to specify in the Escrow Agreement (as defined herein) what principal amount of the maturing 2006B Notes, if any (not to exceed the outstanding principal amount of the refunded 2006B Notes of \$13,000,000), shall be refunded with a portion of the proceeds of the 2021 Bonds (collectively, the “Refunded Notes”); and

WHEREAS, the 2021 Bonds are to bear interest at the rates per annum provided in the Certificate of the Chief Financial Officer, which rates must not exceed by more than 3% the “25 Bond Revenue Index” most recently published in The Bond Buyer before a negotiated offer is accepted and are to be sold at a price equal to the principal amount thereof (not to exceed the principal amount sufficient to pay the Cost of the Refunding Project (as defined below), not to exceed \$13,350,000), plus a premium, or less a discount not exceeding 9% of the principal amount thereof, all as specified by the TMWA Manager or, in his absence, the Chief Financial Officer of the Authority, in the Certificate of the Chief Financial Officer; and

WHEREAS, the Board has considered, found, and determined, and does hereby declare that this resolution pertains to the sale, issuance, and payment of the 2021 Bonds and such declaration shall be conclusive in the absence of fraud or gross abuse of discretion in accordance with the provisions of subsection 2 of NRS 350.579.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE TRUCKEE MEADOWS WATER AUTHORITY DO RESOLVE:

ARTICLE I

SHORT TITLE, DEFINITIONS, INTERPRETATION, RATIFICATION, AUTHENTICATION, AND EFFECTIVE DATE

Section 101. Short Title. This resolution shall be known as the, and may be cited by the short title, “2021 Refunding Bond Resolution” (herein, the “Instrument” or the “Resolution”).

Section 102. Meanings and Construction.

A. Definitions. The terms in this Section defined for all purposes of this Instrument and of any instrument amendatory hereof or supplemental hereto, and of any other instrument or any other document pertaining hereto, except where the context by clear implication otherwise requires, shall have the meanings herein specified:

(1) “Authority” or “TMWA” means the Truckee Meadows Water Authority, the Authority being situate in the County and the State, and constituting a body corporate and politic, a quasi-municipal corporation, and a political subdivision of the State, and means any successor corporation thereof.

(2) “Authority Act” means NRS 277.080 to 277.180, inclusive, the act creating the Authority, under which act the Authority and its Board are operating, and all laws amendatory thereof.

(3) “Banking Institution” means a state or national bank or trust company which is a member of the Federal Deposit Insurance Corporation, which is located within the United States.

(4) “Board” means the board of directors of the Authority, or the Board’s successor in functions, if any.

(5) “Bond Act” means NRS 350.500 through 350.720, and all laws amendatory thereof, and is designated in NRS 350.500 thereof as the “Local Government Securities Law.”

(6) “Bond Fund” means the special and separate account designated as the “Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Bond Fund,” created herein. The Bond Fund consists of two separate subaccounts, the Interest Account and the Principal Account.

(7) “Bond Requirements” means the principal of, any redemption premiums due in connection with, and the interest on the 2021 Bonds and any additional bonds or other additional securities payable from Pledged Revenues and heretofore or hereafter issued, if any, or such part of such securities or such other securities pertaining to the TMWA Water System as may be designated, as such principal, any such premiums, and such interest become due. “Bond

Requirements” does not include any capitalized interest on bonds payable from the proceeds of those bonds as designated by the Chief Financial Officer.

For purposes of computing the Bond Requirements of variable interest rate Superior Securities or Parity Securities with respect to which a Qualified Swap is in effect, the interest payable on such variable interest rate securities (a) except as provided in clause (b) of this sentence, shall be deemed to be the interest payable on such variable interest rate securities in accordance with the terms thereof plus any amount required to be paid by the Authority to the Qualified Swap Provider pursuant to the Qualified Swap or minus any amount required to be paid by the Qualified Swap Provider to the Authority pursuant to the Qualified Swap, or (b) for purposes of computing the maximum annual principal and interest requirements and for purposes of any other computation for the issuance of additional Superior Securities or Parity Securities (including refunding securities), shall be deemed to be the amount accruing at the fixed rate as provided in the Qualified Swap. No computation of Bond Requirements under this Instrument shall take into account payments due to the Qualified Swap Provider on the termination of the Qualified Swap unless such payments on termination are then unconditionally due and payable in accordance with the terms of the related Qualified Swap.

For purposes of computing the Bond Requirements of a Qualified Swap with respect to which no Superior Securities or Parity Securities remain Outstanding or of that portion of a Qualified Swap with respect to which the notional amount is greater than the principal amount of Outstanding Superior Securities or Parity Securities to which such Qualified Swap relates, (a) for purposes of Article V hereof, the interest payable thereon shall be deemed to be the net amount positive or negative, if any, required to be paid by the Authority to the Qualified Swap Provider pursuant to the Qualified Swap, and (b) for purposes of any computation of Bond Requirements for a period after the date of computation, the interest payable thereon shall be deemed to be the net amount most recently paid, as of the date of computation, by the Authority to the Qualified Swap Provider thereunder or (expressed as a negative number) by the Qualified Swap Provider to the Authority thereunder.

In addition, if any Superior Credit Facility Loan or Parity Credit Facility Loan is incurred, the principal and interest due on the Superior Credit Facility Loan or Parity Credit Facility Loan shall be taken into account in calculating the Bond Requirements as provided in this paragraph. “Superior Credit Facility Loan” or “Parity Credit Facility Loan,” as applicable, means a loan made to the Authority pursuant to a letter of credit, line of credit or similar credit support arrangement (a “Credit Facility”) that secures Superior Securities or Parity Securities (as applicable, the “Credit Secured Bonds”) for the purposes of acquiring the Credit Secured Bonds or to pay the purchase price of or principal of or interest on the Credit Secured Bonds. The amounts payable as principal and interest on a Superior Credit Facility Loan or Parity Credit Facility Loan shall be taken into account in determining whether additional Superior Securities or other Parity Securities (including the applicable Credit Secured Bonds and the Superior Credit Facility Loan or Parity Credit Facility Loan) may be issued (but not for purposes of Article X hereof):

(i) the Super Credit Facility Loan or Parity Credit Facility Loan shall be treated as issued on the date of issue of the applicable Credit Secured Bonds and all calculations shall be made as of that date;

(ii) the principal amount of the Superior Credit Facility Loan or Parity Credit Facility Loan taken into account shall be deemed to be the maximum amount of the Superior Credit Facility Loan or Parity Credit Facility Loan under the terms of the applicable Credit Facility;

(iii) the Superior Credit Facility Loan or Parity Credit Facility Loan shall be deemed to be repayable in 20 level installments of principal and interest commencing in the first Bond Year in which there is no capitalized interest with respect to the applicable Credit Secured Bonds and ending 20 years after that Bond Year;

(iv) interest shall be deemed to accrue on the Superior Credit Facility Loan or Parity Credit Facility Loan at a rate equal to the lesser of the maximum rate permitted under the terms of the Superior Credit Facility Loan or Parity Credit Facility Loan or a rate equal to the "25 Bond Revenue Index" most recently published in The Bond Buyer prior to the date a firm offer to purchase the applicable Credit Secured Bonds is accepted by the Authority, or, if the "25 Bond Revenue Index" is no longer published, such other index as the Authority reasonably selects; and

(v) the sum of the (i) principal of and interest on the applicable Credit Secured Bonds plus (ii) the principal of and interest on the Superior Credit Facility Loan or Parity Credit Facility Loan shall not be taken into account; rather, whichever of such obligations results in the highest combined maximum annual principal and interest requirements shall be taken into account.

The actual amount payable on a Superior Credit Facility Loan or a Parity Credit Facility Loan in any Bond Year shall be taken into account in calculating the "Bond Requirements" for the purposes of Article X hereof.

(8) "Bond Year" for the purposes of this Instrument means the 12 months commencing on July 2nd of any calendar year and ending on July 1st of the next succeeding calendar year.

(9) "Budget Act" means NRS 354.470 through 354.626, and all laws amendatory thereof, and is designated in NRS 354.470 thereof as the "Local Government Budget Act."

(10) "Budget Year" means the Fiscal Year for which a budget is being prepared.

(11) "Chairman" means the de jure or de facto chairman of the Board and the Authority and chosen as such officer by the Board, and means the de jure or de facto vice chairman of the Board and the Authority whenever the chairman of the Board and the Authority is unable to act in such capacity, and the defined term means his successor in functions, if any.

(12) “Chief Financial Officer” means the de jure or de facto Chief Financial Officer of the Authority, designated as such by the Authority (but if there is no Chief Financial Officer of the Authority, Chief Financial Officer means the TMWA Manager), and means the de jure or de facto assistant Chief Financial Officer or acting Chief Financial Officer, if any, of the Authority whenever the Chief Financial Officer is unable to act in such capacity, or the successor of the Chief Financial Officer in functions, if any. The Chief Financial Officer is the “chief financial officer” of the Authority for purposes of Chapter 350 of NRS.

(13) “Cities” means the City of Reno and the City of Sparks, in the County and the State, and constituting political subdivisions thereof and bodies politic and corporate, or any successor municipal corporations.

(14) “combined maximum annual principal and interest requirements” means the maximum sum of the principal of and the interest (including any payments to be made (positive or negative) on any Qualified Swap (as provided in the definition of “Bond Requirements”), on the Superior Securities, the 2021 Bonds and any other Parity Securities, falling due during any one succeeding Bond Year for the period beginning with the Bond Year in which such computation is made and ending with the Bond Year in which any 2021 Bonds last become due and payable but not including any securities which are no longer Outstanding under the defeasance provisions of Section 1201 hereof. If any Superior Security or Parity Security bears interest at a variable interest rate and is not covered by a Qualified Swap, the rate of interest used in the foregoing test shall be the lesser of the maximum permitted rate of interest on those Parity Securities or a rate equal to the “25 Bond Revenue Index” as most recently published in The Bond Buyer prior to the date a firm offer to purchase the then proposed Superior Security or Parity Securities is accepted by the Authority or if such index is no longer published, such long-term bond securities index as the Authority reasonably selects.

Superior Credit Facility Loans and Parity Credit Facility Loans (each as defined within the definition of “Bond Requirements”) shall be taken into account in calculating combined maximum annual principal and interest requirements.

(15) “Comparable Bond Year” means, in connection with any Fiscal Year, the Bond Year which commences in the Fiscal Year. For example, for the Fiscal Year commencing on July 1, 2020, and ending on June 30, 2021, the Comparable Bond Year commences on July 2, 2020, and ends on July 1, 2021.

(16) “Continuing Covenant Agreement” means, initially, the Continuing Covenant Agreement, dated as of June 3, 2021, between the Authority and the Initial Purchaser, as the same may be amended, supplemented, restated or otherwise modified from time to time, setting forth certain additional covenants and agreements of the Authority relating to the 2021 Bonds, and thereafter any subsequent Continuing Covenant Agreement executed between the Authority and any subsequent Purchaser, if any, as the same may be amended, supplemented, restated or otherwise modified from time to time.

(17) “Continuing Covenant Agreement Obligations” means all fees, expenses, and other obligations (excluding the principal of, premium, if any, and interest on the 2021 Bonds) due and owing any Purchaser under any Continuing Covenant Agreement.

(18) “Cost of the Refunding Project,” or any phrase of similar import, means, in connection with the 2021 Bonds, all or any part designated by the Board of the cost of refunding the Refunded Notes, which cost may include all or any part of the incidental costs pertaining to the Refunding Project.

(19) “Costs of Issuance Account” means the special account designated as the “Truckee Meadows Water Authority, Subordinate Water Revenue Refunding Bonds, Series 2021, Costs of Issuance Account” created herein.

(20) “County” means the County of Washoe, in the State, and constituting a political subdivision thereof, or any successor municipal corporation; and where the context so indicates, such term means the geographical area comprising the County of Washoe.

(21) “Debt” means, with respect to the Authority, at any date and without duplication, (i) all obligations of the Authority for borrowed money, and all obligations of the Authority evidenced by bonds, debentures, notes, loan agreements or other similar instruments, (ii) all direct or contingent obligations of the Authority arising under letters of credit, bankers’ acceptances, bank guaranties, surety bonds and similar instruments, (iii) capital lease obligations, (iv) all obligations of the Authority to pay the deferred purchase price of property or services, except trade accounts payable arising in the ordinary course of business (including, without limitation, accounts payable to construction contractors and other professionals for services rendered and other personnel expenses), (v) all indebtedness of others secured by a lien on any asset of the Authority, whether or not such indebtedness is assumed by the Authority, (vi) all indebtedness of others guaranteed by, or secured by any of the revenues or assets of, the Authority and (vii) payment obligations of the Authority under any Qualified Swap.

(22) “Default Rate” has the meaning set forth in the Continuing Covenant Agreement, if any.

(23) “Determination of Taxability” has the meaning set forth in the Continuing Covenant Agreement, if any.

(24) “Directors” means members of the Authority’s governing body, i.e., the Board.

(25) “disposal” or “dispose” means the sale, destruction, razing, loan, lease, grant, transfer, assignment, option to sell, other contract, other disposition, or any combination thereof, of the TMWA Water System, other property, or any interest therein.

(26) “Drinking Water State Revolving Fund Loans” means the (i) Truckee Meadows Water Authority, Water Revenue Bond, Series 2005 (also known as the Drinking Water SRF Loan, Series 2005), (ii) Truckee Meadows Water Authority, Water Revenue Bond, Series

2009A (also known as the Drinking Water SRF Loan, Series 2009A), (iii) Truckee Meadows Water Authority, Water Revenue Bond, Series 2010A (also known as the Drinking Water SRF Loan, Series 2010A), (iv) Truckee Meadows Water Authority, Water Revenue Bond, Series 2014 (also known as the Drinking Water SRF Loan, Series 2014) and (v) Truckee Meadows Water Authority, Water Revenue Bond, Series 2015B (also known as the Drinking Water SRF Loan, Series 2015B), and each similar loan, series of bonds or other obligation hereafter issued under or pursuant to the Nevada Drinking Water State Revolving Fund with a lien on the Net Revenues on a parity with any of the bonds referenced in this definition; provided that the lien of the Drinking Water State Revolving Fund Loans on the Net Revenues shall be subordinate to the lien thereon of the 2015 Bonds, 2016 Bonds, 2017 Bonds and 2018 Bonds and any bonds issued on a parity with those bonds.

(27) “Emergency Capital Amount” means the amount designated by the Professional Engineer as a continuing reserve to be deposited, accumulated, reaccumulated, and maintained in the Renewal and Replacement Account in accordance with Section 514 hereof.

(28) “equip” or “equipment” means the furnishing of all related or appurtenant machinery, furnishings, apparatus, paraphernalia, or other gear, or any combination thereof, pertaining to the Project, the TMWA Water System, or other property, or any interest therein.

(29) “Escrow Account” means the special account designated as the “Truckee Meadows Water Authority, Subordinate Water Revenue Refunding Bonds, Series 2021, Escrow Account,” created in this Resolution.

(30) “Escrow Agent” means The Bank of New York Mellon Trust Company, N.A. or any successor banking institution.

(31) “Escrow Agreement” means the escrow agreement between the Authority and the Escrow Agent relating to the deposit of amounts in the Escrow Account, in substantially the form now on file with the Authority, with such changes as designated by the Chief Financial Officer, or in her absence, the TMWA Manager, which are consistent with the provisions of this Resolution.

(32) “Event of Taxability” has the meaning set forth in the Continuing Covenant Agreement, if any.

(33) “events of default” means the events stated in Section 1303 hereof.

(34) “Federal Government” means the United States, or any agency, instrumentality, or corporation thereof.

(35) “Federal Securities” means bills, certificates of indebtedness, notes, bonds, or similar securities which are direct obligations of, or the principal and interest of which securities are unconditionally guaranteed by, the United States.

(36) "Fiscal Year" for the purposes of this Instrument means the 12 months commencing on July 1st of any calendar year and ending on June 30th of the next succeeding calendar year.

(37) "General Purpose Account" means the special and separate account designated as the "Truckee Meadows Water Authority, TMWA Water System General Purpose Account," heretofore created and continued herein.

(38) "Gross Revenues" means all income and revenues received or accrued under generally accepted accounting principles derived directly or indirectly by the Authority from the water and other goods and services provided by, or from the operation and use of and otherwise pertaining to, the TMWA Water System, including, without limitation, all rates, fees, and other charges for the use of the TMWA Water System, or for any service rendered by the Authority in the operation thereof, or any part thereof, whether resulting from repairs, enlargements, extensions, betterments or other improvements to the TMWA Water System, or otherwise, and includes all revenues received by the Authority from the TMWA Water System, including, without limitation, all fees, rates, and other charges for the use of the TMWA Water System, or for any service rendered by the Authority in the operation thereof, directly or indirectly, the availability of any such service or the sale or other disposal of any commodity derived therefrom, but excluding any moneys borrowed and used for the acquisition of capital improvements and any moneys received as grants, appropriations or gifts from the United States, the State or other sources, the use of which is limited by the grantor or donor to the construction of capital improvements for the TMWA Water System, except to the extent any such moneys shall be received as payments for the use of the TMWA Water System, services rendered thereby, the availability of any such service or the disposal of any such commodities. "Gross Revenues" shall also include:

(i) all income or other gain from the investment of such income and revenues and of the proceeds of securities payable from Gross Revenues or Net Revenues; and

(ii) all amounts withdrawn from the Rate Stabilization Account and deposited in the Revenue Fund as described in Section 515 hereof.

(39) "hereby," "herein," "hereinabove," "hereinafter," "hereinbefore," "hereof," "hereto," "hereunder," or any similar term refer to this Instrument and not solely to the particular portion thereof in which such word is used; "heretofore" means before the adoption of this Instrument; and "hereafter" means after the adoption of this Instrument.

(40) "holder," or any similar term, when used in conjunction with any Bonds, or any other designated securities, means the registered owner of any Bond or other security which is registered for payment.

(41) "Independent Accountant" means any certified public accountant, or any firm of certified public accountants, duly licensed to practice and practicing as such under the laws of the State, as from time to time appointed and compensated by the Board on the behalf and in the name of the Authority:

(a) Who is, in fact, independent and not under the domination of the Authority;

(b) Who does not have any substantial interest, direct or indirect, with the Authority; and

(c) Who is not connected with the Authority as an officer or employee thereof, but who may be regularly retained to make annual or similar audits of any books or records of the Authority.

(42) “Instrument” means this resolution, cited in Section 101 hereof by the short title “2021 Refunding Bond Resolution”; and the term “instrument of the Authority,” “instrument of the Board,” “amendatory instrument,” “supplemental instrument,” or any phrase of similar import, means any resolution adopted by the Board on behalf of the Authority.

(43) “Interest Account” means the special and separate subaccount designated as the “Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Interest Account,” created within the Bond Fund herein.

(44) “I.R.C.” or “Tax Code” means the Internal Revenue Code of 1986, as of the date of delivery of the 2021 Bonds and the regulations promulgated thereunder.

(45) “Member” means the Cities and the County and any other entity that may hereafter become a member of the Authority.

(46) “Minimum Operation and Maintenance Reserve” means at any time in each Fiscal Year an amount at least equal to one-sixth of the aggregate amount of the Operation and Maintenance Expenses of the TMWA Water System for the Fiscal Year as fixed by the then current budget for that year, which minimum amount is required to be deposited, accumulated or reaccumulated, and maintained in the Operation and Maintenance Reserve Account pursuant to Section 513 hereof.

(47) “Net Revenues” means the Gross Revenues remaining after the deduction of the “Operation and Maintenance Expenses,” of the TMWA Water System, or any other facilities in connection with which the defined term is used.

(48) “NRS” means Nevada Revised Statutes, the State’s code of general laws.

(49) “Operation and Maintenance Expenses,” or any phrase of similar import, means all reasonable and necessary current expenses of the Authority, paid or accrued under generally accepted accounting principles, of operating, maintaining, and repairing the TMWA Water System or any other designated facilities in connection with which such term is used; and the term includes, without limitation:

(a) Engineering, auditing, reporting, legal, planning and other overhead expenses relating to the administration, operation, and maintenance of the TMWA Water System;

(b) Fidelity bond and property and liability insurance premiums pertaining to the TMWA Water System, or a reasonably allocable share of a premium of any blanket bond or policy pertaining to the TMWA Water System;

(c) Payments to pension, retirement, health, and hospitalization funds, and other insurance, and to any self-insurance fund as insurance premiums not in excess of such premiums which would otherwise be required for such insurance;

(d) Any general taxes, assessments, excise taxes, or other charges which may be lawfully imposed on the Authority, the TMWA Water System, revenues therefrom, or the Authority's income from or operations of any properties under its control and pertaining to the TMWA Water System, or any privilege in connection with the TMWA Water System or its operation;

(e) The reasonable charges of the Trustee, Paying Agent, Registrar and any other depository bank pertaining to the bonds and any other securities payable from Pledged Revenues or otherwise pertaining to the TMWA Water System;

(f) Contractual services, professional services, salaries, other administrative expenses, and costs of materials, supplies, repairs, and labor, pertaining to the TMWA Water System or to the issuance of the 2021 Bonds or any other securities relating to the TMWA Water System, including, without limitation, the expenses and compensation of the Trustee, any receiver, or other fiduciary under the Bond Act;

(g) The costs incurred by the Board in the collection and any refunds of all or any part of Pledged Revenues;

(h) Any costs of utility services furnished to the TMWA Water System;

(i) Any lawful refunds of any Pledged Revenues;

(j) The cost of calculating and verifying any amount due the United States as rebate payments under Section 148(f), I.R.C.; and

(k) All other administrative, general, and commercial expenses pertaining to the TMWA Water System; but

(i) Excluding any allowance for depreciation, amortization, or noncash allocation of pension liabilities;

(ii) Excluding any costs of extensions, enlargements, betterments, and other improvements, or any combination thereof;

(iii) Excluding any reserves for major capital replacements, other than normal (noncapital) repairs;

(iv) Excluding any reserves for operation, maintenance, or repair of the TMWA Water System;

(v) Excluding any allowance for the redemption of any bond or other security evidencing a loan or other obligation, or the payment of any interest thereon, or any prior redemption premium due in connection therewith;

(vi) Excluding any liabilities incurred in the acquisition or improvement of any properties comprising any project or any existing facilities, or any combination thereof, pertaining to the TMWA Water System, or otherwise; and

(vii) Excluding any liabilities imposed on the Authority for any ground of legal liability not used on contract, including, without limitation, negligence in the operation of the TMWA Water System.

(50) “Operation and Maintenance Account” means the special and separate account designated as the “Truckee Meadows Water Authority, TMWA Water System Operation and Maintenance Account,” heretofore created and continued herein, and required to be applied in accordance with Section 506 hereof.

(51) “Operation and Maintenance Reserve Account” means the special and separate account designated as the “Truckee Meadows Water Authority, TMWA Water System Operation and Maintenance Reserve Account,” heretofore created and continued herein.

(52) “Outstanding” when used with reference to the 2021 Bonds or any other designated securities and as of any particular date means all the 2021 Bonds or any such other securities payable from Pledged Revenues or otherwise pertaining to the TMWA Water System, as the case may be, in any manner theretofore and thereupon being executed and delivered:

(a) Except any bond or other security canceled by the Authority, by the Registrar, Paying Agent or otherwise on the Authority’s behalf, at or before such date;

(b) Except any bond or other security for the payment or the redemption of which moneys at least equal to its Bond Requirements to the date of its maturity or any Redemption Date, whichever date is earlier, if any, shall have theretofore been deposited with a trust bank in escrow or in trust for that purpose, as provided in Sections 520 or 1201 hereof; and

(c) Except any bond or other security in lieu of or in substitution for which another bond or other security shall have been executed and delivered pursuant to Sections 306 or 1509 hereof.

