2022 Resolution Listing

<u>January 19, 2022</u>

Resolution 01-22 – A resolution adopting the investment policy for the Tualatin Valley Water District

<u>February 16, 2022</u>

Resolution 02-22 – A resolution amending system development charges for the Tualatin Valley Water District and declaring an effective date

<u>March 16, 2022</u>

Resolution 03-22 – A resolution endorsing the annexation to the Tualatin Valley Water District of a single property located at Tax Lot 400, T1NR2W, Section 14, Willamette Meridian, at 21727 NW West Union Road, in Washington County

Resolution 04-22 – A resolution amending the Intergovernmental Agreement Between Washington County and Tualatin Valley Water District for Construction of Waterline Work on SW Tualatin Valley Highway (SW 211th Avenue to SW 209th Avenue) and SW 209th Avenue (SW Alexander Street to SW Kinnaman Road)

<u>May 18, 2022</u>

Resolution 05-22 – A resolution authorizing the Chief Executive Officer to extend the audit services agreement with Moss Adams LLP for two additional years

Resolution 06-22 – A resolution approving the Intergovernmental Agreement Between Tualatin Valley Water District and the City of Beaverton for System Interconnection at SW Kemmer Road

Resolution 07-22 – A resolution approving the District's 2022-23 Financial Plan

Resolution 08-22 – A resolution establishing the cost-of-living adjustment (COLA) for employee compensation

June 15, 2022

Resolution 09-22 – A resolution approving the First Amendment to the Intergovernmental Agreement Between Tualatin Valley Water District and the City of Beaverton for Emergency Water Use

July 20, 2022

Resolution 10-22 – A resolution establishing a process for proposed adjustments to water rates effective November 1, 2022

Resolution 11-22 – A resolution amending the Local Contract Review Board Rules Division 120-010 to add Governmental Affairs, Public Policy and Communications as a Class Special Procurement and to approve a contract with CFM Strategic Communications, Inc., CFM Advocates

August 17, 2022

Resolution 12-22 – A resolution to appoint members of the 2022 Rate Advisory Committee

September 21, 2022

Resolution 13-22 – A resolution establishing water rates for the Tualatin Valley Water District as listed in Exhibit A with an effective date of November 1, 2022

December 21, 2022

Resolution 14-22 – A resolution establishing regular monthly meeting dates of the Board of Commissioners for the calendar year 2023

Resolution 15-22 – A resolution revising the vision statement for the Tualatin Valley Water District

Tualatin Valley Water District

Delivering the Best Water Service Value

RESOLUTION NO. 01-22

A RESOLUTION ADOPTING THE INVESTMENT POLICY FOR THE TUALATIN VALLEY WATER DISTRICT.

WHEREAS, the Board of Commissioners (Board), in compliance with ORS 294.135, adopts the District's Investment Policy annually; and

WHEREAS, the Investment Policy was last adopted by the Board through its approval of Resolution 01-21 on January 20, 2021; and

WHEREAS, the Investment Policy provides guidance on investment decisions and operating principles for the effective management of financial risk, portfolio diversification and internal controls, and allows for the purchase of investments having a maturity longer than 18 months as allowed by ORS 294.135; and

WHEREAS, the Investment Policy remains in compliance with ORS 294.035 regulating the investment of public funds by municipal subdivisions and policy guidelines established by the State of Oregon Short Term Fund (OSTF) Board; and

WHEREAS, the OSTF Board approved the District's Investment Policy in April 2009, and subsequent amendments to the Investment Policy since that time have conformed with OSTF guidance; and

WHEREAS, there are no recommended changes for the Investment Policy, and being fully advised.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT**:**

Section 1: The Investment Policy attached hereto as Exhibit A and incorporated by reference is hereby adopted, and staff is directed to implement in the ordinary course of the District business.

Approved and adopted at a regular meeting held on the 19th day of January 2022.

________________________________ ________________________________

Todd Sanders, President Jim Doane, Secretary

Exhibit A

INVESTMENT POLICY

Tualatin Valley Water District

Adopted January 19, 2022

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1. Scope

This policy applies to activities of Tualatin Valley Water District (District) with regard to investing the financial assets of all funds as defined by the District in its Chart of Accounts except that funds held by trustees or fiscal agents are excluded from these rules; however, all funds are subject to regulations established by the State of Oregon.

The purpose of this Investment Policy is to establish the investment objectives, delegation of authority, standards of prudence, eligible investments and transactions, internal controls, reporting requirements, and safekeeping and custodial procedures necessary for the prudent management and investment of the funds of the District.

This policy has been adopted by Resolution No. 01-22 by the District's Board of Commissioners on January 19, 2022 and replaces the District's previous Investment Policy.

Other than bond proceeds or other unusual situations, the total of all funds ranges from $40,000,000 to $130,000,000. The Chart of Accounts currently defines the following funds that are not held by trustee or fiscal agent:

1.) Cash Pool
2.) General Fund
3.) Capital Improvement Fund
4.) Capital Reserve Fund
5.) Debt Proceeds Fund
6.) Revenue Bond Debt Service Fund
7.) Willamette River Water Coalition
8.) Customer Emergency Assistance Fund
9.) Willamette Intake Facilities
10.) Willamette Water Supply System

If, in the course of its activities, the District should define further funds (not held by trustee or fiscal agent), these rules shall also apply to the investment of the financial assets of those new funds. These funds will be invested in compliance with the provisions of, but not necessarily limited to, ORS 294.035 through ORS 294.048; and ORS 294.125 through ORS 294.155. Investment of any tax-exempt borrowing proceeds and any related debt service funds will comply with the arbitrage restrictions on all applicable Internal Revenue Codes.

The District acts as collection agent for several other utilities. These funds are to be transferred to the respective agency in compliance with the intergovernmental agreements. Currently the agreements vary from two business days from receipt, the second business day following the week of collection, and twice a month following the 15th and end of month. The method of transfer is by requesting a Pool-to-Pool account transfer at the Local Government Investment Pool (LGIP), a check, or an automated clearing house (ACH) deposit if the agency requests it.

2. Governing Authority

The investment program shall be operated in conformance with federal, state, and other legal requirements. Specifically, this investment policy is written in conformance with ORS 294.035; 294.040; 294.052; 294.135; 294.145 and 294.810. All funds within the scope of this policy are subject to regulations established by the state of Oregon. Any revisions or extensions of these sections of the ORS shall be assumed to be part of this Investment Policy immediately upon being enacted.

3. Objectives

The District's investment objectives are as follows:

3.1: Safety

- Preservation of capital and the protection of principal.
- Diversification to avoid incurring unreasonable risks regarding specific security types or individual issuers.

3.2: Liquidity

- Maintenance of sufficient liquidity to meet operating requirements.

3.3: Limit Risk

- Avoidance of imprudent credit, market, or speculative risk.

3.4: Legality

- Conformance with federal, state, and other legal requirements.

3.5: Return

- Attainment of a market rate of return throughout all economic and fiscal cycles.

4. Standards of Care

4.1: Delegation of Authority

- The Chief Financial Officer is the designated Investment Officer of the District and is responsible for investment decisions, under the review of the Board of Commissioners. The Chief Financial Officer may delegate authority to another member of the Finance Department to perform all or some of the duties of the Investment Officer.
- The Investment Officer is responsible for setting investment policy and guidelines subject to review and adoption by the Board of Commissioners and, if required, review and comment by the Oregon Short Term Fund Board. Further, the Investment Officer will be responsible for the day-to-day operations of the investment process which include, but are not limited to, choosing what to buy or sell, from whom investments will be purchased, executing the buy/sell orders, producing necessary reports, and supervising staff. In addition to the active management of the investment portfolio, the Investment Officer is responsible for the maintenance of other written administrative procedures consistent with this policy and the requisite compliance.
- To further manage the risk and return of the investment portfolio, the Investment Officer will administer an active cash management program that maintains historical cash flow information (e.g., debt service, payroll, revenue receipts, and any extraordinary expenditures).
- Subject to required procurement procedures, the District may engage the support services of outside professionals and services as necessary for the efficient management of the investment program. External service providers shall be subject to Oregon Revised Statutes and the provisions of this Investment Policy. The Advisor shall provide non-discretionary advisory services, which requires prior approval from the Investment Officer. If the District hires an Investment Advisor to provide investment advisory services, the Advisor is authorized to transact with its direct dealer relationships on behalf of the District.

4.2: Prudence

- The standard of prudence to be used by the Investment Officer in the context of managing the financial resources shall be the "prudent person" standard, which states: "Investments shall be made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived."
- The Investment Officer and staff, acting in accordance with the Investment Policy and exercising due diligence, shall not be held personally responsible for a specific security's credit risk, market price changes, or loss of principal if securities are liquidated prior to maturity provided these deviations and losses are reported as soon as practical and action is taken to control adverse developments.

4.3: Ethics and Conflict of Interest

- District officers and employees involved in the investment process shall refrain from personal business activity that could conflict with the proper execution and management of the investment program, or that could impair their ability to make impartial decisions. Employees and investment officials shall disclose to the Chief Executive Officer any material interests in financial institutions with which they conduct business. They shall further disclose any person financial/investment positions that could be related to the performance of the investment portfolio. Employees, officers and their families shall refrain from undertaking personal investment transactions with the same individual with whom business is conducted on behalf of the District. Officers and employees shall, at all times, comply with the State of Oregon's Government Ethics requirements set forth in ORS 244.

5. Safekeeping, Accounting, and Controls

5.1: Safekeeping and Collateralization

- All trades of marketable securities will be executed on a delivery vs. payment (DVP) basis to ensure that securities are deposited in the District's safekeeping institution prior to the release of funds. The trust department of a bank may be designated as custodian for safekeeping securities purchased from that bank. The custodian shall provide monthly statements and accrual basis reports to Tualatin Valley Water District listing security holdings, issuer, coupon, maturity, CUSIP number, purchase or sale price, transaction date, accrued interest, and other pertinent information. The custodian shall also provide daily access regarding pending investment transactions, future call notices, and any other important information. Upon request, the safekeeping institution shall make available a copy of its Statement on Standards for Attestation Engagements (SSAE) No. 16.
- Demand and time deposits shall be collateralized through the State collateral pool as required by ORS 295 for any excess over the amount insured by an agency of the US Government. Additional collateral requirements may be required if the Chief Financial Officer or the Investment Officer deems increased collateral is beneficial to the protection of the monies under the District's management.

5.2: Accounting Method

- The District shall comply with all required legal provisions and Generally Accepted Accounting Principles (GAAP). The accounting principles are those contained in the pronouncements of the authoritative bodies including, but not necessarily limited to, the American Institute of Certified Public Accountants (AICPA); the Financial Accounting Standards Board (FASB); and the Government Accounting Standards Board (GASB).

5.3: Internal Controls

- The Investment Officer shall maintain a system of written internal controls which shall be reviewed and tested by the independent auditor at least annually or upon any extraordinary event, e.g., turnover of key personnel, the discovery of any inappropriate activity. The internal controls shall address the following points at a minimum:

  i. Compliance with Investment Policy
  ii. Control of Collusion
  iii. Separation of transaction authority from accounting and record keeping
  iv. Custodial safekeeping
  v. Avoidance of physical delivery of securities whenever possible and address control requirements for physical delivery where necessary
  vi. Clear delegation of authority to subordinate staff members
  vii. Confirmation of transactions for investments and wire transfers in written or digitally verifiable electronic form
  viii. Dual authorizations of wire and automated clearing house (ACH) transfers
  ix. Staff training
  x. Review, maintenance and monitoring of security procedures both manual and automated

6. Qualified Institutions, Investment Advisory Services, and Competitive Transactions

6.1: Qualified Financial Institutions – Broker/Dealers

- The Investment Officer, and if applicable, the investment advisory firm as described in Section 6.3, shall maintain a list of all authorized broker/dealers and financial institutions which are approved for investing funds within the scope of this investment policy. Any firm is eligible to make an application to the District, and on due consideration and approval, may be added to the list. Additions or deletions to the list will be made at the Investment Officer's discretion. The following minimum criteria must be met prior to authorizing investment transactions. The Investment Officer may impose more stringent criteria.

  a. Broker/Dealer firms must meet the following minimum criteria:
     i. Be registered with the Securities and Exchange Commission (SEC);
     ii. Be registered with the Financial Industry Regulatory Authority (FINRA).
     iii. Provide most recent audited financials.
     iv. Provide FINRA Focus Report filings.

  b. Approved broker/dealer employees who execute transactions with the District must meet the following minimum criteria:
     i. Be a registered representative with the Financial Industry Regulatory Authority (FINRA);
     ii. Be licensed by the state of Oregon;
     iii. Provide certification (in writing) of having read; understood; and agreed to comply with the most current version of this investment policy.

- At the request of the District, the firms performing investment services shall provide their most recent financial statements for review. Further, there should be in place, proof as to all the necessary credentials and licenses held by employees of the broker/dealers who will have contact with the District as specified by, but not necessarily limited to, the Financial Industry Regulatory Authority (FINRA), Securities and Exchange Commission (SEC), etc. The District, or District's Investment Advisory Firm, shall conduct an annual evaluation of each firm's creditworthiness to determine if it should remain on the list. Securities broker/dealers not affiliated with a bank shall be required to be registered in the state of Oregon or be classified as reporting dealers affiliated with the Federal Reserve as primary dealers.

- If an investment advisory firm is retained by the District to execute transactions on the District's behalf, it will have authority to execute investment trades and transactions from its list of authorized broker/dealers and financial institutions. The advisor's broker/dealer list will be provided to the Investment Officer for approval. The Investment Officer can assign the responsibility of the broker/dealer due diligence process to the advisor, and all licensing information on the counterparties will be maintained by the advisor and available upon request.

  The advisor broker/dealer review should include:

  i. FINRA Certification check
  ii. Firm Profile
  iii. Firm History
  iv. Firm Operations
  v. Disclosures of Arbitration Awards, Disciplinary and Regulatory Events
  vi. State Registration Verification
  vii. Financial review of acceptable FINRA capital requirements or letter of credit for clearing settlements.

  The advisor must provide the District with any changes to the list prior to transacting on behalf of the District.

6.2: Qualified Financial Institutions – Banks

- All bank financial institutions that provide deposits, certificates or any other deposit of the District must be either fully covered by the Federal Deposit Insurance Corporation (FDIC) or the bank must be a participant of the State of Oregon – Public Funds Collateralization Program (PFCP). ORS Chapter 295 governs the collateralization program for banks at the State level. Bank depositories are required to pledge collateral against any public fund deposits in excess of the FDIC insurance amounts. This provides additional protection for public funds in the event of a bank loss. ORS 295 sets the specific value of the collateral, as well as the types of collateral that are acceptable. ORS 295 creates a shared liability structure for participating bank depositories, better protecting public funds though still not guaranteeing that all funds are 100% protected.

6.3: Investment Advisory Services

- The District may enter into contracts with external investment advisory firms as it applies to the investment of its short-term operating funds and capital funds including bond proceeds and bond reserve funds. The investment advisory firm must work on a non-discretionary basis, which requires that the Investment Officer approves all transactions prior to execution.
- If an investment advisor is hired, the advisor will serve as fiduciary for the District and comply with all requirements of this Investment Policy. The Investment Officer remains the person ultimately responsible for the prudent management of the portfolio.
- Factors to be considered when hiring an investment advisory firm may include, but are not limited to:

  i. The firm's major business
  ii. Ownership and organization of the firm
  iii. The background and experience of key members of the firm, including portfolio manager expected to be responsible for the District's account
  iv. The size of the firm's asset base, and the portion of that base which would be made up by Tualatin Valley Water District's portfolio if the firm were hired
  v. Management fees
  vi. Cost analysis by Investment Officer

- A periodic (at least annual) review of all authorized investment advisors under contract will be conducted by the Investment Officer to determine their continued eligibility within the portfolio guidelines.

- Requirements of Investment Advisors
    i. The investment advisor firm must be registered with the Securities and Exchange Commission (SEC) or licensed by the state of Oregon; *(Note: Investment advisor firms with assets under management exceeding $100 million must be registered with the SEC, otherwise the firm must be licensed by the State of Oregon).*
    ii. All investment advisor firm representatives conducting investment transactions on behalf of the District must be registered representatives with FINRA.
    iii. All investment advisor firm representatives conducting investment transactions on behalf of District must be licensed by the State of Oregon.
    iv. Contract terms will include that the Investment advisor will comply with the District's Investment Policy.

- The Investment Advisor must notify the District immediately if any of the following issues arise while serving under a District Contract:
    i. Pending investigations by securities regulators
    ii. Significant changes in net capital
    iii. Pending customer arbitration cases
    iv. Regulatory enforcement actions

6.4: Competitive Selection of Bids or Offers

- Each investment transaction shall be competitively transacted with broker/dealers who have been authorized by the District or investment advisory firm. At least two broker/dealers shall be contacted for each transaction and their bids and offering prices shall be recorded. A record, subject to District archiving policy, shall be maintained by the District of all bids and offerings for security transactions in order to ensure that the District receives competitive pricing.

- If the District is offered a security for which there is no readily available competitive offering, then the Investment Officer shall document quotations for comparable or alternative securities. When purchasing original issue instrumentality securities, no competitive offerings will be required as all dealers in the selling group offer those securities at the same original issue price.

7. AUTHORIZED AND SUITABLE INVESTMENTS

7.1: Authorized Investments

- All investments of the District shall be made in accordance with Oregon Revised Statutes: ORS 294.035 (Investment of surplus funds of political subdivisions; approved investments), ORS 294.040 (Restriction on investments under ORS 294.035), ORS 294.135 (Investment maturity dates), ORS 294.145 (Prohibited conduct for Investment Officer including not committing to invest funds or sell securities more than 14 business days prior to the anticipated date of settlement), ORS 294.805 to 294.895 (Local Government Investment Pool). Any revisions or extensions of these sections of the ORS shall be assumed to be part of this Investment Policy immediately on being enacted.

- This policy recognizes S&P, Moody's, and Fitch Ratings as the major Nationally Recognized Statistical Ratings Organizations (NRSRO).

- In the case of split ratings, where the major NRSROs issue different ratings, the lower rating shall be used to determine compliance with this investment policy. Minimum credit ratings and percentage limitations apply to the time of purchase.

7.2: Suitable Investments

US Treasury Obligations: Direct obligations of the United States Treasury whose payment is guaranteed by the United States. [ORS 294.035(3)(a)]

US Agency Obligations Primary: Senior debenture obligations of US federal agencies and instrumentalities or U.S. government sponsored enterprises (GSE) that have actively traded markets and provide a higher level of liquidity. These include: Federal National Mortgage Association (FNMA), the Federal Home Loan Mortgage Corporation (FHLMC), Federal Home Loan Banks (FHLB), and the Federal Farm Credit Bureau (FFCB).

US Agency Obligations Secondary: Other US government sponsored enterprises that are less marketable are considered secondary GSEs. They include but are not limited to: Private Export Funding Corporation (PEFCO), Tennessee Valley Authority (TVA), Financing Corporation (FICO) and Federal Agricultural Mortgage Corporation, (Farmer Mac).

Municipal Debt: Lawfully issued debt obligations of the States of Oregon, California, Idaho, and Washington and political subdivisions of those states if the obligations have a long-term rating of AA- or better by S&P, Aa3 or better by Moody's, or AA- or better by Fitch.

Corporate Notes: Corporate Notes must be rated AA- or better by S&P, Aa3 or better by Moody's, or AA- or better by Fitch [ORS 294.035(3)(b)].

Commercial Paper: Commercial Paper must be rated A1 or better by Standard and Poor's, P1 or better by Moody's Services, or F1 or better by Fitch [ORS 294.035(3)(b)] and has long-term bonds which have a minimum rating of AA- by Standard and Poor's and Aa3 by Moody's. Issuer constraints for commercial paper combined with corporate notes will be limited by statute to 5% of market value per issuer.

Bank Deposit/ Savings Accounts: Time deposit open accounts or savings accounts in insured institutions as defined in ORS Section 706.008, in credit unions as defined in ORS Section 723.006 or in federal credit unions, if the institution or credit union maintains a head office or a branch in Oregon [ORS Section 294.035(3)(d)].

Certificates of Deposit: Certificates of deposit in insured institutions as defined in ORS 706.008, in credit unions as defined in ORS Section 723.006 or in federal credit unions, if the institution or credit union maintains a head office or a branch in Oregon [ORS Section 294.035(3)(d)].

Bankers' Acceptances: Bankers' acceptances, if the bankers' acceptances are: (i) Guaranteed by, and carried on the books of, a qualified financial institution; (ii) Eligible for discount by the Federal Reserve System; and (iii) Issued by a qualified financial institution whose short-term letter of credit rating is rated AAA by S&P, Aaa by Moody's, or AAA by Fitch. For the purposes of this paragraph, "qualified financial institution" means: (i) A financial institution that is located and licensed to do banking business in the State of Oregon; or (ii) A financial institution that is wholly owned by a financial holding company or a bank holding company that owns a financial institution that is located and licensed to do banking business in the State of Oregon. [ORS 294.035(3)(h)]

Local Government Investment Pool: State treasurer's local short-term investment fund up to the statutory limit per ORS 294.810.

8. Investment Parameters

8.1: Investment Maturity

- The Investment Officer may invest funds that are related to cash flows for future construction projects or that are being accumulated for future renewal and replacement of infrastructure, by purchasing securities that will be held for a maximum of 5 years. Except for the aforesaid funds and funds requiring special handling (bond proceeds subject to arbitrage, etc.), investments beyond 5 years require the express approval of the Board of Commissioners. The first priority will be to invest in maturities that match liquidity needs of the District. Thereafter, the District shall target to maintain maturities within the following parameters for the total portfolio:

Maturity Constraints	**Minimum % of Total Portfolio**
Under 30 days	10%
Under 1 year	25%
Under 5 years	100%
Maturity Constraints	**Maximum of Total Portfolio in Years**
Weighted Average Maturity	2.00
Security Structure Constraint	**Maximum % of Total Portfolio**
Callable Agency Securities	25%

- Five-years maximum maturity of any single issue.
- Further, the District shall target the weighted average maturity (WAM) of the total fund to one year which includes both liquidity funds and core investments.
- Cash flow projections will be reviewed and updated at least monthly and will be the controlling guide to establishing maturities. Maturities will be selected to ensure that sufficient cash is available to meet requirements. At least one month's estimated cash operating requirements will be maintained in the Local Government Investment Pool (LGIP) at all times.

8.2: Portfolio Diversification

Diversification Constraints on Total Holdings:
Liquidity and Core Funds

Issue Type	**Maximum % Holdings**	**Maximum % per Issuer**	**Ratings S&P**	**Ratings Moody's**
US Treasury Obligations	100%	None	N/A	N/A
US Agency Primary Securities FHLB, FNMA, FHLMC, FFCB	100%	40%	N/A	N/A
US Agency Secondary Securities FICO, FARMER MAC etc.	10%	5%	Security must be rated	Security must be rated
Municipal Bonds (OR, CA, ID, WA)	10%	5%	AA-	Aa3
Corporate Notes	35%*	5%**	AA-	Aa3
Commercial Paper			A1	P1
Bank Time Deposits/Savings Accounts	20%	10%	Oregon Public Depository	Oregon Public Depository
Certificates of Deposit	10%	5%	Oregon Public Depository	Oregon Public Depository
Banker's Acceptance	25%	5%	AAA Underlying	Aaa Underlying
Oregon Short Term Fund	Maximum allowed per ORS 294.810	None	N/A	N/A

*35% maximum combined corporate and commercial paper per ORS.
**Issuer constraints apply to the combined issues in corporate and commercial paper holdings.

8.3: Prohibited Investments

- The District shall not invest in “144A” private placement securities, this includes commercial paper privately placed under section 4(a)(2) of the Securities Act of 1933.
- The District shall not lend securities nor directly participate in a securities lending or reverse repurchase program.
- The District shall not purchase mortgage backed securities.
- The District will not purchase, per ORS 294.040, any bonds of issuers listed in ORS 294.035(3)(a) to (c) that have a prior default history.

8.4: Investment of Proceeds from Debt Issuance

- Investments of bond proceeds are restricted under bond covenants that may be more restrictive than the investment parameters included in this policy. Bond proceeds shall be invested in accordance with the parameters of this policy and the applicable bond covenants and tax laws.
- Funds from bond proceeds and amounts held in a bond payment reserve or proceeds fund may be invested pursuant to ORS 294.052. Investments of bond proceeds are typically not invested for resale and are maturity matched with outflows. Consequently, surplus funds within the scope of ORS 294.052 are not subject to this policy’s liquidity risk constraints within Section 8.1.

8.5: Investment of Reserve or Capital Improvements

- Pursuant to ORS 294.135(1)(b), reserve or capital Improvement project monies may be invested in securities exceeding three years when the funds in question are being accumulated for an anticipated use that will occur more than 18 months after the funds are invested, then, upon the approval of the governing body of the county, municipality, school district or other political subdivision, the maturity of the investment or investments made with the funds may occur when the funds are expected to be used.

9. Investment Policy Compliance

9.1: Compliance Report

- A compliance report shall be maintained quarterly to document the portfolio versus the investment policy.

9.2: Compliance Measurement and Adherence

- Compliance Measurement
    - i. Guideline measurements will use market value of investments based in investment parameters.
    - ii. Rating and distribution criteria will be based on the settlement date of each purchase.
- Compliance Procedures
    - i. If the portfolio falls outside of compliance with adopted investment policy guidelines or is being managed inconsistently with this policy, the Investment Officer shall bring the portfolio back into compliance in a prudent manner and as soon as prudently feasible.
    - ii. Violations of portfolio guidelines as a result of transactions; actions to bring the portfolio back into compliance and; reasoning for actions taken to bring the portfolio back into compliance shall be documented and reported to the Board of Commissioners.

iii. Due to fluctuations in the aggregate surplus funds balance, maximum percentages for a particular issuer or investment type may be exceeded at a point in time. Securities need not be liquidated to realign the portfolio; however, consideration should be given to this matter when future purchases are made to ensure that appropriate diversification is maintained.

iv. As determined on any date that the security is held within the portfolio. If the credit rating of a security is subsequently downgraded below the minimum rating level for a new investment of that security, the Investment Officer shall evaluate the downgrade on a case-by-case basis in order to determine if the security should be held or sold. The Investment Officer will apply the general objectives of safety, liquidity and legality to make the decision.

10. Reporting Requirements and Performance Measurement

10.1: Reporting Requirements

- The Investment Officer shall generate monthly reports for management purposes. The Board of Commissioners will be provided with reports which will include but not necessarily be limited to; portfolio activity, instruments held by type, investment allocations by maturity, estimated market valuations, as well as any narrative necessary for adequate clarification.

10.2: Performance Evaluation

- The portfolio will be invested into a predetermined structure that will be measured against a selected benchmark portfolio. The structure will be based upon a chosen minimum and maximum effective duration and will have the objective to achieve market rates of returns over long investment horizons. The purpose of the benchmark is to appropriately manage the risk in the portfolio given interest rate cycles. The core portfolio is expected to provide similar returns to the benchmark over interest rate cycles but may underperform or outperform in certain periods. The portfolio will be positioned to first protect principal and then achieve market rates of return. The benchmark used will be a 0-3 year or 0-5 year standard market index and comparisons will be calculated monthly and reported quarterly.
- When comparing the performance of the District's portfolio, all fees and expenses involved with managing the portfolio shall be included in the computation of the portfolio's rate of return.
- The mark to market pricing will be calculated monthly and be provided in a monthly report.
- The Investment Advisor shall make available quarterly and annual reports to the District that contains sufficient information to permit an informed outside reader to evaluate the performance of the investment program.

10.3: Monitoring and Adjusting the Portfolio

- The Investment Officer will routinely monitor the contents of the portfolio comparing the holdings to the markets, relative values of competing instruments, changes in credit quality, and benchmarks. If there are advantageous transactions, the portfolio may be adjusted accordingly.
- The policies set forth in this document will be adhered to and monitored on a monthly basis.

11. Investment Policy Adoption

This Investment Policy will be formally adopted by the Board of Commissioners; and thereafter, this policy will be readopted annually, even if there are no changes. Prior to adoption by the Board of Commissioners, if changes to the Investment Policy require review and comment by the Oregon Short Term Fund Board, such review will be sought prior to formal adoption.

12. Glossary of Investment Terms

Accrued Interest: The interest accumulated on a security since the issue date or since the last coupon payment. The buyer of the security pays the market price plus accrued interest.

Agency Securities: Government sponsored enterprises of the US Government**.**

Basis Point: One-hundredth of 1 percent. One hundred basis points equal 1 percent.

Bond: An interest-bearing security issued by a corporation, government, governmental agency, or other body. It is a form of debt with an interest rate, maturity, and face value, and it is usually secured by specific assets. Most bonds have a maturity of greater than one year and generally pay interest semiannually.

Bond Discount: The difference between a bond's face value and a selling price, when the selling price is lower than the face value.

Broker: An intermediary who brings buyers and sellers together and handles their orders, generally charging a commission for this service. In contrast to a principal or a dealer, the broker does not own or take a position in securities.

Callable: A bond that may be redeemed by the issuer before maturity for a call price specified at the time of issuance.

Call Date: The date before maturity on which a bond may be redeemed at the option of the issuer.

Collateral: Securities or other property that a borrower pledges as security for the repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.

Commercial Paper: Short-term, unsecured, negotiable promissory notes issued by businesses.

Commission: Broker's or agent's fee for purchasing or selling securities for a client.

Core Fund: Core funds are defined as operating fund balance which exceeds the District's daily liquidity needs.

Corporate Notes: A debt instrument issued by a corporation with a maturity of greater than one year and less than ten years.

Coupon Rate: The annual rate of interest that the issuer of a bond promises to pay to the holder of the bond.

Coupon Yield: The annual interest rate of a bond, divided by the bond's face value and stated as a percentage. This usually is not equal to the bond's current yield or its yield to maturity.

Current Maturity: The amount of time left until an obligation matures. For example, a one-year bill issued nine months ago has a current maturity of three months.

Current Yield: The remaining or final interest due on a security as a percentage of a security's market price.

CUSIP: The Committee on Uniform Security Identification Procedures, which was established under the auspices of the American Bankers Association to develop a uniform method of identifying municipal, U.S. government, and corporate securities.

Dealer: An individual or firm that ordinarily acts as a principal in security transactions. Typically, dealers buy for their own account and sell to a customer from their inventory. The dealer's profit is determined by the difference between the price paid and the price received.

Delivery: Either of two methods of delivering securities: delivery vs. payment and delivery vs. receipt (also called “free”). Delivery vs. payment is delivery of securities with an exchange of money for the securities. Delivery vs. receipt is delivery of securities with an exchange of a signed receipt for the securities.

Discount: The reduction in the price of a security; the difference between its selling price and its face value at maturity. A security may sell below face value in return of such things as prompt payment and quantity purchase. “At a discount” refers to a security selling at less than the face value, as opposed to “at a premium", when it sells for more than the face value.

Full Faith and Credit: Indicator that the unconditional guarantee of the issuer (e.g., the United States government, State of Oregon) backs the repayment of a debt.

Government Bonds: Securities issued by the federal government; they are obligations of the U.S. Treasury. Also known as “governments.”

Government Sponsored Enterprise (GSE): Financial services corporations created by the United States government. Their function is to enhance the flow of credit to targeted sectors of the economy, make those segments of the capital market more efficient, and reduce the risk to investors. The desired effect of the GSEs is to enhance the availability and reduce the cost of credit to the targets. Examples include Federal Home Loan Banks (FHLB), Federal National Mortgage Association (FNMA), Federal Home Loan Mortgage Corporation (FHLMC), and Federal Farm Credit Banks (FFCB).

Interest: Compensation paid, or to be paid, for the use of money. The rate of interest is generally expressed as an annual percentage.

Interest Rate: The interest payable each year on borrowed funds, expressed as a percentage of the principal.

Investment Advisor or Manager: An investment advisor that acts on a non-discretionary basis to provide investment and risk strategies. The advisor must act in a fiduciary capacity.

Investment Portfolio: A collection of securities owned by the District and held by a custodian.

Investment Securities: Securities purchased for an investment portfolio, as opposed to those purchased for resale to customers.

Liquidity: The ease at which a security can be bought or sold (converted to cash) in the market. A large number of buyers and sellers and a high volume of trading activity are important components of liquidity.

Liquidity Component: A percentage of the total portfolio dedicated to providing liquidity needs for the District.

Local Government Investment Pool: Oregon's Local Government Investment Pool (LGIP) created by Oregon Laws in 1973, Chapter 748. It is a diversified portfolio offered to eligible participants of the State of Oregon. The Local Government Investment Pool is an alternate investment vehicle offered to participants that includes, but is not limited to, any municipality, political subdivision or public corporation of Oregon that by law is made the custodian of, or has control of, any public funds. The LGIP is commingled with the State's short-term funds.

Mark to Market: Adjustment of an account or portfolio to reflect actual market price rather than book price, purchase price, or some other valuation.

Mortgage-Backed Securities: Mortgage-backed securities are debt obligations that represent claims to the cash flows from pools of mortgage loans, most commonly on residential property. Mortgage loans are purchased from banks, mortgage companies, and other originators and then assembled into pools by a governmental, quasi-governmental, or private entity. The entity then issues securities that represent claims on the principal and interest payments made by borrowers on the loans in the pool, a process known as securitization. Senior debentures of GSE's Federal National Mortgage Association (FNMA), Federal Home Loan Mortgage Corporation (FHLMC) are not considered mortgage-backed securities.

Municipals (Munis): Securities, usually bonds, issued by a state or its agencies. The interest on munis is generally exempt from federal income taxes and state and local income taxes in the state of issuance. Municipal securities may or may not be backed by the issuing agency's taxation powers.

Par Value: The value of a security expressed as a specific dollar amount marked on the face of the security, or the amount of money due at maturity. Par value should not be confused with market value.

Portfolio: A collection of securities held by an individual or institution.

Prudent Person Rule: A long-standing common-law rule that requires a trustee who is investing for another to behave in the same way as a prudent individual of reasonable discretion and intelligence who is seeking a reasonable income and preservation of capital.

Quotation, or Quote: The highest bid to buy or the lowest offer to sell a security at a particular time.

Settlement Date: The actual date when a security is purchased and comes under the ownership of the buyer.

Spread: The difference between two figures or percentages. E.g. the difference between the bid and ask prices of a quote or between the amount paid when a security is bought and an amount received when sold.

Trade Date: The date when a security transaction is executed.

Treasury Bill (T-Bill): An obligation of the U.S. government with a maturity of one year or less. T-bills bear no interest but are sold at a discount.

Treasury Bonds and Notes: Obligations of the U.S. government that bear interest. Notes have maturities of one to ten years; bonds have longer maturities.

Weighted Average Maturity: The weighted sum of the average years to maturity of the investments held by the District.

Yield: The annual rate of return on an investment, expressed as a percentage of the investment. Income yield is obtained by dividing the current dollar income by the current market price for the security. Net yield, or yield to maturity, is the current income yield minus any premium above par or plus any discount from par in the purchase price, with the adjustment spread over the period from the date of purchase to the date of maturity of the bond.

Yield to Maturity: The average annual yield on a security, assuming it is held to maturity; equals to the rate at which all principal and interest payments would be discounted to produce a present value equal to the purchase price of the bond.

Tualatin Valley Water District

Delivering the Best Water Service Value

RESOLUTION NO. 02-22

A RESOLUTION AMENDING SYSTEM DEVELOPMENT CHARGES FOR THE TUALATIN VALLEY WATER DISTRICT AND DECLARING AN EFFECTIVE DATE.

WHEREAS, on July 18, 2012, the Board of Commissioners adopted Ordinance 01-12 "System Development Charge Ordinance" to impose system development charges (SDCs) and other related procedures to comply with ORS 223.297 to ORS 223.314, inclusive, to provide revenues necessary for capital improvements constructed and to be constructed; and

WHEREAS, in accordance with the methodology identified in Section 4 of Ordinance 01-12, the administrative staff of the District calculated the amount of the SDC to be imposed by the Board of Commissioners to collect the statutorily authorized, necessary revenues; and

WHEREAS, Section 9B of Ordinance 01-12 requires the District to review its SDCs annually in relation to the Engineering News Record (ENR) Construction Cost Index (CCI) (Seattle); and

WHEREAS, construction costs increased 6.52% between December 2020 and December 2021 as evidenced by the ENR CCI (Seattle); and

WHEREAS, pursuant to Section 9 of Ordinance 01-12, the Board of Commissioners by this resolution amends the SDCs for the District as set forth below.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: Resolution 02-21 is hereby repealed and superseded by this resolution effective at 7:00 A.M., Pacific Standard Time on March 1, 2022.

Section 2: Prior to making a connection of non-District water facilities to the District's water system, the applicant for such a connection shall pay in full the SDC to the District, except that there shall be no SDC for a fireline.

Section 3: Further, the Board directs staff, for any calendar year, during which the Board has not adjusted SDCs based on a revised capital improvements or facilities plan, to adjust SDCs March 1 for each the ensuing year thereafter, as calculated by staff based on the change, from December of the prior year to December of the current year, in the Engineering News Record (ENR) Construction Cost Index (CCI) (Seattle).

Section 4 (a): Pursuant to Section 3 above, the SDC is calculated for a 5/8 x 3/4-inch meter by a weighting factor. The weighting factors adopted by the Board are based on the American Water Works Association safe operating capacities for displacement type meters.

The SDCs for meter sizes up to 1-1/2 inches are:

Reimbursement Fee	$ 1,540/ERU
Improvement Fee	7,110/ERU
Administration	145/ERU
Total SDC	$ 8,795/ERU

Meter Size	Weighting Factors (ERUs)	Charge
5/8 x 3/4-inch	1.0	$ 8,795
3/4 x 3/4-inch	1.5	13,193
1-inch	2.5	21,988
1.5-inch	5.0	43,975

Section 4 (b): Pursuant to Section 4(a) above, for meters over 1.5-inch, the SDC shall be determined based on the customer's anticipated water usage. Anticipated peak-day water usage will be divided by the peak-day system design flow of 844 gallons per day per equivalent residential unit (ERU) to determine peak-day ERUs. Anticipated average daily water usage will be divided by 358 gallons per day per ERU to determine average-day ERUs (storage ERUs).

Peak-Day SDC cost is:

Reimbursement Fee	$ 1,011 per peak-day ERU
Improvement Fee	6,222 per peak-day ERU
Peak-Day SDC cost	$7,233 per peak-day ERU

Storage SDC cost is:

Reimbursement Fee	$ 674 per storage ERU
Improvement Fee	888 per storage ERU
Storage SDC cost	$1,562 per storage ERU

The SDC shall be the sum of the peak-day SDC cost per ERU multiplied by the peak-day ERUs and the storage SDC cost per ERU multiplied by the storage ERUs.

Section 4 (c): The SDC paid for meters larger than 1-1/2 inches as of the effective date of this resolution may be adjusted upward based on actual usage pursuant to an SDC agreement to be executed with the District. If during the term of the SDC agreement, the usage is greater than 110% of anticipated volume during a 12-month period, an additional SDC may be charged, using the same techniques for calculating peak-day and storage ERUs and multiplying the peak-day SDC cost per ERU and the storage cost per ERU then in effect.

Section 4 (d): The SDC paid for a residential ¾-inch or 1-inch water meter, in the circumstance where a larger meter is required only for the purpose of meeting a residential multi-purpose fire sprinkler system requirement, will consist of the SDC for the appropriate size meter that would be required without the multi-purpose fire sprinkler system plus 18% of the difference between the price of the SDC for the meter size meeting the domestic water requirements and the SDC for the meter size meeting the fire sprinkler requirement. The 18% factor represents the approximate storage cost component of the SDC. Should the customer regularly use the capacity of the ¾-inch or 1-inch meter to meet its domestic needs, the customer will be required to pay the remainder of the SDC at the current rate then in effect.

Section 4 (e): If the customer has been charged by the District for an illegal connection and requests a contract for payment of the SDC, the District may withhold the option of providing a contract for said payment of SDC.

Section 4 (f): If the SDC is financed as permitted by ORS 223.208, the financing charge established by the District is 9.0% as authorized in ORS 82.010 Legal Rate of Interest and for a maximum term of 10 years.

Approved and adopted at a regular meeting held on the 16th day of February 2022.

______________________________ ______________________________

Todd Sanders, President Jim Doane, Secretary

Tualatin Valley Water District

Delivering the Best Water Service Value

RESOLUTION NO. 03-22

A RESOLUTION ENDORSING THE ANNEXATION TO THE TUALATIN VALLEY WATER DISTRICT OF A SINGLE PROPERTY LOCATED AT TAX LOT 400, T1NR2W, SECTION 14, WILLAMETTE MERIDIAN, AT 21727 NW WEST UNION ROAD, IN WASHINGTON COUNTY.

WHEREAS, this matter came before the Board of Commissioners of the Tualatin Valley Water District, hereinafter referred as the Board; and

WHEREAS, Tsuan-Chung Chang and Mei-hui Wang (Owners) are the owners of a parcel known as Tax Lot 400, Section 14, T1NR2W. The Owners have petitioned to annex this parcel to the District as set forth in Exhibit B, attached hereto and incorporated by reference; and

WHEREAS, the Board is required by ORS 198.850 to endorse an annexation upon receiving the necessary consent in writing from the Owner of the property and endorse the annexation if deemed in the best interest of the District; and

WHEREAS, the annexation request is subject to approval by the Washington County Board of County Commissioners in accordance with State statues, Washington County ordinances and Metro ordinances prior to water services being provided by TVWD; and

WHEREAS, the Board has received a request for such an annexation as set forth in Exhibit A, Exhibit B and Exhibit C, attached hereto and incorporated by reference; and being fully advised.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The Board, by this resolution, endorses the proposed annexation as described in Exhibit A, Exhibit B and Exhibit C, attached hereto and incorporated by reference.

Section 2: The Board hereby directs and authorizes District staff to take all action to file this resolution with the Board of County Commissioners of Washington County to cause the annexation of the property to the District.

Section 3: The Board requests that the Board of County Commissioners conduct the annexation process as required by law and approve annexation of the property to the District.

Approved and adopted at a regular meeting held on the 16th day of March 2022.

________________________________ ________________________________

Todd Sanders, President Jim Doane, Secretary

Exhibit A

Tsuan-Chung Chang and Mei-hui Wang

21727 NW West Union Rd

Hillsboro, OR 97124

March 3, 2022

Tualatin Valley Water District

1850 SW 170th Avenue

Beaverton OR 97006-4211

Subject: Annexation to TVWD

Dear TVWD officers,

We like to apply for annexation to TVWD for our property at 21727 NW West Union Rd, Hillsboro, OR 97124. Our well is very old and broke 2 times already in last 8 years since we bought the property. The water supply is inconsistent and insufficient for our daily use. Therefore, we like to get public water service.

Regards,

Tsuan-Chung Chang and Mei-hui Wang

Tsuan-Chung Chang

Mei-hui Wang

Exhibit B

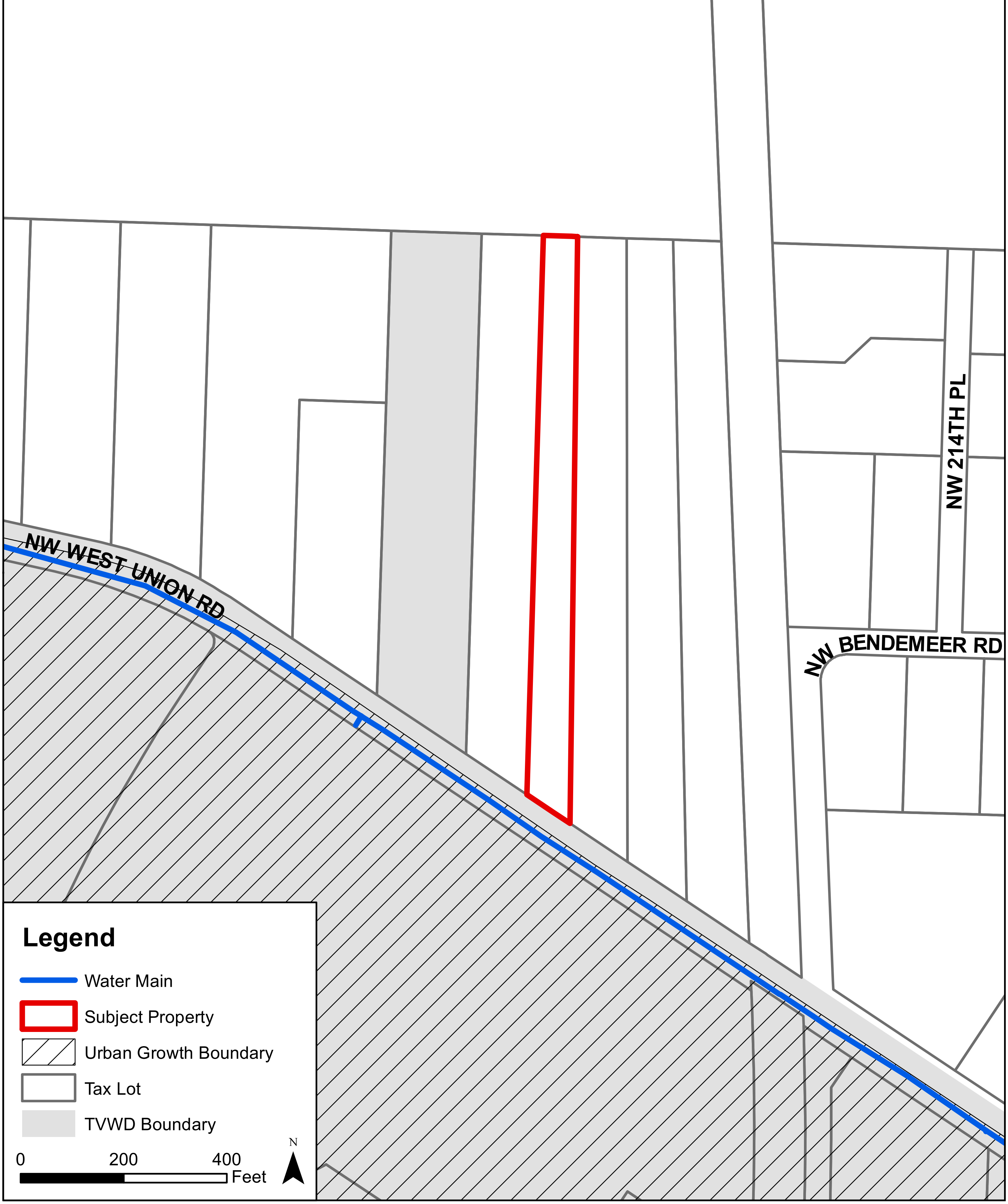
LEGAL DESCRIPTION: Real property in the County of Washington, State of Oregon, described as follows:

THAT PORTION OF LOTS 19, 20 AND 21, BENDEMEER, IN THE COUNTY OF WASHINGTON AND STATE OF OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 11.46 FEET EAST OF THE NORTHWEST CORNER OF SAID TRACT 19, BENDEMEER, IN THE COUNTY OF WASHINGTON AND STATE OF OREGON; RUNNING THENCE WEST ALONG THE NORTH BOUNDARY LINES OF TRACTS 19 AND 21, A DISTANCE OF 66 FEET; THENCE SOUTH ABOUT 1,121.97 FEET PARALLEL TO THE WEST LINE OF TRACT 21, TO THE SOUTH BOUNDARY LINE OF SAID TRACT 21; THENCE SOUTHEASTERLY ALONG THE SOUTH BOUNDARY LINE OF TRACTS 21 AND 20, A DISTANCE OF 100.39 FEET; THENCE NORTHERLY ABOUT 1,174.75 FEET TO THE POINT OF BEGINNING.

NOTE: This legal description was created prior to January 1, 2008.

Exhibit C



3/4/2022

TUALATIN VALLEY WATER DISTRICT

21727 NW West Union Rd

Tualatin Valley Water District

Delivering the Best Water Service Value

RESOLUTION NO. 04-22

A RESOLUTION AMENDING THE INTERGOVERMENTAL AGREEMENT BETWEEN WASHINGTON COUNTY AND TUALATIN VALLEY WATER DISTRICT FOR CONSTRUCTION OF WATERLINE WORK ON SW TUALATIN VALLEY HIGHWAY (SW 211TH AVENUE TO SW 209TH AVENUE) AND SW 209TH AVENUE (SW ALEXANDER STREET TO SW KINNAMAN ROAD).

WHEREAS, Washington County has approved and funded a project under the Major Streets Transportation Improvement Program to construct road improvements on SW Tualatin Valley Highway (SW 211th Avenue to SW 209th Avenue) and SW 209th Avenue (SW Alexander Street to SW Kinnaman Road) "Road Project"; and

WHEREAS, TVWD desires to perform the Waterline Work and related improvements in association with the Road Project; and

WHEREAS, additional Waterline Work is required to relocate existing TVWD waterlines in conflict with Washington County's stormwater improvements, and which relocations are desired to be included as part of Washington County's construction contract; and

WHEREAS, TVWD and Washington County desire to amend Resolution 01-20 and the accompanying intergovernmental agreement due to the substantial nature of the added scope.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: Amendment No. 1 to the Intergovernmental Agreement Between Washington County and Tualatin Valley Water District for Construction of Waterline Work on SW Tualatin Valley Highway from SW 211th Avenue to SW 209th Avenue, attached hereto as Exhibit 1 and expressly incorporated by reference, is hereby approved.

Section 2: The Chief Executive Officer is authorized to execute the Amendment No. 1 on behalf of the District. The Board recognizes that there may be edits or other corrections to the document, and the Chief Executive Officer is authorized to sign on behalf of the District so long as the amendments are not substantial in nature, and the District's Legal Counsel approves.

Approved and adopted at a regular meeting held on the 16th day of March 2022.

________________________________ ________________________________

Todd Sanders, President | Jim Doane, Secretary

Amendment No. 1 to INTERGOVERNMENTAL AGREEMENT BETWEEN

WASHINGTON COUNTY AND TUALATIN VALLEY WATER DISTRICT FOR CONSTRUCTION OF:

WATERLINE WORK ON SW TUALATIN VALLEY HIGHWAY FROM SW 211TH AVENUE TO SW 209TH AVENUE

This **Amendment No. 1.** is made and entered between Washington County, acting by and through its Elected Officials, hereinafter referred to as “County”, and the Tualatin Valley Water District, acting by and through its Board of Commissioners, hereinafter referred to as “TVWD” (collectively “the Parties”).

The title of the Intergovernmental Agreement is hereby changed from **Waterline Work on SW Tualatin Valley Highway from SW 211th Avenue to SW 209th Avenue** to **Waterline Work on SW Tualatin Valley Highway (SW 211th Avenue to SW 209th Avenue) and SW 209th Avenue (SW Alexander Street to SW Kinnaman Road).**

W I T N E S S E T H

ARTICLE 1 RECITALS

1. COUNTY and TVWD entered into an Intergovernmental Agreement (“IGA”) on or about November 14th, 2019, that provided for the cooperative construction and inspection of various waterline and related improvements benefiting TVWD as part of the County’s planned improvements to SW Tualatin Valley Highway and SW 209th Avenue; and

2. Since the execution of the IGA, additional utility conflicts were identified which required updates to the overall scope and fee to include additional TVWD waterline improvements as part of the Waterline Work; and

3. The Parties desire to enter into this Amendment No. 1 to the IGA to modify the scope of the Waterline Work and clarify the financial contributions for the Waterline Work to be paid by TVWD.

NOW, THEREFORE, the premises being in general as stated in the foregoing recitals and in consideration of the terms, conditions and covenants set forth below, the Parties hereto agree as follows:

ARTICLE 1 - RECITALS

The third WHEREAS finding in the original Article 1 - Recitals describing the scope of the Waterline Work is replaced in its entirety as follows:

WHEREAS, the TVWD desires to relocate and replace approximately 3,000 feet of existing water mains ranging from 6-inch to 30-inch in size and associated appurtenances on SW Tualatin Valley Highway and SW 209th Avenue, all within the limits of the County's Road Project, and said new waterline and associated improvements are hereinafter referred to as "Waterline Work"; and,

ARTICLE 4 - COMPENSATION

Provision 4.1 is replaced in its entirety as follows:

4.1 TVWD shall pay County for County costs incurred to include the Waterline Work in the Project including costs to: (i) prepare contract and bidding documents, (ii) select a construction contractor, (iii) administer and manage the construction contract, (iv) construct the Waterline Work, (v) manage and provide inspection assistance for the Waterline Work, and (vi) obtain approvals and permits from ODOT. Specific TVWD costs are estimated as follows:

a. Pay to the County, the cost of the Waterline Design Work of the Waterline Work in SW Tualatin Valley Highway and the construction of the Waterline Work in SW Tualatin Valley Highway and SW 209th Avenue. The estimated Waterline Work Design cost is $40,000 and the estimated Waterline Work construction cost is $1,087,000.

b. Pay to the County, a flat fee for traffic control design cost and permitting cost for work in TV Highway. The fee for traffic control design costs is $10,000 and the fee for ODOT permitting is $5,000.

c. Pay to the County, the road restoration costs associated with the Waterline Work construction in SW Tualatin Valley Highway and SW 209th Avenue. The estimated road restoration cost is $90,000.

d. Pay to the County a flat rate of 15% of the actual Waterline Work construction cost and road restoration construction cost for County contract administration and construction services. Theses services include project management, inspection assistance and contract administration. The estimated County administration and construction services cost is $210,000.

e. Pay to the County a lump sum contribution for mobilization, erosion control, pollution control, construction survey and traffic control. The lump sum contribution amount for these items will be proportional to the value of the Waterline Work and road restoration bid items relative to the value of the County Project bid items. The estimated lump sum contribution for shared construction costs is $222,000.

f. Pay to the County a lump sum contribution for ODOT inspection costs and costs to obtain an ODOT specific performance bond for work in ODOT's right-of-way. The lump sum contribution amount for these items will be proportional to the value of the Waterline Work and road restoration bid items relative to the value of the County Project bid items. The estimated lump sum contribution for shared ODOT inspection and permit bonding costs is $9,000.

County and TVWD agree the costs outlined in 4.1.a and 4.1.c above are estimates and are used to determine project budgets and estimate payment amounts used with this Agreement. Final payments for item 4.1.a and 4.1.c shall be paid to County based on actual invoices submitted by the engineering firm and the construction contractor. Item 4.1.b shall be a set fee. Items 4.1.d, 4.1.e. and 4.1.f. shall be calculated after County makes final Waterline Work payment for the construction contractor for the Project and final payment by TVWD to County will be made a lump sum based on actual bid prices, construction quantities and non-construction costs.

Except to the extent as modified by this Amendment No. 1, all other terms and conditions of the IGA remain valid, in full force and effect.

IN WITNESS WHEREOF, the parties hereto have set their hands and affixed their seals as of the day and year hereinafter written.

DONE AND DATED this ______ day of ______________________, 2022.

TUALATIN VALLEY WATER DISTRICT	**WASHINGTON COUNTY, OREGON**
____________________________	____________________________
CEO	County Administrator
Date:________________________	Date:________________________

APPROVED AS TO FORM

____
TVWD General Counsel

Date:________________________

WASHINGTON COUNTY
OREGON
Dept. of Land Use & Transportation
Capital Project Services

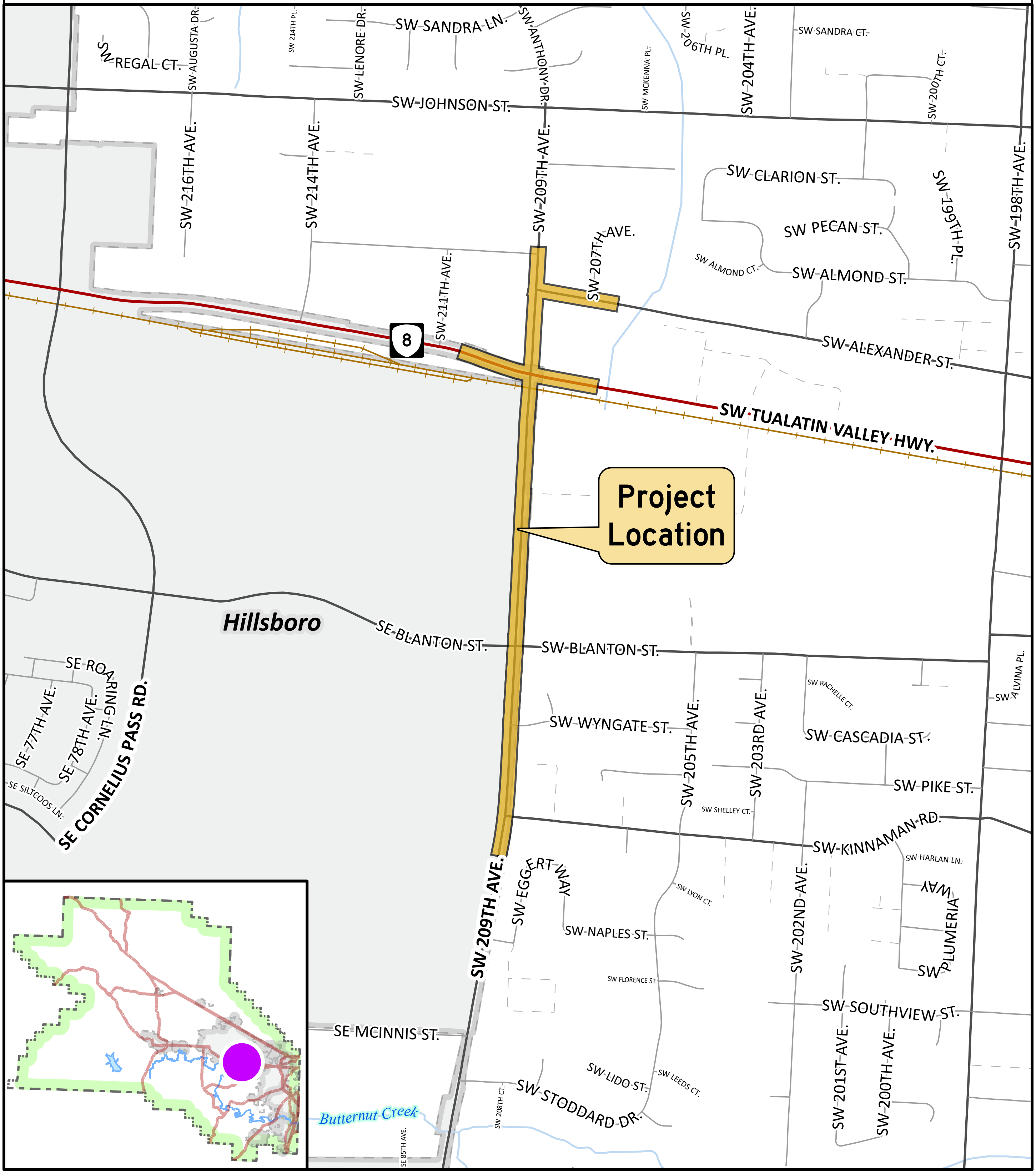
Vicinity Map

SW 209th Avenue
Alexander St. to Kinnaman Rd.

KLF | December 02, 2021
Not to Scale

Project # 100295

N



TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 05-22

A RESOLUTION AUTHORIZING THE CHIEF EXECUTIVE OFFICER TO EXTEND THE AUDIT SERVICES AGREEMENT WITH MOSS ADAMS LLP FOR TWO ADDITIONAL YEARS

WHEREAS, as an Oregon municipal corporation, the Tualatin Valley Water District (District) is required to conduct annual audits by auditors licensed to conduct municipal audits in Oregon; and

WHEREAS, the District has entered into an audit services agreement (Agreement) with Moss Adams LLP to perform audits of the District's annual financial statements for the fiscal years ended June 30, 2019, 2020, and 2021; and

WHEREAS the Agreement allows the Board of Commissioners to extend it for an additional two years, to include audits for the fiscal years ended June 30, 2022, and June 30, 2023; and

WHEREAS the Finance Committee of the Board of Commissioners recommends extending the Agreement for two additional years.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The District's Chief Executive Officer, or designee, is authorized to extend the Agreement between Tualatin Valley Water District and Moss Adams LLP, attached as Exhibit 1, through December 31, 2023.

Approved and adopted at a regular meeting held on the 18th day of May 2022.

Todd Sanders, President	Jim Doane, Secretary

AGREEMENT NO. 2019-44
TUALATIN VALLEY WATER DISTRICT

AUDIT SERVICES AGREEMENT

THIS AUDIT SERVICES AGREEMENT ("Agreement") is effective June 1, 2019, by and between Tualatin Valley Water District ("District") and Moss Adams, LLP ("Auditor") with offices in Portland, Oregon.

RECITALS

WHEREAS, District requires the services of an individual or entity with the particular training, ability, knowledge, and experience possessed by Auditor for providing financial audit services

The parties agree that Auditor shall provide the District with such services, subject to certain conditions.

The parties agree to set forth the terms and conditions of their agreement in this Audit Services Agreement ("Agreement").

AGREEMENT

1. **SERVICES TO BE PERFORMED.** Auditor shall conduct financial audit services as set forth in Exhibit A, Scope of Services. These services shall be performed with the same degree of care, skill, diligence, competency and knowledge which is ordinarily exhibited and possessed by other professionals in good standing in the same or similar field and community as Auditor. The District shall provide audit work papers, support and services to be performed by District staff as needed and as outlined in Exhibit C.

2. **EFFECTIVE DATE AND DURATION OF AGREEMENT.** This Agreement shall become effective on the date shown above. Unless earlier terminated, this Agreement shall remain in full force and effect until December 31, 2022, unless extended annually for an additional two (2) years upon District recommendation and Board approval.

3. **PAYMENT.** District agrees to pay Auditor fees relating to Auditor's performance under this Agreement, as set forth in Exhibit B, Auditor's Fee Proposal.

Compensation under this Agreement is as follows and shall not exceed these dollar amounts unless additional work is assigned over what was originally agreed.

For Fiscal Year July 1, 2018 through June 30, 2019: $53,000.00, fixed.
For Fiscal Year July 1, 2019 through June 30, 2020: $54,500.00, fixed.
For Fiscal Year July 1, 2020 through June 30, 2021: $56,000.00, fixed.
For Fiscal Year July 1, 2021 through June 30, 2022: $57,500.00, if Agreement extended.
For Fiscal Year July 1, 2022 through June 30, 2023: $59,000.00, if Agreement extended.

Auditor will charge the District for hours worked only. Any amount over this shall be preapproved by the District via written amendment to this Agreement. Out of Pocket costs are included in the annual fees. Payment terms are Net 30. Auditor shall present District with one invoice monthly. Should the District and Auditor agree to extend the term for an additional two (2) years, the rates listed in Article 3 for the last two (2) years of the Agreement shall apply.

4. **CHANGES**. Neither this Agreement, including any of the contract documents, shall be waived, altered, modified, supplemented, extended or amended, in any manner whatsoever, except by written instrument, executed by both parties. No changes to the Agreement will be effective until approved in writing by District.

5. **INDEPENDENT CONSULTANT STATUS**. Auditor shall be free from direction and control over the means and manner of providing the labor or service, subject only to the specifications of the desired results. Auditor is responsible for obtaining all assumed business registrations or professional occupation licenses required by state or local law. Auditor shall furnish the tools or equipment necessary for the contracted labor or services. Auditor certifies that Auditor is an independent contractor and will be responsible for any federal or state taxes applicable to any payments made under this agreement.

6. **SUBCONTRACTORS, ASSIGNMENT; SUCCESSORS-IN-INTEREST**. Except as specifically authorized in the contract documents, Auditor shall not make any subcontract with any other party for furnishing any of the work and services contemplated under the Agreement documents or assign or transfer any interest in this Agreement, without obtaining the express prior written consent of District.

7. **NO THIRD-PARTY BENEFICIARIES.** District and Auditor are the only parties to this Agreement and are the only parties entitled to enforce its terms.

8. **COMPLIANCE WITH APPLICABLE LAW.**

8.1. Generally.

Auditor shall keep itself fully informed of and shall fully comply with all federal, state, regional, and local laws, rules, regulations, ordinances, and orders pertaining in any manner to this Contract and the rules, regulations and orders of any agency or authority having jurisdiction over the work under this Contract or persons employed or engaged therein. Auditor shall pay all taxes, including federal, state, regional, county, and city taxes, and taxes of any other governmental entity, applicable to the services performed or materials provided under this Contract. All permits, licenses, and fees necessary for prosecution and completion of the Work shall be secured and paid for by Auditor, unless otherwise specified by District.

The following paragraphs include, without limitation, the standard contract clauses that are required in every public contract in accordance with the Oregon Revised Statutes. As such these paragraphs are applicable, to the extent they apply, to this Contract. This Contract shall include by reference any other standard contract clauses required by federal, state, and local laws, ordinances, and regulations.

8.2. Prompt Payment.

Auditor shall promptly pay as due all of its obligations arising out of or in connection with the Work, including, but not limited to, payments (1) to all persons supplying to Auditor labor, equipment, services, or materials for the performance of the Work; (2) of all contributions or amounts due the Industrial Accident Fund from Auditor or any subcontractor incurred in the performance of the Work; and (3) to the Department of Revenue of all sums withheld from employees under ORS 316.167.

8.3. Hours of Labor.

Auditor shall pay employees at least time and a half pay for all overtime in excess of 40 hours in any one week, except for individuals who are excluded under ORS 653.010 to 653.261 or under 29 U.S.C. 201 to 209 from receiving overtime.

8.4. Workers' Compensation.

All employers, including Auditor, that employ subject workers who work under this Contract in the state of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Auditor shall ensure that each of its subcontractors complies with these requirements.

8.5. Prompt Payment for Medical Services.

Auditor shall promptly make payment, as due, to any person, co-partnership, association, or corporation furnishing medical, surgical, or hospital care services or other needed care and attention, incident to sickness or injury, to the employees of Auditor, of all sums that Auditor agrees to pay for the services and all moneys and sums that Auditor collected or deducted from the wages of employees under any law, contract, or agreement for the purpose of providing or paying for the services.

8.6. Compliance with Laws/Tax Laws.

Auditor shall comply with all applicable federal, state, and local laws, statutes, codes, regulations, rules, orders, and rulings including, without limitation, those governing labor, materials, equipment, construction procedures, safety, health, sanitation, and the environment. Auditor agrees to indemnify, hold harmless, reimburse, and defend District from and against any penalties or liabilities arising out of violations of such obligations by Auditor or its subcontractors or suppliers at any tier.

8.7. Recycled Materials.

Auditor, in performance of the work under this Contract, shall use recycled paper as defined in ORS 279A.010(1)(ee), recycled PETE products as defined in ORS 279A.010(1)(ff), and other recycled plastic resin products to the maximum extent economically feasible.

8.8. Liens.

Auditor shall not permit any lien or claim to be filed or prosecuted against the District on account of any labor or materials furnished.