(53) “Parity Securities” means bonds, notes, securities and other similar instruments pertaining to the TMWA Water System and secured by Pledged Revenues and with a lien on Pledged Revenues on a parity with the lien thereon of the Outstanding 2021 Bonds.

(54) “Paying Agent” means The Bank of New York Mellon Trust Company, N.A., a “Banking Institution” and a “trust bank,” as herein defined, and designated by the Authority as the paying agent for the 2021 Bonds, which Banking Institution is also the “Registrar” hereunder and is an agent of the Authority for the payment of the Bond Requirements of the 2021 Bonds and for other administration of moneys pertaining to the Authority; and the term “Paying Agent” includes any successor Banking Institution as such a paying agent.

(55) “Person” means a corporation, firm, other body corporate (including, without limitation, the Federal Government, the State, or any other body corporate and politic other than the Authority), partnership, association, or individual, and also includes an executor, administrator, trustee, receiver, or other representative appointed according to law.

(56) “Pledged Revenues” means all of the Net Revenues.

(57) “Principal Account” means the special and separate subaccount designated as the “Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Principal Account,” created within the Bond Fund herein.

(58) “Professional Engineer” means any registered or licensed professional engineer, any firm of such engineers, any licensed professional architect, or any firm of such architects, as from time to time determined by the Authority, which Person or Persons shall:

(a) Have a wide and favorable reputation for skill and experience in the field of designing, preparing plans and specifications for, and supervising construction of, water systems and water facilities;

(b) Be entitled to practice and are practicing as such under the laws of the State; and

(c) Be selected, retained, and compensated by the Board, in the name and on behalf of the Authority, and who may be in the regular employ or control of the Authority.

(59) “Purchaser” means, initially, the Initial Purchaser, and upon the receipt from time to time by the Trustee and the Authority of a notice described in the Continuing Covenant Agreement from time to time means the person designated in such notice as the Purchaser, as more fully provided in the Continuing Covenant Agreement.

(60) “Qualified Swap” means, to the extent from time to time permitted by law, any financial arrangement entered into by the Authority with respect to the Superior Securities, the 2021 Bonds or Parity Securities for the purpose of moderating interest rate fluctuations or any

other purpose, (i) which is entered into with an entity that is a Qualified Swap Provider at the time the arrangement is entered into; (ii) which is any of the following, or any combination thereof, or any option with respect thereto: a cap, floor or collar; forward rate; future rate; swap (such swap may be based on an amount equal either to the principal amount of such Superior Securities, 2021 Bonds or Parity Securities, as the case may be, as may be designated or a notional principal amount relating to all or a portion of the principal amount of such Superior Securities, 2021 Bonds or Parity Securities, or such other exchange or rate protection transaction agreement; or other similar transaction (however designated); and (iii) which has been designated in writing to the Trustee by the Authority as a Qualified Swap with respect to such bonds.

(61) “Qualified Swap Provider” means, except as otherwise provided in Section 1135 hereof, a counterparty whose senior long term debt obligations, or whose obligations under a Qualified Swap are guaranteed by a financial institution whose senior long term debt obligations, are rated by whichever of Standard and Poor’s Ratings Services, Moody’s Investors Service or Fitch Investors Services as then has a rating in effect for the bonds or all such agencies if all then have a rating in effect for the bonds, at the time the subject Qualified Swap is entered into of at least “A” in the case of Moody’s, “A” in the case of Standard & Poor’s, or “A” by Fitch Investors Services.

(62) “Rate Stabilization Account” means the “Truckee Meadows Water Authority, TMWA Water System Rate Stabilization Account” heretofore created and continued herein.

(63) “Rebate Account” means the “Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Rebate Account” created herein.

(64) “Redemption Date” means the date fixed for the redemption prior to their respective fixed maturity dates of any bonds or other designated securities payable from Pledged Revenues or other moneys pertaining to the TMWA Water System in any notice of prior redemption, or otherwise fixed and designated by the Authority.

(65) “Redemption Price” means, when used with respect to a bond or other designated security payable from Pledged Revenues or other moneys pertaining to the TMWA Water System, the principal amount thereof plus accrued interest thereon to the Redemption Date plus the applicable premium, if any, payable upon the redemption thereof prior to the stated fixed maturity date of such bond or other security on a Redemption Date in the manner contemplated in accordance with the security’s terms.

(66) “Refunding Project” means the refunding of the Refunded Notes, if any, financed wholly or in part with a portion of the proceeds of the 2021 Bonds.

(67) “Registrar” means The Bank of New York Mellon Trust Company, N.A., which Banking Institution is required to keep records for the registration, transfer, and exchange of the 2021 Bonds or any successor thereof.

(68) “Renewal and Replacement Account” means the special and separate account designated as the “Truckee Meadows Water Authority, TMWA Water System Renewal and Replacement Account,” heretofore established and authorized and continued herein.

(69) “Revenue Fund” means the special and separate account designated as the “Truckee Meadows Water Authority, TMWA Water System Gross Revenues Fund,” heretofore established and authorized and continued herein.

(70) “Secretary” means the de jure or de facto secretary of the Board and the Authority and chosen as such officer by the Board, and means the de jure or de facto assistant secretary or acting secretary, if any, of the Board and the Authority whenever the secretary is unable to act in such capacity, the individual designated as secretary may be (but is not necessarily) a member of the Board and may be (but is not necessarily) the same individual as the Treasurer, and the defined term means his successor in functions, if any.

(71) “State” means the State of Nevada, in the United States; and where the context so indicates, means the geographical area comprising the State of Nevada.

(72) “Subordinate Securities” means bonds, notes, securities and other similar instruments pertaining to the TMWA Water System and secured by Pledged Revenues with a lien on Pledged Revenues subordinate and junior to the lien thereon of the Outstanding 2021 Bonds and any Parity Securities hereafter issued.

(73) “Superior Securities” means the outstanding Drinking Water State Revolving Fund Loans, 2015 Bonds, 2016 Bonds, 2017 Bonds and 2018 Bonds and any other bonds, notes, securities and other similar instruments pertaining to the TMWA Water System and secured by Pledged Revenues with a lien on Pledged Revenues superior to the lien thereon of the Outstanding 2021 Bonds and any Parity Securities hereafter issued.

(74) “Tax Code” means the I.R.C., as herein defined.

(75) “Taxable Date” has the meaning set forth in the Continuing Covenant Agreement, if any.

(76) “Taxable Rate” has the meaning set forth in the Continuing Covenant Agreement, if any.

(77) “Taxable Rate Factor” has the meaning set forth in the Continuing Covenant Agreement, if any.

(78) “TMWA Manager” means the de jure or de facto General Manager of the Authority and any deputy director designated by the TMWA Manager for purposes of this Instrument, and means any de jure or de facto deputy director or acting TMWA Manager, if any, of the Authority whenever the TMWA Manager is absent or is unable to act in such capacity, or the TMWA Manager’s successor in functions, if any. The TMWA Manager is the “chief administrative officer” of the Authority for the purposes of Chapter 350 of NRS.

(79) “TMWA Asset Purchase Agreement” means the asset purchase agreement between Sierra Pacific Power Company and the Authority dated as of January 15, 2001.

(80) “TMWA Water System” means the water facilities described in the TMWA Asset Purchase Agreement, and consisting of all properties, real, personal, mixed or otherwise, now owned or hereafter acquired by the Authority through purchase, construction or otherwise, and used in connection with such system of the Authority, and in any way pertaining thereto, whether or not located within or without or both within and without the boundaries of the County, including, without limitation, machinery, apparatus, structures, buildings and related or appurtenant furniture, fixtures and other equipment, as such system is from time to time extended, bettered or otherwise improved, or any combination thereof.

(81) “Treasurer” means the de jure or de facto treasurer of the Board and the Authority and chosen as such officer by the Board, and means the de jure or de facto assistant treasurer or acting treasurer, if any, of the Board and the Authority whenever the treasurer is unable to act in such capacity, the individual designated as treasurer may be (but is not necessarily) a member of the Board and may be (but is not necessarily) the same individual as the Secretary, and the defined term means his successor in functions, if any.

(82) “Trust bank” means the Trustee and any “Banking Institution,” as defined herein, which is also authorized to exercise and is exercising trust powers, and also means any branch of the Federal Reserve Bank.

(83) “Trustee” means The Bank of New York Mellon Trust Company, N.A., which Banking Institution is the fiduciary appointed by Section 1401 hereof, and the term “Trustee” includes any successor “trust bank,” as herein defined, which may at any time be substituted in its place as such a trustee.

(84) “2021 Bonds or Bonds” means the “Truckee Meadows Water Authority, Subordinate Water Revenue Refunding Bonds, Series 2021,” authorized to be issued by this Instrument.

(85) “2018 Bonds” means the “Truckee Meadows Water Authority, Water Revenue Refunding Bonds, Series 2018.”

(86) “2017 Bonds” means the “Truckee Meadows Water Authority, Water Revenue Refunding Bonds, Series 2017.”

(87) “2016 Bonds” means the “Truckee Meadows Water Authority, Water Revenue Refunding Bonds, Series 2016.”

(88) “2015 Bonds” means the “Truckee Meadows Water Authority, Water Revenue Refunding Bonds, Series 2015A.”

(89) “United States” means the United States of America; and where the context so indicates, such term means the geographical area comprising the United States of America.

(90) “Vice Chairman” means the de jure or de facto vice chairman or the Board and the Authority and chosen as such officer by the Board, and the defined term means his successor in functions, if any.

(91) “Water Fund” means the separate fund designated as the “Truckee Meadows Water Authority, Water Fund,” heretofore authorized and continued herein, which fund consists of a self-balancing group of accounts pertaining to the TMWA Water System, and to which the various accounts herein created or otherwise designated relate.

B. Construction. This Instrument, except where the context by clear implication herein otherwise requires, shall be construed as follows:

(1) Words in the singular number include the plural, and words in the plural include the singular.

(2) Words in the masculine gender include the feminine and the neuter, and when the sense so indicates words of the neuter gender refer to any gender.

(3) Articles, sections, subsections, paragraphs, and subparagraphs mentioned by number, letter, or otherwise, correspond to the respective articles, sections, subsections, paragraphs, and subparagraphs of this Instrument so numbered or otherwise so designated.

(4) The titles and leadlines applied to articles, sections, and subsections of this Instrument are inserted only as a matter of convenience and ease in reference and in no way define, limit, or describe the scope or intent of any provisions of this Instrument.

(5) Any 2021 Bonds held by the Authority shall not be deemed to be Outstanding for the purpose of redemption or Outstanding for the purpose of consents hereunder or for any other purpose provided herein.

Section 103. Successors. All of the covenants, stipulations, obligations, and agreements by or on behalf of and other provisions for the benefit of the Authority or the Board contained herein shall bind and inure to the benefit of any successors thereof and shall bind and inure to the benefit of any officer, board, district, commission, authority, agent, or instrumentality to whom or to which there shall be transferred by or in accordance with law any right, power, or duty of the Authority or the Board or of their respective successors, if any, the possession of which is necessary or appropriate in order to comply with any such covenants, stipulations, obligations, agreements, or other provisions hereof.

Section 104. Parties Interested Herein. Except as herein otherwise expressly provided, nothing herein expressed or implied is intended or shall be construed to confer upon or to give to any Person, other than the Authority, the Board, the Directors, the Paying Agent, the Trustee,

and the holders from time to time of the 2021 Bonds, including, without limitation, the Paying Agent in its capacity as a paying agent and as the Registrar, any right, remedy, or claim under or by reason hereof or any covenant, condition, or stipulation hereof. All the covenants, stipulations, promises, and agreements herein contained by and on behalf of the Authority shall be for the sole and exclusive benefit of the Authority, the Board, the Directors, the Paying Agent, the Trustee, and any holder of any 2021 Bonds, except as herein otherwise provided.

Section 105. Ratification. All action taken (not inconsistent with the provisions of this Instrument) by the Board, the officers of the Authority, and otherwise by the Authority, including without limitation, directed:

- A. Refunding Project. Toward the Refunding Project.
- B. Bonds. Toward the sale and delivery of the Authority's 2021 Bonds for purpose of paying the Cost of the Refunding Project.
- C. Certificate of the Chief Financial Officer. Toward the acceptance of the Purchase Proposal via the completion and execution of the Certificate of the Chief Financial Officer by the officers designated therein, and otherwise towards any and all of the purposes and objectives of the Authority be, and the same hereby is, ratified, approved, and confirmed.

Section 106. Execution of Continuing Covenant Agreement. The TMWA Manager or, in his absence, the Chief Financial Officer is hereby further authorized to execute and deliver the Continuing Covenant Agreement with the Initial Purchaser for and on behalf of the Authority, in substantially the form on file with the Secretary, with only such changes therein as are approved by the TMWA Manager or, in his absence, the Chief Financial Officer and not inconsistent with this Resolution (the execution thereof by such person is evidence of the approval of such changes on behalf of the Authority). The TMWA Manager or, in his absence, the Chief Financial Officer is further authorized to execute and deliver all agreements, certificates, instruments or other documents related to this Resolution or the Continuing Covenant Agreement for and on behalf of the Authority.

Section 107. Instrument Irrepealable. In consideration of the purchase and acceptance of the 2021 Bonds by those who shall hold the same from time to time, after any of the 2021 Bonds are issued, this Instrument shall constitute an irrevocable contract between the Authority and the holder or holders of the 2021 Bonds; and this Instrument (subject to the provisions of Section 1201 and of Article XV hereof), if any 2021 Bonds are in fact issued, shall be and shall remain irrepealable until the 2021 Bonds, as to all Bond Requirements, shall be fully paid, canceled, and discharged, except as herein otherwise expressly provided.

Section 108. Repealer. All bylaws, orders, and other instruments, or parts thereof, inconsistent herewith are hereby repealed to the extent only of such inconsistency. This repealer shall not be construed to revive any bylaw, order, or other instrument, or part thereof, heretofore repealed.

Section 109. Severability. If any section, subsection, paragraph, clause, or other provision of this Instrument shall for any reason be held to be invalid or unenforceable, the invalidity

or unenforceability of such section, subsection, paragraph, clause, or other provision shall not affect any of the remaining provisions of this Instrument.

Section 110. Execution of Instrument. This Instrument, immediately on its final passage and adoption, shall be recorded in the official records of the Authority kept for that purpose, shall be executed by the signature of the Chairman, shall be attested by the Secretary, and the seal of the Authority shall be affixed thereto.

Section 111. Effective Date. This Instrument shall be in effect upon its adoption.

ARTICLE II

BOARD'S DETERMINATIONS, AUTHORITY FOR AND AUTHORIZATION OF REFUNDING PROJECT, NECESSITY OF REFUNDING PROJECT AND BONDS, COST OF REFUNDING PROJECT, OBLIGATION OF AUTHORITY, AND TERMS OF BOND SALE

Section 201. Authority for this Instrument. This Instrument is adopted by virtue of the Authority Act, the Bond Act, the Supplemental Bond Act and pursuant to their provisions; and the Authority has ascertained and hereby determines that each and every matter and thing as to which provision is made herein is necessary in order to carry out and to effectuate the purposes of the Authority in accordance with the Authority Act and the Bond Act.

Section 202. Necessity of Refunding Project and Bonds. It is necessary and for the best interests of the Authority and the inhabitants thereof, that the Authority effect the Refunding Project and defray the cost thereof wholly or in part by issuing the 2021 Bonds therefor; and the Board hereby so determines and declares.

Section 203. Authorization of Refunding Project. The Board, on behalf of the Authority, does hereby determine, that it is in the best interests of the Authority, to refund the Refunded Notes with the proceeds of the 2021 Bonds; and the Refunding Project is hereby so authorized.

Section 204. Cost of the Refunding Project. The Cost of the Refunding Project is estimated not to exceed an amount received from the sale of the 2021 Bonds, excluding any such cost defrayed or to be defrayed by funds other than with the proceeds of the 2021 Bonds.

Section 205. Bonds Equally Secured. The covenants and agreements herein set forth to be performed on behalf of the Authority shall be for the equal benefit, protection, and security of the holders of any and all of the Outstanding 2021 Bonds and any Outstanding Parity Securities payable from Pledged Revenues and hereafter authorized, all of which, regardless of the time or times of their issue or maturity, shall be of equal rank without preference, priority, or distinction of any of the 2021 Bonds or other such securities over any other thereof, except as otherwise expressly provided in or pursuant to this Instrument.

Section 206. Special Obligations. All of the 2021 Bonds, as to all Bond Requirements, shall be payable and collectible solely out of the Net Revenues pertaining to the TMWA Water System, which Net Revenues are so pledged; the holder or holders thereof may not look to any general or other fund for the payment of the Bond Requirements, except the herein-designated special funds pledged therefor; the 2021 Bonds shall not constitute an indebtedness or a debt within the meaning of any constitutional or statutory provision or limitation; and the 2021 Bonds shall not be considered or held to be general obligations of the Authority but shall constitute its special obligations. The Authority has no taxing power and, therefore, does not pledge its full faith and credit for the payment of the 2021 Bonds.

Section 207. Character of Agreement. None of the covenants, agreements, representations, and warranties contained herein or in the 2021 Bonds issued hereunder, in the absence of any breach thereof, shall ever impose or shall be construed as imposing any monetary liability, obligation, or charge against the Authority (except for the special funds pledged therefor) or its general credit, payable out of its general fund or out of any funds derived from taxation.

Section 208. No Pledge of Property. The payment of the 2021 Bonds is not secured by an encumbrance, mortgage, or other pledge of property of the Authority, except the Net Revenues and any other moneys pledged for the payment of the 2021 Bonds. No property of the Authority, subject to such exception, shall be liable to be forfeited or taken in payment of the 2021 Bonds.

Section 209. No Recourse against Officers and Agents. Pursuant to NRS 350.606, no recourse shall be had for the payment of the Bond Requirements of the 2021 Bonds, the Continuing Covenant Agreement Obligations or for any claim based thereon, or otherwise, upon this Instrument authorizing their issuance or any other instrument pertaining thereto, against any individual member of the Board or the Authority, or any officer or other agent of the Authority, past, present, or future, either directly or indirectly through the Board of the Authority, or otherwise, whether by virtue of any constitution, statute, or rule of law, or by the enforcement of any penalty, or otherwise, all such liability, if any, being by the acceptance of the 2021 Bonds and as a part of the consideration of their issuance specially waived and released.

Section 210. Limitations upon State. Pursuant to NRS 350.610, the faith of the State is hereby pledged that the Authority Act, the Bond Act, any law supplemental or otherwise pertaining thereto, and any other act concerning the 2021 Bonds or other securities, Pledged Revenues, or any combination of such securities and such revenues, shall be neither repealed nor amended nor otherwise directly or indirectly modified in such a manner as to impair adversely any Outstanding securities of the Authority until all such securities have been discharged in full or provision for their payment and redemption has been fully made.

Section 211. No Election or Other Preliminaries. The 2021 Bonds shall be issued without their being authorized at an election by any electors of the Authority or without any other preliminaries being taken other than as herein otherwise provided.

Section 212. Sale of Bonds. The TMWA Manager, or in his absence, the Chief Financial Officer, is authorized to proceed with the sale of the 2021 Bonds to the Initial Purchaser on the terms and conditions provided herein, and to accept the Purchase Proposal by the execution of the Certificate of the Chief Financial Officer and the Continuing Covenant Agreement; the 2021 Bonds are to bear interest at the rates per annum provided in the Certificate of the Chief Financial Officer, which rates must not exceed by more than 3% the "25 Bond Revenue Index" most recently published in The Bond Buyer before a negotiated offer is accepted (the "Statutory Maximum") and are to be sold at a price equal to the principal amount thereof (not to exceed the principal amount sufficient to pay the Cost of the Refunding Project, not to exceed \$13,350,000), plus a premium, or less a discount not exceeding 9% of the principal amount thereof.

ARTICLE III

AUTHORIZATION, TERMS, EXECUTION AND FORM OF BONDS

Section 301. Authorization of Bonds. For the purpose of protecting the public health, conserving the property, and advancing the general welfare of the citizens of the Authority, the "Truckee Meadows Water Authority, Subordinate Water Revenue Refunding Bonds, Series 2021," in the aggregate principal amount set forth in the Certificate of the Chief Financial Officer, payable as to all Bond Requirements solely out of the Net Revenues pertaining to the TMWA Water System, are hereby authorized to be issued, pursuant to the Authority Act and the Bond Act; the Authority pledges irrevocably, but not necessarily exclusively, the Net Revenues to the payment of the Bond Requirements of the 2021 Bonds; and the proceeds of the 2021 Bonds are to be used solely to defray wholly or in part the Cost of the Refunding Project, except as herein otherwise provided.

Section 302. 2021 Bond Details. The 2021 Bonds shall be issued in fully registered form, i.e., registered as to both principal and interest, in compliance with Section 149 of the Tax Code, and the regulations of the Secretary of the Treasury thereunder. The 2021 Bonds shall be dated as of the date of delivery of the 2021 Bonds and issued in definitive certificated form as physical Bonds to the Initial Purchaser. The 2021 Bonds shall be issued in denominations of \$250,000 or any integral multiple of \$5,000 thereof. The 2021 Bonds shall bear interest calculated based on a 360-day year of twelve 30-day months, from their date until their respective maturity dates (or, if redeemed prior to maturity as provided below, their redemption dates) at the respective dates set forth in the Certificate of the Chief Financial Officer, payable semiannually on June 1 and December 1 of each year commencing on December 1, 2021; provided that those 2021 Bonds which are reissued upon transfer, exchange or other replacement shall bear interest at the rates shown in the Certificate of the Chief Financial Officer from the most recent interest payment date to which interest has been paid or duly provided for, or if no interest has been paid, from the date of the 2021 Bond. Notwithstanding the foregoing: (i) from and after any Taxable Date, the 2021 Bonds shall bear interest at the Taxable Rate; and (ii) upon the occurrence and during the continuation of an event of default set forth in Section 1303, the 2021 Bonds shall bear interest at a rate equal to the greater of (a) the Default Rate (not to exceed the Statutory Maximum) and (b) the interest rate that would otherwise be applicable to the 2021 Bonds but for the provisions of this subsection (a). In clarification of the foregoing, only one of the Taxable Rate or the Default Rate may apply at any given time to the 2021 Bonds; and for the avoidance of doubt, upon the occurrence and during the continuation of an event of default set forth in Section 1303, the Default Rate shall apply. The 2021 Bonds shall mature semiannually on June 1 and December 1 of each year in each of the designated amounts of principal and designated dates/years and interest rates, as set forth in the Certificate of the Chief Financial Officer (not to exceed 7 years from the date of delivery of the 2021 Bonds).

The principal of and redemption premium, if any, on any 2021 Bond shall be payable to the registered owner thereof as shown on the registration records kept by the Registrar, upon maturity or prior redemption thereof in accordance with the wire transfer instructions provided by the Holder of such Bond on record with the Registrar and without requirement of presentment or surrender; provided, however, that presentation and surrender at the office of the Paying Agent or such other office as designated by the Paying Agent may be required for payment of the final maturity of the 2021 Bonds. If any 2021 Bond shall not be paid when due, it shall continue to draw

interest at the applicable interest rate borne by said 2021 Bond (which may include the Default Rate, if applicable) until the principal thereof is paid in full. Payment of interest on any 2021 Bond shall be made to the registered owner thereof by check or draft mailed by first class mail by the Paying Agent, on each interest payment date (or, if such interest payment date is not a business day, on the next succeeding business day), to the registered owner thereof, at his or her address as shown on the registration records kept by the Registrar as of the close of business on the 15th day of the calendar month next preceding each interest payment date (other than a special interest payment date hereafter fixed for payment of defaulted interest) (the "Regular Record Date"); but any such interest not so timely paid or duly provided for shall cease to be payable to the owner thereof as shown on the registration records of the Registrar as of the close of business on the Regular Record Date and shall be payable to the owner thereof, at his or her address, as shown on the registration records of the Registrar as of the close of business on a date fixed to determine the names and addresses of owners for the purpose of paying defaulted interest (the "Special Record Date"). Such Special Record Date shall be fixed by the Paying Agent whenever moneys become available for payment of the defaulted interest, and notice of the Special Record Date shall be given to the owners of the 2021 Bonds not less than ten days prior thereto by first-class mail to each such owner as shown on the Registrar's registration records as of a date selected by the Registrar, stating the date of the Special Record Date and the date fixed for the payment of such defaulted interest. The Paying Agent may make payments of interest on any 2021 Bond by such alternative means as may be mutually agreed to between the owner of such 2021 Bond and the Paying Agent. Upon the occurrence and during the continuation of an event of default set forth in Section 1303 hereof, interest at the Default Rate is payable as set forth in the Continuing Covenant Agreement. All such payments shall be made in lawful money of the United States of America without deduction for any service charges of the Paying Agent or Registrar.

Section 303. Prior Redemption and Partial Redemption

A. Optional Redemption. Subject to any limitations and requirements (including, payment of a make-whole fee, if any) set forth in any Continuing Covenant Agreement, the 2021 Bonds, or portions thereof (\$5,000 or any integral multiple), shall be subject to optional redemption prior to their respective maturities, at the option of the Authority, on and after the date set forth in the Certificate of the Chief Financial Officer, in whole or in part at any time from any maturities selected by the Authority and by lot within a maturity (giving proportionate weight to 2021 Bonds in denominations larger than \$5,000), at a price equal to the principal amount of each 2021 Bond, or portion thereof, so redeemed, accrued interest thereon to the redemption date, and a premium, if any, as set forth in the Certificate of the Chief Financial Officer.

B. Mandatory Sinking Fund Redemption. The 2021 Bonds maturing on June 1 or December 1 of the years set forth in the Certificate of the Chief Financial Officer, if any, are subject to mandatory sinking fund redemption at a redemption price equal to 100% of the principal amount thereof and accrued interest to the redemption date. As and for a sinking fund for the redemption of the 2021 Bonds, there shall be deposited into the Bond Fund on or before June 1 and December 1 of the years set forth in the Certificate of the Chief Financial Officer, a sum which, together with other moneys available in the Bond Fund, is sufficient to redeem the 2021 Bonds plus accrued interest to the redemption date, on June 1 or December 1 of the years and in the principal amounts as set forth in the Certificate of the Chief Financial Officer.

Not more than sixty days nor less than thirty days prior to the sinking fund payment dates for the 2021 Bonds, the Registrar shall proceed to select for redemption (by lot in such manner as the Registrar may determine) from all Outstanding 2021 Bonds of a series, a principal amount of the 2021 Bonds equal to the aggregate principal amount of the 2021 Bonds redeemable with the required sinking fund payments, and shall call such 2021 Bonds or portions thereof for redemption from the sinking fund on the next June 1 or December 1, as applicable, and give notice of such call as provided in Section 304 of this Instrument.

At the option of the Authority to be exercised by delivery of a written certificate to the Registrar not less than sixty days next preceding any sinking fund redemption date, it may (i) deliver to the Registrar for cancellation 2021 Bonds, or portions thereof (\$250,000 or any integral multiple of \$5,000 in excess thereof) in an aggregate principal amount desired by the Authority or, (ii) specify a principal amount of 2021 Bonds, or portions thereof (\$250,000 or any integral multiple of \$5,000 in excess thereof) which prior to said date have been redeemed (otherwise than through the operation of the sinking fund) and canceled by the Registrar and not theretofore applied as a credit against any sinking fund redemption obligation. Each Term Bond or portions thereof so delivered or previously redeemed shall be credited by the Registrar at 100% of the principal amount thereof against the obligation of the Authority on the sinking fund redemption dates and any excess shall be so credited against future sinking fund redemption obligations in such manner as the Authority determines. In the event the Authority shall avail itself of the provisions of clause (i) of the first sentence of this paragraph, the certificate required by the first sentence of this paragraph shall be accompanied by the respective 2021 Bonds or portions thereof to be canceled.

C. Partial Redemption. In the case of 2021 Bonds in a denomination larger than \$5,000, a portion of such 2021 Bond (\$250,000 or any integral multiple of \$5,000 in excess thereof) may be redeemed, in which case the Registrar shall, without charge to the owner of such 2021 Bond, authenticate and issue a replacement 2021 Bond or 2021 Bonds for the unredeemed portion thereof. In the case of a partial redemption of 2021 Bonds of a single maturity pursuant to Subsection A of this Section, the Paying Agent shall select the 2021 Bonds to be redeemed by lot at such time as directed by the Authority (but at least 30 days prior to the redemption date), and if such selection is more than 60 days before a redemption date, shall direct the Registrar to appropriately identify the 2021 Bonds so called for redemption by stamping them at the time any 2021 Bond so selected for redemption is presented to the Registrar for stamping or for transfer or exchange, or by such other method of identification as deemed adequate by the Registrar, and any 2021 Bond or 2021 Bonds issued in exchange for, or to replace, any 2021 Bond or 2021 Bonds so called for prior redemption shall likewise be stamped or otherwise identified.

Section 304. Notice of Redemption. Unless waived by any registered owner of a 2021 Bond to be redeemed, notice of prior redemption shall be given electronically by the Registrar, at least 30 days but not more than 60 days prior to the Redemption Date to the registered owner of any 2021 Bond all or a part of which is called for prior redemption at his or her address as it last appears on the registration records kept by the Registrar. Actual receipt of notice by the any registered owner of 2021 Bonds shall not be a condition precedent to redemption of such 2021 Bonds. Failure to give such notice to the registered owner of any 2021 Bond designated for redemption, or any defect therein, shall not affect the validity of the proceedings for the redemption

of any other 2021 Bond. A certificate by the Registrar that notice of call and redemption has been given as provided in this Section shall be conclusive as against all parties; and no owner whose 2021 Bond is called for redemption or any other owner of any 2021 Bond may object thereto or may object to the cessation of interest on the Redemption Date on the ground that he failed actually to receive such notice of redemption.

All official notices of redemption shall be dated and shall state:

- (1) the redemption date,
- (2) the purchase prices,
- (3) the identification by CUSIP number and maturity (and, in the case of partial redemption of a maturity, other appropriate identification) of the 2021 Bonds to be redeemed,
- (4) that on the redemption date the redemption price will become due and payable upon each such 2021 Bond or portion thereof called for redemption, and that interest thereon shall cease to accrue from and after said date, and
- (5) the place where such 2021 Bonds are to be surrendered for payment of the redemption price, which place of payment shall be the principal office of the Paying Agent or such other office as designated by the Paying Agent (accrued interest to the redemption date being payable by mail or as otherwise provided in this Instrument).

Unless waived by the Registrar, written direction to give a notice of optional redemption shall be given by the Authority to the Registrar in writing not less than 60 days prior to the redemption date. No such written direction need be provided for mandatory redemption under Section 303B, and the Registrar shall call Bonds in accordance with Section 303B without further direction.

Each notice may further state that such redemption shall be conditional upon the Paying Agent receiving for deposit in the Bond Fund on or prior to the date fixed for redemption, monies authorized by the Authority to be deposited into the Bond Fund that are sufficient to pay the principal of and interest and prior redemption premium, if any, on the 2021 Bonds to be redeemed and that if such monies have not been so received, the notice shall be of no force and effect and the Authority shall not be required to redeem such 2021 Bonds. Unless waived by the Registrar, the Authority, not less than 60 days prior to the redemption date, shall advise the Registrar, in writing, of its election to conditionally redeem any 2021 Bonds as provided in this paragraph.

Official notice of redemption having been given as aforesaid, the 2021 Bonds or portions of 2021 Bonds so to be redeemed shall, on the redemption date, become due and payable at the redemption price therein specified, and from and after such date (unless the Authority shall not have deposited payment of the redemption price into the Bond Fund) such 2021 Bonds or portions of 2021 Bonds shall cease to bear interest. Upon surrender of such 2021 Bonds for redemption in accordance with said notice, such 2021 Bonds shall be paid by the Paying Agent at the redemption price, if the Authority has deposited with the Paying Agent an amount of money sufficient to pay the

redemption price. Installments of interest due on or prior to the redemption date shall be payable as herein provided for payment of interest. Upon partial redemption of any 2021 Bond, the applicable amount being redeemed shall be reflected on the prepayment panel appended to the 2021 Bonds. All 2021 Bonds which have been redeemed shall be canceled and destroyed by the Registrar and shall not be reissued.

Section 305. Negotiability. The 2021 Bonds shall be fully negotiable within the meaning of and for the purpose of the Uniform Commercial Code - Investment Securities and each owner shall possess all rights enjoyed by holders of negotiable instruments under the Uniform Commercial Code - Investment Securities.

Section 306. Registration, Transfer and Exchange of Bonds. Except as otherwise provided in Section 303 hereof:

A. Records for the registration and transfer of the 2021 Bonds shall be kept by the Registrar. Upon the surrender of any 2021 Bond at the Registrar, duly endorsed for transfer or accompanied by an assignment in form satisfactory to the Registrar duly executed by the owner or his or her attorney duly authorized in writing, the Registrar shall authenticate and deliver in the name of the transferee or transferees a new 2021 Bond or 2021 Bonds of a like aggregate principal amount and of the same maturity, bearing a number or numbers not previously assigned. 2021 Bonds may be exchanged at the Registrar for an equal aggregate principal amount of 2021 Bonds of the same maturity of other authorized denominations, as provided in Section 302 hereof. The Registrar shall authenticate and deliver a 2021 Bond or 2021 Bonds which the owner making the exchange is entitled to receive, bearing a number or numbers not previously assigned. For every exchange or transfer of 2021 Bonds requested by the owner thereof, the Registrar may make a sufficient charge to the bondholder to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer and may charge a sum sufficient to pay the cost of preparing and authenticating a new 2021 Bond. No such charge shall be levied in the case of an exchange resulting from an optional redemption of a 2021 Bond. Notwithstanding the foregoing, the 2021 Bonds may only be transferred in whole or in part to (i) any affiliate of the registered owner or to a trust or custodial arrangement established by the registered owner or an affiliate of the registered owner, the owners of any beneficial interest in which are "qualified institutional buyers" as defined in Rule 144A promulgated under the Securities Act of 1933, as amended (the "1933 Act"), or an "accredited investor" as defined in Rule 501 of Regulation D under the 1933 Act, and subject to the limitations, if any, set forth in any Continuing Covenant Agreement or (ii) one or more transferees each of which constitutes (1) a "qualified institutional buyer" as defined in Rule 144A promulgated under the 1933 Act, or an "accredited investor" as defined in Rule 501 of Regulation D under the 1933 Act, and (2) (2) a commercial bank organized under the laws of the United States, or any state thereof, or any other country which is a member of the Organization for Economic Cooperation and Development, or a political subdivision of any such country, and, in any such case, having a combined capital and surplus, determined as of the date of any transfer pursuant to this Section, of not less than \$5,000,000,000, and in each case, unless otherwise not required by any Continuing Covenant Agreement, upon receipt by the Authority and the Paying Agent of an investor letter in the form set forth in any Continuing Covenant Agreement or, if no Continuing Covenant Agreement then exists with respect to the 2021 Bonds, in a form reasonably acceptable to the Authority.

B. The Registrar shall not be required to transfer or exchange (i) any 2021 Bond, or portion thereof, subject to redemption during a period beginning at the opening of business fifteen (15) days before the date of mailing by the Registrar of a notice of prior redemption of 2021 Bonds and ending at the close of business on the date of such mailing; (ii) any 2021 Bond, or any portion thereof, subject to redemption after the mailing of such notice as herein provided; or (iii) any 2021 Bond, or portion thereof, during a period beginning fifteen (15) days before the maturity date of such 2021 Bond presented for transfer.

C. The person in whose name any 2021 Bond shall be registered, on the registration records kept by the Registrar, shall be deemed and regarded as the absolute owner thereof for the purpose of payment and for all other purposes (except to the extent otherwise provided in Section 302 hereof with respect to interest payments); and payment of or on account of either principal or interest on any 2021 Bond shall be made only to or upon the written order of the owner thereof or his or her legal representative. All such payments shall be valid and effectual to discharge the liability upon such 2021 Bond to the extent of the sum or sums so paid.

D. If any 2021 Bond shall be lost, stolen, destroyed or mutilated, the Registrar shall, upon receipt of such evidence, information or indemnity relating thereto as it or the Authority may reasonably require, and upon payment by the holder of all expenses in connection therewith, authenticate and deliver a replacement 2021 Bond or 2021 Bonds of a like aggregate principal amount and of the same maturity, bearing a number or numbers not previously assigned. If such lost, stolen, destroyed or mutilated 2021 Bond shall have matured or shall have been called for redemption, the Registrar may direct that such 2021 Bond be paid by the Paying Agent in lieu of replacement.

E. Whenever any 2021 Bond shall be surrendered to the Paying Agent upon payment thereof, or to the Registrar for transfer, exchange or replacement as provided herein, such 2021 Bond shall be promptly canceled or destroyed by the Paying Agent or Registrar, and counterparts of a certificate of such cancellation or proof of destruction shall be furnished by the Paying Agent or Registrar to the Board upon request.

Section 307. Reserved.

Section 308. Execution of Bonds. The 2021 Bonds shall be executed as follows:

A. Filings with Secretary of State. Pursuant to NRS 350.638 and to the act cited as the Uniform Facsimile Signatures of Public Officials Act, cited as chapter 351 of NRS, and prior to the execution of any 2021 Bonds by facsimile signature, the Chairman, the Treasurer, and the Secretary shall each file with the Secretary of State of the State of Nevada such officer's manual signature certified by such officer under oath.

B. Manner of Execution. Pursuant to NRS 350.636, each Bond shall be signed and executed in the name and on behalf of the Authority with the manual or reproduced facsimile of the signature of the Chairman, and shall be countersigned and executed with a manual or facsimile signature of the Treasurer; each Bond shall be authenticated with the manual or facsimile

impression of the official seal of the Authority; and each Bond shall be signed, subscribed, executed, and attested by the manual or facsimile signature of the Secretary.

Section 309. Use of Predecessor's Signature. The 2021 Bonds bearing the signatures of the officers in office at the time of the signing thereof shall be the valid and binding obligations of the Authority, notwithstanding that before the delivery thereof and the payment thereof any or all of the individuals whose signatures appear thereon shall have ceased to fill their respective offices. At the time of the execution of the 2021 Bonds and of a signature certificate pertaining thereto the Chairman, the Treasurer, and the Secretary, respectively, may adopt as and for his own signature the signature of his predecessor in office if such signature appears upon any of the 2021 Bonds pertaining thereto.

Section 310. Authentication of the Bonds. No 2021 Bond shall be valid or obligatory for any purpose unless the certificate of authentication thereon, substantially in the form hereinafter provided, has been duly manually executed by the Registrar. By authenticating any of the 2021 Bonds initially delivered pursuant to this Instrument, the Registrar shall be deemed to have assented to all of the provisions of this Instrument.

Section 311. Incontestable Recital in Bonds. Pursuant to NRS 350.628, each 2021 Bond shall recite that it is issued pursuant to the Authority Act, the Supplemental Bond Act and to the Bond Act, which recital shall be conclusive evidence of the validity of the 2021 Bonds and the regularity of their issuance.

Section 312. State Tax Exemption. The 2021 Bonds and the income therefrom are exempt from all State, County, and municipal taxation, except for the tax on estates imposed pursuant to the provisions of chapter 375A of NRS and the tax on generation-skipping transfers imposed pursuant to chapter 375B of NRS.

Section 313. Bond Execution. The Chairman, the Treasurer, and the Secretary are hereby authorized and directed to prepare and to execute the 2021 Bonds as herein provided.

Section 314. Bond Delivery. After registration, execution and authentication, the TMWA Manager or the Chief Financial Officer shall cause the 2021 Bonds to be delivered to the Initial Purchaser, upon payment being made therefor on the terms of the sale of the 2021 Bonds.

Section 315. Bond Form. Subject to the provisions of this Instrument, each 2021 Bond shall be, respectively, in substantially the following form, with such omissions, insertions, endorsements, and variations as to any recitals of fact or other provisions as may be required by the circumstances, be required or permitted by this Instrument, including, without limitation, if applicable, a statement of insurance to guarantee the payment of the principal of and the interest on each 2021 Bond of a designated portion or all of the issue by any insurer or insurers thereof, or be consistent with this Instrument and necessary or appropriate to conform to the rules and requirements of any governmental authority or any usage or requirement of law with respect thereto:

(Form of Bond)

TRANSFER OF THIS BOND OTHER THAN BY REGISTRATION IS NOT EFFECTIVE AND THIS BOND IS SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AS DESCRIBED HEREIN AND IN THE RESOLUTION.

TRUCKEE MEADOWS WATER AUTHORITY
SUBORDINATE WATER REVENUE REFUNDING BOND
SERIES 2021

No. _____ \$ _____

Interest Rate Maturity Date Dated As of CUSIP
_____ % per annum _____ 1, ____ _____, 2021

REGISTERED OWNER:

PRINCIPAL AMOUNT: _____ DOLLARS

The Truckee Meadows Water Authority, in Washoe County, in the State of Nevada (the "Authority", "County", and the "State", respectively) for value received, hereby acknowledges itself to be indebted and for value received promises to pay to the registered owner specified above, or registered assigns, the principal amount specified above, on the maturity date specified above (unless called for earlier redemption), and to pay interest thereon on June 1 and December 1 of each year, commencing on December 1, 2021, at the interest rate per annum specified above (the "Interest Rate"), until the principal sum is paid or payment has been provided for or, if such payment date is not a business day, on or before the next succeeding business day. This bond shall bear interest from the most recent interest payment date to which interest has been paid or, if no interest has been paid, from the date of the initial delivery of the series of bonds of which this bond is one (the "Bond"). Notwithstanding the foregoing, this Bond shall bear interest at the Default Rate or the Taxable Rate instead of the Interest Rate from the dates, and to the extent required, by the Resolution (as defined below) and any Continuing Covenant Agreement. Except as otherwise provided in any Continuing Covenant Agreement, the principal of and redemption premium, if any, on this Bond are payable in accordance with the wire transfer instructions provided by the Holder of such Bond on record with The Bank of New York Mellon Trust Company, N.A., who is acting as the Authority's registrar and paying agent for the Bonds (the "Registrar" and the "Paying Agent," as applicable) and without requirement of presentment or surrender; provided, however, that and upon presentation and surrender at the office of the Paying Agent or such other office as designated by the Paying Agent may be required for payment of the final maturity of the 2021 Bonds. Interest on this Bond will be paid on each interest payment date (or, if such date is not a business day, on the next succeeding business day) by check or draft mailed, by first class mail, to the person in whose name this Bond or any predecessor bond is registered (the "registered owner") in the registration records of the Authority maintained by the Registrar, at the address appearing thereon, as of the close of business

on the 15th day of the calendar month next preceding such interest payment date (the "Regular Record Date"). Any such interest not so timely paid or duly provided for shall cease to be payable to the person who is the registered owner as of the close of business on the Regular Record Date and shall be payable to the person who is the registered owner as of the close of business on a special record date for the payment of any defaulted interest (the "Special Record Date"). Such Special Record Date shall be fixed by the Registrar whenever moneys become available for payment of the defaulted interest, and notice of the Special Record Date shall be given to the registered owner not less than ten (10) days prior thereto. Upon the occurrence and during the continuation of an event of default set forth in Section 1303 of the Resolution (as defined below), interest on the Bonds shall be payable at the Default Rate (as defined in the Continuing Covenant Agreement) is payable as set forth in the Continuing Covenant Agreement. Alternative means of payment of interest may be used if mutually agreed to by the registered owner and the Paying Agent, as provided in the Resolution of the Board of Directors of the Authority (the "Board") authorizing the issuance of the Bonds and designated in Section 101 thereof as the "2021 Refunding Bond Resolution" (the "Resolution"), duly adopted by the Board on May 20, 2021. All such payments shall be made in lawful money of the United States of America without deduction for any service charges of the Paying Agent or Registrar. If this Bond is not paid upon presentation at its maturity, interest at the rate specified above shall continue to be borne hereby until the principal hereof is discharged as provided in the Resolution.

This Bond is one of a series of Bonds issued by the Authority upon its behalf and upon the credit thereof, for the purpose of defraying wholly or in part of the cost of refunding certain outstanding commercial paper notes of the Authority under the authority of and in full compliance with the Constitution and laws of the State, and pursuant to the Resolution.

The Bonds are issued pursuant to NRS 277.080 to 277.180, inclusive (the "Authority Act"); pursuant to NRS 350.500 through 350.720, and all laws amendatory thereof designated in NRS 350.500 thereof as the Local Government Securities Law (the "Bond Act"); pursuant to NRS chapter 348 (the "Supplemental Bond Act"); and pursuant to NRS 350.628, Bond Act, this recital is conclusive evidence of the validity of the Bonds and the regularity of their issuance; and the Bonds and the income therefrom are exempt from all State, County, and municipal taxation, except for the tax on estates imposed pursuant to chapter 375A of NRS and the tax on generation skipping transfers imposed pursuant to chapter 375B of NRS.

Subject to any limitations and requirements (including, payment of a make-whole fee to the holders thereof, if any) set forth in any Continuing Covenant Agreement, the Bonds, or portions thereof, are subject to redemption prior to their respective maturities, at the option of the Authority as provided in the Resolution, the Certificate of the Chief Financial Officer and any applicable Continuing Covenant Agreement.

[Certain of the Bonds are also subject to mandatory sinking fund redemption as provided in the Resolution and the Certificate of the Chief Financial Officer.]

Redemption shall be made upon not less than 30 days prior notice in the manner and upon the conditions provided in the Resolution. If this Bond is called for redemption and payment is

duly provided for as specified in the Resolution, interest shall cease to accrue hereon from and after the date fixed for redemption.

The Bonds do not constitute a debt or an indebtedness of the Authority within the meaning of any constitutional or statutory provision or limitation, and shall not be considered or held to be general obligations of the Authority. The Authority has not pledged its full faith and credit for the payment of the Bonds. The Bonds are special obligations and are payable and collectible solely out of and are secured by an irrevocable pledge of the gross revenues (the "Gross Revenues") derived from the operation and use of, and otherwise pertaining to, certain water facilities of the Authority (herein the "TMWA Water System"), after provision is made for the payment of all necessary and reasonable Operation and Maintenance Expenses of the TMWA Water System (the "Net Revenues"), which Net Revenues are so pledged, as more specifically provided in the Resolution; and the holder hereof may not look to any general or other fund for the payment of the principal of, interest on, and any prior redemption premiums due on this Bond (the "Bond Requirements") of this obligation except the special funds pledged therefor.

Payment of the Bond Requirements due in connection with the Bonds shall be made solely from and as security for such payment there are irrevocably (but not exclusively) pledged, pursuant to the Resolution two special and separate subaccounts identified as the "Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Interest Account" and the "Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Principal Account," which two subaccounts are within the "Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Bond Fund" (the "Bond Fund"), into which two subaccounts within the Bond Fund the Authority covenants to pay from the Net Revenues sums sufficient to pay when due the Bond Requirements of the Bonds and any additional Parity Securities hereafter issued and payable from such Net Revenues.