9. INSURANCE. Auditor shall provide to the District certificates of insurance prior to beginning any work under the Agreement documents and shall maintain in full force and effect for the term of this Agreement, at Auditor's expense; comprehensive general liability insurance, automobile liability insurance, umbrella/excess liability insurance and professional liability insurance covering bodily injury, including death, and property damage. Automobile insurance shall include coverage for owned, non-owned or hired vehicles, as applicable for the protection of the Auditor and the District, its members, officers, boards, agents and employees arising out of Auditor's negligence. Auditor agrees to maintain commercial automobile liability insurance in the amount of not less than One Million Dollars ($1,000,000) combined single limit. General Liability Insurance coverage limits shall be set at not less than One Million Dollars ($1,000,000) applicable to bodily injury, sickness, or death for any one occurrence, and One Million Dollars ($1,000,000) for loss of or damage to property for any one occurrence; or a general aggregate of Two Million Dollars ($2,000,000). Auditor agrees to maintain umbrella/excess liability insurance for comprehensive general liability and automobile liability in the amount of not less than One Million Dollars ($1,000,000) per occurrence and One Million Dollars ($1,000,000) in the aggregate. Auditor shall also obtain professional liability insurance for its errors and omissions with limits set at not less than One Million Dollars ($1,000,000) per claim and Two Million Dollars ($2,000,000) in the aggregate. Auditor shall name District, its members, officers, boards, agents and employees as additional named insureds on the automobile and general liability policies of insurance for Auditor's negligent acts. The policy shall be issued by a company authorized to do business in the State of Oregon and shall protect Auditor against liability for contractual liability.

The District prefers all insurance coverage to be written on an "occurrence" basis. But if any of the required liability insurance is on "claims made "basis, "tail coverage will be required at expiration of this contract and completion of all work for a duration of 24 months. Auditor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 24 months following Agreement expiration. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage provided its retroactive date is on or before the effective date of the Agreement. If Continuous "claims made" coverage is used, Auditor shall be required to keep the coverage in effect for a duration of not less than 24 months from the expiration date of the Agreement This will be a condition of the final acceptance of work or services.

The Auditor is the sole proprietor or a partner or is an insured employer for purposes of the Oregon Workers' Compensation law (ORS Ch. 656) and is solely liable for any workers' compensation coverage under this Agreement. If the Auditor has the assistance of other persons in the performance of this Agreement, the Auditor agrees to qualify and remain qualified for the term of this Agreement as an insured employer under ORS 656.407. Auditor shall maintain employers' liability insurance with limits of $100,000 for each accident, $100,000 for illness coverage for each employee, and a $500,000 policy limit.

10. INDEMNIFICATION. Auditor shall defend, indemnify, and hold the District, its officers, agents and employees, harmless against all liability, loss, or expenses, including attorney's fees, and against all claims, actions or judgments arising from any liability, loss, expense, claim, action or judgment asserted by a third party for bodily injury (including death) and damage to real or tangible personal property to the extent based upon or arising out of or in connection with the performance by Auditor or its agents, officers or employees under this Agreement insofar as such performance results from Auditor's negligent, reckless, or willful act or omission and Auditor's breach of sections 5, 6, 8, 9, 11, 14 and 16 of this Agreement. This indemnity does not include claims that arise from any negligent, reckless or willful act or omission of the District. In the event of claim for which the District may seek indemnification hereunder, the District shall provide Auditor with prompt written notice of such claim and cooperate with Auditor in handling the claim. The Auditor shall be entitled to control the handling of such claim and to defend or settle any such claim in its sole discretion with counsel of its own choosing. This indemnification obligation shall continue beyond the term of this Agreement as to any acts or omissions occurring under this Agreement or any extension of this Agreement.

11. CONFIDENTIALITY. No reports, information and data given to or prepared or assembled by Auditor under the contract documents shall be made available to any third-party individual or organization by Auditor without the prior written approval of District. By execution hereof, the District consents to disclosure of information to rating agencies, bond insurance companies, the State Treasury, bond counsel and bond underwriters. Provided, however, that such confidential information shall not include information that (i) is now, or hereafter becomes, through no act or failure to act on the part of Auditor, generally known or available in the public domain; (ii) is known by Auditor at the time of receiving such information; (iii) is hereafter furnished to Auditor by a third party, as a matter of right and without restriction on disclosure; (iv) is the subject of a written permission to disclose provided by the District; or (v) is in response to a subpoena or order of a court or other governmental body of the United States or any political subdivision thereof or otherwise required by law to be disclosed, provided that Auditor gives prompt written notice to the District of such requirement prior to disclosure.

12. RECORD-KEEPING. Auditor shall maintain all fiscal records relating to this Agreement in accordance with generally accepted accounting principles. In addition, Auditor shall maintain any other records, pertinent to this Agreement in such a manner as to clearly document the Auditor's performance hereunder. All such fiscal records, books, documents, papers, plans, and writings shall be retained by Auditor and kept accessible for a minimum of three (3) years, except as required longer by law, following final payment and termination of this Agreement, or until the conclusion of any audit, controversy, or litigation arising out of or related to this Agreement, whichever date is later.

13. ACCESS TO RECORDS. Auditor agrees that District and its authorized representatives shall have access to all books, documents, papers and records of the Auditor which are directly related to the Agreement, excluding files related to Auditor's personnel and business operations, for the purpose of making any audit, examination, copies, excerpts and transcripts and this right shall survive the term of this Agreement.

14. FOREIGN CONTRACTOR. If Auditor is not domiciled in or registered to do business in the State of Oregon, Auditor shall promptly provide to the Oregon Department of Revenue and the Oregon Corporation Division all information required by those agencies relative to this Agreement. Auditor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Agreement.

15. GOVERNING LAW; JURISDICTION; VENUE. This Agreement shall be governed and construed in accordance with the laws of the State of Oregon without resort to any jurisdiction's conflict of laws, rules or doctrines.

16. OWNERSHIP OF WORK PRODUCT; LICENSE. All final reports of Auditor that result from this Agreement and are submitted to the District, excluding any Auditor Materials (defined below) contained or embodied therein, ("the work products") are the exclusive property of the District. The parties expressly agree that the work products produced pursuant to this Agreement are works specially commissioned by the District, and that any and all such works shall be made for hire in which all rights and copyright belong exclusively to the District. Except as otherwise provided herein, Auditor shall not publish, republish, display or otherwise use any of the work products resulting from this Agreement without the prior written agreement of the District.

16.1. Auditor shall own any engagement documentation and consulting-related general skills, know-how, expertise, ideas, concepts, methods, techniques, processes, software, materials or other intellectual property or information which may have been discovered, created, received, developed or derived by Auditor either prior to or as a result of providing services under this Agreement ("Auditor Materials"). The District shall have a non-exclusive, non-transferable license to use Auditor Materials for the District's own internal use and only for the purposes for which they are delivered to the extent that they form part of the work product. Any interest granted hereunder by Auditor to the District shall be effective upon and to the extent of payment by the District of the fees and expenses invoiced by Auditor pursuant to this Agreement. Further, all original written material and other documentation, including background data documentation, and staff work that is preliminary to final reports, originated and prepared for District under the contract documents, consisting of audit work papers, shall be the exclusive property of Auditor. Auditor will not use any written or other materials developed for District under the contract documents in developing materials for others, except as may be specifically provided herein or in writing to the contrary.

16.2. Auditor and its personnel are free to use and employ their general skills, know-how, and expertise, and to use, disclose, and employ any generalized ideas, concepts, know-how, methods, techniques, or skills gained or learned during the course of this Agreement so long as they acquire and apply such information without any unauthorized use or disclosure of confidential or proprietary information of District. Material already in Auditor's possession, independently developed by Auditor outside the scope of the Agreement or independently obtained by the Auditor from third parties, belongs to Auditor.

16.3. This Agreement shall not preclude Auditor from independently developing materials
that may be similar to materials developed pursuant to the contract documents.

17. ERRORS. Upon written request and only to the extent permitted by professional standards while maintaining Auditor's independence to provide audit services, Auditor shall perform such additional work as may be necessary to correct errors in the work required under this Agreement without undue delays and without additional cost.

18. TERMINATION. This Agreement may be terminated at any time by mutual consent of both parties, or by either party upon thirty (30) days' written notice, delivered by certified mail at the address listed in this Agreement, or by facsimile at the facsimile number listed below, or in person. In the event of termination, (a) Auditor will stop providing Services hereunder except on work mutually agreed upon in writing, necessary to carry out such termination; (b) District shall pay Auditor for work and services provided and expenses incurred through the effective date of termination; (c) neither party shall be liable to the other for any damages that occur as a result of Auditor ceasing to render services to the District.

In case of termination by Auditor, Notice shall be mailed or faxed to:

Paul Matthews,
Chief Financial Officer
Tualatin Valley Water District
1850 S.W. 170th Avenue
Beaverton, Oregon 97006
Facsimile: (503) 649-2733

In case of termination by District, Notice shall be mailed or faxed to:

Julie Desimone,
Partner and National Practice Leader
Moss Adams LLP
805 S.W. Broadway, Suite 1200
Portland, Oregon 97205
Facsimile: (503) 274-2789

19. ATTORNEY FEES. If a suit or action is filed to enforce any of the terms of this Agreement, each party shall pay its own costs and attorney fees.

20. SEVERABILITY. The parties agree that if any term or provision of this Agreement is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular term or provision held to be invalid.

21. FORCE MAJEURE. Neither District nor Auditor shall be held responsible for delay or default caused by fire, riot, acts of God, or war where such cause was beyond, respectively, District's or Auditor's reasonable control. Auditor shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon the cessation of the cause, diligently pursue performance of its obligations under this Agreement.

22. WAIVER. The failure of District or Auditor to enforce any provision of this Agreement shall not constitute a waiver by District or Auditor of that or any other provision.

23. AUTHORIZATION. The person signing this Agreement on behalf of Auditor hereby covenants and warrants that he/she is authorized to do so, and that his/her signature will fully bind Auditor to the terms and conditions of this Agreement. Upon the District's request, Auditor shall provide the District with evidence to confirm the foregoing covenants and warranties between the parties.

24. MERGER. This Agreement and attached exhibits constitute the entire Agreement between the parties. No waiver, consent, modification or change of terms of this Agreement shall bind either party unless in writing and signed by both parties.

25. OBJECTIVE OF THE AUDIT. The objective of Auditor's audit is the expression of an opinion about whether District's financial statements are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Auditor's audit will be conducted in accordance with U.S. generally accepted auditing standards and the Oregon Municipal Audit Law set forth in ORS Chapter 297 and incorporated herein and will include tests of District's accounting records and other procedures Auditor considers necessary to enable Auditor to express such an opinion. If Auditor's opinion is other than unqualified, Auditor will discuss the reasons with District in advance. If, for any reason, Auditor is unable to complete the audit or are unable to form or have not formed an opinion, Auditor may decline to express an opinion or to issue a report.

26. PROCEDURES AND LIMITATIONS.

26.1. Auditor's procedures may include tests of documentary evidence supporting the transactions recorded in the accounts, tests of the physical existence of inventories, and direct confirmation of certain receivables and certain other assets and liabilities by correspondence with selected customers, creditors, and financial institutions. Auditor may also request written representations from District's attorneys as part of the engagement, and they may bill District for responding to this inquiry. At the conclusion of Auditor's audit, Auditor will require certain written representations from management about the financial statements and related matters. Management's failure to provide representations to Auditor's satisfaction will preclude Auditor from issuing Auditor's report.

26.2. An audit includes examining evidence, on a test basis, supporting the amounts and disclosures in the financial statements. Therefore, Auditor's audit will involve judgment about the number of transactions to be examined and the areas to be tested. Also, Auditor will plan and perform the audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free of material misstatement. Such material misstatements may include errors, fraudulent financial reporting, misappropriation of assets, or violations of laws or governmental regulations that are attributable to the entity or to acts by management or employees acting on behalf of the entity that may have a direct financial statement impact. A risk exists that Auditor may not detect material misstatements because (i) an audit is designed to provide reasonable, rather than absolute, assurance the financial statements are free of material misstatement, (ii) Auditor will not perform a detailed examination of all transactions as such is cost prohibitive, and (iii) an audit is not designed to detect immaterial misstatements or violations of laws or governmental regulations that do not have a direct and material effect on the financial statements. However, Auditor will inform District of any material errors, fraudulent financial reporting or misappropriation of assets, and violations of laws or governmental regulations that come to Auditor's attention, unless clearly inconsequential. Auditor's responsibility as auditors is limited to the period covered by Auditor's audit and does not extend to any time period for which Auditor is not engaged as auditors.

26.3. Auditor's audit will include obtaining an understanding of District and its environment, including its internal control sufficient to assess the risks of material misstatements of the financial statements whether due to error of fraud and to design the nature, timing, and extent of further audit procedures to be performed. An audit is not designed to provide assurance on internal control or to identify deficiencies in the design or operation of internal control. However, if, during the audit, Auditor becomes aware of any matters involving internal control or its operation that Auditor considers to be significant deficiencies under standards established by the American Institute of Certified Public Accountants, Auditor will communicate them in writing to District and those charged with governance. Auditor will also identify if Auditor considers any significant deficiency, or combination of significant deficiencies, to be a material weakness.

26.4. Auditor may assist District in the preparation of District's financial statements. Regardless of any assistance Auditor may render, all information included in the financial statements remains the representations of District. Auditor may issue a preliminary draft of the financial statements to District for District's review. Any preliminary draft financial statements should not be relied upon, reproduced or otherwise distributed without the written consent of Auditor.

27. RESPONSIBILITY FOR FINANCIAL STATEMENTS.

27.1. District is responsible for making all financial records and related information available to Auditor and for the accuracy and completeness of that information. Auditor may advise District about appropriate accounting principles and their application and will assist in the preparation of District's financial statements, but District is responsible for the financial statements. This responsibility includes the establishment and maintenance of adequate records and effective internal controls over financial reporting, the selection and application of accounting principles, and the safeguarding of assets. District is responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing Auditor about all known or suspected fraud affecting District involving (i) management, (ii) employees who have significant roles in internal control, and (iii) others where the fraud could have a material effect on the financial statements. District is responsible for informing Auditor of District's knowledge of any allegations of fraud or suspected fraud affecting District received in communications from employees, former employees, regulators or others. District is responsible for adjusting the financial statements to correct material misstatements and for confirming to Auditor in the management representation letter that the effects of any uncorrected misstatements aggregated by Auditor during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements taken as a whole. District is also responsible for identifying and ensuring that District complies with applicable laws and regulations.

27.2. District agrees that as a condition of Auditor's engagement District will provide Auditor, in a timely and orderly way, with information in District's possession that Auditor requests or that has a material impact on the nature or characterization of any material transaction to complete Auditor's engagement and that information will be, to the best of District's knowledge and belief, truthful and accurate.

28. DISSEMINATION OF FINANCIAL STATEMENTS.

28.1. Auditor's report on the financial statements must be associated only with the financial statements that were the subject of Auditor's engagement. District may make copies of Auditor's report, but only if the entire financial statements (including related footnotes and supplemental information, as appropriate) are reproduced and distributed with Auditor's report. District agrees not to reproduce or associate Auditor's report with any other financial statements, or portions thereof, that are not the subject of this engagement.

28.2. District may choose to publish District's financial statements electronically on District's Internet website. District agrees Auditor is not required under professional standards or this Agreement to read or monitor the information contained on District's website or to consider the consistency of other information in the electronic site with the original document. However, Auditor reserves the right to review the information as presented on District's Internet website and to withdraw Auditor's report should Auditor disagree with the form, context or manner of presentation of the financial statements upon which Auditor reported. District agrees that upon written notification of Auditor's objections District will immediately remove Auditor's report and any reference thereto or to Auditor from District's Internet website.

29. OFFERING OF SECURITIES. This Agreement does not contemplate Auditor providing any services in connection with the offering of securities, whether registered or exempt from registration, and Auditor will charge additional fees to provide any such services. District agrees not to incorporate or reference Auditor's report in a private placement or other offering of District's equity or debt securities without Auditor's express written permission. District further agrees Auditor is under no obligation to re-issue Auditor's report or provide consent for the use of Auditor's report at a later date in connection with an offering of securities, the issuance of debt instruments or for any other circumstance. Auditor will determine, at Auditor's sole discretion, whether Auditor will re-issue Auditor's report or provide consent for the use of Auditor's report only after Auditor have conducted any due diligence Auditor deems necessary in the circumstances. District agrees to provide Auditor with adequate time to review documents where Auditor's report is (i) requested to be reissued, (ii) referred to, or (iii) reference to Auditor's firm as "Experts" is expected to be made. If Auditor decides to re-issue Auditor's report or consent to the use of Auditor's report, District agrees that Auditor will be included on each distribution of draft offering materials and Auditor will receive a complete set of final documents.

30. CHANGES IN PROFESSIONAL OR ACCOUNTING STANDARDS. To the extent that future federal, state, or professional rule-making activities require modification of Auditor's audit approach, procedures, scope of work, etc., Auditor will advise District of such changes and the impact on Auditor's fee.

31. LIMITATION ON LIABILITY. In no event will either party be liable to the other for any special, indirect, incidental, or consequential damages in connection with or otherwise arising out of this Agreement, even if advised of the possibility of such damages. In no event shall either party be liable for exemplary or punitive damages arising out of or related to this Agreement.

32. DOCUMENT RETENTION POLICY. At the conclusion of this engagement, Auditor will return to District all original records District supplied to Auditor. District's records are the primary records for District's operations and comprise the backup and support for the results of this engagement. Auditor's records and files, including Auditor's work papers whether kept on paper or electronic media, are Auditor's property and are not a substitute for District's own records. Except as set forth above, District agrees that Auditor may destroy paper originals and copies of any documents, including, without limitation, correspondence, agreements, and representation letters, and retain only digital images thereof.

33. USE OF ELECTRONIC COMMUNICATION. In the interest of facilitating Auditor's services to District, Auditor may communicate by facsimile transmission or send electronic mail over the Internet. Such communications may include information that is confidential to District. Auditor employs measures in the use of facsimile machines and computer technology designed to provide reasonable assurance that data security is maintained. While Auditor will use Auditor's best efforts to keep such communications secure in accordance with Auditor's obligations under applicable laws and professional standards, District recognizes and accepts that Auditor has no control over the unauthorized interception of these communications once they have been sent. Unless District issues specific instructions to do otherwise, Auditor will assume that District consents to Auditor's use of facsimile transmissions to District's representatives and other use of these electronic devices during this engagement as Auditor deems appropriate.

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

TUALATIN VALLEY WATER DISTRICT	**MOSS ADAMS LLP**
By: ______________________	**By:** ______________________
Mark Knudson,	**Julie Desimone,**
Chief Executive Officer	**Partner and National Practice Leader**
Date: 5/21/2019	**Date:** 4/10/19

EXHIBIT A - SCOPE OF SERVICES AND GENERAL REQUIREMENTS.

1. All audits shall be performed in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in the requirements of the Minimum Standards for Audits for Oregon Municipal Corporations. The audit shall also be performed in compliance with all other applicable federal, state, and local laws and regulations.

2. The District does not currently require a single audit. However, the District is likely to be the recipient of federal funds during the period covered by this proposal. Audits conducted after federal funding is received shall be conducted in accordance with generally accepted government auditing standards and the provisions of OMB uniform guidance. Any fees relating to the additional services required to conduct the audit under these circumstances shall be considered as additional fees subject to negotiation and are not to be considered within the scope of the services to be provided under the original agreement.

3. The District is the managing agency for the Willamette River Water Coalition (WRWC) and the Willamette Intake Facilities Commission (WIF). In July of 2019, it is anticipated that the District will become the managing agency of the Willamette Water Supply System Commission (WWSS) upon inception. Additional joint ventures may be formed during the term of the audit agreement.

   Audit services for the District and the WIF, as well as review services for the WRWC are included as part of this Scope of Services. Audit services for the WWSS and any additional joint ventures created during the term of the audit agreement will be considered as additional fees subject to negotiation and are not to be considered within the scope of services to be performed under the original agreement.

4. The audit/review periods cover the fiscal year beginning July 1st, through June 30th. The audit shall cover all the funds of the District. Separate audits or reviews are required for joint ventures for which the District is the managing agency. Lists and copies of the required reports are attached for use in preparing the audit proposal and are available on our website. See references to website and appendices below.

5. If circumstances disclosed by the audit indicate that a more intensive and detailed examination is required than that which would be sufficient under normal circumstances, Auditor shall provide the District all pertinent facts relative to the extraordinary circumstances in writing together with Auditor's estimate of the additional effort to provide the necessary services. Any fees relating to such extensions of examination procedures are to be considered as additional fees subject to negotiation and are not to be considered within the scope of services to be performed under the original agreement.

6. Historically, the audit fieldwork generally takes four to five days at interim and final audit. With the addition of joint ventures to the audit scope more time may be required. (See Appendix A for the current list of joint ventures). Other joint ventures may be added

during the term of this agreement. Interim field work may be scheduled at the convenience of the audit team and District accounting staff. The audit firm may be asked to conduct a preliminary audit exit conference for the District's Management.

7. Auditor shall provide a separate Management Letter addressing the observations, options and comments concerning internal controls and operations efficiencies and recommendations for improvements if they are noted during the course of the audit. Such observations, opinions or comments are not to be construed as special or additional studies.

8. The District has been awarded the Government Finance Officer Association's (GFOA's) Certificate of Achievement for Excellence in Financial Reporting every year since 1990. The award indicates the report not only complies with generally accepted accounting principles and applicable legal requirements, but is also easy to read, efficiently organized, and conforms to program standards.

   It is the District's intent to annually submit its CAFR to the GFOA Certificate program and to continue to receive the award. The District may require technical assistance from the audit firm in regard to presentation or disclosure issues relating to the GFOA program. The District may also require assistance in responding to the annual GFOA reviewer comments. Once the audit is completed, a set of auditor opinion letters on the auditing firm's stationery with the required disclosures will be necessary for inclusion into the District's CAFR and for the joint venture reports. The District will print and assemble the final CAFR documents. The 2018 TVWD CAFR can be viewed on the District website at:

   https://www.tvwd.org/media/203983/cafr_18_17.pdf

   The 2018 Willamette River Water Coalition Financial Report is located here:
   http://www.willametteriver.org/docs/WRWC_report%20_final%20_FY18.pdf

   The 2018 Willamette Intake Facilities Commission Financial Report is located here:
   https://www.tvwd.org/media/203930/01_wif%20report%20_v2.pdf

Fee Proposal

The fees below were carefully considered and we believe reflect a fair and reasonable value in relation to the District's needs as outlined in your scope of work. Starting with a carefully designed audit approach, tied directly to the needs of your stakeholders and based on our substantial understanding of your systems, the fees below were calculated based on the hours needed to appropriately address your inherent risks.

Our goal is to be clear with you on fees from the very beginning—we'd rather provide a reasonable fee estimate than charge you for unexpected hours later. Other firms may offer to complete your audit in fewer hours but consider what may get overlooked when audit hours are not appropriately budgeted. Can you be sure a low-hour engagement will apply the right level of risk assessment or evaluate the correct balances and transaction cycles? Will your board, external users of your financial statements, or beneficiaries of your services get an appropriate analysis that addresses their biggest worries or concerns? With Moss Adams, you'll get all of that plus a strategic relationship with national industry leaders–the District and its stakeholders will rest easy knowing they're working with the right team and the right approach for financial accuracy and transparency.

We've priced our engagement competitively to reflect our desire for a long-term client service commitment and to support the District's strategic objectives. However, if fees may keep us from being considered, please reach out to us to discuss prior to making a final decision—we wouldn't willingly allow a fee differential to keep you from staying on as one of our most valued clients.

STANDARD HOURLY RATES

Staff Level	Hourly Rate
Partner	$455
Senior Manager	$360
Manager	$260
Senior	$205
Staff	$165

Exhibit B - Fee Proposal

FEE FOR AUDIT AND REVIEW SERVICES

Service Description	2019	2020	2021	2022	2023
Audit of the financial statements of Tualatin Valley Water District	$46,000	$47,300	$48,600	$49,900	$51,200
Audit of the financial statements of Willamette Intake Facility Commission	$4,000	$4,100	$4,200	$4,300	$4,400
Financial statement review services for Willamette River Water Coalition	$3,000	$3,100	$3,200	$3,300	$3,400
Attendance at audit committee meetings, including: › Presentation of audit results › Communication of internal control issues › Management letter			Included		
Maximum Not-to-Exceed Fee	**$53,000**	**$54,500**	**$56,000**	**$57,500**	**$59,000**

BILLING INFORMATION

Billing for services rendered will be presented monthly and, at your request, include the name and title of staff, hours worked, and the hourly rate totaling the labor amount. Our billing invoices will also include a summary showing the maximum fee, fees paid to date, and the remaining "not-to-exceed" balance.

ADDITIONAL FEE DETAILS

Subject	The Details
Cost Overruns	During the course of the audit, we'll measure our progress against our planned budget. If situations arise that are significantly different than our expectations, we'll bring them to your attention immediately and discuss various options before we proceed. We'll meet weekly during the course of fieldwork with the appropriate parties to ensure there are open lines of communication between our organizations.
Routine Phone Calls and Emails	Our policy is to not charge for short telephone calls seeking miscellaneous advice unless those consultations require significant additional work or research. If a matter requires further follow-up, we'll discuss a fee estimate with you before incurring significant time.
Minor Research and Consultation	If we're requested to provide minor research or consultation service, we'll estimate the number of hours necessary to provide the requested services. We'll then provide a fee quote for your approval before commencing any work. Our fees for these services are generally at our standard billing rates.
Future New Audit, Review, and Accounting Standards	Our fee estimate discussed herein is based on accounting and professional standards that exist and are applicable as of the date of this proposal. To the extent that future rulemaking activities require modification to our audit approach, procedures, scope of work, etc., we'll advise you of such changes and the impact on our fee proposal. If we're unable to agree on the additional fees, if any, that may be required to implement any new accounting, auditing, and review standards that are required to be adopted and applied as part of our engagement, we reserve the right to withdraw from the engagement, regardless of the stage of completion.

Exhibit B - TVWD Agreement No. 2019-44

EXHIBIT C

AUDIT WORK PAPERS, SUPPORT, AND SERVICES TO BE PROVIDED BY DISTRICT STAFF

The following work papers are prepared by the District's Finance Staff:

TUALATIN VALLEY WATER DISTRICT

AUDIT WORK PAPERS

I. Trial Balances and Other

- Trial Balances with prior year activity for each Budgetary Fund
- Adjusting journal entries
- GAAP adjustments

II. Completed Draft of CAFR

- Letter of Transmittal
- Management's Discussion & Analysis
- Basic Financial Statements
- Notes to Basic Financial Statements
- Required Supplementary Information
- Budgetary Schedules
- Statistical Section

III. Consolidating Worksheets

A. Cash and Investments

- Bank reconciliations
- Outstanding checks list
- Deposits in transit
- Schedule of investments
- Schedule of investment earnings by fund
- Schedule of investment gains and losses from sale of investments

B. Statements of Net Position Analysis-Assets

Schedules for all significant asset categories, including:

- Accounts receivable including accrued water sales
- Inventory
- Capital asset additions and deletions
- Plant in service

Statements of Net Position Analysis -Assets (continued)

- Work in progress
- Contributed projects
- Depreciation schedule
- Support for current year contributed capital
- Leased assets and amortization
- Non-utility property
- Accrued accounts and deposits
- Joint Ventures

C. Statements of Net Position Analysis – Liabilities

Schedules for all significant liability categories, including:

- Accounts payable
- Retainage payable
- Payroll liabilities
- Accrued compensated absences
- Bond & interest schedules
- Customer deposits detail
- Pension liabilities and related deferred inflows and outflows
- OPEB liabilities and related deferred inflows and outflows
- Lease liabilities

IV. Other

- Analysis of changes to Net Position categories
- Net Position calculations
- Inter-Fund transfers lead schedule.
- Reconciliation of payroll to 941s and PERS reports
- New bond issues or refunding detail
- Response to GFOA Comments
- Bond & coupon schedules
- Support for debt service coverage covenants
- Insurance coverage

V. Other Reports

- Budget Adjustments and Supplemental Budgets
- Budget Hearing Notices
- Budget Documents and Reconciliation to Operating Statements
- Other Schedules and Reports upon request

AUDIT WORKPAPERS

I. Trial Balances and Other

- Trial Balances with prior year activity
- Adjusting journal entries
- GAAP adjustments

II. Financial Statements

- Basic financial statements
- Notes to basic financial statements
- Budgetary schedule

III. Supporting schedules for significant categories on the statement of net position:

- Cash and investments
- Accounts receivable
- Capital assets
- Accounts payable
- Accrued liabilities
- Components of net position

IV. Supporting schedules for significant categories on the statement of revenue, expenses, and changes in net position:

- Depreciation
- Capital contributions
- Operating income and expenses
- Analysis of variances in operating income and expenses

V. Other Reports

- Budget Adjustments and Supplemental Budgets
- Budget Hearing Notices
- Budget Documents and Reconciliation to Operating Statements
- Other Schedules and Reports upon request
- Related party transactions

WILLAMETTE WATER SUPPLY SYSTEM COMMISSION (to be established in the year ending 6/30/2020)

AUDIT WORKPAPERS

I Trial Balance and Other

- Trial Balance
- Adjusting journal entries
- GAAP adjustments

II. Financial Statements

- Management's discussion and analysis
- Basic financial statements
- Notes to basic financial statements
- Budgetary schedule

III. Supporting schedules for significant categories on the statement of net position

- Cash and investments
- Accounts receivable
- Capital assets
- Accounts payable
- Accrued liabilities
- Components of net position

IV. Supporting schedules for significant categories on the statement of revenue, expenses, and changes in net position:

- Depreciation
- Capital contributions
- Operating income and expenses

V. Other Reports:

- Budget Adjustments and Supplemental Budgets
- Budget Hearing Notices
- Budget Documents and Reconciliation to Operating Statements
- Other Schedules and Reports upon request
- Related party transactions

WILLAMETTE RIVER WATER COALITION

REVIEW WORKPAPERS

I Trial Balance and Other

- Trial Balance
- Adjusting journal entries
- GAAP adjustments

II. Financial Statements

- Management's discussion and analysis
- Basic financial statements
- Notes to basic financial statements
- Budgetary schedule

III. Supporting schedules for significant categories on the statement of net position

- Cash and investments
- Accounts receivable
- Capital assets
- Accounts payable
- Accrued liabilities
- Components of net position

IV. Supporting schedules for significant categories on the statement of revenue, expenses, and changes in net position:

- Reimbursements from joint ventures
- Operating expenses
- Capital contributions
- Analysis of variances in operating income and expenses

V. Other Reports:

- Budget Adjustments and Supplemental Budgets.
- Budget Hearing Notices.
- Budget Documents and Reconciliation to Operating Statements.
- Other Schedules and Reports upon request
- Related party transactions

RESOLUTION NO. 06-22

A RESOLUTION APPROVING THE INTERGOVERNMENTAL AGREEMENT BETWEEN TUALATIN VALLEY WATER DISTRICT AND THE CITY OF BEAVERTON FOR SYSTEM INTERCONNECTION AT SW KEMMER ROAD

WHEREAS, the City of Beaverton (Beaverton) and Tualatin Valley Water District (District) serve their respective water systems from reservoirs and other water system facilities on Cooper Mountain, including new facilities under construction or to be constructed in close proximity along Kemmer Road; and

WHEREAS, Beaverton and the District find it beneficial, economic and efficient to construct water system facilities and a pipeline in Kemmer Road to interconnect the systems and provide for emergency and mutual aid water supply as set forth in the Intergovernmental Agreement Between Tualatin Valley Water District and the City of Beaverton for System Interconnection at SW Kemmer Road, attached hereto as Exhibit 1 and incorporated by reference (Agreement); and

WHEREAS, the Agreement provides for the allocation of costs for the design and construction of the water system facilities and methodology for costs of operations thereof as well as provisions for temporary water supply from Beaverton to District while District makes system improvements; and

WHEREAS, pursuant to Oregon Revised Statutes 190.003 to 190.130, the Parties desire to enter into the Agreement and being advised.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The Intergovernmental Agreement Between Tualatin Valley Water District and the City of Beaverton for System Interconnection at SW Kemmer Road, attached hereto as Exhibit 1 and incorporated by reference, is hereby approved.

Section 2: The Chief Executive Officer is authorized to execute this contract following approval by Beaverton.

Section 3: The Board authorizes the Chief Executive Officer to execute an amended version of the contract so long as the final executed version is substantially the same as that set forth on Exhibit 1 and the General Counsel has approved.

Approved and adopted at a regular meeting held on the 18th day of May 2022.

Todd Sanders, President	Jim Doane, Secretary

Exhibit 1

INTERGOVERNMENTAL AGREEMENT BETWEEN
TUALATIN VALLEY WATER DISTRICT AND THE CITY OF BEAVERTON
FOR SYSTEM INTERCONNECTION AT SW KEMMER ROAD

PARTIES:

TVWD: Tualatin Valley Water District, a domestic water supply district

City: City of Beaverton, an Oregon municipal corporation

Together collectively referred to as the "Parties" or individually as a "Party."

BACKGROUND:

A. Each Party owns, operates, and maintains municipal water system facilities to serve residential, commercial, and industrial customers within their respective service territories.

B. The Parties desire to build on their history of cooperation to ensure the cost-effective provision of safe and reliable water services to present and future customers by establishing a mutually beneficial interconnection between their two water systems in the Cooper Mountain area as depicted on Exhibit A, which is attached and incorporated by this reference.

C. Each Party owns and maintains water system facilities consisting of reservoirs and pipelines in and around Southwest Kemmer Road, and within approximately 1,500 feet of the other Party. Water is supplied separately to each Party's system through pumped supply systems, and the Parties believe an interconnection between the systems can provide for standby and emergency water for each Party for the mutual benefit and resiliency for customers.

D. In the future, the Parties anticipate accommodating a second high pressure intertie to allow reciprocal emergency water for each Party's 920 HGL pressure zone.

THE PARTIES AGREE AS FOLLOWS:

Section 1. Definitions. The following words and phrases shall have the meaning given in these definitions when capitalized:

1.1. **Connection**: The Vault; TVWD's 24-inch diameter pipeline, which commences at the vault and follows along SW Kemmer Road approximately 1,500 feet to the TVWD Cooper Mountain reservoir site; and all other improvements necessary to make connection between the Parties' systems.

1.2. **Emergency:** A sudden, unplanned occurrence that results in the inability to supply water to customers, such as a main break or other event resulting in a significant reduction in pressure or the receiving Party's ability to supply water to its customers. Emergency does not include increased demand or lack of supply due to drought, warmweather, or increased demand due to service area growth.

1.3. **Emergency Supply:** The temporary unplanned use of the Connection between the water systems of the Parties to provide emergency water supply in an Emergency.

1.4. **City Property:** City owned real property located at 18402 SW Kemmer Road, which houses the City's Cooper Mountain Reservoirs, ASR 7 and other City water system facilities.

1.5. **Supply Agency:** The water supply agency that provides treated water to the Parties. The Parties' Supply Agency may be the Joint Water Commission (JWC), the Willamette Water Supply System (WWSS), or other water provider to the Parties.

1.6. **Temporary Supply:** The temporary regular use of the Connection between the water systems while TVWD completes modification of its pump stations to serve its Cooper Mountain facilities, or the use by either Party if that Party's system is out of service, either due to pressure loss or planned shutdown, as mutually agreed by the Parties.

1.7. **Vault:** The joint metering vault, as well as meters, valves, Supervisory Control and Data Acquisition (SCADA) system, electrical power, assemblies, appurtenances, and the like located in or around the vault located at the west side entrance to the Beaverton-owned Cooper Mountain Reservoir property; approximately 20 to 30 feet of 24-inch ductile iron pipeline or more, depending on the final alignment, from the eastern connection point to the vault; and all other improvements related to the vault.

Section 2. Term. This Agreement commences on the day it is executed by the last Party, and it continues for 20 years, and will renew automatically for additional 5-year periods unless either amended or terminated upon written agreement of the Parties.

Section 3. Connection.

3.1 **Description of Connection.** City and TVWD agree to provide a Connection between their respective systems and provide a Vault at an agreed upon location on the City Property. The Vault located on the City Property shall be capable of providing water from either Party to the other. The Connection shall include a SCADA system that will allow the SCADA system to be configured so that both Parties can independently monitor the flow of water between their respective water systems, and additionally to the Joint Water Commission SCADA system.

3.2 **Construction.**

a. *Vault*. The City shall contract for engineering and construction of the Vault and the SCADA system described in Section 3.1.

b. *City Waterline*. The City shall contract for and construct approximately 500 feet of 24-inch ductile iron pipe located along the north side of the City Property, from east to west, to the Vault to connect the Parties' systems.

c. *TVWD Waterline*. TVWD shall contract for and construct approximately 1,500 feet of 24-inch ductile iron pipe from the Vault's pipeline and continuing west, in and along SW Kemmer Road to TVWD's Cooper Mountain Reservoir.

3.3 **Location, Design, and Inspection.**

a. *City.* The City is currently constructing reservoir improvements on the City Property according to designs prepared by the City's consultant. The City shall contract with its consultant to design the City Waterline and Vault to mutually agreed upon standards. If required, the City will submit the Vault design to the Oregon Health Authority (OHA) as needed to comply with OHA regulations. The Vault shall be designed and built to the requirements of the OHA approved plans. The Parties shall agree on the final location, capacity, and design of the Connection. The City shall provide reasonable notice to TVWD during construction of the Vault to allow reasonable inspection.

b. *TVWD.* TVWD shall contract for design of the TVWD Waterline.

3.4 **Ownership.** The Parties shall equally own the Vault. Each Party shall own its own waterlines as described in Sections 3.2.b and 3.2.c

3.5 **Cost and Payment.**

a. *Vault*. Each Party agrees to pay one-half of the costs of design, permitting, and construction, and continuing maintenance of the Vault, which includes the connecting pipelines. City shall administer and manage the work and invoice TVWD for its share of the Vault's cost. Payment shall be due within 30 days of invoice.

b. *City Waterline.* The City shall be fully responsible for the cost of the City Waterline.

c. *TVWD*. TVWD shall be fully responsible for the cost of the TVWD Waterline.

Section 4. Provision of Water through the Connection. The Connection shall be capable of providing water from one Party's system to the other Party. It shall be available and operable on demand at any time with notice that is reasonable under the circumstances from the requesting Party. The Parties agree that the Party supplying water will not be liable for non-delivery of water if it is unavailable because of the supplying Party's demands or system limitations. The Parties will develop a methodology to determine available capacity as part of the Operations Plan in Section 5.1.

4.1 **Use for Emergency Supply**. The Connection may be used for Emergencies when notice of the Emergency is given to the other Party. Notice from either Party to the other shall be reasonable under the circumstances.

4.2 **Use for Temporary Supply by TVWD.** TVWD shall be entitled to use the Connection for Temporary Supply for approximately two years after execution of this Agreement, as long as the City has sufficient capacity to wheel the water through the City's system. The Parties shall coordinate the timing of the commencement of TVWD improvements in the Cooper

Mountain area to minimize impacts to both Parties.

4.3 **Use for Temporary Supply by both Parties.** The Connection may be used by either Party for Temporary Supply of Cooper Mountain area facilities. Requests for use of the Connection for Temporary Supply shall be submitted a minimum of 30 days prior to anticipated usage, and it shall include a planned schedule along with the estimated supply quantity and flow desired for the duration Temporary Supply is anticipated. Both Parties shall agree to the plans prior to Temporary Supply being delivered, and acceptance of the plan shall not be unreasonably withheld. As an example, it would be unreasonable to deny a Party's request for Temporary Supply when sufficient water supply is available at the Connection to accommodate the request.

4.4 **Water Supply, Stored Water, Treatment Capacity, and Transmission Capacity.** Water provided through the connection shall be the receiving Party's own water that is wheeled through the providing Party's distribution system. The receiving Party will use its own stored water if applicable, its own treatment capacity, and its own transmission capacity to deliver this water to the providing Party's distribution system. Both Parties shall cooperatively coordinate with the Supply Agency to provide meter reads to the Supply Agency during usage of the Connection to support invoicing and stored water allocation to the Parties.

Section 5. Connection Water Meter.

5.1 **Installation and Maintenance**. Upon completion of construction and acceptance of ownership by the Parties, they shall continuously maintain, repair, and replace the meters, valves, assemblies, and appurtenances, as needed, to ensure proper operation of the Connection. City shall be responsible to operate and maintain the Vault and the City Waterline located on City Property, as shown on Exhibit A. TVWD shall be responsible for operation and maintenance of the TVWD Waterline starting at the first valve outside of the Vault where the TVWD Waterline leaves City property and enters SW Kemmer Road. The costs of operating and maintaining the Vault shall be shared equally and paid as provided in Section 3.4. City shall test the meter annually. The Parties shall coordinate the timing of planned maintenance that involves or impacts the Connection so that the functionality and availability of the Connection is optimized. The Parties shall mutually develop an Operations Plan that, at a minimum, addresses: 1) testing and flushing of the Connection; 2) water quality for water supplied through the Connection; and 3) the method for a Party to determine maximum capacity available to the other, in that Party's judgment.

5.2 **Access and Inspection**. City shall provide TVWD with access to the water meter for the purpose of inspecting and observing tests or to perform other obligations required under this Agreement, at any time with reasonable notice.

5.3 **Meter Reading**. Real-time SCADA information will be available to TVWD, the City, and Joint Water Commission ("JWC"). City may read the Connection meter periodically (typically monthly) for City's purposes, and TVWD will remotely monitor the meter for TVWD's purposes through its SCADA system.

Section 6. No Third-Party Beneficiaries. The Parties agree that this Agreement is for the sole benefit of TVWD and the City and that there are no third-party beneficiaries to this Agreement. Each Party is providing the Connection as an accommodation to the other, regardless of any end users that receive water. This Agreement shall not be deemed to have conferred any rights, express or implied, upon any person or entity not a party to this Agreement.

Section 7. Rates, Charges and Fees. Water provided through the Connection, including the Temporary Supply under Section 4.2, shall be billed at the rate established according to Exhibit B, attached and incorporated by reference. In addition, any direct costs for items which are directly attributable to an Emergency, such as the cost of electricity, shall also be billed to the Party requesting water.

City will generally invoice TVWD within 30 days for all rates, charges, and fees incurred by the City for water delivered through the Connection. If TVWD provides water to City, City shall read the meters and notify TVWD of the amount of water measured by the meter within 30 days. TVWD will generally invoice the City within 30 days for all rates, charges, and fees incurred by TVWD for water delivered through the Connection.

Late payments are subject to interest at the default rate and additional charges as provided in Exhibit B. Failure to pay within 30 days of invoice shall result in termination of service following the procedures of Sections 11 and 13 below.

Section 8. Cross Connection Control. The Connection will be designed and constructed to deliver Emergency or Temporary Supply from either system to the other, and the Parties agree that there will be no cross-connection control assembly, unless required by OHA.

Section 9. Indemnity. To the full extent permitted by law, each Party (Indemnifying Party) agrees to indemnify, hold harmless and defend the other Party (Indemnified Party), its governing body, officers, agents, and employees from any and all liability, claims, demands, damages (including attorney fees and costs), actions, or proceedings of whatever kind or nature arising out the acts or failure to act under this Agreement by the Indemnifying Party, its elected officials, officers, agents, employees, or anyone over whom the Indemnifying Party has direction or control, except to the extent of the Indemnified Party's negligence, if any.

Section 10. Insurance. Independent of the indemnity obligation in Section 8, the Parties shall maintain not less than $5,000,000 in liability, casualty, and property insurance coverages and appropriate Workers Compensation coverage.

Section 11. Detrimental Fiscal and Operational Impacts to the Parties. Each Party agrees to cooperate to prevent or minimize fiscal or operational impacts to the other Party that result from this Agreement and to negotiate reasonable modifications to this Agreement as necessary to prevent detrimental impacts to either Party's system resulting from this Agreement.

Section 12. Dispute Resolution. This Agreement obligates the Parties to cooperate for the mutual benefit of all Parties to deliver water to their respective municipal water systems for Emergency and Temporary purposes. This Dispute Resolution process is provided to encourage informal resolution through negotiation among the Parties' staff, executives, or elected officials before resorting to a formal process using mediation, arbitration, or litigation.

12.1 **Default and Cure.** If a Party defaults in performance of this Agreement, then upon 20 days written notice, the defaulting party shall cure or undertake diligent steps to cure within a reasonable time. If the default cannot be cured within the 20-day period, the defaulting party must agree to the timeline for cure. Failure to pay must be cured by payment in full within 20 days. If the dispute is not resolved within 30 days, it shall be referred to mediation.

12.2 **Mediation**. If the default is not cured through a notice of default, the Party desiring mediation shall provide the other Party with a written notice setting forth the nature of the dispute. The Parties will cooperate in good faith to select the mediator within 14 days of either Party requesting mediation, and the Parties may adopt any procedural format that seems appropriate for the particular dispute. Mediation should be scheduled within 14 days of selection of the mediator, or as soon as possible, based on availability. If the mediation fails, the Parties may agree to binding arbitration, and if the Parties do not agree to arbitrate, then any Party may seek legal relief.

12.3 **Remedies**. The Parties agree that because this Agreement concerns potable water system infrastructure, equitable remedies such as injunction or specific performance may be sought.

Section 13. Notices. Any notice under this Agreement shall be deemed sufficient if hand delivered or deposited in the United States Mail, postage prepaid, addressed to the Parties as follows:

Tualatin Valley Water District
Attn: Chief Executive Officer
1850 SW 170th Ave
Beaverton, OR 97003

City of Beaverton
Attention: City Manager
P.O. Box 4755
Beaverton, OR 97076

Section 14. Termination. This Agreement may be terminated by any Party upon 5 year's notice to the other, unless the Parties mutually agree to a different date. At that time the parties will determine a mutually agreeable separation agreement.

Section 15. Law and Venue. The Parties agree that Oregon law will apply, and any legal proceeding shall be brought in the Circuit Court of the State of Oregon for the County of Washington.

Section 16. Successors and Assigns/Non-Assignment. This Agreement may not be assigned to another party without the express written consent of the non-assigning party.

Section 17. Amendment. This Agreement may only be amended in writing signed by both Parties. The designated representatives of each Party may execute any amendment to this Agreement.

THE PARTIES EXECUTED this Agreement on the dates written below.

City	TVWD
By:__________________________ Lacey Beaty, Mayor	By:__________________________ Tom Hickmann, CEO
____________________________ Date	______________________________ Date

Approved as to form:

____________________________ City Attorney’s Office	______________________________ District General Counsel

Exhibit A

Emergency and Temporary Supply Facilities

EXHIBIT B

SYSTEM INTERCONNECTION AT SW KEMMER ROAD WHEELING SERVICE RATE METHODOLOGY

This exhibit presents the methods that can be used to set the cost of wheeling water under the Agreement for the City of Beaverton (City) and the Tualatin Valley Water District (TVWD).

The Agreement allows for either Party to provide wheeled water service (Provider) to the other; and receive wheeled water service (Receiver) from the other. This exhibit presents the methods available to the Parties to determine the wheeled water rates (Rates) charged by the Provider and paid by the Receiver.

1 GENERAL APPROACH

The City and TVWD entered into an intergovernmental agreement (IGA) effective February 23, 2018 (Domestic Water Service Agreement), which among other things, describes the method to be used to calculate wheeling water rates to be charged by TVWD to the City for wheeling water under that IGA.

Using that method, and consistent with Domestic Water Service Agreement, TVWD updates the wheeling water rates associated with wheeling water service to the City. Although that wheeling rate charged the City is melded into a single wheeling water rate for all wheeled water to the City within TVWD's service area, the underlying method relies on the development of unit costs for wheeling water to various parts of TVWD's service area. The unit costs vary within TVWD's service area based on the infrastructure and operating expense required to serve each area. Elevation is often a key driver in the variation of unit costs within TVWD's service area. This exhibit describes the method that will be used to determine the various unit costs for both TVWD and the City that the Parties will use when determining the Rates.

The unit costs for the area(s) served by this Agreement calculated as part of the Domestic Water Service Agreement will be used to determine the Rates when TVWD is the Provider and the City is the Receiver of wheeled water under this Agreement. The Rates will exclude the unit cost for those services not provided by the Provider to the Receiver. Examples of excluded unit costs would be the cost for distribution and direct fire as described in the Domestic Water Service Agreement and presented as an example in Table 4 of Exhibit F of that agreement.

When the City is the Provider and TVWD is the Receiver, the City may determine the Rate using either:

1. The unit costs calculated by TVWD that TVWD would charge the City if TVWD were the Provider and the City were the Receiver, or

2. The City's unit cost of wheeling water based on the methodology comparable to that included in Exhibit F of the Domestic Water Service Agreement and further described here.

2 GENERAL METHODOLOGY

2.1 INDUSTRY-STANDARD PRINCIPLES

The methodology is to be based on industry-standard cost-of-service principles. That is, the Rates established by the methodology are intended to recover Provider's cost of providing the wheeling services to the Receiver using industry-standard approaches. The Parties also intend that the cost-of-service principles be consistent with the principles underlying the methodologies used by the Joint Water Commission, a joint venture that, among others, includes both the City and TVWD.

2.2 UTILITY BASIS OF DETERMINING REVENUE REQUIREMENTS

The revenue requirements that are used to calculate the Rates will be based on the utility basis as described in this Exhibit and Exhibit F of the Domestic Water Service Agreement. Under the utility basis, the revenue requirements that are the basis for the Rates include an amount for operations and maintenance costs described in Subsection 2.4.1 of this exhibit, a return on investment described in Subsection 2.4.3, and replacement cost depreciation described in Subsection 2.4.2. The Receiver will not be charged for costs incurred by Provider that are incurred exclusively in serving Provider's retail customers. For those costs that are incurred for serving both the Receiver's and Provider's retail customers, the Receiver shall be charged its proportionate share of the cost using standard costs-of-service principles such as those presented by the American Water Works Association (AWWA) in its Manual of Water Supply Practices – *M1, Principles of Water Rates, Fees and Charges*, Seventh Edition, Denver: 2017.

2.3 TYPES OF CUSTOMERS AND CUSTOMER CLASSES

The Parties anticipate that the Provider may have similar agreements with other water utilities in the Washington-county region. If Provider enters into other similar agreements, the Rates shall continue to be based on the proportionate cost of serving the Receiver.

The Receiver and Provider anticipate that Provider will wheel water for the Receiver to areas identified in the Agreement. These areas and service levels may be included in unique customer classes that accounted for the costs of serving each of the areas identified in the Agreement.

2.3.1 Types of Customers

Provider shall allocate costs based on a customer classification approach that follows cost-of-service principles. Provider shall classify customers as owners or nonowners, retail or wheeling, and by delivery area (e.g., pressure zone). Other classification factors may be implemented to further the cost-of-service objectives of the Agreement.

2.3.1.1 Owner and Nonowner Customers

Customer classes will be identified as either owner or nonowner customers. Owner customer classes are those that are served directly by Provider and are within Provider's corporate boundaries or otherwise treated as Provider's direct retail customers. These customers capitalize the utility and have the rate of return set directly by the Provider.

Nonowner customers are those customers (e.g., the Receiver) located outside Provider's corporate boundaries. Rates for Provider as a nonowner customers will be based on a return on investment described in Subsection 2.4.3 of this Exhibit and Exhibit F of the Domestic Water Service Agreement.

2.3.1.2 Retail and Wheeling

Retail services is the service the Provider provides to its retail customers. Retail customer classes are those classes for which Provider provides retail services. Under this methodology, retail service includes those customers where the Provider owns and maintains the assets required to serve them.[1]

Wheeling service is the service the Provider provides to the Receiver at the locations identified in this Agreement. The services provided by Provider may vary by the area served. As a wheeling service, the Receiver provides the source of supply to Provider in exchange for the water wheeled. The source of supply exchanged from the Receiver to Provider must meet the operational standards established under the Agreement.

2.3.1.3 Delivery Area

Provider will determine the Rates using cost-of-service principles that allocate costs based on delivery areas served. The Agreement establishes the delivery areas. The Rates will be determined based on the volume of water wheeled to these delivery areas. The delivery areas will be revised as necessary to meet the cost-of-service principles that underlies this Agreement.

2.4 DETERMINATION OF REVENUE REQUIREMENTS

2.4.1 Operation and Maintenance Costs

The operations and maintenance costs shall be those costs as set in Provider's adopted budget for expenditures on personnel services, materials and services, and other appropriations categories that are not otherwise treated as capital expenditures. Operations and maintenance costs shall include appropriate allocation of Provider's overhead costs following Provider's indirect cost allocation plan. Operations and maintenance costs exclude debt service and other expenditures that are capitalized as determined by Provider's capitalization policies.

Operation and maintenance costs assessed to the Receiver will be adjusted annually to reflect Provider's actual costs using the following methodology:

1. After the close of each fiscal year, Provider will calculate the variance between the actual costs and the budget for Provider's operation and maintenance costs charged to the Receiver for that fiscal year.

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[1] In this exhibit, "owns and maintains the assets required to serve them" may include the capacity of assets the Party controls through another joint venture or IGA.

2. The Receiver will be credited any savings or charged any additional costs in addition to Provider's operation and maintenance costs charged to the Receiver for the then-current fiscal year.

3. Such credits or additional charges will be applied equally over the months remaining in the fiscal year following the calculation of the variance described above.

This methodology may be adjusted and revised as mutually agreed by the parties as established in the Domestic Water Service Agreement (reference Section 6.3).

2.4.2 Replacement Cost Depreciation Expense

Unless otherwise agreed to by the Parties, replacement cost depreciation expense shall be determined by the annual depreciation expense on assets that serve the Receiver based on the depreciation expense used by Provider in the preparation of its financial statements, adjusted by changes in the *Engineering News Record's Construction Cost Index for Seattle*. Replacement cost depreciation expense used for setting the Rates shall be determined using the following formula:

$$RCD_n = AD_n \frac{ENR_n}{ENR_a}$$

Where:

RCD_n = Replacement Cost Depreciation in year n

AD_n = Annual Depreciation on an asset at year n

ENR_n = Value of the Construction Cost Index for Seattle in year n as published by the *Engineering News Record*.

ENR_a = Value of the Construction Cost Index for Seattle in year the asset was estimated to be placed in service as published by the *Engineering News Record*.

If the *Engineering News Record's Construction Cost Index for Seattle* is no longer published, the Parties shall select a comparable index to value the replacement cost deprecation.

2.4.3 Return on Investment

The return on investment shall equal the rate of return multiplied by the rate base that serves the Receiver.

2.4.3.1 Determination of Rate of Return

The rate of return shall equal the interest rate as published by the State of Oregon Treasury Department entitled *Oregon Bond Index – Oregon A Rated 20 Year* for the first date after the beginning of the calendar year for when the Rates will be effective. If the *Oregon Bond Index – Oregon A Rated 20 Year* is no longer published, the Parties shall select a comparable index to value the rate of return.

2.4.3.2 Determination of Rate Base

Assets that are used and useful in the provision of water to the Receiver shall be included in the rate base. Assets that are used solely for the provision of services to Provider's retail customers shall not be included in the rate base. Each year Provider shall undertake an analysis of the assets used to provide wheeling services to the Receiver and revise the assets included in rate base as appropriate.

2.4.3.3 Criteria for Capitalization

Only assets that have been or will be capitalized following standard accounting principles shall be included in rate base.

2.4.3.4 Value of Rate Base

2.4.3.4.1 Asset Valuation

The value used for the rate base shall be based on an estimate of each asset's reproduction cost new less depreciation. Provider shall use the *Engineering News Record's Construction Cost Index for Seattle* to estimate the reproduction cost new less depreciation for assets.

The formula for valuing rate base is:

$$RCNLD_n = BV_n \frac{ENR_n}{ENR_a}$$

Where:

$RCNLD_n$ = Replacement Cost New Less Depreciation in year n

Book Value_n = Book value (i.e., original cost of the asset minus the accumulated depreciation for the asset at original costs) of the asset in rate based at year n

ENR_n = Value of the Construction Cost Index for Seattle in year n as published by the *Engineering News Record*.

ENR_a = Value of the Construction Cost Index for Seattle in year the asset was estimated to be placed in service as published by the *Engineering News Record*.

If the *Engineering News Record's Construction Cost Index for Seattle* is no longer published, the Parties shall select a comparable index to value the replacement cost deprecation.

Construction work in progress (CWIP) will not be included in the rate base until the year in which an asset is reasonably expected to enter operations or as otherwise agreed to by the Parties.

2.4.3.4.2 Allowance for Working Capital

In addition to the asset values as described in Section 2.4.3.4.1, the rate base shall also include an allowance for working capital equal to 45 days of budgeted expenditures for operations and maintenance costs as described in Section 2.4.1. The allowance for working capital shall be allocated in the same manner as the operations and maintenance costs as described in Section 4.2.

2.4.3.5 Tracking Requirements of Fixed Assets

Provider shall follow a standard of care common for municipal utilities to maintain records of the value of assets in its rate base. The Receiver and Provider agree that a list of assets will be compiled separately, with such assets to be included in rate base until future assets are added or existing assets are retired.

2.4.3.5.1 Retirement of Fixed Assets

When an asset is retired, the asset shall be removed from the list of assets included in the rate base. In some cases, the assets will be part of a group of assets. In those cases, the value of the asset shall be removed from the value of the group of assets.

2.4.3.5.2 Addition of Fixed Asset

Each year Provider will produce an estimate of the value of assets to be added to the rate base. As appropriate, the assets will be identified by function, purpose, acquisition cost, depreciation rate, and acquisition date. Unless otherwise agreed to, the acquisition costs will be the cost to be recorded in Provider's financial statements.

3 ALLOCATION OF REVENUE REQUIREMENTS

The method of allocating each element of the revenue requirement is described below.

3.1 ALLOCATION OF RETURN ON INVESTMENT AND RATE BASE

The rate base will be allocated to the Receiver using the base/extra-capacity method as described in the AWWA's Manual of Water Supply Practices – *M1, Principles of Water Rates, Fees and Charges*, Seventh Edition, Denver: 2017.

Each element of rate base will be allocated to one or more water functions as identified in an economic and engineering analysis of the system. The Provider shall allocate rate base in a manner consistent with the level of detail presented in Exhibit F of the Domestic Water Service Agreement.

3.2 ALLOCATION TO CUSTOMER CLASSES AND COST POOLS OF CUSTOMER CLASSES

The rate base will be allocated to customer classes and groups of customer classes that participate in common cost pools in a manner similar to that described in Exhibit F of the Domestic Water Service Agreement.

3.3 ALLOCATION TO WATER CUSTOMER CHARACTERISTICS

The functionalized items shall be allocated to the customer service characteristics listed below by the cost pools following the base/extra-capacity method described in the AWWA's Manual of Water Supply Practices – M1, *Principles of Water Rates, Fees and Charges.*

3.3.1 Base Demands

Base demands shall be identified as described in the AWWA's Manual of Water Supply Practices – *M1, Principles of Water Rates, Fees and Charges*.

3.3.2 Peak-Day Demand

Items required to meet peak-day demand shall be allocated to both base capacity and max-day extra capacity. The percentage allocated to the base capacity shall equal the quotient of the estimated quantity of water provided through a cost pool on an average-day basis divided by the estimate of the quantity of water provided during the peak day, all in millions of gallons per day (MGD). The remaining percentage (i.e., 100 percent minus the quotient described above) shall be allocated to max-day extra capacity.

3.3.3 Peak-Hour Demand

Items required to meet peak-hour demand shall be allocated to base capacity, max-day extra capacity, and max-hour extra capacity. The percentage allocated to the base capacity shall equal the estimated quantity of water provided through a cost pool on an average-day basis in MGD divided by the estimate of the quantity of water provided through the same cost pools during the peak hour (in MGD). The percentage allocated to the max-day extra capacity shall equal the quotient of the estimated difference between the peak-day demand and the average-day demands, divided by the estimated peak-hour demand (in MGD). The remaining percentage shall be allocated to max-hour extra-capacity.

3.3.4 Customer

Items that serve the customer, regardless of the customer's demands, shall be allocated based on the number of customers served by the customer service function. For wheeling customers, the customer service characteristic does not include the individual customers. Rather the customer service characteristic includes only the number of master meters or other Receiver accounts used to serve the Receiver.

3.3.5 Meter

Meter-related items shall be allocated based on the number of equivalent meters as described in the AWWA's Manual of Water Supply Practices – *M1, Principles of Water Rates, Fees and Charges.* If the Provider and Receiver share the cost of the meter through this Agreement or anther similar agreement, then the meter costs may be accounted for through that cost sharing methodology.

3.3.6 Fire

Fire-related items shall be allocated based on the number of equivalent fire hydrants served.

3.4 ALLOCATION OF THE RETURN ON INVESTMENT

The return on investment will be allocated based on the allocation of rate base. The return on investment will equal the value of the rate base as allocated in this exhibit times the rate of return identified in Section 2.4.3.1.

4 ALLOCATION OF COSTS BY CUSTOMER SERVICE CHARACTERISTIC

The Receiver will be allocated a percentage of the costs allocated to each customer service characteristic based on the base/extra-capacity method described in the AWWA's Manual of Water Supply Practices – *M1, Principles of Water Rates, Fees and Charges*. The percentages of the Receiver's total demands for each customer service characteristic shall be used to allocate costs to the Receiver for base, max-day extra capacity, and max-hour extra capacity. Estimated peaking factors may be used on estimates of average-day demand unless a more accurate method is reasonably available.

4.1 ALLOCATION OF REPLACEMENT COST DEPRECIATION EXPENSE

Replacement Cost Depreciation expense shall be allocated by using the same procedure as for rate base. The allocation of the replacement cost depreciation expense will use the same percentages as for rate base.

4.2 ALLOCATION OF OPERATIONS AND MAINTENANCE COSTS

Operations and maintenance costs will be functionalized and allocated in the same manner as rate base with the objective being an allocation methodology that follows cost-of-service principles.

5 NATURE OF CHARGES

5.1 FIXED MONTHLY CHARGE

The cost allocated to the Receiver for O&M, return on investment, and replacement cost depreciation for the costs associated with meters and services, direct and indirect fire, and customer services will be paid to Provider in equal monthly installments during months in which the Provider is providing water to the Receiver. The monthly payment will be prorated for the number of days the Provider is providing water to the Receiver for months where the service is provided for less than the entire month.

5.2 USAGE CHARGE

All other costs allocated to the Receiver that are not recovered through the fixed monthly charge will be recovered through rates per hundred cubic feet of wheeled water as measured by the Provider and Receiver consistent with *Section* ***Error! Reference source not found., Error! Reference source not found.***.

The Receiver will pay Provider for water wheeled to area identified in this Agreement at the calculated rate.

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 07-22

A RESOLUTION APPROVING THE DISTRICT'S 2022-23 FINANCIAL PLAN

WHEREAS, the Board of Commissioners adopted the Tualatin Valley Water District's *Financial Management Policies* by Resolution 08-19 (Policies), and the Policies require the District to periodically prepare a Financial Plan for Board approval; and

WHEREAS, the local, national, and global economy has recently experienced historically significant inflationary pressure; and

WHEREAS, the District's currently approved Financial Plan requires updating to account for the effects of the recent inflation; and

WHEREAS, with assistance of management, the Board has assessed risks and benefits of various capital and operational plans which factor into rates, borrowing needs and levels of financial reserves; and

WHEREAS, at its April 20, 2022, regular meeting, the Board approved an updated Financial Strategy for the District which provided management guidance that balances risks, costs and benefits to allow management to prepare the proposed 2022-23 Financial Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The 2022-23 Financial Plan attached hereto as Exhibit 1 and incorporated by reference, is hereby approved.

Section 2: Management will prepare updated Financial Plans in accordance with the District's *Financial Management Policies*.

Approved and adopted at a regular meeting held on the 18th day of May 2022.

______________________________ ______________________________

Todd Sanders, President Jim Doane, Secretary

2022-23 FINANCIAL PLAN

Tualatin Valley Water District

May 2022

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1 Introduction

Tualatin Valley Water District (*TVWD* or *District*) serves about 60,000 accounts in parts of Washington County, Oregon. The District's service area is about 41 square miles, home to approximately 218,000 people in portions of the cities of Beaverton, Hillsboro, Tigard, and unincorporated Washington County. In the fiscal year ended June 30, 2021 (FY2021), the District supplied an average of 22.2 million gallons of water per day (MGD) to its customers. The daily amounts ranged from a minimum of approximately 14.2 million gallons (MG) to a peak day of 39.1 MG.

To provide this service to its customers, the District currently relies on three water sources: the City of Portland Water Bureau (Portland), the Joint Water Commission (JWC)[1], and Grabhorn Aquifer Storage and Recovery (ASR). The District's capacity from Portland includes 42.3 MGD in the Washington County Supply Line (WCSL).[2] The District also has 14.5 MGD available from the JWC. The total of these amounts is well above the average and peak daily flow requirements of the District's customers.

To deliver water to its customers, the District maintains approximately 758 miles of pipe, ranging in size from 2 to 60 inches. Thirteen pumping stations move water throughout the District. There are 23 finished water reservoirs with a combined storage capacity of 67 MG. The major pumping stations and the reservoirs have full telemetry control systems. The District's water system is monitored 24 hours a day, seven days a week. In addition to monitoring water flows and pressure, the District's state-of-the-art Supervisory Control and Data Acquisition (SCADA) system monitors several water quality parameters and security alarms. If the system identifies anything out of the ordinary, alarms alert an operator to the possible problem and staff are dispatched as needed.

Maintaining a reliable and efficient water system is a major focus at TVWD. Infrastructure projects are planned and constructed year-round to meet current and future water needs. At any given time, the District will be engaged in a variety of these projects including pipe replacement, reservoir construction, and building improvements. Additionally, the District is engaged in a major infrastructure project to develop a new water source for the Tualatin Valley. The source development project is commonly referred to as the Willamette Water Supply Program (WWSP) and includes capital improvements that are part of two new regional water entities. The District serves as the Managing Agency for each entity:

1. Willamette Intake Facilities (WIF) Commission – The WIF is a joint venture of the District and the cities of Beaverton, Hillsboro, Sherwood, Tigard, and Wilsonville to jointly own and operate a raw water intake facility located at the current Willamette River Water Treatment Plant in Wilsonville, Oregon.

2. Willamette Water Supply System (WWSS) Commission – The WWSS is a joint venture of the District and the cities of Beaverton and Hillsboro to construct and operate supply facilities that convey raw water from the WIF, treat the raw water to potable standards, and convey the potable water to each partner's distribution systems.[3]

[1] The District is a partner in the JWC along with the cities of Beaverton, Forest Grove, and Hillsboro.
[2] The WCSL is a 60-inch gravity supply conduit that flows approximately 14 miles from Portland's Powell Butte Reservoirs to the District's eastern boundary.
[3] The WWSP website (http://www.ourreliablewater.org/) provides additional information including activities-to-date, maps, and other related information for all WIF and WWSS projects.