The Bonds are equally and ratably secured by a lien on the Net Revenues, and the Bonds constitute an irrevocable lien (but not necessarily an exclusive lien) upon the Net Revenues, subject to and subordinate to the lien thereon of any Superior Securities, and on a parity with the lien thereon of any Parity Securities hereafter issued; provided that the lien of the Continuing Covenant Agreement Obligations on the Net Revenues shall be subordinate to the Authority's obligations to pay the Bond Requirements of the Bonds. Bonds and other securities, subject to expressed conditions, may be issued and made payable from the Net Revenues of the TMWA Water System having a lien thereon subordinate and junior to the lien or, subject to additional expressed conditions, having a lien thereon on superior or on a parity with the lien of the Bonds, in accordance with the provisions of the Resolution.

Reference is made to the Resolution and to the Bond Act, for an additional description of the nature and extent of the security for the Bonds, the accounts, funds, or revenues pledged, the nature and extent and manner of enforcement of the pledge, the rights and remedies of the registered owners of the Bonds with respect thereto, the terms and conditions upon which the Bonds are issued, and a statement of rights, duties, immunities, and obligations of the Authority, and other rights and remedies of the owners of the Bonds.

To the extent and in the respects permitted by the Resolution, the provisions of the Resolution may be amended or otherwise modified by action of the Authority taken in the manner and subject to the conditions and exceptions prescribed in the Resolution. The pledge of Net Revenues under the Resolution may be discharged at or prior to the respective maturities or prior redemption of the Bonds upon the making of provision for the payment thereof on the terms and conditions set forth in the Resolution.

This Bond shall not be entitled to any benefit under the Resolution, or be valid or obligatory for any purpose until the Registrar shall have manually signed the certificate of authentication hereon.

The Bonds are issuable solely in fully registered form in denominations of \$250,000 each or (subject to certain conditions) any integral multiple of \$5,000 thereof, and are exchangeable for fully registered Bonds of the same maturity in equivalent aggregate principal amounts and in authorized denominations at the aforesaid office of the Registrar but only in the manner, subject to the limitations, and on payment of charges provided in the Resolution.

This Bond is fully transferable by the registered owner in person or by his or her duly authorized attorney on the registration records kept by the Registrar upon surrender of this Bond together with a duly executed written instrument of transfer satisfactory to the Registrar. Upon such transfer a new fully registered Bond of authorized denomination or denominations of the same aggregate principal amount and maturity will be issued to the transferee in exchange for this Bond, on payment of the charges and subject to the terms and conditions as set forth in the Resolution. Notwithstanding the foregoing, this Bond may only be transferred in whole or in part to (i) any affiliate of the registered owner or to a trust or custodial arrangement established by the registered owner or an affiliate of the registered owner, the owners of any beneficial interest in which are "qualified institutional buyers" as defined in Rule 144A promulgated under the Securities Act of 1933, as amended (the "1933 Act"), or an "accredited investor" as defined in Rule 501 of Regulation D under the 1933 Act, and subject to the limitations, if any, set forth in any Continuing Covenant Agreement or (ii) one or more transferees each of which constitutes (1) a "qualified institutional buyer" as defined in Rule 144A promulgated under the 1933 Act, or an "accredited investor" as defined in Rule 501 of Regulation D under the 1933 Act, and (2) a commercial bank organized under the laws of the United States, or any state thereof, or any other country which is a member of the Organization for Economic Cooperation and Development, or a political subdivision of any such country, and, in any such case, having a combined capital and surplus, determined as of the date of any transfer pursuant to this Section, of not less than \$5,000,000,000, and in each case, unless otherwise not required by any Continuing Covenant Agreement, upon receipt by the Authority and the Paying Agent of an investor letter in the form set forth in any Continuing Covenant Agreement or, if no Continuing Covenant Agreement then exists with respect to this Bond, in a form reasonably acceptable to the Authority.

The Authority and the Registrar and Paying Agent may deem and treat the person in whose name this Bond is registered as the absolute owner hereof for the purpose of payment and for all other purposes, except to the extent otherwise provided hereinabove and in the Resolution with respect to Regular and Special Record Dates for the payment of interest.

The Registrar will not be required to transfer or exchange (i) any Bond, or portion thereof, subject to redemption during the period beginning at the opening of business fifteen (15) days before the day of mailing by the Registrar of a notice of prior redemption of Bonds and ending at the close of business on the day of such mailing; (ii) any Bond, or portion thereof, subject to redemption after the mailing of such notice; or (iii) any Bond, or portion thereof, during a period beginning fifteen (15) days before the maturity date of such Bond presented for transfer.

It is further certified, recited, and warranted that all the requirements of law have been fully complied with by the proper officers of the Authority in the issuance of this bond; that it is issued pursuant to and in strict conformity with the Constitution and laws of the State, and particularly under the terms and provisions of the Authority Act, the Bond Act, and all laws supplemental thereto, and with the Resolution; and that this Bond does not contravene any constitutional or statutory limitation.

No transfer of this Bond shall be valid unless made on the registration records maintained at the principal office of the Registrar by the registered owner or his or her attorney duly authorized in writing.

No recourse shall be had for the payment of the Bond Requirements of this Bond or for any claim based thereon or otherwise in respect to the Resolution or other instrument pertaining thereto against any individual member of the Board, or any officer or other agent of the Authority, past, present, or future, either directly or indirectly through the Board or otherwise, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any penalty or otherwise, all such liability, if any, being by the acceptance of this Bond and as a part of the consideration of its issuance specially waived and released.

In the event of any conflict between the terms of this Bond and the terms of the Resolution, the terms of the Resolution shall control.

[Remainder of page intentionally left blank.]

(Form of Registrar's Certificate of Authentication for Bonds)

Date of authentication
and registration _____

This is one of the Bonds described in the within-mentioned Resolution, and this Bond has been duly registered on the registration records kept by the undersigned as Registrar for such Bonds.

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A., as Registrar

By Manual Signature
Authorized Officer

(End of Form of Registrar's Certificate of Authentication for Bonds)

(Form of Prepayment Panel)

The following installments of principal (or portions thereof) of this Bond have been prepaid by the Truckee Meadows Water Authority, in accordance with the terms of the Resolution authorizing the issuance of this Bond:

<u>Date of Prepayment</u>	<u>Principal Amount Prepaid</u>	<u>Signature of Registrar</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

(End of Form of Prepayment Panel)

(Form of Assignment for Bonds)

For value received, the undersigned hereby sells, assigns and transfers unto _____ the within Bond and hereby irrevocably constitutes and appoints _____ attorney, to transfer the same on the records kept for registration of the within Bond, with full power of substitution in the premises.

Dated: _____

Signature Guaranteed:

Name of Transferee:

Address of Transferee:

Social Security or other tax
identification number of
Transferee:

NOTE: The signature to this Assignment must correspond with the name as written on the face of the within Bond in every particular, without alteration or enlargement or any change whatsoever.

NOTICE: TRANSFER FEES MUST BE PAID TO THE REGISTRAR IN ORDER TO TRANSFER OR EXCHANGE THIS BOND AS PROVIDED IN THE WITHIN-MENTIONED RESOLUTION.

(End of Form of Assignment for Bonds)

ARTICLE IV

USE OF BOND PROCEEDS AND OTHER REVENUES

Section 401. Disposition of Bond Proceeds. The proceeds of the 2021 Bonds, upon the receipt thereof at any time, or from time to time, shall be applied in the following manner:

(1) Escrow Account. First, there shall be: (i) transferred directly to the issuer of the irrevocable transferable direct-pay letter of credit supporting the Refunded Notes an amount fully sufficient, together with any other legally available moneys of the Authority, to pay and cancel any Refunded Notes (including any fees due in connection therewith) maturing on the date of issuance of the Bonds; and/or (ii) deposited into a special account hereby created and designated as the "Truckee Meadows Water Authority, Subordinate Water Revenue Refunding Bonds, Series 2021, Escrow Account" (the "Escrow Account") to be held by the Escrow Agent, an amount fully sufficient to establish the Escrow Account, together with any other legally available moneys of the Authority, to purchase the Federal Securities designated in the Escrow Agreement for credit to the Escrow Account, together with any uninvested funds, to be used solely for the purpose of effecting the Refunding Project, including, without limitation, defeasing and paying the principal of and accrued interest due on the Refunded Notes (including any fees due in connection therewith) on the applicable maturity date(s) of the Refunded Notes (each a "Refunded Notes Payment Date"), as provided in the Escrow Agreement.

(2) Costs of Issuance Account. Second, an amount sufficient to pay the costs of issuing the 2021 Bonds shall be deposited into the Costs of Issuance Account, a special account to be held under the control of the Authority hereby created, and shall be applied to the costs of issuing the 2021 Bonds. After payment of the costs of issuance, if there is a balance remaining in the Costs of Issuance Account, the remaining balance shall be deposited in the Bond Fund.

Section 402. Purchaser Not Responsible. The validity of the 2021 Bonds shall neither be dependent upon nor be affected by the validity or regularity of any proceedings relating to the Refunding Project. No Purchaser of the 2021 Bonds, any associate thereof, and any subsequent holder of the 2021 Bonds shall in any manner be responsible for the application or disposal by the Authority or by any of the officers, agents, and employees of the Authority of the moneys derived from the sale of the 2021 Bonds or of any other moneys herein designated. This provision does not relieve the Escrow Agent of its duties under the Escrow Agreement.

Section 403. Maintenance of Escrow Account; Notices for Refunded Notes.

A. The Escrow Account shall be maintained by the Authority in an amount at the time of those initial deposits therein and at all times subsequently at least sufficient, together with the known minimum yield to be derived from the initial investment and any temporary reinvestment of the deposits therein or any part thereof in Federal Securities, to pay the interest due in connection with the Refunded Notes, both accrued and not accrued, as the same become due on each Refunded Notes Payment Date; and to pay, on each Refunded Notes Payment Date, the Refunded Notes outstanding, in accordance with the resolution of the Board authorizing the issuance of the Refunded Notes.

B. Moneys shall be withdrawn by the Escrow Agent from the Escrow Account in sufficient amounts and at such times to permit the payment without default of principal and interest due in connection with the Refunded Notes in accordance with the provisions of the Escrow Agreement. Any moneys remaining in the Escrow Account after provision shall have been made for the payment in full of the Refunded Notes shall be applied to any lawful purpose of the Authority as the Board may hereafter determine.

C. If for any reason the amount in the Escrow Account shall at any time be insufficient for its purpose, the Authority shall forthwith from the first moneys available therefore deposit in such account such additional moneys as shall be necessary to permit the payment in full of the principal of and interest due in connection with the Refunded Notes as herein provided.

D. If the 2021 Bonds are issued, the Authority hereby elects to pay and cancel the Refunded Notes on the applicable maturity date(s) of the Refunded Notes at a price equal to the principal amount thereof plus accrued interest thereon to the applicable maturity date(s). In connection therewith, the officers of the Authority are hereby authorized and directed to give any and all necessary notices to accomplish the Refunding Project, including, without limitation, applicable notices to the issuing and paying agent for the Refunded Notes, the dealer for the Refunded Notes and the issuer of the irrevocable transferable direct-pay letter of credit supporting the Refunded Notes.

ARTICLE V

ADMINISTRATION OF AND ACCOUNTING FOR PLEDGED REVENUES

Section 501. Pledge Securing Bonds. The Net Revenues and all moneys and securities paid or to be paid to or held or to be held in any account or subaccount under this article or under Section 401 hereof, are hereby pledged and a lien is placed thereon to secure the payment of the Bond Requirements of the 2021 Bonds and any Continuing Covenant Agreement Obligations. This pledge of and lien on Net Revenues shall be valid and binding from and after the date of the first delivery of any 2021 Bonds; and the moneys, as received by the Authority and hereby pledged, shall immediately be subject to the lien of this pledge of and lien on Net Revenues without any physical delivery thereof, any filing, or further act. The lien on the Net Revenues and the obligation to perform the contractual provisions hereby made shall be subject to and subordinate to the lien thereon of any Superior Securities, and on a parity with the lien thereon of any Parity Securities hereafter issued; provided that the lien of the Continuing Covenant Agreement Obligations on the Net Revenues shall be subordinate to the Authority's obligations to pay the Bond Requirements of the 2021 Bonds. The lien of this pledge of and lien on Net Revenues shall be valid and binding as against all parties having claims of any kind in tort, contract, or otherwise against the Authority (except as herein otherwise provided) irrespective of whether such parties have notice thereof.

Section 502. Establishment of Trustee Accounts and Subaccounts. The Authority hereby authorizes the following special and separate subaccounts within the Bond Fund, hereby created and designated the "Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Bond Fund," which shall be held by the Trustee, within which are hereby designated:

A. Interest Account. The "Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Interest Account" (herein the "Interest Account");

B. Principal Account. The "Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Principal Account" (herein the "Principal Account"); and

Section 503. Continuation of Authority Accounts. The Authority hereby continues the previously established and authorized following special and separate accounts, which shall be under the control of the Authority, which shall not be held by the Trustee (except in a capacity other than as Trustee, e.g., as custodian), and which are designated:

A. Revenue Fund. The "Truckee Meadows Water Authority, TMWA Water System Gross Revenues Fund" (herein the "Revenue Fund").

B. Operation and Maintenance Account. The "Truckee Meadows Water Authority, TMWA Water System Operation and Maintenance Account" (herein the "Operation and Maintenance Account");

C. Operation and Maintenance Reserve Account. The “Truckee Meadows Water Authority, TMWA Water System Operation and Maintenance Reserve Account” (herein the “O & M Reserve Account”).

D. Renewal and Replacement Account. The “Truckee Meadows Water Authority, TMWA Water System Renewal and Replacement Account” (herein the “Renewal and Replacement Account”).

E. Rate Stabilization Account. The “Truckee Meadows Water Authority, TMWA Water System Rate Stabilization Account” (herein the “Rate Stabilization Account”).

F. General Purpose Account. The “Truckee Meadows Water Authority, TMWA Water System General Purpose Account” (herein the “General Purpose Account”).

Section 504. Revenue Fund Deposits. So long as any of the 2021 Bonds shall be Outstanding, all Gross Revenues, upon their receipt from time to time by the Authority, shall be deposited at least weekly, as far as practicable, and shall be set aside and credited immediately to the Revenue Fund.

Section 505. Administration of Revenue Fund. So long as any of the 2021 Bonds hereby authorized shall be Outstanding, in each Fiscal Year the Revenue Fund shall continue to be administered, and the moneys on deposit therein shall continue to be applied in the order of priority, all as provided in Sections 506 through 516 hereof.

Section 506. Operation and Maintenance Expenses. First, as a first charge on the Revenue Fund, from time to time there shall be set aside in and credited to the Operation and Maintenance Account, moneys sufficient to pay Operation and Maintenance Expenses by the last day of the month that is at least one month before such expenses are to be paid, and thereupon they shall be promptly paid. Any surplus remaining at the end of the Fiscal Year and not needed for Operation and Maintenance Expenses shall be transferred for credit to the Revenue Fund and shall be used for the purposes thereof, as herein provided.

Section 507. Superior Bond Fund Payments. Second, payments shall be made, as required, from the Revenue Fund into the bond funds created by the resolutions authorizing any Superior Securities for the payment of the principal of and interest (including payments due on any Qualified Swap) on the Superior Securities of the Authority, when due and payable, and any reasonably required reserve accounts and rebate funds therefor.

Section 508. Payment of 2021 Bonds. Third, and subject to the aforesaid provisions, from any moneys remaining in the Revenue Fund, and concurrently with the transfers into the Interest Account and Principal Account required by any Parity Securities hereafter issued, but subsequent to the payments required by Sections 506 and 507 and subject to the provisions of Section 519 hereof, any moneys remaining in the Revenue Fund, there shall be transferred to the Trustee and credited to the Bond Fund, the following:

A. Interest Payments. Monthly, into the Interest Account, within the Bond Fund, commencing on the first day of the month that is one full month after the delivery date of the 2021 Bonds, and on the first day of the month succeeding the delivery of any other Parity Securities hereafter issued and payable from the Bond Fund, an amount in substantially equal monthly installments necessary, together with any other moneys from time to time available therefor or from whatever source, to pay the next accruing installment of interest on the 2021 Bonds and any additional Parity Securities then Outstanding (including payments due on any Qualified Swap) and monthly thereafter, commencing on each interest payment date, the amount necessary to accumulate the next accruing installment of interest on the 2021 Bonds and any additional Parity Securities then Outstanding (including payments due on any Qualified Swap) in equal monthly installments prior to the due date thereof, except to the extent any other moneys are available therefor on the due date of such installment.

B. Principal Payments. Monthly, into the Principal Account, within the Bond Fund, commencing on the first day of the month of the year immediately preceding the first principal payment date of the 2021 Bonds or any Parity Securities hereafter issued and payable from the Bond Fund (i.e., 12 months prior to the first date on which the principal of such bonds is due), an amount in substantially equal monthly installments necessary, together with any other moneys from time to time available therefor from whatever source, to pay the next maturing installment of principal (including any mandatory sinking fund or prior redemption payments then due) of the 2021 Bonds and any additional Parity Securities then Outstanding, and monthly thereafter, commencing on each principal payment date, the amount necessary to accumulate the next maturing installment of principal (including any mandatory sinking fund or prior redemption payments then due) of the 2021 Bonds, and any such additional Parity Securities then Outstanding, in equal monthly installments prior to the due date thereof, except to the extent any other moneys are available therefor on the due date of such installment.

The moneys credited to the Interest Account and the Principal Account within the Bond Fund shall be used to pay the Bond Requirements of the 2021 Bonds and any additional Parity Securities hereafter issued as such Bond Requirements become due.

Section 509. Reserve Payments. Fourth, but subsequent to the payments into the Interest Account and the Principal Account within the Bond Fund, except as provided in Sections 512 and 1135 hereof, from any moneys remaining in the Revenue Fund there shall be transferred to the Trustee and credited monthly to any reserve account established in connection with any Parity Securities, such amount as may be required by the resolution or other instrument authorizing such Parity Securities. No reserve account is being established in connection with the issuance of the 2021 Bonds.

Section 510. Continuing Covenant Agreement Obligations. Fifth, payments shall be made from the Revenue Fund to pay any Continuing Covenant Agreement Obligations then due and owing.

Section 511. Rebate Account. Sixth, and subject to the provisions hereinabove in this article, such amounts as are required to be deposited in "Truckee Meadows Water Authority, TMWA Water System Subordinate Revenue Securities, Rebate Account" (herein the "Rebate

Account”). to meet the Authority’s obligations under the covenant contained in Section 1134 hereof, in accordance with Section 148(f) of the Tax Code with respect to the 2021 Bonds. Amounts in the Rebate Account shall be used for the purpose of making the payments to the United States required by such covenant and Section 148(f) of the Tax Code. Any amounts in the Rebate Account in excess of those required to be on deposit therein by Section 1134 hereof and Section 148(f) of the Tax Code may be withdrawn therefrom and used for any lawful purpose as provided herein.

Section 512. Termination of Deposits. No payment need be made into the Interest Account or the Principal Account, or all or any other combination thereof, within the Bond Fund, if the amount in the Bond Fund totals a sum at least equal to all Bond Requirements of the Outstanding 2021 Bonds and any Outstanding Parity Securities, to their respective maturities or to any Redemption Date or Redemption Dates on which the Authority shall have exercised or shall have obligated itself to exercise its option to redeem prior to their respective maturities the 2021 Bonds and any Parity Securities (or any part thereof) then Outstanding and thereafter maturing, whichever date is the earlier, if any, and both accrued and not accrued, in which case moneys in those 3 subaccounts in an amount at least equal to such Bond Requirements, except for any interest or other gain to accrue from any investment of moneys in Federal securities or otherwise pursuant to Article VI hereof from the time of any such investment to the time or respective times the proceeds of any such investment or deposit shall be needed for such payment, shall be used, together with any such gain from such investments, solely to pay such Bond Requirements as the same become due; and any moneys in excess thereof in those 3 subaccounts and any other moneys derived from the Pledged Revenues may be used in any lawful manner determined by the Board or the TMWA Manager, if the TMWA Manager certifies that the Rebate Account is sufficiently funded to meet the requirements of 148(f) of the Tax Code.

Section 513. Operation and Maintenance Reserve Account. Seventh, and subject to the provisions hereinabove in this article, from any moneys remaining in the Revenue Fund there shall be credited to the Operation and Maintenance Reserve Account monthly, an amount sufficient to accumulate the Minimum Operation and Maintenance Reserve in 60 substantially equal monthly installments. For this purpose, in each Fiscal Year during such 60 month period the Authority will calculate the substantially equal monthly amount that would be sufficient to accumulate over the then remaining months in such 60 month period, an amount equal to the Minimum Operation and Maintenance Reserve. In any Fiscal Year, the amount of the Minimum Operation and Maintenance Reserve shall be determined based on that Fiscal Year’s budget.

After the balance in the Operation and Maintenance Reserve Account initially has reached an amount equal to the Minimum Operation and Maintenance Reserve, if, at the beginning of any Fiscal Year, the amount accounted for in the Operation and Maintenance Reserve Account is less than the Minimum Operation and Maintenance Reserve for the Fiscal Year as stated in the budget therefor, there shall be credited to the Operation and Maintenance Reserve Account, in 12 substantially equal monthly installments commencing on the first day of the Fiscal Year, an amount at least equal to the remainder of the Minimum Operation and Maintenance Reserve for the Fiscal Year less the amount accounted for in that account at the beginning of the Fiscal Year. No payment need be made into the Operation and Maintenance Reserve Account so long as the moneys therein shall then equal not less than the Minimum Operation and Maintenance Reserve. The moneys in the Operation and Maintenance Reserve Account shall be accumulated or reaccumulated and maintained

as a continuing reserve to be used only to prevent deficiencies in the payment of the TMWA Water System's Operation and Maintenance Expenses resulting from the failure to deposit into the Operation and Maintenance Account pursuant to Section 506 hereof sufficient funds to pay such expenses as the same accrue and become due. If at any time the moneys credited to the Operation and Maintenance Account are not sufficient to pay Operation and Maintenance Expenses, the Authority acting by and through the TMWA Manager or the Chief Financial Officer may requisition the additional moneys needed therefor, and thereupon such money shall be withdrawn from the Operation and Maintenance Reserve Account and transferred to the Operation and Maintenance Account. Any moneys accounted for in the Operation and Maintenance Reserve Account and exceeding the Minimum Operation and Maintenance Reserve for the then current Fiscal Year may be transferred to and deposited in the Revenue Fund.

Section 514. Renewal and Replacement Account. Eighth, and subject to the provisions hereinabove in this article, from any moneys remaining in the Revenue Fund there shall be credited to the Renewal and Replacement Account monthly, the sum of \$166,000 per month, unless the amount of \$10,000,000.00 (the "Emergency Capital Amount") is on deposit therein. If the Professional Engineer determines that the aforesaid monthly payments and the Emergency Capital Amount are insufficient or excessive for the purposes for which the Renewal and Replacement Account is established, the monthly payments into that account shall be adjusted in the amount directed by the Professional Engineer until the aggregate amount so determined by the Professional Engineer is on deposit therein, but in no event at a rate less than \$33,333.00 per month or in an aggregate amount less than \$2,000,000.00 (except for any period during which the Emergency Capital Amount is being accumulated or reaccumulated). The Authority shall expend moneys in the Renewal and Replacement Account only to make up deficiencies in the Bond Fund and to pay the cost of, and to create a reserve for the payment of the cost of, emergency capital improvements, extraordinary maintenance, repairs, renewals, and replacements to the TMWA Water System as shall not be annually recurring in nature, as determined by the Professional Engineer, unless otherwise provided by the Board.

Section 515. Rate Stabilization Account. Ninth, and subject to the provisions hereinabove in this article, from any moneys remaining in the Revenue Fund there shall be withdrawn from the Revenue Fund, and credited monthly, to the Rate Stabilization Account, an amount sufficient to accumulate in 12 substantially equal monthly installments the Rate Stabilization Amount (which shall not be less than \$500,000) as is designated by the Authority for that Fiscal Year and pertaining to the TMWA Water System. No deposit need be made into the Rate Stabilization Account if the amount therein equal or exceeds the Rate Stabilization Amount for the Fiscal Year. Such amounts shall be used for expenditure from time to time for any lawful purpose or purposes of the Authority pertaining to the Authority's TMWA Water System, and any other water facilities of the Authority, and to be held as a reserve therefor. Expenditures from the Rate Stabilization Account shall be in accordance with an annual budget for the account established by the Authority. At the beginning of each Fiscal Year any moneys accounted for in the Rate Stabilization Account, whether or not encumbered to pay obligations accrued and to accrue under any existing contract made by the Authority prior to such Fiscal Year, shall remain in the Rate Stabilization Account for the purposes of the account designated above in this Section, until expended for any such purposes. Amounts in the Rate Stabilization Account at the beginning of a

Fiscal Year which are deposited into the Revenue Fund in that Fiscal Year are Gross Revenues for Fiscal Year in which they are deposited into the Revenue Fund.

Section 516. General Purpose Account. Tenth, and subject to the provisions hereinabove in this article, from any moneys remaining in the Revenue Fund, at least annually by the end of each Fiscal Year, there shall be set aside and credited to the General Purpose Account, on or before the last day of each Fiscal Year the remaining revenues in the Revenue Fund. Moneys accounted for in such account, as may be determined and directed from time to time by the TMWA Manager within budget limitations fixed by the Board, but subject to any limitations herein or in any other contract pertaining to such account, may be withdrawn in any priority for any one, all, or any other combination of the following, as the TMWA Manager may from time to time determine:

A. Capital Costs. To pay the costs of constructing or otherwise acquiring any betterments of, enlargement of, extensions of, or any other improvements to the TMWA Water System, or any part thereof, and any equipment therefor, authorized by law;

B. Major Maintenance Costs. To pay the costs of extraordinary and major repairs, renewals, replacements, or maintenance items pertaining to any properties of the TMWA Water System of a type not recurring annually or at shorter intervals and not defrayed by the monies in the Extraordinary Maintenance Account or otherwise as Operation and Maintenance Expenses;

C. Lawful Refunds. To make any lawful refund of any Pledged Revenues due any Person;

D. Bond Requirements. To pay any bonds or other securities pertaining to the TMWA Water System and payable from the Net Revenues (regardless of whether such securities are secured by a lien thereon), including, without limitation, the 2021 Bonds, as to Bond Requirements and any other appurtenant charge, at the fixed maturity dates pertaining to such Bond Requirements, or any Redemption Date or Redemption Dates, or by purchase in the open market, or otherwise; and

E. Law Suits Obligations. To pay any obligations pertaining to the TMWA Water System and arising from a judgment against the Authority or any officer, employee, or other agent of the Authority acting within the scope of his official duties, rights, or privileges, or the scope of his employment, as the case may be, in any suit, action, or special proceedings in equity or at law, in any court of competent jurisdiction, or a settlement by the Authority of any claim to avoid or to settle such a suit, action, or special proceedings, except to the extent revenues are otherwise available to defray such an obligation, including, without limitation, insurance proceeds.

F. Lawful Purpose. For any other lawful purpose as the Authority may determine, provided that no such amount shall be used for a purpose that is not a capital or working capital expense of the Authority unless the balance in the General Purpose Account, after payment of such non-capital or non-working capital expense, is at least equal to six months of Operation and Maintenance Expenses based on the then current budget of the Authority.

Section 517. Application of General Purpose Account. Moneys shall be withdrawn from the General Purpose Account for any one, all, or other combination of such purposes

designated in Section 515 hereof pursuant to any such directive of the TMWA Manager upon approval by the Board, drawn by the TMWA Manager or the Chief Financial Officer, and countersigned by the Chairman or the Treasurer, in the same manner that other claims against the Authority are presented and paid.

Section 518. Water Fund and Water Fund Accounts. There is hereby authorized to be created a separate fund designated as the "Truckee Meadows Water Authority, Water Fund" (herein the "Water Fund"), which fund consists of a self-balancing group of accounts, including, without limitation, the respective special and separate accounts and subaccounts herein designated, and constitutes an independent fiscal and accounting entity. Separate accounts and subaccounts (other than those herein designated) pertaining to the Water Fund may from time to time be created, terminated, and otherwise modified, but in no manner inconsistent with the provisions of this Instrument.

Section 519. Repayment of Interaccount Loans. If the Authority makes an interaccount loan and transfer to any account or subaccount within the Water Fund for the benefit of the TMWA Water System to the extent hereby permitted, the Authority's obligation to repay the loan and any interest accruing thereon to the account from which the loan is made may be deemed by the Authority to be Outstanding Parity Securities thereof payable from the Net Revenues as to the Bond Requirements of such obligation in accordance with Section 508 hereof at such time or times and in such amount or amounts as the Authority may determine in accordance with an annual budget for such account or subaccount or as may otherwise be provided for the payment of such securities in this Instrument or any other instrument of the Authority.

Section 520. Funds Held for Securities. The amounts held or applied for the payment of the Bond Requirements due on any date with respect to particular 2021 Bonds, any Superior Securities, Parity Securities and any securities payable from the General Purpose Account, pending such payment, shall be set aside and held in trust for the holders of the respective securities entitled thereto by any paying agent holding moneys for such payment; and for the purposes of this Instrument, such Bond Requirements, after the due date thereof, shall no longer be considered to be unpaid or Outstanding.

ARTICLE VI

GENERAL ADMINISTRATION

Section 601. Administration of Accounts. The separate accounts and subaccounts designated in Articles IV and V hereof shall be administered as provided in this article (but not any account under Section 1201 hereof).

Section 602. Places and Times of Deposits. Each of the separate accounts and subaccounts hereinabove designated in Articles IV and V hereof shall be maintained as an account and kept separate from all other accounts solely for the purposes herein designated therefor, except as otherwise expressly stated herein. The moneys accounted for in such separate accounts and subaccounts shall be deposited in one bank account or more, except as herein otherwise provided. Nothing herein prevents the commingling of moneys accounted for in any two or more accounts or subaccounts, or both accounts and subaccounts, pertaining to the TMWA Water System, the Pledged Revenues, proceeds of securities, other moneys, or to the fund pertaining to the TMWA Water System and any other funds of the Authority (each of which funds consists of a self-balancing group of accounts and constitutes an independent fiscal and accounting entity) in any bank account or any investment in Federal Securities hereunder (but not any account under Section 1201 hereof). Each such bank account shall be continuously secured to the fullest extent required or permitted by the laws of the State for the securing of public funds, subject to the provisions of Section 1403 hereof, and shall be irrevocable and not withdrawable by anyone for any purpose other than the purpose or purposes designated therefor. Each periodic payment shall be credited to the proper account or subaccount not later than the date therefor herein designated, except that when any such date shall be a Saturday, Sunday, or a legal holiday, then such payment shall be made on or before the next preceding secular day. Notwithstanding any other provision herein to the contrary, collected moneys shall be deposited with the Paying Agent, and any other Banking Institution designated as a paying agent for any securities heretofore or hereafter authorized to be issued and payable from Pledged Revenues (or any combination thereof), at least by the day of each interest payment date or any other due date herein designated sufficient to pay the Bond Requirements then becoming due on the Outstanding 2021 Bonds and any other Outstanding securities pertaining to the TMWA Water System.

Section 603. Investment of Moneys. Any moneys in any account designated in Articles IV and V hereof (but not any account under Section 1201 hereof), and not needed for immediate use, may be invested or reinvested in any investments permitted under State law (the "permitted securities") in accordance with written or verbal instructions, which are promptly followed in writing, of the TMWA Manager or the Chief Financial Officer, except as otherwise expressly stated herein. Such investments shall mature not later than the date or dates on which the TMWA Manager or the Chief Financial Officer estimates the proceeds thereof will be needed. Any securities that mature later than 5 years after the investment therein will be revalued to their market value at least semiannually. For the purposes of any such investment or reinvestment, securities shall be deemed to mature at the earliest date on which the obligor is, on demand, obligated to pay a fixed sum in discharge of the whole of such obligations. In making each such investment or reinvestment, the Trustee may rely upon such written or verbal instructions, which are promptly followed in writing, and shall be under no duty as to the propriety of the investment or reinvestment

made in accordance with such instructions. The Trustee may sell or present for redemption, any securities so purchased whenever it shall be necessary to provide moneys to meet any required payment, transfer, withdrawal or disbursement from the fund or account to which such securities are credited, and the Trustee shall not be liable or responsible for any loss resulting from such investment.

Section 604. Permitted Investments. The TMWA Manager and the Chief Financial Officer shall have no obligation to cause the making of any investment or reinvestment hereunder, unless any moneys on hand and accounted for in any one account exceeds \$5,000.00 and at least \$5,000.00 therein will not be needed for a period of not less than 60 days. In such event, the TMWA Manager or Chief Financial Officer shall cause the investment or reinvestment in permitted securities to the extent practicable not less than substantially all the amount which will not be needed during such 60-day period, except for any moneys on deposit in an interest-bearing account of a Banking Institution, regardless of whether such moneys on deposit are evidenced by a certificate of deposit, or otherwise; but the TMWA Manager and the Chief Financial Officer are not required to invest, or so to invest in such a manner, any moneys accounted for hereunder if any such investment would contravene the provisions of the Tax Code or any other investment limitation imposed by law upon the Authority. The TMWA Manager or the Chief Financial Officer may cause the investment or reinvestment in any lawful manner any moneys on hand at any time even though he is not obligated to do so. The Authority acknowledges that regulations of the Comptroller of the Currency grant the Authority the right to receive brokerage confirmations of the investments or reinvestments as they occur. To the extent permitted by law, the Authority specifically waives compliance with 12 C.F.R. 12 and hereby notifies the Trustee that no brokerage confirmations need be sent relating to the security transactions as they occur.

Section 605. Accounting for Investments. The securities so purchased as an investment or reinvestment of moneys in any such account or subaccount, as the case may be, shall be deemed at all times to be a part of the account or subaccount and held in trust therefor. Except as herein otherwise provided, any interest accruing thereon and any other gain realized therefrom, as well as any interest and other gain from the deposit of moneys in a Banking Institution, shall be credited to the Revenue Fund as such gain is received; and any loss in any account or subaccount resulting from any such investments and reinvestment in securities and from any such deposits in any Banking Institution shall be charged or debited to the Revenue Fund.

Except as provided in Section 603, no loss or profit in any account or subaccount on any investments or reinvestments in securities or any certificates of deposit shall be deemed to take place as a result of fluctuations in the market quotations of the investments, reinvestments, or certificates prior to the sale or maturity thereof. In the computation of the amount in any account or subaccount for any purpose hereunder, except as herein otherwise expressly provided, securities and certificates of deposit shall be valued at the cost thereof (including any amount paid as accrued interest at the time of purchase of the obligation) and other bank deposits shall be valued at the amounts deposited, exclusive of any accrued interest or any other gain to the Authority until such gain is realized. The expenses of purchase, safekeeping, sale, and all other expenses incident to any investment or reinvestment of moneys pursuant to this article shall be accounted for as Operation and Maintenance Expenses of the TMWA Water System and charged to the Operation and Maintenance Account as permitted by Section 506 hereof.

Section 606. Accelerated Payments. Nothing contained in Article V hereof prevents the accumulation in any account or subaccount herein designated of any monetary requirements at a faster rate than the rate or minimum rate, as the case may be, provided in Article V; but, no payment shall be so accelerated if such acceleration shall cause the Board to default in the payment of any obligation of the Authority pertaining to Pledged Revenues or the TMWA Water System. Nothing herein contained requires in connection with Pledged Revenues received in any Fiscal Year the accumulation in any account or subaccount for the payment in the Comparable Bond Year of Bond Requirements due in connection with any series of bonds or other securities payable from Pledged Revenues and herein or hereafter authorized, in excess of such Bond Requirements due in such Comparable Bond Year, and of any reserves required to be accumulated and maintained therefor, and of any existing deficiencies, and payable from such account, as the case may be, except as may be otherwise provided herein.

Section 607. Payment of Bond Requirements. The moneys credited to any account or subaccount designated in Article V hereof for the payment of the Bond Requirements due in connection with any issue of bonds or other securities payable from Pledged Revenues and herein, heretofore, or hereafter authorized shall be used without requisition, voucher, warrant, further order, or authority (other than is contained herein), or any other preliminaries, to pay promptly the Bond Requirements payable from such account or subaccount as such securities become due, upon the respective Redemption Dates, if any, on which the Authority is obligated to pay such securities, or upon the respective principal and interest fixed maturity dates of such securities, as provided therefor herein, or otherwise, except to the extent any other moneys are available therefor, including, without limitation, moneys accounted for in the Bond Fund.

Section 608. Payment of Redemption Premiums. Notwithstanding any other provision herein, this Instrument requires the accumulation in any account or subaccount designated in Article V hereof for the payment of any issue of bonds or other securities payable from Pledged Revenues of amounts sufficient to pay not only the principal thereof and interest thereon but also the redemption premiums due in connection therewith, as the same become due, whenever the Authority shall have exercised or shall have obligated itself to exercise a prior redemption option pertaining thereto or otherwise to call any security for prior redemption, except to the extent provision is otherwise made therefor, if any redemption premiums are due in connection therewith. In such event moneys shall be deposited in such account or subaccount when due for the payment of all such Bond Requirements without default as the same become due.

ARTICLE VII

SECURITIES LIENS AND ADDITIONAL SECURITIES

Section 701. Lien of the Bonds. The 2021 Bonds and Continuing Covenant Agreement Obligations authorized herein, constitute an irrevocable lien (but not necessarily an exclusive lien) upon the Pledged Revenues subject to and subordinate to the lien thereon of any Superior Securities, and on a parity with the liens of any Parity Securities hereafter issued; provided that the lien of the Continuing Covenant Agreement Obligations on the Pledged Revenues shall be subordinate to the Authority's obligations to pay the Bond Requirements.

Section 702. Equality of Bonds. The 2021 Bonds and any Parity Securities previously or hereafter authorized shall be equally secured by the Net Revenues. All Superior Securities, whether a bond or note payable solely from Net Revenues, shall have priority with respect to the lien on the Net Revenues of the Authority over the 2021 Bonds and any future obligations of the Authority issued with a lien on the Net Revenues which is on a parity with the lien thereon of the 2021 Bonds. The Net Revenues are hereby pledged for the security of the 2021 Bonds and the Continuing Covenant Agreement Obligations; provided that the lien of the Continuing Covenant Agreement Obligations on the Net Revenues shall be subordinate to the Authority's obligations to pay the Bond Requirements. The Net Revenues and funds derived therefrom shall be used only as permitted under the terms of this Resolution.

Section 703. Issuance of Debt. Subject to the limitations set forth within any Continuing Covenant Agreement, nothing herein limits or prevents the Authority from issuing additional Debt for any lawful purpose.

Section 704. Use of Proceeds. The proceeds of any additional bonds or other additional securities (other than funding or refunding securities) payable from Pledged Revenues shall be used only to pay the cost of a project, including, without limitation, incidental expenses, for the betterment, enlargement, extension, other improvement, and equipment of the TMWA Water System, or any combination thereof.

Section 705. Supplemental Instrument. Additional bonds or other additional securities payable from Pledged Revenues shall be issued only after authorization thereof by a supplemental instrument of the Board stating the purpose or purposes of the issuance of such additional securities, directing the application of the proceeds thereof to such purpose or purposes, directing the execution and authentication thereof, and fixing and determining the date, principal amount, maturity or maturities, designation, and numbers thereof, the maximum rate or the rate or rates of interest to be borne thereby, any prior redemption privileges of the Authority with respect thereto, and other provisions thereof. Upon such authorization such additional bonds or other additional securities may at one time or from time to time be executed by and on behalf of the Authority and authenticated and delivered by the Authority or upon its order. All additional securities shall bear such date, shall bear such numbers and series designation, letters, or symbols prefixed to their numbers distinguishing them from each other security, shall be payable at such place or places, may be subject to redemption prior to maturity on such terms and conditions, and

shall bear interest at such rate or at such different or varying rates per annum, as may be fixed by instrument or other document of the Board.

ARTICLE VIII

BUDGETARY PROCEDURES

Section 801. Procedures Applicable. For the purposes of this Instrument the budgetary procedures of the Authority shall be substantially as provided in this article. The Board and the officials of the Authority shall annually and at such other times, if any, as may be provided by law prepare and adopt a budget pertaining to the TMWA Water System pursuant to the Budget Act, all laws supplemental thereto, and the provisions hereof.

Section 802. Budget Estimates. The TMWA Manager or Chief Financial Officer shall annually submit for each Budget Year to the Board in accordance with the budget calendar estimates of Gross Revenues and expenditure requirements for the TMWA Water System for such Budget Year, i.e., the next ensuing Fiscal Year, including, without limitation, as a part of such expenditure requirements the Operation and Maintenance Expenses for the Budget Year and the Bond Requirements for the Comparable Bond Year (but none other). The estimates of expenditures in connection with the operation of the TMWA Water System shall be classified so as to set forth the data by accounts, including those designated in Article V hereof, character, and object of expenditures, work programs, and other details requested by the Board. The estimates of the Gross Revenues shall be classified as to accounts and sources of income in such detail as requested by the Board. Such estimates, in addition, shall be so prepared as to permit an analysis of the Gross Revenues of the TMWA Water System and of the Operation and Maintenance Expenses of the TMWA Water System under the definitions set forth in Section 102 hereof.

Section 803. Amount of Net Revenues. The amount of the remainder of Net Revenues for each Fiscal Year shall at least equal the sum required for the Fiscal Year by the rate maintenance covenant in Section 1001 hereof and all other provisions herein supplemental thereto.

Section 804. Content and Submission of Budget. The TMWA Manager shall include such estimates in his proposed budget annually submitted to the Board. The annual budget as adopted by the Board shall show the amounts apportioned for the Operation and Maintenance Expenses of the TMWA Water System and shall be in such detail as to permit the analysis above contemplated.

Section 805. Limitation Upon Expenditures. The total expenditures for operating and maintaining the TMWA Water System in any Fiscal Year (other than expenses for the purchase of commodities for resale) shall not exceed the total expenditures so set forth in the budget except upon the approval of a majority of the members of the Board as expressed by vote of the Board.

ARTICLE IX

RESERVED

Section 901. Reserved.

ARTICLE X

RATES, FEES AND OTHER CHARGES

Section 1001. Rate Maintenance Covenant. The Authority shall adopt, from time to time revise, and continue in effect, a schedule of rates, fees, and other charges for water and other goods and services provided by, and for the use of, the TMWA Water System as may be necessary or proper in order that the amount of the Gross Revenues in each Fiscal Year, shall at least equal the sum of:

A. The amount of Gross Revenues required to pay Operation and Maintenance Expenses for such Fiscal Year; plus

B. The greatest of:

(i) 1.25 times the Bond Requirements for the Comparable Bond Year of the Outstanding the 2015 Bonds, 2016 Bonds, 2017 Bonds and 2018 Bonds and any bonds issued on a parity with those bonds;

(ii) 1.2 times the Bond Requirements for the Comparable Bond Year of the Outstanding Superior Securities; or

(iii) All amounts payable from the Gross Revenues and pertaining to the TMWA Water System, including, without limitation, debt service on any Superior Securities, and Parity Securities, amounts due on the Continuing Covenant Agreement Obligations, if any, Operation and Maintenance reserves, capital reserves, any necessary capital expenditures not otherwise provided for, and prior deficiencies pertaining to any account relating to Gross Revenues.

The foregoing rate maintenance covenant is subject to compliance by the Authority with any legislation of the United States, the State, or other governmental body, or any regulation or other action taken by the Federal Government, any State agency, or any political subdivision of the State pursuant to such legislation, in the exercise of the police power thereof for the public welfare, which legislation, regulation, or action limits or otherwise inhibits the amounts of any rates, fees, and other charges due to the Authority for the use of or otherwise pertaining to any and all services rendered by or at the TMWA Water System, including, without limitation, increases in the amounts of such rates, fees, or other charges (or any combination thereof).

Section 1002. Increasing Revenues. From time to time, and as often as it shall appear necessary, and whenever the audit report made pursuant to Article XI hereof states that the Gross Revenues were not sufficient to comply with the rate maintenance covenant stated in Section 1001 hereof (adjusted as provided therein), the Authority, upon recommendation of the TMWA Manager or Chief Financial Officer, shall revise the schedule of rates, fees, and other charges for the use of the TMWA Water System as may be necessary to produce Gross Revenues as aforesaid.

Section 1003. Collection of Charges. The Authority shall cause all rates, fees, and other charges pertaining to the TMWA Water System to be collected as soon as reasonable, shall

prescribe and enforce rules and regulations or impose contractual obligations for the payment thereof, including, without limitation, the imposition of penalties for any defaults, to the end that the Gross Revenues of the TMWA Water System shall be adequate to meet the requirements of this Instrument and any other instruments supplemental thereto. The rates, fees, and other charges due shall be collected in any lawful manner.

ARTICLE XI

MISCELLANEOUS PROTECTIVE COVENANTS

Section 1101. General. The Authority hereby particularly covenants and agrees with the holders of the 2021 Bonds and Continuing Covenant Agreement Obligations and makes provisions which shall be a part of its contract with such holders to the effect and with the purpose set forth in the following provisions and sections of this article.

Section 1102. Performance of Duties. The Authority, acting by and through the TMWA Manager, the Board, or otherwise, shall faithfully and punctually perform or cause to be performed all duties with respect to Pledged Revenues, the TMWA Water System required by the Constitution and laws of the State and the various resolutions and other instruments of the Authority, including, without limitation, the resolutions authorizing the issuance of the Superior Securities, and any securities hereafter authorized and pertaining to the TMWA Water System and Pledged Revenues and their application from time to time to the respective accounts provided therefor.

Section 1103. Contractual Obligations. The Authority shall perform all contractual obligations undertaken by it under leases or other agreements with the Federal Government, under and any other agreements with all other Persons relating to the 2021 Bonds and any other TMWA Water System securities, Pledged Revenues, the Refunding Project, or the TMWA Water System, or any combination thereof.

Section 1104. Further Assurances. At any and all times the Authority, acting by and through the Board except when otherwise required by law, shall, so far as it may be authorized by law, pass, make, do, execute, acknowledge, deliver, and file or record all and every such further instruments, acts, deeds, conveyances, assignments, transfers, other documents, and assurances as may be necessary or desirable for the better assuring, conveying, granting, assigning, and confirming all and singular the rights, the Gross Revenues, and other moneys and accounts hereby pledged or assigned, or intended so to be, or which the Authority may hereafter become bound to pledge or to assign, or as may be reasonable and required to carry out the purposes of this Instrument and any instrument supplemental thereto, and to comply with the Authority Act and the Bond Act. The Authority, acting by and through the TMWA Manager, the Board, or otherwise, shall at all times, to the extent permitted by law, defend, preserve, and protect the pledge of the Gross Revenues, Net Revenues and other moneys and accounts pledged hereunder and all the rights of every holder of any bonds or other securities payable from Pledged Revenues against all claims and demands of all Persons whomsoever.

Section 1105. Conditions Precedent. Upon the date of issuance of any 2021 Bonds, all conditions, acts, and things required by the Constitution or statutes of the United States, the Constitution or statutes of the State, including, without limitation, the Authority Act and the Bond Act, or this Instrument to exist, to have happened, and to have been performed precedent to or in the issuance of the bonds shall exist, have happened, and have been performed; and the bonds, together with all other obligations of the Authority, shall not contravene any debt or other limitation prescribed by the Constitution or statutes of the United States, or the Constitution or statutes of the State.