The WWSP began in FY2014 and will be complete in FY2026. Its total program cost (including inflation) is substantial at approximately $1.6 billion. Until 2018, the District had assumed that it would fund its projected share (approximately $729 million at the time) with cash and revenue bond proceeds.[4] In 2019, the District and its WWSS partner, the City of Hillsboro (Hillsboro), applied for loans through the Water Infrastructure Finance and Innovation Act (WIFIA) program, a federal loan and guarantee program administered by the U.S. Environmental Protection Agency (EPA). The District closed its original WIFIA loan agreement on August 2, 2019 and Hillsboro closed its agreement shortly thereafter. Section 5.1.1 provides additional details on the District's original WIFIA loan, amendments made in the spring of 2020, and the District's re-executed loan which closed on September 15, 2020.

To forecast its financial resource requirements, including future revenues from rates and charges, the District maintains a financial forecast model (Forecast) that is used to analyze revenue requirements[5] scenarios under alternative capital improvements plans and cost assumptions.

1.1 The Forecast Model

This Financial Plan summarizes the Forecast results, which are based on the District's latest data and assumptions. These data and assumptions include capital improvement plan (CIP) costs, operations and maintenance (O&M) costs, rate and non-rate revenues, system development charge (SDC) collections, reserve funds, and various assumptions around interest rates and cost escalation factors.

The model examines the impacts of funding capital improvements with a mix of rate revenue, reserves, system development charges, and proceeds from future borrowings. The scenario presented in this Financial Plan is based on the District's latest CIP projections, budget numbers, and collective estimates of interest rates and escalation factors as of May 2022. The scenario is projected to generate enough revenue to meet the District's future revenue requirements, maintain prudent reserve fund balances, exceed target minimum debt service coverage ratios, and mitigate the impacts of the new Capital Financing Plan on the District's projected net leverage ratio.

The Forecast that this Financial Plan is based on uses the 30-year planning period of FY2022 through FY2051. However, in most instances, this Financial Plan provides summary data from the first 10 years of the forecast period (i.e., FY2023-FY2032). Throughout this document, this period may be referred to as the "10-year presentation period" or simply the "presentation period".

1.2 Notable Changes from Prior Financial Plan

1.2.1 COVID-19

Although the COVID-19 pandemic is not new this year, the economic pressures it kickstarted are still having impacts on the District's financial performance. To measure these impacts, the District continues to monitor key indicators including the average age of account receivable (AR Aging) and days of sales outstanding (DSO). Both metrics are helpful measures of potential impacts on future collections. Additional measures of account receivable (AR) balances are used to compare the total balance of unpaid bills over time. The next page provides specific comparisons of this metric since March 2020.

[4] WWSP partner costs will be funded individually by the District's partners, with payments made through the District as Managing Agency of the WWSP.

[5] Revenue requirements include cash-funded capital improvements, debt service, and operational expenditures.

During the COVID-19 pandemic, the District's implemented a policy to discontinue shutting off water service for nonpayment. That policy ended the week of July 12, 2021 and resulted in many customers, formerly in shutoff status, to either pay their bills or contact the District to make payment arrangements. Though this policy reversal brought many customers into good standing with the District, there are still many other customers that have outstanding account receivable (AR) balances that are beyond 60 days. A monthly comparison of account receivable (AR) balances aged at 60, 90, and 120+ days shows a significant increase in older AR balances since the COVID-19 pandemic began:

- March 2020 – At the beginning of the COVID-19 crisis, the totals of water AR balances that were 60, 90, and 120+ days were $91, $51, and $42 thousand, respectively, totaling $184 thousand.
- March 2021 – One year later, total AR balances at 60, 90, and 120+ days were $190, $120, and $475 thousand, respectively, totaling $785 thousand.
- March 2022 – Total AR balances at 60, 90, and 120+ days were $175, $150, and $556 thousand, respectively, totaling $881 thousand. This represents an $697 thousand (379%) increase since the COVID-19 pandemic crisis began, and an increase of $96 thousand (11%) in the 12 months between March 2021 and March 2022.

As the effects of the COVID-19 pandemic are still felt in 2022, the District continues to monitor its revenues, expenses, and collections to anticipate potential impacts on the District's financial performance. The District increased its allowance for doubtful accounts to account for the increased aging of its AR and DSO. Moving into the second half of the current biennium and looking ahead to the next, the District's ability to plan for these and other market-driven impacts will become a central focus. The next three years will be the peak spending period for the WWSP, with planned costs pushed significantly higher over the last six months due to increases in the final bids for major elements of the program including the water treatment plant and raw water facility.

1.2.2 Inflationary Pressure on Capital and Operating Expenditures

Like other water utilities, the current inflationary environment is putting increasing pressure on the District's capital and operating expenditures. In fact, recent bids for WWSS infrastructure increased the total cost of the program from $1.3 billion to approximately $1.6 billion. The District's share of this increase is approximately $200 million. The District is also seeing bids come in higher than estimates for its non-WWSS projects and expects inflationary pressures to impact its operating costs over the next several years. In an effort to prepare the District for these potential realities, this Financial Plan incorporates revised assumptions, presented in Table 1-1, for the effects of inflation and interest.

Table 1-1: Updated Assumptions in the District's Forecast and Financial Plan

	Annual Escalation Rates		
	Prior	Next 3 years	Future
CIP - Pipelines	3.5%	4.0%	3.5%
CIP - Other	3.5%	8.0%	3.5%
O&M	4.5%	8.0%	4.5%

	Interest Rate Assumption	
	Prior Assumption	New Assumption
Rev. Bond Financing	3.5%	5.5%

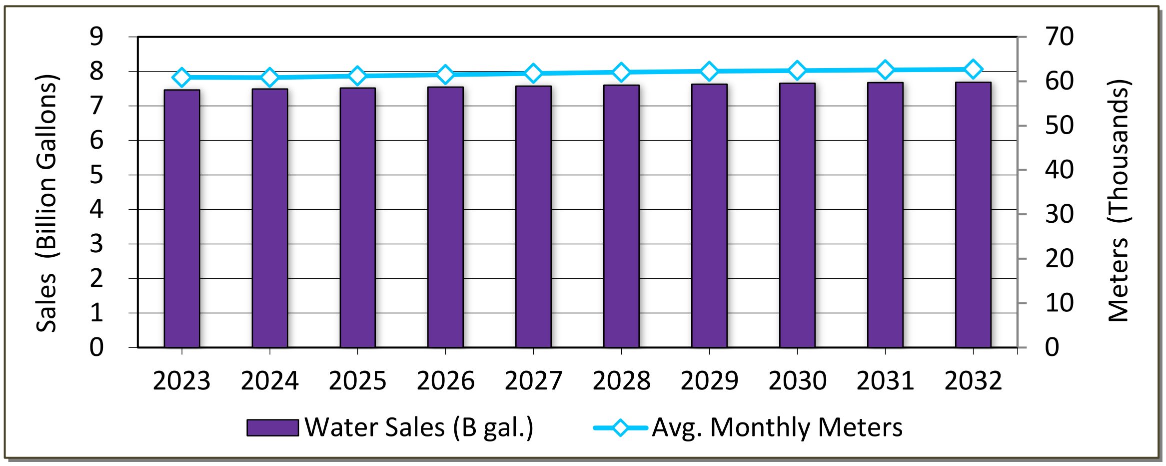
1.3 Financial Plan Section Descriptions and Highlights

This Financial Plan guides the financial management of the District, and it will be updated periodically to reflect future assumptions and outcomes. In addition to regular updates, the District anticipates that its Financial Plan will evolve to provide additional information intended to help the Board and management in the execution of their responsibilities. Therefore, content or sections may change over time. The next four pages present brief overviews for each section of this Financial Plan.

SECTION 2 – FINANCIAL MANAGEMENT OBJECTIVES AND POLICIES. This section describes the objectives that form the basis of the District's financial management activities, and the key financial planning assumptions and policies used in the Forecast model.

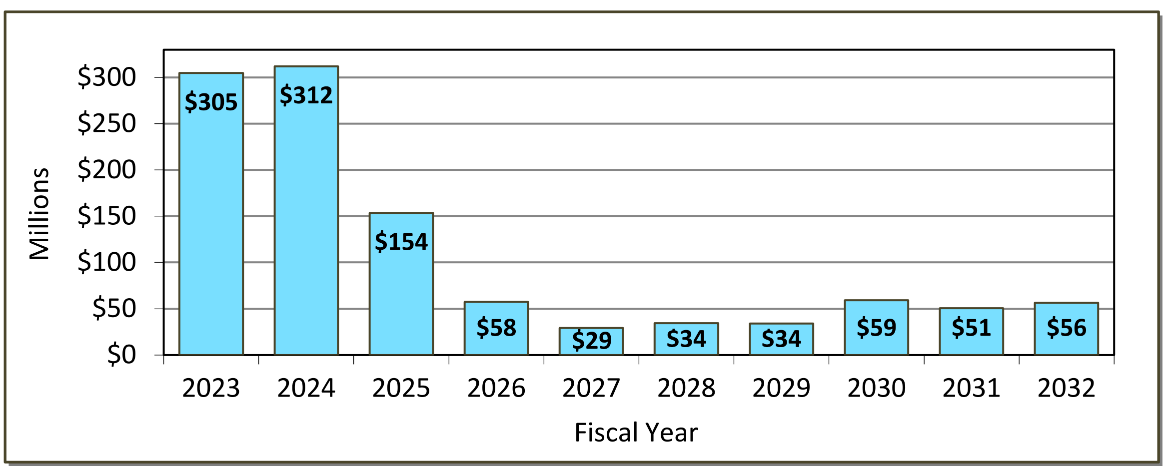
SECTION 3 – WATER SALES PROJECTIONS. This section describes the District's water sales forecast and the data used in the preparation of this Financial Plan. Figure 1-1 presents projected annual water sales and average meters served.

Figure 1-1: Water Sales and Meters Forecast by Fiscal Year



SECTION 4 – CAPITAL IMPROVEMENT PLAN. This section describes various elements of the District's CIP, including projected costs by category. Figure 1-2 provides a summary of projected CIP expenditures over the 10-year presentation period. Total expenditures over this period are approximately $1.09 billion.

Figure 1-2: Projected CIP Expenditures



SECTION 5 – CAPITAL FINANCING PLAN. This section provides a detailed overview of the types and anticipated timing of debt required to finance the CIP and the methodology used to optimize the District's capital financing mix (Figure 1-3). Section 5 also describes the debt assumptions used in the Forecast model and projections of future debt repayments (Figure 1-4).

Figure 1-3: Five-Year Financing Mix (Cash v. Debt, FY2023-FY2027)

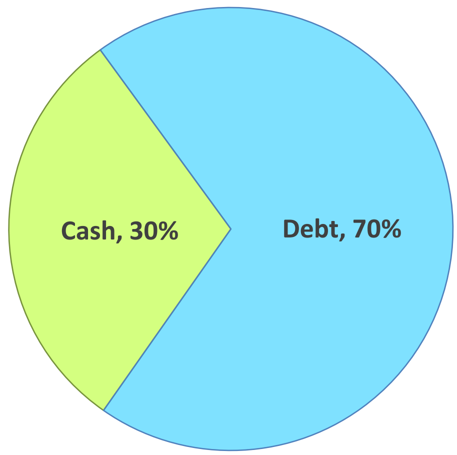
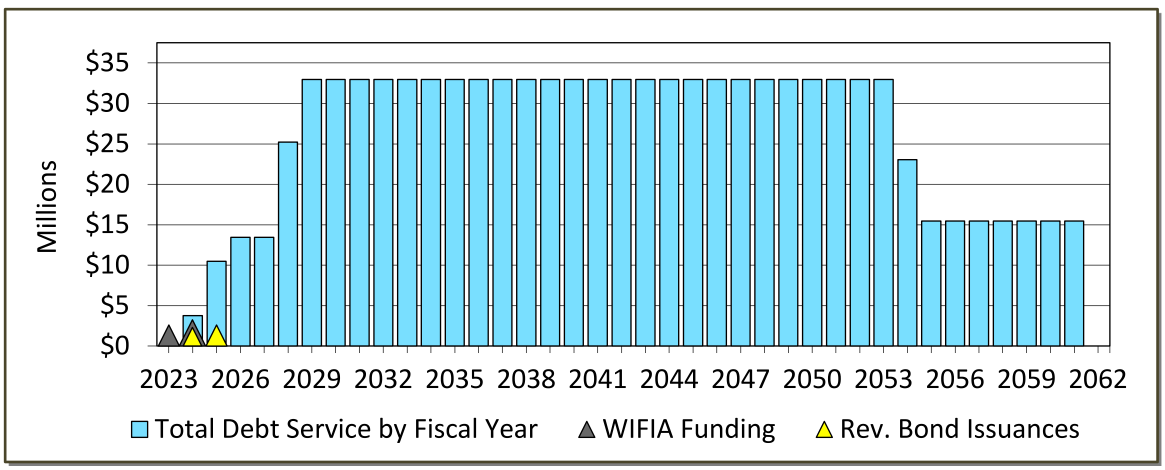


Figure 1-4: Projected Debt Repayments (Total Debt Service on WIFIA and Revenue Bonds)



SECTION 6 – FINANCIAL FORECAST. This section demonstrates the overall feasibility of the District's capital financing plan. It provides descriptions of the District's current and projected rates and charges, and descriptions of the projected sources and uses of funds during the presentation period.

Figure 1-5 (next page) presents the Forecast customer impacts over the presentation period, including typical monthly bills and projected rate revenue adjustments. For the first three years (FY2023-FY2025) of the presentation period, the graph presents two rate adjustments per year based on recent direction from the Board. Additional details on the Board's direction and Forecast rate adjustments are provided in Section 6.2 – *Projected Rates and Charges*.

Figure 1-5: Rate Adjustments and Typical Bill Impacts by Fiscal Year

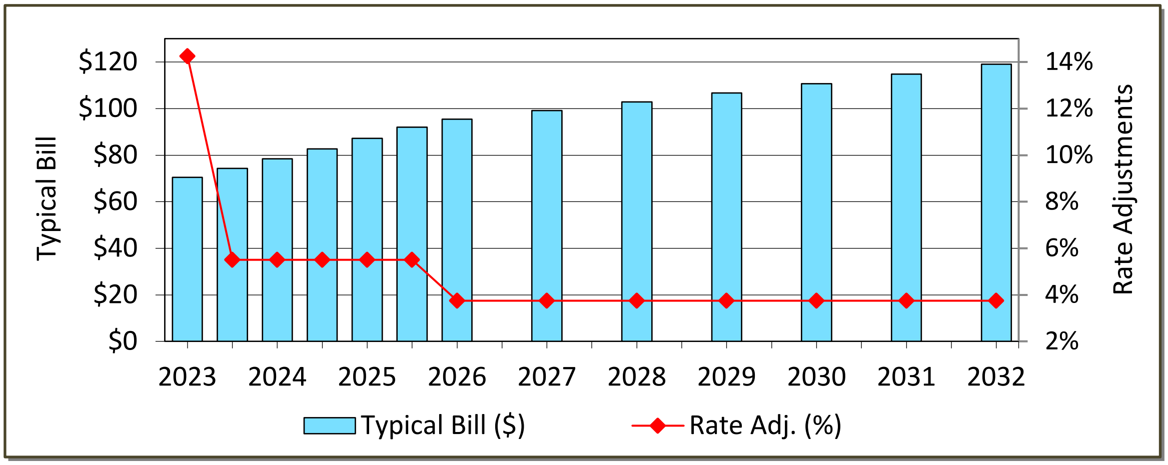


Figure 1-6 below shows that projected debt service coverage (DSC)[6] will exceed the District's target minimum of 2.0x for the foreseeable future. Note that Figure 1-6 presents ten years of results beginning with FY2025 instead of FY2023. This is to show projected DSC for a period after which the bulk of the District's near-term debt service requirements will be in place.

Figure 1-6: Projected Debt Service Coverage Ratio

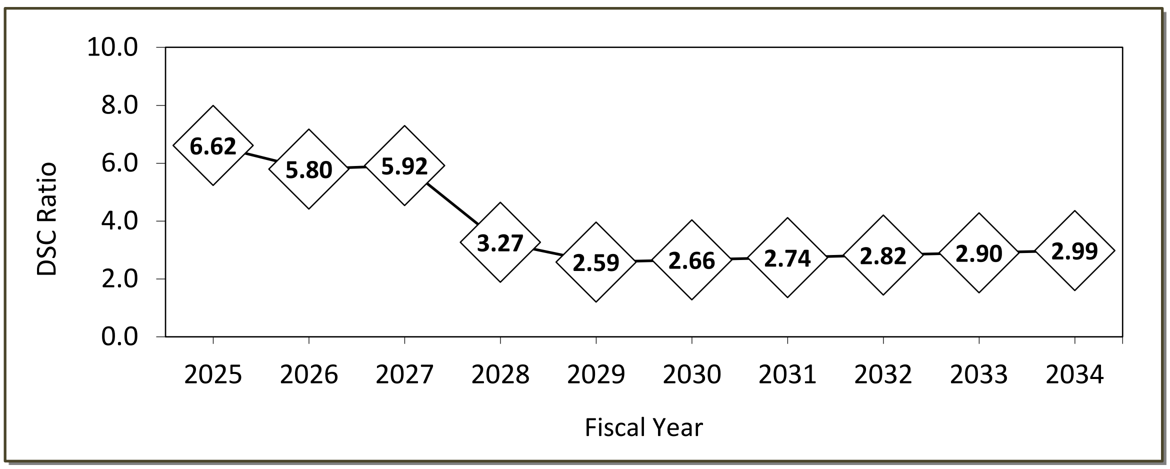
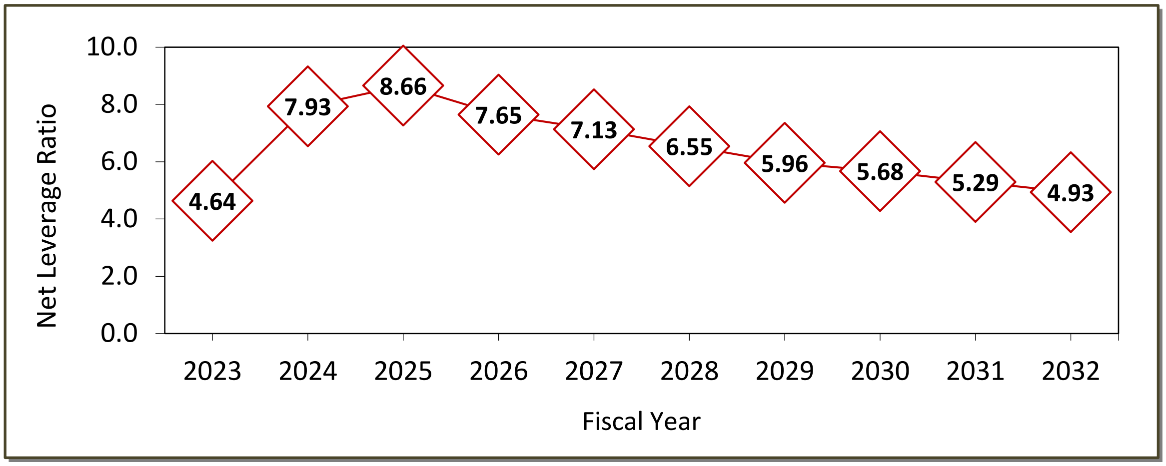


Figure 1-7 shows that the District's estimated net leverage ratio will peak at 8.66x in FY2025 (when the District concludes its planned debt financing for the WWSS) and then decline annually in future years.[7]

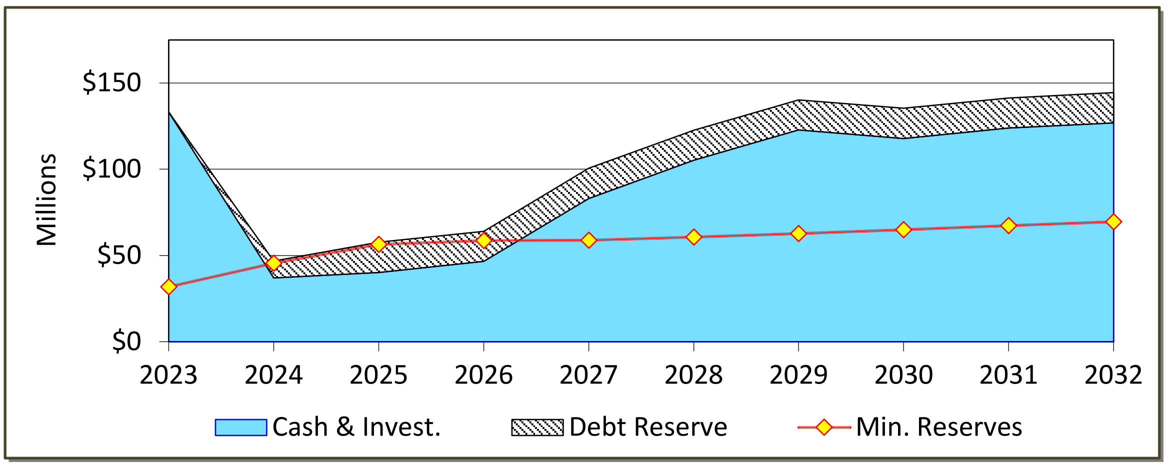
[6] A DSC ratio measures the availability of current financial resources to pay for debt service. It is the ratio of annual revenues (net of operating expenses) to total annual debt service.
[7] For background information on the Net Leverage ratio, see Section 2.2.1.1 in this report.

Figure 1-7: Projected Net Leverage Ratio



SECTION 7 – FUNDS AND RESERVES. This section describes the summary funds used in the Forecast model. The projections in this section, summarized in Figure 1-8, demonstrate that the District will have enough liquidity to meet both its operating and capital investment commitments.

Figure 1-8: Projected Year-End Cash Balances by Fiscal Year



APPENDICES. Along with a service area map inside the back cover, the Appendices include the following:

- Appendix A – Proposed Financial Plan Assumptions for the Financial Management Policies
- Appendix B – Ordinance 01-19 – Authorizing the Issuance of Debt
- Appendix C – Master Revenue Bond Declaration
- Appendix D – First Supplement to Master Revenue Bond Declaration
- Appendix E – Parity Certificate and Transcript Documents
- Appendix F – PERS Valuation Report
- Appendix G – Forecast Model Summary Results
- Appendix H – Map – Tualatin Valley Water District (Washington County, Oregon)

1.4 Conclusion

It must be noted that many assumptions were employed in the financial planning analysis underlying this document. For this reason, the results presented herein are not concrete in nature and should be considered as planning estimates.

In the future, the actual rate adjustments required to fund revenue requirements may vary from the estimates presented in Section 6 – *Financial Forecast*. As time passes and projections become reality, future capital requirements, O&M costs, customer demands, and other assumptions will influence the accuracy of these estimates. Therefore, the District will continue to take great care to mitigate risk by following prudent management practices, including reviewing rates and revenues annually (at a minimum) to see if additional adjustments are necessary.

2 Financial Management Objectives and Policies

This Financial Plan incorporates the Board's financial policies and objectives into an actionable plan that guides the District's financial activities. To develop the District's Financial Plan, the Board considers alternative financial outcomes at public meetings and workshops periodically throughout the year. The Forecast is used to inform the Board on the impact that various policy decisions have on the District's financial outcomes. This includes, for example, changes in water rates, use of long-term debt, etc.

Most of the District's financial policies are included in its *Financial Management Policies* document.[8] In addition to the *Financial Management Policies*, the Board separately adopts the District's *Investment Policy* annually as required by Oregon law.[9]

The aim of this section is threefold:

- Provide context for understanding the policies in terms of financial management objectives.
- Describe key District financial policies, including recent enhancements.
- Present background information on credit ratings.

2.1 Financial Management Objectives

This section provides a context for understanding the District's financial policies in terms of certain financial management objectives –

- Promoting Stability and Continuity
- Providing Best Value to the Community
- Providing a Definitive Policy Framework for District Staff
- Managing Risks to Financial Condition
- Following Established Public Management Best Practices

PROMOTING STABILITY AND CONTINUITY. The long-term, strategic intent articulated by many financial policies necessarily demands a long-term perspective from the organization. These policies promote stability and continuity by institutionalizing good financial management practices. They also prevent the need to re-invent responses to recurring issues.

PROVIDING BEST VALUE TO THE COMMUNITY. By clarifying and crystallizing strategic intent for financial management, financial policies define a shared understanding of how the organization will develop its financial practices and manage its resources to provide the best value to the community.

PROVIDING A DEFINITIVE POLICY FRAMEWORK FOR DISTRICT STAFF. Financial policies define limits on the actions staff may take. The policy framework provides the boundaries within which staff can innovate to further the organization's strategic intent.

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[8] The District's current *Financial Management Policies* were adopted by the Board of Commissioners on March 20, 2019 by Resolution 08-19. The document is available on the District's website, under "Supporting Documents" on the Finance Department page (https://www.tvwd.org/finance).
[9] The District's current *Investment Policy* was adopted by the Board of Commissioners on January 19, 2022 by Resolution 01-22.

MANAGING RISKS TO FINANCIAL CONDITION. A key component of governance accountability is not to incur excessive risk in the pursuit of public goals. Financial policies identify important risks to financial condition.

FOLLOWING ESTABLISHED PUBLIC MANAGEMENT BEST PRACTICES. The Government Finance Officers Association (GFOA), through its officially adopted Best Practices endorsement of National Advisory Council on State and Local Budgeting (NACSLB) budget practices and the GFOA Distinguished Budget Presentation Award Program, has recognized financial policies as an essential part of public financial management.

2.2 Key Financial Policies and Assumptions

The District's financial policies cover a range of diverse activities. However, for long-range financial planning, policies related to capital financing and reserve levels are of particular importance. The following subsection describes each of these key policies in greater detail.

Financial Planning Assumptions[10]

- Debt Service Coverage Ratio
- Net Leverage Ratio
- Additional Bonds Test
- Debt Structure Considerations

Reserve Policies

- Working Capital
- Capital Reserves
- Debt Service Reserves

2.2.1 Financial Planning Assumptions

The financial planning assumptions provide guidance for future debt issuance, structure, and management. The assumptions are incorporated into policies that establish certain limits which recognize the District's capital requirements, its ability to repay financial obligations, and the existing legal, economic, financial, and debt market conditions. Specifically, the policies are intended to assist the District in the following:

1. Evaluating available debt issuance options;
2. Maintaining appropriate capital assets for present and future needs;
3. Promoting sound financial management through accurate and timely information on financial conditions;
4. Protecting and enhancing the District's credit rating(s); and
5. Safeguarding the legal use of the District's financing authority through an effective system of internal controls.

The District's debt financing assumptions and debt structure considerations are discussed in the following two subsections. For more detail and additional information on the District's policies on *Debt Financing*, please see the District's *Financial Management Policies* document.

[10] Assumptions used in the Forecast are from the District's *Financial Management Policies*, except for the additional WIFIA-related assumptions described in *Section 5.3.1 – WIFIA Debt Assumptions*.

2.2.1.1 Forecast Model Assumptions for Debt Financing

DEBT SERVICE COVERAGE (DSC) RATIO. A DSC ratio measures the availability of current financial resources to pay for debt service. It is the ratio of annual revenues (net of operating expenses) to total annual debt service. For example, a DSC ratio of 1.0x means that after paying all operating expenses[11], an issuer only has exactly enough funds to pay debt service obligations. Similarly, a DSC ratio of 1.5x means that after paying all operating expenses, an issuer has 50% more than the amount needed to pay debt service obligations. This additional capacity allows the issuer to fund other capital expenditures with cash (thereby resulting in lower debt leverage) and providing a buffer should revenue be unexpectedly lower (e.g., due to weather or other unforeseen events), or operating expenses being unexpectedly higher.

DSC is one of the primary metrics used by credit ratings agencies and investors to assess the credit worthiness of an issuer. In this way, it is like a ratio of monthly income to mortgage payment used in qualifying for a home mortgage. All other things being equal, an issuer with a higher DSC ratio may indicate less borrowing, better credit ratings, and a lower cost of debt. Conversely, a similar utility with a lower DSC ratio may indicate more debt outstanding, lower credit ratings, and more expensive debt.

The District's master revenue bond declaration (Master Declaration) is the document that governs debt issuance. In this document, the District commits to set rates at levels to meet rate covenants and additional bonds tests imposed by then-existing financing covenants. In addition to the legal and/or contractual requirements associated with future revenue bonds, the District will strive to maintain a minimum annual debt service coverage ratio of 2.0 times average annual debt service.[12]

NET LEVERAGE RATIO. A net leverage ratio measures an entity's total outstanding debt to its financial resources. It is similar to the DSC ratio described above, but different in its measurement and perspective:

- The DSC ratio is a measurement of annual net revenues to total annual debt payments. Target DSC ratios are set as a *minimum* bar to clear.
- Conversely, net leverage measures cumulative debt outstanding to revenue (and other resources), and the target is set as a *maximum* "not-to-exceed" ratio.

Historically the District assumed a cap on its use of long-term debt as a measure of its maximum leverage. However, in its 2021-2023 Financial Plan,[13] the District began using the net leverage ratio calculation as another guide in planning future debt financings. The *Proposed Financial Plan Assumptions for the Financial Management Policies* in Appendix A include targets for net leverage, where the projected net leverage ratio in the Financial Plan:

- Shall not exceed 8.0x for two or more consecutive years, and
- Shall not exceed a net leverage ratio of 7.0x for more than four consecutive years.

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[11] Excluding depreciation. Although depreciation is an operating expense, it is a non-cash expense and is therefore excluded from the calculation of the DSC ratio.
[12] The District sets its minimum DSC ratio target higher than the expected required minimum of 1.25 times debt service. This is a matter of prudent financial policy, in which the District strives to achieve a higher standard than the requirements typically set forth in bond covenants.
[13] The 2021-2023 Financial Plan (Issued May 2021) is available on the District's website, under "Supporting Documents" on the Financial Plan page (https://www.tvwd.org/finance/page/financial-plan).

The addition of the net leverage ratio to the District's financial planning is due, in part, in response to credit rating criteria used by ratings agencies. It is also replacing the assumed debt issuance cap previously used.

The District's Board of Commissioners has demonstrated a strong commitment to the financial health of the District. This commitment is demonstrated by a history of implementing changes in water rates that are necessary to meet the needs of the water system and customers. Therefore, DSC is not typically considered a constraint at the District. However, given the substantial amounts of debt funding that will be required for its CIP, the District's net leverage ratio may become a constraining factor at some point. This is especially true when considering the perspectives of the credit market and ratings agencies.

2.2.1.2 Debt Structure Considerations

MATURITY OF DEBT. The final maturity of the debt shall not exceed, and preferably be less than, the remaining useful life of the assets being financed, and to comply with Federal tax regulations, the average life of a financing shall not exceed 120% of the average life of the assets being financed.

DEBT SERVICE STRUCTURE. Debt service payments for any new money debt issue will generally be structured to create more level debt service payments over the life of the debt. Exceptions are permitted for refunding debt that will have varying principal repayments structured to fill in the gaps created by refunding specific principal maturities. The Chief Financial Officer (CFO) may also structure the amortization of principal to wrap around existing obligations or to achieve other financial planning goals. Deferring the repayment of principal should be avoided except in select instances where it will take time before project revenues are sufficient to pay debt service.

LIEN STRUCTURE. Senior and subordinate liens may be used to maximize the most critical constraint, either cost or capacity, thus allowing for the most beneficial leverage of revenues.

CAPITALIZED INTEREST. The District may elect to fund capitalized interest in connection with the construction of certain projects if revenue from such projects is not initially available to pay debt service on related debt. Additionally, the District may consider funding capitalized interest if it would minimize the financial impact of such borrowing on District customers.

RESERVE FUNDS. A reserve fund for a debt issuance may be required for credit rating or marketing reasons. If required, such reserve funds can be funded with:

- The proceeds of a debt issue,
- The reserves of the District, or
- A surety policy.

A cash reserve fund will be invested pursuant to the investment restrictions associated with the respective financing documents and the District's separate investment policy. For each debt issue, the CFO will evaluate whether a reserve fund is beneficial for credit rating or marketing purposes and the prudence of funding or maintaining the reserve requirement with cash or a surety policy, in addition to determining the benefits of borrowing the necessary funds or using cash reserves.

REDEMPTION PROVISIONS. In general, the District will have the right to optionally redeem debt at par no later than 10 1/2 years after issuance. Redemption provisions will be established on a case-by-case basis, taking into consideration market conditions and the results of a call option analysis prior to the time of sale. Because the issuance of non-callable debt may restrict future financial flexibility, cost will not be the sole determinant in the decision to issue non-callable debt.

CREDIT ENHANCEMENT. Credit enhancement (e.g., bond insurance or letters of credit) on District financings will only be used when net debt service is reduced by more than the cost of the enhancement. The District will evaluate the availability and cost/benefit of credit enhanced debt versus unenhanced debt prior to issuing any debt.

2.2.2 Reserve Policies

Maintaining fund balances is an important function for the District to operate efficiently over the long run. The District's reserve policies guide the development of minimum cash balances that directly affect this District's Financial Plan, rates and charges, and budget. The accumulation or use of fund balances and reserves is a practice that may allow financial decisions in one year to affect future years. Because of the nature of these effects, these policies provide guidance to:

- District management in developing the various plans proposed to the Board, and
- The Board in making its financial decisions.

The decision to retain financial resources in fund balance or reserves directly affects:

- Financial risks from unexpected disruptions to revenue or unplanned expenditures.
- Water rates required in the current and future years.
- The District's credit rating(s).
- Other related financial matters.

The District's reserves requirements are highlighted in the following three subsections. For more detail and additional information on the District's policies on *Minimum Fund Balances and Reserves*, please see the District's *Financial Management Policies* document.[14]

2.2.2.1 Working Capital

The District separately measures its current and non-current assets and liabilities. The District can use this distinction to calculate working capital (i.e., current assets less current liabilities). The measure of working capital indicates the relatively liquid portion of the District's assets, which constitutes a margin or buffer for meeting obligations. Additionally, credit ratings agencies consider the availability of working capital in their evaluations of the District's creditworthiness. Therefore, working capital is a crucial consideration in this Financial Plan.

The District's *Financial Management Policies* state that working capital shall be maintained at a level considered adequate to mitigate current and future risks (e.g., revenue shortfalls and unanticipated expenses) and to provide stable services and fees. The policies state that this level will be at least equal to two months of annual operations and maintenance expense (i.e., 60 days cash on hand).

[14] Available on the Finance page of the District's website (https://www.tvwd.org/finance).

2.2.2.2 Capital Reserves

The District's rate setting goals include a preference to avoid sudden and/or unexpected rate increases for customers. Capital reserves are one mechanism the District can use to lower the overall costs of acquiring capital assets by saving money early in the planning process. Capital reserve levels are determined through the financial planning process and identified in this Financial Plan.

In the Forecast model, the District targets 250 days of annual O&M for financial planning purposes. This reserve balance is intended to meet the requirements of the working capital and capital reserves targets.

2.2.2.3 Debt Service Reserves

A reserve fund for a debt issuance may be required for credit rating or marketing reasons. The District fully redeemed its last outstanding revenue bonds in June of 2015 and its Debt Service Fund has not been used since that time. For planning purposes, the District assumes that any debt reserves required for future revenue bonds will be funded from the proceeds of each bond issuance.

This cash reserve fund will be invested pursuant to the investment restrictions associated with the respective financing documents and the District's separate investment policy. For each debt issue, the CFO will evaluate whether a reserve fund is required for credit rating or marketing purposes and the benefits of funding or maintaining the reserve requirement with cash or a surety policy, in addition to determining the benefits of borrowing the necessary funds or using cash reserves.

2.3 District Credit Ratings

The primary goal of the District's Financial Plan is to provide the financial foundation on which to build and operate its expanding system infrastructure. As described earlier, financial policies represent a tradeoff among various objectives. Prudent financial management means striking a balance among these objectives in a manner that provides for a sustainable enterprise with the ability to face the risks and capitalize on the opportunities before it.

Though high underlying credit ratings are not an end in-and-of themselves, they are one of the best measures of success in creating a financially sustainable enterprise. For several years, the District has worked with its professional advisers to develop a targeted credit rating for its long-term debt. Based on the District's alignment with the rating criteria of the various rating agencies and considering the effect on the District's cost of capital, the District targeted financial performance that would result in a credit rating of at least AA+/Aa1. The District believes its financial performance may support a rating of AAA.

As part of the application process for the WIFIA loan program, the District was required to get credit ratings from two national rating agencies. The District selected Standard & Poor's and Fitch Ratings for its ratings and achieved its minimum targeted rating from each agency.

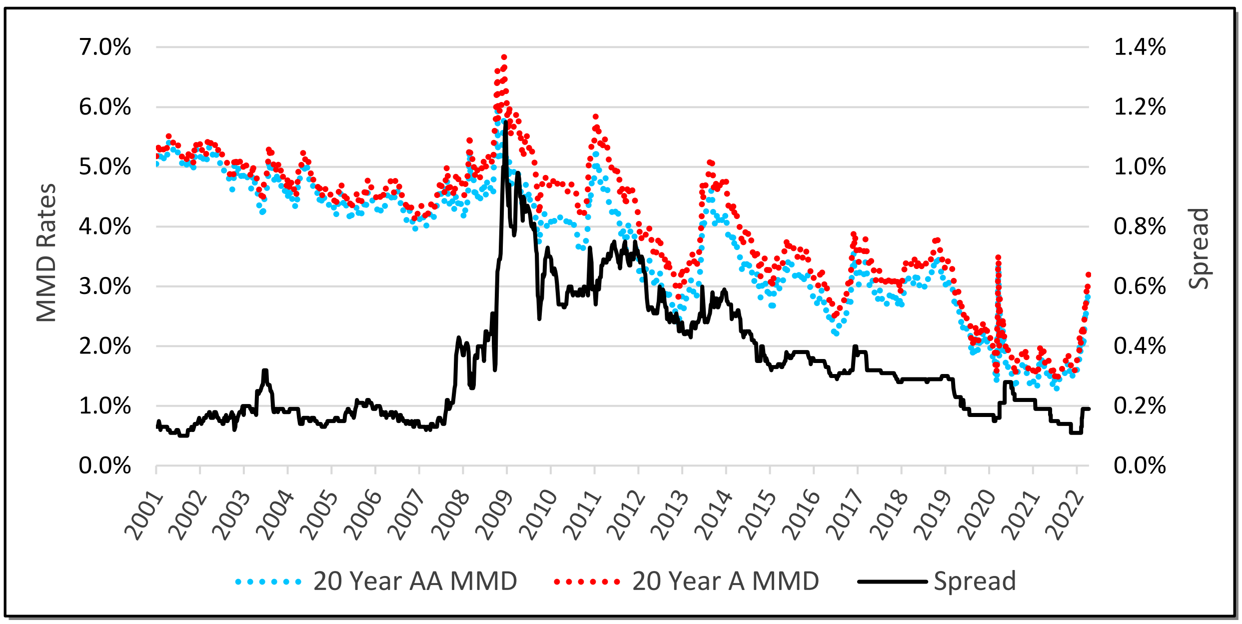
Table 2-1 (next page) provides a scale comparison for investment grade securities for three national rating agencies. The District's ratings are shaded.

Table 2-1: Rating Scales by Agency

Standard & Poor's	Fitch Ratings	Moody's Investor's Service
AAA	AAA	Aaa
AA+	AA+	Aa1
AA	AA	Aa2
AA-	AA-	Aa3
A+	A+	A1
A	A	A2
A-	A-	A3
BBB+	BBB+	Baa1
BBB+	BBB+	Baa2
BBB-	BBB-	Baa3

The direct financial value of a strong credit rating is a function of investor perceptions of risk. In terms of basis points savings on long-term debt, the graph below shows the value of 'AA'-rated credit vs. 'A'-rated credit since 2001.

Figure 2-1: Spread Between 'AA' versus 'A' Rated Debt* – The Benefit of Staying 'AA' or Better



* 20-year AA vs. A MMD Historical Rate Comparison (1/5/2001-4/14/2022); from PFM Financial Advisors LLC.

The graph makes clear that the value of a strong credit rating varies over time. Over the period presented, the value (i.e., "spread") ranged from a low of 10 basis points to a high of 115 basis points, while averaging 28 basis points. To put this in perspective, an additional 28 basis points results in an additional $5.5 million in interest on every $100 million in outstanding debt (i.e., over 30 years).

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3 Water Sales Projections

3.1 Water Sources

One of the District's primary responsibilities is to meet the water demands of existing and future customers. No single water source is sufficiently robust to meet this challenge, and the District's Board has long recognized the need to balance water supplies among multiple sources. Currently, the District purchases most of its water through a wholesale contract with the City of Portland. The remainder of the water needed by the District's customers comes from the Joint Water Commission (JWC) and the District's aquifer storage and recovery (ASR) facilities.

3.1.1 City of Portland Water Bureau

TVWD purchases water from Portland under an existing regional water sales agreement. TVWD has no equity share in the Portland supply and, under the terms of the agreement, is required to pay for a minimum average of 13.16 MGD even if the District uses less. Under the agreement, this 13.16 MGD is referred to as the guaranteed purchase quantity (GPQ). If the District requires more water than the GPQ, the District will pay Portland for the additional costs. Water is billed at a pre-determined rate which includes a return on investment for Portland, with significant rate increases tied to high usage during summer months. The District's connections with Portland can provide up to 42.3 MGD through the WCSL,[15] however, there are significant incentives to manage the existing supply system to limit the financial impacts of the existing Portland water sales agreement.

3.1.2 Joint Water Commission

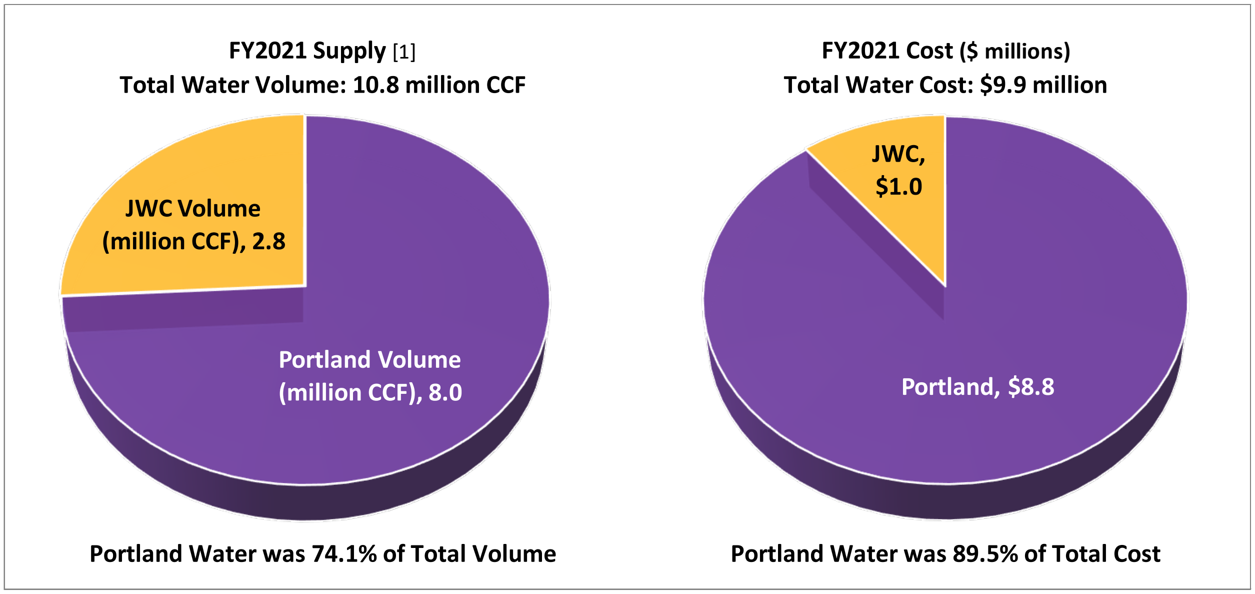
The JWC is a partnership of the District and the cities of Beaverton, Forest Grove, and Hillsboro. The JWC operates a treatment plant and related storage and transmission facilities. As a member of the JWC, the District owns capacity rights in the JWC's facilities. TVWD's capacity share of the JWC water treatment plant is 14.5 MGD, and the District owns rights to approximately 7,000 acre-feet of storage[16] at Barney Reservoir, one of the two primary impoundments that provide stored raw surface water supply to the JWC (the other is Hagg Lake). JWC members share actual operating and maintenance costs in proportion to their water usage and ownership shares.

JWC water is billed to the District at actual water production cost with no return on investment since TVWD provided the capital. In the summer months, purchased water costs from the JWC are significantly lower than the cost of Portland water. Therefore, the District maximizes its purchases from the JWC source while concurrently making the contractually required minimum purchases from Portland during the peak season.

Figure 3-1 (next page) illustrates the comparative volume and costs of the District's supplies from Portland and the JWC.

[15] The Washington County Supply Line, or *WCSL*, is a 60-inch gravity supply conduit that flows approximately 14 miles from Portland's Powell Butte Reservoirs to the District's eastern boundary.
[16] 7,000 acre-feet is equivalent to approximately 12.5 MGD over a 180-day peak-season period.

Figure 3-1: Comparison of Existing Supplies and Related Costs



[1] CCF = one hundred cubic feet or 748 gallons.

3.1.3 Grabhorn Aquifer Storage and Recovery

The District also uses its existing Grabhorn ASR well to supplement supply during peak-summer periods. The Grabhorn ASR facility can store up to 300 million gallons of water and was designed to deliver up to 3 MGD of supply over a 100-day period.

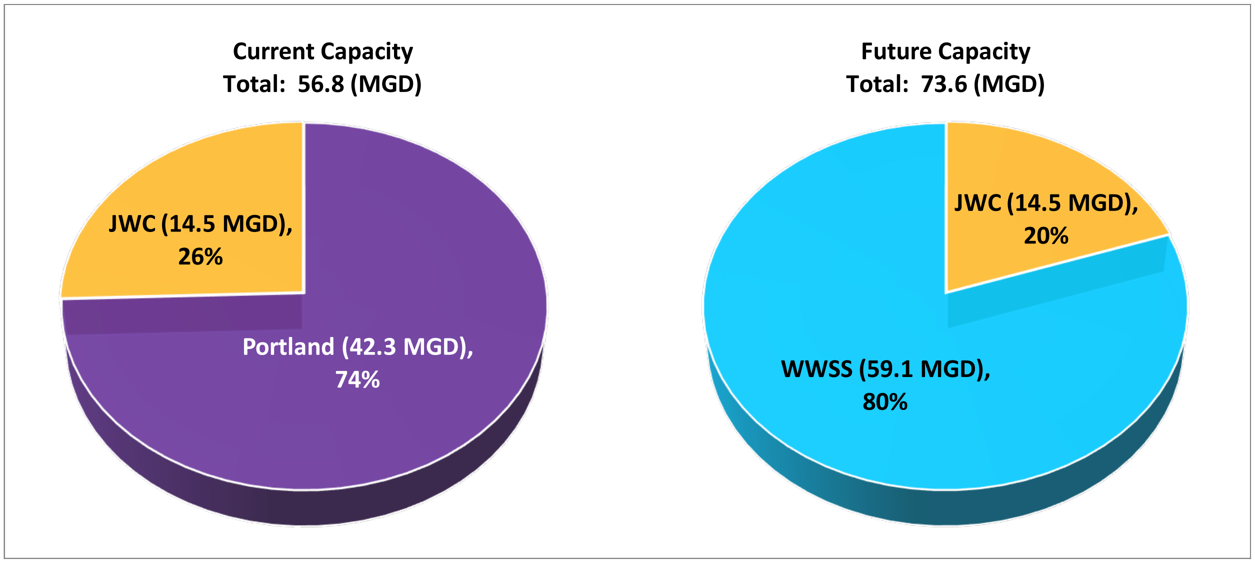
To reduce the higher costs of purchasing water for peak-summer use, the District forecasts its projected demand on a regular basis. This short-term demand forecasting helps the District meet the minimum purchase requirement of the Portland agreement while efficiently using the JWC and ASR sources to help meet higher demands during summer months.

3.1.4 Willamette Water Supply System

In 2013, the District's Board decided to expand the District's portfolio of water sources and develop a new water supply on the mid-Willamette River near Wilsonville. With the development of the Willamette Water Supply System (WWSS), the District plans to replace its Portland purchased water with this new source. The WWSS is scheduled to be available by July 1, 2026.

Figure 3-2 (next page) summarizes the District's current source water capacities and its planned capacities beginning in FY2027.

Figure 3-2: Current v. Future Source Water Capacity



Developing the new water supply is considered an integral element of the District's core mission. The planning, design, and construction of the WWSS is being done by the Willamette Water Supply Program (WWSP). Once complete, the WWSS will be a seismically hardened water supply system to meet the long-term needs of its residential, commercial, and industrial customers.

The WWSS is a regional effort which will result in long-term regional benefits. It is being implemented as a regional partnership, with TVWD serving as the Managing Agency for two new regional water entities with ownership interest in different parts of the total program:

1. Willamette Intake Facilities (WIF) Commission – The WIF is a joint venture of the District and the cities of Beaverton, Hillsboro, Sherwood, Tigard, and Wilsonville to jointly own and operate a raw water intake facility located at the current Willamette River Water Treatment Plant in Wilsonville, Oregon.

2. Willamette Water Supply System (WWSS) Commission – The WWSS is a joint venture of the District and the cities of Beaverton and Hillsboro to construct and operate supply facilities that convey raw water from the WIF, treat the raw water to potable standards, and convey the potable water to each partner's distribution systems.[17]

3.2 Water Demand Forecast

In February 2018, the District and the City of Beaverton (Beaverton) entered into a service area agreement (Beaverton Service Area Agreement). This service area agreement provided a framework for the District and Beaverton to plan for serving customers within Beaverton's corporate jurisdiction in places where it overlaps with the District's boundaries. The agreement provided Beaverton an opportunity to withdraw a limited number of customers from the District, thereby making them Beaverton customers.

[17] The WWSP website (http://www.ourreliablewater.org/) provides additional information including activities-to-date, maps, and other related information for all WIF and WWSS projects.

The water demand forecast underlying this Financial Plan incorporates anticipated withdrawals of customers by Beaverton. Related reductions in the District's service accounts and associated water consumption are embedded in the projected source water purchases and rate revenue (fixed charges and water sales) included in the Forecast model.

At this time, the District is aware of limited additional areas from which Beaverton could withdraw customers in the future.[18] Regardless of the ultimate number of services that Beaverton withdraws, the probability is low that future withdrawal(s) would occur all at once. Rather, a series of withdrawals with subsequent transfer activities over multiple years may impact the District's finances in a gradual way.

Given the staggered timing of customer transfers to wheeling status and then separated status (i.e., served directly by Beaverton), the impact to the District's finances has been gradual. Should Beaverton pursue additional transfers in the future as the implementation of the agreement proceeds, the District will refine the projected revenue impacts in the Forecast.

Before factoring in assumed withdrawals by Beaverton, the assumed annual customer growth rate begins at 0.60% in FY2024 and then declines by 0.05% annually until it reaches zero in FY2036. These reductions in growth recognize the anticipation of slowing of development as the District approaches its build-out capacity. Expansions of the region's urban growth boundary on the northern edge of the District's current service area may increase these assumed growth rates for future years.

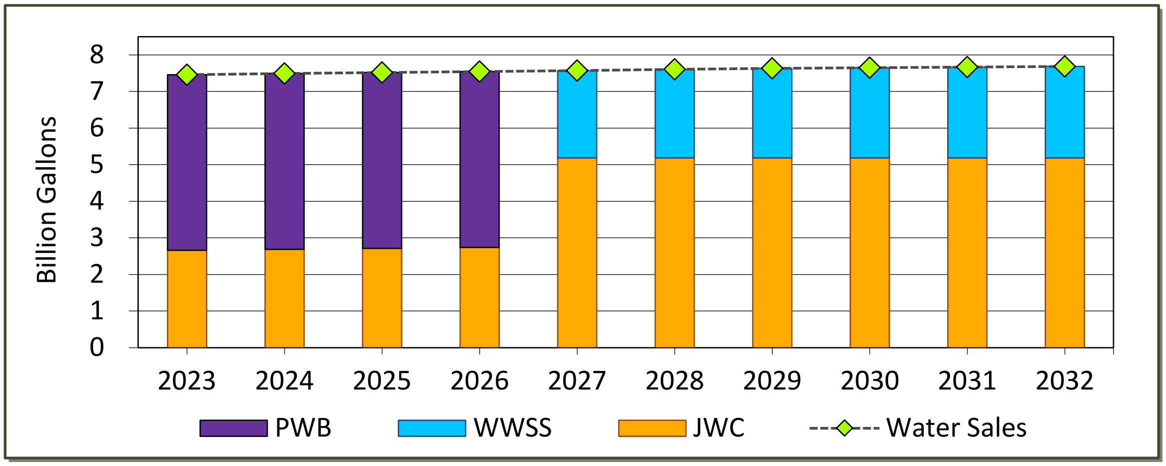
Prior to its last Financial Plan (May 2021), the District had seen fluctuations in its water demand. In the summer of 2019, consumption per capita declined 8% but then stabilized until the COVID-19 pandemic hit in 2020. The District saw further declines in the summer of 2020, likely due to the economic impacts of the pandemic. Since November 2020, it appears that water usage per customer has rebounded, especially in the District's single-family residential, irrigation, and production customer classes.

In its Forecast modeling, the District assumes that these past conservation savings and declines in system demands are permanent and forecasts sales growth at a lower rate than that of customer growth. This assumption is related to a combination of factors including the potential for mild weather, a successful conservation program that has depressed summer water demands, and the District's similar experience to the nation-wide trends towards higher density developments, smaller family sizes, and widespread assimilation of water-efficient appliances. The Forecast assumes an annual sales growth rate of approximately 0.4% through FY2028. After FY2028, the District assumes that sales growth will align with customer growth, ultimately becoming zero by FY2036.

On the following page, Figure 3-3 summarizes projected water demand and the assumed mix of supply sources used as the basis for purchased water costs in the Forecast model. Note that the impacts of the Beaverton withdrawals are already included in the FY2022 numbers. Additional future withdrawals by Beaverton would impact the projections shown below, and the District would necessarily adjust its assumptions and Financial Plan.

[18] Section 3.7 of the Beaverton Service Area Agreement defines the obligations of Beaverton to assume a proportionate share of the District's the outstanding debt for all withdrawals effective after July 2, 2020.

Figure 3-3: Balancing Water Supplies and Demand by Fiscal Year



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4 Capital Improvement Plan

Each biennium the District updates its capital improvement plan, which includes expenditures for the Willamette Water Supply Program, Joint Water Commission, and in-District projects.

- The WWSP was established to develop and deliver the Willamette Intake Facilities (WIF), Willamette Water Supply System (WWSS), and Metzger Pipeline East (MPE) to the District and its partners by July 2026.
- As discussed in Section 3.1.2, the District is a partner in the JWC along with the cities of Beaverton, Forest Grove, and Hillsboro. As a member of the JWC, the District also participates in the development of its capital budget.
- For in-District projects, status updates on current projects and new project requests are prepared by the Engineering & Operations Department.

Table 4-1 presents the forecast CIP expenditures through FY2032. The District's share of projected WWSP (including WIF & WWSS projects) and JWC capital costs are summarized in the top two rows of the table. The categories listed below JWC are all in-District capital expenditures.

Table 4-1: Forecast CIP Expenditures by Category and Fiscal Year ($ Millions)

Category	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Totals
WWSP/WWSS	$209.2	$245.5	$120.3	$36.3	$3.8	$2.2	$1.7	$15.8	$15.6	$1.1	**$651.5**
JWC	0.1	0.3	0.7	0.6	1.0	1.0	1.1	1.1	1.1	1.4	**8.5**
TVWD Source	5.5	0.5	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	**7.7**
Storage	6.2	8.0	0.5	0.0	1.6	2.6	0.1	0.1	0.1	3.4	**22.6**
Pumping	1.9	5.3	5.6	0.2	1.6	2.4	0.2	0.2	0.2	1.2	**18.9**
Pipelines*	75.4	46.9	21.3	11.3	12.7	13.9	19.7	21.3	17.7	32.6	**272.9**
PRVs/Vaults	1.9	0.7	0.3	0.4	0.5	0.4	0.6	0.4	0.4	0.4	**6.0**
Facilities/Fleet/IT	1.7	0.7	0.8	0.8	1.2	2.9	1.3	1.3	1.4	1.4	**13.4**
Meters/Svcs	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.6	**21.9**
Other	0.9	2.4	2.0	4.3	4.5	6.9	7.2	16.5	11.7	12.1	**68.5**
Totals	**$304.8**	**$312.2**	**$153.7**	**$57.6**	**$29.1**	**$34.5**	**$34.2**	**$59.1**	**$50.7**	**$56.3**	**$1092.0**
Summary											
WWSP/WWSS	$209.2	$245.5	$120.3	$36.3	$3.8	$2.2	$1.7	$15.8	$15.6	$1.1	**$651.5**
JWC	0.1	0.3	0.7	0.6	1.0	1.0	1.1	1.1	1.1	1.4	**8.5**
In-District*	95.5	66.5	32.7	20.6	24.3	31.3	31.4	42.1	34.0	53.8	**432.0**

*Includes MPE (prelim. estimates: $108.1 million in FY2023-27, $157.5 million total), being delivered by the WWSP.

- The largest element of the District's ten-year CIP is the WWSP/WWSS at approximately $651.5 million. This number represents the District's share of all remaining WWSP project expenditures, including the costs of the raw water facilities, water treatment plant, finished water pipelines, and terminal reservoirs. The District and its partners plan to end the WWSP in FY2026, with several million in program close-out costs projected for FY2027. There are, however, additional WWSS-related project costs in future years.

  The timing of these future projects costs is based on efforts by the District and its partners to lessen the near-term financial pressure on customers by pushing some elements of WWSP projects into future years. These elements include a planned expansion of the water treatment plant, a second 15 MG storage tank at the terminal reservoir site, the northernmost finished water pipeline, and an optional element of the WWSS control system.

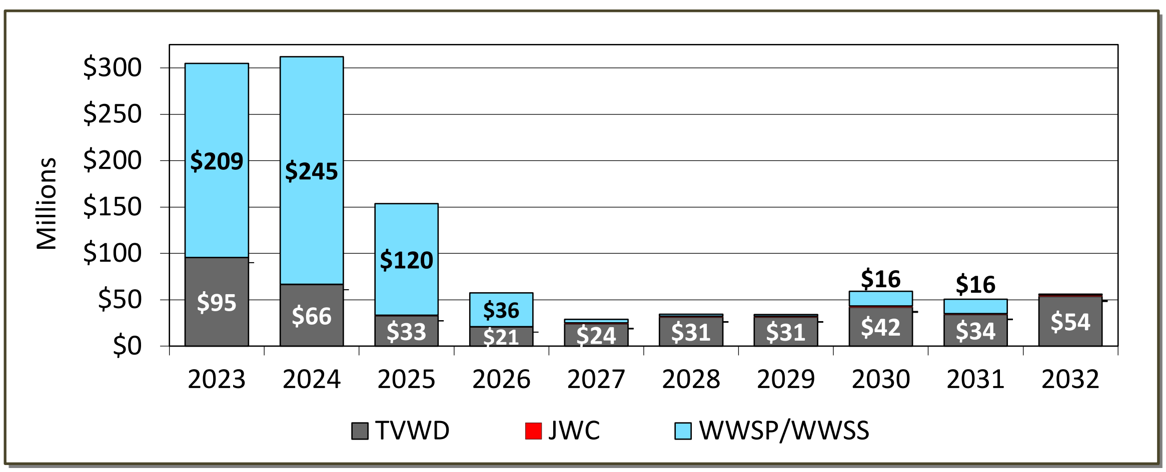
- Pipelines will be the next costliest category of ten-year and future CIP expenditures. Included in the $272.9 million shown above is the District's Mains Replacement Program ($95.6 million) and Metzger Pipeline East ($108.1 million, preliminary estimate), which will deliver WWSS water to both the District's Metzger and Wolf Creek service areas.
- A reservoir replacement and several other reservoir improvements are included in the $22.6 million for Storage.
- Similarly, at nearly $18.9 million for Pumping, the District is planning several major expansions and improvements to existing pump stations over the next ten years.

Figure 4-1 below presents a graphical summary of the projected annual CIP expenditures for the next ten years. As shown in Table 4-1 above, the costs underlying the graph total nearly $1.1 billion over the 10-year presentation period. This total represents the costs of the in-District CIP and the District's cost shares of JWC and WWSP/WWSS capital expenditures. These projected expenditures form the capital funding needs of the District during the Financial Plan period.

Funding needs will decline after completion of the WWSP. However, in FY2027 and beyond, the District is projecting additional WWSS-related projects, increased spending in its Mains Replacement Program, and in additional future improvements and replacements of storage and pump station facilities.

In Figure 4-1, note that only the in-District and WWSP costs are labeled. The JWC amounts are not labeled because they are relatively small, and the labels would crowd the larger in-District and WWSP amounts shown.

Figure 4-1: Projected Annual CIP Expenditures by Fiscal Year



5 Capital Financing Plan

The capital financing plan for the District's projected capital expenditures is one of the primary drivers for this Financial Plan. The capital financing plan considers the District's financial objectives and the mix of current and future funds available for capital investment to determine the optimal funding sources for the projected CIP expenditures. The optimal funding mix will be achieved by balancing the use of cash funding and debt proceeds to fund the CIP while minimizing increases to customers' rates.

This section provides an overview of the debt instruments the District anticipates using to finance its projected CIP, the methodology used to optimize the CIP financing mix, and the fundamental assumptions underlying the projected debt service schedules for new debt.

5.1 Borrowing Options

Certain rules and regulations make clear the types and limits of debt financing available to the District. Some rules exist on the national level, while others are specified by Oregon law. The District complies with the debt limitations imposed by the Oregon Constitution, Oregon Revised Statutes (ORS), and Oregon Administrative Rules (OAR). The District will further comply with Security and Exchange Commission (SEC) and Municipal Securities Rulemaking Board (MSRB) rules regarding debt issuance, and with IRS regulations for tax-exempt or tax-advantaged debt.

The following describes the specific debt instruments that the District has selected for its capital financing plan.

5.1.1 Types and Use of Long-Term Debt

REVENUE BONDS. Revenue bonds are obligations payable from the net revenues of the District's operations. As users of the District facilities will benefit from long-term capital investments in future years, it is appropriate that future revenues pay a share of the costs and more closely match the term of repayment to the expected economic useful life of the project being financed.

Long-term revenue bonds issued by the District will only be used to finance new and refurbished capital facilities, projects, and certain equipment where it is determined to be cost effective and fiscally prudent. Revenue bonds will be structured to achieve the lowest possible net cost to the District considering market conditions, terms that are advantageous to the District, risks, the Financial Plan, and the nature and type of security to be provided.

Although revenue bonds are not subject to constitutional or statutory debt limits, the District's debt will not exceed legal or contractual limitations, such as rate covenants or additional bonds tests imposed by then-existing financing covenants. Prior to the issuance of any new revenue bonds, the CFO will cause the impact of future debt service payments on total annual fixed costs to be analyzed.

WIFIA. The Water Infrastructure Finance and Innovation Act (WIFIA) program is a federal loan and guarantee program, administered by the U.S. EPA, that aims to accelerate investment in the nation's water infrastructure by providing credit assistance for regionally and nationally significant projects. The District closed its original WIFIA loan agreement on August 2, 2019. The original loan, which would fund up to 49% of the District's share of WIFIA-eligible project costs, included an interest rate of 2.39% that would free up the District's financial resources for other purposes and lower the overall levels of annual revenues required from rates and charges. The District and the EPA estimated that the initial WIFIA loan would save the District's customers approximately $138.4 million.

After the District closed its original WIFIA loan agreement in August 2019, the District made two significant requests of the EPA:

1. In the spring of 2020, the District requested the EPA amend the District's draw schedule under its existing WIFIA loan. This requested amendment better aligned the District's WIFIA draws with its new projected cash flow requirements. The EPA approved the revised draw schedule, allowing the District to make more of its total WIFIA funding (i.e., $387.75 million) available earlier in the WWSP's life cycle.

2. Following the close of the District's original WIFIA loan agreement in August 2019, market conditions changed and interest rates declined. To achieve interest rate savings, the District requested that its WIFIA loan be re-executed. The EPA allowed this re-execution, and the District closed its re-executed WIFIA loan on September 15, 2020 at a lower interest rate of 1.35%.

Under its new WIFIA loan terms (i.e., revised draw schedule and lower interest rate), the District and the EPA estimated additional savings of approximately $122 million for the District's customers.

The District's WIFIA loan is technically considered a revenue bond under Oregon Law and the District's Master Declaration. The District has not yet drawn on its WIFIA loan. However, the District plans to draw $100 million of its WIFIA funding in June 2022 to reimburse itself for WWSP project costs to date. The District also plans to use this cash to expand its investment portfolio and take advantage of favorable short-term yields in the current market. The interest earnings from these investments may then be used to offset part of the higher cost revenue bonds that will be needed to complete the WWSS.

WIFIA is a highly valuable addition to the District's portfolio of future debt because it locked in a low interest rate for the length of the program, provides favorable loan terms, and allows for customized disbursement and repayment schedules.

FEDERAL, STATE, OR OTHER LOAN PROGRAMS. To the extent it benefits the District, the District may participate in federal, state, or other loan programs. The CFO routinely evaluates the requirements of these programs to determine if the District is well served by employing them. For planning purposes and in the event the District employs a federal, state, or other loan program, the District will treat and report these obligations in a manner consistent with other similar debt instruments. To the extent required by the loans or other outstanding debt agreements, the District will include the financial requirements of these obligations when determining additional bonds test, coverage requirements, etc.

5.1.2 Authority to Issue Debt

The District has authority under state law to enter into financial obligations for the borrowing options described above. Below are descriptions of the actions the District has taken to obtain the authority to issue debt.

ORDINANCE. At its April 17, 2019 regular meeting, the Board of Commissioners adopted Ordinance 01-19 (Ordinance) authorizing the issuance of debt. The Ordinance authorizes $600 million in net bond proceeds to fund capital expenditures, identifies an additional $80 million to fund debt service reserves and issuance costs, authorizes the District's participation in the WIFIA loan program as well as additional revenue bond issuances, and identifies the types of capital expenditures that may be funded by the borrowings.[19] The Ordinance also delegates to the District's CFO, Chief Executive Officer (CEO), or other designated employees of the District to issue the revenue bonds authorized by the Ordinance.[20]

MASTER DECLARATION. On August 2, 2019, the District executed its master revenue bond declaration (Master Declaration). The Master Declaration establishes the terms under which the District's long-term borrowings are incurred and the terms under which future obligations may be issued on a parity. On September 15, 2020, the Master Declaration was supplemented as part of the WIFIA loan re-execution. Under certain future circumstances, the Master Declaration may be supplemented or amended further by Supplemental Declaration.[21,22]

5.1.3 Other Debt Considerations

DEBT REFINANCING. Refunding obligations may be issued to retire all or a portion of an outstanding debt issue. Economic refundings may refinance high-coupon debt at lower interest rates to realize debt service savings. Alternatively, the District may conduct a refunding for reasons other than cost savings, such as to restructure debt service payments, to change the type of debt instruments, to release restricted revenues, to ease administrative requirements, or to remove undesirable covenants.