Section 1106. Rules, Regulations, and Other Details. The Authority, acting by and through the TMWA Manager, the Board, or otherwise, shall establish and enforce reasonable rules and regulations governing the operation, care, repair, maintenance, management, control, occupancy, use, and services of the TMWA Water System. The Authority shall observe and perform all of the terms and conditions contained in this Instrument and shall comply with all valid acts, rules, regulations, orders, and directives of any legislative, executive, administrative, or judicial body applicable to the TMWA Water System or the Authority.

Section 1107. Competent Personnel and Operation. The Authority shall at all times endeavor to employ in connection with the operation of the TMWA Water System in executive and managerial capacities only individuals competent therefor by reason of training and experience. The Authority shall administer the TMWA Water System in accordance with sound business principles. All salaries, fees, wages, and other compensation paid by the Authority in connection with the maintenance, repair, and operation of the TMWA Water System shall be reasonable, proper, and not excessive.

Section 1108. Maintenance of TMWA Water System. The Authority shall, insofar as it may legally do so, without any violation of other provisions of this Instrument, maintain, preserve, keep, and operate the TMWA Water System or cause the TMWA Water System to be maintained, preserved, kept, and operated in good repair, working order, and condition.

Section 1109. Operation of TMWA Water System. The Authority shall at all times operate the TMWA Water System properly and in a sound and economical manner and shall maintain, preserve, and keep the TMWA Water System properly, or cause the same, by lease or otherwise, so to be maintained, preserved, and kept, with the appurtenances and every part and parcel thereof, in good repair, working order, and condition. The Authority also shall from time to time make or cause to be made all necessary and proper repairs, replacements, and renewals so that at all times the operation of the TMWA Water System may be properly and advantageously conducted in conformity with standards customarily followed by municipalities operating water facilities of like size and character.

Section 1110. Competing Water Facilities. The Authority shall not construct other facilities or structures to be operated by the Authority separate from the TMWA Water System and competing with the TMWA Water System for revenues otherwise available for the payment of the 2021 Bonds, Continuing Covenant Agreement Obligations or any other securities payable from Pledged Revenues.

Section 1111. Corporate Existence. The Authority shall maintain its corporate identity and existence so long as any of the 2021 Bonds, Continuing Covenant Agreement Obligations and any other securities payable from Pledged Revenues remain Outstanding, unless another body corporate and politic by operation of law succeeds to the duties, privileges, powers, liabilities, disabilities, immunities, and rights of the Authority and is obligated by law to operate and maintain the TMWA Water System and to fix and collect Pledged Revenues as herein provided without adversely and materially affecting at any time the privileges and rights of any holder of any Outstanding bond or any such other Outstanding security.

Section 1112. Disposal of TMWA Water System Prohibited. Except for the use of the TMWA Water System or services pertaining thereto in the normal course of business, neither all nor a substantial part of the TMWA Water System shall be sold, leased, mortgaged, pledged, encumbered, alienated, or otherwise disposed of, until all the 2021 Bonds and the Continuing Covenant Agreement Obligations have been paid in full, as to all Bond Requirements, or unless irrevocable deposit has been made therefor, or until the bonds have been otherwise redeemed, including, without limitation, the termination of the pledge as herein authorized; and the Authority shall not dispose of its title to the TMWA Water System or to any useful part thereof, including, without limitation, any property necessary to the operation and use of the TMWA Water System and the lands comprising the site of the TMWA Water System (other than the execution of leases, licenses, easements, or other agreements in connection with the operation of the TMWA Water System by the Authority), except for any pledges of and liens on revenues derived from the operation and use of the TMWA Water System, or any part thereof, for the payment of any other revenue bonds or other securities pertaining to the TMWA Water System as permitted herein, and except as otherwise provided herein.

Section 1113. Revenues and Agreements. The Authority shall not create or permit to be created any charge or lien on the Gross Revenues, except as herein permitted. Nothing herein contained prevents the Authority from executing leases, licenses, easements, or other agreements for any part of the TMWA Water System with the Federal Government or any other Persons, if such instrument shall not substantially diminish the Net Revenues otherwise available for the payment of the Outstanding 2021 Bonds, Continuing Covenant Agreement Obligations and any other Outstanding bonds or other Outstanding securities payable from Pledged Revenues. TMWA shall not enter into any agreement that limits its ability to increase rates and charges for water and other goods and services provided by, and for the use of the TMWA Water System as may be necessary to comply with Section 1001 hereof. No more than 10 percent of the Gross Revenues, excluding revenues derived from the sale of electric power, may be subject to a contract that fixes the amount paid to the Authority for goods or services or otherwise for a term greater than three years.

Section 1114. Disposal of Unnecessary Property. The Authority may sell, exchange, lease, or otherwise dispose of at any time and from time to time any property constituting a part of the TMWA Water System and not useful in the construction, reconstruction, or operation thereof, or which shall cease to be necessary for the efficient operation of the TMWA Water System, or which shall have been replaced by other property of at least equal value, except to the extent the Authority is prevented from so doing by any contractual limitation pertaining thereto. The TMWA Manager shall certify that such property is not useful, has ceased to be necessary for the efficient operation of the TMWA Water Systems, or has been replaced by other property of at least equal value prior to disposal of such property. The net proceeds of the sale of any TMWA Water System property shall be used for the purpose of replacing properties at the TMWA Water System, real, personal, mixed, or otherwise, or shall be paid into the General Purpose Account for the purposes thereof.

Section 1115. Loss from Condemnation. If any part of the TMWA Water System shall be taken by the exercise of a power of eminent domain, the amount of any award received by the Authority as a result of such taking shall be paid into the General Purpose Account for the

purposes of reconstructing the TMWA Water System and, to the extent not needed for reconstruction, to the Revenue Fund, as the Board may determine.

Section 1116. Payment of Governmental Charges and Liens. The Authority shall pay or cause to be paid all taxes, assessments, and other municipal or governmental charges, if any, lawfully levied or assessed upon or in respect of the TMWA Water System, or upon any part thereof, or upon any portion of the Gross Revenues, or revenues otherwise pertaining to the TMWA Water System, when the same shall become due. The Authority shall duly observe and comply with all valid requirements of any municipal or governmental authority relative to the TMWA Water System, or any part thereof, except for any period during which the validity of the same is being contested in good faith by proper legal proceedings. The Authority shall not create or suffer to be created any lien or charge upon the TMWA Water System, or any part thereof, or upon the Gross Revenues, except the pledge and lien created by this Instrument for the payment of the Bond Requirements of the 2021 Bonds, Continuing Covenant Agreement Obligations and any Outstanding Superior Securities or Parity Securities hereafter issued, and except as herein otherwise permitted. The Authority shall pay or cause to be discharged or shall make adequate provision to satisfy and to discharge, within 60 days after the same shall become payable, all lawful claims and demands for labor, materials, supplies, or other objects which, if unpaid, might by law become a lien upon the TMWA Water System, any part thereof, the Gross Revenues, or any other revenues pertaining to the TMWA Water System. Nothing herein contained requires the Authority to pay or cause to be discharged or to make provision for any such tax, assessment, lien, charge, or demand before the time when payment thereon shall be due, or so long as the validity thereof shall be contested in good faith.

Section 1117. Protection of Security. The Authority, the officers, agents, and employees of the Authority and the Board shall not take any action in such manner or to such extent as might prejudice the security for the payment of the Bond Requirements of the 2021 Bonds, the Continuing Covenant Agreement Obligations and any other securities payable from Pledged Revenues according to the terms of such securities. The Authority shall maintain, preserve, and renew all the rights, powers, privileges, and franchises now owned or hereafter acquired with respect to the TMWA Water System. No contract shall be entered into and no other action shall be taken by which the rights of any holder of any bond or other security payable from Pledged Revenues might be prejudicially and materially impaired or diminished.

Section 1118. Prompt Payment of Securities. The Authority shall promptly pay the Bond Requirements of every bond and every other security payable from Pledged Revenues at a place, on the dates, and in the manner specified in the bond or other security according to their true intent and meaning and as provided in any instrument pertaining thereto, including without limitation, this Instrument.

Section 1119. Use of Gross Revenues. None of the Gross Revenues shall be used for any purpose other than as provided herein. The Authority shall apply the Net Revenues to the payment of the bonds, any other securities payable from Pledged Revenues, and the interest thereon (but not necessarily exclusively thereto), and the Authority is not obligated to make such payments from any other source or moneys, but it is not prohibited from making such payments from any moneys which may be lawfully used for that purpose.

Section 1120. Use of Bond Fund. The Bond Fund shall be used solely and only and the moneys credited to such account are hereby pledged for the purpose of paying the Bond Requirements of the 2021 Bonds, the Continuing Covenant Agreement Obligations and any Parity Securities hereafter authorized and then Outstanding, except for those moneys in the Interest Account and the Principal within the Bond Fund as are in excess of such Bond Requirements, both accrued and not accrued, to their respective maturities or any Redemption Date or Redemption Dates, whichever due date is earlier, if any (subject to the provisions of Article V and Section 606 and 1201 hereof).

Section 1121. Additional Securities. The Authority shall not hereafter issue any bonds or other securities payable from Pledged Revenues and having a lien on Pledged Revenues on a parity with or senior to the lien thereon of the 2021 Bonds so long as any 2021 Bonds are Outstanding, unless such additional securities with a lien on Pledged Revenues on a parity with or senior to the lien thereon of the 2021 Bonds are issued in such manner as provided in any Continuing Covenant Agreement. Any other securities hereafter authorized to be issued and secured by Pledged Revenues shall not hereafter be issued, unless such additional securities are also issued in conformance with the provisions of Articles V and VII hereof.

Section 1122. Other Liens. Other than as provided herein, there are no liens or encumbrances of any nature whatsoever on or against the TMWA Water System, or any part thereof, or on or against the Gross Revenues derived or to be derived.

Section 1123. Revenues Claims. The Authority shall defend against every suit, action, or proceeding at any time brought against any holder of any bonds or other securities payable from Pledged Revenues upon any claim arising out of the receipt, application, or disbursement of any of the Gross Revenues, or involving such holder's rights under this Instrument or other proceedings pertaining to the issuance of such securities; the Authority shall also indemnify and save harmless any such holders against any and all liability, claim, or assertion by any Person whomsoever, arising out of such receipt, application, or disbursement; but such holder at his election may appear in and defend any such suit, action, or proceedings; and notwithstanding any contrary provision hereof, this covenant shall continue and remain in full force and effect, even though all indebtedness, liabilities, obligations, and other sums secured hereby may have been fully paid and satisfied, and the obligations under this Instrument may have been released and the lien hereof discharged.

Section 1124. Accumulation of Interest Claims. In order to prevent any accumulation of claims for interest after maturity, the Authority shall not directly or indirectly extend or assent to the extension of the time for the payment of any claim for interest on any of the 2021 Bonds or any other securities payable from Pledged Revenues; and the Authority shall not directly or indirectly be a party to or approve any arrangements for any such extension or for the purpose of keeping alive any of such claims for interest. If the time for the payment of such installment of interest shall be extended in contravention of the foregoing provisions, such installment or installments of interest after such extension or arrangement shall not be entitled in case of default hereunder to the benefit or security of this Instrument, except upon the prior payment

in full of the principal of all 2021 Bonds and any such other securities then Outstanding and of all matured interest on all such securities the payment of which has not been extended.

Section 1125. Records and Accounts. So long as any of the 2021 Bonds and any other securities payable from Pledged Revenues remain outstanding, proper records and accounts shall be kept by the Authority, separate and apart from all other records and accounts, showing complete and correct entries of all transactions relating to the TMWA Water System and to all moneys pertaining thereto, including, without limitation, the Gross Revenues. Such records shall include (but not necessarily be limited to) monthly records, all in reasonable detail as may be determined by the TMWA Manager or her delegate and in accordance with standard accounting practices, showing:

A. Receipts. The Gross Revenues and other moneys received and pertaining to the TMWA Water System;

B. Purposes and Accounts. The respective purposes for which such moneys were paid and the respective accounts in which such moneys were accounted; and

C. Complete Accounting. Complete and correct entries of all transactions relating to the receipt, disbursement, allocation, and application of all moneys.

All requisitions, requests, certificates, opinions, and other documents received by any Person on behalf of the Authority in connection with the TMWA Water System under the provisions of this Instrument shall be retained in the Authority's official records in accordance with State law.

Section 1126. Rights Concerning Records. The Trustee shall have the right at all reasonable times to inspect all financial statements, other records, accounts, and data relating thereto, concerning the TMWA Water System, or the Gross Revenues, or any other moneys pertaining to the TMWA Water System, or any combination thereof, and to make copies of such financial statements, other records, accounts, and data.

Section 1127. Audits Required. The Authority shall cause an audit to be made for each Fiscal Year within 180 days following the close of the Fiscal Year of such records, accounts, and subaccounts by an Independent Accountant, and shall order an audit report showing the receipts and disbursements for each account and subaccount pertaining to the TMWA Water System, including, without limitation, the Gross Revenues.

Section 1128. Accounting Principles. Records and accounts, and audits thereof, with respect to the TMWA Water System and the Gross Revenues, shall be currently kept and made, as nearly as practicable, in accordance with generally accepted accounting principles, methods and terminology followed and construed for water systems comparable to the TMWA Water System, except as may be otherwise provided herein or required by applicable law or regulation or by contractual obligation existing on the effective date of this Instrument.

Section 1129. Insurance and Reconstruction. The Authority, shall at all times maintain fire and extended coverage insurance, workmen's compensation insurance, public liability

insurance, and all such other insurance as is customarily maintained with respect to facilities of like character against loss of or damage to the TMWA Water System, against loss of Pledged Revenues and against public and other liability to the extent reasonably necessary to protect the interests of the Authority and of each owner of a Bond or any other security payable from the Pledged Revenues, except as herein otherwise provided. The amounts of such insurance coverage shall be approved by the Authority's risk manager or the risk managers of the Members. If at any time the Authority is unable to obtain insurance to the extent provided herein, the Authority shall maintain such insurance to the extent it is reasonably obtainable. If such insurance is not reasonably obtainable, the Authority shall self-insure to the extent it is financially able to do so. If any useful part of the TMWA Water System shall be damaged or destroyed, the Authority shall, as expeditiously as possible, commence and diligently prosecute the repair or replacement of the damaged or destroyed property so as to restore the same to use. The proceeds of any such property insurance relating to the TMWA Water System shall be payable to the Authority and applied as provided in Section 1130 below. The Authority may insure all or a portion of the above risks through a program of self-insurance, providing that the level of self-insurance reserves and the funding thereof are approved by an independent expert in self-insurance.

Section 1130. Use of Insurance Proceeds. Immediately after any loss or damage to the TMWA Water System which is covered by insurance, the Authority shall cause plans and specifications for repairing, reconstruction, or otherwise replacing the damaged or destroyed property to be prepared and an estimate of the cost thereof, and to file copies of such plans and specifications and of such estimate with the TMWA Manager. The proceeds of all insurance referred to in Section 1129 hereof shall be available for and to the extent necessary be applied to the repair, reconstruction, and other replacement of the damaged or destroyed property. If such proceeds are more than sufficient for such purpose, the balance remaining shall be paid into the General Purpose Account designated in Section 516 hereof.

If such proceeds shall be insufficient to repair, reconstruct, or otherwise replace the damaged or destroyed property pertaining to the TMWA Water System, the deficiency may be supplied by the TMWA Manager from moneys in the Renewal and Replacement Account, the General Purpose Account, or any other accounts or subaccounts legally available for such purposes. If the cost of repairing, reconstruction, or otherwise replacing the damaged or destroyed property as estimated by the TMWA Manager shall not exceed the proceeds of insurance and other moneys legally available for such purpose, the Authority shall forthwith commence and diligently prosecute the repair, reconstruction, or other replacement of the damaged or destroyed property. The cost of maintaining such insurance for the TMWA Water System shall be deemed a part of the Operation and Maintenance Expenses of the TMWA Water System.

Section 1131. Transfer to General Purpose Account. The proceeds of any insurance designated in Sections 1129 and 1130 hereof and not applied within 18 months after receipt by the Authority to the repairing, reconstructing, or otherwise replacing of the damaged or destroyed property, unless the Authority is prevented from so doing because of conditions beyond its control, shall be transferred to the General Purpose Account.

Section 1132. Maintenance of Policies. All such insurance policies designated in Sections 1129 hereof shall be filed with the TMWA Manager and shall be subject to the inspection at

all reasonable times of any holder of any Outstanding bond or any other Outstanding security payable from Pledged Revenues or any authorized representative of any such holder.

Section 1133. Completion of Refunding Project. The Authority, with the proceeds derived from the sale of the 2021 Bonds and any other available moneys, shall proceed to cause the Refunding Project to be completed without delay to the best of the Authority's ability and with due diligence, as herein provided.

Section 1134. Federal Tax Covenant. The Authority hereby covenants for the benefit of each holder of the 2021 Bonds that it will not take any action or omit to take any action with respect to the 2021 Bonds, the proceeds thereof, any other funds of the Authority or any facilities refinanced with the proceeds of the 2021 Bonds if such action or omission (i) would cause the interest on the 2021 Bonds to lose its exclusion from gross income for Federal income tax purposes under Section 103 of the Tax Code or (ii) would cause interest on the 2021 Bonds to lose its exclusion from alternative minimum taxable income as defined in Section 55(b)(2) of the Tax Code. The foregoing covenant shall remain in full force and effect notwithstanding the payment in full or defeasance of the 2021 Bonds until the date on which all obligations of the Authority in fulfilling the above covenant under the Tax Code have been met.

Section 1135. Additional Covenants. While the 2021 Bonds or any Continuing Covenant Agreement Obligations are Outstanding, the Authority agrees to the following:

A. At least 15 days in advance of entering into a Qualified Swap, the Authority will give written notice to Standard and Poor's Ratings Group, Moody's Investors Service, and/or Fitch whichever then has a rating in effect for any Superior Securities, of such Qualified Swap and provide those rating agencies the proposed documentation evidencing such Qualified Swap.

B. If a termination payment under a Qualified Swap is unconditionally due and payable in accordance with the terms of the Qualified Swap, and the Authority determines that payment of such termination payment on its due date would be unduly burdensome, the Authority will use its best efforts to issue bonds or other obligations and use the proceeds thereof for the purpose of paying such termination payment.

C. Any Qualified Swap entered into by the Authority will contain a provision requiring the Qualified Swap Provider to (i) maintain at least an "A" rating from Standard and Poor's Corporation on its senior long-term debt obligations, or on the senior long-term debt obligations of the financial institution that guarantees the Authority's obligations under the Qualified Swap, or (ii) to collateralize its obligations under the Qualified Swap in a manner reasonably acceptable to Standard and Poor's Corporation.

Section 1136. No Purveyor Members. As provided in Section 6.13(e) of the TMWA Asset Purchase Agreement, the Authority shall not permit any of its Members to engage in the retail delivery of potable water within its respective jurisdiction and within the retail service area of the Authority.

ARTICLE XII

MISCELLANEOUS

Section 1201. Defeasance. Except as otherwise set forth herein, upon not less than 30 days prior notice the Purchaser, when all Bond Requirements of all 2021 Bonds, all Continuing Covenant Agreement Obligations or any other security of any other issue payable from Pledged Revenues have been duly paid, the pledge and lien and all obligations hereunder shall thereby be discharged as to that Bond or security and it shall no longer be deemed to be Outstanding within the meaning of this Instrument. There shall be deemed to be such due payment if the Authority has irrevocably placed in escrow or in trust with a trust bank exercising trust powers, an amount sufficient (including the known minimum yield available for such purpose from Federal Securities in which such amount wholly or in part may be initially invested) to meet all Bond Requirements of the Bond or security, as such requirements become due to the fixed maturity date of the Bond or security or to any Redemption Date or Redemption Dates as of which the Authority shall have exercised or shall have obligated itself to exercise its prior redemption option by a call of the Bond or security thereafter maturing for payment then. The Federal Securities shall become due prior to the respective times on which the proceeds thereof shall be needed, in accordance with a schedule established and agreed upon between the Authority and such bank at the time of the creation of the escrow or trust, or the Federal Securities shall be subject to redemption at the option of the holders thereof to assure such availability as so needed to meet such schedule. If at any time the Authority has so irrevocably placed in escrow or trust an amount so sufficient to pay designated Bond Requirements of securities constituting less than all of the Bond Requirements of the securities becoming due on and before their respective due dates, be they the fixed maturity dates of the securities or any such Redemption Date pertaining to the securities, such designated Bond Requirements shall be deemed paid and discharged under this Instrument. For the purposes of this Section, "Federal Securities" shall not include any Federal Securities which are callable by any party other than the owner thereof. The Authority shall provide the Trustee with either (i) a report of an independent firm of nationally recognized certified public accountants verifying the sufficiency of the escrow established to pay the defeased 2021 Bonds in full or (ii) an opinion of bond counsel to the effect that such 2021 Bonds are no longer Outstanding under this Instrument, that the defeasance was in accordance with the requirements of this Instrument and will not adversely affect the tax exempt status of such 2021 Bonds.

Section 1202. Delegated Powers. The Chairman, Secretary, Treasurer, TMWA Manager, Chief Financial Officer and other officers of the Authority be, and they hereby are, authorized and directed to take all action necessary or appropriate to effectuate the provisions of this Instrument, including, without limitation:

- A. Printing Bonds. The printing of the 2021 Bonds;
- B. Final Certificates. The execution of such certificates electronically or otherwise as may be reasonably required by the Initial Purchaser, relating, among other matters, to:
 - (1) The signing of the 2021 Bonds,

- (2) The tenure and identity of the officials of the Board and the Authority,
- (3) The exemption of interest on the 2021 Bonds from Federal income taxation,
- (4) The delivery of the 2021 Bonds and the receipt of the purchase price,
- (5) If it is in accordance with fact, the absence of litigation, pending or threatened, affecting the validity thereof, and
- (6) The execution electronically or otherwise of the Escrow Agreement and any agreement related to the Paying Agent and Registrar not inconsistent with this Instrument;

C. Continuing Covenant Agreement. The completion and execution electronically or otherwise of the initial Continuing Covenant Agreement concerning the 2021 Bonds; and

D. Bond Sale. The sale and issuance of the 2021 Bonds in accordance with the provisions of this Instrument, including but not limited to the acceptance of the Purchase Proposal by the completion and execution of the Certificate of the Chief Financial Officer.

Section 1203. Statute of Limitations. No action or suit based upon any Bond or other obligation of the Authority shall be commenced after it is barred by any statute of limitations pertaining thereto. Any trust or fiduciary relationship between the Authority and the holder of any Bond or the obligee regarding any such obligation shall be conclusively presumed to have been repudiated on the fixed maturity date or other due date thereof unless the Bond is presented for payment or demand for payment of any such obligation is otherwise made before the expiration of the applicable limitation period. Any moneys from whatever source derived remaining in any account reserved, pledged, or otherwise held for the payment of any such obligation, action or suit for the collection of which has been barred, shall revert to the Revenue Fund, unless the Board shall otherwise provide by instrument of the Authority. Nothing herein prevents the payment of any such obligation after any action or suit for its collection has been barred if the Board deems it in the best interests of the public so to do and orders such payment to be made.

Section 1204. Impairment of Prior Contracts. Nothing herein impairs the Authority's obligation of contracts with any Person in connection with the Authority, including, without limitation:

- A. Pledged Revenues. Pledged Revenues,
- B. Outstanding Securities. Any Outstanding securities payable from Pledged Revenues,
- C. TMWA Water System. The TMWA Water System,
- D. Refunding Project. The Refunding Project,

E. Prior Contracts. Any existing viable contracts pertaining to the TMWA Water System between the Authority and other Persons, or

F. Combination. Any combination thereof.

If any provision herein is inconsistent with any provision in any existing contract pertaining to the Authority so as to affect prejudicially and materially the rights and privileges thereunder, so long as such contract shall remain viable and in effect such provision therein shall control such inconsistent provision herein and the latter provision shall be subject and subordinate to such provision in such existing contract.