REIMBURSEMENT DECLARATION. The District's Board of Commissioners authorized the District's Chief Executive Officer to declare official intent on behalf of the District to reimburse the District's cash reserves for capital expenditures with the proceeds from tax-advantaged obligations. This authorization was approved by Resolution No. 08-13, adopted on June 19, 2013. In addition to this reimbursement declaration, the District's Board further declared its intent as part of the Ordinance.

5.2 Optimizing the Capital Financing Mix

The District's CIP funding sources include accumulated reserves (fund balances), future revenues allocated towards capital expenditures (cash financing, also known as "pay-as-you-go"), and debt financing which will lead to debt service repayments (sometimes referred to as "pay-as-you-use" financing). All of these funding sources must be integrated into the capital financing plan.

Optimizing the capital financing plan is a complex and iterative process that involves several key steps. These steps are:

1. Determine the CIP funding mix of cash and debt financing for each Forecast year.
2. Determine the types and estimate the amounts of debt financing that will be used.
3. Calculate amortization schedules for the forecasted debt issuances.

The steps and process are discussed in greater detail in the following subsections.

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[19] The authorized capital expenditures include all system improvements of the District, including investments in the District's joint ventures such as the Willamette Water Supply System.

[20] A signed copy of the Ordinance is included as *Appendix B – Ordinance 01-19 – Authorizing the Issuance of Debt*.

[21] The District's Master Declaration and First Supplement are included as *Appendix C – Master Revenue Bond Declaration* and *Appendix D – First Supplement to Master Revenue Bond Declaration*, respectively.

[22] The District's signed Parity Certificate and related transcript documents are included as *Appendix E – Parity Certificate and Transcript Documents*.

5.2.1 Target Cash and Debt Financing Profile

Like any business, the District must determine the best mix of resources (cash and debt financing) to fund both its operations and its capital program. The cash/debt profile aims to maintain some cash investment into both existing facilities (renewal and replacement) and new system assets, while minimizing impacts on customers and achieving intergenerational equity among customers.

Figure 5-1 illustrates the mix of cash and debt planned to finance the CIP over the 10-year presentation period. Note that the ratio of cash-to-debt is projected to vary each year. Ultimately, the mix will vary from the projections shown, depending on actual water sales revenue, future market conditions and input from the District's financial consultants.

Figure 5-1: CIP Funding Sources by Fiscal Year

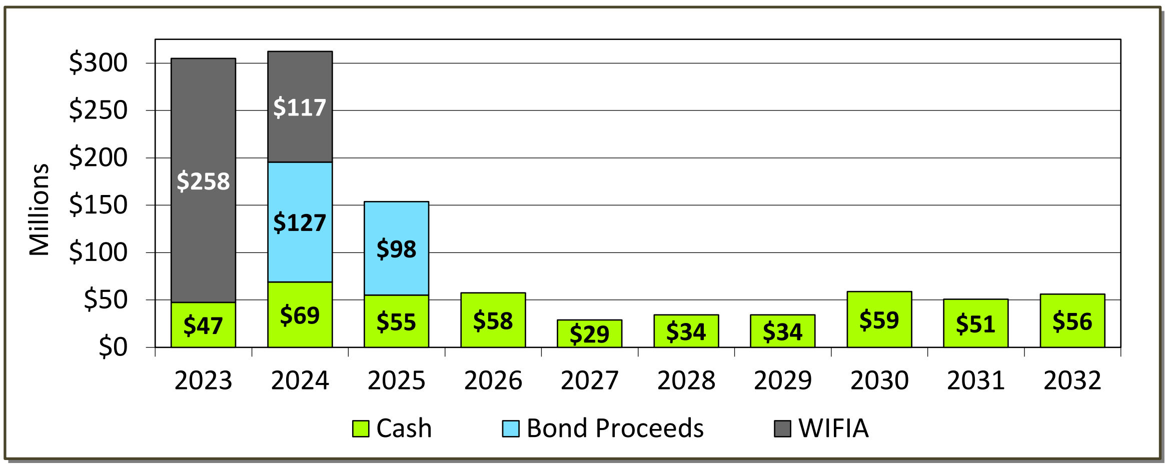
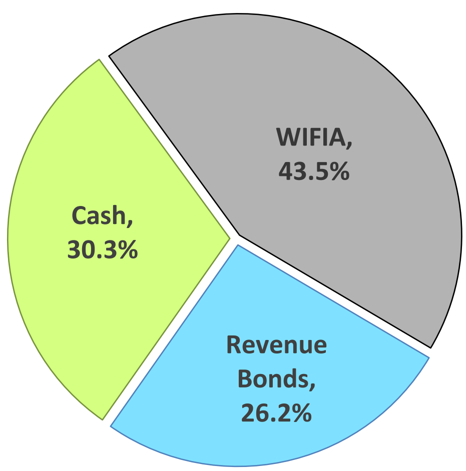


Figure 5-2 illustrates the proportional amounts of CIP funding through the end of FY2027.

Figure 5-2: Five-Year CIP Funding Ratios by Source (Cash and Debt, FY2023-FY2027)



5.2.2 Debt Structure and Principal Amortization

Ultimately, the structuring of the District's future debt obligations and repayments will depend on market factors and input from professional advisers (municipal advisers, underwriters, etc.) at the time of each issuance. For the purposes of the Forecast model and this Financial Plan, the District used what it considers to be standard, and slightly conservative, assumptions to calculate future debt service requirements. These assumptions are outlined in Section 5.3 below.

5.3 Significant Debt Program Assumptions

As mentioned in the *Introduction* (Section 1), the District will fund a significant portion of its WWSS expenditures with financing from the Water Infrastructure Finance and Innovation Act (WIFIA), with traditional revenue bonds augmenting the remaining WWSS costs and providing outside funding at times when future debt financing will be required.

5.3.1 WIFIA Debt Assumptions

TERM. The total WIFIA loan amount will be repaid in 34 years, beginning after "substantial completion" of the project (i.e., the WWSS). As specified in the re-executed loan agreement, WIFIA repayments will begin in FY2028 and end in FY2061.

INTEREST RATE. The re-executed loan agreement allowed the District to reset its WIFIA interest rate from 2.39% to 1.35%. This new, lower rate is incorporated into related WIFIA financing and capitalized interest calculations in the Forecast.

CAPITALIZED INTEREST. Using the 1.35% WIFIA interest rate and guidance from the WIFIA program, the District calculates compounding interest on each of its projected WIFIA draws from the year each draw is taken to FY2028 (when the total WIFIA loan is sized), at which point the total accumulated amounts would be rolled into the total WIFIA debt outstanding. Table 5-1 presents a summary of the capitalized interest calculation and resulting WIFIA loan amount to be amortized.

Table 5-1: WIFIA Capitalized Interest and Total Financing ($ Millions)

	WIFIA Proceeds	Total Cap-i	Total Financed
FY2022 [1]	$100.0	$7.8	$107.8
FY2023	257.5	18.5	276.0
FY2024	30.2	1.9	32.1
Totals	**$387.7**	**$28.2**	**$416.0**

[1] Initial draw on WIFIA funds planned for June 2022.

PRINCIPAL AMORTIZATION. Per the repayment schedule included in the WIFIA loan agreement, the principal amount of approximately $416 million was amortized over 34 years using levelized annual debt service.

DEBT SERVICE RESERVE. The WIFIA loan agreement does not include a debt reserve requirement.

ISSUANCE COSTS. The issuance costs for the District's WIFIA loan were incurred in prior years.

5.3.2 Revenue Bond Debt Assumptions

TERM. The District assumes all revenue bonds will be issued with a 30-year term.

INTEREST RATE. The assumed interest rate is 5.5% for revenue bonds issuances.

ISSUANCE COSTS. Revenue bond issuance costs are estimated at 0.75% of the par amount for each issuance through FY2025. For revenue bonds needed in future years, the Forecast assumes that issuance costs would increase to 1.50% of the par amount for each issuance, with the costs included in the total issuance amount. Issuance costs as a percentage of the par amounts are assumed to increase for future borrowings in recognition of the smaller sizes of future issues.

PRINCIPAL AMORTIZATION. For planning purposes, revenue bonds were amortized over 30 years using levelized annual debt service. For projected revenue bond issuances in FY2024 and FY2025, the District assumed that amortization would be structured with provision for interest-only payments until FY2028. This assumption was incorporated into the 2021-23 Financial Plan (May 2021) with input from the District's municipal adviser.

DEBT SERVICE RESERVE. Revenue bond reserve requirements were calculated based on the maximum annual debt service (MADS) of each issuance.

5.4 Schedule of Future Debt Issuance

Projected debt issuances are presented in Table 5-2 below. For WIFIA and each revenue bond issuance, Table 5-2 includes the proceeds available for capital expenditures, estimated issuance costs, capitalized interest (WIFIA loan only), reserve requirements (revenue bonds only), and total issue amounts during the 10-year and 30-year projection periods.

Table 5-2: Projected WIFIA Funding and Revenue Bond Issuances ($ Millions)

	Proceeds for CIP	Issuance Costs [1]	Reserve Req. [2]	Capitalized Interest	Total Financed
Projected Debt Issuances					
WIFIA	$387.7	$0.0	$0.0	$28.2	**$416.0**
FY2024 Revenue Bonds	126.6	1.0	9.9	0.0	**137.5**
FY2025 Revenue Bonds	98.4	0.8	7.6	0.0	**106.8**
Totals	**$612.7**	**$1.8**	**$17.5**	**$28.2**	**$660.3**

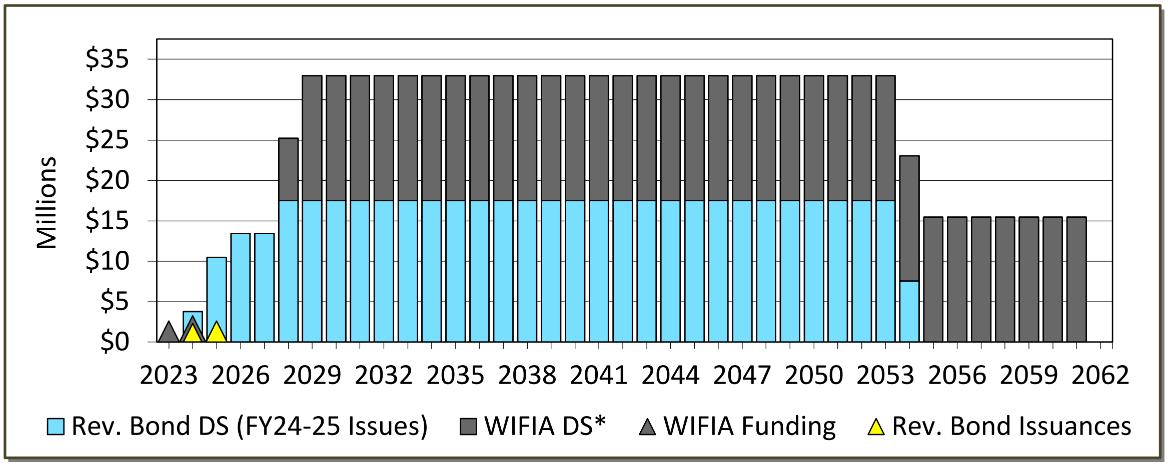
[1] Revenue bond issuance costs assumed at 0.75% of the total amounts financed per year.

[2] Revenue bond reserve requirement assumed at maximum annual debt service (MADS) per issuance.

It should be noted that Table 5-2 is not intended as an outline or planned schedule for future revenue bond issuances, as the District will not likely issue revenue bonds annually over 2- and 3-year periods. Rather, the schedule above is meant to demonstrate the approximate size and timing of needed debt financing. In future years when debt funding is needed, the District may execute a single bond issuance to fund capital needs for multiple successive years. Conversely, short-term debt instruments may be employed to cover interim capital costs in one or more periods, with revenue bonds then issued to close-out the interim financing and provide additional funding for then-current and/or future capital expenditures.

Figure 5-3 shows the resulting debt service based on the projected borrowings in Table 5-2 above and the debt service assumptions described in Section 5.3.

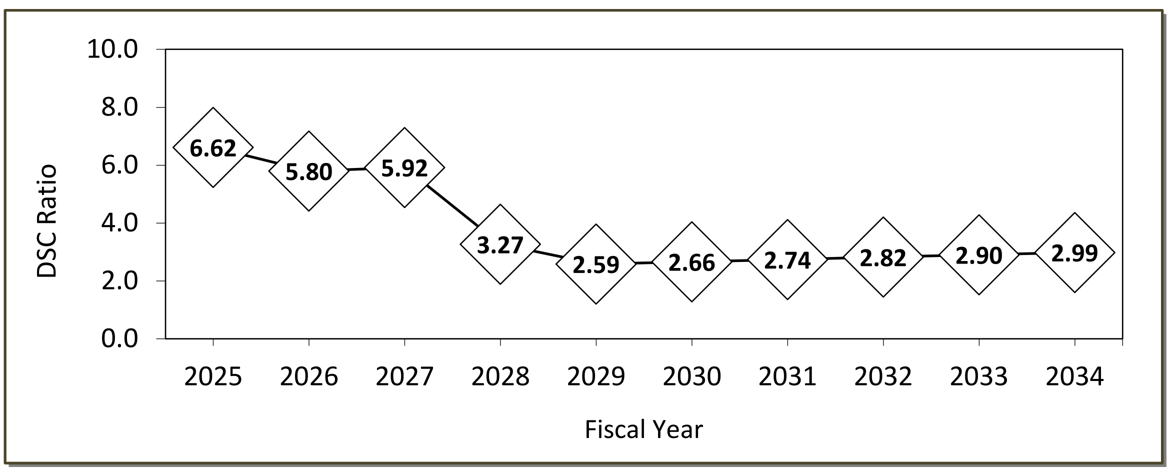
Figure 5-3: Projected Annual Debt Service by Fiscal Year



* WIFIA debt repayments based on program funding plus capitalized interest in FY2023 through FY2027.

As presented in Figure 5-4, the District expects to meet or exceed its target minimum debt service coverage ratio of 2.0 times total annual debt service (WIFIA and revenue bonds).

Figure 5-4: Projected Debt Service Coverage

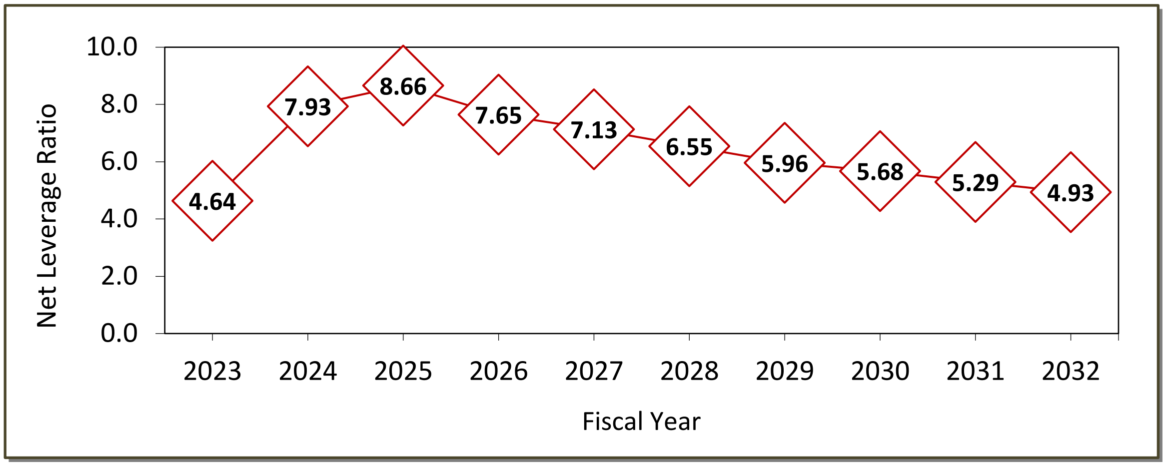


Note that Figure 5-4 presents ten years of results beginning with FY2025 instead of FY2023. This is to show projected DSC for a period after which the bulk of the District's near-term debt service requirements will be in place.

As shown in Figure 5-5 (next page), the District estimates that its net leverage ratio will peak above its target maximum of 8.0x in FY2025. This coincides with the conclusion of the District's planned debt financing for the WWSS. Beginning in FY2026, the District's net leverage ratio will fall to less than the target maximum and continue to decline annually in future years.[23]

[23] For background information on the Net Leverage ratio, see Section 2.2.1.1 in this report.

Figure 5-5: Projected Net Leverage Ratio



6 Financial Forecast

This section provides a brief description of the District's rates and charges, forecast financial projections, and a summary of the District's projected sources and uses of funds over the presentation period. The forecast represents the District's current projections, which are based on current data and assumptions. It is important to note that these projections are subject to change and should be viewed as estimates.

6.1 District Rates and Charges

The District collects revenues from a variety of sources. Some sources are fixed (i.e., not dependent on water sales or the economy), while others are variable being based on the amount of water sold or the local/regional economy (e.g., system development charges). Brief descriptions for each of the District's rates and charges categories are provided below.

FIXED CHARGE. Water rates include two types of charges: fixed and volumetric. The *fixed charge* is assessed to customers monthly or bimonthly and varies by meter size.

VOLUMETRIC WATER RATE. The *volumetric rate* is based on the amount of water consumed. TVWD assesses this rate to each unit of water sold (i.e., $/CCF).

OTHER RATES AND CHARGES (NON-RATE REVENUE). For planning purposes, *non-rate revenue* includes meter and service revenue, dispatch fees, backflow program reimbursements, contract reimbursements, miscellaneous income, and some other small dollar items.

SYSTEM DEVELOPMENT CHARGES. Sometimes referred to as improvement fees, impact fees, capacity reserve charges, or infrastructure investment fees, SDCs are contributions of capital that reimburse existing customers for the available capacity in the existing system and help finance growth-related capacity improvements.

6.2 Projected Rates and Charges

The District developed its financial projections based on its financial objectives and policies (presented in Section 2), water sales projections (Section 3), and projections of future revenue requirements which are based on the following:

- CIP (Section 4)
- Capital financing plans (Section 5)
- Operating cost forecast – discussed later in this section (Section 6)

Using all these inputs and assumptions, District staff uses its Forecast model to determine the level of rate revenue needed to meet the District's requirements in each year of the model's forecast period.

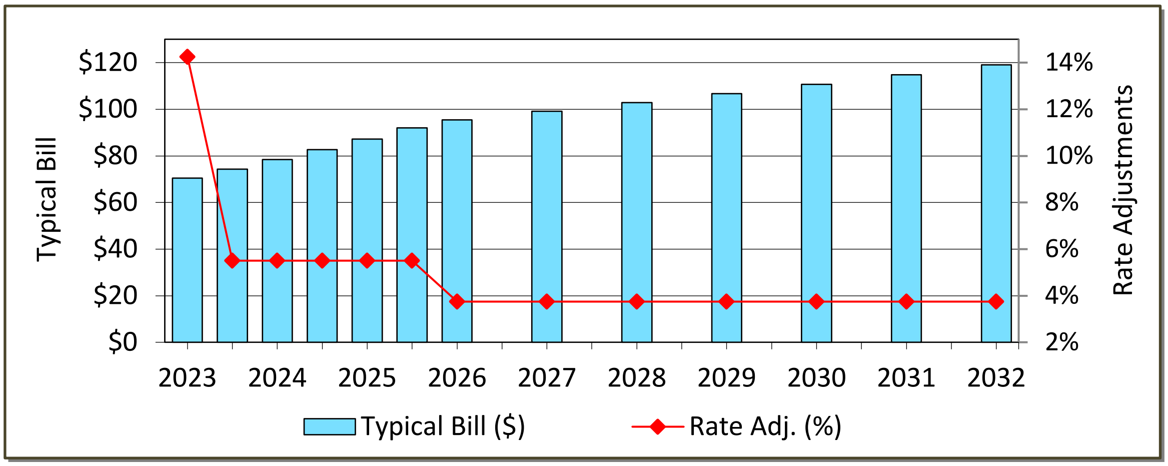
Historically, the District adopted new water rates annually after conducting a public rate process each summer. Beginning with the 2017-2019 biennial budget period, the District began adopting rates for two years at a time following a public rate process conducted in the first few months of each biennial budget period. This shift to *multi-year* rate adoption was based on recommendations received from the District's Rate Advisory Committee in 2016-17.

Based on recent considerations by the Board and direction given to staff at its April 20, 2022 regular monthly meeting, this Financial Plan presents a new strategy for meeting the District's revenue requirements over the next several years. This strategy includes adjusting the previously adopted rates that were scheduled to become effective on November 1, 2022 and then adopting new rates every six months until shifting back to annual rate adjustments beginning in November 2025 (FY2026).

Figure 6-1 presents the Forecast customer impacts over the presentation period, including typical monthly bills and projected rate revenue adjustments. For the first three years (FY2023-FY2025) of the presentation period, the graph presents two rate adjustments per year:

- 14.25% in November 2022 (FY2023)
- 5.50% every 6 months from May 2023 (FY2023) to May 2025 (FY2025)
- 3.75% annually thereafter, beginning in November 2025 (FY2026)

Figure 6-1: Projected Rate Adjustments and Typical Bills by Fiscal Year



6.3 Projected Sources of Funds

Figure 6-2 presents a summary of the District's projected sources of funds over the presentation period. On the next page, Table 6-1 presents the same information in tabular format.

Figure 6-2: Projected Sources of Funds by Fiscal Year

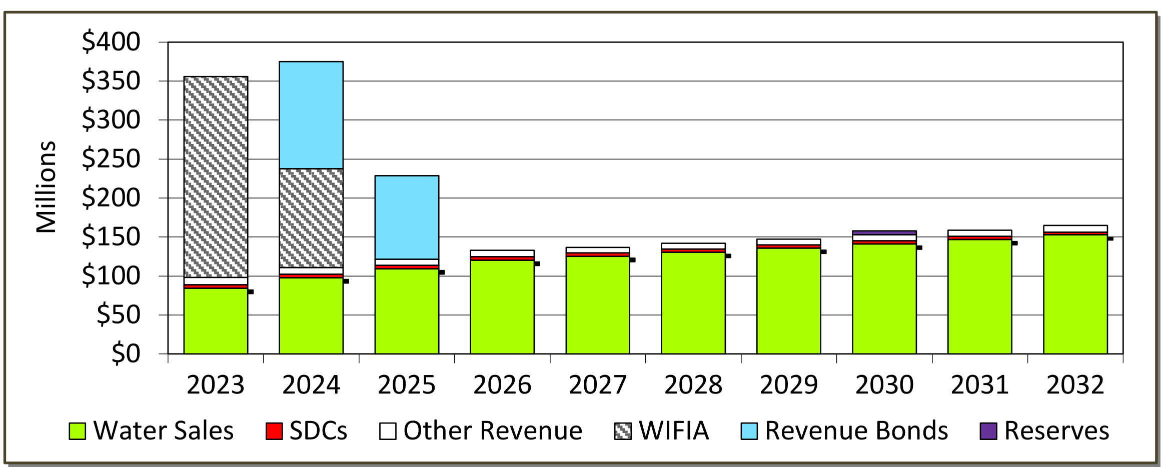


Table 6-1: Revenues and Other Funding Sources by Fiscal Year ($ Millions)

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Totals
Water Sales	$84.5	$97.8	$109.2	$120.3	$125.3	$130.5	$135.8	$141.4	$147.0	$152.8	**$1244.6**
SDCs	4.6	4.6	4.6	4.6	4.4	4.3	4.1	3.9	3.8	3.6	**42.3**
Other Revenue	9.3	8.6	7.9	8.1	6.8	7.1	7.5	7.8	8.0	8.3	**79.4**
WIFIA [1]	257.5	126.5	-	-	-	-	-	-	-	-	**384.0**
Revenue Bonds	-	137.5	106.8	-	-	-	-	-	-	-	**244.3**
Reserves	-	-	-	-	-	-	-	4.9	-	-	**4.9**
Totals	**$355.8**	**$375.0**	**$228.4**	**$132.9**	**$136.5**	**$141.9**	**$147.5**	**$158.0**	**$158.8**	**$164.7**	**$1999.5**

[1] Approximately 75% of the WIFIA funding shown in FY2024 is from the District's initial draw of $100 million (planned for June 2022). The District intends to invest those funds until FY2024 (when needed for capital expenditures) and earn interest at today's relatively higher rates. The additional interest earnings will be used to offset higher-cost revenue bond financing in the next biennium.

Each category listed above in Table 6-1 is described below. Note that some categories are described in multiple parts. For example, Other Revenue in Table 6-1 includes the following five items, each described separately below: *Non-Rate Revenue*, *Payments from Partners – Capitalized Overhead*, *Payments from Partners – Joint Venture Operations*, *Wheeling Revenue*, and *Interest Income*.

RATE REVENUE (WATER SALES). Water rate revenue projections include revenue from both fixed and volumetric charges, as discussed in *Section 6.1 – District Rates and Charges*. Over the presentation period, increasing rate revenue is due to the projected rate revenue adjustments shown in Figure 6-1 and minor annual increases in customers and water sales following recent net losses due to withdrawals by the City of Beaverton, which were discussed in *Section 3.2 – Water Demand Forecast.*

SYSTEM DEVELOPMENT CHARGES (SDCs). In FY2023, the District projects that it will receive approximately $4.6 million from water SDCs. For the first 4 years of the forecast, the District assumed that SDC collections will remain steady at approximately $4.6 million annually, then decline slowly over time in the future. These assumptions are important as the overreliance on growth-related fees for rate setting purposes may result in the need for additional rate adjustments to fund capital improvements should growth not occur at the projected levels.

NON-RATE REVENUE (OTHER REVENUE). As mentioned in Section 6.1 above, non-rate revenue includes meter and service revenue, dispatch fees, backflow program reimbursements, contract reimbursements, miscellaneous income, and some other small dollar items. Based on the District's FY2023 budget for these items plus actual data from FY2021 and FY2022, the Forecast includes a projection of approximately $2.6 million in FY2023. From FY2024 forward, non-rate revenue line items were projected to increase at a rate of 3.0% annually.

PAYMENTS FROM PARTNERS – CAPITALIZED OVERHEAD (OTHER REVENUE). For capital budgeting purposes, District personnel costs directly associated with the development of capital projects are included in the CIP cost projections and ultimately capitalized with the projects. For the WWSP and other partner projects, the District receives payments from its partners for their share of project costs (including District overhead).

Although the Forecast model includes only the District's share of partner project costs like the WWSP, it recognizes the partners' share of capitalized overhead as a resource (non-rate revenue) since that portion of the District's operational costs is included in its budget and Forecast O&M expenses but will be paid by partners. In other words, the Forecast includes the District's total operational expenses, but offsets a portion of those expenses with the amounts the District will receive from its partners for capitalized overhead.

From FY2023 to FY2026, the Forecast includes between $1.4 and $1.6 million per year from partner reimbursements for capitalized overhead related to WWSP projects. This resource is eliminated after FY2026 as the WWSP will be complete, resulting in the FY2027 decline in *Other Revenue* in Table 6-1.

PAYMENTS FROM PARTNERS – JOINT VENTURE OPERATIONS (OTHER REVENUE). Similar to the reimbursements for capitalized overhead related to the WWSP, the District will begin charging its partners for the costs of joint venture operations (JV Ops) as the WWSP winds down and the District transitions into its role as managing agency of the WWSS. These JV Ops costs will include both personnel costs and the costs of WWSS-related materials and services (M&S).

Partner payments for JV Ops are projected to increase from $81 thousand in FY2023 to $755 thousand in FY2027 when the WWSS is in full operation. Going forward, these payments are projected to escalate at 4.5% annually, consistent with the operating costs that the District will incur for JV Ops.

WHEELING REVENUE (OTHER REVENUE). As discussed in *Section 3.2 – Water Demand Forecast*, the service area agreement with Beaverton affected a portion of the District's service area subject to withdrawal. Although withdrawn from the District, the District continued to serve these customers until Beaverton executed certain "transfer activities" governed by the agreement. Beaverton then transferred customers to a wheeling status in which Beaverton provides water for the District to convey to Beaverton's customers. The agreement provides a basis for compensation to the District for providing wheeling services to Beaverton.

Beaverton can also serve withdrawn customers directly with its own infrastructure and has done so with select portions of the withdrawal areas. As Beaverton moves its customers from the "wheeling" status to the "separated" status, the District ceases to provide wheeling services to Beaverton. The District assumes that Beaverton will continue to fully separate the withdrawn customers in the coming years and estimates annual wheeling revenue declining from approximately $922 thousand in FY2023 to approximately $211 thousand in FY2027. The District also assumes that a small portion of withdrawn customers will receive wheeled water on a permanent basis and increased projected wheeling revenue in FY2028 and beyond at a rate of 3.0% annually.

INTEREST INCOME (OTHER REVENUE). Interest earnings on the District's reserve funds were calculated based on assumed interest rates of 0.88% in FY2023, 2.0% in FY2024 and FY2025, and annual rates that decline by approximately 0.25% per year until reaching 1.0% in FY2028. The Forecast then uses 1.0% annually for each year thereafter.

Given the substantial level of reserves currently held by the District plus the addition of approximately $100 million from WIFIA (i.e., planned for June 2022), the Forecast includes interest earnings totaling approximately $2.6 million in FY2023 and $1.8 million in FY2024. As the District uses cash reserves for capital expenditures over the next several years, interest earnings are projected to decline to approximately $915 thousand in FY2025 and FY2026. In FY2027 and beyond, interest earnings are projected to rebound as the District's annual capital expenditures will be much lower and its reserve fund balances grow in preparation for future expansions of the WWSS.

WIFIA. The WIFIA program is described in detail in Section 5 of this Financial Plan.

REVENUE BONDS. Along with the WIFIA program, revenue bond issuances are described in detail as part of *Section 5 – Capital Financing Plan*.

RESERVES (NET FUND WITHDRAWALS). Cash fund withdrawals provide an important source of funds for the District as the WWSP has moved into full swing. For the last 5-10 years, the District proactively planned for these capital investments and has funded expenditures-to-date entirely with current revenues and reserves. Through the remainder of the WWSP, the District will need to shift away from cash reserves as a source of funding and instead rely on current revenue plus debt-financing for its portion of the WWSP and other expenditures. After the WWSP is complete and the District begins to accumulate reserves that exceed its target minimum balances, future reserve balances will again play an important role in keeping future rate revenue adjustments steady and low.

6.4 Projected Uses of Funds

The following graph and table show the projected uses of funds over the presentation period. The major categories of uses include:

- Operations and Maintenance (O&M) Costs (including debt issuance costs)
- Purchased Water Program (including pumping power costs)
- Capital Expenditures
- Net Increases in Reserves
- Debt Service

As shown in Figure 6-3, the largest variability in the projected uses of funds is driven by the District's planned capital expenditures. Table 6-2 (next page) presents the tabular detail of the projected uses of funds, with descriptions below and on following pages.

Figure 6-3: Projected Uses of Funds by Fiscal Year

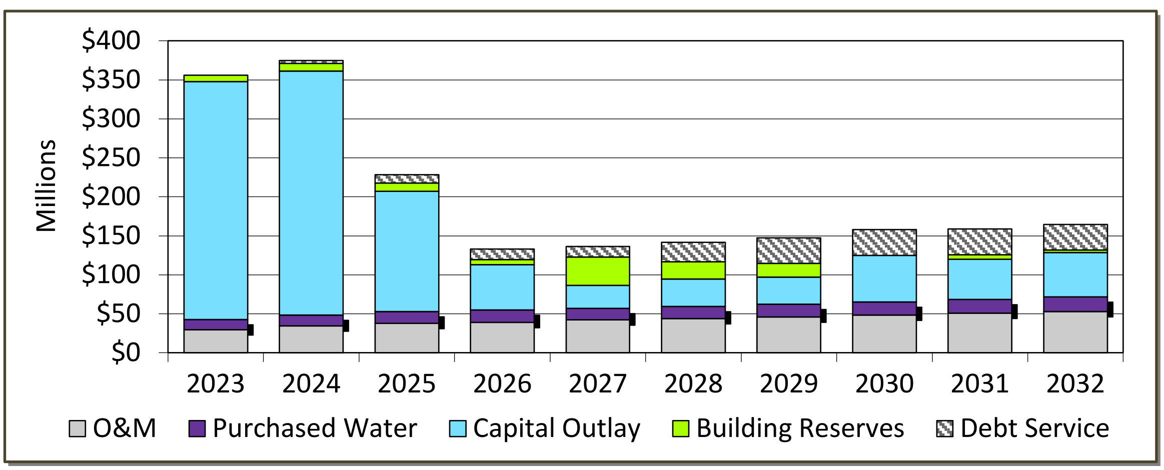


Table 6-2: Annual Expenditures and Increases in Reserves by Fiscal Year ($ Millions)

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Totals
O&M Costs [1]	$29.6	$34.5	$37.7	$39.1	$42.3	$44.1	$46.1	$48.4	$50.8	$53.1	**$425.7**
Purchased Water [2]	13.1	14.1	15.2	15.9	14.6	15.3	16.1	16.9	17.7	18.6	**157.5**
Capital Outlay	305.0	312.7	154.2	58.1	29.7	35.1	34.8	59.7	51.4	57.0	**1097.7**
Building Reserves	8.0	9.9	10.8	6.4	36.5	22.1	17.5	-	6.0	3.1	**120.3**
Debt Service	-	3.8	10.5	13.4	13.4	25.2	33.0	33.0	33.0	33.0	**198.3**
Totals	**$355.8**	**$375.0**	**$228.4**	**$132.9**	**$136.5**	**$141.9**	**$147.5**	**$158.0**	**$158.8**	**$164.7**	**$1999.5**

[1] O&M costs shown include debt issuance costs.

[2] Consistent with past reporting, Purchased Water includes pumping power costs.

O&M COSTS. Operations and maintenance costs account for most of the day-to-day expenditures for operating a water utility. O&M costs include labor, benefits, and M&S (i.e., materials and services), among other items. The District's 2021-2023 budget served as a starting point for the O&M forecast included in this Financial Plan. Most O&M costs were projected to escalate from FY2023 data at 8.0% annually through FY2025, 4.5% annually thereafter. Also included in the *O&M Costs* row in Table 6-2 are debt issuance costs which were discussed in *Section 5.3 – Significant Debt Program Assumptions*.

PERS PENSION COSTS (O&M COSTS). Employees of the District are provided pensions through the Oregon Public Employees Retirement System (Oregon PERS or simply "PERS").[24] Oregon PERS provides a variety of pension plans for public employees based on when an employee first enters public service. These pension plans are commonly referred to as PERS Tier 1 and Tier 2, and Oregon Public Service Retirement Plan (OPSRP). These plans vary in benefits but include both a defined benefits component and a defined contribution component.

Like many pension plans, the Oregon PERS plans currently have an unfunded actuarial liability (UAL). The PERS UAL is allocated to employers of the plan. Based on its latest valuation report, the District estimates it current share of PERS UAL is approximately $14.7 million. The District's share of the PERS UAL is the result of many factors including changes in actuarial assumptions, earnings on the PERS investments, and other PERS policies (e.g., rate collaring). The District's share of PERS UAL is a liability of the District and is reported in the District's financial statements consistent with the requirements of the various Government Accounting Standards Board (GASB) statements on pension reporting.

In the 2019-21 biennium, the District's management requested $20 million to fund a PERS side account with two deposits of $10 million each. The deposits were to be separated in time to mitigate market risks since the PERS investments of side accounts has greater market risk than the District's investment portfolio. Ultimately, only the first $10 million deposit was made which almost cut the District's UAL in half to approximately $10.5 million. Since then, the Oregon PERS discount rate was lowered, and the District's UAL increased accordingly to the current level of $14.7 million.[25] Nonetheless, funding the side account resulted in lower PERS rates and payments by the District, and allows the District's assets to be invested in a manner more consistent with long-term retirement needs.[26]

[24] Oregon PERS is commonly known by and referred to using only the acronym "PERS". This abbreviated version is even used on the Oregon PERS website and by Milliman, Inc. in its actuarial valuation report for Oregon PERS.
[25] For details on the District's PERS valuation and a system-wide analysis of OPERS, see *Appendix F – PERS Valuation Report*.
[26] The District's investment policies restrict investments to have a maturity of no more than five years whereas OPERS-funded side accounts are invested consistent with long-term retirement funds.

PURCHASED WATER (INCLUDES FUTURE WWSS SUPPLY). Based on the District's 2021-2023 budget and subsequent Portland rate information, supply costs are projected to escalate from FY2023 to FY2026:

Table 6-3: Source Water Rates and Total Costs (FY2023–FY2027)

	2023	2024	2025	2026	2027
Portland					
Purchase (MGD) [1]	13.16	13.16	13.16	13.16	0.00
Rate ($/CCF) [2]	$1.461	$1.642	$1.769	$1.843	$2.250
Annual Cost ($ million)	**$9.4**	**$10.5**	**$11.4**	**$11.8**	**$0.0**
JWC					
Purchase (MGD) [3]	7.28	7.36	7.44	7.51	14.20
Rate ($/CCF) [4]	$0.764	$0.825	$0.891	$0.931	$0.973
Annual Cost ($ million)	**$2.7**	**$3.0**	**$3.2**	**$3.4**	**$6.7**
WWSS					
WWSS Supply (MGD) [5]					6.55
Unit Cost ($/CCF) [6]					$1.992
Annual Cost ($ million)					**$6.4**
Total Annual Cost	**$12.1**	**$13.5**	**$14.6**	**$15.2**	**$13.1**
% Change		*11.7%*	*8.0%*	*4.5%*	*(14.0%)*

[1] Contract minimum (as annual avg.); min. purchase assumed for financial planning.
[2] Portland rate forecast provided by Portland thru FY2026.
[3] Annual avg. required to meet Forecast water demands after Portland purchases.
[4] JWC rates escalated by 8.0% annually through 2025, 4.5% per year thereafter.
[5] Annual avg. required to meet water demands in FY2027 (i.e., after JWC purchases).
[6] Preliminary unit cost estimate for WWSS water supply.

In FY2027, the melded cost of the District's water will drop due to the change in source water supplies. As presented in Figure 3-3, Table 6-3 summarizes the Forecast's assumptions regarding future water supplies and related costs. These projections assume that the District will purchase more JWC water after switching its other source from Portland to the WWSS. In doing so, overall source water costs decline by approximately $2.1 million (14%) in FY2027.

PUMPING POWER COSTS (PURCHASED WATER). As noted previously, pumping power costs are also included in the Purchased Water category in Table 6-2. Currently, the District incurs these costs for moving water from its 385, 426, and 435 pressure zones to higher elevations in its service area. Consistent with most other O&M projections, pumping power costs are projected to escalate from the FY2023 budget at an annual rate of 8.0% through FY2025, then 4.5% in FY2026. However, when the District switches its gravity-fed water supply (Portland) to a pumped source (WWSS), pumping power costs will increase by approximately $770 thousand in FY2027, from $592 thousand in FY2026 to $1.36 million.

When the WWSS pumping costs are added to in-District pumping and combined with the FY2027 reduction in source water costs, the net decrease in *Purchased Water* shown in Table 6-2 is approximately $1.36 million, or 8.6% lower than the FY2026 total. After FY2027, *Purchased Water* costs are projected to escalate at approximately 5.1% in FY2028, then slow gradually to 4.5% annual increases in FY2036 and beyond.

CAPITAL EXPENDITURES (CAPITAL OUTLAY). The District's CIP is described in Section 4 of this Financial Plan. Capital outlays from O&M are also included as *Capital Outlay* in Table 6-2. These outlays are minor in comparison to the CIP, with approximately $210 thousand in the District's FY2023 budget and $500 thousand in FY2024, escalating at 4.5% annually thereafter.

NET INCREASES IN RESERVES (BUILDING RESERVES). In years when the District will use WIFIA and revenue bond funding for portions of its capital expenditures, revenue from rates and other sources may be available to increase reserve balances, thereby making it available for use in future years. Reserve fund balances will also increase in the years following the completion of the WWSS, when the District's rates will have increased to meet the financial targets and metrics associated with its debt financings and future debt repayments.

DEBT SERVICE. Projected debt service is driven by the capital financing mix discussed in Section 5.2.1 – *Target Cash and Debt Financing Profile* and the debt program assumptions detailed in Section 5.3.

6.5 Detailed Financial Projections

Appendix G – Forecast Model Summary Results includes a copy of detailed projections from the summary version of the District's Forecast model.

7 Funds and Reserves

Reserves are critical to the prudent financial management of any utility. Adequate reserve levels can provide the necessary funding in low sales years or offset emergency capital projects, both minimizing the impacts to rates in the short-term. This section presents the summary reserves that the District uses in the Forecast model. The projections in this section demonstrate that the District will have sufficient liquidity to meet both its operating and capital investment commitments.

Before presenting the summary reserves and results from the Forecast model, however, it may help to understand the District's budgetary fund structure and how the District combines some funds (and ignores others) for financial planning purposes. The District's budget and accounting systems are structured around the following funds (fund titles italicized):

- On a day-to-day basis, all administration, operations, and maintenance activities are accounted for in the *General Fund*.
- Construction and capital improvement activities are accounted for in the *Capital Improvement Fund*.
- The *Capital Reserve Fund* is used to hold resources available for current and future capital investments for the District.
- Historically, the *Revenue Bond Debt Service Fund* accounted for the District's debt service obligations.
- The District is a member of, and provides management services for, the *Willamette River Water Coalition (WRWC)*, and accounts for these activities in a separate fund.
- The *Customer Emergency Assistance (CEA) Fund* accounts for the resources and requirements used to provide limited emergency assistance to qualified District customers.
- The *Willamette Intake Facilities Fund* accounts for the activities of the WIF Commission; an intergovernmental agreement among TVWD and five neighboring cities.
- The *Willamette Water Supply System Fund* accounts for the activities of the WWSS Commission; an intergovernmental agreement among TVWD and the cities of Beaverton and Hillsboro.

Each of these funds is described below.

7.1 Description of District Funds

GENERAL FUND (FUND 01). All six of the District's operating departments and District staff are accounted for in the General Fund. Additionally, the Purchased Water budget and payments of right-of-way fees are included in the General Fund as a non-departmental expenditure. Purchased Water represents the District's single largest materials and services (M&S) expenditure.

CAPITAL IMPROVEMENT FUND (FUND 11). The Capital Improvement Fund accounts for the resources and expenditures used for acquisition and/or construction of major capital facilities. It does not maintain a fund balance. All reserves for capital investments are held in the Capital Reserve Fund and transferred to the Capital Improvement Fund as needed to fund capital outlays. The sole resource for the Capital Improvement Fund is transfers from the Capital Reserve Fund.

CAPITAL RESERVE FUND (FUND 18). The Capital Reserve Fund is used to hold resources available for current and future capital investments for the District. The use of the Capital Reserve Fund allows the flow of funds for current and future uses to be managed in a transparent manner consistent with budgeting best practices. In anticipation of the significant costs associated with WWSP, the District has increased its reserves deliberately. These reserves are easily monitored in a single fund.

DEBT PROCEEDS FUND (FUND 22). The Debt Proceeds Fund is used to hold resources from debt issuances that are available to fund capital expenditures of the District. The use of the Debt Proceeds Fund allows the flow of funds for current and future uses to be managed in a transparent manner consistent with budgeting best practices.

REVENUE BOND DEBT SERVICE FUND (FUND 31). The Revenue Bond Debt Service Fund accounts for the District's obligations for principal and interest payments on its outstanding revenue bonds. The District fully redeemed its last outstanding revenue bonds in June of 2015; however, the fund is maintained for future use.

WILLAMETTE RIVER WATER COALITION (FUND 41). This joint venture fund is used to account for the Willamette River Water Coalition (WRWC), a coalition of four local governments of which the District is a member. The WRWC's purpose is to preserve access to the Willamette River as a municipal and industrial water source. The budget is set by the WRWC governing body and administered by the District. Resources for the WRWC Fund come from member agency dues based on a formula agreed to in an intergovernmental agreement.

CUSTOMER EMERGENCY ASSISTANCE FUND (FUND 43). The purpose of the Customer Emergency Assistance (CEA) Fund is to account for the resources and requirements used to provide limited emergency assistance to qualified District customers. The resources for the CEA Fund are transferred in from the General Fund or come from voluntary contributions from customers, District staff, and members of the Board. A third-party administrator reviews and qualifies requests from customers facing temporary financial hardships. Any unspent funds remaining at the end of each budgetary period remain in the CEA Fund to meet future customer assistance needs.

WILLAMETTE INTAKE FACILITIES (FUND 44). The WIF Fund accounts for the activities of the WIF Commission; an intergovernmental agreement whose members include TVWD and the cities of Beaverton, Hillsboro, Sherwood, Tigard, and Wilsonville. The WIF owns, operates, and maintains the intake facilities at the Willamette River Water Treatment Plant in Wilsonville for the benefit of its members. As the Managing Agency, TVWD incorporates the budget adopted by the WIF Board of Commissioners into the District's biennial budget. Resources for the fund include payments by members for operating expenses and contributions for capital outlay. The WIF is audited separately, and the fund is not included as part of TVWD's audited financial statements.

WILLAMETTE WATER SUPPLY SYSTEM (FUND 45). The WWSS Fund accounts for the activities of the WWSS Commission; an intergovernmental agreement among TVWD and the cities of Beaverton and Hillsboro. The WWSS Commission was established to design and construct the Willamette Water Supply System by 2026, and will own, operate, and maintain the assets that make up the system for the benefit of the partners. As the Managing Agency, TVWD incorporates the budget adopted by the WWSS Board of Commissioners into the District's biennial budget. Resources for the fund include payments by members for operating expenses and contributions for capital outlay. The WWSS is audited separately. Following governmental accounting standards, the WWSS is considered a component unit of TVWD.

7.2 Projected Reserve Balances

The Forecast is a cash flow model designed for financial planning around the District's future cash requirements. As such, the District uses it to forecast *reserves* rather than *funds*. In doing so, some of the *Funds* described in Section 7.1 above are either combined into a *cash reserve*, while most are excluded from the Forecast altogether.

For example, some of the *Funds* listed above were established only to manage the joint ventures that the District serves as the Managing Agency on behalf of its partners. Funds 41, 44, and 45 exist to account for the activities of various partnerships, where the costs and partner contributions are tracked for budgeting, accounting, and reporting purposes.

In contrast, the Forecast is only concerned with the *District's* revenue requirements and how those requirements will be met with available cash (including liquid investments) and future debt. Therefore, partner costs shares are not included, and the District's costs are tracked as uses of cash reserves and debt proceeds (from debt issued to the District only). For this reason, it is unnecessary to forecast the District's *Funds*. Rather, the following *Reserves* are tracked for financial planning purposes:

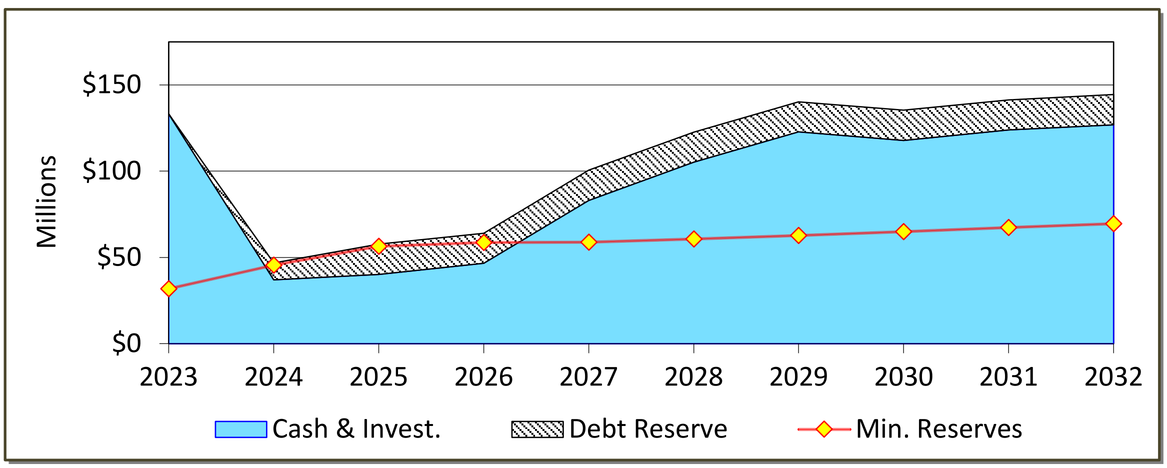
- **Cash & Investments**
    - Includes the estimated combined balance of the General Fund (Fund 01) and Capital Reserves Fund (Fund 18).
    - Sources of Funds include all *Rate Revenue* and *Other Revenue* described in Section 6.3.
    - Uses of Funds include:
        - All *O&M Costs* and *Purchased Water* described in Section 6.4.
        - *Capital Outlays from O&M Budget* which is mentioned under *Capital Expenditures (Capital Outlay)* in Section 6.4.
        - Transfers to other Reserves for capital expenditures and debt service.
- **Bond Proceeds Reserve**
    - Sources of Funds are future revenue bond issuances, as outlined in Section 5 – *Capital Financing Plan*.
    - Uses of Funds include splitting each revenue bond issuance into:
        - Issuance costs,
        - Debt reserve requirement, and
        - Proceeds for capital expenditures.
    - The Forecast assumes that 100% of each revenue bond issuance will be spent or transferred to another Reserve for one of these purposes in the year it is issued. Therefore, this Reserve does not carry a balance.
- **Revenue Bond Debt Service Reserve**
    - Sources of Funds include transfers for debt service and bond reserve requirements.
    - Interest earnings on reserve balances also accumulate in this Reserve.
    - Revenue bond debt service is the only Use of Funds from this Reserve.
- **Reimbursement Fee SDC Account**
    - The reimbursement fee portion of SDC receipts is tracked as the Source of Funds in this Reserve.
    - In each Forecast year, all SDC receipts are used to fund a portion of capital expenditures.
    - This Reserve carries no balance.

- **Improvement Fee SDC Account**
    - The improvement fee portion of SDC receipts is tracked as the Source of Funds in this Reserve.
    - In each Forecast year, all SDC receipts are used to fund a portion of capital expenditures.
    - This Reserve carries no balance.

- **WIFIA Reserve**
    - Sources of Funds include:
        - WIFIA proceeds, as outlined in Section 5 – *Capital Financing Plan*, and
        - Transfers for WIFIA loan repayments.
    - Uses of Funds include:
        - Issuance costs,
        - Proceeds for capital expenditures (i.e., eligible project costs as defined in the District's WIFIA Loan Agreement), and
        - WIFIA loan repayments.
    - The Forecast assumes that 100% of each WIFIA draw will be spent or transferred to another Reserve for one of these purposes in the year issued[27], and future WIFIA loan repayments will be transferred in annually from Cash & Investments. Therefore, this Reserve does not carry a balance.

Figure 7-1 presents the District's projected cash reserve balances over the 10-year presentation period.

Figure 7-1: Projected Year-End Cash Balances by Fiscal Year



As shown in Figure 7-2 and Figure 7-3 on the next page, the District is projecting that its Cash & Investments Reserves and Debt Service Reserve will meet their balance targets (250 days of O&M and MADS, respectively) throughout the presentation period.

[27] WIFIA funds may be used to reimburse the District for prior WIFIA-eligible expenditures.

Figure 7-2: Cash and Investments Year-end Balances and Annual Targets by Fiscal Year

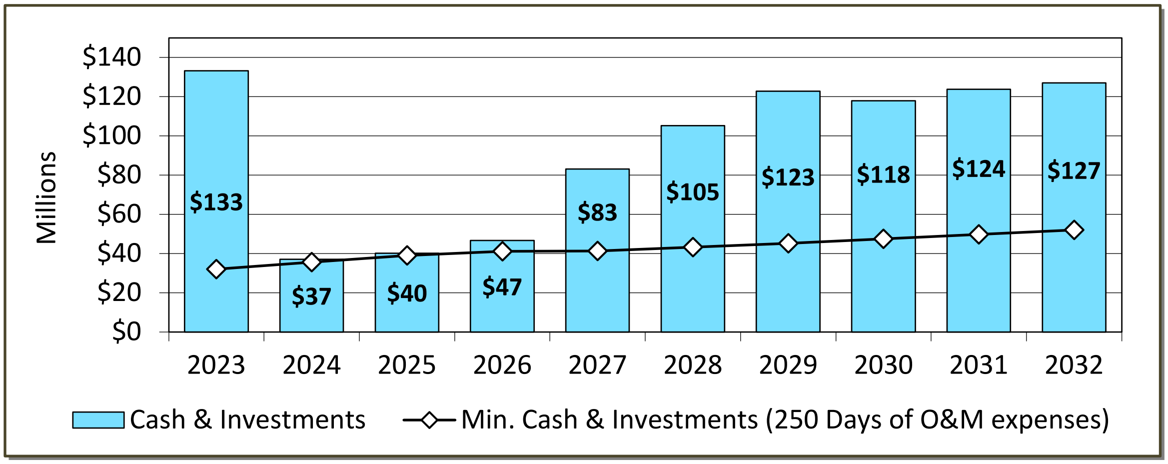
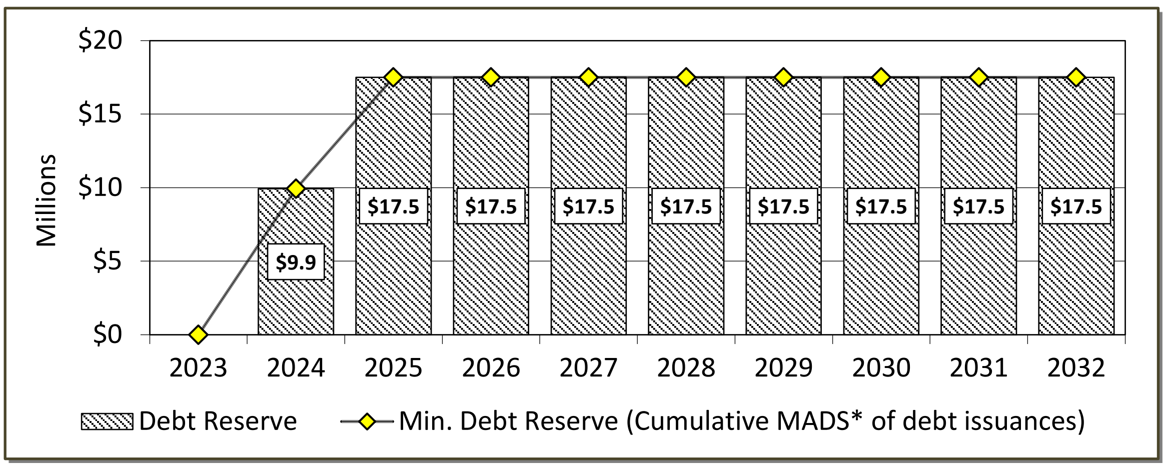


Figure 7-3: Debt Service Reserve Balance Requirements by Fiscal Year



* Maximum annual debt service.

7.3 Conclusion

As stated in Section 1.4, many assumptions were employed in the financial planning analysis underlying this document. For this reason, the projected results presented are not concrete in nature and should be considered as planning estimates.

In the future, the actual rate adjustments required to fund the District's revenue requirements may vary from the estimates presented in Section 6, and the resulting reserve balances will vary from the projections shown above. As time passes and projections become reality, future capital requirements, O&M costs, customer demands, and other assumptions will influence the accuracy of these estimates. Therefore, the District will continue to take great care to mitigate risk by following prudent management practices, including reviewing rates and revenues annually (at a minimum) to see if additional adjustments are necessary.

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Appendices

The following subsections contain supporting documents and other related materials including:

A – Proposed Financial Plan Assumptions for the Financial Management Policies

B – Ordinance 01-19 – Authorizing the Issuance of Debt

C – Master Revenue Bond Declaration

D – First Supplement to Master Revenue Bond Declaration

E – Parity Certificate and Transcript Documents

F – PERS Valuation Report

G – Forecast Model Summary Results

H – Map – Tualatin Valley Water District (Washington County, Oregon)

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A. Proposed Financial Plan Assumptions for the Financial Management Policies

APPENDIX A

Proposed Financial Plan Assumptions

DEBT CAPACITY
The 2022-23 Financial Plan includes the assumption that the District will issue approximately $660.3 million in total debt by FY2025, with $612.7 million in net debt proceeds available for funding the District's capital expenditures. The planned total debt issuances are greater than the $600 million limit established by District Ordinance 01-19 and may require further Board action.

ISSUANCE COSTS
Issuance costs for revenue bonds shall be estimated for each issuance based on the following:

- 0.75% of the par amount for each issuance through FY2025, and
- 1.50% of the par amount of all issuances thereafter.

TERM
The term assumed for future revenue bond issues shall be 30 years. The term for federal or state loan programs shall be the maximum allowed within the program unless a shorter duration is in the financial interest of the District.

INTEREST RATES
Presented below are the assumed interest rates to be included in the financial plan:

Fiscal Year	Revenue Bond Issues	Interest Earnings *(on Reserve Funds)*
2023	5.00%	2.00%
2024	5.50%	2.00%
2025	5.50%	1.75%
2026	5.50%	1.50%
2027	5.50%	1.25%
2028	5.50%	1.00%
2029	5.50%	1.00%
2030	5.50%	1.00%
2031	5.50%	1.00%
2032	5.50%	1.00%

Tualatin Valley Water District Financial Management Policies

DEBT SERVICE RESERVE FUND

Depending on market conditions, a debt service reserve may not be required. However, the Financial Plan shall assume a debt service reserve as the minimum of:

1. The maximum annual debt service for a future revenue bond
2. 125% of the average annual debt service for a future revenue bond issue
3. 10% of the par amount of a future revenue bond issue.

DEBT SERVICE COVERAGE RATIOS

The target minimum for the debt service coverage ratios used in the Financial Plan shall be:

1. 2.0x by including SDCs in gross revenues.
2. 1.5x by excluding SDCs from gross revenues.

ADDITIONAL BONDS TEST

The Financial Plan shall exceed the following additional bonds test ratios:

1. 1.3x by including SDCs in gross revenues.
2. 1.15x by excluding SDCs from gross revenues.

NET LEVERAGE RATIO

The projected net leverage ratio in the Financial Plan shall not exceed 8.0x for two or more consecutive years and shall not exceed a net leverage ratio of 7.0x for more than four consecutive years.

MINIMUM CASH BALANCES

The Financial Plan shall include 250 days of forecast annual operations and maintenance expense as the minimum cash balance. This minimum is in addition to any balances required in a debt service reserve account.

B. Ordinance 01-19 – Authorizing the Issuance of Debt

Tualatin Valley Water District

Delivering the Best Water · Service · Value

ORDINANCE NO. 01-19

AN ORDINANCE OF THE TUALATIN VALLEY WATER DISTRICT, OREGON, AUTHORIZING THE ISSUANCE OF WATER REVENUE BONDS.

WHEREAS, the District is authorized to issue revenue bonds for a public purpose under ORS 287A.150 and related statutes (the "Act"). Revenue bonds issued under the Act may be payable from all or any portion of the water system revenues of the District; and

WHEREAS, the District may authorize revenue bonds under the Act by nonemergency ordinance. The District may not sell the revenue bonds under the Act until the period for referral of the nonemergency ordinance authorizing the revenue bonds has expired. If a nonemergency ordinance authorizing the revenue bonds is referred, the District may not sell the revenue bonds unless the voters approve the revenue bonds; and

WHEREAS, the District now finds it financially feasible and in the best interests of the District to authorize the issuance of revenue bonds under the Act in order to finance capital assets of the water system, including but not limited to the District's portion of the Willamette Water Supply System including pumps, pipelines, the water treatment plant and the reservoir (collectively, the "System Improvements"); and

WHEREAS, it may be desirable to issue revenue bonds to finance the System Improvements under one or more financing structures, including as water revenue bonds with a senior lien on net revenues of the District's water system, as water revenue bonds with a subordinate lien on net revenues of the District's water system, as short term water revenue bonds or refunding bonds; and

WHEREAS, prior to the issuance of the water revenue bonds, the District desires to incur certain capital expenditures with respect to the System Improvements from available moneys of the District and wishes to declare its official intent to reimburse itself for any such expenditures from the proceeds of borrowings authorized by this ordinance.

NOW THEREFORE, IT IS HEREBY ORDAINED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT:

Section 1. Issuance of Bonds for System Improvements.

a. The District hereby authorizes the issuance of revenue bonds pursuant to ORS 287A.150 in an amount that is sufficient to provide net proceeds of up to $600 million to pay for costs of System Improvements, plus additional amounts that are required to pay capitalized interest, fund bond reserves for bonds authorized by Section 1.a and Section 2 of this ordinance and to pay costs related to the financings. The District estimates that the total principal amount of revenue bonds required for this purpose will not exceed $680 million. The bonds shall be issued and sold in accordance with the Act.

b. The bonds authorized by this ordinance shall be special obligations of the District that are payable solely from water system revenues and related amounts that the District pledges to pay the bonds. The District may issue the bonds authorized by this ordinance with a first lien on net revenues of the water system or with a subordinate lien on the net revenues of the water system.

c. No bonds authorized by Section 1.a of this ordinance may be sold and no purchase agreement for any of those bonds may be executed until the period for referral of this nonemergency ordinance has expired. If this ordinance is referred, the District may not sell the bonds authorized by Section 1.a of this ordinance unless the voters approve those bonds.

Section 2. Issuance of Refunding Bonds. The District hereby authorizes the issuance of refunding bonds pursuant to applicable Oregon statutes to refinance any water revenue bonds that are issued pursuant to Section 1.a of this ordinance to provide interim financing. The refunding bonds authorized by this Section 2 may be issued in an aggregate principal amount sufficient to refund any water revenue bonds selected by the District Official pursuant to Section 3.k of this ordinance, plus amounts required to pay costs related to the refunding bonds.

Section 3. Delegation. When and if this ordinance takes effect, the Chief Financial Officer, the Chief Executive Officer or the employees of the District designated by the District's Chief Executive Officer or Board of Commissioners to act on behalf of the District under this ordinance (each of whom is referred to herein as a "District Official") are each hereby authorized, on behalf of the District and without further action by the Board of Commissioners, to:

a. Issue the revenue bonds authorized by this ordinance (the "Water Bonds") in one or more series, which may be sold at different times, and issue any series of Water Bonds as First Lien Bonds, as defined below, or with a subordinate lien on water system revenues.

b. Issue the Water Bonds as short or intermediate term bonds to provide interim financing for System Improvements and enter into lines of credit or similar documents which permit the District to draw Water Bond proceeds over time.

c. Participate in the preparation of, authorize the distribution of and deem final the preliminary and final official statements and any other disclosure documents for each series of the Water Bonds, as applicable.

d. Subject to the limits of this ordinance, establish the final principal amounts, lien status, maturity schedules, interest rates, redemption terms and other terms for each series of Water Bonds.

e. Either publish a notice of sale, receive bids and award the sale of that series to the bidder complying with the notice and offering the most favorable terms to the District or select one or more underwriters or lenders and negotiate the sale of that series with those underwriters or lenders and execute and deliver a bond purchase agreement or other document in connection with such sale.

f. Prepare, execute and deliver one or more documents that will specify the terms under which the Water Bonds are issued and the administrative provisions that apply to the Water Bonds.

g. Enter into covenants with owners or credit enhancement providers that are designed to obtain more favorable terms for the District, including covenants required by the Water Infrastructure Finance and Innovation Act, if the District borrows under that program, or by the State, if the District borrows under State lending programs.

h. Prepare and finalize the terms of a master water system declaration which pledges the revenues of the District's water system to the Water Bonds issued with a first lien on the water system revenues ("First Lien Bonds"), contains covenants regarding the levels of fees and charges that the District must impose and describes the terms under which the District may issue obligations in the future that are secured by the revenues of the District's water system.

i. If all or any portion of the Water Bonds is secured by a subordinate lien on water system revenues, establish a master second lien water revenue bond declaration or similar document to memorialize the terms under which that series and future series of subordinate lien bonds may be issued.

j. Make contributions to bond reserve accounts that the District Official determines are desirable and determine the reserve requirement, if any, for each series of the Water Bonds.

k. Select water revenue bonds to be refunded, refund any Water Bonds that are issued to provide interim financing with other short, intermediate or long-term term bonds.

l. Undertake to provide continuing disclosure for any series of Water Bonds in accordance with Rule 15c2-12 of the United States Securities and Exchange Commission or lender requirements, as applicable.

m. Apply for and purchase municipal bond insurance, reserve sureties or other forms of credit enhancements for any series of Water Bonds and enter into related agreements.

n. Appoint and enter into agreements with paying agents and other professionals and service providers for the Water Bonds.

o. Issue any qualifying series of Water Bonds as "tax-exempt bonds" bearing interest that is excludable from gross income under the Internal Revenue Code of 1986, as amended, (the "Code") and enter into covenants for the benefit of the owners of those series to maintain the excludability of interest on those series from gross income under the Code.

p. If the federal government approves subsidy payments or tax credits for municipal bonds and those subsidies or tax credits are estimated to reduce the net debt service payments for the Water Bonds, issue any series of Water Bonds as eligible for those federal subsidies or tax credits, and enter into related covenants to maintain the eligibility of such series of Water Bonds for those subsidies or tax credits.

q. Issue any series of Water Bonds as "taxable bonds" bearing interest that is includable in gross income under the Code.

r. Designate any series of Water Bonds as "green bonds" if applicable.

s. Execute any documents and take any other action in connection with the Water Bonds which the District Official finds will be advantageous to the District.

Section 4. Unless referred, this ordinance shall take effect on the 30th day after it is enacted.

Section 5. Declaration of Intent to Reimburse. The District hereby declares its official intent to reimburse itself with the proceeds of the Water Bonds for any expenditures on the System Improvements paid prior to the issuance of the Water Bonds. This declaration is adopted as an official action of the District in order to comply with United States Treasury Regulation 1.150-2.

Section 6. Pursuant to Oregon Revised Statute Chapter 198, the ordinance was read at two regular meetings of the District Board of Commissioners on two different days, at least six days apart, prior to the adoption thereof, to wit: the 20th day of March 2019, and the 17th day of April 2019.

Section 7. This ordinance was adopted following a second reading by the affirmative vote of at least a majority of the members of the District Board of Commissioners at its regular meeting on the 17th day of April 2019, and was signed by the presiding officer and attested to by the secretary.

Bernice Bagnall, President

Todd Sanders, Secretary

MASTER WATER SYSTEM REVENUE BOND DECLARATION

Tualatin Valley Water District, Oregon

Water Revenue Bond

Series 2019

Executed by the District Official of the Tualatin Valley Water District, Oregon

As of the 2nd day of August, 2019

3193363.11 041297 RSIND

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3193363.11 041297 RSIND

MASTER WATER SYSTEM REVENUE BOND DECLARATION

THIS MASTER WATER SYSTEM REVENUE BOND DECLARATION is executed as of August 2, 2019, by an authorized District Official of the Tualatin Valley Water District, Oregon pursuant to the authority granted to the District Official by the Ordinance to establish the terms under which the District's Water Revenue Bond, Series 2019 and future Parity Bonds may be issued.

Section 1. Findings.