Section 1205. Governmental Powers. The enforceability of the Authority's obligations and creditors' remedies is:

A. Equity Principles. Subject to general principles of equity to the extent relevant to the Authority (regardless of whether such enforceability is considered in a proceeding in equity or at law),

B. Limitations Fixed by Law. Subject to the limitations upon enforceability fixed by bankruptcy, insolvency, reorganization, moratorium, and other laws affecting creditors' rights and privileges,

C. State and U.S. Powers. Otherwise subject to the reasonable exercise in the future by the State and its governmental bodies of the police powers and the powers of eminent domain, taxation, and licensing inherent in the sovereignty of the State and to the exercise by the United States of the powers delegated to it by the Constitution of the United States,

D. Limitations Upon Suits. Subject to the limitations stated in the 11th Amendment, Constitution of the United States, upon suits against states in Federal courts, and

E. Sovereign Immunity. Subject to the possible passage hereafter of a State statute reestablishing the doctrine of sovereign immunity (heretofore waived by the State subject to certain exceptions and conditions, none of which apply to the transactions contemplated by the issuance and purchase of the 2021 Bonds) of the State and any political subdivision of the State from liability and suits thereagainst in the absence of the State's consent thereto.

Nothing herein prohibits or limits the exercise by the Federal Government, the State, or any other governmental entity of their respective sovereign powers. Generally, the State can neither contract away such sovereign powers nor limit or inhibit by contract the proper exercise of such powers, and this Instrument does not purport to do so.

Section 1206. Additional Securities. The Authority reserves the privileges of issuing at a later time or from time to time any securities now or hereafter authorized by law (not herein designated for issuance), as moneys, if any, are needed for the project or projects for which such securities are authorized respectively to be issued.

Section 1207. No Acceleration. Nothing in this Instrument or any other instrument of the Authority or any law of the State shall permit the acceleration of the time or times for the payment of the 2021 Bonds, except to the extent, and under the circumstances, described in any Continuing Covenant Agreement.

ARTICLE XIII

PRIVILEGES, RIGHTS AND REMEDIES

Section 1301. Bondholder's Remedies. Each holder of any 2021 Bond and the Trustee, acting for each such holder, shall be entitled to all of the privileges, rights, and remedies provided herein, in the Authority Act, in the Bond Act, and as otherwise provided or permitted at law or in equity or by other statutes, except as provided in Sections 206 through 210 hereof, but subject to the provisions herein concerning Pledged Revenues and the proceeds of the 2021 Bonds.

Section 1302. Right To Enforce Payment. Nothing in this article affects or impairs the right of any Purchaser or any holder of any 2021 Bond to enforce the payment of the Bond Requirements of his bond or the obligation of the Authority to pay the Bond Requirements of each 2021 Bond to the holder thereof at the time and the place expressed in the 2021 Bond.

Section 1303. Events of Default. Except as otherwise provided herein, each of the following events is hereby declared an "event of default:"

A. Nonpayment of Principal and Premium. Payment of the principal of any of the 2021 Bonds, or any prior redemption premium due in connection therewith, or both, is not made when the same becomes due and payable, either at maturity or by proceedings for prior redemption, or otherwise;

B. Nonpayment of Interest. Payment of any installment of interest is not made when the same becomes due and payable;

C. Incapable To Perform. The Authority for any reason is rendered incapable of fulfilling its obligations hereunder;

D. Nonperformance of Duties. The Authority fails to carry out and to perform (or in good faith to begin the performance of) all acts and things lawfully required to be carried out or to be performed by it under any contract relating to Pledged Revenues, to the TMWA Water System, or to all or any other combination thereof, or otherwise, including, without limitation this Instrument, and such failure continues for 60 days after receipt of notice directly from any Purchaser or the holders of a majority in principal amount of the 2021 Bonds then Outstanding or receipt of such notice from any Purchaser or such holders is delivered by the Trustee;

E. Failure to Reconstruct. The Authority discontinues or unreasonably delays or fails to carry out with reasonable dispatch the repair, reconstruction, or other replacement of any material part of the TMWA Water System which is destroyed or damaged and is not promptly replaced (whether such failure to replace the same is due to impracticability of such replacement, is due to a lack of moneys therefor, or for any other reason);

F. Appointment of Receiver. An order or decree is entered by a court of competent jurisdiction with the consent or acquiescence of the Authority appointing a receiver or receivers for the TMWA Water System or for any Pledged Revenues and any other moneys subject

to the lien to secure the payment of the 2021 Bonds, or both such TMWA Water System and such moneys, or an order or decree having been entered without the consent or acquiescence of the Authority is not vacated or discharged or stayed on appeal within 60 days after entry;

G. Default under Continuing Covenant Agreement. The Authority receives written notice from any Purchaser that an event of default has occurred under the Continuing Covenant Agreement; and

H. Default of Any Provision. Except as otherwise provided herein, the Authority makes any default in the due and punctual performance of any other of the representations, covenants, conditions, agreements, and other provisions contained in the 2021 Bonds or in this Instrument on its part to be performed, and such default continues for 60 days after written notice specifying such default and requiring the same to be remedied is given to the Authority directly by any Purchaser, the holders of a majority in principal amount of the 2021 Bonds and any Parity Securities then Outstanding or such notice from any Purchaser or such holders is received by the Trustee and delivered to the Authority by the Trustee. If the Authority defaults in performance of the Rate Maintenance Covenant pursuant to Section 1001 hereof, and: (1) the Authority has consulted an Professional Engineer with regard to the steps it should take to increase Net Revenues; (2) the rates and charges collected by the Authority equal or are greater than 100 percent of combined maximum principal and interest requirements; and (3) the Authority is following those recommendations of the Professional Engineer, it does not constitute an event of default as long as such default does not continue for a period of not more than three years.

Section 1304. Remedies for Defaults. Upon the happening and continuance of any of the events of default, as provided in Section 1303 hereof, then and in every case any Purchaser or, if there is not a Purchaser, the holder or holders of not less than a majority in principal amount of the 2021 Bonds then Outstanding may or the Trustee, if directed by the Purchaser or, if there is not a Purchaser, the holder or holders of not less than a majority in principal amount of the 2021 Bonds, shall proceed against the Authority and its agents, officers, and employees to protect and to enforce the rights of any holder of 2021 Bonds under this Instrument by mandamus or by other suit, action, or special proceedings in equity or at law, in any court of competent jurisdiction, either for the appointment of a receiver or for the specific performance of any covenant or agreement contained herein or by an award of execution of any power herein granted for the enforcement of any proper, legal, or equitable remedy as such Purchaser, holder or holders may deem most effectual to protect and to enforce the rights aforesaid, or thereto enjoin any act or thing which may be unlawful or in violation of any right of any holder of any 2021 Bond, or to require the Authority to act as if it were the trustee an expressed trust, or any combination of such remedies. All such proceedings at law or in equity shall be instituted, had, and maintained for the equal benefit of all holders of the 2021 Bonds and any Parity Securities then Outstanding.

From and after the occurrence of an event of default hereunder, the 2021 Bonds shall bear interest at the Default Rate (not to exceed the Statutory Maximum) for so long as any event of default hereunder is continuing. Notwithstanding anything herein to the contrary, upon the occurrence of an Event of Default, the 2021 Bonds shall be redeemed by the Authority in accordance with any Continuing Covenant Agreement. Notwithstanding anything herein to the contrary, the 2021 Bonds are not subject to acceleration except to the extent, and under the circumstances,

described in any Continuing Covenant Agreement. In the event of any direction to accelerate as provided in any Continuing Covenant Agreement, the Trustee shall immediately accelerate the Bonds as set forth in any Continuing Covenant Agreement.

Section 1305. Vesting in Trustee Powers of Statutory Trustee. The Purchaser and the holders of the 2021 Bonds shall be entitled to the benefits and be subject to the provisions of NRS 350.660, 350.664, and 350.666 (except as hereinafter provided with respect to the method of the appointment of a trustee), and the trustee referred to therein (being the Trustee appointed and confirmed herein) shall have the powers provided by such sections of the Bond Act; the provisions of such sections of the Bond Act (except as to such method of appointment) shall be fully applicable to all Outstanding 2021 Bonds; the right or privilege of such holders to appoint such trustee in the manner provided in such sections is hereby abrogated; all of the rights, powers, and duties of such trustee shall be and hereby are vested in the Trustee without further act on the part of the holders of the 2021 Bonds; and the Authority shall not interpose, as a defense to any proceedings under such sections of the Bond Act, failure of holders of 2021 Bonds to appoint a trustee in the manner provided in such sections of the Bond Act.

Section 1306. Receiver's Rights and Privileges. Any receiver appointed in any proceedings to protect the rights of such holders hereunder, the consent to any such appointment being hereby expressly granted by the Authority, may enter and take possession of the TMWA Water System, subject to the rights and privileges of any lessee or other user under any lease or other contract, may operate and maintain the same, may prescribe rates, fees, and other charges, and may collect, receive, and apply all Gross Revenues and any other revenues pertaining to the TMWA Water System arising after the appointment of such receiver in the same manner as the Authority itself might do.

Section 1307. Rights and Privileges Cumulative. The failure of any holder of any Outstanding 2021 Bond to proceed in any manner herein provided shall not relieve the Authority, its Board, or any of the Authority's officers, agents, or employees of any liability for failure to perform or carry out any duty, obligation, or other commitment. Each right or privilege of any such holder (or trustee thereof) is in addition and is cumulative to any other right or privilege, and the exercise of any right or privilege by or on behalf of any holder shall not be deemed a waiver of any other right or privilege thereof.

Section 1308. Duties upon Defaults. Upon the happening of any of the events of default as provided in Section 1303 hereof, the Authority, in addition, shall do and perform all proper acts on behalf of and for the holders of the 2021 Bonds, and any Parity Securities payable from Pledged Revenues to protect and to preserve the security created for the payment of the securities and to insure the payment of the Bond Requirements of the securities promptly as the same become due. During any period of default, so long as any of the securities, as to any Bond Requirements, are Outstanding, all Net Revenues shall be paid into the Bond Fund, and, to the extent such revenues, if any, exceed the Bond Requirements of the Outstanding securities payable from such account, both accrued and to accrue to their respective fixed maturity dates or to any Redemption Date or Redemption Dates pertaining thereto, whichever is earlier, if any, into any like account or like accounts for any Outstanding Parity Securities. If the Authority fails or refuses to proceed as in this Section provided, the holder or holders of not less than a majority in principal

amount of the bonds and any Parity Securities then Outstanding, after demand in writing, may proceed to protect and to enforce the rights of the holders of the securities as hereinabove provided; and to that end any such holders of Outstanding securities shall be subrogated to all rights of the Authority under any agreement, lease, or other contract involving Pledged Revenues, or the TMWA Water System entered into prior to the effective date of this Instrument or thereafter while any such securities are Outstanding.

Section 1309. Duties in Bankruptcy Proceedings. If any lessee or other user of the TMWA Water System proceeds under any laws of the United States relating to bankruptcy, including, without limitation, any action under law providing for corporate reorganization, it shall be the duty of the Authority and its appropriate officers are hereby authorized and directed to take all necessary steps for the benefit of the holders of the 2021 Bonds and any Parity Securities in such proceedings, including, without limitation, the filing of any claims for unpaid rates, fees, other charges, and other payments due to the Authority or otherwise arising from the breach of any of the covenants, terms, or conditions of the lease or any other contract pertaining to the TMWA Water System, unless the TMWA Manager or his delegate determines that the costs of such action are likely to exceed the amounts thereby recovered from such obligor.

Section 1310. Rights of Purchaser.

A. If an event of default shall have occurred and be continuing hereunder, the Purchaser shall be entitled to direct the Authority and the Trustee in the enforcement of the 2021 Bonds and this Resolution. Without limiting the generality of the foregoing, the Purchaser may, to the extent permitted by the Continuing Covenant Agreement, require the Authority and the Trustee to accelerate the due date for the payment of the principal of the 2021 Bonds upon the occurrence and during the continuance of an event of default hereunder. No waiver of any event of default hereunder shall be granted and no remedies for any such event of default may be enforced by the Trustee without the prior written consent of the Purchaser.

B. Any provision of this Resolution requiring the consent of the Authority or the Trustee shall require the consent of the Purchaser.

C. Notwithstanding the provisions of Article XIII of this Resolution, if an event of default shall have occurred and be continuing, (i) the Purchaser shall have the right to require the removal of the Trustee; (ii) no Trustee shall be required to be appointed to make such removal effective; (iii) the Purchaser shall be entitled to exercise all remedies of the Trustee under this Resolution in respect of the 2021 Bonds; provided, however, that the Trustee shall have no liability for any action taken by the Purchaser pursuant to this sentence; and (iv) the Purchaser's prior written consent shall be required to any removal of the Trustee by the Authority.

ARTICLE XIV

CONCERNING THE TRUSTEE

Section 1401. Appointment of Trustee. The Bank of New York Mellon Trust Company, N.A. is hereby appointed and confirmed as Trustee. The Trustee shall signify its acceptance of the duties and obligations imposed upon it by this Instrument by executing the certificate of authentication endorsed upon the 2021 Bonds; and the Trustee shall be deemed to have accepted such duties and obligations not only with respect to the 2021 Bonds so authenticated, but also with respect to all the 2021 Bonds thereafter to be issued hereunder.

Section 1402. Property Held in Trust. All moneys and securities held by the Trustee at any time pursuant to the terms of this Instrument shall be and hereby are assigned, transferred, and set over unto such Trustee in trust for the purposes and under the terms and conditions on this Instrument.

Section 1403. Deposit and Security of Funds. Subject to the provisions of Sections 602 and 603 hereof, all moneys (not including securities) held by the Trustee may, subject to the provisions of this Section, be deposited by the Trustee in demand or time deposit in its banking department, the banking department of any of the Trustee's affiliates, or with such other Banking Institutions as may be designated by the Authority. No such moneys shall be deposited with any Banking Institution, other than the Trustee or an affiliate of the Trustee, in an amount exceeding 50% of the amount which an officer of such bank shall certify to the Trustee and to the Authority as the combined capital and surplus of such bank. No such moneys shall be deposited or remain on deposit with any Banking Institution, including the Trustee and its affiliates, in excess of the amount guaranteed by the Federal Deposit Insurance Corporation or other Federal agency:

A. Pledge of Collateral Security. Unless such bank shall have lodged with the corporate trust department of the Trustee or, with the written approval of the Trustee and of the Authority, pledged to some other Banking Institution for the benefit of the Authority and every holder of any 2021 Bond issued hereunder, as collateral security for the moneys deposited, Federal Securities or such securities as are provided by law for securing a deposit in a Banking Institution in the State of cities and towns in the State, having a market value (exclusive of accrued interest) at least equal to 110% of the amount of such moneys; or

B. Surety Bond. Unless, in lieu of such collateral security as to all or any part of such moneys, there shall have been lodged with the corporate trust department of the Trustee for the benefit of the Authority and every holder of any 2021 Bond issued hereunder, and remain in full force and effect as security for such moneys or part thereof, the indemnifying bond or bonds of a surety company or companies qualified as surety for deposits of funds of the United States and qualified to transact business in the state in which such Banking Institution is located in a sum at least equal to the amount of such moneys or part thereof.

The Trustee shall allow and credit interest on any such moneys held by it at such rate as it customarily allows upon similar funds of similar size and under similar conditions or as

required by law. Interest or any other gain in respect of moneys or on securities in any account shall be credited in accordance with the provisions of Article VI hereof.

Section 1404. Basic Duties of Trustee. The Trustee undertakes, prior to default, and after the curing of all defaults which may have occurred, to perform such duties and only such duties as are specifically set forth in this Instrument and, in case of an event of default (which has not been cured) to exercise such of the rights and powers vested in it by this Instrument and to use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs, except as herein otherwise expressly provided. The Trustee, upon receipt of evidence furnished to it by or on behalf of the Authority pursuant to any provision of this Instrument shall examine the same to determine whether or not such evidence conforms to the requirements of this Instrument.

Section 1405. Trustee's Conduct. Except as herein otherwise expressly provided, no provision of this Instrument relieves the Trustee from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that:

A. Absence of Implied Duties. Prior to default hereunder and after the curing of all defaults which may have occurred, the Trustee shall not be liable except for the performance of such duties as are specifically set out in this Instrument, and no implied covenants or obligations shall be read into this Instrument against the Trustee, but the duties and obligations of the Trustee, prior to default and after curing of all defaults which may have occurred, shall be determined solely by the express provisions of this Instrument;

B. Reliance Upon Instruments. Prior to default hereunder and after the curing of all defaults which may have occurred, and in the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates, opinions, or other instruments conforming to the requirements of this Instrument;

C. No Liability for Mere Error of Judgment. The Trustee shall not be personally liable for any error of judgment made in good faith by a responsible officer or officers of the Trustee, unless it shall be proven that the Trustee was negligent in ascertaining the pertinent facts or in the performance of an expressed duty;

D. Action Directed by Bondholders. The Trustee shall not be personally liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the holders of not less than a majority in principal amount of the 2021 Bonds and Parity Securities then Outstanding relating to the time, method, and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee under this Instrument;

E. Incurrence of Personal Liabilities. The Trustee shall not be required to advance or expend or use its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if the repayment of

such funds or liability is not assured to it by the security afforded it by the terms of this Instrument or by other security or indemnity reasonably satisfactory to the Trustee;

F. Limited Liability Concerning Bonds. The Trustee shall not be under any responsibility or duty with respect to the disposition by the Authority of the 2021 Bonds or the application by the Authority of the proceeds thereof or of any moneys paid to the Authority under any of the provisions hereof, except to the extent that such proceeds are paid to the Trustee in its capacity as Trustee or Paying Agent.

G. Cost of Execution or Enforcement of Trusts. The Trustee, in the case of any default hereunder, shall not be under any obligation to take any action toward the execution or enforcement of the trusts created by this Instrument, which, in the opinion of the Trustee, will likely involve it in expense or liability, unless one or more of the holders of 2021 Bonds shall, as often as required by the Trustee, furnish to the Trustee security and indemnity satisfactory to the Trustee against such expense or liability.

H. No Liability for Continued Tax-Exempt Status of 2021 Bonds. Under no circumstances does the Trustee assume any responsibility or liability for the issuance of the 2021 Bonds as obligations the interest on which is excludable from gross income for purposes of Federal income taxation or for the maintenance of such tax-exempt status subsequent to the date of issuance of the 2021 Bonds.

Section 1406. Recitals of Fact and Representations. The recitals of fact contained herein and in the bonds (other than the Trustee's certificate of authentication) shall be taken as the statements of the Authority, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representations as to the validity of this Instrument or of the 2021 Bonds issued thereunder.

Section 1407. Entry upon TMWA Water System. The Trustee shall not be personally liable in case of entry by it upon the TMWA Water System for debts contracted or liability or damages incurred in the management or operation of the properties comprising the TMWA Water System.

Section 1408. Further Permitted Reliance. To the extent permitted by Sections 1404 and 1405:

A. Reliance upon Documents. The Trustee may rely and shall be protected in acting upon any resolution, certificate, opinion, notice, request, consent, order, appraisal, report, bond, or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

B. Reliance upon Counsel. The Trustee may consult with counsel and the opinion of such counsel shall be full and complete authorization and protection in respect of any action taken or suffered by it hereunder in good faith and in accordance with the opinion of such counsel; and

C. Reliance upon Assistants. Whenever this Instrument provides for certain action to be taken or a certain document shall be executed and forwarded to the Trustee or otherwise by a designated official and such action is taken or such document is executed and so forwarded by the assistant to such official or by an acting official so designated, the Trustee may conclusively assume that the designated official is unable to act in such capacity at such time and the assistant or acting official is then authorized to take such action or to execute and so forward such document, as the case may be; and the Trustee may rely upon such action or document.

D. Actions by Agents. The Trustee may act through agents or attorneys, and shall not be responsible for the misconduct or negligence of agents or attorneys appointed with due care.

Section 1409. Other Immunities. The Trustee shall not be under any responsibility for the approval of any expert for any of the purposes expressed in this Instrument, but nothing in this Section contained shall relieve the Trustee of its obligation to exercise reasonable care with respect to the approval of independent experts who may furnish opinions or certificates to the Trustee pursuant to any provision of this Instrument. Any instrument of the Board shall be evidenced to the Trustee by a copy thereof certified by the Secretary of the Authority to have been duly adopted, and the Trustee may accept such copy as conclusive evidence of the adoption of such instrument. Nothing contained in this Section modifies the obligation of the Trustee to exercise after default the rights and powers vested in it by this Instrument with the degree of care and skill specified in Section 1404. No surety bond or other security shall be required of the Trustee unless ordered by a court having jurisdiction and for cause shown.

Section 1410. Permitted Transactions with Authority. The Trustee, the affiliates of the Trustee, any paying agent, and any other Banking Institution to which this Instrument pertains may buy, hold, sell or deal in, or be a pledgee of the bonds and any other securities of the Authority and may engage or be interested in any financial or other transaction with the Authority, all as freely as if they were not Trustee, paying agent, or such other bank hereunder.

Section 1411. Commingling of Moneys. Except as herein otherwise provided, all moneys received by the Trustee, whether as Trustee or otherwise, until used or applied as herein provided, shall be held in trust for the purposes for which they were paid, but need not be segregated from other moneys except to the extent required by law, unless herein otherwise expressly provided.

Section 1412. Compensation of Trustee. The Authority covenants and agrees to pay to the Trustee from time to time, and the Trustee shall be entitled to, reasonable compensation for all services rendered by it in the execution of the trusts hereby created and in the exercise and performance of any of the powers and duties hereunder of the Trustee, which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust; and the Authority will pay to the Trustee from time to time its expenses and disbursements (including, without limitation, reasonable compensation and the expenses, charges, counsel fees, and other disbursements of its counsel, officers, employees, other agents, and of all other Persons not regularly in the Trustee's employ). The Authority also covenants to indemnify the Trustee for, and to hold it harmless against, any loss, liability, or expense incurred without negligence or bad faith on the part of the Trustee, arising out of or in connection with the acceptance or administration of this trust,

including the costs and expenses of defending against any claim of liability in the premises. The obligations of the Authority to the Trustee under this Section shall constitute additional obligations secured by the lien of this Instrument, and shall be defrayed as Operation and Maintenance Expenses.

Section 1413. Preference in Event of Defaults. In order to further assure the Trustee that it will be compensated, reimbursed, and indemnified, all parties to this Instrument agree, and hereafter each holder of any bond and any other security hereafter authorized and payable from Pledged Revenues by his acceptance thereof shall be deemed to have agreed that in the event of the occurrence of any one or more of the events of default mentioned in Section 1303 hereof, the Trustee may file from time to time in any proceeding or proceedings one or more claims, supplemental claims, and amended claims as a creditor for its reasonable compensation for all services rendered by it (including services rendered during the course of any such proceeding or proceedings) and for reimbursement as Operation and Maintenance Expenses for all advances, expenses, and disbursements (including the reasonable compensation and the expenses and disbursements of its counsel and of all other Persons not regularly in its employ) made or incurred by it in the execution of the trusts hereby created and in the exercise and performance of any of the powers and duties herein of the Trustee, and for any and all amounts to which the Trustee is entitled as indemnity; and the Trustee and its counsel and agents may file in any such proceeding or proceedings applications or petitions for compensation for such services rendered, for reimbursement for such advances, expenses, and disbursements, and for such indemnity, as such Operation and Maintenance Expenses.

Section 1414. Adjustment and Allowance of Claims. The claim or claims of the Trustee filed in any such proceeding or proceedings shall be reduced by the amount of compensation for services, reimbursement for advances, expenses, and disbursements, and indemnity paid to it following final allowance to it and to its counsel and agents by the court in any such proceedings as an expense of administration or in connection with a plan of reorganization or readjustment. To the extent that compensation, reimbursement, and indemnity are denied to the Trustee or to its counsel or its other agents because of not being rendered or incurred in connection with the administration of an estate in a proceeding or in connection with a plan of reorganization or readjustment approved as required by law, because such services were not rendered in the interests of and with benefit to the estate of the Authority as a whole but in the interest of and with benefit to the holders of the 2021 Bonds and any other securities hereafter authorized and payable from Pledged Revenues in the execution of the trusts hereby created or in the exercise and performance of any of the powers and duties hereunder of the Trustee, or because of any other reason, the court may, to the extent permitted by law, allow such claim, as supplemented and amended, in any such proceeding or proceedings and for the purposes of any plan of reorganization or readjustment of the Authority's obligations, may classify the Trustee as a creditor of a class having priority for the payment of the Operation and Maintenance Expenses, and precedence over the class in which the holders of the 2021 Bonds and any such securities are placed. The amount of the claim or claims of the Trustee for services rendered and for advances, expenses, and disbursements, including the reasonable compensation and the expenses and disbursements of its counsel and of all Persons not regularly in its employ which are not allowed and paid in any such proceeding, but for which the Trustee is entitled to the allowance of a claim as herein provided may be fixed by the court or judge in any such proceeding or proceedings to the extent that such court or judge has or exercises jurisdiction over the amount of any such claim or claims.

Section 1415. Certificates of Officers and Experts. Whenever in the administration of the trusts of this Instrument, prior to a default hereunder, the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed), subject to the provisions of Sections 1404 and 1405, may be deemed to be prima facie proved and established by a certificate signed by an Authority officer, or may be deemed to be conclusively proved and established by a certificate signed by the Chairman or Vice Chairman and Secretary or Treasurer of the Board and delivered to the Trustee, and any such certificate so conclusively proved shall be full warrant to the Trustee for any action taken or suffered by it under the provisions of this Instrument upon the faith thereof. Likewise, all appraiser's certificates, engineer's certificates, independent appraiser's certificates, independent engineer's certificates, officers' certificates, and other certificates or instruments herein provided to be given to the Trustee, shall be full warrant and protection to the Trustee, subject to the provisions of Sections 1404 and 1405 hereof, for any action or non-action taken or suffered by it under the provisions of this Instrument upon the faith thereof. Whenever it is provided in this Instrument that the Trustee shall take any action upon the happening of a specified event or upon the fulfillment of any condition or upon the request of the Authority or of any holder of any 2021 Bond, the Trustee shall have full power to give any and all notices and to do any and all acts and things incident to such action.

Section 1416. Resignation of Trustee. The Trustee, or any successor thereof, may at any time resign and be discharged of its duties and obligations hereunder by giving not less than 60 days written notice to the Authority. Such resignation shall take effect upon the day specified in such notice unless previously a successor shall have been appointed by the Authority or holders of 2021 Bonds as herein provided, in which event such resignation shall take effect immediately on the appointment of such successor.

Section 1417. Removal of Trustee. The Trustee, or any successor thereof, may be removed at any time by the Authority, as designated by the TMWA Manager or the Chief Financial Officer, as long as the Authority is not in default pursuant to the terms of this Instrument or any other instrument authorizing the issuance of Parity Securities, and at any time by the holders of a majority in principal amount of the 2021 Bonds and any other bonds payable from Pledged Revenues then Outstanding, which payment is secured by a lien on such revenues, excluding any such bonds held by or for the account of the Authority, by an instrument or concurrent instruments in writing signed and acknowledged by such holders of bonds or by their attorneys-in-fact duly authorized and delivered to the Authority. Copies of each such instrument shall be delivered by the Authority to the Trustee and to any successor thereof.

Section 1418. Successor Trustee. In case the Trustee, or any successor thereof, shall resign or shall be removed or shall become incapable of acting or shall be adjudged a bankrupt or insolvent, or if a receiver, liquidator, or conservator thereof or of its property shall be appointed, or if any public officer shall take charge or control thereof or of its property or affairs, a successor may be appointed by the Authority, as designated by the TMWA Manager or the Chief Financial Officer, or in the case of removal of the Trustee by the holders, a successor may be appointed by the holders of a majority in principal amount of the then Outstanding 2021 Bonds and any other Parity Securities payable from Pledged Revenues, which payment is secured by a lien on such revenues, excluding

any such bonds held by or for the account of the Authority, by an instrument or concurrent instruments in writing signed and acknowledged by such holders of such Parity Securities or by their attorneys-in-fact duly authorized and delivered to the Authority. Pending such appointment by holders of such bonds, the Authority shall forthwith appoint a successor to act until such appointment is made by the holders of such bonds. Copies of each such instrument and of any instrument of the Authority providing for any such appointment shall be delivered by the Authority to the successor and to the predecessor Trustee. If no appointment of a successor shall be made within 30 days after the Trustee has been removed or resigned or after the occurrence of any other event requiring or authorizing such appointment, any holder of such Parity Securities or the trustee of such bonds may apply to any court of competent jurisdiction for the appointment of such a successor, and the court thereupon after such notice, if any, as the court may deem proper and may prescribe, may appoint such successor. Any successor appointed under the provisions of this Section shall be a trust bank and willing and able to accept the appointment on reasonable and customary terms and authorized by law to perform all the duties required by this Instrument.

Section 1419. Transfer of Rights and Property. Any successor appointed under the provisions of Section 1418 of this Instrument shall execute, acknowledge, and deliver to its predecessor and also to the Authority an instrument accepting such appointment; and thereupon such successor, without any further act, deed, or conveyance, shall become fully vested with all moneys, estates, properties, rights, powers, duties, and obligations of its predecessor hereunder, with like effect as if originally appointed herein as Trustee; but the Trustee then ceasing to act shall, nevertheless, on request by the Authority or by such successor, execute, acknowledge, and deliver such instruments of conveyance and further assurance and such other things as may reasonably be required for more fully and certainly vesting and confirming in such successor all the right, title, and interest of such Trustee in and to any property held by it hereunder and shall pay over, assign, and deliver to such successor any money or other property subject to the trusts and conditions herein set forth. If any deed, conveyance, or instrument in writing from the Authority is required by such successor for more fully and certainly vesting in and confirming to it any such moneys, estates, properties, rights, powers, duties, or obligations, any and all such deeds, conveyances, and instruments in writing shall on request and so far as may be authorized by law be executed, acknowledged, and delivered to the Authority by the Trustee originally appointed herein.

Section 1420. Merger or Consolidation. Any company in which the Trustee may be merged or with which it may consolidate or any company resulting from any merger or consolidation to which it shall be a party or any company to which the Trustee may sell or transfer all or substantially all of its corporate trust business, if such company is a trust bank qualified to be a successor to the Trustee under the provisions of Section 1418 hereof, shall be the successor to the Trustee without any further act, deed, or conveyance.

Section 1421. Electronic Instructions. The Trustee shall have the right to accept and act upon instructions, including funds transfer instructions ("Instructions") given pursuant to this Instrument and delivered using Electronic Means ("Electronic Means" means the following communications methods: S.W.I.F.T., e-mail, facsimile transmission, secure electronic transmission containing applicable authorization codes, passwords and/or authentication keys issued by the Trustee, or another method or system specified by the Trustee as available for use in connection with its services hereunder); provided, however, that the Authority, shall provide to the Trustee an

incumbency certificate listing officers with the authority to provide such Instructions (“Authorized Officers”) and containing specimen signatures of such Authorized Officers, which incumbency certificate shall be amended by the Authority, whenever a person is to be added or deleted from the listing. If the Authority elects to give the Trustee Instructions using Electronic Means and the Trustee in its discretion elects to act upon such Instructions, the Trustee’s understanding of such Instructions shall be deemed controlling. If the Trustee elects not to act upon such Instructions, the Trustee shall notify the Authority. The Authority understands and agrees that the Trustee cannot determine the identity of the actual sender of such Instructions and that the Trustee shall conclusively presume that directions that purport to have been sent by an Authorized Officer listed on the incumbency certificate provided to the Trustee have been sent by such Authorized Officer. The Authority shall be responsible for ensuring that only Authorized Officers transmit such Instructions to the Trustee and the Authority and all Authorized Officers are solely responsible to safeguard the use and confidentiality of applicable user and authorization codes, passwords and/or authentication keys upon receipt by the Authority. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee’s reliance upon and compliance with such Instructions notwithstanding such directions conflict or are inconsistent with a subsequent written instruction. The Authority agrees: (i) to assume all risks arising out of the use of Electronic Means to submit Instructions to the Trustee, including without limitation the risk of the Trustee acting on unauthorized Instructions, and the risk of interception and misuse by third parties; (ii) that it is fully informed of the protections and risks associated with the various methods of transmitting Instructions to the Trustee and that there may be more secure methods of transmitting Instructions than the method(s) selected by the Authority; (iii) that the security procedures (if any) to be followed in connection with its transmission of Instructions provide to it a commercially reasonable degree of protection in light of its particular needs and circumstances; and (iv) to notify the Trustee immediately upon learning of any compromise or unauthorized use of the security procedures.

Section 1422. Force Majeure. The Trustee shall not be considered in breach of or in default in its obligations hereunder or progress in respect thereto in the event of enforced delay in the performance of such obligations due to unforeseeable causes beyond its control and without its fault or negligence, including, but not limited to, Acts of God, terrorism, war, riots, strikes, fire, floods, earthquakes, epidemics or other like occurrences beyond the control of the Trustee; it being understood that the Trustee shall use reasonable efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

ARTICLE XV

AMENDMENT OF INSTRUMENT

Section 1501. Privilege of Amendments. This Instrument may be amended as provided in Section 1510 hereof without the need of obtaining consent of any of the holders of the 2021 Bonds. The "Regular Record Date" as defined in Section 302 hereof may be changed by the Authority without the need of obtaining consent of any holders of the 2021 Bonds if the Authority receives the consent of the securities depository then holding the 2021 Bonds pursuant to Section 302 hereof, if any, and if the Authority gives to the registered owner of each 2021 Bond a notice of change in the Regular Record Date, if a securities depository is the registered owner of the 2021 Bonds, by registered or certified mail, and otherwise, by first class mail, not less than six months before the first interest payment date to which the changed Regular Record Date will be applicable. In addition, except for supplemental instruments adopted pursuant to Section 712 hereof which do not expressly or impliedly amend or otherwise modify this Instrument, and except as provided in Section 1502 hereof, this Instrument may be amended or supplemented by instruments adopted by the Board in accordance with the laws of the State, without receipt by the Authority of any additional consideration, but, subject to the provisions of Section 1209 hereof, with the written consent of the holders of 66% in aggregate principal amount of the 2021 Bonds and Parity Securities Outstanding at the time of the adoption of such amendatory or supplemental instrument, excluding, pursuant to paragraph (5), Section 102(B) hereof, any 2021 Bonds which may then be held or owned for the account of the Authority, but including such refunding securities as may be issued for the purpose of refunding any of the 2021 Bonds if such refunding securities are not owned by the Authority.

Section 1502. Limitations upon Amendments. Notwithstanding the provisions of Section 1209(A) of this Instrument, no such instrument shall permit without the consent of the beneficial owners of the 2021 Bonds affected thereby:

- A. Changing Payment. A change in the maturity or in the terms of redemption of the principal of any Outstanding 2021 Bond or any installment of interest thereon; or
- B. Reducing Return. A reduction in the principal amount of any 2021 Bond, the rate of interest thereon, or any prior redemption premium payable in connection therewith; or
- C. Prior Lien. The creation of a lien upon or a pledge of revenues ranking prior to the lien or the pledge created by this Instrument; or
- D. Modifying Limitations upon Modifications. A reduction of the principal amount or percentages or otherwise affecting the description of 2021 Bonds or the consent of the holders of which is required for any such amendment or other modifications; or
- E. Priorities Between Bonds. The establishment of priorities as between 2021 Bonds issued and Outstanding under the provisions of this Instrument; or

F. Partial Modification. Materially and prejudicially modifying or otherwise materially and prejudicially affecting the rights or privileges of the holders of less than all of the 2021 Bonds then Outstanding.

Section 1503. Notice of Amendment. Whenever the Board proposes to amend or modify this Instrument under the provisions of this article, it shall cause notice of the proposed amendment to be mailed within 30 days to the Trustee, or each holder of the Outstanding 2021 Bonds and any Parity Securities. Such notice shall briefly set forth the nature of the proposed amendment and shall state that a copy of the proposed amendatory instrument is on file in the office of the Secretary for public inspection.

Section 1504. Time for Amendment. Whenever at any time within one year from the date of the mailing of such notice, there shall be filed in the office of the Secretary an instrument or instruments executed by Purchaser, or if there is no Purchaser, the holders of at least 66% in the aggregate principal amount of the 2021 Bonds then Outstanding, which instrument or instruments shall refer to the proposed amendatory instrument described in such notice shall specifically consent to and approve the adoption of such instrument, thereupon, but not otherwise, the Board may adopt such amendatory instrument and such instrument shall become effective.

Section 1505. Binding Consent to Amendment. If the Purchaser, or if there is no Purchaser, holders of at least 66% in the aggregate principal amount of the 2021 Bonds and Parity Securities then Outstanding, at the time of the adoption of such amendatory instrument, or the predecessors in title of such holders, shall have consented to and approved the adoption thereof as herein provided, no holder of any bond whether or not such holder shall have consented to or shall have revoked any consent as in this article provided, shall have any right or interest to object to the adoption of such amendatory instrument or to object to any of the terms or provisions therein contained or to the operation thereof or to enjoin or restrain the Authority from taking any action pursuant to the provisions thereof.

Section 1506. Time Consent Binding. Any consent given by the holder of a 2021 Bond and any Parity Securities pursuant to the provisions of this article shall be irrevocable for a period of 6 months from the date of the mailing of the notice above provided for in Section 1503 and shall be conclusive and binding upon all future holders of the same bond during such period. Such consent may be revoked at any time after 6 months from the date of such mailing of such notice, by the holder who gave such consent or by a successor in title by filing notice of such revocation with the Secretary, but such revocation shall not be effective if the holders of 66% in aggregate principal amount of the bonds Outstanding as in this article provided, prior to the attempted revocation, consented to and approved the amendatory instrument referred to in such revocation.

Section 1507. Unanimous Consent. Notwithstanding anything in the foregoing provisions of this article, the terms and the provisions of this Instrument or of any instrument amendatory thereof or supplemental thereto and the rights and the obligations of the Authority and of the holders of the 2021 Bonds may be amended or otherwise modified in any respect upon the adoption by the Authority and upon the filing with the Secretary of an instrument to that effect and with the consent of the holders of all the then Outstanding 2021 Bonds, such consent to be given as provided in Section 1204 hereof; and no notice to holders of 2021 Bonds shall be required as

provided in Section 1503 hereof, and the time of consent shall not be limited except as may be provided in such consent.

Section 1508. Exclusion of Authority's Bonds. At the time of any consent or of other action taken under this article, the Authority shall furnish to the Secretary a certificate of the Treasurer, upon which the Authority may rely, describing all bonds to be excluded, for the purpose of consent or of other action or of any calculation of Outstanding bonds provided for in this article, and the Authority shall not be entitled with respect to such bonds to give any consent or to take any other action provided for in this article, pursuant to paragraph (5) of Section 102(B) hereof.

Section 1509. Notation on Bonds. Bonds authenticated and delivered after the effective date of any action taken as in this article provided may bear a notation by endorsement or otherwise in form approved by the Board as to such action; and if such Bonds so authenticated and delivered shall bear such notation, then upon demand of the holder of any Bond Outstanding at such effective date and upon presentation of his Bond for the purpose at the principal office of the Secretary, suitable notation shall be made on such Bond by the Secretary as to any such action. If the Board so determines, new Bonds so modified as in the opinion of the Board to conform to such action shall be prepared, authenticated, and delivered; and upon demand of the holder of any Bond then Outstanding, exchanged without cost to such holder for Bonds then Outstanding upon surrender of such Bonds.

Section 1510. Amendments Not Requiring Consent. The Authority, acting by and through the Board, and the Trustee, notwithstanding the provisions of other sections of this article, and without the consent of or notice to any holder of any 2021 Bond, shall consent to any amendment, change, or modification of this Instrument as required:

- A. Bond Resolution. By the provisions of this Instrument,
- B. Curing Defects. For the purpose of curing any ambiguity or formal defect or omission herein,
- C. Additional Securities. In connection with the issuance and delivery of additional bonds or other securities payable from the Net Revenues, or
- D. Other Change. In connection with any other change herein which, in the judgment of the Trustee and in the opinion of bond counsel to the Authority, is not to the prejudice of the Trustee, or the holders of the 2021 Bonds or any Parity Securities then Outstanding.

PASSED, APPROVED AND ADOPTED BY THE BOARD OF DIRECTORS
OF THE TRUCKEE MEADOWS WATER AUTHORITY ON THIS MAY 20, 2021.



(SEAL)

Attest:

A handwritten signature in blue ink, appearing to read "Mark Free", is written over a horizontal line.

Secretary

A handwritten signature in black ink, appearing to read "Vaughn Hartung", is written over a horizontal line.

Chairman

STATE OF NEVADA)
) ss.)
 COUNTY OF WASHOE)
)
 TRUCKEE MEADOWS)
 WATER AUTHORITY)

I am the duly chosen, qualified, and acting Secretary of the Truckee Meadows Water Authority and of its Board of Directors (herein the "Authority" and the "Board," respectively), the Authority being situate in the County of Washoe and State of Nevada, do hereby certify:

1. The foregoing pages together with the Exhibit appended thereto constitute a true, correct, complete, and compared copy of the "2021 Refunding Bond Resolution," introduced, passed, and adopted at a meeting of the Board held on May 20, 2021.

2. The original of the 2021 Refunding Bond Resolution has been approved and authenticated by the signatures of the Chairman of the Board and myself as Secretary, and sealed with the seal of the Authority, and has been recorded in the minute book of the Board kept for that purpose in the Authority's office, which record has been duly signed by such officers and properly sealed.

3. The Directors voted on the passage of such instrument as follows:

Those Voting Aye:	Paul Anderson Jenny Brekhus Kristopher Dahir Naomi Duerr Vaughn Hartung Alexis Hill Neoma Jardon
-------------------	--

Those Voting Nay: _____

Those Absent: _____

4. The foregoing proceedings were in fact held as in such minutes specified as originally of record in my possession.

5. All members of the Board were given due and proper notice of the meeting.

6. Public notice of such meeting was given and such meeting was held and conducted in full compliance with the provisions of NRS 241.020 and, if applicable, the Nevada Governor's Directive 006, as amended, and the Nevada Governor's Directive 033 (collectively, the "Directives"). A copy of the notice of meeting (attached as Exhibit A) and excerpts from the agenda for the meeting relating to the resolution, was posted no later than 9:00 a.m. on the third working day prior to the meeting, on the Authority's website, on the State of Nevada's official website and if

required by the NRS 241.020 and the Directives, at least three (3) other separate, prominent places within the jurisdiction of the Board.

7. Prior to 9:00 a.m. at least 3 working days before such meeting, such notice was mailed to each person, if any, who has requested notices of meetings of the Board in compliance with NRS 241.020(3)(b) by United States Mail, or if feasible and agreed to by the requestor, by electronic mail.

8. No other proceedings were adopted and no other action was taken or considered at such meeting pertaining to the proposed bonds.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of the Truckee Meadows Water Authority, on this May 20, 2021.

(SEAL)



A handwritten signature in blue ink that reads "Mark Free".

Secretary

EXHIBIT A

(Attach Copy of Notice of Meeting)



TRUCKEE MEADOWS WATER AUTHORITY
Board of Directors
AGENDA

NEW DAY: Thursday May 20, 2021 at 10:00 a.m.
Virtual meeting only.

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

Please click the link below to join the webinar:

<https://tmwa.zoom.us/j/93199705901?pwd=b1BNd2hHM2pqVkVhZFJlCmGzV1NkUT09>

Password: 205040

Or call:

Phone: (888) 788-0099

Webinar ID: 931 9970 5901

Board Members

Chair Vaughn Hartung	Vice Chair Kristopher Dahir
Member Neoma Jardon	Member Alexis Hill
Member Jenny Brekhus	Member Naomi Duerr
Member Paul Anderson	

NOTES:

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

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

1. Roll call*
2. Pledge of allegiance*
3. Public comment — limited to no more than three minutes per speaker*
4. Possible Board comments or acknowledgements*
5. Approval of the agenda **(For Possible Action)**
6. Approval of the minutes of the April 21, 2021 meeting of the TMWA Board of Directors **(For Possible Action)**
7. Presentation of Fiscal Year 2021 Q3 Year to Date Financial Results — Matt Bowman*
8. PUBLIC HEARING ON ADOPTION OF BUDGET
 - A. Discussion, and action on request for adoption of Resolution No. 292: A resolution to adopt the final budget for the Fiscal Year ending June 30, 2022 and the 2022-2026 Five-Year Capital Improvement Plan — Matt Bowman and Sandra Tozi **(For Possible Action)**
 - B. Public comment — limited to no more than three minutes per speaker*CLOSE PUBLIC HEARING
9. Discussion, and action on request for adoption of Resolution No. 293: A resolution designated by the short title “2021 Refunding Bond Resolution” authorizing the issuance by the authority of its “Truckee Meadows Water Authority, Subordinate Water Revenue Refunding Bonds, Series 2021,” in the aggregate principal amount not to exceed \$13,350,000, for the purpose of defraying wholly or in part the cost of refunding certain outstanding commercial paper notes; providing the form, terms, and conditions of the bonds and the security therefor; providing for the collection and disposition of revenues derived from the operation of the Authority’s water system; pledging such revenues to the payment of the bonds; approving the form of a continuing covenant agreement to be entered into between the initial purchaser and the Authority; providing other covenants, agreements, details and other matters relating thereto — Michele Sullivan and Matt Bowman **(For Possible Action)**
10. Discussion, action and possible approval of Feasibility Study Agreement between TMWA and Palomino Farms, LLC and LW Land Company LLC authorizing feasibility study in collaboration with OneWater Nevada to evaluate the feasibility of using recycled water for irrigation in Warm Springs Valley and to provide water sustainability benefits — John Enloe and John Zimmerman **(For Possible Action)***(discussion may be combined with item #11)*
11. Discussion and action, possible direction to staff and possible approval of an interlocal agreement with the City of Reno, City of Sparks and Washoe County for reimbursement of costs to conduct a feasibility study to evaluate the feasibility of using recycled water for

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irrigation in Warm Springs Valley (Palomino Farms and LW Land Company) and to provide water sustainability benefits — John Enloe and John Zimmerman **(For Possible Action)**

12. Discussion and action on appointments to the Standing Advisory Committee (SAC) to fill the multi-family customer primary representative, and senior citizen and residential 3 customer alternate representatives, and other possible vacancies for terms beginning May 1, 2021 to December 31, 2023 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)** *(continued from April 21, 2021 meeting)*
13. Water Supply Update — Bill Hauck*
14. Discussion and possible action, and direction to staff regarding 2021 legislative activities, current bills, including SCR 11, and TMWA recommended positions on legislative proposals — John Zimmerman and Leo Drozdoff **(For Possible Action)**
15. General Manager's Report*
16. Public comment — limited to no more than three minutes per speaker*
17. Board comments and requests for future agenda items*
18. Adjournment **(For Possible Action)**

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