The District finds that it enacted the Ordinance pursuant to Oregon Revised Statutes ("ORS") Section 287A.150 and related provisions of ORS Chapter 287A. The Ordinance authorizes the District to issue water revenue bonds in an amount that is sufficient to provide net proceeds of up to $600 million to pay for projects described in the Ordinance, plus additional amounts that are required to pay capitalized interest, fund bond reserves, if any, and pay costs related to the financing, and to enter into this Master Declaration. This Master Declaration establishes the terms under which the District's Water Revenue Bond, Series 2019 is issued and the terms under which future obligations may be issued on a parity with the Series 2019 Bond.

Section 2. Definitions.

Unless the context clearly requires otherwise, capitalized terms that are used in this Master Declaration shall have the meanings defined for those terms in this Section 2.

"Adjusted Coverage Revenues" means the Coverage Revenues, adjusted for purposes of Section 7.1.C(ii) as provided in Section 7.3.

"Adjusted Net Revenues" means the Net Revenues, adjusted for purposes of Section 7.1.C(ii) as provided in Section 7.3.

"Annual Bond Debt Service" means in any Fiscal Year the amount of principal and interest required to be paid in that Fiscal Year on all Outstanding Bonds, adjusted as follows:

(a) Interest which is to be paid from Bond Proceeds shall be subtracted;

(b) Bonds which are subject to scheduled, noncontingent redemption/prepayment or tender shall be deemed to mature on the dates and in the amounts which are subject to mandatory redemption/prepayment or tender, and only the amount scheduled to be Outstanding on the final maturity date shall be treated as maturing on that date;

(c) Interest subsidies shall be subtracted from the interest due on Interest Subsidy Bonds as provided in Section 6.5;

(d) Bonds which are subject to contingent redemption/prepayment or tender shall be treated as maturing on their stated maturity dates; and,

(e) Each Balloon Payment shall be assumed to be paid according to its Balloon Debt Service Requirement.

"Auditor" means a person authorized by the State Board of Accountancy to conduct municipal audits pursuant to ORS 297.670.

"Balloon Debt Service Requirement" means the Committed Debt Service Requirement for a Balloon Payment or, if the District has not entered into a firm commitment to sell Bonds or other obligations to refund that Balloon Payment, the Estimated Debt Service Requirement for that Balloon Payment.

"Balloon Payment" means any principal payment for a Series of Bonds which comprises more than twenty-five percent of the original principal amount of that Series, but only if that principal payment is designated as a Balloon Payment in the closing documents for the Series.

"Base Period" means the alternative selected by the District from the following two options: (a) any twelve consecutive months selected by the District or Qualified Consultant out of the most recent eighteen months preceding the delivery of a Series of Parity Bonds; or (b) the most recently completed fiscal year for which audited financial statements are available.

"BEO" means "book-entry-only" and refers to a system for clearance and settlement of securities transactions through electronic book-entry changes, which eliminates the need for physical movement of securities.

"Bond" or "Bonds" means the Series 2019 Bond and any Parity Bonds.

"Bond Counsel" means a law firm selected by the District and having knowledge and expertise in the field of municipal law and whose opinions are generally accepted by purchasers of municipal bonds.

"Bond Reserve Account" means the Bond Reserve Account in the Water Fund described in Section 5.3 of this Master Declaration.

"Business Day" means any day except a Saturday, a Sunday, a legal holiday, a day on which the offices of banks in Oregon or New York are authorized or required by law or executive order to remain closed, or a day on which the New York Stock Exchange is closed.

"Closing" means the date on which a Series of Bonds is delivered in exchange for payment.

"Code" means the Internal Revenue Code of 1986, as amended, including the rules and regulations promulgated thereunder.

"Committed Debt Service Requirement" means the schedule of principal and interest payments for a Series of Bonds or other obligations which refund a Balloon Payment, as shown in the documents evidencing the District's firm commitment to sell that Series. A "firm commitment to sell" means a bond purchase agreement or similar document which obligates the District to sell, and obligates a purchaser to purchase, the Series of refunding Bonds or other obligations, subject only to the conditions which customarily are included in such documents.

"Coverage Revenues" means the Net Revenues less System Development Charges.

"Credit Facility" means a letter of credit, a municipal bond insurance policy, standby bond purchase agreement or other credit enhancement device which is obtained by the District to secure payment in full of Bonds, and which is issued or provided by a Credit Provider.

"Credit Provider" means the person or entity that is: (i) obligated to make or guarantee payments under a Credit Facility or Reserve Credit Facility; and (ii) whose long-term debt obligations or claims-paying ability (as appropriate) are rated, at the time the Credit Facility or Reserve Credit Facility is issued, in one of the two highest rating categories by a Rating Agency that has issued a rating on Outstanding Bonds. Under rating systems in effect on the date of this Master Declaration, a rating in one of the two highest rating categories by a Rating Agency would be a rating of "AA-/Aa3" or better.

"Debt Service Account" means the Debt Service Account described in Section 5.2 of this Master Declaration.

"District" means the Tualatin Valley Water District in Washington County, Oregon, a municipal corporation of the State of Oregon.

"District Board" means the Board of Commissioners of the District.

"District Official" means the Chief Financial Official of the District, or then-comparable position at the District, or the employees of the District designated by the District's Executive Officer or Board of Directors to act on behalf of the District under this Master Declaration.

"DTC" means The Depository Trust Company or any other qualified securities depository designated by the District as its successor.

"Estimated Debt Service Requirement" means the schedule of principal and interest payments for a hypothetical Series of Bonds that refunds a Balloon Payment, that is prepared by the District Official and that meets the requirements of Section 6.4.

"Event of Default" means any event specified in 11.2 of this Master Declaration.

"Fiscal Year" means the period beginning on July 1 of each year and ending on the next succeeding June 30, or as otherwise defined by State law.

"Fitch" means Fitch Investors Service, Inc., its successors and assigns.

"Fund" or "Account" refers to any fund, account, or other accounting concept that permits the District to account accurately for amounts that are credited to it under this Master Declaration. A "Fund" in this Master Declaration does not need to appear as a "fund" in the District's budget and an "Account" in this Master Declaration does not need to appear as an "account" in the District's budget.

"Government Obligations" means (a) direct, noncallable obligations of the United States of America (including obligations issued or held in book-entry form on the books of the Department of the Treasury and principal-only and interest-only strips that are issued by the U.S. Treasury);

or (b) noncallable obligations the principal of and interest on which are secured by the full faith and credit of the United States of America or are unconditionally guaranteed by the United States of America.

"Gross Revenues" means all fees and charges and other revenues that are properly accrued under generally accepted accounting principles as revenues of the Water System, including System Development Charges, revenues from product sales, wholesale water delivery, and fees for other services provided, and interest earnings on Gross Revenues in the Water Fund. Gross Revenues shall be increased by any withdrawals from the Rate Stabilization Account as provided in Section 5.5.B, and shall be reduced by any deposits to the Rate Stabilization Account as provided in Section 5.5.A. However, the term "Gross Revenues" shall not include:

(a) The interest income or other earnings derived from the investment of any escrow fund established for the defeasance or refunding of outstanding indebtedness of the District;

(b) Any gifts, grants, donations or other amounts received by the District from any State or Federal Agency or other person if such amounts are restricted by law or the grantor to uses inconsistent with the payment of Bonds;

(c) The proceeds of any borrowing;

(d) The proceeds of any liability or other insurance (excluding business interruption insurance or other insurance of like nature insuring against the loss of revenues);

(e) The proceeds of any casualty insurance which the District intends to utilize for repair or replacement of the Water System;

(f) The proceeds derived from the sales of assets pursuant to Section 10.9 of this Master Declaration;

(g) Any ad valorem or other taxes imposed by the District (except charges or payments for Water System services which become "taxes" within the meaning of Article XI, Section 11b of the Oregon Constitution only because they are imposed on property or property owners);

(h) Any income, fees, charges, receipts, profits or other amounts derived by the District from its ownership or operation of any Separate Utility System;

(i) Installment payments of District line and branch charges, connection fees, or local improvement district assessments that have been pledged as security for a borrowing other than a Bond;

(j) The proceeds of any fees or charges the District collects on behalf of a third party, including the fees currently collected by the District on behalf of the cities of Beaverton, Tigard and Hillsboro; or

(k) Any federal interest subsidies the District receives for Interest Subsidy Bonds.

"Interest Payment Date" means any date on which Bond interest is scheduled to be paid, and any date on which Bonds are called for redemption/prepayment.

"Interest Subsidy Bonds" means Bonds for which the District is eligible to receive federal interest rate subsidies that are similar to the interest subsidies that were available for Build America Bonds.

"Master Declaration" means this Master Water System Revenue Bond Declaration, including any amendments made pursuant to Section 12.

"Maximum Annual Bond Debt Service" means the greatest amount of Annual Bond Debt Service that is due in any Fiscal Year, beginning with the Fiscal Year for which the calculation is made, and ending with the last Fiscal Year in which Outstanding Bonds are scheduled to be paid.

"Moody's" means Moody's Investors Service, a corporation organized and existing under the laws of the State of Delaware, its successors and their assigns.

"Net Revenues" means the Gross Revenues less the Operating Expenses.

"Operating Expenses" means all costs which are properly treated as expenses of operating and maintaining the Water System under generally accepted accounting principles. However, Operating Expenses do not include:

(a) Any rebates or penalties paid from Gross Revenues under Section 148 of the Code;

(b) Payments of judgments against the District and payments for the settlement of litigation;

(c) Depreciation and amortization of property values or losses, and other non-cash expenses, including non-cash expenses related to pensions and postemployment benefits,;

(d) All amounts eligible to be treated for accounting purposes as payments for capital expenditures;

(e) Interest and other debt service payments, paying agent fees, broker-dealer fees and similar charges for the maintenance of borrowings;

(f) The expenses of owning, operating or maintaining any Separate Utility System;

(g) Expenditures made from any liability insurance proceeds;

(h) Expenditures made from any casualty insurance proceeds used to pay for costs of repairing or replacing portions of the Water System;

(i) Expenditures made from grant funds, regardless of whether such grant funds are dedicated to a specific purpose or available for the general operation, maintenance and repair or replacement of the Water System;

(j) Extraordinary, non-recurring expenses of the Water System;

(k) Payments to third parties from the proceeds of any fees or charges the District collects on behalf of such third parties, including the fees currently collected by the District on behalf of the cities of Beaverton, Tigard and Hillsboro; or

(l) Expenditures allocable to any other funding source which does not constitute Gross Revenues of the Water System.

"Ordinance" means Ordinance No. 01-19 enacted by the District Board on April 17, 2019.

"ORS" means the Oregon Revised Statutes.

"Outstanding" refers to all Bonds except Bonds that have been defeased pursuant to Section 13 of this Master Declaration, paid in full in cash or canceled, and Bonds which have matured and not been presented for payment (provided that sufficient funds to pay those Bonds have been transferred to the Paying Agent).

"Owner" means a registered owner of a Bond.

"Parity Bond" means the Series 2019 Bond and any obligation that is secured by the Net Revenues on an equal basis with the Bonds and is issued in accordance with Section 7.

"Paying Agent" means the paying agent for the Bonds. The Paying Agent will be appointed when the District enters into publicly offered Bonds.

"Payment Date" means a Principal Payment Date or an Interest Payment Date.

"Permitted Investments" means any investments which the District is permitted to make under the laws of the State.

"Principal Payment Date" means any date on which any Bonds are scheduled to be retired, whether by virtue of their maturity or by mandatory sinking fund redemption/prepayment prior to maturity, and the redemption/prepayment date of any Bonds which have been called for redemption/prepayment.

"Qualified Consultant" means an independent engineer, an independent auditor, an independent financial advisor, or similar independent professional consultant of recognized standing and having experience and expertise in the area for which such person or firm is retained by the District for purposes of performing activities specified in this Master Declaration or any Supplemental Declaration.

"Rate Stabilization Account" means the Rate Stabilization Account established in the Water Fund pursuant to Section 5.5.

"Rating Agency" means Fitch, Moody's, S&P, or any other nationally recognized financial rating Agency which has rated Outstanding Bonds or a Credit Facility at the request of the District.

"Record Date" means for a series of publicly offered Bonds the date that is established in the proceedings related to that series.

"Reserve Credit Facility" means any arrangement in which the District pays a fee in exchange for an agreement of a Credit Provider to advance money to the District in the future that the District will use in lieu of using cash or Permitted Investments credited to a subaccount in the Bond Reserve Account. "Reserve Credit Facility" does not include guaranteed investment contracts, master repurchase agreements and similar Permitted Investments.

"Reserve Credit Facility Rating" means a long-term debt, financial strength or claims-paying ability rating assigned by a Rating Agency to: (a) a provider of a Reserve Credit Facility, or (b) to any reinsurer of the obligations of a provider of a Reserve Credit Facility.

"Reserve Requirement" means a set of rules for funding a subaccount in the Bond Reserve Account. Each Reserve Requirement shall indicate the amount that is required to be credited to the subaccount, the dates by which that amount must be credited to the subaccount, and the requirements for restoring amounts to the subaccount if amounts are withdrawn to pay Bonds that are secured by the subaccount. The Series 2019 Bond is not secured by the Bond Reserve Account or any subaccount therein.

"S&P" means S&P Global Ratings, a corporation organized and existing under the laws of the State of New York, its successors and their assigns.

"Separate Utility System" means any utility property which is declared by the District to constitute a system which is distinct from the Water System in accordance with Section 9.

"Series" refers to all Bonds authorized by a single ordinance or declaration and delivered in exchange for payment on the same date, regardless of variations in maturity, interest rate or other provisions, unless the closing documents for the Series provide otherwise.

"Series 2019 Bond" means the District's Water Revenue Bond, Series 2019 issued pursuant to Section 17 of this Master Declaration.

"State" means the State of Oregon.

"Subordinate Obligations" means obligations having a lien on the Net Revenues which is subordinate to the lien of the Bonds. Restrictions on Subordinate Obligations are described in Section 8. On the date of this Master Declaration, the District has no borrowings outstanding with a subordinate lien on the Net Revenues.

"Subordinate Obligations Account" means the Subordinate Obligations Account of the Water Fund which is described in Section 5.4.

"Supplemental Declaration" means any declaration, resolution or other document which supplements or amends this Master Declaration, entered into by the District in compliance with Section 12.

"System Development Charges" means the fees on development imposed by the District pursuant to ORS Chapter 223 or subsequent statutes and which are legally permitted to be used to pay the Bonds.

"Tax Maximum" means, for any Series of Bonds, the least of: the greatest amount of principal, interest and premium, if any, required to be paid in any Fiscal Year on such Series; 125% of average amount of principal, interest and premium, if any, required to be paid on such Series during all Fiscal Years in which such Series will be Outstanding, calculated as of the date of issuance of such Series; or, ten percent of the proceeds of such Series, as "proceeds" is defined for purposes of Section 148(d) of the Code.

"Valuation Date" means the date or dates on which a subaccount of the Bond Reserve Account shall be valued as prescribed in the Supplemental Declaration authorizing the establishment of such subaccount.

"Water Fund" means the collection of funds and accounts used by the District to hold the Gross Revenues and the proceeds of Bonds.

"Water System" means all utility property now or hereafter used by the District to supply water within or without the corporate limits of the District, except property described in the following sentence. The Water System does not include any Separate Utility System or the Willamette Water Supply System, the Willamette Intake Facilities Commission, the Willamette River Water Coalition and other joint ventures which the District may enter into after the date of this Master Declaration unless the District Official declares in writing in a publicly available document that such joint venture is included in the definition of the Water System.

Section 3. Rules of Construction.

In determining the meaning of the provisions of this Master Declaration, the following rules shall apply unless the context clearly requires application of a different meaning:

A. References to section numbers shall be construed as references to sections of this Master Declaration.

B. References to one gender shall include all genders.

C. References to the singular include the plural, and references to the plural include the singular.

Section 4. Deposit, Pledge and Use of Gross Revenues.

4.1. All Gross Revenues shall be deposited to and maintained in the Water Fund, and shall be used only as described in this Section as long as any Bonds remain Outstanding. The District shall apply Gross Revenues in the Water Fund on or before the following dates for the following purposes in the following order of priority:

A. At any time to pay Operating Expenses which are then due;

B. At least one Business Day prior to each Payment Date, to transfer Net Revenues to the Debt Service Account in an amount sufficient (with amounts available in the Debt Service Account) to pay in full all Bond principal, interest and premium, if any, which is due to be paid on that Payment Date;

C. On the Closing date for a Series of Bonds and on the first day of the month following a Valuation Date for any subaccount in the Bond Reserve Account, if the balance in any subaccount of the Bond Reserve Account is determined to be less than the applicable Reserve Requirement, to transfer Net Revenues to the Bond Reserve Account in the amounts required by the provisions creating the subaccounts in the Bond Reserve Account until the balances in all subaccounts of the Bond Reserve Account are equal to their Reserve Requirement;

D. On the day on which any rebates or penalties for Bonds are due to be paid to the United States pursuant to Section 148 of the Code, an amount of Net Revenues that is sufficient, with other available funds, to pay the amounts due to the United States;

E. On the dates specified in any proceedings authorizing Subordinate Obligations, the District shall transfer to the Subordinate Obligations Account the Net Revenues required by those proceedings; and,

F. On any date, the District may transfer Gross Revenues to the Rate Stabilization Account or spend Net Revenues for any other lawful purpose relating to the Water System or to providing water, but only if all deposits and payments that are required to be made on or before that date and that have a higher priority under this Section have been made.

4.2. The District hereby pledges the Net Revenues and federal interest subsidies the District receives for Interest Subsidy Bonds to the payment of principal of, premium, if any, and interest on all Bonds. Pursuant to ORS 287A.310, these pledges made by the District shall be valid and binding from the Closing of the Series 2019 Bond. The Net Revenues and federal interest subsidies so pledged and hereafter received by the District shall immediately be subject to the lien of such pledges without any physical delivery or further act. The lien of these pledges shall be superior to all other claims and liens except liens and claims for the payment of Operating Expenses. The District covenants and agrees to take such action as is necessary from time to time to perfect or otherwise preserve the priority of the pledges.

4.3. If a Reserve Credit Facility is permitted to fund a subaccount in the Bond Reserve Account, the District may pledge the Net Revenues available for transfer to that subaccount of the Bond Reserve Account to pay amounts due under any Reserve Credit Facility securing that subaccount.

Section 5. Bond Funds and Accounts.

5.1. So long as Bonds are Outstanding, the District shall maintain the Debt Service Account as a discrete account in the Water Fund.

5.2. **Debt Service Account.** The District shall hold the Debt Service Account. Until all Bonds are paid or defeased, amounts in the Debt Service Account shall be used only to pay Bonds.

A. After the transfer described in Section 4.1.B, if the balance in the Debt Service Account is less than the amount of Bond principal, premium, if any, and interest that is due on that Payment Date, the District shall credit to the Debt Service Account an amount equal to the deficiency from any Net Revenues in the Subordinate Obligations Account.

B. If, after the credit described in Section 5.2.A, the amounts available to pay Debt Service Account is not sufficient to pay all amounts due on the Payment Date, the District shall allocate the available amounts:

(i) First, to pay Bond interest, and pro rata based on the amount due on Bonds if the available amount is not sufficient to pay all Bond interest that is due on that Payment Date; and,

(ii) Second, to pay Bond principal and premium that is due on that Payment Date, and pro rata based on the amount of principal and premium due on each Bond if the available amount is not sufficient to pay all Bond principal and premium that is due on that Payment Date.

C. If, after the allocation described in Section 5.2.B, there is not enough to pay all principal, interest and premium allocated to pay Bonds that are secured by a subaccount in the Bond Reserve Account, the District shall apply any amounts available in the subaccounts in the Bond Reserve Account, but only to pay the principal, interest and premium on the Bonds that are secured by those subaccounts.

D. The District shall transfer sufficient amounts from the Debt Service Account in time to permit payment of all Bond principal, interest and premium, if any, when due in accordance with the Bonds.

E. Amounts in the Debt Service Account shall be invested only in Permitted Investments. Earnings on the Debt Service Account shall be credited to the Water Fund.

5.3. **Bond Reserve Account**.

A. If the District determines to secure Bonds with the Bond Reserve Account and so long as those Bonds are Outstanding, the District shall maintain the Bond Reserve Account as a discrete account in the Water Fund held by the District. The District may create one or more subaccounts in the Bond Reserve Account to secure Series of Bonds and covenant to make deposits into any subaccounts it creates; however, the District is not obligated to create any subaccounts in the Bond Reserve Account, and is not obligated to secure any Series of Bonds with a subaccount in the Bond Reserve Account.

B. When a subaccount in the Bond Reserve Account is created, the District shall determine whether the subaccount will secure one or more Series of Bonds. If the District creates a subaccount in the Bond Reserve Account, the District shall, when it issues the first Series of Bonds that is secured by that subaccount: a) establish the Reserve Requirement for that subaccount; b) pledge amounts credited to that subaccount to pay the Bonds that are secured by that subaccount; and c) determine if the Reserve Requirement for that subaccount may be funded with Reserve Credit Facilities and the requirements for those Reserve Credit Facilities, and the valuation and replenishment provisions that apply to that subaccount.

C. The District shall not create any subaccounts in the Bond Reserve Account for any purpose except securing Bonds in accordance with this Master Declaration.

D. The Series 2019 Bond is not secured by the Bond Reserve Account or any subaccount therein.

5.4. **Subordinate Obligations Account.** The District shall create and maintain the Subordinate Obligations Account in the Water Fund as long as Subordinate Obligations are Outstanding. The Subordinate Obligations Account may be divided into subaccounts, and the District may establish priorities for funding the subaccounts in the Subordinate Obligations Subaccount. Net Revenues shall be deposited into the Subordinate Obligations Account only as permitted by Section 4.1.E. Earnings on the Subordinate Obligations Account shall be credited as provided in the proceedings authorizing the Subordinate Obligations.

5.5. **Rate Stabilization Account.** The District may create a Rate Stabilization Account in the Water Fund and if created will maintain that account as long as Bonds are Outstanding. Net Revenues may be transferred to the Rate Stabilization Account at the option of the District as permitted by Section 4.1.F. Money in the Rate Stabilization Account may be withdrawn at any time and used for any purpose for which the Gross Revenues may be used.

A. Deposits to the Rate Stabilization Account decrease Gross Revenues in the Fiscal Year for which the deposit is made.

B. Withdrawals from the Rate Stabilization Account increase Gross Revenues in the Fiscal Year for which the withdrawal is made.

C. The District may adjust deposits to and withdrawals from the Rate Stabilization Account for a Fiscal Year up until 180 days after the end of that Fiscal Year.

D. Earnings on the Rate Stabilization Account shall be credited to the Water Fund.

Section 6. Rate Covenant; Calculations Relating to Balloon Payments and Interest Subsidy Bonds.

6.1. The District covenants for the benefit of the Owners that it will establish and maintain rates and charges in connection with the operation of the Water System which are sufficient to permit the District to pay all Operating Expenses and all lawful charges against the Net Revenues, and to make all transfers required by this Master Declaration to the Debt Service Account, the Bond Reserve Account and the Subordinate Obligations Account.

6.2. The District covenants for the benefit of the Owners of all Bonds that it shall charge rates and fees in connection with the operation of the Water System which, when combined with other Gross Revenues are adequate to generate:

A. Coverage Revenues each Fiscal Year at least equal to one hundred fifteen percent (115%) of Annual Bond Debt Service due in that Fiscal Year; and,

B. Net Revenues each Fiscal Year at least equal to one hundred twenty-five percent (125%) of Annual Bond Debt Service due in that Fiscal Year.

6.3. Not later than six months after the end of each Fiscal Year, the District shall prepare a report that demonstrates whether the District has complied with Section 6.2 during that Fiscal Year and shall file that report in the District records. If the report demonstrates that the District has not complied with Section 6.2 during that Fiscal Year, it shall not constitute a default under this Master Declaration if, within thirty (30) days after the report is filed, the District files a certificate of a District Official that specifies the actions that the District has taken and will take within the next ninety (90) days to permit the District to comply with Section 6.2 for the remainder of the Fiscal Year in which the report is filed, and for the succeeding Fiscal Year, and the District takes the actions specified by the District Official, or actions having a comparable effect.

6.4. The Estimated Debt Service Requirement for Balloon Payments shall be calculated in accordance with this Section 6.4.

A. For the Rate Covenants: For each Balloon Payment that is Outstanding on May 1 of any Fiscal Year, the District Official shall prepare a schedule of principal and interest payments for a hypothetical Series of Bonds that refunds that Balloon Payment in accordance with Section 6.4.D. The District Official shall prepare that schedule as of that first day of May, and that schedule shall be used to determine compliance with the rate covenant in Section 6.2 for the following Fiscal Year.

B. For Parity Bonds: Whenever a Balloon Payment will be Outstanding on the date a Series of Parity Bonds is issued, the District Official shall prepare a schedule of principal and interest payments for a hypothetical Series of Bonds that refunds each Outstanding Balloon Payment in accordance with Section 6.4.D. The District Official shall prepare that schedule as of the date the Parity Bonds are sold, and that schedule shall be used to determine compliance with the tests for Parity Bonds in Section 7.1.

C. For the Reserve Requirement: Whenever a Series of Bonds that contains a Balloon Payment is issued, the District Official shall prepare a schedule of principal and interest payments for a hypothetical Series of Bonds that refunds each Balloon Payment in that Series in accordance with Section 6.4.D. The District Official shall prepare that schedule as of the date the Series is sold, and that schedule shall be combined with the schedule for payment of any debt service on Bonds that are secured by the same subaccount, and that combined schedule shall be used to determine the Reserve Requirement as long as that Series is Outstanding.

D. Each hypothetical Series of refunding Bonds shall be assumed to be paid in equal annual installments of principal and interest that are sufficient to amortize the principal amount of the Balloon Payment over the term selected by the District Official; however, the District Official shall not select a term that exceeds the lesser of: 30 years from the date the Balloon Payment is originally scheduled to be paid; or, the District's estimate of the remaining weighted average useful life (expressed in years and rounded to the next highest integer) of the assets which are financed with the Balloon Payment. The annual installments shall be assumed to be due on the anniversaries of the date the Balloon Payment is originally scheduled to be paid, with the first installment due on the first anniversary of the date the Balloon Payment is scheduled to be paid. Each installment shall be assumed to bear interest at a rate that is estimated by the District from the Bond Buyer Revenue Bond Index (or if the Bond Buyer Revenue Bond Index is not available, a reasonably comparable index selected by the District) for a revenue bond with a term that is equal to the term of the installment. When the District prepares a schedule described in Section 6.4.A, Section 6.4.B or Section 6.4.C, the District shall use the index that is available to the District on the date the District is required to prepare that schedule.

6.5. Interest Subsidy Bonds. The amounts assumed to be paid on Interest Subsidy Bonds shall be calculated as follows:

A. When calculating Annual Bond Debt Service for the rate covenant in Section 6.2, the District shall subtract from interest to be paid on Interest Subsidy Bonds the federal interest subsidies on Interest Subsidy Bonds that the District reasonably expects, at the beginning of the Fiscal Year, to receive during that Fiscal Year.

B. When calculating Annual Bond Debt Service and Maximum Annual Bond Debt Service for the tests for issuing Parity Bonds in Section 7, the District shall subtract from the scheduled payments of interest on Interest Subsidy Bonds the amount of federal interest subsidies that the District reasonably expects, at the time the Parity Bonds are issued, to receive.

C. When calculating the greatest amount of principal, interest and premium, if any, required to be paid in any Fiscal Year on a Series of Interest Subsidy Bonds to determine the Tax Maximum for Interest Subsidy Bonds that are secured by a subaccount in the Bond Reserve Account, the District shall subtract from the scheduled payments of interest on Interest Subsidy Bonds the federal interest subsidies that the District reasonably expects, at the time the Series of Interest Subsidy Bonds is issued, to be paid to the District for the Series of Interest Subsidy Bonds. The District shall not be required to increase the amount the District is required to hold in a subaccount in the Bond Reserve Account if federal interest subsidies are not paid when or in the amounts expected. However, if the District reduces the amount it holds in a subaccount of the Bond Reserve Account because Bonds secured by that subaccount have been paid, the District must take into account its reasonable expectations of the amount of federal interest subsidies it expects to receive at the time of reduction in determining the amount that the District must retain in a subaccount of the Bond Reserve Account.

Section 7. Parity Bonds.

7.1. The District may issue Parity Bonds to provide funds for any purpose relating to the Water System or to providing water, but only if:

A. No Event of Default under this Master Declaration or any Supplemental Declaration has occurred and is continuing;

B. At the time of the issuance of the Parity Bonds there is no deficiency in the Debt Service Account and all required deposits to all subaccounts in the Bond Reserve Account have been made;

C. There shall have been filed with the District either:

(i) A certificate of the District Official stating that both:

(a) Coverage Revenues (adjusted as provided in Section 7.2) for the Base Period were not less than one hundred fifteen percent (115%) of Maximum Annual Bond Debt Service on all then Outstanding Bonds, calculated as of the date the Parity Bonds are issued and with the proposed Parity Bonds treated as Outstanding; and

(b) Net Revenues (adjusted as provided in Section 7.2) for the Base Period were not less than one hundred twenty five percent (125%) of Maximum Annual Bond Debt Service on all then Outstanding Bonds, calculated as of the date the Parity Bonds are issued and with the proposed Parity Bonds treated as Outstanding; or

(ii) A certificate or opinion of a Qualified Consultant:

(a) Stating the amount of the Adjusted Coverage Revenues and the Adjusted Net Revenues for each of the five Fiscal Years after the last Fiscal Year for which interest on the Parity Bonds is, or is expected to be, capitalized, or, if interest will not be capitalized, for each of the five Fiscal Years after the proposed Parity Bonds are issued; and

(b) Concluding that the respective amounts of Adjusted Coverage Revenues in each of the first four Fiscal Years described in Section 7.1.C(ii)(a) are at least equal to one hundred fifteen percent (115%) of the Annual Bond Debt Service for each of those respective Fiscal Years on all Outstanding Bonds, with the proposed Parity Bonds treated as Outstanding; and,

(c) Concluding that the respective amounts of Adjusted Net Revenues in each of the first four Fiscal Years described in Section 7.1.C(ii)(a) are at least equal to one hundred twenty-five percent(125%) of the Annual Bond Debt Service for each of those respective Fiscal Years on all Outstanding Bonds, with the proposed Parity Bonds treated as Outstanding; and,

(d) Concluding that the amount of Adjusted Coverage Revenues in the fifth Fiscal Year described in Section 7.1.C(ii)(a) is at least equal to one hundred fifteen percent (115%) of the Maximum Annual Bond Debt Service, calculated for the period beginning with that fifth Fiscal Year on all then Outstanding Bonds, with the proposed Parity Bonds treated as Outstanding; and,

(e) Concluding that the amount of Adjusted Net Revenues in the fifth Fiscal Year described in Section 7.1.C(ii)(a) is at least equal to one hundred twenty-five percent (125%) of the Maximum Annual Bond Debt Service, calculated for the period beginning with that fifth Fiscal Year on all then

Outstanding Bonds, with the proposed Parity Bonds treated as Outstanding.

7.2. The District may adjust Coverage Revenues and Net Revenues for purposes of Section 7.1.C(i) by adding any Coverage Revenues or Net Revenues the District Official calculates the District would have had during the Base Period because of increases in Water System rates, fees and charges which have been adopted by the District and are in effect on or before the date the Parity Bonds are issued. The District shall adjust Coverage Revenues and Net Revenues for the Base Period by eliminating the effect of any withdrawals from or deposits to the Rate Stabilization Account.

7.3. The Qualified Consultant shall calculate Adjusted Net Revenues and Adjusted Coverage Revenues for purposes of Section 7.1.C(ii) as provided in this Section 7.3:

A. The District shall provide the Qualified Consultant with the following information:

(i) The Base Period, the Coverage Revenues and Net Revenues for the Base Period and the amounts of any withdrawals from or deposits to the Rate Stabilization Account for Fiscal Years that are included in the Base Period;

(ii) Information regarding any Water System utility properties that are being acquired with Parity Bonds and that have an earnings record;

(iii) Any changes in rates and charges which have been adopted by the District since the beginning of the Base Period and the dates on which they are scheduled to take effect;

(iv) Any changes in customers since the beginning of the Base Period; and,

(v) A description of any extensions or additions to the Water System that were in the process of construction at the beginning of the Base Period or commenced construction after the beginning of the Base Period, the expected date of completion of those extensions or additions, the estimated operating and capital costs of those extensions or additions, and any other changes to the Gross Revenues or Operating Expenses that the District reasonably expects to result from the completion and operation of those extensions or additions.

B. Using the information provided by the District pursuant to Section 7.3.A and any additional information the Qualified Consultant determines is necessary, the Qualified Consultant shall adjust the Coverage Revenues and Net Revenues for the Base Period to eliminate the effect of any withdrawals from or deposits to the Rate Stabilization Account in the manner described in Section 7.2 and may adjust the Coverage Revenues and Net Revenues for the Base Period:

(i) To reflect any changes that the Qualified Consultant projects will result from the acquisition of Water System utility properties that are being financed with the Parity Bonds and that have an earnings record;

(ii) To reflect any changes in rates and charges which have been adopted by the District and which are scheduled to take effect during the period described in Section 7.1.C(ii)(a), or which increase rates and charges for inflation at a level which the Qualified Consultant determines is reasonable;

(iii) To reflect any changes in customers of the Water System that occurred after the beginning of the Base Period and prior to the date of the Qualified Consultant's certificate; and

(iv) To reflect any changes to Coverage Revenues or Net Revenues not included in the preceding paragraphs that are projected to result from the completion and operation of additions and extensions to the Water System that were under construction at the beginning of the Base Period, or commenced construction after the beginning of the Base Period.

7.4. The District may issue Parity Bonds to refund Outstanding Bonds without complying with Section 7.1 if the refunded Bonds are legally or economically defeased on the date of delivery of the refunding Parity Bonds and if the Annual Bond Debt Service on the refunding Parity Bonds does not exceed the Annual Bond Debt Service on the refunded Bonds in any Fiscal Year by more than $5,000.

7.5. Bonds shall be treated as "legally defeased" for purposes of Section 7.4 if they are defeased as provided in Section 13. Bonds shall be treated as "economically defeased" for purposes of Section 7.4 if they have been irrevocably called for redemption/prepayment within one year after the date on which the refunding Bonds are issued, and the District has irrevocably deposited money or Government Obligations with the paying agent or Owner for the refunded Bonds, as applicable, or in escrow with an independent trustee or escrow agent, and the money and any amounts to be received from the Government Obligations have been calculated to be sufficient, without reinvestment, to pay the Bonds that are economically defeased.

7.6. All Parity Bonds issued in accordance with this Section 7 shall have a lien on the Net Revenues which is equal to the lien of all other Outstanding Bonds.

Section 8. Subordinate Obligations.

The District may issue Subordinate Obligations only if:

8.1. The Subordinate Obligations are payable solely from amounts permitted to be deposited in the Subordinate Obligations Account pursuant to Section 4.1.E;

8.2. The Subordinate Obligations state clearly that they are secured by a lien on or pledge of the Net Revenues which is subordinate to the lien on, and pledge of, the Net Revenues for the Bonds.

Section 9. Separate Utility System.

The District may declare property which the District owns and is part of the Water System (but has a value of less than five percent of the Water System at the time of the declaration), and property which the District has not yet acquired but would otherwise become part of the Water System, to be part of a Separate Utility System. The District may pay costs of acquiring, operating and maintaining Separate Utility Systems from Net Revenues, but only if there is no deficit in the Debt Service Account or the Bond Reserve Account. The District may issue obligations which are secured by the revenues produced by the Separate Utility System, and may pledge the Separate Utility System revenues to pay those obligations. In addition, the District may issue Subordinate Obligations to pay for costs of a Separate Utility System, and may pledge the revenues of the Separate Utility System to pay the Subordinate Obligations.

Section 10. General Covenants.

The District hereby covenants and agrees with the Owners of all Outstanding Bonds as follows:

10.1. The District shall promptly cause the principal, premium, if any, and interest on the Bonds to be paid as they become due in accordance with the provisions of this Master Declaration and any Supplemental Declaration.

10.2. The District shall maintain complete books and records relating to the operation of the Water System and all District funds and accounts in accordance with generally accepted accounting principles, shall cause such books and records to be audited annually at the end of each Fiscal Year, and shall have an audit report prepared by the Auditor and made available for the inspection of Owners.

10.3. The District shall not issue obligations which have a lien on the Net Revenues that is superior to the lien of the Bonds except for obligations to pay Operating Expenses.

10.4. The District shall promptly deposit the Gross Revenues and other amounts described in this Master Declaration into the funds and accounts specified in this Master Declaration.

10.5. The District shall work in good faith to cause the Water System to be operated at all times in a safe, sound, efficient and economic manner in compliance with all health, safety and environmental laws, regulatory body rules, regulatory body orders and court orders applicable to the District's operation and ownership of the Water System.

10.6. The District shall maintain the Water System in good repair, working order and condition.

10.7. The District shall not enter into any new agreements or arrangements or make any new offers to provide Water System products or services at a discount from published rate schedules or provide free Water System products or services except: a) for District-owned facilities, b) in case of emergencies, c) where the District exchanges services with other water systems, or d) where in the reasonable judgment of the District such action does not materially reduce the Gross Revenues received by the District.

10.8. The District shall at all times maintain with responsible insurers all such insurance on the Water System as is customarily maintained with respect to works and properties of like character against accident to, loss of or damage to such works or properties.

A. The net proceeds of insurance against material accident to or material destruction of the Water System shall be used to repair or rebuild the damaged or destroyed Water System, and to the extent not so applied, will be applied to the payment or redemption/prepayment of the Bonds.

B. The insurance described in Section 10.8 shall be in the form of policies or contracts for insurance with insurers of good standing and shall be payable to the District, or in the form of self-insurance by the District. The District shall establish such fund or funds or reserves which it deems are necessary to provide for its share of any such self-insurance.

10.9. The District shall not voluntarily, nor shall it permit others to, sell, mortgage or otherwise permanently dispose of all or any portion of the Water System except:

A. The District may dispose of all or substantially all of the Water System, only if the District pays all Bonds or defeases them pursuant to Section 13.

B. Except as provided in Section 10.9.C or 10.9.D, the District will not voluntarily dispose of any part of the Water System in excess of 10% of the value of the Water System in service unless prior to such disposition either:

(i) There has been filed with the District a certificate of a Qualified Consultant or District Official stating that such disposition will not impair the ability of the District to comply with the rate covenants contained in Sections 6.1 and 6.2 of this Master Declaration; or

(ii) Provision is made for the payment, redemption/prepayment or other defeasance of a principal amount of Bonds equal to the greater of the following amounts:

(a) An amount which will be in the same proportion to the net principal amount of Bonds then Outstanding (defined as the total principal amount of Bonds then Outstanding less the amount of cash and investments in the Debt Service Account, the Bond Reserve Account, and the Subordinate Obligations Account) that the Gross Revenues attributable to the part of the Water System sold or disposed of for the 12 preceding months bears to the total Gross Revenues for such period; or

(b) An amount which will be in the same proportion to the net principal amount of Bonds then Outstanding that the book value of the part of the Water System sold or disposed of bears to the book value of the Water System immediately prior to such sale or disposition.

C. The District may dispose of any portion of the Water System that has become unserviceable, inadequate, obsolete, or unfit to be used or no longer necessary for use in the operation of the Water System.

D. If the ownership of all or part of the Water System is transferred from the District through the operation of law, the District shall to the extent authorized by law, reconstruct or replace such transferred portion using any proceeds of the transfer unless the District reasonably determines that such reconstruction or replacement is not in the best interest of the District and the Owners, in which case any proceeds shall be used for the payment, redemption/prepayment or defeasance of the Bonds.

Section 11. Events of Default and Remedies.

11.1. **Continuous Operation Essential.** District Official hereby finds and determines that the continuous operation of the Water System and the collection, deposit and disbursement of the Net Revenues in the manner provided in this Master Declaration and in any Supplemental Declaration are essential to the payment and security of the Bonds, and the failure or refusal of the District to perform the covenants and obligations contained in this Master Declaration or any such Supplemental Declaration will endanger the necessary continuous operation of the Water System and the application of the Net Revenues to the operation of the Water System and the payment of the Bonds.

11.2. **Events of Default.** The following shall constitute "Events of Default" so long as they are occurring and have not been cured in accordance with the terms of this Master Declaration:

A. If the District shall fail to pay any Bond principal or interest when due.

B. Except as provided in Section 11.3, if the District shall default in the observance and performance of any other of its covenants, conditions and agreements in this Master Declaration and the default continues for ninety (90) days after the District receives a written notice, specifying the Event of Default and demanding the cure of such default, from a Credit Provider or from the Owners of not less than 25% in aggregate principal amount of the Bonds Outstanding.

C. If the District shall sell, mortgage or otherwise permanently dispose of all or any portion of the Water System in violation of Section 10.9.

D. If an order, judgment or decree shall be entered by any court of competent jurisdiction:

(i) Appointing a receiver, trustee or liquidator for the District or the whole or any part of the Water System;

(ii) Approving a petition filed against the District seeking the bankruptcy, arrangement or reorganization of the District under any applicable law of the United States or the State; or

(iii) Assuming custody or control of the District or of the whole or any part of the Water System under the provisions of any other law for the relief or aid of debtors and such order, judgment or decree shall not be vacated or set aside or stayed (or, in case custody or control is assumed by said order, such custody or control shall not be otherwise terminated) within sixty (60) days from the date of the entry of such order, judgment or decree.

E. If the District shall:

(i) Admit in writing its inability to pay its debts generally as they become due;

(ii) File a petition in bankruptcy or seeking a composition of indebtedness under any state or federal bankruptcy or insolvency law;

(iii) Consent to the appointment of a receiver of the whole or any part of the Water System; or

(iv) Consent to the assumption by any court of competent jurisdiction under the provisions of any other law for the relief or aid of debtors of custody or control of the District or of the whole or any part of the Water System.

11.3. **Exception.** It shall not constitute an Event of Default under 11.2.B if the default cannot practicably be remedied within ninety (90) days after the District receives notice of the default, so long as the District promptly commences reasonable action to remedy the default after the notice is received, and continues reasonable action to remedy the default until the default is remedied.

11.4. **Remedies.** If an Event of Default occurs, any Owner may exercise any remedy available at law or in equity including mandamus where applicable. However, the Bonds shall not be subject to acceleration.

A. Books of District Open to Inspection.

(i) The District covenants that if an Event of Default shall have happened and shall not have been remedied, the books of record and account of the District and all other records relating to the Water System shall at all reasonable times be subject to the inspection and use of any persons holding at least twenty percent (20%) of the principal amount of Outstanding Bonds and their respective agents and attorneys.

(ii) The District covenants that if the Event of Default shall happen and shall not have been remedied, the District will continue to account, as a trustee of an express trust, for all Net Revenues and other amounts, securities and funds pledged under this Master Declaration.

B. Appointment of Trustee. Whenever any Event of Default exists, Owners representing 51 percent or more of the Outstanding Bonds may appoint a commercial bank or other financial institution with a reported capital and surplus in excess of $50 million as trustee (the "Trustee") to represent the interests of the Owners.

11.5. Trustee Duties Upon Default.

A. Upon the occurrence of an Event of Default the Trustee may pursue any other available remedy at law or in equity to enforce the payment of the principal of, premium, if any, and interest on the outstanding Bonds, and to enforce any rights of the Trustee under or with respect to the Master Declaration.

B. In addition, upon the occurrence of an Event of Default, and upon the filing of a suit or other commencement of judicial proceedings to enforce the rights of the Trustee and of the Owners under the Master Declaration, the Trustee will be entitled, as a matter of right to the fullest extent permitted by Oregon law, to the appointment of a receiver or receivers of the Net Revenues and other amounts pledged under the Master Declaration, pending such proceedings, with such powers as the court making such appointment may confer.

C. If an Event of Default has occurred and is continuing and if requested so to do by the Owners of at least 25% in aggregate principal amount of Outstanding Bonds and indemnified as provided in the Master Declaration, the Trustee will be obligated to exercise any of the rights and powers conferred by this Master Declaration, as the Trustee, being advised by counsel, deems most expedient in the interest of the Owners.

D. If a Trustee has been appointed pursuant to 11.4.B, no Owner of any Bond shall have the right to institute any suit, action or proceeding at law or in equity, for any remedy under the Master Declaration, unless:

(i) such Owner has previously given to the Trustee written notice of the occurrence of an Event of Default;

(ii) the Owners of a majority in aggregate principal amount of all the Bonds then Outstanding have requested the Trustee in writing to exercise its powers under the Master Declaration;

(iii) said Owners have tendered to the Trustee indemnity reasonably acceptable to the Trustee against the costs, expenses and liabilities to be incurred in compliance with such request; and

(iv) the Trustee has refused or failed to comply with such request for a period of 60 days after such written request has been received by the Trustee and said tender of indemnity is made to the Trustee.

E. If the Trustee takes any judicial or other action in an Event of Default the Trustee has full power in its direction with respect to any continuance, discontinuance, withdrawal, compromise, settlement or other disposition of such action, unless opposed by the written request of the Owners of a majority in aggregate principal amount of the Outstanding

Bonds. The Trustee is appointed attorney-in-fact of the Owners for the purpose of bringing any suit action or proceedings in an Event of Default.

F. Waivers of Event of Default.

(i) No delay or omission of any Owner or of the Trustee to exercise any right or power arising upon the happening of an Event of Default shall impair any right or power or shall be construed to be a waiver of any such Event of Default or to be an acquiescence therein; and every power and remedy given by this Section 11 to the Owners and to the Trustee may be exercised from time to time and as often as may be deemed expedient by the Owners and/or the Trustee as applicable.

(ii) The owners of not less than fifty percent (50%) in principal amount of the affected Bonds that are at the time Outstanding, or their attorneys-in-fact duly authorized, or the Trustee may, on behalf of the Owners of all of affected Bonds, waive any past default under this Master Declaration with respect to such Bonds and its consequences, except a default in the payment of the principal of, premium, if any, or interest on any of the Bonds. No such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

(iii) If a default occurs under Section 6 and that default has not become an Event of Default, that default shall be deemed waived at the end of the first Fiscal Year following that default in which the District has complied with Section 6.

11.6. Remedies Granted in Master Declaration Not Exclusive.

No remedy by the terms of this Master Declaration conferred upon or reserved to the Owners is intended to be exclusive of any other remedy, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Master Declaration or existing at law or in equity or by statute on or after the date of adoption of this Master Declaration. However, the Bonds shall not be subject to acceleration.

Section 12. Amendment of Master Declaration.

12.1. This Master Declaration may be amended by Supplemental Declaration without the consent of any Owners for any one or more of the following purposes:

A. To cure any ambiguity or formal defect or omission in this Master Declaration;

B. To add to the covenants and agreements of the District in this Master Declaration, other covenants and agreements to be observed by the District which are not contrary to or inconsistent with this Master Declaration as theretofore in effect;

C. To authorize issuance of Bonds or Subordinate Obligations as permitted by this Master Declaration;

D. To modify, amend or supplement this Master Declaration or any Supplemental Declaration to qualify this Master Declaration under the Trust Indenture Act of 1939, as amended, or any similar federal statute hereafter in effect or to permit the qualification of any Bonds for sale under the securities laws of any of the states of the United States of America;

E. To confirm, as further assurance, any security interest or pledge created under this Master Declaration or any Supplemental Declaration;

F. To make any change which, in the reasonable judgment of the District, does not materially and adversely affect the rights of the owners of any Outstanding Bonds;

G. So long as a Credit Facility (other than a Reserve Credit Facility) is in full force and effect with respect to the Bonds affected by such Supplemental Declaration, to make any other change which is consented to in writing by the issuer of such Credit Facility other than any change which:

(i) Would result in a downgrading or withdrawal of the rating then assigned to the affected Bonds by the Rating Agencies;

(ii) Changes the maturity (except as permitted herein), the Interest Payment Dates, interest rates, redemption/prepayment and purchase provisions, and provisions regarding notices of redemption/prepayment and purchase applicable to the affected Bonds or diminishes the security afforded by such Credit Facility;

(iii) Materially and adversely affects the rights and security afforded to the Owners of any Outstanding Bonds not secured by such Credit Facility; or

H. To modify any of the provisions of this Master Declaration or any Supplemental Declaration in any other respect whatever, as long as the modification shall take effect only after all affected Outstanding Bonds cease to be Outstanding.

12.2. This Master Declaration may be amended for any other purpose only upon consent of Owners of not less than fifty-one percent (51%) in aggregate principal amount of the Bonds Outstanding; provided, however, that no amendment shall be valid without the consent of Owners of 100 percent (100%) of the aggregate principal amount of the Bonds Outstanding which:

A. Extends the maturity of any Bond, reduces the rate of interest upon any Bond, extends the time of payment of interest on any Bond, reduces the amount of principal payable on any Bond, or reduces any premium payable on any Bond, without the consent of the affected Owner; or

B. Reduces the percent of Owners required to approve Supplemental Declarations.

12.3. For purposes of Section 12.2, and subject to Section 12.4, the initial purchaser of a series of Bonds may be treated as the Owner of that Series at the time that series of Bonds is delivered in exchange for payment.

12.4. Except as otherwise expressly provided in Section 12.5, Section 12.6 or a Supplemental Declaration, as long as a Credit Facility securing all or a portion of any Outstanding Bonds is in effect, the issuer of such Credit Facility shall be deemed to be the Owner of the Bonds secured by such Credit Facility for the purpose of the execution and delivery of a Supplemental Declaration of any amendment, change or modification of this Master Declaration or the initiation by Owners of any action which under this Master Declaration requires the written approval or consent of or can be initiated by the Owners of at least a majority in principal amount of the affected Bonds at the time Outstanding, or following an Event of Default for all other purposes.

12.5. The issuer of a Credit Facility shall not be deemed to be an Owner for purposes of any amendment, change or modification of this Master Declaration which:

A. Would result in a downgrading or withdrawal of the rating then assigned to the affected Bonds by the Rating Agencies; or

B. Changes the maturity (except as expressly permitted herein), the Interest Payment Dates, interest rates, redemption/prepayment and purchase provisions, and provisions regarding notices of redemption/prepayment and purchase applicable to the affected Bonds or diminishes the security afforded by such Credit Facility; or

C. Reduces the percentage or otherwise affects the classes of affected Bonds, the consent of the Owners of which is required to effect any such modification or amendment.

12.6. No issuer of a Credit Facility shall be entitled to act as an Owner during any period in which:

A. The issuer's Credit Facility is not in full force and effect;

B. The issuer of a Credit Facility shall have filed a petition or otherwise sought relief under any federal or state bankruptcy or similar law;

C. The issuer of the Credit Facility shall, for any reason, have failed or refused to honor a proper demand for payment under such Credit Facility; or

D. An order or decree shall have been entered, with the consent or acquiescence of the issuer of a Credit Facility, appointing a receiver or receivers or the assets of the issuer of a Credit Facility, or if such order or decree having been entered without the consent or acquiescence of the issuer of a Credit Facility, shall not have been vacated or discharged or stayed within ninety (90) days after the entry thereof.

12.7. For purposes of determining the percentage of Owners consenting to, waiving or otherwise acting with respect to any matter that may arise under this Master Declaration, the Owners of Bonds which pay interest only at maturity, and mature more than one year after they are issued shall be treated as Owners of Bonds in an aggregate principal amount equal to the accreted value of such Bonds as of the date the notice is sent requesting consent, waiver or other action as provided herein.

Section 13. Defeasance.

13.1. The District shall be obligated to pay Bonds which are defeased pursuant to this Section solely from the money and Government Obligations deposited with the escrow agent or trustee, and the District shall have no further obligation to pay the defeased Bonds from any source except the amounts deposited in the escrow. Bonds shall be deemed defeased if the District:

A. Irrevocably deposits money or Government Obligations in escrow with an independent trustee or escrow agent which are calculated to be sufficient without reinvestment for the payment of Bonds which are to be defeased;

B. Files with the escrow agent or trustee a certificate from an independent, certified public accountant to the effect that the money and the principal and interest to be received from the Government Obligations are calculated to be sufficient, without further reinvestment, to pay the defeased Bonds when due; and

C. Files with the escrow agent or trustee an opinion of nationally recognized bond counsel that the proposed defeasance will not cause interest on the defeased Bonds to be includable in gross income under the Code.

Section 14. BEO System.

14.1. Unless otherwise provided by a Supplemental Declaration, all Bonds shall be subject to the BEO System pursuant to the provisions of this Section 14.1.

14.2. The Bonds shall be initially issued as a BEO security issue with no Bonds being made available to the Owners upon the execution and delivery of the letter of representations among the Paying Agent, DTC and the District. Ownership of the Bonds shall be recorded through entries on the books of banks and broker-dealer participants and correspondents that are related to entries on the DTC BEO system. The Bonds shall be initially issued in the form of separate single fully registered typewritten Bonds for each maturity of the Bonds (the "Global Bonds"). Each Global Bond shall be registered in the name of CEDE & CO. as nominee (the "Nominee") of DTC (DTC and any other qualified securities depository designated by the District as a successor to DTC, collectively the "Depository") as the "Registered Owner", and such Global Bonds shall be lodged with the Depository until early redemption or maturity of the Bond issue. The Paying Agent shall remit payment for the maturing principal and interest on the Bonds to the Owner for distribution by the Nominee for the benefit of the owners (the "Beneficial Owner" or "Record Owner") by recorded entry on the books of the Depository participants and correspondents. While the Bonds are in BEO form, the Bonds will be available in denominations of $5,000 or any integral multiple thereof within a maturity.

14.3. In the event the Depository determines not to continue to act as securities depository for the Bonds, or the District determines that the Depository shall no longer so act, then the District will discontinue the BEO system with the Depository. If the District fails to designate another qualified securities depository to replace the Depository or elects to discontinue use of a BEO system, the Bonds shall no longer be a BEO issue but shall be registered in the registration books maintained by the Paying Agent in the name of the Owner as appearing on the Bond register and thereafter in the name or names of the Owners of the Bonds transferring or exchanging Bonds.

14.4. While the Bonds are in BEO form, the District and the Paying Agent shall have no responsibility or obligation to any participant or correspondent of the Depository or to any Registered Owner on behalf of which such participants or correspondents act as agent for the Owner with respect to:

A. The accuracy of the records of the Depository, the Nominee or any participant or correspondent with respect to any ownership interest in the Bonds;

B. The delivery to any participant or correspondent or any other person, other than an Owner as shown in the registration books maintained by the Paying Agent, of any notice with respect to the Bonds, including any notice of redemption/prepayment;

C. The selection by the Depository of the beneficial interest in Bonds to be redeemed prior to maturity; or

D. The payment to any participant, correspondent, or any other person other than the owner of the Bonds as shown in the registration books maintained by the Paying Agent, of any amount with respect to principal of or interest on the Bonds.

14.5. Notwithstanding the BEO system, the District may treat and consider the Owner in whose name each Bond is registered in the registration books maintained by the Paying Agent as the Owner and absolute owner of such Bond for the purpose of payment of principal and interest with respect to such Bond, or for the purpose of giving notices of redemption and other matters with respect to such Bond, or for the purpose of registering transfers with respect to such Bond, or for all other purposes whatsoever. The District shall pay or cause to be paid all principal and interest on the Bonds only to or upon the order of the Registered Owner, as shown in the registration books maintained by the Paying Agent, or their respective attorneys duly authorized in writing, and all such payments shall be valid and effective to fully satisfy and discharge the District's obligation with respect to payment thereof to the extent of the sum or sums so paid.

14.6. Upon delivery by the Depository to the District and to the Owner of written notice to the effect that the Depository has determined to substitute a new nominee in place of the Nominee, then the word "Nominee" in this Master Declaration shall refer to such new nominee of the Depository, and upon receipt of such notice, the District shall promptly deliver a copy thereof to the Paying Agent. The Depository shall tender the Bonds it holds to the Paying Agent for re-registration.

Section 15. Redemption of Bonds.

15.1. Unless otherwise provided by a Supplemental Declaration, all Bonds shall be subject to the redemption terms of this Section 15.

15.2. The District reserves the right to purchase Bonds in the open market.

15.3. If Bonds are subject to mandatory redemption the Paying Agent shall, without further action by the District, select the particular Bonds to be redeemed in accordance with the mandatory redemption schedule, by lot within each maturity, call the selected Bonds, and give notice of their redemption in accordance with this Section 15.

15.4. If certain maturities of Bonds are subject to both optional and mandatory redemption, the District may elect to apply the Bonds which it has previously optionally redeemed to any mandatory redemption maturity. In addition, if the District purchases Bonds which are subject to mandatory redemption, the District may elect to apply against the mandatory redemption requirement any such Bonds which it has previously purchased. If the District makes such an election, it shall notify the Paying Agent not less than sixty days prior to the mandatory redemption date to which the election applies.

15.5. So long as the BEO System remains in effect with respect to the Bonds, and unless DTC consents to a shorter period, the Paying Agent shall provide not less than 20 days nor more than 60 days' notice of redemption, and shall provide such information in connection therewith as required by the letter of representations submitted to DTC in connection with the issuance of the Bonds.

15.6. During any period in which the BEO System is not in effect with respect to the Bonds, unless waived by any Owner of the Bonds to be redeemed, official notice of any redemption of Bonds shall be given by the Paying Agent on behalf of the District by mailing a copy of an official redemption notice by first class mail postage prepaid at least 20 days and not more than 60 days prior to the date fixed for redemption to the Owner of the Bonds to be redeemed, at the address shown on the Bond Register or at such other address as is furnished in writing by such owner to the Paying Agent. All such official notices of redemption shall be dated and shall state:

A. The redemption date;

B. The redemption price;

C. If less than all Outstanding Bonds are to be redeemed, the identification (and, in the case of partial redemption, the respective principal amounts) of the Bonds to be redeemed;

D. That on the redemption date the redemption price will become due and payable upon each such Bond or portion thereof called for redemption, and that interest thereon shall cease to accrue from and after said date; and

E. The place where such Bonds are to be surrendered for payment of the redemption price, which place of payment shall be the principal office of the Paying Agent.

15.7. The District shall deposit with the Paying Agent, on or before the redemption date, an amount of money sufficient to pay the redemption price of all the Bonds or portions of Bonds which are to be redeemed on that date.

15.8. Official notice of redemption having been given as aforesaid, the Bonds or portions of Bonds 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 District shall default in the payment of the redemption price or unless the notice was conditional as described in Section 15.9) such Bonds or portions of Bonds shall cease to bear interest. Upon surrender of such Bonds for redemption in accordance with said notice, such Bonds shall be paid by the Paying Agent at 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 surrender for any partial redemption of any Bond, there shall be prepared for the registered owner a new Bond of the same maturity in the amount of the unpaid principal. All Bonds which have been redeemed shall be canceled and destroyed by the Paying Agent and shall not be reissued. Notwithstanding that any Bonds called for redemption shall not have been surrendered, no further interest shall accrue on any such Bonds. From and after such notice having been given and such deposit having been made, the Bonds to be redeemed shall not be deemed to be Outstanding hereunder, and the District shall be under no further liability in respect thereof.

15.9. Any notice of optional redemption given for the Bonds pursuant to this Section 15 may state that the optional redemption is conditional upon receipt by the Paying Agent of amounts sufficient to pay the redemption price of such Bonds or upon the satisfaction of any other condition, and/or that such notice may be rescinded upon the occurrence of any other event, and any conditional notice so given may be rescinded at any time before payment of such redemption price if any such condition so specified is not satisfied or if any such other event occurs. Notice of such rescission or of the failure of any such condition shall be given by the Paying Agent to affected owners of the Bonds as promptly as practicable.

Section 16. Authentication, Registration and Transfer.

16.1. The provisions of this Section 16 apply only if the Bonds cease to be a BEO issue, and unless otherwise specified in a Supplemental Declaration or Section 17 herein.

16.2. No Bond shall be entitled to any right or benefit under this Master Declaration unless it shall have been authenticated by an authorized officer of the Paying Agent. The Paying Agent shall authenticate all Bonds to be delivered at Closing, and shall additionally authenticate all Bonds properly surrendered for exchange or transfer pursuant to this Master Declaration.

16.3. All Bonds shall be in registered form. The Paying Agent will be appointed when the District issues publicly offered Bonds. A successor Paying Agent may be appointed for the Bonds by ordinance or resolution of the District. The Paying Agent shall provide notice to Owners of any change in the Paying Agent not later than the Bond payment date following the change in Paying Agent.

16.4. The ownership of all Bonds shall be entered in the Bond register maintained by the Paying Agent and the District and Paying Agent may treat the person listed as owner in the Bond register as the owner of the Bond for all purposes.

16.5. The Paying Agent shall mail each interest payment on the Interest Payment Date (or the next Business Day if the Interest Payment Date is not a Business Day) to the name and address of the Owner, as that name and address appear on the Bond register as of the Record Date. If payment is so mailed, neither the District nor the Paying Agent shall have any further liability to any party for such payment.

16.6. Bonds may be exchanged for an equal principal amount of Bonds of the same Series and maturity which are in different authorized denominations, and Bonds may be transferred to other owners if the Owner submits the following to the Paying Agent:

A. Written instructions for exchange or transfer satisfactory to the Paying Agent, signed by the Owner or his attorney in fact and guaranteed or witnessed in a manner satisfactory to the Paying Agent; and

B. The Bonds to be exchanged or transferred.

16.7. The Paying Agent shall not be required to exchange or transfer any Bonds submitted to it during any period beginning with a Record Date and ending on the next following payment date; however, such Bonds shall be exchanged or transferred promptly following the payment date.

16.8. The Paying Agent shall not be required to exchange or transfer any Bonds which have been designated for redemption if such Bonds are submitted to it during the fifteen-day period preceding the designated redemption date.

16.9. For purposes of this Section, Bonds shall be considered submitted to the Paying Agent on the date the Paying Agent actually receives the materials described in Section 16.6.

16.10. The District may alter these provisions regarding registration and transfer by mailing notification of the altered provisions to all Owners. The altered provisions shall take effect on the date stated in the notice, which shall not be earlier than 45 days after notice is mailed.

Section 17. The Series 2019 Bond.

17.1. Pursuant to the authority of the Ordinance and this Master Declaration, the District has entered into its Series 2019 Bond, a draw-down borrowing, under the WIFIA Loan Agreement for the Willamette Water Project (WIFIA – N18167OR) with the United States Environmental Protection Agency in a maximum principal amount up to $387,748,990.00, dated as of August 2, 2019 (the "WIFIA Loan Agreement"). The amounts disbursed under the Series 2019 Bond shall be a "Bond" and "Parity Bond" as defined in this Master Declaration. The Series 2019 Bond shall bear interest, shall mature and shall have such other terms as outlined in the WIFIA Loan Agreement.

17.2. The amounts disbursed under the Series 2019 Bond shall be special obligations of the District, and shall be payable solely from the Net Revenues and amounts required to be deposited in the Debt Service Account as required and as provided by this Master Declaration. The amounts disbursed under the Series 2019 Bond are not general obligations of the District and are payable solely from the amounts described in the previous sentence. The Series 2019 Bond is not secured by the Bond Reserve Account or any subaccount therein.

17.3. The Series 2019 Bond shall be in substantially the form attached to the WIFIA Loan Agreement and shall be signed with the facsimile or manual signature of an authorized District Official.

17.4. The Series 2019 Bond proceeds shall be used to finance the projects described in the Ordinance and to pay costs incurred in connection with the issuance of the Series 2019 Bond.

17.5. The Series 2019 Bond is placed directly with the United States Environmental Protection Agency and not publicly issued. Because of this, the provisions related to book entry bonds in this Master Declaration do not apply to the Series 2019 Bond.

EXECUTED ON BEHALF OF THE TUALATIN VALLEY WATER DISTRICT BY AN AUTHORIZED DISTRICT OFFICIAL AS OF THE 2ND DAY OF AUGUST, 2019.

Tualatin Valley Water District, Oregon

By: ______________________________
Paul L. Matthews, Chief Financial Officer

Signature Page – Master Water System Revenue Bond Declaration

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First Supplement to Master Water System Revenue Bond Declaration

Tualatin Valley Water District, Oregon

$387,748,990 (Maximum)
WIFIA Loan Agreement
and related Water Revenue Bond, Series 2020
(Re-execution of Series 2019 Bond)

Executed on behalf of the Tualatin Valley Water District, Oregon

As of September 15, 2020

3507809.3 044488 RSIND

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3507809.3 044488 RSIND

FIRST SUPPLEMENT TO MASTER WATER SYSTEM REVENUE BOND DECLARATION

THIS FIRST SUPPLEMENT TO MASTER WATER SYSTEM REVENUE BOND DECLARATION ("First Supplement") is executed as of September 15, 2020, by the District Official of the Tualatin Valley Water District, Oregon (the "District") pursuant to the authority granted to the District Official by the Ordinance. This First Supplement supplements the Master Water System Revenue Bond Declaration of the Borrower dated as of August 2, 2019 (as supplemented and amended from time to time in accordance with the terms thereof, the "Master Declaration"), and provides the terms under which the District's Water Revenue Bond, Series 2020 (the "Series 2020 Bond") is issued.

Unless the context clearly requires otherwise, capitalized terms that are used in this First Supplement but are not defined shall have the meanings defined for those terms in the Master Declaration.

Section 1. Cancellation of the Series 2019 Bond.

1.1. The District issued the Series 2019 Bond and entered into the related WIFIA Loan Agreement with the United States Environmental Protection Agency, acting by and through the Administrator of the Environmental Protection Agency (the "WIFIA Lender") on August 2, 2019 (the "2019 Loan Agreement").

1.2. The District and the WIFIA Lender have agreed to administrative revisions to the 2019 Loan Agreement and to re-execute the 2019 Loan Agreement as of the date hereof. The Series 2020 Bond, described in Section 2 below, and the WIFIA Loan Agreement (defined in Section 2.1 below) will replace the Series 2019 Bond and 2019 Loan Agreement.

1.3 As of the date hereof, the Series 2019 Bond and 2019 Loan Agreement are terminated and cancelled in full and no longer in full force and effect, all as described in Section 40 of the WIFIA Loan Agreement.

Section 2. The Series 2020 Bond.

2.1. Pursuant to the authority of the Ordinance and the Master Declaration, the District has entered into its Series 2020 Bond, a draw-down borrowing, under the WIFIA Loan Agreement for the Willamette Water Project (WIFIA – N18167OR) with the WIFIA Lender in a maximum principal amount up to $387,748,990.00, dated as of September 15, 2020 (the "WIFIA Loan Agreement"). The amounts disbursed under the Series 2020 Bond shall be a "Bond" and "Parity Bond" as defined in the Master Declaration. The Series 2020 Bond shall bear interest, shall mature and shall have such other terms as outlined in the WIFIA Loan Agreement.

2.2. The amounts disbursed under the Series 2020 Bond shall be special obligations of the District, and shall be payable solely from the Net Revenues and amounts required to be deposited in the Debt Service Account as required and as provided by the Master Declaration. The amounts disbursed under the Series 2020 Bond are not general obligations of the District and are payable solely from the amounts described in the previous sentence. The Series 2020 Bond is not secured by the Bond Reserve Account or any subaccount therein.

2.3. The Series 2020 Bond shall be in substantially the form attached to the WIFIA Loan Agreement and shall be signed with the facsimile or manual signature of an authorized District Official.

2.4. The Series 2020 Bond proceeds shall be used to finance the projects described in the Ordinance and to pay costs incurred in connection with the issuance of the Series 2020 Bond.

2.5. The Series 2020 Bond is placed directly with the United States Environmental Protection Agency and not publicly issued. Because of this, the provisions related to book entry bonds in the Master Declaration do not apply to the Series 2020 Bond.

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EXECUTED ON BEHALF OF THE TUALATIN VALLEY WATER DISTRICT BY AN AUTHORIZED DISTRICT OFFICIAL AS OF THE 15th DAY OF SEPTEMBER 2020.

Tualatin Valley Water District, Oregon

By: Paul L. Matthews
Paul L. Matthews, Chief Financial Officer

Signature Page - First Supplement to Master Water System Revenue Bond Declaration
3507809.3 044488 RSIND

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E. Parity Certificate and Transcript Documents

LEGAL CLOSING MEMORANDUM AND INDEX

Tualatin Valley Water District, Oregon
Up to $250,000,000 of Disbursements between October 1, 2020 and September 30, 2023
under the WIFIA Loan Agreement and related Water Revenue Bond, Series 2019
dated August 2, 2019

Listed below are the documents related to the above-captioned disbursements.

Basic Documents

1. Transcript Certification.

Issuer's Documents

2. General Certificate.
3. Parity Certificate, with attached calculations.

Miscellaneous

4. Opinion of Bond Counsel, with attached reliance letter.

3450577.1 041297 CLD

TRANSCRIPT CERTIFICATE

Tualatin Valley Water District, Oregon
Up to $250,000,000 of Disbursements between October 1, 2020 and September 30, 2023 under the WIFIA Loan Agreement and related Water Revenue Bond, Series 2019 dated August 2, 2019

On behalf of Tualatin Valley Water District, Oregon (the "District"), I hereby certify that the attached documents are true copies or duplicate originals of the District's documents that were assembled related to the above-captioned disbursement of up to $250,000,000 between October 1, 2020 and September 30, 2023 under the WIFIA Loan Agreement and the related Water Revenue Bond, Series 2019, through the offices of Hawkins Delafield & Wood LLP, in Portland, Oregon.

3450578.1 041297 CLD

Dated as of the 15th day of May, 2020.

Tualatin Valley Water District, Oregon

By: Paul L Matthews

Paul L. Matthews, Chief Financial Officer

[Transcript Certificate]

3450578.1 041297 CLD

GENERAL CERTIFICATE

Tualatin Valley Water District, Oregon
Up to $250,000,000 of Disbursements between October 1, 2020 and September 30, 2023
Under the WIFIA Loan Agreement and related Water Revenue Bond, Series 2019
dated as of August 2, 2019

On behalf of Tualatin Valley Water District, Oregon (the "District"), I hereby certify as follows regarding the disbursement of up to $250,000,000 between October 1, 2020 and September 30, 2023 under the above-captioned WIFIA Loan Agreement (the "WIFIA Loan") between the District and the United States of America Environmental Protection Agency (the "Agency") and the related Water Revenue Bond, Series 2019 (the "Bond") each of which is dated as of August 2, 2019.

1. I, Paul L. Matthews, certify that I am the Chief Financial Officer of the District, and that I am the duly chosen and qualified officer authorized to execute all documents on behalf of the District pertaining to the WIFIA Loan and the Bond pursuant to Ordinance No. 01-19 (the "2019 Ordinance") enacted by the District Board of Commissioners (the "Board") on April 17, 2019, and Resolution No. 16-19 (the "2019 Resolution," and together with the 2019 Ordinance, the "Ordinance") adopted by the Board on May 15, 2019.

2. The 2019 Ordinance was duly enacted, remains in full force and effect, and has not been rescinded or modified.

3. The 2019 Resolution was duly enacted, remains in full force and effect, and has not been rescinded or modified.

4. The Bond is authorized by a Master Water System Revenue Bond Declaration dated as of August 2, 2019 (the "Declaration"), the WIFIA Loan, and the Ordinance. As of the date hereof and prior to the above-reference disbursements, no bonds have been issued under the Ordinance.

5. The proceeds from disbursements made under the WIFIA Loan and Bond will be used solely as provided in the Ordinance.

6. The proceeds from disbursements made under the WIFIA Loan and Bond will be used in a manner that is consistent with the District's acknowledged land use regulations and the statewide goals of the Land Conservation and Development Commission of the State of Oregon.

7. The District has complied and will comply with the applicable provisions of any budget law which are applicable to the disbursement of up to $250,000,000 between October 1, 2020 and September 30, 2023 under the WIFIA Loan and the Bond.

3450578.1 041297 CLD

Dated as of the 15th day of May, 2020.

Tualatin Valley Water District, Oregon

By:______________________________
Paul L. Matthews, Chief Financial Officer

[General Certificate]

3450578.1 041297 CLD

PARITY CERTIFICATE

Tualatin Valley Water District, Oregon
Up to $250 Million of Disbursements between June 1, 2020 and September 30, 2023
Under the WIFIA Loan Agreement
and related Water Revenue Bond, Series 2019
Dated as of August 2, 2019

On behalf of Tualatin Valley Water District, Oregon (the "District"), I hereby certify as follows in connection with the above-captioned disbursement of up to $250,000,000 between June 1, 2020 and September 30, 2023 under the WIFIA Loan Agreement (the "WIFIA Loan Agreement") and the related Water Revenue Bond, Series 2019 (the "Bond"):

1. The District expects to request disbursements under the WIFIA Loan Agreement in an amount of $250,000,000 over the course of June 1, 2020 through September 30, 2023. The capitalized interest on those disbursement will not exceed $36,796,126.40, for a total borrowing amount of $286,796,126.40. That total borrowing amount, to the extent of principal and regularly scheduled interest payments due on it, is referred to as "Disbursement No. 1" in this certificate.

2. The Bond, to the extent represented by Disbursement No. 1, is being issued as a Bond and a Parity Bond under the Master Water System Revenue Bond Declaration dated August 2, 2019 (the "Declaration"). Capitalized terms used but not defined in this certificate have the meanings defined for those terms in the Declaration.

3. No Event of Default under the Declaration has occurred and is continuing.

4. As of this date, there is no deficiency in the Debt Service Account and all required deposits to all subaccounts in the Bond Reserve Account have been made.

5. The Coverage Revenues (adjusted as provided in Section 7.2 of the Declaration) for the Base Period were not less than one hundred fifteen percent (115%) of Maximum Annual Bond Debt Service on all then Outstanding Bonds, calculated as of this date and with Disbursement No. 1 treated as Outstanding.

6. The Net Revenues (adjusted as provided in Section 7.2 of the Declaration) for the Base Period were not less than one hundred twenty five percent (125%) of Maximum Annual Bond Debt Service on all then Outstanding Bonds, calculated as of this date and with Disbursement No. 1 treated as Outstanding.

Supporting calculations are attached to this certificate.

3450578.1 041297 CLD

Dated as of the 15th day of May, 2020.

Tualatin Valley Water District, Oregon

By:______________________________

Paul L. Matthews, Chief Financial Officer

[Parity Certificate]

3450578.1 041297 CLD

ATTACHMENT TO PARITY CERTIFICATE

Net Revenue Test	
Description	FY2019
Revenues	
Water Services	$69,451,031
Administrative Services	3,633,228
Rental Income	81,979
System Development Charges	6,193,831
Interest Earnings	2,769,322
Gross Revenue	$82,129,391
Operating Expenses	$44,814,711
Less Depreciation and Amortization	(6,896,192)
Less Capitalized Operating Items	(4,904,995)
Net Operating Expenses	$33,013,524
Adjustment for Rate Increases[1]	$2,500,237
Net Revenue	$51,616,104
Maximum Annual Debt Service	$12,489,237
Debt Service Coverage	4.13x

Coverage Revenue Test	
Description	FY2019
Revenues	
Water Services	$69,451,031
Administrative Services	3,633,228
Rental Income	81,979
System Development Charges	6,193,831
Interest Earnings	2,769,322
Gross Revenue	$82,129,391
Operating Expenses	$44,814,711
Less Depreciation and Amortization	(6,896,192)
Less Capitalized Operating Items	(4,904,995)
Net Operating Expenses	$33,013,524
Adjustment for Rate Increases[1]	$2,500,237
Net Revenue	$51,616,104
Less System Development Charges	(6,193,831)
Coverage Revenue	$45,422,273
Maximum Annual Debt Service	$12,489,237
Debt Service Coverage	3.64x

[1]Section of the Declaration allows adjustment of Net Revenue and Coverage Revenue for rate increases that have been adopted by the District and are in effect. On September 18, 2019, the District's Board of Commissioners adopted Resolution 24-19 increasing water rates by 3.6% effective November 1, 2019.

3450578.1 041297 CLD

Hawkins Delafield & Wood LLP

200 SW MARKET STREET, SUITE 350
PORTLAND, OR 97201
WWW.HAWKINS.COM

May 15, 2020

Tualatin Valley Water District
1850 SW 170th Avenue
Beaverton, Oregon 97003

Subject: Up to $250,000,000 of Disbursements between October 1, 2020 and September 30, 2023 under the WIFIA Loan Agreement and Water Revenue Bond dated as of August 2, 2019

Ladies and Gentlemen:

We have acted as bond counsel in connection with the execution and delivery by the Tualatin Valley Water District, Oregon (the "District") of its WIFIA Loan Agreement dated as of August 2, 2019 (the "WIFIA Loan"), between the District and the United States Environmental Protection Agency, an agency of the United States of America, acting by and through the Administrator of the Environmental Protection Agency, and the related WIFIA Water Revenue Bond, Series 2019 (the "WIFIA Bond," and collectively with the WIFIA Loan, the "WIFIA Borrowing"). The WIFIA Borrowing is authorized by Oregon Revised Statutes Section 287A.150 and other relevant provisions of Oregon Revised Statutes Chapter 287A, Ordinance No. 01-19 enacted by the District Board on April 17, 2019 (the "Ordinance"), and the Master Water System Revenue Bond Declaration dated as of August 2, 2019 (the "Declaration"). Capitalized terms used but not defined in this opinion have the respective meanings assigned to such terms in the Declaration.

The District expects to request disbursements under the WIFIA Loan Agreement in an amount of $250,000,000 between October 1, 2020 and September 23, 2023. The capitalized interest on those disbursements will not exceed $37,317,928.45, for a total borrowing amount of $287,317,928.45. That aggregate amount of all such disbursements, including the principal thereof and regularly scheduled interest payments due thereon, is referred to as "Disbursement No. 1" in this opinion.

We have examined the law, and such certified proceedings and other documents as we deem necessary to render this opinion.

We have not been engaged or undertaken to review the accuracy, completeness or sufficiency of any financial disclosure relating to the WIFIA Borrowing, and we express no opinion relating thereto.

Regarding questions of fact material to our opinion, we have relied on representations of the District in the Ordinance, the Declaration, and the WIFIA Borrowing and in the certified proceedings and on other certifications of public officials and others furnished to us without undertaking to verify the same by independent investigation.

Based on the foregoing, we are of the opinion that, under existing law:

1. The WIFIA Borrowing has been duly authorized, executed, and delivered by the District under and pursuant to the Constitution and Statutes of the State of Oregon, the Ordinance, and the Declaration. The WIFIA Borrowing, to the extent represented by Disbursement No. 1 or any portion thereof, constitutes a valid and legally binding special obligation of the District that is enforceable in accordance with its terms.

2. The WIFIA Bond, to the extent represented by Disbursement No. 1 or any portion thereof, is a "Bond" and a "Parity Bond" as defined in the Declaration.

3. Interest on Disbursement No. 1 is not excludable from gross income for federal income tax purposes pursuant to the Internal Revenue Code of 1986, as amended.

4. Interest on Disbursement No. 1 is exempt from Oregon personal income tax.

3450615.1 041297 OPN

Legal Opinion
May 15, 2020
Page 2

Except as stated in paragraphs 3 and 4 above, we express no opinion as to any other federal, state or local tax consequences arising with respect to the WIFIA Borrowing or Declaration or disbursements under the WIFIA Borrowing or the ownership or disposition thereof.

The WIFIA Borrowing provides for draw down borrowings. This opinion only covers Disbursement No. 1. The remaining amount of the WIFIA Borrowing may be disbursed in the future ("Subsequent Disbursements"). We express no opinion herein as to Subsequent Disbursements.

The portion of this opinion that is set forth in paragraph 1, above, is qualified only to the extent that enforceability of the WIFIA Borrowing may be limited by or rendered ineffective by (i) bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other laws affecting creditors' rights generally; (ii) the application of equitable principles and the exercise of judicial discretion in appropriate cases; (iii) common law and statutes affecting the enforceability of contractual obligations generally; and (iv) principles of public policy concerning, affecting or limiting the enforcement of rights or remedies against governmental entities such as the District.

This opinion is limited to matters of Oregon law and applicable federal law and we assume no responsibility as to the applicability of laws of other jurisdictions. This opinion is given as of the date hereof and is based on existing law, and we assume no obligation to update, revise, or supplement this opinion to reflect any action hereafter taken or not taken, or any facts or circumstances that may hereafter come to our attention or any changes in law or interpretations thereof that may hereafter arise or occur, or for any other reason.

This opinion is provided to you as a legal opinion only, and not as a guaranty or warranty of the matters discussed herein. No opinions may be inferred or implied beyond the matters expressly stated herein. No qualification, limitation or exception contained herein shall be construed in any way to limit the scope of the other qualifications, limitations and exceptions. For purposes of this opinion, the terms "law" and "laws" do not include unpublished judicial decisions, and we disclaim the effect of any such decision on this opinion.

We have served as bond counsel only to the District in connection with Disbursement No. 1 and have not represented and are not representing any other party in connection with the WIFIA Borrowing. This opinion is given solely for the benefit of the District in connection with Disbursement No. 1 and may not be relied on in any manner or for any purpose by any person or entity other than the District, and any person to whom we may send a formal reliance letter indicating that the recipient is entitled to rely on this opinion.

Very truly yours,

Hawkins Delafield & Wood LLP

3450615.1 041297 OPN

Hawkins Delafield & Wood LLP

200 SW MARKET STREET, SUITE 350
PORTLAND, OR 97201
WWW.HAWKINS.COM

May 15, 2020

Environmental Protection Agency
WIFIA Director, WJC-W 6201A
1200 Pennsylvania Avenue NW
Washington, DC 20460

Subject: Up to $250,000,000 of Disbursements between October 1, 2020 and September 30, 2023 under the WIFIA Loan Agreement and Water Revenue Bond dated as of August 2, 2019

Ladies and Gentlemen:

We have as of this date delivered our legal opinion, copy attached, with respect to the subject disbursements under the WIFIA Loan Agreement and Water Revenue Bond (collectively, the "WIFIA Borrowing"). You are entitled to rely upon such opinion as if it had been addressed to you originally. We have served only as bond counsel to the Tualatin Valley Water District, Oregon (the "District") in connection with the WIFIA Borrowing and have not and are not representing any other party in connection with the WIFIA Borrowing. Therefore, no attorney-client relationship shall arise by virtue of our addressing this opinion to persons other than the District.

Very truly yours,

Hawkins Delafield & Wood LLP

3450616.1 041297 OPN

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F. PERS Valuation Report

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2021

Tualatin Valley Water District/2842
Oregon Public Employees Retirement System

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2020. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2023 through June 30, 2025 will be calculated in the December 31, 2021 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2020, including Senate Bill 111 and House Bill 2906 which were enacted in June 2021. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact actuarial.services@pers.oregon.gov.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions, and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/Financials/Actuarial-Financial-Information.aspx.

Milliman

December 2021
Tualatin Valley Water District/2842

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations) and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in October 2021.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2023 to June 2025 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendices of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2021
Tualatin Valley Water District/2842

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the Code of Professional Conduct and Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States published by the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. Assumptions related to the healthcare trend (cost inflation) rates for the RHIPA program discussed in this report were determined by Milliman actuaries qualified in such matters.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2020

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tualatin Valley Water District -- #2842

December 2021

CONTENTS

Executive Summary

Milliman has prepared this report for Tualatin Valley Water District to:

- Provide summary December 31, 2020 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide advisory information calculated as of December 31, 2020, on estimated employer-specific contribution rates effective July 1, 2023 through June 30, 2025, and
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2020.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2020 system-wide valuation report. This report develops advisory employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tualatin Valley Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates calculated as of December 31, 2020 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2023 - 2025 Employer Rates Calculated as of December 31, 2020 for Tualatin Valley Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.80%	14.80%	22.14%	9.99%	14.74%
Tier 1/Tier 2 UAL rate[1]	13.84%	13.84%	13.84%	13.84%	13.84%
OPSRP UAL rate	2.09%	2.09%	2.09%	2.09%	2.09%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(2.60%)	(2.60%)	(2.60%)	(2.60%)	(2.60%)
Side account rate relief [2]	(7.78%)	(7.78%)	(7.78%)	(7.78%)	(7.78%)
Member redirect offset[3]	(2.40%)	(2.40%)	(2.40%)	(0.65%)	(0.65%)
Net employer pension contribution rate	**17.95%**	**17.95%**	**25.29%**	**14.89%**	**19.64%**
Retiree Healthcare					
Normal cost rate	0.05%	0.05%	0.05%	0.00%	0.00%
UAL rate	(0.05%)	(0.05%)	(0.05%)	0.00%	0.00%
Net retiree healthcare rate	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Total net employer contribution rate	**17.95%**	**17.95%**	**25.29%**	**14.89%**	**19.64%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members, and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) will offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 UAL Contribution Rates for the July 2023 to June 2025 Biennium

The rate collar limits changes in the UAL Rate for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts and does not limit the change in the normal cost rate. The table below shows the possible minimum and maximum UAL Rates for the SLGRP first effective as of July 1, 2023. The collar width, which in general is the amount the UAL Rate could increase or decrease from the current UAL Rate being paid, is 3% of pay. However, the UAL Rate is only allowed to decrease by the full collar width if the funded status (excluding side accounts) of the SLGRP is greater than or equal to 90%. The UAL Rate is not allowed to decrease at all if funded status is below 87%, and the allowable decrease is phased in for funded status levels from 87% to 90%.

For comparison, the Pool's funded status as of December 31, 2020 is 69%.

2021-2023 Biennium	2023-2025 Biennium	
	15.46%	**<<<No higher than this**
12.46%	12.46%	**<<<No lower than this if December 31, 2021 funded status is 87% or lower**
	9.46%	**<<<No lower than this if December 31, 2021 funded status is 90% or higher**

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's pre-SLGRP pooled liability rate, transition liability rate, and side account rate offset.

Normal Cost Rates

As seen on the prior page, the other large rate components are the normal cost rates for the Tier 1/Tier 2 and OPSRP programs. The normal cost rate represents the projected cost of benefits earned by current year service.

The normal cost rate in any biennium is driven by the active member demographics of the experience pooling groups in which the employer's members participate. While the active member census as of December 31, 2021 will be used to calculate the adopted 2023 - 2025 biennium normal cost rate, the active member census used in this advisory valuation should be similar for the large experience pooling groups.

Each biennium's normal cost rate is also sensitive to the investment return assumption, or assumed rate, adopted by the PERS Board for the valuation. The lower the assumed rate, the higher the normal cost rate. The 2023 - 2025 biennium's normal cost rate will be based on a 6.90% assumed rate adopted by the PERS Board during 2021, which is a decrease from the 7.20% assumed rate used in calculating the 2021 - 2023 normal cost rate. To illustrate the sensitivity of the assumption, the decrease in the assumed rate increased system-average normal cost rates by approximately 1.15% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68 (GASB 68), which replaced Statement No. 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Retiree Healthcare

In June 2015, the GASB issued Statement 75 (GASB 75), which replaced Statement No. 45 and governs employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods, or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tualatin Valley Water District

	Actuarial Valuation as of	
	December 31, 2020	**December 31, 2019**
Allocated pooled SLGRP T1/T2 UAL	$25,889,364	$22,810,796
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,042,240)	(2,308,885)
Allocated pooled OPSRP UAL	2,607,915	1,992,704
Side account	11,736,618	11,993,777
Net unfunded pension actuarial accrued liability	14,718,421	10,500,838
Combined valuation payroll	12,740,341	12,121,404
Net pension UAL as a percentage of payroll	116%	87%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.60%)	(2.77%)
Side account rate relief	(7.78%)	(8.10%)
Allocated pooled RHIA UAL	($292,626)	($252,491)
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to the combined valuation payroll of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2020	Actuarial Valuation as of December 31, 2019
Normal cost	$350.5	$336.6
Tier 1/Tier 2 valuation payroll	2,089.0	2,183.5
Normal cost rate	16.78%	15.41%
Actuarial accrued liability	$46,382.2	$44,122.1
Actuarial asset value	31,884.9	31,384.1
Unfunded actuarial accrued liability	14,497.4	12,738.0
Funded status	69%	71%
Combined valuation payroll	$7,134.3	$6,768.8
UAL as a percentage of payroll	203%	188%
UAL rate[1]	13.84%	12.60%
State and Community College Pre-SLGRP Pooled Liability	$362.9	$408.7
LGRP Pooled Liability	(155.8)	(174.9)
Total Transition Liability	(499.7)	(553.5)
Tier 1/Tier 2 Active Members		
▪ Count	23,191	25,581
▪ Average Age	54.5	54.2
▪ Average Service	22.6	21.9
▪ Average Valuation Salary (in dollars)	$90,076	$85,356
Tier 1/Tier 2 Dormant Members		
▪ Count	14,901	15,710
▪ Average Age	57.6	57.3
▪ Average Monthly Benefit (in dollars)	$1,472	$1,428
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	90,963	89,575
▪ Average Age	72.4	72.0
▪ Average Monthly Benefit (in dollars)	$2,449	$2,381

[1] *The December 31, 2020 UAL rate shown for the SLGRP includes 0.14% for Multnomah Fire District #10 (0.14% at December 31, 2019). The City of Portland pays an additional 0.95% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.14% (0.97% and 0.14% respectively at December 31, 2019).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2020	December 31, 2019
General service normal cost	$731.3	$582.1
OPSRP general service valuation payroll	7,322.9	6,740.9
General service normal cost rate	9.99%	8.64%
Police and fire normal cost	$152.2	$119.5
OPSRP police and fire valuation payroll	1,032.6	919.0
Police and fire normal cost rate	14.74%	13.00%
Actuarial accrued liability	$10,008.1	$8,082.2
Actuarial asset value	7,548.8	6,190.4
Unfunded actuarial accrued liability	2,459.3	1,891.8
Funded status	75%	77%
Combined valuation payroll	$12,042.7	$11,533.7
UAL as a percentage of payroll	20%	16%
UAL rate	2.09%	1.69%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2020**	**December 31, 2019**
Normal cost	$1.7	$1.9
Tier 1 / Tier 2 valuation payroll	3,687.3	3,873.9
Normal cost rate	0.05%	0.05%
Actuarial accrued liability	$383.6	$403.9
Actuarial asset value	660.2	644.1
Unfunded actuarial accrued liability	(276.6)	(240.3)
Funded status	172%	159%
Combined valuation payroll	$12,042.7	$11,533.7
UAL as a percentage of payroll	(2%)	(2%)
UAL rate	0.00%	0.00%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2020**	**December 31, 2019**
Normal cost	$1.0	$1.2
Tier 1 / Tier 2 valuation payroll	1,091.8	1,120.6
Normal cost rate	0.09%	0.11%
Actuarial accrued liability	$48.0	$59.3
Actuarial asset value	63.6	51.9
Unfunded actuarial accrued liability	(15.6)	7.4
Funded status	133%	87%
Combined valuation payroll	$3,712.6	$3,479.8
UAL as a percentage of payroll	0%	0%
UAL rate	(0.09%)	0.17%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Total Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2020			December 31, 2019		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	18.14%	$959,711	$174,092	16.64%	$1,263,076	$210,176
Tier 2 General Service	13.87%	3,425,010	475,049	12.67%	3,368,457	426,784
Total General Service		**4,384,721**	**649,141**		**4,631,533**	**636,960**
Tier 1 Police & Fire	23.86%	0	0	21.76%	0	0
Tier 2 Police & Fire	21.58%	0	0	19.69%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$4,384,721**	**$649,141**		**$4,631,533**	**$636,960**
Total normal cost rate						
General Service			**14.80%**			**13.75%**
Police & Fire			**22.14%**			**20.28%**
Aggregate (Default)			**14.80%**			**13.75%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost rate of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2019	($2,308,885)
2. January 1, 2020 through June 30, 2020	
A. Transition liability/(surplus) rate[1]	(3.19%)
B. Actual employer payroll	6,080,908
C. Payment to transition liability/(surplus)	(193,981)
3. July 1, 2020 through December 31, 2020	
A. Transition liability/(surplus) rate[1]	(3.19%)
B. Actual employer payroll	6,577,721
C. Payment to transition liability/(surplus)	(209,829)
4. Supplemental payment to transition liability	0
5. Interest	(137,165)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2020 *(1. - 2C. - 3C. - 4. + 5. + 6.)*	**($2,042,240)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2020	December 31, 2019
1. Total transition liability/(surplus)	(2,042,240)	(2,308,885)
2. Combined valuation payroll	12,740,341	12,121,404
3. Regular amortization factor	6.158	6.875
4. **Total transition liability/(surplus) rate**	**(2.60%)**	**(2.77%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2019	**N/A**	**$11,993,777**	**$11,993,777**
2. Deposits during 2020			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2020		(1,050,095)	(1,050,095)
5. Side account earnings during 2020		793,937	793,937
6. Side account as of December 31, 2020 ***(1. + 2. + 3. + 4. + 5.)***		**$11,736,618**	**$11,736,618**

Side Account Information

Side Account Balances

	December 31, 2020	December 31, 2019
Side Account 1	$887,477	$1,001,165
Side Account 2	10,849,141	10,992,612
Side Account 3	0	0
Side Account 4	0	0
Side Account 5	0	0
Total	**$11,736,618**	**$11,993,777**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the default fixed period ends 18 years after the first rate-setting valuation following its creation, though employers can select a shorter period under certain specified circumstances. For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

	December 31, 2020			December 31, 2019		
	Combined valuation payroll		$12,740,341	Combined valuation payroll		$12,121,404
	Side account balance	Amortization factor	Side account rate	Side account balance	Amortization factor	Side account rate
1.	$887,477	6.158	(1.13%)	$1,001,165	6.875	(1.20%)
2.	10,849,141	12.802	(6.65%)	10,992,612	13.151	(6.90%)
3.	0		0.00%	0		0.00%
4.	0		0.00%	0		0.00%
5.	0		0.00%	0		0.00%
Total	**$11,736,618**		**(7.78%)**	**$11,993,777**		**(8.10%)**

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2020 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10-year period. If a Retiree Healthcare program is over 100% funded the actuarial surplus is amortized over a rolling 20-year period over Tier 1/Tier 2 payroll. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which set actuarially determined contribution rates for the 2021-2023 biennium. Future Tier 1/Tier 2 gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to OPSRP and to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The UAL Rate contributon rate component is confined to a collared range based on the prior biennium's collared UAL Rate and a defined collar width. The UAL Rate is not allowed to decrease if the funded status of the rate pool or employer is 87% or lower. The rate collar does not limit the change in the normal cost rate or changes for individual employers related to side accounts.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Investment return	6.90% compounded annually on system assets.
Interest crediting	6.90% compounded annually on members' regular account balances. 6.90% compounded annually on members' variable account balances.
Inflation	2.40% per year.
Payroll Growth	3.40% per year.
Healthcare cost trend	Ranging from 5.9% in 2021 to 3.9% in 2074.
Administrative Expenses	$59 million per year is added to the total system normal cost and allocated between Tier 1/Tier 2 and OPSRP based on valuation payroll.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2019 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Allocation Procedures

- The rate collar methodology was revised to only restrict changes in the UAL Rate component and to narrow the width of allowable changes.
- The UAL Rate amortization methodologies for the RHIA and RHIPA programs were changed to allow a limited rate offset when a program is in an actuarial surplus position (over 100% funded).
- The assumed system-average level of member redirect contributions to Tier 1/Tier 2 and OPSRP was updated to reflect the projected effects of House Bill 2906.

Changes in Economic Assumptions

- The long-term inflation assumption was lowered from 2.50% to 2.40% and the system payroll growth assumption was lowered from 3.50% to 3.40%.
- The assumed average annual long-term investment return was lowered from 7.20% to 6.90%.
- Interest crediting on regular and variable member accounts was also lowered to 6.90%.
- Assumed administrative expenses were updated and changed to a combined assumption for both Tier 1/Tier 2 and OPSRP.

Changes in Demographic Assumptions

- The base mortality assumption was changed for School District males and an updated future mortality improvement projection scale was adopted for all groups.
- Termination, disability and retirement rates were updated for some groups to more closely match observed and anticipated future experience.
- Assumptions for merit increases, unused sick leave, and vacation pay were updated.
- The assumed healthcare cost trend rates for the RHIPA program as well as the participation assumptions for both RHIA and RHIPA were updated.

A complete summary of all assumptions used as part of the December 31, 2020 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report. The following changes made since the prior valuation were reflected in the December 31, 2020 actuarial valuation:

- Senate Bill 111, signed on June 1, 2021, increased the death benefit payable to a surviving spouse when a retirement-eligible member dies. Previously, the benefit was based on 50% of the actuarial equivalent value of the member's retirement benefit, but this was increased to 100% of the actuarial equivalent value.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement, rates of investment earnings, and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability/(Surplus)

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability/(Surplus)

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A contribution rate setting methodology that defines the maximum biennium-to-biennium change in the UAL contribution rate for a given experience-sharing pool.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions. The standard replaced GASB 27 for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions. The standard replaced GASB Statement 45 for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rates.

Transition Liability/(Surplus)

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool. The initial balance of liability or surplus is calculated at the time an employer joins the pool. That balance is then amortized over time via employer contribution rate charges (for a liability) or rate offsets (for a surplus).

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

G. Forecast Model Summary Results

TVWD Forecast Model Summary

Table 1
Tualatin Valley Water District
2022-23 Financial Plan
45-year Categorical CIP Summary (Escalated)

Category	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
WWSP	$52,281,222	$209,164,655	$245,467,340	$120,323,342	$36,330,785	$3,842,131	$2,150,775	$1,731,997	$15,789,026
JWC	553,480	145,880	259,740	706,190	649,930	1,027,420	984,730	1,095,020	1,133,310
TVWD Source	4,140,080	5,497,600	499,000	229,500	1,487,000	0	0	0	0
Storage	1,520,020	6,240,000	7,994,100	524,300	0	1,610,000	2,585,100	88,100	91,200
Pumping	1,305,600	1,928,100	5,314,000	5,627,500	173,500	1,614,500	2,416,000	192,500	199,000
Pipelines	37,670,915	75,439,031	46,941,486	21,252,786	11,332,734	12,718,114	13,917,530	19,740,000	21,251,050
PRVs/Vaults	721,000	1,910,500	673,000	295,000	399,000	500,500	381,500	592,500	409,000
Facilities	981,100	926,800	0	0	0	340,700	2,007,650	365,000	377,750
Fleet	459,000	815,000	724,500	782,500	809,500	838,000	867,500	897,500	929,000
IT	4,416,000	0	0	0	0	0	0	0	0
Meters/Svcs	1,787,000	1,850,500	1,914,500	1,983,500	2,053,500	2,123,000	2,239,000	2,316,000	2,398,500
Other/Undefined	0	890,850	2,398,400	1,965,900	4,321,200	4,508,850	6,924,900	7,167,250	16,484,950
Capital Outlays from O&M	495,600	210,350	500,000	522,500	546,013	570,583	596,259	623,091	651,130
Totals	$106,331,017	$305,019,266	$312,686,066	$154,213,019	$58,103,162	$29,693,797	$35,070,944	$34,808,958	$59,713,916

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TVWD Forecast Model Summary

Table 1
Tualatin Valley Water District
2022-23 Financial Plan
45-year Categorical CIP Summary (Escalated)

Category	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039
WWSP	$15,621,986	$1,121,407	$1,846,306	$5,514,434	$19,394,811	$43,632,662	$1,881,850	$0	$0
JWC	1,106,890	1,376,700	1,300,370	1,345,810	1,232,890	1,314,700	1,463,560	1,366,980	1,231,080
TVWD Source	0	0	0	0	0	0	0	0	0
Storage	94,400	3,417,700	3,536,000	104,500	108,500	3,827,000	3,961,000	4,609,500	6,543,500
Pumping	206,000	1,184,250	1,225,500	1,269,000	1,313,500	1,359,000	1,406,500	1,456,000	1,506,500
Pipelines	17,677,200	32,617,430	51,859,270	36,022,700	39,431,730	33,367,870	32,662,120	25,761,990	43,457,450
PRVs/Vaults	423,000	438,000	453,500	469,000	485,500	502,500	520,000	538,500	557,000
Facilities	391,000	404,650	418,850	433,500	448,650	464,350	480,600	497,450	514,850
Fleet	961,500	995,500	1,030,000	1,065,000	1,105,000	1,140,000	1,180,000	1,225,000	1,265,000
IT	0	0	0	0	0	0	0	0	0
Meters/Svcs	2,481,500	2,570,000	2,658,500	2,753,000	2,848,000	2,948,000	3,054,000	3,160,500	3,272,500
Other/Undefined	11,730,000	12,140,500	12,565,500	13,005,500	13,460,500	13,931,500	14,419,500	14,924,000	15,446,500
Capital Outlays from O&M	680,431	711,050	743,048	776,485	811,427	847,941	886,098	925,972	967,641
Totals	$51,373,907	$56,977,187	$77,636,843	$62,758,929	$80,640,508	$103,335,523	$61,915,228	$54,465,892	$74,762,021

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Table 1
Tualatin Valley Water District
2022-23 Financial Plan
45-year Categorical CIP Summary (Escalated)

Category	FY2040	FY2041	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048
WWSP	$125,346	$13,523,188	$7,172	$0	$28,815	$7,832,068	$88,417,531	$40,141,005	$4,148,500
JWC	1,602,560	1,512,270	1,840,170	1,728,850	1,898,470	1,964,960	1,620,790	1,822,660	7,637,800
TVWD Source	0	0	0	0	0	0	0	0	0
Storage	4,391,500	4,545,500	5,641,000	10,414,000	7,549,500	25,166,500	5,398,500	6,977,500	11,913,500
Pumping	3,744,500	6,134,000	1,670,500	1,729,000	1,789,500	1,852,500	1,917,000	1,984,000	2,053,500
Pipelines	50,302,550	26,520,000	24,655,000	41,166,000	25,494,000	30,721,000	26,487,500	30,914,500	25,653,000
PRVs/Vaults	577,000	597,000	618,000	639,500	662,000	685,000	709,000	734,000	759,500
Facilities	532,850	551,500	570,800	590,800	611,500	632,900	655,050	677,950	701,700
Fleet	1,310,000	1,355,000	1,405,000	1,455,000	1,505,000	1,555,000	1,610,000	1,665,000	1,725,000
IT	0	0	0	0	0	0	0	0	0
Meters/Svcs	3,385,000	3,503,000	3,627,000	3,751,500	3,882,000	4,017,500	4,159,500	4,306,500	4,455,000
Other/Undefined	15,987,000	16,546,500	17,125,500	17,725,000	18,345,500	18,987,500	19,652,000	20,340,000	21,052,000
Capital Outlays from O&M	1,011,185	1,056,688	1,104,239	1,153,930	1,205,857	1,260,121	1,316,826	1,376,083	1,438,007
Totals	$82,969,491	$75,844,647	$58,264,382	$80,353,580	$62,972,142	$94,675,048	$151,943,697	$110,939,198	$81,537,507

TVWD Forecast Model Summary

Table 1
Tualatin Valley Water District
2022-23 Financial Plan
45-year Categorical CIP Summary (Escalated)

Category	FY2049	FY2050	FY2051	FY2052	FY2053	FY2054	FY2055	FY2056	FY2057
WWSP	$0	$5,519,986	$863,935	$4,974,454	$0	$0	$188,916	$65,537,697	$38,763,064
JWC	7,905,100	8,182,050	8,533,120	9,004,050	1,992,900	2,062,700	2,134,550	2,286,430	2,570,900
TVWD Source	0	0	0	0	0	0	0	0	0
Storage	13,255,000	52,018,500	6,224,000	6,442,000	6,667,500	6,900,500	7,142,000	7,392,000	7,651,000
Pumping	2,125,500	2,200,000	2,240,300	2,318,850	2,399,900	2,483,900	2,570,850	2,660,850	2,754,400
Pipelines	26,547,000	27,482,000	29,014,950	30,030,200	31,081,400	32,169,550	33,295,250	34,461,000	35,666,300
PRVs/Vaults	786,000	813,500	169,800	175,750	181,900	188,250	194,850	201,700	208,750
Facilities	726,250	751,650	777,950	805,200	833,400	862,550	892,750	924,000	956,300
Fleet	1,785,000	1,850,000	1,401,500	1,450,500	1,501,500	1,554,000	1,608,500	1,665,000	1,723,000
IT	0	0	0	0	0	0	0	0	0
Meters/Svcs	4,614,000	4,773,500	4,013,500	4,154,000	4,299,500	4,450,000	4,606,000	4,767,000	4,934,000
Other/Undefined	21,788,500	22,551,000	23,340,500	24,157,500	25,003,000	25,878,000	26,783,500	27,721,000	28,691,500
Capital Outlays from O&M	1,502,717	1,570,340	1,641,005	1,714,850	1,792,018	1,872,659	1,956,929	2,044,991	2,137,015
Totals	$81,035,067	$127,712,526	$78,220,560	$85,227,354	$75,753,018	$78,422,109	$81,374,094	$149,661,667	$126,056,229

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Table 1
Tualatin Valley Water District
2022-23 Financial Plan
45-year Categorical CIP Summary (Escalated)

Category	FY2058	FY2059	FY2060	FY2061	FY2062	FY2063	FY2064	FY2065	FY2066
WWSP	$19,363,000	$2,004,000	$74,182	$101,096	$0	$7,215,336	$57,335	$3,911,581	$123,714,313
JWC	2,366,800	2,449,350	2,535,050	2,715,420	3,053,500	2,810,600	2,909,650	3,011,350	3,224,800
TVWD Source	0	0	0	0	0	0	0	0	0
Storage	7,918,500	8,196,000	8,482,500	8,779,500	9,087,000	9,405,000	9,734,000	10,075,000	10,427,500
Pumping	2,850,450	2,950,550	3,053,750	3,160,550	3,271,000	3,385,600	3,503,800	3,626,750	3,753,400
Pipelines	36,915,300	38,207,000	39,544,500	40,928,500	42,361,000	43,843,000	45,378,000	46,966,000	48,610,000
PRVs/Vaults	216,050	223,600	231,450	239,550	247,900	256,600	265,600	274,850	284,500
Facilities	989,800	1,024,500	1,060,500	1,097,500	1,136,000	1,175,500	1,216,500	1,259,500	1,303,500
Fleet	1,783,500	1,845,500	1,910,500	1,977,000	2,046,500	2,118,000	2,192,000	2,269,000	2,348,500
IT	0	0	0	0	0	0	0	0	0
Meters/Svcs	5,106,500	5,285,500	5,470,500	5,661,500	5,860,000	6,065,000	6,277,500	6,497,000	6,724,500
Other/Undefined	29,695,500	30,735,000	31,810,500	32,924,000	34,076,500	35,269,000	36,503,500	37,781,000	39,103,500
Capital Outlays from O&M	2,233,181	2,333,674	2,438,689	2,548,430	2,663,110	2,782,950	2,908,182	3,039,050	3,175,808
Totals	$109,438,581	$95,254,674	$96,612,121	$100,133,047	$103,802,510	$114,326,586	$110,946,068	$118,711,082	$242,670,321

TVWD Forecast Model Summary

Table 2
Tualatin Valley Water District
2022-23 Financial Plan
Funding Sources for Improvements

Description	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Funding Summary										
Capital Projects & Outlays from Cash/Reserves	$101,547,241	$42,966,257	$151,319,994	$51,238,856	$53,544,964	$25,276,904	$30,802,830	$30,697,342	$55,766,764	$47,599,443
Projects funded from Debt Proceeds (incl fund Int.)	0	257,500,000	156,809,627	98,415,965	0	0	0	0	0	0
SDC-Funded Capital Projects	4,783,776	4,553,009	4,556,445	4,558,198	4,558,198	4,416,893	4,268,114	4,111,616	3,947,152	3,774,464
Totals	$106,331,017	$305,019,266	$312,686,066	$154,213,019	$58,103,162	$29,693,797	$35,070,944	$34,808,958	$59,713,916	$51,373,907
Funding Split										
Capital Projects & Outlays from Cash/Reserves	95.5%	14.1%	48.4%	33.2%	92.2%	85.1%	87.8%	88.2%	93.4%	92.7%
Projects funded from Debt Proceeds (incl fund Int.)	0.0%	84.4%	50.1%	63.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SDC-Funded Capital Projects	4.5%	1.5%	1.5%	3.0%	7.8%	14.9%	12.2%	11.8%	6.6%	7.3%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Check	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 2
Tualatin Valley Water District
2022-23 Financial Plan
Funding Sources for Improvements

Description	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Funding Summary										
Capital Projects & Outlays from Cash/Reserves	$53,383,897	$74,233,485	$59,554,536	$77,644,400	$100,557,314	$59,364,832	$52,153,534	$72,698,241	$81,165,157	$74,310,963
Projects funded from Debt Proceeds (incl fund Int.)	0	0	0	0	0	0	0	0	0	0
SDC-Funded Capital Projects	3,593,290	3,403,359	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780	1,804,333	1,533,683
Totals	$56,977,187	$77,636,843	$62,758,929	$80,640,508	$103,335,523	$61,915,228	$54,465,892	$74,762,021	$82,969,491	$75,844,647
Funding Split										
Capital Projects & Outlays from Cash/Reserves	93.7%	95.6%	94.9%	96.3%	97.3%	95.9%	95.8%	97.2%	97.8%	98.0%
Projects funded from Debt Proceeds (incl fund Int.)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SDC-Funded Capital Projects	6.3%	4.4%	5.1%	3.7%	2.7%	4.1%	4.2%	2.8%	2.2%	2.0%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Check	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Table 2
Tualatin Valley Water District
2022-23 Financial Plan
Funding Sources for Improvements

Description	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Funding Summary										
Capital Projects & Outlays from Cash/Reserves	$57,012,896	$79,396,194	$62,321,119	$94,343,027	$151,943,697	$110,939,198	$81,537,507	$81,035,067	$127,712,526	$78,220,560
Projects funded from Debt Proceeds (incl fund Int.)	0	0	0	0	0	0	0	0	0	0
SDC-Funded Capital Projects	1,251,486	957,387	651,023	332,022	0	0	0	0	0	0
Totals	$58,264,382	$80,353,580	$62,972,142	$94,675,048	$151,943,697	$110,939,198	$81,537,507	$81,035,067	$127,712,526	$78,220,560
Funding Split										
Capital Projects & Outlays from Cash/Reserves	97.9%	98.8%	99.0%	99.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Projects funded from Debt Proceeds (incl fund Int.)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SDC-Funded Capital Projects	2.1%	1.2%	1.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Check	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Table 3
Tualatin Valley Water District
2022-23 Financial Plan
Projected LTD Sizing & Debt Service Assumptions

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
PROJECTED DEBT ISSUE SIZING										
Total Cost of Debt-Eligible Projects	$105,835,417	$304,808,916	$312,186,066	$153,690,519	$57,557,149	$29,123,214	$34,474,685	$34,185,867	$59,062,786	$50,693,476
Total Debt-Eligible Capital Project Costs (after other funding)	101,051,641	300,255,907	126,561,703	98,414,450	52,998,951	24,706,321	30,206,571	30,074,251	55,115,634	46,919,012
Issue Proceeds, Costs, & Reserves Estimates										
Bond Proceeds Requested	$0	$0	$126,561,703	$98,414,450	$0	$0	$0	$0	$0	$0
Issuance Costs	0.75%	0.75%	0.75%	0.75%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Reserve Req. Selected: Minimum of 3-Prong Test	0.00%	0.00%	7.21%	7.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Issue Sizing										
Rev. Bonds Issue Sizing Formulas	$0	$0	$137,511,158	$106,793,355	$0	$0	$0	$0	$0	$0
Rev. Bonds Issue Size used in model	$0	$0	$137,510,000	$106,795,000	$0	$0	$0	$0	$0	$0
Summary of Costs and Reserves by Issue										
Issuance Costs	$0	$0	$1,031,325	$800,963	$0	$0	$0	$0	$0	$0
Reserve Requirement	0	0	9,918,038	7,578,072	0	0	0	0	0	0
Proceeds Used in model forecast	$0	$0	$126,560,637	$98,415,965	$0	$0	$0	$0	$0	$0
LTD Proceeds Used in model forecast	$0	$0	$126,560,637	$98,415,965	$0	$0	$0	$0	$0	$0
Difference recouped from (or added to) Rates/Reserves	0	0	1,066	(1,516)	0	0	0	0	0	0
DEBT SERVICE FORECASTING										
Debt Service Requirements										
Term (Years)	30	30	30	30	30	30	30	30	30	30
Interest Rate	4.50%	5.00%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
New Debt Service										
Annual Debt Service Costs	$0	$0	$9,461,429	$7,348,072	$0	$0	$0	$0	$0	$0
Accumulated Debt Service	0	0	3,781,525	10,499,913	13,436,775	13,436,775	17,496,110	17,496,110	17,496,110	17,496,110
Check Proceeds	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 3
Tualatin Valley Water District
2022-23 Financial Plan
Projected LTD Sizing & Debt Service Assumptions

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
PROJECTED DEBT ISSUE SIZING										
Total Cost of Debt-Eligible Projects	$56,266,137	$76,893,796	$61,982,444	$79,829,081	$102,487,582	$61,029,130	$53,539,920	$73,794,380	$81,958,306	$73,643,958
Total Debt-Eligible Capital Project Costs (after other funding)	52,672,847	73,490,437	58,778,051	76,832,974	99,709,373	58,478,734	51,227,561	71,730,600	80,153,972	72,110,275
Issue Proceeds, Costs, & Reserves Estimates										
Bond Proceeds Requested	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Issuance Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Reserve Req. Selected: Minimum of 3-Prong Test	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Issue Sizing										
Rev. Bonds Issue Sizing Formulas	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rev. Bonds Issue Size used in model	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Summary of Costs and Reserves by Issue										
Issuance Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reserve Requirement	0	0	0	0	0	0	0	0	0	0
Proceeds Used in model forecast	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LTD Proceeds Used in model forecast	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Difference recouped from (or added to) Rates/Reserves	0	0	0	0	0	0	0	0	0	0
DEBT SERVICE FORECASTING										
Debt Service Requirements										
Term (Years)	30	30	30	30	30	30	30	30	30	30
Interest Rate	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
New Debt Service										
Annual Debt Service Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Accumulated Debt Service	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110
Check Proceeds	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 3
Tualatin Valley Water District
2022-23 Financial Plan
Projected LTD Sizing & Debt Service Assumptions

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
PROJECTED DEBT ISSUE SIZING										
Total Cost of Debt-Eligible Projects	$57,160,142	$79,199,650	$61,766,285	$93,414,928	$150,626,871	$109,563,115	$80,099,500	$79,532,350	$120,630,686	$76,579,555
Total Debt-Eligible Capital Project Costs (after other funding)	55,908,657	78,242,263	61,115,262	93,082,906	150,626,871	109,563,115	80,099,500	79,532,350	120,630,686	76,579,555
Issue Proceeds, Costs, & Reserves Estimates										
Bond Proceeds Requested	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Issuance Costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Reserve Req. Selected: Minimum of 3-Prong Test	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Issue Sizing										
Rev. Bonds Issue Sizing Formulas	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rev. Bonds Issue Size used in model	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Summary of Costs and Reserves by Issue										
Issuance Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reserve Requirement	0	0	0	0	0	0	0	0	0	0
Proceeds Used in model forecast	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LTD Proceeds Used in model forecast	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Difference recouped from (or added to) Rates/Reserves	0	0	0	0	0	0	0	0	0	0
DEBT SERVICE FORECASTING										
Debt Service Requirements										
Term (Years)	30	30	30	30	30	30	30	30	30	30
Interest Rate	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
New Debt Service										
Annual Debt Service Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Accumulated Debt Service	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110	17,496,110
Check Proceeds	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 4
Tualatin Valley Water District
2022-23 Financial Plan
WIFIA Loan Sizing & Debt Service Assumptions

		Totals	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
WIFIA Proceeds and Ratio based on TVWD Cost Shares									
WWSP Project Costs		$790,824,470							
EPA WIFIA Issuance Costs		500,000							
Total WWSP/WIFIA Costs		$791,324,470							
Less: Ineligible Costs		0							
Total Eligible WWSP/WIFIA Costs		$791,324,470							
WIFIA Proceeds Requests		$387,748,990	$100,000,000	$257,500,000	$30,248,990	$0	$0	$0	NA
WIFIA %		**49.00%**							
WIFIA Loan Sizing									
WIFIA Proceeds *(FY2027 DSR amt. based on MADS)*		$387,748,990	$100,000,000	$257,500,000	$30,248,990	$0	$0	$0	$0
Capitalized Interest on Proceeds	TRUE	28,228,424	7,801,878	18,538,514	1,888,032	0	0	0	NA
WIFIA Debt		$415,977,414	$107,801,878	$276,038,514	$32,137,022	$0	$0	$0	$0
Debt Service Requirements									
# of Level Payments	67								
Interest Rate	1.35%								
First Repayment Year	FY2028								
Summary of WIFIA Proceeds and Requirements									
Issuance Costs		NA	$0	$0	$0	$0	$0	$0	NA
Reserves		NA	$100,000,000	$0	$0	$0	$0	$0	NA
WIFIA Proceeds for WWSP Projects		$387,748,990	$0	$257,500,000	$30,248,990	$0	$0	$0	$0

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TVWD Forecast Model Summary

Table 5
Tualatin Valley Water District
2022-23 Financial Plan
Total Annual Debt Service and Balance Summary

Description	Subject to Req?	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Existing Debt Service											
None	TRUE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
BANs Interest (if applicable)	FALSE	0	0	0	0	0	0	0	0	0	0
Totals		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amount Subject to Coverage		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Debt Service on Proposed Debt											
Future Revenue Bonds	TRUE	$0	$0	$3,781,525	$10,499,913	$13,436,775	$13,436,775	$17,496,110	$17,496,110	$17,496,110	$17,496,110
WIFIA Loan	TRUE	0	0	0	0	0	0	7,738,582	15,477,165	15,477,165	15,477,165
Total Debt Service Subject to Coverage		$0	$0	$3,781,525	$10,499,913	$13,436,775	$13,436,775	$25,234,693	$32,973,275	$32,973,275	$32,973,275
Total Interest Expense		$0	$0	$3,781,525	$10,499,913	$13,436,775	$13,436,775	$16,188,807	$18,667,137	$18,289,964	$17,897,457
Ending Debt Balances											
Future Revenue Bonds		$0	$0	$137,510,000	$244,305,000	$244,305,000	$244,305,000	$240,189,849	$235,845,252	$231,258,417	$226,415,837
WIFIA Loan		0	0	0	0	0	0	411,046,679	401,085,138	390,988,661	380,755,423
Total Debt Balance		$0	$0	$137,510,000	$244,305,000	$244,305,000	$244,305,000	$651,236,528	$636,930,390	$622,247,078	$607,171,260

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Table 5
Tualatin Valley Water District
2022-23 Financial Plan
Total Annual Debt Service and Balance Summary

Description	Subject to Req?	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Existing Debt Service											
None	TRUE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
BANs Interest (if applicable)	FALSE	0	0	0	0	0	0	0	0	0	0
Totals		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amount Subject to Coverage		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Debt Service on Proposed Debt											
Future Revenue Bonds	TRUE	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
WIFIA Loan	TRUE	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Total Debt Service Subject to Coverage		$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275
Total Interest Expense		$17,488,837	$17,063,286	$16,619,938	$16,157,882	$15,676,154	$15,173,742	$14,649,576	$14,102,527	$13,531,405	$12,934,956
Ending Debt Balances											
Future Revenue Bonds		$221,303,253	$215,905,610	$210,207,015	$204,190,688	$197,838,913	$191,132,987	$184,053,164	$176,578,596	$168,687,274	$160,355,962
WIFIA Loan		370,383,569	359,871,223	349,216,481	338,417,415	327,472,069	316,378,462	305,134,586	293,738,406	282,187,858	270,480,851
Total Debt Balance		$591,686,822	$575,776,833	$559,423,496	$542,608,103	$525,310,982	$507,511,449	$489,187,750	$470,317,002	$450,875,132	$430,836,813

TVWD Forecast Model Summary

Table 5
Tualatin Valley Water District
2022-23 Financial Plan
Total Annual Debt Service and Balance Summary

Description	Subject to Req?	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Existing Debt Service											
None	TRUE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
BANs Interest (if applicable)	FALSE	0	0	0	0	0	0	0	0	0	0
Totals		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amount Subject to Coverage		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Debt Service on Proposed Debt											
Future Revenue Bonds	TRUE	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
WIFIA Loan	TRUE	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Total Debt Service Subject to Coverage		$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275
Total Interest Expense		$12,311,855	$11,660,707	$10,980,037	$10,268,291	$9,523,831	$8,744,926	$7,929,752	$7,076,383	$6,182,789	$5,246,825
Ending Debt Balances											
Future Revenue Bonds		$151,560,127	$142,273,870	$132,469,845	$122,119,185	$111,191,411	$99,654,345	$87,474,015	$74,614,556	$61,038,102	$46,704,676
WIFIA Loan		258,615,266	246,588,955	234,399,741	222,045,418	209,523,748	196,832,464	183,969,271	170,931,838	157,717,806	144,324,782
Total Debt Balance		$410,175,393	$388,862,825	$366,869,586	$344,164,602	$320,715,158	$296,486,809	$271,443,286	$245,546,394	$218,755,908	$191,029,458

TVWD Forecast Model Summary

Table 6
Tualatin Valley Water District
2022-23 Financial Plan
Summary O&M Forecast

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
Water Costs											
Portland	$8,274,600	$9,664,200	$10,617,495	$11,438,897	$11,917,653	$86,252	$90,134	$94,190	$98,428	$102,858	$107,486
JWC	2,595,300	2,999,500	2,961,243	3,231,582	3,412,079	6,739,115	7,042,375	7,359,282	7,690,450	8,036,520	8,398,163
WWSS Water	0	0	0	0	0	6,368,824	6,734,481	7,114,931	7,504,673	7,903,148	8,309,717
Water Costs Subtotal	$10,869,900	$12,663,700	$13,578,738	$14,670,479	$15,329,733	$13,194,192	$13,866,990	$14,568,403	$15,293,551	$16,042,526	$16,815,366
% Change		*16.5%*	*7.2%*	*8.0%*	*4.5%*	*(13.9%)*	*5.1%*	*5.1%*	*5.0%*	*4.9%*	*4.8%*
Pumping Power											
In-District Pumping	$450,000	$486,000	$524,880	$566,870	$592,380	$619,037	$646,893	$676,003	$706,424	$738,213	$771,432
WWSS Pumping	0	0	0	0	0	745,160	787,943	832,456	878,056	924,678	972,247
Pumping Power Subtotal	$450,000	$486,000	$524,880	$566,870	$592,380	$1,364,197	$1,434,836	$1,508,459	$1,584,480	$1,662,891	$1,743,680
% Change		*8.0%*	*8.0%*	*8.0%*	*4.5%*	*130.3%*	*5.2%*	*5.1%*	*5.0%*	*4.9%*	*4.9%*
WWSS (excluding treatment & pump power)											
WWSS O&M (non-WTP)	0	0	0	0	0	460,484	479,717	499,764	520,659	542,439	565,140
WIF-related	39,998	41,798	43,679	45,644	47,698	79,545	83,124	86,865	90,774	94,858	99,127
WIFIA Issuance and Servicing	13,500	14,108	14,742	15,406	16,099	16,823	17,581	18,372	19,198	20,062	20,965
WWSS Subtotal	$53,498	$55,905	$58,421	$61,050	$63,797	$556,852	$580,422	$605,000	$630,631	$657,359	$685,233
% Change		*4.5%*	*4.5%*	*4.5%*	*4.5%*	*772.8%*	*4.2%*	*4.2%*	*4.2%*	*4.2%*	*4.2%*
Operational Expenses											
Administrative Services	$4,007,770	$3,955,615	$4,157,482	$4,344,569	$4,540,075	$4,340,540	$4,421,513	$4,622,021	$4,831,606	$5,050,679	$5,279,667
Customer Service	5,447,553	5,859,558	6,199,306	6,471,537	6,755,849	7,052,783	7,362,903	7,686,796	8,025,078	8,378,392	8,747,411
Engineering/Operations	12,452,059	12,822,215	13,427,005	14,031,221	14,662,626	15,322,444	16,011,954	16,732,492	17,485,454	18,272,299	19,094,553
Other Operational Expenses	110,000	1,192,450	1,990,123	3,338,028	3,488,240	3,645,210	3,809,245	3,980,661	4,159,791	4,346,981	4,542,595
Finance	3,943,987	4,174,090	4,570,953	4,776,646	4,991,595	4,798,746	5,014,690	5,240,351	5,476,167	5,722,594	5,980,111
Water Supply Program	1,893,265	1,986,575	2,075,971	2,169,390	2,267,012	2,369,028	2,475,634	2,587,037	2,703,454	2,825,110	2,952,239
IT Services	2,796,112	3,112,337	3,331,544	3,481,463	3,638,129	3,801,845	3,972,928	4,151,710	4,338,537	4,533,771	4,737,791
Operational Expenses Subtotal	$30,650,745	$33,102,840	$35,752,385	$38,612,854	$40,343,526	$41,330,596	$43,068,866	$45,001,067	$47,020,086	$49,129,826	$51,334,367
% Change		*8.0%*	*8.0%*	*8.0%*	*4.5%*	*2.4%*	*4.2%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Other											
Expenses from Master Plan CIP	$88,000	$92,000	$96,000	$574,900	$105,000	$122,700	$128,200	$125,500	$130,600	$136,800	$143,000
Capital Outlays	495,600	210,350	500,000	522,500	546,013	570,583	596,259	623,091	651,130	680,431	711,050
Initiatives – Personnel Svcs.	0	0	1,014,500	1,303,000	2,788,000	2,913,000	3,043,000	3,180,500	3,568,000	3,730,500	3,898,373
Initiatives – M&S	0	0	420,250	591,150	303,510	318,065	333,330	349,320	366,090	623,360	651,411
Other Subtotal	$583,600	$302,350	$2,030,750	$2,991,550	$3,742,523	$3,924,348	$4,100,789	$4,278,411	$4,715,820	$5,171,091	$5,403,834
% Change		*(48.2%)*	*571.7%*	*47.3%*	*25.1%*	*4.9%*	*4.5%*	*4.3%*	*10.2%*	*9.7%*	*4.5%*
Grand Total O&M	**$42,607,743**	**$46,610,795**	**$51,945,174**	**$56,902,803**	**$60,071,958**	**$60,370,185**	**$63,051,903**	**$65,961,341**	**$69,244,568**	**$72,663,693**	**$75,982,479**
% Change		*9.4%*	*11.4%*	*9.5%*	*5.6%*	*0.5%*	*4.4%*	*4.6%*	*5.0%*	*4.9%*	*4.6%*
Less Capitalized OH & Capital Outlays	$3,909,751	$3,846,253	$4,378,381	$4,721,738	$5,094,190	$3,482,184	$3,638,416	$3,802,345	$3,973,632	$4,153,230	$4,340,125
Net O&M	**$38,697,992**	**$42,764,542**	**$47,566,793**	**$52,181,065**	**$54,977,768**	**$56,888,001**	**$59,413,487**	**$62,158,996**	**$65,270,936**	**$68,510,463**	**$71,642,354**
% Change		*10.5%*	*11.2%*	*9.7%*	*5.4%*	*3.5%*	*4.4%*	*4.6%*	*5.0%*	*5.0%*	*4.6%*
Check	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 6
Tualatin Valley Water District
2022-23 Financial Plan
Summary O&M Forecast

	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041	FY2042	FY2043
Water Costs											
Portland	$112,323	$117,378	$122,660	$128,179	$133,947	$139,975	$146,274	$152,856	$159,735	$166,923	$174,434
JWC	8,776,081	9,171,004	9,583,700	10,014,966	10,465,640	10,936,593	11,428,740	11,943,033	12,480,470	13,042,091	13,628,985
WWSS Water	8,723,648	9,144,116	9,570,195	10,000,854	10,450,893	10,921,183	11,412,636	11,926,205	12,462,884	13,023,714	13,609,781
Water Costs Subtotal	$17,612,052	$18,432,498	$19,276,555	$20,144,000	$21,050,480	$21,997,751	$22,987,650	$24,022,094	$25,103,089	$26,232,728	$27,413,200
% Change	*4.7%*	*4.7%*	*4.6%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Pumping Power											
In-District Pumping	$806,147	$842,423	$880,332	$919,947	$961,345	$1,004,606	$1,049,813	$1,097,054	$1,146,422	$1,198,011	$1,251,921
WWSS Pumping	1,020,678	1,069,873	1,119,725	1,170,113	1,222,768	1,277,792	1,335,293	1,395,381	1,458,173	1,523,791	1,592,361
Pumping Power Subtotal	$1,826,824	$1,912,296	$2,000,057	$2,090,060	$2,184,113	$2,282,398	$2,385,106	$2,492,435	$2,604,595	$2,721,802	$2,844,283
% Change	*4.8%*	*4.7%*	*4.6%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
WWSS (excluding treatment & pump power)											
WWSS O&M (non-WTP)	616,392	642,300	669,310	697,469	840,577	876,303	913,564	952,425	992,957	1,035,231	1,079,323
WIF-related	103,588	108,249	113,120	118,211	123,530	129,089	134,898	140,969	147,312	153,941	160,869
WIFIA Issuance and Servicing	21,909	22,894	23,925	25,001	26,126	27,302	28,531	29,814	31,156	32,558	34,023
WWSS Subtotal	$741,888	$773,444	$806,355	$840,681	$990,234	$1,032,695	$1,076,993	$1,123,209	$1,171,425	$1,221,730	$1,274,215
% Change	*8.3%*	*4.3%*	*4.3%*	*4.3%*	*17.8%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*
Operational Expenses											
Administrative Services	$5,491,432	$5,740,376	$6,000,587	$6,272,573	$6,443,117	$6,735,157	$7,040,412	$7,359,479	$7,692,983	$8,041,577	$8,405,941
Customer Service	9,132,834	9,535,397	9,955,865	10,395,038	10,853,752	11,332,883	11,833,342	12,356,083	12,902,105	13,472,446	14,068,198
Engineering/Operations	19,953,807	20,851,729	21,790,057	22,770,609	23,795,287	24,866,074	25,985,048	27,154,375	28,376,322	29,653,256	30,987,653
Other Operational Expenses	4,747,012	4,960,628	5,183,856	5,417,129	5,660,900	5,915,641	6,181,845	6,460,028	6,750,729	7,054,512	7,371,965
Finance	6,249,216	6,530,431	6,824,300	7,131,394	7,452,306	7,787,660	8,138,105	8,504,320	8,887,014	9,286,930	9,704,841
Water Supply Program	3,085,090	3,223,919	3,368,996	3,520,600	3,679,028	3,844,584	4,017,590	4,198,382	4,387,309	4,584,738	4,791,051
IT Services	4,950,991	5,173,786	5,406,606	5,649,904	5,904,149	6,169,836	6,447,479	6,737,615	7,040,808	7,357,644	7,688,738
Operational Expenses Subtotal	$53,610,384	$56,016,266	$58,530,266	$61,157,247	$63,788,539	$66,651,834	$69,643,819	$72,770,281	$76,037,269	$79,451,102	$83,018,386
% Change	*4.4%*	*4.5%*	*4.5%*	*4.5%*	*4.3%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Other											
Expenses from Master Plan CIP	$149,300	$155,500	$749,200	$169,900	$177,200	$185,400	$193,700	$202,000	$211,200	$220,500	$230,800
Capital Outlays	743,048	776,485	811,427	847,941	886,098	925,972	967,641	1,011,185	1,056,688	1,104,239	1,153,930
Initiatives – Personnel Svcs.	4,073,799	4,257,120	4,448,691	4,648,882	4,858,081	5,076,695	5,305,146	5,543,878	5,793,352	6,054,053	6,326,486
Initiatives – M&S	680,725	711,357	743,368	776,820	811,777	848,307	886,481	926,372	968,059	1,011,622	1,057,145
Other Subtotal	$5,646,872	$5,900,462	$6,752,686	$6,443,542	$6,733,156	$7,036,374	$7,352,968	$7,683,435	$8,029,300	$8,390,414	$8,768,360
% Change	*4.5%*	*4.5%*	*14.4%*	*(4.6%)*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Grand Total O&M	**$79,438,019**	**$83,034,966**	**$87,365,918**	**$90,675,530**	**$94,746,521**	**$99,001,052**	**$103,446,536**	**$108,091,455**	**$112,945,678**	**$118,017,776**	**$123,318,445**
% Change	*4.5%*	*4.5%*	*5.2%*	*3.8%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Less Capitalized OH & Capital Outlays	$4,535,431	$4,739,525	$4,952,804	$5,175,680	$5,408,586	$5,651,972	$5,906,311	$6,172,095	$6,449,839	$6,740,082	$7,043,386
Net O&M	**$74,902,588**	**$78,295,440**	**$82,413,114**	**$85,499,850**	**$89,337,935**	**$93,349,080**	**$97,540,225**	**$101,919,360**	**$106,495,838**	**$111,277,694**	**$116,275,059**
% Change	*4.6%*	*4.5%*	*5.3%*	*3.7%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Check	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Tualatin Valley Water District
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Summary O&M Forecast

	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Water Costs								
Portland	$182,284	$190,487	$199,059	$208,016	$217,377	$227,159	$237,381	$248,063
JWC	14,242,290	14,883,193	15,552,936	16,252,818	16,984,195	17,748,484	18,547,166	19,381,788
WWSS Water	14,222,221	14,862,221	15,531,021	16,229,917	16,960,263	17,723,475	18,521,031	19,354,478
Water Costs Subtotal	$28,646,794	$29,935,900	$31,283,016	$32,690,751	$34,161,835	$35,699,118	$37,305,578	$38,984,329
% Change	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Pumping Power								
In-District Pumping	$1,308,258	$1,367,129	$1,428,650	$1,492,939	$1,560,122	$1,630,327	$1,703,692	$1,780,358
WWSS Pumping	1,664,018	1,738,899	1,817,149	1,898,921	1,984,372	2,073,669	2,166,984	2,264,498
Pumping Power Subtotal	$2,972,275	$3,106,028	$3,245,799	$3,391,860	$3,544,494	$3,703,996	$3,870,676	$4,044,856
% Change	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
WWSS (excluding treatment & pump power)								
WWSS O&M (non-WTP)	1,125,311	1,173,279	1,223,312	1,275,500	1,329,936	1,386,718	1,445,948	1,507,732
WIF-related	168,108	175,673	183,578	191,839	200,472	209,493	218,920	228,771
WIFIA Issuance and Servicing	35,554	37,154	38,826	40,573	42,399	44,307	46,301	48,384
WWSS Subtotal	$1,328,973	$1,386,106	$1,445,716	$1,507,912	$1,572,807	$1,640,518	$1,711,169	$1,784,888
% Change	*4.3%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*
Operational Expenses								
Administrative Services	$8,786,789	$9,184,866	$9,600,950	$10,035,854	$10,490,429	$10,965,563	$11,462,186	$11,981,268
Customer Service	14,690,495	15,340,526	16,019,532	16,728,811	17,469,718	18,243,668	19,052,141	19,896,683
Engineering/Operations	32,382,097	33,839,292	35,362,060	36,953,352	38,616,253	40,353,985	42,169,914	44,067,560
Other Operational Expenses	7,703,703	8,050,370	8,412,636	8,791,205	9,186,809	9,600,215	10,032,225	10,483,675
Finance	10,141,559	10,597,929	11,074,836	11,573,204	12,093,998	12,638,228	13,206,948	13,801,261
Water Supply Program	5,006,648	5,231,947	5,467,385	5,713,417	5,970,521	6,239,194	6,519,958	6,813,356
IT Services	8,034,731	8,396,294	8,774,127	9,168,963	9,581,566	10,012,737	10,463,310	10,934,159
Operational Expenses Subtotal	$86,746,023	$90,641,224	$94,711,526	$98,964,806	$103,409,294	$108,053,590	$112,906,682	$117,977,962
% Change	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Other								
Expenses from Master Plan CIP	$241,100	$1,078,500	$262,800	$274,100	$286,500	$298,800	$298,800	$298,800
Capital Outlays	1,205,857	1,260,121	1,316,826	1,376,083	1,438,007	1,502,717	1,570,340	1,641,005
Initiatives – Personnel Svcs.	6,611,178	6,908,681	7,219,571	7,544,452	7,883,952	8,238,730	8,609,473	8,996,899
Initiatives – M&S	1,104,716	1,154,428	1,206,378	1,260,665	1,317,395	1,376,677	1,438,628	1,503,366
Other Subtotal	$9,162,851	$10,401,729	$10,005,575	$10,455,300	$10,925,854	$11,416,925	$11,917,240	$12,440,070
% Change	*4.5%*	*13.5%*	*(3.8%)*	*4.5%*	*4.5%*	*4.5%*	*4.4%*	*4.4%*
Grand Total O&M	**$128,856,917**	**$135,470,988**	**$140,691,632**	**$147,010,630**	**$153,614,284**	**$160,514,147**	**$167,711,345**	**$175,232,105**
% Change	*4.5%*	*5.1%*	*3.9%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Less Capitalized OH & Capital Outlays	$7,360,338	$7,691,553	$8,037,673	$8,399,368	$8,777,340	$9,172,320	$9,585,075	$10,016,403
Net O&M	**$121,496,579**	**$127,779,434**	**$132,653,959**	**$138,611,262**	**$144,836,944**	**$151,341,826**	**$158,126,271**	**$165,215,703**
% Change	*4.5%*	*5.2%*	*3.8%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Check	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 7
Tualatin Valley Water District
2022-23 Financial Plan
Revenue Forecast

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Rate Revenue Growth Assumptions										
Class Customer/System Growth Rate	0.70%	(0.80%)	(0.04%)	0.55%	0.50%	0.45%	0.40%	0.35%	0.30%	0.25%
Sales Growth / Conservation Adj.	0.37%	(0.80%)	0.37%	0.38%	0.38%	0.37%	0.38%	0.35%	0.30%	0.25%
Ratio - Volumetric Revenue	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*
Internal Revenue Growth	**0.44%**	**(0.79%)**	**0.29%**	**0.41%**	**0.40%**	**0.39%**	**0.38%**	**0.35%**	**0.30%**	**0.25%**
Rate Revenue Adjustments										
Nov. 1 Rate Adjustment	9.5%	14.25%	5.5%	5.5%	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%
May 1 Rate Adjustment	0.0%	5.5%	5.5%	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retail Rate Revenue										
Revenue Before Increase	$72,442,859	$78,695,132	$94,884,574	$105,893,255	$118,166,944	$123,077,803	$128,179,128	$133,451,567	$138,871,576	$144,439,608
Revenue from Increase(s)	3,284,265	5,774,572	2,955,640	3,303,264	2,114,789	2,202,571	2,293,863	2,388,218	2,485,213	2,584,857
Annual Totals – Rate Revenue	$75,727,123	$84,469,704	$97,840,213	$109,196,519	$120,281,733	$125,280,374	$130,472,991	$135,839,784	$141,356,789	$147,024,465
FY2022 Favorable Variance from Budget										
Favorable Variance from Budget (July '21 - Nov '21)	$2,055,239									
Total in FY2022	$2,055,239									
Total User Charges	$77,782,363	$84,469,704	$97,840,213	$109,196,519	$120,281,733	$125,280,374	$130,472,991	$135,839,784	$141,356,789	$147,024,465
Non-Rate Revenues*										
Meter & Svc Revenue	$1,697,650	$1,757,975	$1,818,775	$1,884,325	$1,950,825	$2,016,850	$2,127,050	$2,200,200	$2,278,575	$2,357,425
Special Service & Turn On Fees	1,950	2,009	2,069	2,131	2,195	2,261	2,328	2,398	2,470	2,544
Penalty Fees	12,075	12,437	12,810	13,195	13,591	13,998	14,418	14,851	15,296	15,755
Dispatch Fees	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income	202,375	208,446	214,700	221,141	227,775	234,608	241,646	248,896	256,363	264,053
Plan Review	26,125	26,909	27,716	28,547	29,404	30,286	31,195	32,130	33,094	34,087
Contract Reimbursements	1,600,000	1,648,000	1,697,440	1,748,363	1,800,814	1,854,839	1,910,484	1,967,798	2,026,832	2,087,637
Inspection Fees	91,650	94,400	97,231	100,148	103,153	106,247	109,435	112,718	116,099	119,582
Backflow Program Reimbursement	403,625	415,734	428,206	441,052	454,283	467,912	481,949	496,408	511,300	526,639
Power Generation Station	25,075	25,827	26,602	27,400	28,222	0	0	0	0	0
Rental Property Income	65,125	67,079	69,091	71,164	73,299	75,498	77,763	80,096	82,498	84,973
Sales to Other Funds – Partner Share	1,423,109	1,538,764	1,667,769	1,853,704	2,058,345	755,716	789,370	825,043	862,308	901,706
COB Wheeling Revenue	1,082,935	922,129	762,684	591,383	407,606	210,704	217,025	223,536	230,242	237,149
Interest Earnings - Cash & Investments	903,197	2,583,865	1,702,274	675,504	650,700	810,133	941,193	1,139,541	1,202,878	1,208,352
Annual Totals – Non-Rate Revenues	$7,534,890	$9,303,574	$8,527,367	$7,658,058	$7,800,211	$6,579,052	$6,943,856	$7,343,615	$7,617,956	$7,839,905
Total Annual Revenues	$85,317,253	$93,773,278	$106,367,581	$116,854,576	$128,081,945	$131,859,426	$137,416,847	$143,183,399	$148,974,745	$154,864,370

* Note: Non-Rate Revenues are net of related expenses.

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TVWD Forecast Model Summary

Table 7
Tualatin Valley Water District
2022-23 Financial Plan
Revenue Forecast

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Rate Revenue Growth Assumptions										
Class Customer/System Growth Rate	0.20%	0.15%	0.10%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sales Growth / Conservation Adj.	0.20%	0.15%	0.10%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ratio - Volumetric Revenue	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*
Internal Revenue Growth	**0.20%**	**0.15%**	**0.10%**	**0.05%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Rate Revenue Adjustments										
Nov. 1 Rate Adjustment	3.75%	3.75%	3.75%	3.75%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
May 1 Rate Adjustment	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retail Rate Revenue										
Revenue Before Increase	$150,155,905	$156,020,490	$162,033,157	$168,193,462	$174,500,717	$180,608,242	$186,929,530	$193,472,064	$200,243,586	$207,252,112
Revenue from Increase(s)	2,687,154	2,792,106	2,899,707	3,009,950	2,914,635	3,016,647	3,122,230	3,231,508	3,344,611	3,461,672
Annual Totals – Rate Revenue	$152,843,060	$158,812,596	$164,932,864	$171,203,412	$177,415,352	$183,624,889	$190,051,760	$196,703,572	$203,588,197	$210,713,784
FY2022 Favorable Variance from Budget										
Favorable Variance from Budget (July '21 - Nov '21)										
Total in FY2022										
Total User Charges	$152,843,060	$158,812,596	$164,932,864	$171,203,412	$177,415,352	$183,624,889	$190,051,760	$196,703,572	$203,588,197	$210,713,784
Non-Rate Revenues*										
Meter & Svc Revenue	$2,441,500	$2,525,575	$2,615,350	$2,705,600	$2,800,600	$2,901,300	$3,002,475	$3,108,875	$3,215,750	$3,327,850
Special Service & Turn On Fees	2,621	2,699	2,780	2,864	2,950	3,038	3,129	3,223	3,320	3,419
Penalty Fees	16,228	16,715	17,216	17,733	18,265	18,812	19,377	19,958	20,557	21,174
Dispatch Fees	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income	271,975	280,134	288,538	297,195	306,110	315,294	324,752	334,495	344,530	354,866
Plan Review	35,110	36,163	37,248	38,365	39,516	40,702	41,923	43,181	44,476	45,810
Contract Reimbursements	2,150,266	2,214,774	2,281,217	2,349,654	2,420,144	2,492,748	2,567,530	2,644,556	2,723,893	2,805,610
Inspection Fees	123,170	126,865	130,671	134,591	138,629	142,788	147,071	151,483	156,028	160,709
Backflow Program Reimbursement	542,438	558,711	575,473	592,737	610,519	628,835	647,700	667,131	687,145	707,759
Power Generation Station	0	0	0	0	0	0	0	0	0	0
Rental Property Income	87,523	90,148	92,853	95,638	98,507	101,463	104,507	107,642	110,871	114,197
Sales to Other Funds – Partner Share	942,283	984,685	1,028,996	1,075,301	1,123,690	1,174,256	1,227,097	1,282,317	1,340,021	1,400,322
COB Wheeling Revenue	244,264	251,592	259,139	266,914	274,921	283,169	291,664	300,414	309,426	318,709
Interest Earnings - Cash & Investments	1,253,781	1,195,237	1,134,789	1,083,572	854,854	745,957	905,988	1,027,949	1,033,212	1,058,824
Annual Totals – Non-Rate Revenues	$8,111,158	$8,283,300	$8,464,271	$8,660,163	$8,688,704	$8,848,361	$9,283,214	$9,691,223	$9,989,228	$10,319,249
Total Annual Revenues	$160,954,218	$167,095,896	$173,397,135	$179,863,575	$186,104,056	$192,473,250	$199,334,974	$206,394,795	$213,577,425	$221,033,032

* Note: Non-Rate Revenues are net of related expenses.

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TVWD Forecast Model Summary

Table 7
Tualatin Valley Water District
2022-23 Financial Plan
Revenue Forecast

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Rate Revenue Growth Assumptions										
Class Customer/System Growth Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sales Growth / Conservation Adj.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ratio - Volumetric Revenue	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*	*78.89%*
Internal Revenue Growth	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Rate Revenue Adjustments										
Nov. 1 Rate Adjustment	3.5%	3.5%	3.5%	3.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
May 1 Rate Adjustment	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retail Rate Revenue										
Revenue Before Increase	$214,505,936	$222,013,643	$229,784,121	$237,826,565	$246,150,495	$253,535,010	$261,141,060	$268,975,292	$277,044,550	$285,355,887
Revenue from Increase(s)	3,582,831	3,708,230	3,838,018	3,972,349	3,524,041	3,629,762	3,738,655	3,850,814	3,966,339	4,085,329
Annual Totals – Rate Revenue	$218,088,766	$225,721,873	$233,622,139	$241,798,914	$249,674,535	$257,164,771	$264,879,715	$272,826,106	$281,010,889	$289,441,216
FY2022 Favorable Variance from Budget										
Favorable Variance from Budget (July '21 - Nov '21)										
Total in FY2022										
Total User Charges	$218,088,766	$225,721,873	$233,622,139	$241,798,914	$249,674,535	$257,164,771	$264,879,715	$272,826,106	$281,010,889	$289,441,216
Non-Rate Revenues*										
Meter & Svc Revenue	$3,445,650	$3,563,925	$3,687,900	$3,816,625	$3,951,525	$4,091,175	$4,232,250	$4,383,300	$4,534,825	$3,812,825
Special Service & Turn On Fees	3,522	3,628	3,736	3,848	3,964	4,083	4,205	4,332	4,461	4,595
Penalty Fees	21,809	22,463	23,137	23,831	24,546	25,282	26,041	26,822	27,627	28,456
Dispatch Fees	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income	365,512	376,477	387,771	399,405	411,387	423,728	436,440	449,533	463,019	476,910
Plan Review	47,185	48,600	50,058	51,560	53,107	54,700	56,341	58,031	59,772	61,565
Contract Reimbursements	2,889,778	2,976,471	3,065,765	3,157,738	3,252,471	3,350,045	3,450,546	3,554,062	3,660,684	3,770,505
Inspection Fees	165,530	170,496	175,611	180,879	186,306	191,895	197,652	203,581	209,689	215,979
Backflow Program Reimbursement	728,992	750,861	773,387	796,589	820,487	845,101	870,454	896,568	923,465	951,169
Power Generation Station	0	0	0	0	0	0	0	0	0	0
Rental Property Income	117,623	121,152	124,786	128,530	132,386	136,357	140,448	144,661	149,001	153,471
Sales to Other Funds – Partner Share	1,463,336	1,529,186	1,598,000	1,669,910	1,745,056	1,823,583	1,905,645	1,991,399	2,081,011	2,174,657
COB Wheeling Revenue	328,270	338,118	348,262	358,710	369,471	380,555	391,972	403,731	415,843	428,318
Interest Earnings - Cash & Investments	1,235,024	1,416,938	1,604,034	1,744,327	1,463,843	1,123,639	1,152,829	1,351,279	1,338,076	1,352,470
Annual Totals – Non-Rate Revenues	$10,812,231	$11,318,316	$11,842,448	$12,331,952	$12,414,547	$12,450,144	$12,864,822	$13,467,299	$13,867,474	$13,430,920
Total Annual Revenues	$228,900,997	$237,040,189	$245,464,587	$254,130,866	$262,089,082	$269,614,916	$277,744,537	$286,293,405	$294,878,363	$302,872,136

* Note: Non-Rate Revenues are net of related expenses.

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TVWD Forecast Model Summary

Table 8
Tualatin Valley Water District
2022-23 Financial Plan
SDC Revenue Forecast

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
SDC Fee Escalation		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Annual Fee per EDU										
Improvement Fee	$6,809	$6,945	$7,084	$7,225	$7,370	$7,517	$7,667	$0	$0	$0
Reimbursement Fee	1,614	1,646	1,679	1,712	1,747	1,782	1,817	9,674	9,868	10,065
New Equivalent Dwelling Units	568	530	520	510	500	475	450	425	400	375
SDC Forecast Revenue										
Improvement Fee	$3,867,228	$3,680,675	$3,683,453	$3,684,870	$3,684,870	$3,570,639	$3,450,365	$0	$0	$0
Reimbursement Fee	916,548	872,334	872,992	873,328	873,328	846,255	817,749	4,111,616	3,947,152	3,774,464
Total System Development Charges	$4,783,776	$4,553,009	$4,556,445	$4,558,198	$4,558,198	$4,416,893	$4,268,114	$4,111,616	$3,947,152	$3,774,464

TVWD Forecast Model Summary

Table 8
Tualatin Valley Water District
2022-23 Financial Plan
SDC Revenue Forecast

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
SDC Fee Escalation	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Annual Fee per EDU										
Improvement Fee	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reimbursement Fee	10,267	10,472	10,681	10,895	11,113	11,335	11,562	11,793	12,029	12,269
New Equivalent Dwelling Units	350	325	300	275	250	225	200	175	150	125
SDC Forecast Revenue										
Improvement Fee	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reimbursement Fee	3,593,290	3,403,359	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780	1,804,333	1,533,683
Total System Development Charges	$3,593,290	$3,403,359	$3,204,393	$2,996,107	$2,778,209	$2,550,396	$2,312,359	$2,063,780	$1,804,333	$1,533,683

Table 8
Tualatin Valley Water District
2022-23 Financial Plan
SDC Revenue Forecast

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
SDC Fee Escalation	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Annual Fee per EDU										
Improvement Fee	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reimbursement Fee	12,515	12,765	13,020	13,281	13,546	13,817	14,094	14,376	14,663	14,956
New Equivalent Dwelling Units	100	75	50	25	0	0	0	0	0	0
SDC Forecast Revenue										
Improvement Fee	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reimbursement Fee	1,251,486	957,387	651,023	332,022	0	0	0	0	0	0
Total System Development Charges	$1,251,486	$957,387	$651,023	$332,022	$0	$0	$0	$0	$0	$0

TVWD Forecast Model Summary

Table 9
Tualatin Valley Water District
2022-23 Financial Plan
Debt Service Coverage Calculations

	Growth-related Revenue	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
Estimated Gross Revenues													
Total User Charges		$77,782,363	$84,469,704	$97,840,213	$109,196,519	$120,281,733	$125,280,374	$130,472,991	$135,839,784	$141,356,789	$147,024,465	$152,843,060	$158,812,596
Non-Rate Revenue													
Meter & Svc Revenue	*TRUE*	1,697,650	1,757,975	1,818,775	1,884,325	1,950,825	2,016,850	2,127,050	2,200,200	2,278,575	2,357,425	2,441,500	2,525,575
Special Service & Turn On Fees		1,950	2,009	2,069	2,131	2,195	2,261	2,328	2,398	2,470	2,544	2,621	2,699
Penalty Fees		12,075	12,437	12,810	13,195	13,591	13,998	14,418	14,851	15,296	15,755	16,228	16,715
Dispatch Fees		0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income		202,375	208,446	214,700	221,141	227,775	234,608	241,646	248,896	256,363	264,053	271,975	280,134
Plan Review		26,125	26,909	27,716	28,547	29,404	30,286	31,195	32,130	33,094	34,087	35,110	36,163
Contract Reimbursements		1,600,000	1,648,000	1,697,440	1,748,363	1,800,814	1,854,839	1,910,484	1,967,798	2,026,832	2,087,637	2,150,266	2,214,774
Inspection Fees		91,650	94,400	97,231	100,148	103,153	106,247	109,435	112,718	116,099	119,582	123,170	126,865
Backflow Program Reimbursement		403,625	415,734	428,206	441,052	454,283	467,912	481,949	496,408	511,300	526,639	542,438	558,711
Power Generation Station		25,075	25,827	26,602	27,400	28,222	0	0	0	0	0	0	0
Rental Property Income		65,125	67,079	69,091	71,164	73,299	75,498	77,763	80,096	82,498	84,973	87,523	90,148
Sales to Other Funds – Partner Share		1,423,109	1,538,764	1,667,769	1,853,704	2,058,345	755,716	789,370	825,043	862,308	901,706	942,283	984,685
COB Wheeling Revenue		1,082,935	922,129	762,684	591,383	407,606	210,704	217,025	223,536	230,242	237,149	244,264	251,592
Interest Earnings on Reserve Funds													
Cash & Investments		903,197	2,583,865	1,702,274	675,504	650,700	810,133	941,193	1,139,541	1,202,878	1,208,352	1,253,781	1,195,237
Rev. Bond Debt Service		0	0	99,180	239,874	262,442	218,701	174,961	174,961	174,961	174,961	174,961	174,961
Total System Development Charges	*TRUE*	4,783,776	4,553,009	4,556,445	4,558,198	4,558,198	4,416,893	4,268,114	4,111,616	3,947,152	3,774,464	3,593,290	3,403,359
Gross Revenue (incl. Growth-related Revenue)		**$90,101,028**	**$98,326,287**	**$111,023,206**	**$121,652,648**	**$132,902,584**	**$136,495,021**	**$141,859,922**	**$147,469,976**	**$153,096,858**	**$158,813,795**	**$164,722,469**	**$170,674,215**
Gross Revenue (excl. Growth-related Revenue)		**83,619,603**	**92,015,303**	**104,647,986**	**115,210,125**	**126,393,561**	**130,061,278**	**135,464,758**	**141,158,160**	**146,871,131**	**152,681,906**	**158,687,679**	**164,745,282**
Operating Expenses (excluding depreciation)													
Total O&M Costs		$42,607,743	$46,610,795	$51,945,174	$56,902,803	$60,071,958	$60,370,185	$63,051,903	$65,961,341	$69,244,568	$72,663,693	$75,982,479	$79,438,019
Less Capitalized OH & Capital Outlays		(3,909,751)	(3,846,253)	(4,378,381)	(4,721,738)	(5,094,190)	(3,482,184)	(3,638,416)	(3,802,345)	(3,973,632)	(4,153,230)	(4,340,125)	(4,535,431)
Net O&M (less Capital Outlays)		$38,697,992	$42,764,542	$47,566,793	$52,181,065	$54,977,768	$56,888,001	$59,413,487	$62,158,996	$65,270,936	$68,510,463	$71,642,354	$74,902,588
Net Revenue (incl. Growth-related Revenue)		**$51,403,037**	**$55,561,744**	**$63,456,413**	**$69,471,583**	**$77,924,816**	**$79,607,020**	**$82,446,435**	**$85,310,980**	**$87,825,922**	**$90,303,331**	**$93,080,115**	**$95,771,627**
Net Revenue (excl. Growth-related Revenue)		**44,921,611**	**49,250,761**	**57,081,193**	**63,029,060**	**71,415,793**	**73,173,277**	**76,051,271**	**78,999,164**	**81,600,195**	**84,171,442**	**87,045,325**	**89,842,693**
Annual DS Subject to Coverage		**$0**	**$0**	**$3,781,525**	**$10,499,913**	**$13,436,775**	**$13,436,775**	**$25,234,693**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**
DSC Test 1 (including Growth-related Revenue)													
Estimated Coverage		0.00	0.00	16.78	6.62	5.80	5.92	3.27	2.59	2.66	2.74	2.82	2.90
Target Coverage		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Additional Revenues Required - Test 1		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DSC Test 2 (excluding Growth-related Revenue)													
Estimated Coverage		0.00	0.00	15.09	6.00	5.31	5.45	3.01	2.40	2.47	2.55	2.64	2.72
Target Coverage		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Additional Revenues Required - Test 2		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DSC Target Coverage Check 1		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
DSC Target Coverage Check 2		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 9
Tualatin Valley Water District
2022-23 Financial Plan
Debt Service Coverage Calculations

	Growth-related Revenue	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041	FY2042	FY2043	FY2044	FY2045
Estimated Gross Revenues													
Total User Charges		$164,932,864	$171,203,412	$177,415,352	$183,624,889	$190,051,760	$196,703,572	$203,588,197	$210,713,784	$218,088,766	$225,721,873	$233,622,139	$241,798,914
Non-Rate Revenue													
Meter & Svc Revenue	*TRUE*	2,615,350	2,705,600	2,800,600	2,901,300	3,002,475	3,108,875	3,215,750	3,327,850	3,445,650	3,563,925	3,687,900	3,816,625
Special Service & Turn On Fees		2,780	2,864	2,950	3,038	3,129	3,223	3,320	3,419	3,522	3,628	3,736	3,848
Penalty Fees		17,216	17,733	18,265	18,812	19,377	19,958	20,557	21,174	21,809	22,463	23,137	23,831
Dispatch Fees		0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income		288,538	297,195	306,110	315,294	324,752	334,495	344,530	354,866	365,512	376,477	387,771	399,405
Plan Review		37,248	38,365	39,516	40,702	41,923	43,181	44,476	45,810	47,185	48,600	50,058	51,560
Contract Reimbursements		2,281,217	2,349,654	2,420,144	2,492,748	2,567,530	2,644,556	2,723,893	2,805,610	2,889,778	2,976,471	3,065,765	3,157,738
Inspection Fees		130,671	134,591	138,629	142,788	147,071	151,483	156,028	160,709	165,530	170,496	175,611	180,879
Backflow Program Reimbursement		575,473	592,737	610,519	628,835	647,700	667,131	687,145	707,759	728,992	750,861	773,387	796,589
Power Generation Station		0	0	0	0	0	0	0	0	0	0	0	0
Rental Property Income		92,853	95,638	98,507	101,463	104,507	107,642	110,871	114,197	117,623	121,152	124,786	128,530
Sales to Other Funds – Partner Share		1,028,996	1,075,301	1,123,690	1,174,256	1,227,097	1,282,317	1,340,021	1,400,322	1,463,336	1,529,186	1,598,000	1,669,910
COB Wheeling Revenue		259,139	266,914	274,921	283,169	291,664	300,414	309,426	318,709	328,270	338,118	348,262	358,710
Interest Earnings on Reserve Funds													
Cash & Investments		1,134,789	1,083,572	854,854	745,957	905,988	1,027,949	1,033,212	1,058,824	1,235,024	1,416,938	1,604,034	1,744,327
Rev. Bond Debt Service		174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961
Total System Development Charges	*TRUE*	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780	1,804,333	1,533,683	1,251,486	957,387	651,023	332,022
Gross Revenue (incl. Growth-related Revenue)		**$176,776,489**	**$183,034,644**	**$189,057,226**	**$195,198,607**	**$201,822,294**	**$208,633,536**	**$215,556,719**	**$222,741,677**	**$230,327,444**	**$238,172,537**	**$246,290,571**	**$254,637,848**
Gross Revenue (excl. Growth-related Revenue)		**170,956,746**	**177,332,936**	**183,478,417**	**189,746,911**	**196,507,460**	**203,460,881**	**210,536,636**	**217,880,144**	**225,630,308**	**233,651,225**	**241,951,648**	**250,489,202**
Operating Expenses (excluding depreciation)													
Total O&M Costs		$83,034,966	$87,365,918	$90,675,530	$94,746,521	$99,001,052	$103,446,536	$108,091,455	$112,945,678	$118,017,776	$123,318,445	$128,856,917	$135,470,988
Less Capitalized OH & Capital Outlays		(4,739,525)	(4,952,804)	(5,175,680)	(5,408,586)	(5,651,972)	(5,906,311)	(6,172,095)	(6,449,839)	(6,740,082)	(7,043,386)	(7,360,338)	(7,691,553)
Net O&M (less Capital Outlays)		$78,295,440	$82,413,114	$85,499,850	$89,337,935	$93,349,080	$97,540,225	$101,919,360	$106,495,838	$111,277,694	$116,275,059	$121,496,579	$127,779,434
Net Revenue (incl. Growth-related Revenue)		**$98,481,049**	**$100,621,529**	**$103,557,376**	**$105,860,671**	**$108,473,214**	**$111,093,311**	**$113,637,359**	**$116,245,839**	**$119,049,749**	**$121,897,478**	**$124,793,992**	**$126,858,414**
Net Revenue (excl. Growth-related Revenue)		**92,661,306**	**94,919,822**	**97,978,567**	**100,408,976**	**103,158,380**	**105,920,656**	**108,617,276**	**111,384,305**	**114,352,614**	**117,376,166**	**120,455,069**	**122,709,767**
Annual DS Subject to Coverage		**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**
DSC Test 1 (including Growth-related Revenue)													
Estimated Coverage		2.99	3.05	3.14	3.21	3.29	3.37	3.45	3.53	3.61	3.70	3.78	3.85
Target Coverage		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Additional Revenues Required - Test 1		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DSC Test 2 (excluding Growth-related Revenue)													
Estimated Coverage		2.81	2.88	2.97	3.05	3.13	3.21	3.29	3.38	3.47	3.56	3.65	3.72
Target Coverage		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Additional Revenues Required - Test 2		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DSC Target Coverage Check 1		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
DSC Target Coverage Check 2		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 9
Tualatin Valley Water District
2022-23 Financial Plan
Debt Service Coverage Calculations

	Growth-related Revenue	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Estimated Gross Revenues							
Total User Charges		$249,674,535	$257,164,771	$264,879,715	$272,826,106	$281,010,889	$289,441,216
Non-Rate Revenue							
Meter & Svc Revenue	*TRUE*	3,951,525	4,091,175	4,232,250	4,383,300	4,534,825	3,812,825
Special Service & Turn On Fees		3,964	4,083	4,205	4,332	4,461	4,595
Penalty Fees		24,546	25,282	26,041	26,822	27,627	28,456
Dispatch Fees		0	0	0	0	0	0
Miscellaneous Income		411,387	423,728	436,440	449,533	463,019	476,910
Plan Review		53,107	54,700	56,341	58,031	59,772	61,565
Contract Reimbursements		3,252,471	3,350,045	3,450,546	3,554,062	3,660,684	3,770,505
Inspection Fees		186,306	191,895	197,652	203,581	209,689	215,979
Backflow Program Reimbursement		820,487	845,101	870,454	896,568	923,465	951,169
Power Generation Station		0	0	0	0	0	0
Rental Property Income		132,386	136,357	140,448	144,661	149,001	153,471
Sales to Other Funds – Partner Share		1,745,056	1,823,583	1,905,645	1,991,399	2,081,011	2,174,657
COB Wheeling Revenue		369,471	380,555	391,972	403,731	415,843	428,318
Interest Earnings on Reserve Funds							
Cash & Investments		1,463,843	1,123,639	1,152,829	1,351,279	1,338,076	1,352,470
Rev. Bond Debt Service		174,961	174,961	174,961	174,961	174,961	174,961
Total System Development Charges	*TRUE*	0	0	0	0	0	0
Gross Revenue (incl. Growth-related Revenue)		**$262,264,043**	**$269,789,877**	**$277,919,498**	**$286,468,366**	**$295,053,324**	**$303,047,098**
Gross Revenue (excl. Growth-related Revenue)		**258,312,518**	**265,698,702**	**273,687,248**	**282,085,066**	**290,518,499**	**299,234,273**
Operating Expenses (excluding depreciation)							
Total O&M Costs		$140,691,632	$147,010,630	$153,614,284	$160,514,147	$167,711,345	$175,232,105
Less Capitalized OH & Capital Outlays		(8,037,673)	(8,399,368)	(8,777,340)	(9,172,320)	(9,585,075)	(10,016,403)
Net O&M (less Capital Outlays)		$132,653,959	$138,611,262	$144,836,944	$151,341,826	$158,126,271	$165,215,703
Net Revenue (incl. Growth-related Revenue)		**$129,610,084**	**$131,178,615**	**$133,082,554**	**$135,126,540**	**$136,927,054**	**$137,831,395**
Net Revenue (excl. Growth-related Revenue)		**125,658,559**	**127,087,440**	**128,850,304**	**130,743,240**	**132,392,229**	**134,018,570**
Annual DS Subject to Coverage		**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**	**$32,973,275**
DSC Test 1 (including Growth-related Revenue)							
Estimated Coverage		3.93	3.98	4.04	4.10	4.15	4.18
Target Coverage		2.00	2.00	2.00	2.00	2.00	2.00
Additional Revenues Required - Test 1		$0	$0	$0	$0	$0	$0
DSC Test 2 (excluding Growth-related Revenue)							
Estimated Coverage		3.81	3.85	3.91	3.97	4.02	4.06
Target Coverage		1.50	1.50	1.50	1.50	1.50	1.50
Additional Revenues Required - Test 2		$0	$0	$0	$0	$0	$0
DSC Target Coverage Check 1		OK	OK	OK	OK	OK	OK
DSC Target Coverage Check 2		OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 10
Tualatin Valley Water District
2022-23 Financial Plan
Projected Net Leverage Ratio (Fitch Ratings)
— Net Adjusted Debt to Adjusted Net Revenue (FADS)

		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Calculation of Net Adjusted Debt											
Outstanding Debt Balances											
Future Revenue Bonds		$0	$0	$137,510,000	$244,305,000	$244,305,000	$244,305,000	$240,189,849	$235,845,252	$231,258,417	$226,415,837
WIFIA Proceeds		100,000,000	357,500,000	387,748,990	387,748,990	387,748,990	387,748,990				
Capitalized Interest on WIFIA Proceeds		112,500	3,789,991	9,093,607	14,469,063	19,917,333	25,439,402				
WIFIA Loan Balance								411,046,679	401,085,138	390,988,661	380,755,423
TVWD Share of Wilsonville Ground Lease		9,409,510	9,307,231	9,204,952	9,102,673						
Total Outstanding Debt	(a)	$109,522,010	$370,597,222	$543,557,548	$655,625,726	$651,971,323	$657,493,392	$651,236,528	$636,930,390	$622,247,078	$607,171,260
Capitalized Fixed Charges											
Purchased Water - PWB		$8,274,600	$9,664,200	$10,617,495	$11,438,897	$11,917,653	$0	$0	$0	$0	$0
Ratio		35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Fixed Services Expense		$2,896,110	$3,382,470	$3,716,123	$4,003,614	$4,171,179	$0	$0	$0	$0	$0
Multiplier		7	7	7	7	7	7	7	7	7	7
Total Capitalized Fixed Charg	(b)	$20,272,770	$23,677,290	$26,012,864	$28,025,296	$29,198,251	$0	$0	$0	$0	$0
Adjusted Net Pension Liability											
Total Adjusted UAL	(c)	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421
Less Cash and Restricted Funds											
Available Cash		$125,172,020	$133,214,498	$37,012,946	$40,187,564	$46,572,443	$83,048,890	$105,189,689	$122,718,436	$117,857,166	$123,813,315
Funds Restricted for Debt Service		0	0	9,918,039	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Total Cash/Restricted	(d)	$125,172,020	$133,214,498	$46,930,985	$57,683,675	$64,068,554	$100,545,001	$122,685,800	$140,214,547	$135,353,277	$141,309,426
Net Adjusted Debt	(a)+(b)+(c)-(d)	**$19,341,181**	**$275,778,434**	**$537,357,848**	**$640,685,769**	**$631,819,441**	**$571,666,812**	**$543,269,149**	**$511,434,264**	**$501,612,222**	**$480,580,254**
Calculation of Adjusted Net Revenue (FADS)											
Net Revenue *(Funds Available for Debt Service)*		$51,403,037	$55,561,744	$63,456,413	$69,471,583	$77,924,816	$79,607,020	$82,446,435	$85,310,980	$87,825,922	$90,303,331
Fixed Services Expense		2,896,110	3,382,470	3,716,123	4,003,614	4,171,179	0	0	0	0	0
Operating Leases		0	0	0	0	0	0	0	0	0	0
Net Transfers		0	0	0	0	0	0	0	0	0	0
Pension Expense (estimated)		547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587
Adjusted Net Revenue *(FADS)*		**$54,846,734**	**$59,491,802**	**$67,720,123**	**$74,022,784**	**$82,643,581**	**$80,154,607**	**$82,994,022**	**$85,858,567**	**$88,373,509**	**$90,850,918**
Net Adjusted Debt to Adjusted FADS		**0.35**	**4.64**	**7.93**	**8.66**	**7.65**	**7.13**	**6.55**	**5.96**	**5.68**	**5.29**
Target Maximum Ratio		*8.00*	*8.00*	*8.00*	**9.00**	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*
Net Leverage Check		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 10
Tualatin Valley Water District
2022-23 Financial Plan
Projected Net Leverage Ratio (Fitch Ratings)
— Net Adjusted Debt to Adjusted Net Revenue (FADS)

		FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Calculation of Net Adjusted Debt											
Outstanding Debt Balances											
Future Revenue Bonds		$221,303,253	$215,905,610	$210,207,015	$204,190,688	$197,838,913	$191,132,987	$184,053,164	$176,578,596	$168,687,274	$160,355,962
WIFIA Proceeds											
Capitalized Interest on WIFIA Proceeds											
WIFIA Loan Balance		370,383,569	359,871,223	349,216,481	338,417,415	327,472,069	316,378,462	305,134,586	293,738,406	282,187,858	270,480,851
TVWD Share of Wilsonville Ground Lease											
Total Outstanding Debt	(a)	$591,686,822	$575,776,833	$559,423,496	$542,608,103	$525,310,982	$507,511,449	$489,187,750	$470,317,002	$450,875,132	$430,836,813
Capitalized Fixed Charges											
Purchased Water - PWB		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Ratio		35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Fixed Services Expense		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Multiplier		7	7	7	7	7	7	7	7	7	7
Total Capitalized Fixed Charg	(b)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Adjusted Net Pension Liability											
Total Adjusted UAL	(c)	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421
Less Cash and Restricted Funds											
Available Cash		$126,942,968	$112,104,476	$114,853,321	$101,861,067	$69,109,646	$80,081,814	$101,115,860	$104,473,875	$102,168,468	$109,596,385
Funds Restricted for Debt Service		17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Total Cash/Restricted	(d)	$144,439,079	$129,600,587	$132,349,432	$119,357,178	$86,605,756	$97,577,925	$118,611,971	$121,969,985	$119,664,579	$127,092,496
Net Adjusted Debt	(a)+(b)+(c)-(d)	**$461,966,164**	**$460,894,667**	**$441,792,485**	**$437,969,345**	**$453,423,647**	**$424,651,946**	**$385,294,200**	**$363,065,437**	**$345,928,974**	**$318,462,738**
Calculation of Adjusted Net Revenue (FADS)											
Net Revenue *(Funds Available for Debt Service)*		$93,080,115	$95,771,627	$98,481,049	$100,621,529	$103,557,376	$105,860,671	$108,473,214	$111,093,311	$113,637,359	$116,245,839
Fixed Services Expense		0	0	0	0	0	0	0	0	0	0
Operating Leases		0	0	0	0	0	0	0	0	0	0
Net Transfers		0	0	0	0	0	0	0	0	0	0
Pension Expense (estimated)		547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587
Adjusted Net Revenue *(FADS)*		**$93,627,702**	**$96,319,214**	**$99,028,636**	**$101,169,117**	**$104,104,963**	**$106,408,258**	**$109,020,801**	**$111,640,898**	**$114,184,946**	**$116,793,426**
Net Adjusted Debt to Adjusted FADS		**4.93**	**4.79**	**4.46**	**4.33**	**4.36**	**3.99**	**3.53**	**3.25**	**3.03**	**2.73**
Target Maximum Ratio		*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*
Net Leverage Check		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 10
Tualatin Valley Water District
2022-23 Financial Plan
Projected Net Leverage Ratio (Fitch Ratings)
— Net Adjusted Debt to Adjusted Net Revenue (FADS)

		FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Calculation of Net Adjusted Debt											
Outstanding Debt Balances											
Future Revenue Bonds		$151,560,127	$142,273,870	$132,469,845	$122,119,185	$111,191,411	$99,654,345	$87,474,015	$74,614,556	$61,038,102	$46,704,676
WIFIA Proceeds											
Capitalized Interest on WIFIA Proceeds											
WIFIA Loan Balance		258,615,266	246,588,955	234,399,741	222,045,418	209,523,748	196,832,464	183,969,271	170,931,838	157,717,806	144,324,782
TVWD Share of Wilsonville Ground Lease											
Total Outstanding Debt	(a)	$410,175,393	$388,862,825	$366,869,586	$344,164,602	$320,715,158	$296,486,809	$271,443,286	$245,546,394	$218,755,908	$191,029,458
Capitalized Fixed Charges											
Purchased Water - PWB		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Ratio		35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Fixed Services Expense		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Multiplier		7	7	7	7	7	7	7	7	7	7
Total Capitalized Fixed Charg	(b)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Adjusted Net Pension Liability											
Total Adjusted UAL	(c)	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421	$14,718,421
Less Cash and Restricted Funds											
Available Cash		$137,408,477	$145,979,100	$174,827,675	$174,037,765	$118,730,877	$105,997,019	$124,568,792	$145,686,989	$121,928,242	$148,565,802
Funds Restricted for Debt Service		17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Total Cash/Restricted	(d)	$154,904,588	$163,475,211	$192,323,786	$191,533,876	$136,226,988	$123,493,130	$142,064,902	$163,183,100	$139,424,353	$166,061,913
Net Adjusted Debt	(a)+(b)+(c)-(d)	**$269,989,226**	**$240,106,035**	**$189,264,222**	**$167,349,147**	**$199,206,591**	**$187,712,100**	**$144,096,805**	**$97,081,715**	**$94,049,976**	**$39,685,966**
Calculation of Adjusted Net Revenue (FADS)											
Net Revenue *(Funds Available for Debt Service)*		$119,049,749	$121,897,478	$124,793,992	$126,858,414	$129,610,084	$131,178,615	$133,082,554	$135,126,540	$136,927,054	$137,831,395
Fixed Services Expense		0	0	0	0	0	0	0	0	0	0
Operating Leases		0	0	0	0	0	0	0	0	0	0
Net Transfers		0	0	0	0	0	0	0	0	0	0
Pension Expense (estimated)		547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587	547,587
Adjusted Net Revenue *(FADS)*		**$119,597,336**	**$122,445,065**	**$125,341,579**	**$127,406,001**	**$130,157,671**	**$131,726,202**	**$133,630,141**	**$135,674,127**	**$137,474,641**	**$138,378,982**
Net Adjusted Debt to Adjusted FADS		**2.26**	**1.96**	**1.51**	**1.31**	**1.53**	**1.43**	**1.08**	**0.72**	**0.68**	**0.29**
Target Maximum Ratio		*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*	*8.00*
Net Leverage Check		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 11
Tualatin Valley Water District
2022-23 Financial Plan
Fund Balance Summary

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Beginning Fund Balances										
Cash & Investments	$80,100,000	$125,172,020	$133,214,498	$37,012,946	$40,187,564	$46,572,443	$83,048,890	$105,189,689	$122,718,436	$117,857,166
Bond Proceeds	0	0	0	0	0	0	0	0	0	0
Rev. Bond Debt Service	0	0	0	9,918,039	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve	0	0	0	0	0	0	0	0	0	0
Totals	$80,100,000	$125,172,020	$133,214,498	$46,930,985	$57,683,675	$64,068,554	$100,545,001	$122,685,800	$140,214,547	$135,353,277
Ending Fund Balances										
Cash & Investments	$125,172,020	$133,214,498	$37,012,946	$40,187,564	$46,572,443	$83,048,890	$105,189,689	$122,718,436	$117,857,166	$123,813,315
Bond Proceeds	0	0	0	0	0	0	0	0	0	0
Rev. Bond Debt Service	0	0	9,918,039	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve	0	0	0	0	0	0	0	0	0	0
Totals	$125,172,020	$133,214,498	$46,930,985	$57,683,675	$64,068,554	$100,545,001	$122,685,800	$140,214,547	$135,353,277	$141,309,426
Year-End Min. Balance Assumptions										
Cash & Investments										
Operating Reserve										
Days of O&M in Fund Balance	250	250	250	250	250	250	250	250	250	250
Cash & Investments Minimum Ending Balance	$124,183,386	$131,925,202	$35,578,886	$38,974,523	$41,145,177	$41,349,442	$43,186,235	$45,179,001	$47,427,786	$49,769,653
Minimum Cash & Investments Overrides	*124,183,386*	*131,925,202*								
Rev. Bond Debt Service	$0	$0	$9,918,038	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Reimbursement SDC Account *NA*	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve	0	0	0	0	0	0	0	0	0	0
Check Beginning Fund Balances	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balances	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 11
Tualatin Valley Water District
2022-23 Financial Plan
Fund Balance Summary

		FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Beginning Fund Balances											
Cash & Investments		$123,813,315	$126,942,968	$112,104,476	$114,853,321	$101,861,067	$69,109,646	$80,081,814	$101,115,860	$104,473,875	$102,168,468
Bond Proceeds		0	0	0	0	0	0	0	0	0	0
Rev. Bond Debt Service		17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Construction Clearing Account		0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account		0	0	0	0	0	0	0	0	0	0
Improvement SDC Account		0	0	0	0	0	0	0	0	0	0
WIFIA Reserve		0	0	0	0	0	0	0	0	0	0
Totals		$141,309,426	$144,439,079	$129,600,587	$132,349,432	$119,357,178	$86,605,756	$97,577,925	$118,611,971	$121,969,985	$119,664,579
Ending Fund Balances											
Cash & Investments		$126,942,968	$112,104,476	$114,853,321	$101,861,067	$69,109,646	$80,081,814	$101,115,860	$104,473,875	$102,168,468	$109,596,385
Bond Proceeds		0	0	0	0	0	0	0	0	0	0
Rev. Bond Debt Service		17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Construction Clearing Account		0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account		0	0	0	0	0	0	0	0	0	0
Improvement SDC Account		0	0	0	0	0	0	0	0	0	0
WIFIA Reserve		0	0	0	0	0	0	0	0	0	0
Totals		$144,439,079	$129,600,587	$132,349,432	$119,357,178	$86,605,756	$97,577,925	$118,611,971	$121,969,985	$119,664,579	$127,092,496
Year-End Min. Balance Assumptions											
Cash & Investments											
Operating Reserve											
Days of O&M in Fund Balance		250	250	250	250	250	250	250	250	250	250
Cash & Investments Minimum Ending Balance		$52,042,794	$54,409,602	$56,873,264	$59,839,670	$62,106,527	$64,894,878	$67,808,940	$70,853,792	$74,035,243	$77,360,053
Minimum Cash & Investments Overrides											
Rev. Bond Debt Service		$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Reimbursement SDC Account	*NA*	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve		0	0	0	0	0	0	0	0	0	0
Check Beginning Fund Balances		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balances		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 11
Tualatin Valley Water District
2022-23 Financial Plan
Fund Balance Summary

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Beginning Fund Balances										
Cash & Investments	$109,596,385	$137,408,477	$145,979,100	$174,827,675	$174,037,765	$118,730,877	$105,997,019	$124,568,792	$145,686,989	$121,928,242
Bond Proceeds	0	0	0	0	0	0	0	0	0	0
Rev. Bond Debt Service	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve	0	0	0	0	0	0	0	0	0	0
Totals	$127,092,496	$154,904,588	$163,475,211	$192,323,786	$191,533,876	$136,226,988	$123,493,130	$142,064,902	$163,183,100	$139,424,353
Ending Fund Balances										
Cash & Investments	$137,408,477	$145,979,100	$174,827,675	$174,037,765	$118,730,877	$105,997,019	$124,568,792	$145,686,989	$121,928,242	$148,565,802
Bond Proceeds	0	0	0	0	0	0	0	0	0	0
Rev. Bond Debt Service	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve	0	0	0	0	0	0	0	0	0	0
Totals	$154,904,588	$163,475,211	$192,323,786	$191,533,876	$136,226,988	$123,493,130	$142,064,902	$163,183,100	$139,424,353	$166,061,913
Year-End Min. Balance Assumptions										x
Cash & Investments										
Operating Reserve										
Days of O&M in Fund Balance	250	250	250	250	250	250	250	250	250	250
Cash & Investments Minimum Ending Balance	$80,834,093	$84,464,688	$88,258,162	$92,788,348	$96,364,132	$100,692,212	$105,215,263	$109,941,196	$114,870,784	$120,021,990
Minimum Cash & Investments Overrides										
Rev. Bond Debt Service	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Reimbursement SDC Account *NA*	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve	0	0	0	0	0	0	0	0	0	0
Check Beginning Fund Balances	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balances	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 12
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Cash & Investments

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Interest Rate on Fund Balance	0.88%	2.00%	2.00%	1.75%	1.50%	1.25%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Cash & Investments Balance	$80,100,000	$125,172,020	$133,214,498	$37,012,946	$40,187,564	$46,572,443	$83,048,890	$105,189,689	$122,718,436	$117,857,166
Total User Charges	77,782,363	84,469,704	97,840,213	109,196,519	120,281,733	125,280,374	130,472,991	135,839,784	141,356,789	147,024,465
Non-Rate Revenues										
Meter & Svc Revenue	1,697,650	1,757,975	1,818,775	1,884,325	1,950,825	2,016,850	2,127,050	2,200,200	2,278,575	2,357,425
Special Service & Turn On Fees	1,950	2,009	2,069	2,131	2,195	2,261	2,328	2,398	2,470	2,544
Penalty Fees	12,075	12,437	12,810	13,195	13,591	13,998	14,418	14,851	15,296	15,755
Dispatch Fees	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income	202,375	208,446	214,700	221,141	227,775	234,608	241,646	248,896	256,363	264,053
Plan Review	26,125	26,909	27,716	28,547	29,404	30,286	31,195	32,130	33,094	34,087
Contract Reimbursements	1,600,000	1,648,000	1,697,440	1,748,363	1,800,814	1,854,839	1,910,484	1,967,798	2,026,832	2,087,637
Inspection Fees	91,650	94,400	97,231	100,148	103,153	106,247	109,435	112,718	116,099	119,582
Backflow Program Reimbursement	403,625	415,734	428,206	441,052	454,283	467,912	481,949	496,408	511,300	526,639
Power Generation Station	25,075	25,827	26,602	27,400	28,222	0	0	0	0	0
Rental Property Income	65,125	67,079	69,091	71,164	73,299	75,498	77,763	80,096	82,498	84,973
Sales to Other Funds – Partner Share	1,423,109	1,538,764	1,667,769	1,853,704	2,058,345	755,716	789,370	825,043	862,308	901,706
COB Wheeling Revenue	1,082,935	922,129	762,684	591,383	407,606	210,704	217,025	223,536	230,242	237,149
Transfers In										
WIFIA Reserve to Cash & Investments	100,000,000	0	0	0	0	0	0	0	0	0
Interest Earnings - Cash & Investments	903,197	2,583,865	1,702,274	675,504	650,700	810,133	941,193	1,139,541	1,202,878	1,208,352
Total Sources of Funds	$265,417,253	$218,945,298	$239,582,079	$153,867,523	$168,269,508	$178,431,869	$220,465,737	$248,373,088	$271,693,181	$272,721,536
Uses of Funds										
Net O&M Expenditures	$38,697,992	$42,764,542	$47,566,793	$52,181,065	$54,977,768	$56,888,001	$59,413,487	$62,158,996	$65,270,936	$68,510,463
Capital Outlays from Budget	495,600	210,350	500,000	522,500	546,013	570,583	596,259	623,091	651,130	680,431
Transfers Out										
Cash & Investments to Construction Clearing Account	101,051,641	42,755,907	150,819,994	50,716,356	52,998,951	24,706,321	30,206,571	30,074,251	55,115,634	46,919,012
Cash & Investments to Rev. Bond Debt Service	0	0	3,682,345	10,260,039	13,174,333	13,218,074	17,321,149	17,321,149	17,321,149	17,321,149
Cash & Investments to WIFIA Reserve	0	0	0	0	0	0	7,738,582	15,477,165	15,477,165	15,477,165
Transfers Out for Reserves										
Ending Cash & Investments Balance	125,172,020	133,214,498	37,012,946	40,187,564	46,572,443	83,048,890	105,189,689	122,718,436	117,857,166	123,813,315
Total Uses of Funds	$265,417,253	$218,945,298	$239,582,079	$153,867,523	$168,269,508	$178,431,869	$220,465,737	$248,373,088	$271,693,181	$272,721,536
Minimum Fund Balance Assumptions	$124,183,386	$131,925,202	$35,578,886	$38,974,523	$41,145,177	$41,349,442	$43,186,235	$45,179,001	$47,427,786	$49,769,653
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 12
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Cash & Investments

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Cash & Investments Balance	$123,813,315	$126,942,968	$112,104,476	$114,853,321	$101,861,067	$69,109,646	$80,081,814	$101,115,860	$104,473,875	$102,168,468
Total User Charges	152,843,060	158,812,596	164,932,864	171,203,412	177,415,352	183,624,889	190,051,760	196,703,572	203,588,197	210,713,784
Non-Rate Revenues										
Meter & Svc Revenue	2,441,500	2,525,575	2,615,350	2,705,600	2,800,600	2,901,300	3,002,475	3,108,875	3,215,750	3,327,850
Special Service & Turn On Fees	2,621	2,699	2,780	2,864	2,950	3,038	3,129	3,223	3,320	3,419
Penalty Fees	16,228	16,715	17,216	17,733	18,265	18,812	19,377	19,958	20,557	21,174
Dispatch Fees	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income	271,975	280,134	288,538	297,195	306,110	315,294	324,752	334,495	344,530	354,866
Plan Review	35,110	36,163	37,248	38,365	39,516	40,702	41,923	43,181	44,476	45,810
Contract Reimbursements	2,150,266	2,214,774	2,281,217	2,349,654	2,420,144	2,492,748	2,567,530	2,644,556	2,723,893	2,805,610
Inspection Fees	123,170	126,865	130,671	134,591	138,629	142,788	147,071	151,483	156,028	160,709
Backflow Program Reimbursement	542,438	558,711	575,473	592,737	610,519	628,835	647,700	667,131	687,145	707,759
Power Generation Station	0	0	0	0	0	0	0	0	0	0
Rental Property Income	87,523	90,148	92,853	95,638	98,507	101,463	104,507	107,642	110,871	114,197
Sales to Other Funds – Partner Share	942,283	984,685	1,028,996	1,075,301	1,123,690	1,174,256	1,227,097	1,282,317	1,340,021	1,400,322
COB Wheeling Revenue	244,264	251,592	259,139	266,914	274,921	283,169	291,664	300,414	309,426	318,709
Transfers In										
WIFIA Reserve to Cash & Investments	0	0	0	0	0	0	0	0	0	0
Interest Earnings - Cash & Investments	1,253,781	1,195,237	1,134,789	1,083,572	854,854	745,957	905,988	1,027,949	1,033,212	1,058,824
Total Sources of Funds	$284,767,533	$294,038,864	$285,501,611	$294,716,896	$287,965,123	$261,582,895	$279,416,788	$307,510,655	$318,051,299	$323,201,500
Uses of Funds										
Net O&M Expenditures	$71,642,354	$74,902,588	$78,295,440	$82,413,114	$85,499,850	$89,337,935	$93,349,080	$97,540,225	$101,919,360	$106,495,838
Capital Outlays from Budget	711,050	743,048	776,485	811,427	847,941	886,098	925,972	967,641	1,011,185	1,056,688
Transfers Out										
Cash & Investments to Construction Clearing Account	52,672,847	73,490,437	58,778,051	76,832,974	99,709,373	58,478,734	51,227,561	71,730,600	80,153,972	73,254,275
Cash & Investments to Rev. Bond Debt Service	17,321,149	17,321,150	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149
Cash & Investments to WIFIA Reserve	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Transfers Out for Reserves										
Ending Cash & Investments Balance	126,942,968	112,104,476	114,853,321	101,861,067	69,109,646	80,081,814	101,115,860	104,473,875	102,168,468	109,596,385
Total Uses of Funds	$284,767,533	$294,038,864	$285,501,611	$294,716,896	$287,965,123	$261,582,895	$279,416,788	$307,510,655	$318,051,299	$323,201,500
Minimum Fund Balance Assumptions	$52,042,794	$54,409,602	$56,873,264	$59,839,670	$62,106,527	$64,894,878	$67,808,940	$70,853,792	$74,035,243	$77,360,053
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 12
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Cash & Investments

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Cash & Investments Balance	$109,596,385	$137,408,477	$145,979,100	$174,827,675	$174,037,765	$118,730,877	$105,997,019	$124,568,792	$145,686,989	$121,928,242
Total User Charges	218,088,766	225,721,873	233,622,139	241,798,914	249,674,535	257,164,771	264,879,715	272,826,106	281,010,889	289,441,216
Non-Rate Revenues										
Meter & Svc Revenue	3,445,650	3,563,925	3,687,900	3,816,625	3,951,525	4,091,175	4,232,250	4,383,300	4,534,825	3,812,825
Special Service & Turn On Fees	3,522	3,628	3,736	3,848	3,964	4,083	4,205	4,332	4,461	4,595
Penalty Fees	21,809	22,463	23,137	23,831	24,546	25,282	26,041	26,822	27,627	28,456
Dispatch Fees	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income	365,512	376,477	387,771	399,405	411,387	423,728	436,440	449,533	463,019	476,910
Plan Review	47,185	48,600	50,058	51,560	53,107	54,700	56,341	58,031	59,772	61,565
Contract Reimbursements	2,889,778	2,976,471	3,065,765	3,157,738	3,252,471	3,350,045	3,450,546	3,554,062	3,660,684	3,770,505
Inspection Fees	165,530	170,496	175,611	180,879	186,306	191,895	197,652	203,581	209,689	215,979
Backflow Program Reimbursement	728,992	750,861	773,387	796,589	820,487	845,101	870,454	896,568	923,465	951,169
Power Generation Station	0	0	0	0	0	0	0	0	0	0
Rental Property Income	117,623	121,152	124,786	128,530	132,386	136,357	140,448	144,661	149,001	153,471
Sales to Other Funds – Partner Share	1,463,336	1,529,186	1,598,000	1,669,910	1,745,056	1,823,583	1,905,645	1,991,399	2,081,011	2,174,657
COB Wheeling Revenue	328,270	338,118	348,262	358,710	369,471	380,555	391,972	403,731	415,843	428,318
Transfers In										
WIFIA Reserve to Cash & Investments	0	0	0	0	0	0	0	0	0	0
Interest Earnings - Cash & Investments	1,235,024	1,416,938	1,604,034	1,744,327	1,463,843	1,123,639	1,152,829	1,351,279	1,338,076	1,352,470
Total Sources of Funds	$338,497,382	$374,448,666	$391,443,687	$428,958,540	$436,126,847	$388,345,793	$383,741,556	$410,862,197	$440,565,352	$424,800,378
Uses of Funds										
Net O&M Expenditures	$111,277,694	$116,275,059	$121,496,579	$127,779,434	$132,653,959	$138,611,262	$144,836,944	$151,341,826	$158,126,271	$165,215,703
Capital Outlays from Budget	1,104,239	1,153,930	1,205,857	1,260,121	1,316,826	1,376,083	1,438,007	1,502,717	1,570,340	1,641,005
Transfers Out										
Cash & Investments to Construction Clearing Account	55,908,657	78,242,263	61,115,262	93,082,906	150,626,871	109,563,115	80,099,500	79,532,350	126,142,186	76,579,555
Cash & Investments to Rev. Bond Debt Service	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149	17,321,149
Cash & Investments to WIFIA Reserve	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Transfers Out for Reserves										
Ending Cash & Investments Balance	137,408,477	145,979,100	174,827,675	174,037,765	118,730,877	105,997,019	124,568,792	145,686,989	121,928,242	148,565,802
Total Uses of Funds	$338,497,382	$374,448,666	$391,443,687	$428,958,540	$436,126,847	$388,345,793	$383,741,556	$410,862,197	$440,565,352	$424,800,378
Minimum Fund Balance Assumptions	$80,834,093	$84,464,688	$88,258,162	$92,788,348	$96,364,132	$100,692,212	$105,215,263	$109,941,196	$114,870,784	$120,021,990
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 13
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Bond Proceeds

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Interest Rate on Fund Balance	0.88%	2.00%	2.00%	1.75%	1.50%	1.25%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Bond Proceeds Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Bond Proceeds	0	0	137,510,000	106,795,000	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$0	$0	$137,510,000	$106,795,000	$0	$0	$0	$0	$0	$0
Uses of Funds										
Issuance Costs	$0	$0	$1,031,325	$800,963	$0	$0	$0	$0	$0	$0
STD Retirement	0	0	0	0	0	0	0	0	0	0
Transfers Out										
Bond Proceeds to Rev. Bond Debt Service	$0	$0	$9,918,038	$7,578,072	$0	$0	$0	$0	$0	$0
Bond Proceeds to Construction Clearing Account	0	0	126,560,637	98,415,965	0	0	0	0	0	0
Use of Prior Bond Proceeds for CIP					0	0	0	0	0	0
Ending Bond Proceeds Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$0	$0	$137,510,000	$106,795,000	$0	$0	$0	$0	$0	$0
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 13
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Bond Proceeds

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Bond Proceeds Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Bond Proceeds	0	0	0	0	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Uses of Funds										
Issuance Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
STD Retirement	0	0	0	0	0	0	0	0	0	0
Transfers Out										
Bond Proceeds to Rev. Bond Debt Service	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Bond Proceeds to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Use of Prior Bond Proceeds for CIP	0	0	0	0	0	0	0	0	0	0
Ending Bond Proceeds Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 13
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Bond Proceeds

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Bond Proceeds Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Bond Proceeds	0	0	0	0	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Uses of Funds										
Issuance Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
STD Retirement	0	0	0	0	0	0	0	0	0	0
Transfers Out										
Bond Proceeds to Rev. Bond Debt Service	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Bond Proceeds to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Use of Prior Bond Proceeds for CIP	0	0	0	0	0	0	0	0	0	0
Ending Bond Proceeds Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Table 14
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Rev. Bond Debt Service

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Interest Rate on Fund Balance	0.88%	2.00%	2.00%	1.75%	1.50%	1.25%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Rev. Bond Debt Service Balance	$0	$0	$0	$9,918,039	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111
Transfers In										
Cash & Investments to Rev. Bond Debt Service	$0	$0	$3,682,345	$10,260,039	$13,174,333	$13,218,074	$17,321,149	$17,321,149	$17,321,149	$17,321,149
Bond Proceeds to Rev. Bond Debt Service	0	0	9,918,038	7,578,072	0	0	0	0	0	0
Interest Earnings	0	0	99,180	239,874	262,442	218,701	174,961	174,961	174,961	174,961
Total Sources of Funds	$0	$0	$13,699,564	$27,996,023	$30,932,886	$30,932,886	$34,992,221	$34,992,221	$34,992,221	$34,992,221
Uses of Funds										
Total Debt Service	$0	$0	$3,781,525	$10,499,913	$13,436,775	$13,436,775	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Ending Rev. Bond Debt Service Balance	0	0	9,918,039	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Total Uses of Funds	$0	$0	$13,699,564	$27,996,023	$30,932,886	$30,932,886	$34,992,221	$34,992,221	$34,992,221	$34,992,221
Minimum Fund Balance Assumptions	$0	$0	$9,918,038	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 14
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Rev. Bond Debt Service

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Rev. Bond Debt Service Balance	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111
Transfers In										
Cash & Investments to Rev. Bond Debt Service	$17,321,149	$17,321,150	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149
Bond Proceeds to Rev. Bond Debt Service	0	0	0	0	0	0	0	0	0	0
Interest Earnings	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961
Total Sources of Funds	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221
Uses of Funds										
Total Debt Service	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Ending Rev. Bond Debt Service Balance	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Total Uses of Funds	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221
Minimum Fund Balance Assumptions	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 14
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Rev. Bond Debt Service

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Rev. Bond Debt Service Balance	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111	$17,496,111
Transfers In										
Cash & Investments to Rev. Bond Debt Service	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149	$17,321,149
Bond Proceeds to Rev. Bond Debt Service	0	0	0	0	0	0	0	0	0	0
Interest Earnings	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961	174,961
Total Sources of Funds	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221
Uses of Funds										
Total Debt Service	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Ending Rev. Bond Debt Service Balance	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111	17,496,111
Total Uses of Funds	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221	$34,992,221
Minimum Fund Balance Assumptions	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 15
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Construction Clearing Account

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Interest Rate on Fund Balance	0.88%	2.00%	2.00%	1.75%	1.50%	1.25%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Construction Clearing Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfers In										
Cash & Investments to Construction Clearing Account	$101,051,641	$42,755,907	$150,819,994	$50,716,356	$52,998,951	$24,706,321	$30,206,571	$30,074,251	$55,115,634	$46,919,012
Bond Proceeds to Construction Clearing Account	0	0	126,560,637	98,415,965	0	0	0	0	0	0
Reimbursement SDC Account to Construction Clearing Account	916,548	872,334	872,992	873,328	873,328	846,255	817,749	4,111,616	3,947,152	3,774,464
Improvement SDC Account to Construction Clearing Account	3,867,228	3,680,675	3,683,453	3,684,870	3,684,870	3,570,639	3,450,365	0	0	0
WIFIA Reserve to Construction Clearing Account	0	257,500,000	30,248,990	0	0	0	0	0	0	0
Short-Term Debt	0	0	0	0	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$105,835,417	$304,808,916	$312,186,066	$153,690,519	$57,557,149	$29,123,214	$34,474,685	$34,185,867	$59,062,786	$50,693,476
Uses of Funds										
Capital Projects funded from Cash/Reserves	$101,051,641	$42,755,907	$150,819,994	$50,716,356	$52,998,951	$24,706,321	$30,206,571	$30,074,251	$55,115,634	$46,919,012
Projects funded from Debt Proceeds (incl fund Int.)	0	257,500,000	156,809,627	98,415,965	0	0	0	0	0	0
SDC-Funded Capital Projects	4,783,776	4,553,009	4,556,445	4,558,198	4,558,198	4,416,893	4,268,114	4,111,616	3,947,152	3,774,464
Ending Construction Clearing Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$105,835,417	$304,808,916	$312,186,066	$153,690,519	$57,557,149	$29,123,214	$34,474,685	$34,185,867	$59,062,786	$50,693,476
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Total Capital Projects & Outlays	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 15
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Construction Clearing Account

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Construction Clearing Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfers In										
Cash & Investments to Construction Clearing Account	$52,672,847	$73,490,437	$58,778,051	$76,832,974	$99,709,373	$58,478,734	$51,227,561	$71,730,600	$80,153,972	$73,254,275
Bond Proceeds to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account to Construction Clearing Account	3,593,290	3,403,359	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780	1,804,333	1,533,683
Improvement SDC Account to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Short-Term Debt	0	0	0	0	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$56,266,137	$76,893,796	$61,982,444	$79,829,081	$102,487,582	$61,029,130	$53,539,920	$73,794,380	$81,958,306	$74,787,958
Uses of Funds										
Capital Projects funded from Cash/Reserves	$52,672,847	$73,490,437	$58,778,051	$76,832,974	$99,709,373	$58,478,734	$51,227,561	$71,730,600	$80,153,972	$73,254,275
Projects funded from Debt Proceeds (incl fund Int.)	0	0	0	0	0	0	0	0	0	0
SDC-Funded Capital Projects	3,593,290	3,403,359	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780	1,804,333	1,533,683
Ending Construction Clearing Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$56,266,137	$76,893,796	$61,982,444	$79,829,081	$102,487,582	$61,029,130	$53,539,920	$73,794,380	$81,958,306	$74,787,958
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Total Capital Projects & Outlays	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 15
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – Construction Clearing Account

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning Construction Clearing Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfers In										
Cash & Investments to Construction Clearing Account	$55,908,657	$78,242,263	$61,115,262	$93,082,906	$150,626,871	$109,563,115	$80,099,500	$79,532,350	$126,142,186	$76,579,555
Bond Proceeds to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Reimbursement SDC Account to Construction Clearing Account	1,251,486	957,387	651,023	332,022	0	0	0	0	0	0
Improvement SDC Account to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
WIFIA Reserve to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Short-Term Debt	0	0	0	0	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$57,160,142	$79,199,650	$61,766,285	$93,414,928	$150,626,871	$109,563,115	$80,099,500	$79,532,350	$126,142,186	$76,579,555
Uses of Funds										
Capital Projects funded from Cash/Reserves	$55,908,657	$78,242,263	$61,115,262	$93,082,906	$150,626,871	$109,563,115	$80,099,500	$79,532,350	$126,142,186	$76,579,555
Projects funded from Debt Proceeds (incl fund Int.)	0	0	0	0	0	0	0	0	0	0
SDC-Funded Capital Projects	1,251,486	957,387	651,023	332,022	0	0	0	0	0	0
Ending Construction Clearing Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$57,160,142	$79,199,650	$61,766,285	$93,414,928	$150,626,871	$109,563,115	$80,099,500	$79,532,350	$126,142,186	$76,579,555
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Total Capital Projects & Outlays	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 16
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summaries – SDC Accounts

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Interest Rate on Account Balances	0.88%	2.00%	2.00%	1.75%	1.50%	1.25%	1.00%	1.00%	1.00%	1.00%
Fund Summary – Reimbursement SDC Account										
Sources of Funds										
Beginning Reimbursement SDC Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reimbursement Fee Receipts	916,548	872,334	872,992	873,328	873,328	846,255	817,749	4,111,616	3,947,152	3,774,464
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$916,548	$872,334	$872,992	$873,328	$873,328	$846,255	$817,749	$4,111,616	$3,947,152	$3,774,464
Uses of Funds										
Transfers Out										
Reimbursement SDC Account to Construction Clearing Account	$916,548	$872,334	$872,992	$873,328	$873,328	$846,255	$817,749	$4,111,616	$3,947,152	$3,774,464
Ending Reimbursement SDC Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$916,548	$872,334	$872,992	$873,328	$873,328	$846,255	$817,749	$4,111,616	$3,947,152	$3,774,464
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fund Summary – Improvement SDC Account										
Sources of Funds										
Beginning Improvement SDC Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Improvement Fee Receipts	3,867,228	3,680,675	3,683,453	3,684,870	3,684,870	3,570,639	3,450,365	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$3,867,228	$3,680,675	$3,683,453	$3,684,870	$3,684,870	$3,570,639	$3,450,365	$0	$0	$0
Uses of Funds										
Transfers Out										
Improvement SDC Account to Construction Clearing Account	$3,867,228	$3,680,675	$3,683,453	$3,684,870	$3,684,870	$3,570,639	$3,450,365	$0	$0	$0
Ending Improvement SDC Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$3,867,228	$3,680,675	$3,683,453	$3,684,870	$3,684,870	$3,570,639	$3,450,365	$0	$0	$0
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 16
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summaries – SDC Accounts

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Interest Rate on Account Balances	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Fund Summary – Reimbursement SDC Account										
Sources of Funds										
Beginning Reimbursement SDC Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reimbursement Fee Receipts	3,593,290	3,403,359	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780	1,804,333	1,533,683
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$3,593,290	$3,403,359	$3,204,393	$2,996,107	$2,778,209	$2,550,396	$2,312,359	$2,063,780	$1,804,333	$1,533,683
Uses of Funds										
Transfers Out										
Reimbursement SDC Account to Construction Clearing Account	$3,593,290	$3,403,359	$3,204,393	$2,996,107	$2,778,209	$2,550,396	$2,312,359	$2,063,780	$1,804,333	$1,533,683
Ending Reimbursement SDC Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$3,593,290	$3,403,359	$3,204,393	$2,996,107	$2,778,209	$2,550,396	$2,312,359	$2,063,780	$1,804,333	$1,533,683
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fund Summary – Improvement SDC Account										
Sources of Funds										
Beginning Improvement SDC Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Improvement Fee Receipts	0	0	0	0	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Uses of Funds										
Transfers Out										
Improvement SDC Account to Construction Clearing Account	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Ending Improvement SDC Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 16
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summaries – SDC Accounts

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Interest Rate on Account Balances	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Fund Summary – Reimbursement SDC Account										
Sources of Funds										
Beginning Reimbursement SDC Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reimbursement Fee Receipts	1,251,486	957,387	651,023	332,022	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$1,251,486	$957,387	$651,023	$332,022	$0	$0	$0	$0	$0	$0
Uses of Funds										
Transfers Out										
Reimbursement SDC Account to Construction Clearing Account	$1,251,486	$957,387	$651,023	$332,022	$0	$0	$0	$0	$0	$0
Ending Reimbursement SDC Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$1,251,486	$957,387	$651,023	$332,022	$0	$0	$0	$0	$0	$0
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fund Summary – Improvement SDC Account										
Sources of Funds										
Beginning Improvement SDC Account Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Improvement Fee Receipts	0	0	0	0	0	0	0	0	0	0
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Uses of Funds										
Transfers Out										
Improvement SDC Account to Construction Clearing Account	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Ending Improvement SDC Account Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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TVWD Forecast Model Summary

Table 17
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – WIFIA Reserve

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Interest Rate on Fund Balance	0.88%	2.00%	2.00%	1.75%	1.50%	1.25%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning WIFIA Reserve Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Proceeds	100,000,000	257,500,000	30,248,990	0	0	0	0	0	0	0
Transfers In										
Cash & Investments to WIFIA Reserve	$0	$0	$0	$0	$0	$0	$7,738,582	$15,477,165	$15,477,165	$15,477,165
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$100,000,000	$257,500,000	$30,248,990	$0	$0	$0	$7,738,582	$15,477,165	$15,477,165	$15,477,165
Uses of Funds										
WIFIA Issuance Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Interest-only Payments	0	0	0	0	0	0	0	0	0	0
WIFIA Loan Repayments	0	0	0	0	0	0	7,738,582	15,477,165	15,477,165	15,477,165
Transfers Out										
WIFIA Reserve to Cash & Investments	$100,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Reserve to Construction Clearing Account	0	257,500,000	30,248,990	0	0	0	0	0	0	0
Ending WIFIA Reserve Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$100,000,000	$257,500,000	$30,248,990	$0	$0	$0	$7,738,582	$15,477,165	$15,477,165	$15,477,165
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 17
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – WIFIA Reserve

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning WIFIA Reserve Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Proceeds	0	0	0	0	0	0	0	0	0	0
Transfers In										
Cash & Investments to WIFIA Reserve	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165
Uses of Funds										
WIFIA Issuance Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Interest-only Payments	0	0	0	0	0	0	0	0	0	0
WIFIA Loan Repayments	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Transfers Out										
WIFIA Reserve to Cash & Investments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Reserve to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Ending WIFIA Reserve Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 17
Tualatin Valley Water District
2022-23 Financial Plan
Fund Summary – WIFIA Reserve

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Interest Rate on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Sources of Funds										
Beginning WIFIA Reserve Balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Proceeds	0	0	0	0	0	0	0	0	0	0
Transfers In										
Cash & Investments to WIFIA Reserve	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165
Interest Earnings	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165
Uses of Funds										
WIFIA Issuance Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Interest-only Payments	0	0	0	0	0	0	0	0	0	0
WIFIA Loan Repayments	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Transfers Out										
WIFIA Reserve to Cash & Investments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA Reserve to Construction Clearing Account	0	0	0	0	0	0	0	0	0	0
Ending WIFIA Reserve Balance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$15,477,165
Minimum Fund Balance Assumptions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Check Ending Fund Balance	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 18
Tualatin Valley Water District
2022-23 Financial Plan
Sources and Uses Summary with Changes in Reserves by Fund

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Sources of Funds										
Water Sales	$77,782,363	$84,469,704	$97,840,213	$109,196,519	$120,281,733	$125,280,374	$130,472,991	$135,839,784	$141,356,789	$147,024,465
SDCs	4,783,776	4,553,009	4,556,445	4,558,198	4,558,198	4,416,893	4,268,114	4,111,616	3,947,152	3,774,464
Other Revenue	7,534,890	9,303,574	8,626,548	7,897,931	8,062,653	6,797,754	7,118,817	7,518,576	7,792,917	8,014,866
WIFIA Proceeds	100,000,000	257,500,000	30,248,990	0	0	0	0	0	0	0
Debt Proceeds	0	0	137,510,000	106,795,000	0	0	0	0	0	0
Reserves										
Cash & Investments	0	0	96,201,552	0	0	0	0	0	4,861,269	0
Rev. Bond Debt Service	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	**$190,101,028**	**$355,826,287**	**$374,983,748**	**$228,447,648**	**$132,902,584**	**$136,495,021**	**$141,859,922**	**$147,469,976**	**$157,958,127**	**$158,813,795**
Uses of Funds										
Operating Exp.	$27,378,092	$29,614,842	$34,494,500	$37,744,678	$39,055,656	$42,329,612	$44,111,660	$46,082,133	$48,392,905	$50,805,047
Purchased Water & Pumping Power	11,319,900	13,149,700	14,103,618	15,237,349	15,922,112	14,558,389	15,301,826	16,076,863	16,878,031	17,705,417
Capital Outlay	106,331,017	305,019,266	312,686,066	154,213,019	58,103,162	29,693,797	35,070,944	34,808,958	59,713,916	51,373,907
Debt Service	0	0	3,781,525	10,499,913	13,436,775	13,436,775	25,234,693	32,973,275	32,973,275	32,973,275
Building Reserves										
Cash & Investments	45,072,020	8,042,478	0	3,174,617	6,384,879	36,476,448	22,140,799	17,528,747	0	5,956,149
Rev. Bond Debt Service	0	0	9,918,039	7,578,072	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	**$190,101,028**	**$355,826,287**	**$374,983,748**	**$228,447,648**	**$132,902,584**	**$136,495,021**	**$141,859,922**	**$147,469,976**	**$157,958,127**	**$158,813,795**
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

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Table 18
Tualatin Valley Water District
2022-23 Financial Plan
Sources and Uses Summary with Changes in Reserves by Fund

	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Sources of Funds										
Water Sales	$152,843,060	$158,812,596	$164,932,864	$171,203,412	$177,415,352	$183,624,889	$190,051,760	$196,703,572	$203,588,197	$210,713,784
SDCs	3,593,290	3,403,359	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780	1,804,333	1,533,683
Other Revenue	8,286,119	8,458,261	8,639,232	8,835,124	8,863,665	9,023,322	9,458,175	9,866,184	10,164,189	10,494,210
WIFIA Proceeds	0	0	0	0	0	0	0	0	0	0
Debt Proceeds	0	0	0	0	0	0	0	0	0	0
Reserves										
Cash & Investments	0	14,838,492	0	12,992,253	32,751,422	0	0	0	2,305,407	0
Rev. Bond Debt Service	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	**$164,722,469**	**$185,512,707**	**$176,776,489**	**$196,026,897**	**$221,808,648**	**$195,198,607**	**$201,822,294**	**$208,633,536**	**$217,862,126**	**$222,741,677**
Uses of Funds										
Operating Exp.	$53,083,308	$55,463,712	$57,950,646	$61,136,502	$63,265,790	$66,103,343	$69,068,931	$72,167,469	$75,404,830	$78,788,155
Purchased Water & Pumping Power	18,559,046	19,438,876	20,344,794	21,276,612	22,234,060	23,234,592	24,280,149	25,372,756	26,514,530	27,707,684
Capital Outlay	56,977,187	77,636,843	62,758,929	80,640,508	103,335,523	61,915,228	54,465,892	74,762,021	82,969,491	75,844,647
Debt Service	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275
Building Reserves										
Cash & Investments	3,129,653	0	2,748,844	0	0	10,972,168	21,034,046	3,358,015	0	7,427,917
Rev. Bond Debt Service	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	**$164,722,469**	**$185,512,707**	**$176,776,489**	**$196,026,897**	**$221,808,648**	**$195,198,607**	**$201,822,294**	**$208,633,536**	**$217,862,126**	**$222,741,677**
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 18
Tualatin Valley Water District
2022-23 Financial Plan
Sources and Uses Summary with Changes in Reserves by Fund

	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051
Sources of Funds										
Water Sales	$218,088,766	$225,721,873	$233,622,139	$241,798,914	$249,674,535	$257,164,771	$264,879,715	$272,826,106	$281,010,889	$289,441,216
SDCs	1,251,486	957,387	651,023	332,022	0	0	0	0	0	0
Other Revenue	10,987,192	11,493,277	12,017,409	12,506,913	12,589,508	12,625,105	13,039,784	13,642,260	14,042,435	13,605,882
WIFIA Proceeds	0	0	0	0	0	0	0	0	0	0
Debt Proceeds	0	0	0	0	0	0	0	0	0	0
Reserves										
Cash & Investments	0	0	0	789,910	55,306,888	12,733,858	0	0	23,758,747	0
Rev. Bond Debt Service	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
Total Sources of Funds	**$230,327,444**	**$238,172,537**	**$246,290,571**	**$255,427,758**	**$317,570,931**	**$282,523,735**	**$277,919,498**	**$286,468,366**	**$318,812,072**	**$303,047,098**
Uses of Funds										
Operating Exp.	$82,323,165	$86,017,576	$89,877,509	$94,737,506	$98,125,145	$102,528,650	$107,130,615	$111,938,713	$116,950,017	$122,186,517
Purchased Water & Pumping Power	28,954,529	30,257,483	31,619,070	33,041,928	34,528,815	36,082,611	37,706,329	39,403,114	41,176,254	43,029,185
Capital Outlay	58,264,382	80,353,580	62,972,142	94,675,048	151,943,697	110,939,198	81,537,507	81,035,067	127,712,526	78,220,560
Debt Service	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275
Building Reserves										
Cash & Investments	27,812,093	8,570,622	28,848,575	0	0	0	18,571,772	21,118,198	0	26,637,560
Rev. Bond Debt Service	0	0	0	0	0	0	0	0	0	0
Improvement SDC Account	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	**$230,327,444**	**$238,172,537**	**$246,290,571**	**$255,427,758**	**$317,570,931**	**$282,523,735**	**$277,919,498**	**$286,468,366**	**$318,812,072**	**$303,047,098**
Check Sources/Uses	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TVWD Forecast Model Summary

Table 19
Tualatin Valley Water District
2022-23 Financial Plan
45-year Revenue Requirements Forecast

		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
O&M Summary										
Fixed Expenses		$39,562,443	$43,125,295	$48,459,051	$53,104,351	$56,067,499	$52,266,873	$54,574,692	$57,093,600	$59,969,638
Variable Costs										
JWC		2,595,300	2,999,500	2,961,243	3,231,582	3,412,079	6,739,115	7,042,375	7,359,282	7,690,450
Pumping Power		450,000	486,000	524,880	566,870	592,380	1,364,197	1,434,836	1,508,459	1,584,480
Total O&M		$42,607,743	$46,610,795	$51,945,174	$56,902,803	$60,071,958	$60,370,185	$63,051,903	$65,961,341	$69,244,568
Less Capitalized OH & Outlays from O&M		$3,909,751	$3,846,253	$4,378,381	$4,721,738	$5,094,190	$3,482,184	$3,638,416	$3,802,345	$3,973,632
Net O&M	[A]	$38,697,992	$42,764,542	$47,566,793	$52,181,065	$54,977,768	$56,888,001	$59,413,487	$62,158,996	$65,270,936
Debt Service from Rates *(net of Debt Reserve Retirements)*										
Future Revenue Bonds		$0	$0	$3,781,525	$10,499,913	$13,436,775	$13,436,775	$17,496,110	$17,496,110	$17,496,110
WIFIA		0	0	0	0	0	0	7,738,582	15,477,165	15,477,165
Total Debt Service	[B]	$0	$0	$3,781,525	$10,499,913	$13,436,775	$13,436,775	$25,234,693	$32,973,275	$32,973,275
Cash-Funded Capital Expenditures										
Capital Projects & Outlays from O&M		$106,331,017	$305,019,266	$312,686,066	$154,213,019	$58,103,162	$29,693,797	$35,070,944	$34,808,958	$59,713,916
Less Debt Funding		0	(257,500,000)	(156,809,627)	(98,415,965)	0	0	0	0	0
CIP & Outlays from Cash/Reserves	[C]	$106,331,017	$47,519,266	$155,876,439	$55,797,053	$58,103,162	$29,693,797	$35,070,944	$34,808,958	$59,713,916
Total Requirements [A]+[B]+[C]	[D]	$145,029,009	$90,283,808	$207,224,758	$118,478,031	$126,517,705	$100,018,573	$119,719,123	$129,941,230	$157,958,127
Less **Non-Rate Revenues and Reserves**										
Meter & Svc Revenue		$1,697,650	$1,757,975	$1,818,775	$1,884,325	$1,950,825	$2,016,850	$2,127,050	$2,200,200	$2,278,575
Non-Rate Revenue *(net of related expenses)*		4,934,043	4,961,733	5,006,318	5,098,228	5,198,686	3,752,069	3,875,613	4,003,874	4,136,503
SDC Funding for Capital		4,783,776	4,553,009	4,556,445	4,558,198	4,558,198	4,416,893	4,268,114	4,111,616	3,947,152
Funding from Reserves *(incl. interest earnings)*		903,197	2,583,865	98,003,007	915,378	913,142	1,028,835	1,116,154	1,314,502	6,239,108
Totals	[E]	$12,318,666	$13,856,583	$109,384,545	$12,456,129	$12,620,851	$11,214,647	$11,386,931	$11,630,192	$16,601,339
Net Revenue Requirements [D]-[E]		**$132,710,343**	**$76,427,226**	**$97,840,213**	**$106,021,902**	**$113,896,854**	**$88,803,926**	**$108,332,192**	**$118,311,037**	**$141,356,789**

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TVWD Forecast Model Summary

Table 19
Tualatin Valley Water District
2022-23 Financial Plan
45-year Revenue Requirements Forecast

		FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039
O&M Summary										
Fixed Expenses		$62,964,282	$65,840,636	$68,835,114	$71,951,665	$75,782,161	$78,570,504	$82,096,769	$85,782,061	$89,632,690
Variable Costs										
JWC		8,036,520	8,398,163	8,776,081	9,171,004	9,583,700	10,014,966	10,465,640	10,936,593	11,428,740
Pumping Power		1,662,891	1,743,680	1,826,824	1,912,296	2,000,057	2,090,060	2,184,113	2,282,398	2,385,106
Total O&M		$72,663,693	$75,982,479	$79,438,019	$83,034,966	$87,365,918	$90,675,530	$94,746,521	$99,001,052	$103,446,536
Less Capitalized OH & Outlays from O&M		$4,153,230	$4,340,125	$4,535,431	$4,739,525	$4,952,804	$5,175,680	$5,408,586	$5,651,972	$5,906,311
Net O&M	[A]	$68,510,463	$71,642,354	$74,902,588	$78,295,440	$82,413,114	$85,499,850	$89,337,935	$93,349,080	$97,540,225
Debt Service from Rates *(net of Debt Reserve Retirements)*										
Future Revenue Bonds		$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
WIFIA		15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Total Debt Service	[B]	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275
Cash-Funded Capital Expenditures										
Capital Projects & Outlays from O&M		$51,373,907	$56,977,187	$77,636,843	$62,758,929	$80,640,508	$103,335,523	$61,915,228	$54,465,892	$74,762,021
Less Debt Funding		0	0	0	0	0	0	0	0	0
CIP & Outlays from Cash/Reserves	[C]	$51,373,907	$56,977,187	$77,636,843	$62,758,929	$80,640,508	$103,335,523	$61,915,228	$54,465,892	$74,762,021
Total Requirements [A]+[B]+[C]	[D]	$152,857,646	$161,592,816	$185,512,707	$174,027,645	$196,026,897	$221,808,648	$184,226,439	$180,788,248	$205,275,521
Less **Non-Rate Revenues and Reserves**										
Meter & Svc Revenue		$2,357,425	$2,441,500	$2,525,575	$2,615,350	$2,705,600	$2,800,600	$2,901,300	$3,002,475	$3,108,875
Non-Rate Revenue *(net of related expenses)*		4,274,127	4,415,877	4,562,487	4,714,132	4,870,991	5,033,250	5,201,103	5,374,750	5,554,399
SDC Funding for Capital		3,774,464	3,593,290	3,403,359	3,204,393	2,996,107	2,778,209	2,550,396	2,312,359	2,063,780
Funding from Reserves *(incl. interest earnings)*		1,383,314	1,428,743	16,208,690	1,309,750	14,250,787	33,781,237	920,918	1,080,949	1,202,910
Totals	[E]	$11,789,330	$11,879,409	$26,700,111	$11,843,625	$24,823,485	$44,393,296	$11,573,717	$11,770,533	$11,929,964
Net Revenue Requirements [D]-[E]		**$141,068,316**	**$149,713,407**	**$158,812,596**	**$162,184,019**	**$171,203,412**	**$177,415,352**	**$172,652,721**	**$169,017,714**	**$193,345,557**

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Table 19
Tualatin Valley Water District
2022-23 Financial Plan
45-year Revenue Requirements Forecast

		FY2040	FY2041	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048
O&M Summary										
Fixed Expenses		$93,655,986	$97,860,613	$102,253,884	$106,845,177	$111,642,352	$117,481,767	$121,892,897	$127,365,951	$133,085,595
Variable Costs										
JWC		11,943,033	12,480,470	13,042,091	13,628,985	14,242,290	14,883,193	15,552,936	16,252,818	16,984,195
Pumping Power		2,492,435	2,604,595	2,721,802	2,844,283	2,972,275	3,106,028	3,245,799	3,391,860	3,544,494
Total O&M		$108,091,455	$112,945,678	$118,017,776	$123,318,445	$128,856,917	$135,470,988	$140,691,632	$147,010,630	$153,614,284
Less Capitalized OH & Outlays from O&M		$6,172,095	$6,449,839	$6,740,082	$7,043,386	$7,360,338	$7,691,553	$8,037,673	$8,399,368	$8,777,340
Net O&M	[A]	$101,919,360	$106,495,838	$111,277,694	$116,275,059	$121,496,579	$127,779,434	$132,653,959	$138,611,262	$144,836,944
Debt Service from Rates *(net of Debt Reserve Retirements)*										
Future Revenue Bonds		$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
WIFIA		15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Total Debt Service	[B]	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275
Cash-Funded Capital Expenditures										
Capital Projects & Outlays from O&M		$82,969,491	$75,844,647	$58,264,382	$80,353,580	$62,972,142	$94,675,048	$151,943,697	$110,939,198	$81,537,507
Less Debt Funding		0	0	0	0	0	0	0	0	0
CIP & Outlays from Cash/Reserves	[C]	$82,969,491	$75,844,647	$58,264,382	$80,353,580	$62,972,142	$94,675,048	$151,943,697	$110,939,198	$81,537,507
Total Requirements [A]+[B]+[C]	[D]	$217,862,126	$215,313,760	$202,515,351	$229,601,914	$217,441,996	$255,427,758	$317,570,931	$282,523,735	$259,347,726
Less **Non-Rate Revenues and Reserves**										
Meter & Svc Revenue		$3,215,750	$3,327,850	$3,445,650	$3,563,925	$3,687,900	$3,816,625	$3,951,525	$4,091,175	$4,232,250
Non-Rate Revenue *(net of related expenses)*		5,740,266	5,932,574	6,131,556	6,337,453	6,550,514	6,771,000	6,999,179	7,235,330	7,479,743
SDC Funding for Capital		1,804,333	1,533,683	1,251,486	957,387	651,023	332,022	0	0	0
Funding from Reserves *(incl. interest earnings)*		3,513,579	1,233,785	1,409,985	1,591,899	1,778,995	2,709,198	56,945,692	14,032,459	1,327,790
Totals	[E]	$14,273,929	$12,027,893	$12,238,677	$12,450,664	$12,668,432	$13,628,844	$67,896,396	$25,358,963	$13,039,784
Net Revenue Requirements [D]-[E]		**$203,588,197**	**$203,285,867**	**$190,276,674**	**$217,151,251**	**$204,773,564**	**$241,798,914**	**$249,674,535**	**$257,164,771**	**$246,307,942**

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TVWD Forecast Model Summary

Table 19
Tualatin Valley Water District
2022-23 Financial Plan
45-year Revenue Requirements Forecast

		FY2049	FY2050	FY2051	FY2052	FY2053	FY2054	FY2055	FY2056	FY2057
O&M Summary										
Fixed Expenses		$139,061,667	$145,293,504	$151,805,461	$158,609,279	$165,718,040	$173,145,409	$180,905,667	$189,013,734	$197,485,198
Variable Costs										
JWC		17,748,484	18,547,166	19,381,788	20,253,969	21,165,397	22,117,840	23,113,143	24,153,234	25,240,130
Pumping Power		3,703,996	3,870,676	4,044,856	4,226,875	4,417,084	4,615,853	4,823,566	5,040,627	5,267,455
Total O&M		$160,514,147	$167,711,345	$175,232,105	$183,090,123	$191,300,521	$199,879,102	$208,842,376	$218,207,595	$227,992,783
Less Capitalized OH & Outlays from O&M		$9,172,320	$9,585,075	$10,016,403	$10,467,141	$10,938,162	$11,430,380	$11,944,747	$12,482,260	$13,043,962
Net O&M	[A]	$151,341,826	$158,126,271	$165,215,703	$172,622,982	$180,362,359	$188,448,722	$196,897,630	$205,725,335	$214,948,821
Debt Service from Rates *(net of Debt Reserve Retirements)*										
Future Revenue Bonds		$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$12,537,091	$3,789,036	$0	$0
WIFIA		15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165	15,477,165
Total Debt Service	[B]	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$32,973,275	$28,014,256	$19,266,201	$15,477,165	$15,477,165
Cash-Funded Capital Expenditures										
Capital Projects & Outlays from O&M		$81,035,067	$127,712,526	$78,220,560	$85,227,354	$75,753,018	$78,422,109	$81,374,094	$149,661,667	$126,056,229
Less Debt Funding		0	0	0	0	0	0	0	0	0
CIP & Outlays from Cash/Reserves	[C]	$81,035,067	$127,712,526	$78,220,560	$85,227,354	$75,753,018	$78,422,109	$81,374,094	$149,661,667	$126,056,229
Total Requirements [A]+[B]+[C]	[D]	$265,350,169	$318,812,072	$276,409,538	$290,823,611	$289,088,652	$294,885,087	$297,537,925	$370,864,167	$356,482,215
Less **Non-Rate Revenues and Reserves**										
Meter & Svc Revenue		$4,383,300	$4,534,825	$3,812,825	$3,205,776	$2,695,377	$2,266,240	$1,905,427	$1,602,059	$1,346,992
Non-Rate Revenue *(net of related expenses)*		7,732,720	7,994,573	8,265,625	8,545,868	8,835,611	9,135,179	9,444,903	9,765,128	10,096,210
SDC Funding for Capital		0	0	0	381,389	389,016	396,797	404,733	412,827	421,084
Funding from Reserves *(incl. interest earnings)*		1,526,240	25,271,784	1,527,431	1,493,322	1,752,807	12,001,940	10,046,932	23,493,384	2,480,918
Totals	[E]	$13,642,260	$37,801,182	$13,605,882	$13,626,354	$13,672,812	$23,800,155	$21,801,994	$35,273,398	$14,345,204
Net Revenue Requirements [D]-[E]		**$251,707,908**	**$281,010,889**	**$262,803,656**	**$277,197,256**	**$275,415,840**	**$271,084,932**	**$275,735,931**	**$335,590,769**	**$342,137,011**

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Table 19
Tualatin Valley Water District
2022-23 Financial Plan
45-year Revenue Requirements Forecast

		FY2058	FY2059	FY2060	FY2061	FY2062	FY2063	FY2064	FY2065	FY2066
O&M Summary										
Fixed Expenses		$206,336,347	$215,584,196	$225,246,527	$235,341,916	$245,889,772	$256,910,375	$268,424,911	$280,455,520	$293,025,331
Variable Costs										
JWC		26,375,936	27,562,853	28,803,181	30,099,324	31,453,794	32,869,215	34,348,329	35,894,004	37,509,234
Pumping Power		5,504,490	5,752,192	6,011,041	6,281,538	6,564,207	6,859,596	7,168,278	7,490,851	7,827,939
Total O&M		$238,216,773	$248,899,242	$260,060,750	$271,722,778	$283,907,773	$296,639,186	$309,941,519	$323,840,375	$338,362,504
Less Capitalized OH & Outlays from O&M		$13,630,940	$14,244,333	$14,885,328	$15,555,167	$16,255,150	$16,986,632	$17,751,030	$18,549,827	$19,384,569
Net O&M	[A]	$224,585,832	$234,654,909	$245,175,422	$256,167,611	$267,652,623	$279,652,554	$292,190,489	$305,290,549	$318,977,936
Debt Service from Rates *(net of Debt Reserve Retirements)*										
Future Revenue Bonds		$0	$0	$0	$0	$0	$0	$0	$0	$0
WIFIA		15,477,165	15,477,165	15,477,165	15,477,165	0	0	0	0	0
Total Debt Service	[B]	$15,477,165	$15,477,165	$15,477,165	$15,477,165	$0	$0	$0	$0	$0
Cash-Funded Capital Expenditures										
Capital Projects & Outlays from O&M		$109,438,581	$95,254,674	$96,612,121	$100,133,047	$103,802,510	$114,326,586	$110,946,068	$118,711,082	$242,670,321
Less Debt Funding		0	0	0	0	0	0	0	0	0
CIP & Outlays from Cash/Reserves	[C]	$109,438,581	$95,254,674	$96,612,121	$100,133,047	$103,802,510	$114,326,586	$110,946,068	$118,711,082	$242,670,321
Total Requirements [A]+[B]+[C]	[D]	$349,501,578	$345,386,747	$357,264,708	$371,777,822	$371,455,133	$393,979,140	$403,136,556	$424,001,630	$561,648,256
Less **Non-Rate Revenues and Reserves**										
Meter & Svc Revenue		$1,132,534	$952,221	$800,615	$673,148	$565,974	$475,864	$400,101	$336,400	$282,841
Non-Rate Revenue *(net of related expenses)*		10,438,518	10,792,431	11,158,343	11,536,662	11,927,807	12,332,214	12,750,332	13,182,626	13,629,577
SDC Funding for Capital		429,505	438,096	446,857	455,795	464,910	474,209	483,693	493,367	503,234
Funding from Reserves *(incl. interest earnings)*		2,599,465	2,882,151	3,239,462	3,582,190	3,975,207	4,382,545	4,760,564	5,121,252	96,224,131
Totals	[E]	$14,600,022	$15,064,898	$15,645,278	$16,247,793	$16,933,899	$17,664,831	$18,394,690	$19,133,644	$110,639,783
Net Revenue Requirements [D]-[E]		**$334,901,556**	**$330,321,849**	**$341,619,430**	**$355,530,029**	**$354,521,234**	**$376,314,308**	**$384,741,867**	**$404,867,986**	**$451,008,474**

TVWD Forecast Model Summary

Table 20
Tualatin Valley Water District
2022-23 Financial Plan
45-year Rate Revenue, Coverage, and Reserves

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Rate Revenue Forecast									
Revenue Before Increase	$72,442,859	$78,695,132	$94,884,574	$105,893,255	$118,166,944	$123,077,803	$128,179,128	$133,451,567	$138,871,576
Revenue from Increase(s)	3,284,265	5,774,572	2,955,640	3,303,264	2,114,789	2,202,571	2,293,863	2,388,218	2,485,213
FY2022 Favorable Variance from Budget	2,055,239								
Total Rate Revenue	$77,782,363	$84,469,704	$97,840,213	$109,196,519	$120,281,733	$125,280,374	$130,472,991	$135,839,784	$141,356,789
Debt Service Coverage Summary									
Net Revenue *(incl. SDCs & interest earnings)*	$51,403,037	$55,561,744	$63,456,413	$69,471,583	$77,924,816	$79,607,020	$82,446,435	$85,310,980	$87,825,922
Debt Service	0	0	3,781,525	10,499,913	13,436,775	13,436,775	25,234,693	32,973,275	32,973,275
Debt Service Coverage	0.00	0.00	16.78	6.62	5.80	5.92	3.27	2.59	2.66
Cash & Investments Summary									
Beginning Fund Balance	$80,100,000	$125,172,020	$133,214,498	$37,012,947	$40,187,564	$46,572,443	$83,048,891	$105,189,689	$122,718,436
Change in Cash Balance *(net of interest earnings)*	45,072,020	8,042,478	(96,201,552)	3,174,617	6,384,879	36,476,448	22,140,799	17,528,747	(4,861,269)
Ending Cash Balance	$125,172,020	$133,214,498	$37,012,947	$40,187,564	$46,572,443	$83,048,891	$105,189,689	$122,718,436	$117,857,167
Debt Service Reserve	$0	$0	$9,918,038	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Total Year-End Reserves	$125,172,020	$133,214,498	$46,930,985	$57,683,675	$64,068,554	$100,545,001	$122,685,800	$140,214,547	$135,353,277
Min. Ending Cash Balance	$124,183,386	$131,925,202	$35,578,886	$38,974,523	$41,145,177	$41,349,442	$43,186,235	$45,179,001	$47,427,786

Table 20
Tualatin Valley Water District
2022-23 Financial Plan
45-year Rate Revenue, Coverage, and Reserves

	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039
Rate Revenue Forecast									
Revenue Before Increase	$144,439,608	$150,155,905	$156,020,490	$162,033,157	$168,193,462	$174,500,717	$180,608,242	$186,929,530	$193,472,064
Revenue from Increase(s)	2,584,857	2,687,154	2,792,106	2,899,707	3,009,950	2,914,635	3,016,647	3,122,230	3,231,508
FY2022 Favorable Variance from Budget									
Total Rate Revenue	$147,024,465	$152,843,060	$158,812,596	$164,932,864	$171,203,412	$177,415,352	$183,624,889	$190,051,760	$196,703,572
Debt Service Coverage Summary									
Net Revenue *(incl. SDCs & interest earnings)*	$90,303,331	$93,080,115	$95,771,627	$98,481,049	$100,621,529	$103,557,376	$105,860,671	$108,473,214	$111,093,311
Debt Service	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275
Debt Service Coverage	2.74	2.82	2.90	2.99	3.05	3.14	3.21	3.29	3.37
Cash & Investments Summary									
Beginning Fund Balance	$117,857,167	$123,813,316	$126,942,968	$112,104,477	$114,853,321	$101,861,068	$69,109,646	$80,081,814	$101,115,860
Change in Cash Balance *(net of interest earnings)*	5,956,149	3,129,652	(14,838,492)	2,748,844	(12,992,253)	(32,751,422)	10,972,168	21,034,046	3,358,015
Ending Cash Balance	$123,813,316	$126,942,968	$112,104,477	$114,853,321	$101,861,068	$69,109,646	$80,081,814	$101,115,860	$104,473,875
Debt Service Reserve	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Total Year-End Reserves	$141,309,426	$144,439,079	$129,600,587	$132,349,432	$119,357,178	$86,605,756	$97,577,925	$118,611,971	$121,969,985
Min. Ending Cash Balance	$49,769,653	$52,042,794	$54,409,602	$56,873,264	$59,839,670	$62,106,527	$64,894,878	$67,808,940	$70,853,792

TVWD Forecast Model Summary

Table 20
Tualatin Valley Water District
2022-23 Financial Plan
45-year Rate Revenue, Coverage, and Reserves

	FY2040	FY2041	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048
Rate Revenue Forecast									
Revenue Before Increase	$200,243,586	$207,252,112	$214,505,936	$222,013,643	$229,784,121	$237,826,565	$246,150,495	$253,535,010	$261,141,060
Revenue from Increase(s)	3,344,611	3,461,672	3,582,831	3,708,230	3,838,018	3,972,349	3,524,041	3,629,762	3,738,655
FY2022 Favorable Variance from Budget									
Total Rate Revenue	$203,588,197	$210,713,784	$218,088,766	$225,721,873	$233,622,139	$241,798,914	$249,674,535	$257,164,771	$264,879,715
Debt Service Coverage Summary									
Net Revenue *(incl. SDCs & interest earnings)*	$113,637,359	$116,245,839	$119,049,749	$121,897,478	$124,793,992	$126,858,414	$129,610,084	$131,178,615	$133,082,554
Debt Service	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275
Debt Service Coverage	3.45	3.53	3.61	3.70	3.78	3.85	3.93	3.98	4.04
Cash & Investments Summary									
Beginning Fund Balance	$104,473,875	$102,168,468	$109,596,385	$137,408,478	$145,979,100	$174,827,675	$174,037,766	$118,730,878	$105,997,020
Change in Cash Balance *(net of interest earnings)*	(2,305,407)	7,427,917	27,812,093	8,570,622	28,848,575	(789,910)	(55,306,888)	(12,733,858)	18,571,772
Ending Cash Balance	$102,168,468	$109,596,385	$137,408,478	$145,979,100	$174,827,675	$174,037,766	$118,730,878	$105,997,020	$124,568,792
Debt Service Reserve	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110
Total Year-End Reserves	$119,664,579	$127,092,496	$154,904,588	$163,475,211	$192,323,786	$191,533,876	$136,226,988	$123,493,130	$142,064,902
Min. Ending Cash Balance	$74,035,243	$77,360,053	$80,834,093	$84,464,688	$88,258,162	$92,788,348	$96,364,132	$100,692,212	$105,215,263

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TVWD Forecast Model Summary

Table 20
Tualatin Valley Water District
2022-23 Financial Plan
45-year Rate Revenue, Coverage, and Reserves

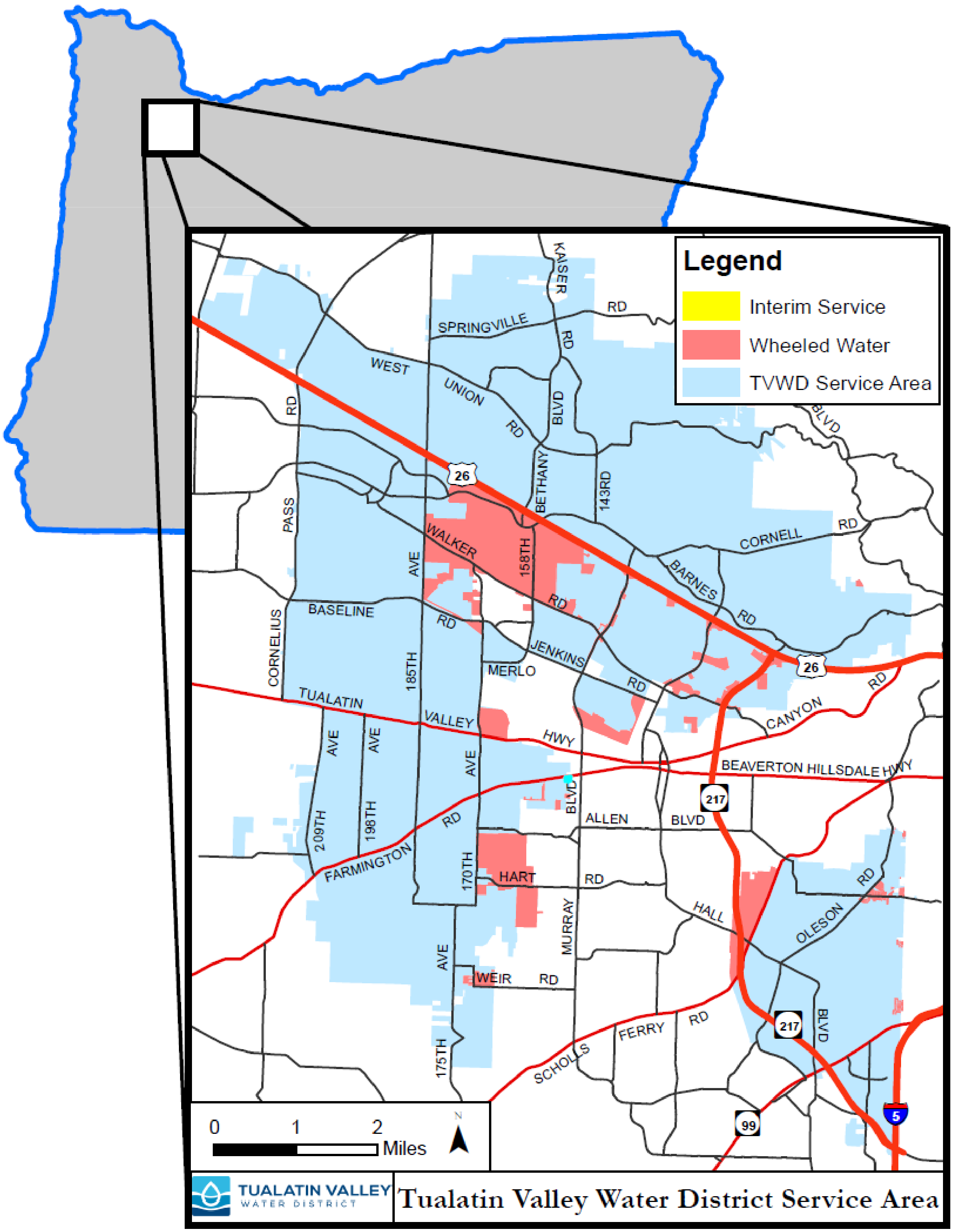
	FY2049	FY2050	FY2051	FY2052	FY2053	FY2054	FY2055	FY2056	FY2057
Rate Revenue Forecast									
Revenue Before Increase	$268,975,292	$277,044,550	$285,355,887	$293,916,564	$302,734,060	$311,816,082	$321,170,565	$330,805,682	$340,729,852
Revenue from Increase(s)	3,850,814	3,966,339	4,085,329	4,207,889	4,334,126	4,464,149	4,598,074	4,736,016	4,878,096
FY2022 Favorable Variance from Budget									
Total Rate Revenue	$272,826,106	$281,010,889	$289,441,216	$298,124,452	$307,068,186	$316,280,232	$325,768,639	$335,541,698	$345,607,949
Debt Service Coverage Summary									
Net Revenue *(incl. SDCs & interest earnings)*	$135,126,540	$136,927,054	$137,831,395	$137,634,503	$138,625,832	$139,629,725	$140,626,071	$141,596,377	$142,523,413
Debt Service	32,973,275	32,973,275	32,973,275	32,973,275	32,973,275	28,014,256	19,266,201	15,477,165	15,477,165
Debt Service Coverage	4.10	4.15	4.18	4.17	4.20	4.98	7.30	9.15	9.21
Cash & Investments Summary									
Beginning Fund Balance	$124,568,792	$145,686,990	$121,928,242	$148,565,802	$169,535,943	$201,232,689	$236,555,855	$279,057,953	$258,136,997
Change in Cash Balance *(net of interest earnings)*	21,118,198	(23,758,747)	26,637,560	20,970,140	31,696,746	35,323,166	42,502,098	(20,920,955)	3,521,673
Ending Cash Balance	$145,686,990	$121,928,242	$148,565,802	$169,535,943	$201,232,689	$236,555,855	$279,057,953	$258,136,997	$261,658,670
Debt Service Reserve	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$17,496,110	$7,578,072	$0	$0	$0
Total Year-End Reserves	$163,183,100	$139,424,353	$166,061,913	$187,032,053	$218,728,799	$244,133,927	$279,057,953	$258,136,997	$261,658,670
Min. Ending Cash Balance	$109,941,196	$114,870,784	$120,021,990	$125,404,194	$131,027,754	$136,903,494	$143,042,724	$149,457,257	$156,159,440

TVWD Forecast Model Summary

Table 20
Tualatin Valley Water District
2022-23 Financial Plan
45-year Rate Revenue, Coverage, and Reserves

	FY2058	FY2059	FY2060	FY2061	FY2062	FY2063	FY2064	FY2065	FY2066
Rate Revenue Forecast									
Revenue Before Increase	$350,951,748	$361,480,300	$372,324,709	$383,494,450	$394,999,284	$406,849,262	$419,054,740	$431,626,383	$444,575,174
Revenue from Increase(s)	5,024,439	5,175,173	5,330,428	5,490,341	5,655,051	5,824,702	5,999,443	6,179,427	6,364,809
FY2022 Favorable Variance from Budget									
Total Rate Revenue	$355,976,187	$366,655,473	$377,655,137	$388,984,791	$400,654,335	$412,673,965	$425,054,184	$437,805,809	$450,939,983
Debt Service Coverage Summary									
Net Revenue *(incl. SDCs & interest earnings)*	$143,390,912	$144,183,311	$144,885,531	$145,482,784	$145,960,403	$146,303,697	$146,497,820	$146,527,653	$146,377,700
Debt Service	15,477,165	15,477,165	15,477,165	15,477,165	0	0	0	0	0
Debt Service Coverage	9.26	9.32	9.36	9.40	0.00	0.00	0.00	0.00	0.00
Cash & Investments Summary									
Beginning Fund Balance	$261,658,670	$282,785,756	$319,173,613	$355,265,392	$388,778,128	$434,971,167	$471,392,795	$511,769,184	$544,773,251
Change in Cash Balance *(net of interest earnings)*	21,127,086	36,387,857	36,091,779	33,512,735	46,193,040	36,421,627	40,376,389	33,004,068	(91,401,334)
Ending Cash Balance	$282,785,756	$319,173,613	$355,265,392	$388,778,128	$434,971,167	$471,392,795	$511,769,184	$544,773,251	$453,371,917
Debt Service Reserve	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Year-End Reserves	$282,785,756	$319,173,613	$355,265,392	$388,778,128	$434,971,167	$471,392,795	$511,769,184	$544,773,251	$453,371,917
Min. Ending Cash Balance	$163,162,173	$170,478,933	$178,123,801	$186,111,492	$194,457,379	$203,177,524	$212,288,712	$221,808,476	$231,755,140

H. Map – Tualatin Valley Water District (Washington County, Oregon)



Tualatin Valley Water District

1850 SW 170th Avenue
Beaverton, OR 97003
www.tvwd.org

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 08-22

A RESOLUTION ESTABLISHING THE COST-OF-LIVING ADJUSTMENT (COLA) FOR EMPLOYEE COMPENSATION

WHEREAS, the District uses a performance-based pay system to adjust employees' compensation on an annual basis; and

WHEREAS, the District's performance-based pay systems is designed to reward employees who achieve high levels of performance; and

WHEREAS, the performance-based pay system uses a formula that can have unintended consequences during periods of unusually high or low inflation; and

WHEREAS, the District implemented a 2% floor to the COLA portion of the performance-based pay systems to mitigate the unintended consequences during periods of unusually low inflation; and

WHEREAS, the economy is currently experiencing annual rates of inflation that have not been experienced since the 1980s; and

WHEREAS, without a ceiling to the COLA, the District's performance-based pay system could result in pay rates outside of market conditions; and

WHEREAS, the Finance Committee of the Board of Commissioners recommends a COLA ceiling of 5% to be used in the performance-based pay system.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The District's Board of Commissioners hereby establishes a floor for the COLA used in the District's performance-based pay system of 2%.

Section 2: The District's Board of Commissioners hereby establishes a ceiling for the COLA used in the District's performance-based pay system of 5%.

Section 3: The CEO is directed to examine the pay-adjustment formula used in the District's performance-based pay system during the District's 2022-23 classification and compensation study.

Section 4: The CEO is directed to notify the Board if the 5% COLA ceiling would be used for pay-adjustments effective after July 1, 2022.

Approved and adopted at a regular meeting held on the 18th day of May 2022.

Todd Sanders, President	Jim Doane, Secretary

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 09-22

A RESOLUTION APPROVING THE FIRST AMENDMENT TO THE INTERGOVERNMENTAL AGREEMENT BETWEEN TUALATIN VALLEY WATER DISTRICT AND THE CITY OF BEAVERTON FOR EMERGENCY WATER USE.

WHEREAS, the City of Beaverton (Beaverton) and Tualatin Valley Water District (District) entered into an Intergovernmental Agreement Relating to the Provision of Domestic Water on February 23, 2018 (IGA); and

WHEREAS, as provided under the IGA, Beaverton is proceeding to separate Area 4 in phases from the District's system but does not have adequate facilities to provide fire flow coverage until the City completes other City system improvements, which it intends to do; and

WHEREAS, in 2020 the Parties entered into an Intergovernmental Agreement for Emergency Water Services (Agreement) whereby TVWD would provide emergency fire flow and supplemental supply to Area 4 Phases I and II, pending construction of facilities by the City to complete separation, through a connection point between the District and Beaverton systems for Area 4, as depicted on Exhibit A of the Agreement; and

WHEREAS, the District and City wish to adopt this First Amendment to the Agreement to include Area 4 Phase IV depicted on the City's Separation Plan for emergency fire flow when needed or supplemental supply if the City's Jenkins Road connection is temporarily out of service; and

WHEREAS, the Parties also wish to amend Exhibits A and B of the Agreement; and

WHEREAS, pursuant to Oregon Revised Statutes 190.003 to 190.130, the Parties desire to enter into the First Amendment to the Agreement and being advised.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The First Amendment to the Intergovernmental Agreement between Tualatin Valley Water District and the City of Beaverton for Emergency Water Use, attached hereto as Attachment 1 and incorporated by reference, is hereby approved.

Section 2: Revised Exhibits A and B to the Agreement, included in Attachment 1 and incorporated by reference, are hereby approved.

Section 3: The Chief Executive Officer is authorized to execute this contract following approval by Beaverton.

Section 4: The Board authorizes the Chief Executive Officer to execute an amended version of the contract so long as the final executed version is substantially the same as that set forth on Attachment 1 and General Counsel has approved.

Approved and adopted at a regular meeting held on the 15th day of June 2022.

Todd Sanders, President	Jim Doane, Secretary

FIRST AMENDMENT TO THE INTERGOVERNMENTAL AGREEMENT BETWEEN TUALATIN VALLEY WATER DISTRICT AND THE CITY OF BEAVERTON FOR EMERGENCY WATER USE

PARTIES:

TVWD: Tualatin Valley Water District, a domestic water supply district

City: City of Beaverton, an Oregon municipal corporation

Together collectively referred to as the "Parties" or individually as a "Party."

BACKGROUND:

A. Each Party owns, operates and maintains municipal and industrial water system facilities to serve residential, commercial and industrial customers within their respective service territories.

B. The Parties previously entered into an "Intergovernmental Agreement between Tualatin Valley Water District and the City of Beaverton for Emergency Water Use" on June 20, 2021 (IGA).

C. The Parties wish to expand the interconnection between their two water systems for Area 4, Phases I and II under the IGA to Area 4, Phases I, II, and IV as identified in revised Exhibit A, which is attached and incorporated by this reference.

D. TVWD owns and maintains water system facilities in and around Southwest Schendel Avenue and Southwest Walker Road within the Beaverton city limits and the TVWD water system can provide emergency fire flow to Area 4, Phases I, II, and IV.

E. The scope of the IGA must be amended in writing to allow for emergency water use to this additional location, referred to as Area 4, Phase IV.

THE PARTIES AGREE AS FOLLOWS:

Section 1. <u>Replacement of Exhibit A</u>. Exhibit A, Water Service Transfer Program Map, to the IGA is superseded in its entirety and replaced by revised Exhibit A.

Section 2. <u>Replacement of Exhibit B</u>. Exhibit B, Emergency Connection and Supplemental Supply Service Rate Methodology, to the IGA is superseded in its entirety and replaced by revised Exhibit B.

Section 3. <u>Term</u>. This First Amendment to the Intergovernmental Agreement between Tualatin Valley Water District and the City of Beaverton for Emergency Water Use ("Amendment") shall become effective on the day it is executed by the last Party. This Amendment is subject to IGA, Section 2, Term, and it shall terminate on July 19, 2025, unless the IGA is renewed in accordance with its terms.

Section 4. <u>Counterparts</u>. This Amendment may be executed in counterparts, each of which shall be deemed an original, but all the counterparts taken together shall constitute the same

Amendment. Facsimile or email transmission of any signed original of this Amendment between the Parties shall be treated the same as delivery of an original.

Section 5. Continuing Effect. Except as expressly modified by this Amendment, the IGA and all its terms and provisions shall remain in full force and effect in accordance with its terms.

THE PARTIES EXECUTED this Amendment on the dates written below.

CITY

By: ______________________________
Lacey Beaty, Mayor

Date: ______________________________

Approved as to form:

____
City Attorney's Office

TVWD

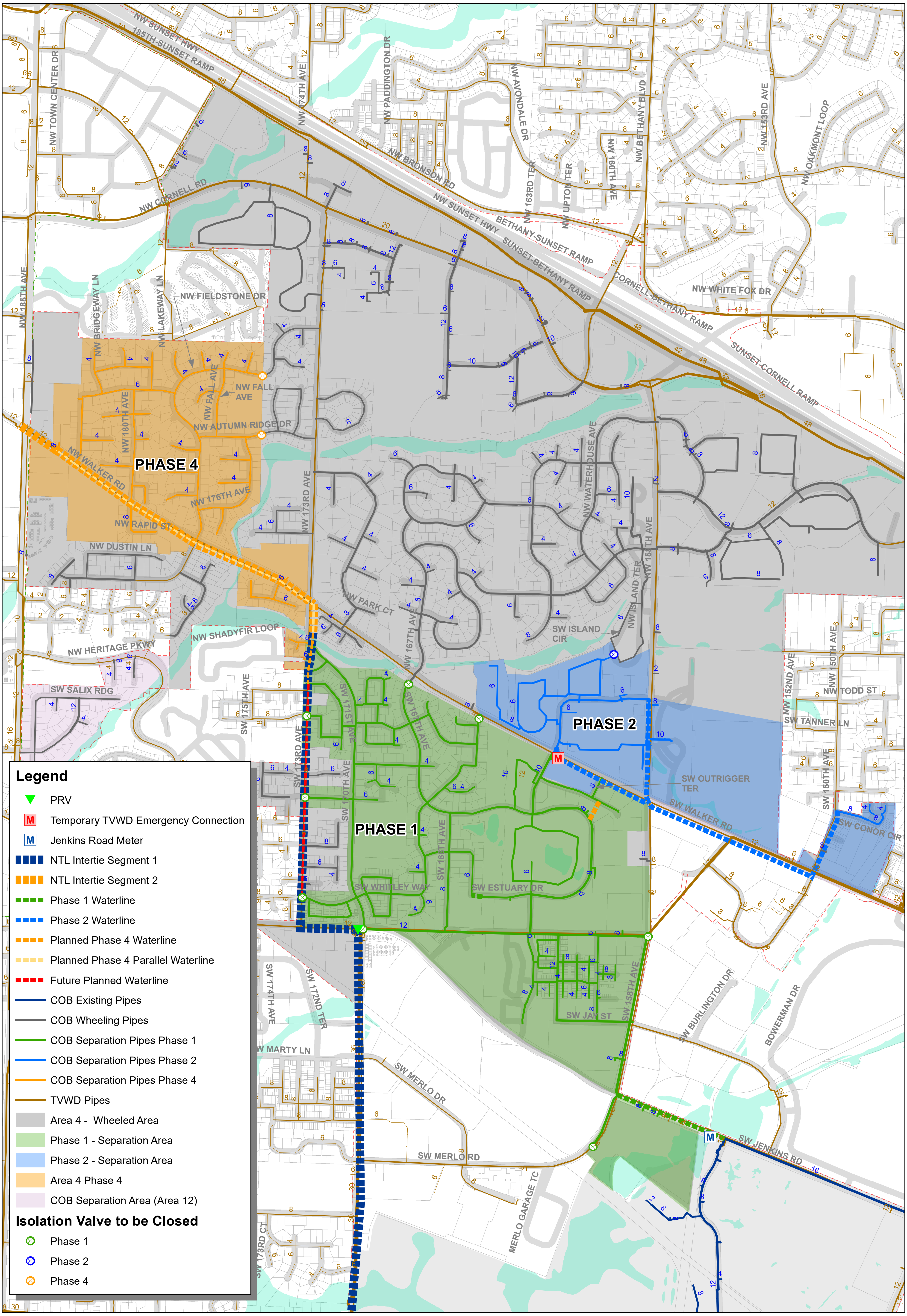
By: ______________________________
Tom Hickmann, CEO

Date: ______________________________

Approved as to form:

____
Clark Balfour, District Counsel

Exhibit A



J:\DATA\BEAV\818-112\07 GIS\MAPS\AREA 4_SEPARATION_PLAN_PH1_PH2_PH4.MXD BY: HFARRIS PLOT DATE: FEB 18, 2022 COORDINATE SYSTEM: NAD 1983 HARN STATEPLANE OREGON NORTH FIPS 3601 FEET INTL

RH2

NORTH

1 inch = 500 feet

0 250 500 1,000 Feet

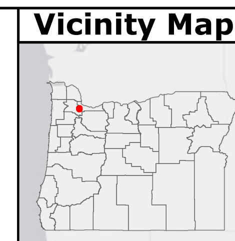
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

Beaverton OREGON

City of Beaverton Water Service Transfer Program

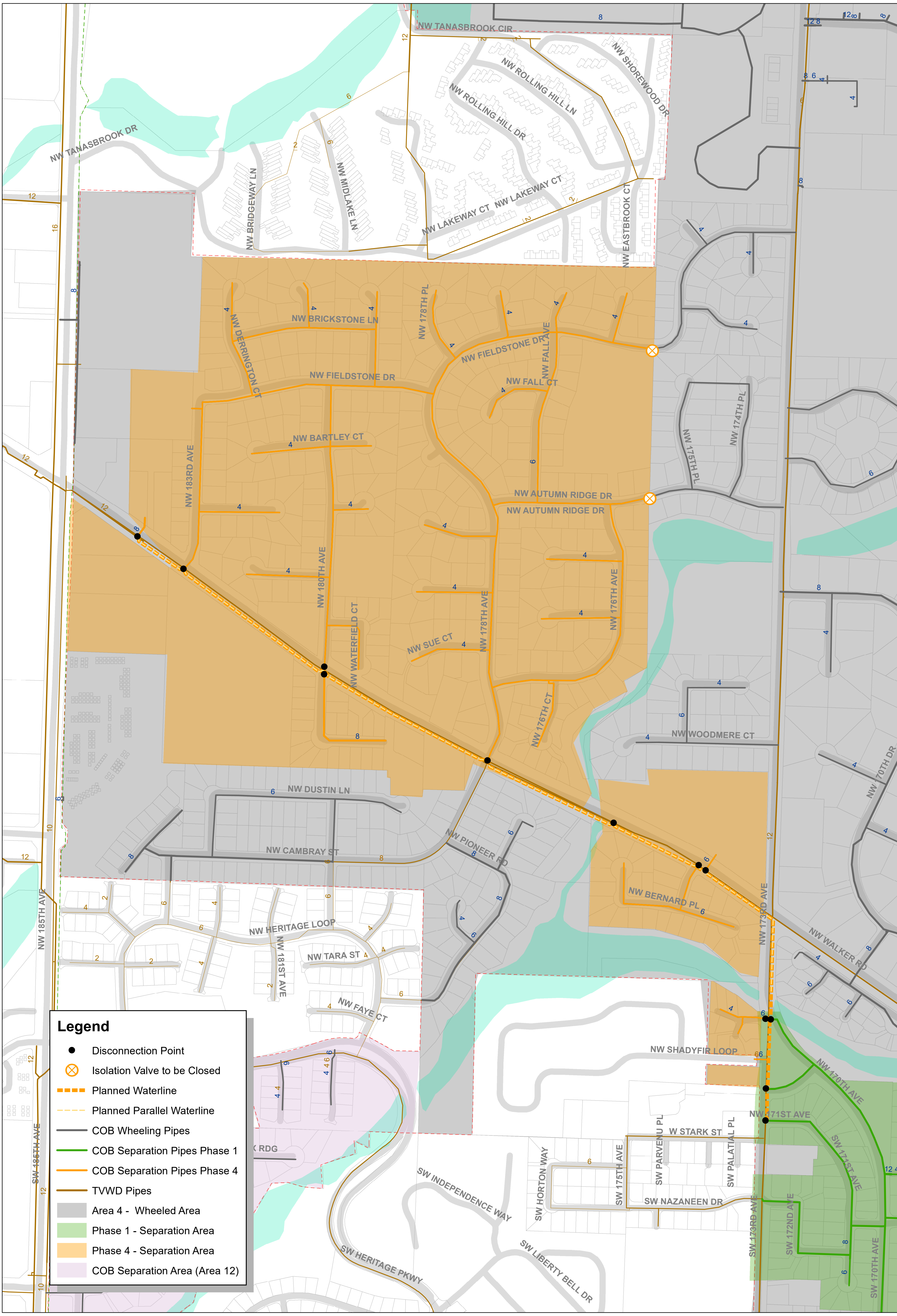
Appendix B - Separation Area

Vicinity Map



This map is a graphic representation derived from the City of Beaverton Geographic Information System. It was designed and intended for City of Beaverton's (City) staff use only; it is not guaranteed to survey accuracy. This map is based on the best information available on the date shown on this map.

Any reproduction or sale of this map, or portions thereof, is prohibited without express written authorization by the City.



J:\DATA\BEAV\818-112\07 GIS\MAPS\AREA 4_SEPARATION_PLAN_PH4_DISCONNECT.MXD BY: HFARRIS PLOT DATE: FEB 18, 2022 COORDINATE SYSTEM: NAD 1983 HARN STATEPLANE OREGON NORTH FIPS 3601 FEET INTL

RH2

NORTH

1 inch = 200 feet

0 100 200 400 Feet

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

Beaverton OREGON

City of Beaverton
Water Service Transfer Program

Appendix C - Separation Boundaries

Vicinity Map

This map is a graphic representation derived from the City of Beaverton Geographic Information System. It was designed and intended for City of Beaverton's (City) staff use only; it is not guaranteed to survey accuracy. This map is based on the best information available on the date shown on this map.

EXHIBIT B

EMERGENCY AND FIRE CONNECTION RATE METHODOLOGY

The City of Beaverton (City) and the Tualatin Valley Water District (TVWD) have entered into an intergovernmental agreement (IGA) that provides for the provision of water, during emergencies and fire events, from TVWD to specific service areas within the City. This area is further described in the IGA.

This exhibit refers to this service area as “Area 4-s” for *Area 4-separated*, and presents the methodology used to determine the costs of providing service to Area 4-s through an emergency connection.

1 GENERAL METHODOLOGY

1.1 OVERALL PRINCIPLES OF THE METHODOLOGY

The proposed methodology is intended to be based on industry-standard cost-of-service principles as described and implemented in the Intergovernmental Agreement between City of Beaverton and Tualatin Valley Water District, relating to the Provision of Domestic Water, executed February 23, 2018 (Service Area IGA). That is, the rates established by the methodology are intended to recover TVWD’s cost of providing requested services to the City using industry-standard approaches. A common methodology is intended for use within this IGA and the Service Area IGA.

1.2 LIMITATIONS

This Agreement and the methodology contained within this exhibit are intended only to apply to services specifically described within this IGA.

2 GENERAL REVIEW OF COST RECOVERY

According to Section 1.1 of this IGA, an *emergency* is defined as a sudden, unplanned occurrence that results in the inability to supply water to customers. Such an occurrence may be caused by a main break or other event resulting in a significant reduction in pressure or the receiving party’s ability to supply water to its customers.[1] Under the terms of this IGA, two services will be provided to the City via the Emergency and Fire Connection, including:

- Emergency Supply - the provision of water during emergencies.
- Fire Protection - the provision of water during fire events.

[1] *Emergency* does not include increased demand or lack of supply due to drought, warm or freezing weather, or increased demand due to service area growth.

Each service (and its related costs) is described in the following sections.[2] As referenced in Section 1 above, these Emergency and Fire Connection-related costs will be recovered consistent with the methodology originally described in Exhibit F of the Service Area IGA. The general cost recovery calculations for the two services is described below.

2.1 RECOVERY OF COSTS RELATED TO EMERGENCY SUPPLY

2.1.1 Description of Service

In the event of an emergency that disrupts the City's ability to serve Area 4-s, the City may use the Emergency and Fire Connection to maintain service using Emergency Supply water from TVWD. This service includes related costs for the following water functions, as described in Section 2.1 of Exhibit F of the Service Area IGA:

- **Source of Supply** – Accounts for the investments,[3] infrastructure, and operating costs of the potable water TVWD receives from the Joint Water Commission (JWC) and the City of Portland Water Bureau (PWB).
- **Aquifer Storage and Recovery (ASR)** – Includes the costs of TVWD's ASR facilities.
- **Fluoride/Regulators** – TVWD owns and operates facilities that regulate pressure within its system. Some of these facilities also include equipment that introduces fluoride into the water.
- **Storage** – Finished water storage that is used to meet the diurnal demands within a pressure zone, reduce peak-day demands on sources of supply, and/or meet fire flow requirements.
- **Transmission** – This function includes the costs allocated to operating, maintaining, and owning transmission pipe, generally 12-inches or greater, within TVWD's Wolf Creek system and the 385-foot and 435-foot pressure zones. (Generally, distribution pipe is limited to pipe with a diameter of less than 12-inches, while transmission is generally pipe 12-inches or greater. There are pipes within TVWD's system, however, that are smaller than 12 inches but used as transmission pipes.)
- **SCADA** – This function includes the cost of operating, maintaining, and owning the District's Supervisory Control and Data Acquisition (SCADA) system. This system is used to monitor and operate the water system.

Under this IGA, Emergency Supply and Fire Protection service for Area 4-s is available via a connection to TVWD's Wolf Creek service area in the 385-foot and 435-foot pressure zones, which uses the system functions described above. Therefore, the cost of Emergency Supply service provided to the City will include proportional shares of these costs.

---

[2] Note that the estimated costs and calculated charges presented in Section 2 are only examples, based on projected annual costs for TVWD's fiscal year ending June 30, 2020 (FY2020). The values presented do not reflect a commitment of future charges for the City's emergency connection.

[3] *Investments* is not included in Exhibit F of the Service Area IGA. It has been added here to better describe TVWD's investment in the Washington County Supply Line.

In addition to the services described above, the City will also rely on TVWD's supply of potable water from the JWC and the PWB. Unlike the Service Area IGA, TVWD will not be able to wheel the City's water to the City's customers during these conditions. The Service Area IGA relies on three years of historical billing information to estimate the amount of water wheeled to the City's customers. Given the intermittent nature of the Emergency Supply, it is not possible for the City to use its JWC source for wheeling purposes. For water subject to charges under this agreement, the then-current published rate from the PWB that applies to TVWD's guaranteed purchased quantity under TVWD's agreement with the City of Portland will be used as the basis for determining the costs of providing the service described in the paragraph. This cost will be added to the cost of the other services described within this Exhibit.

2.1.2 Description of Charges

2.1.2.1 Fixed Monthly Charge

Table 1 provides a summary of the cost calculation for Emergency Supply service for Area 4-s. Supply-related costs shown in the table include those related to Finished Water (Source and ASR) and Fluoride/Regulators.

Based on TVWD's projected annual costs for fiscal year ending June 30, 2020 (FY2020) and the methodologies described here and in Exhibit F of the Service Area IGA, the City's monthly cost for this service would be $362.15. The monthly cost would be subject to change annually, consistent with the City's annual wheeling rate updates.

Where used in the calculation for this Exhibit, the number of equivalent meters will be determined by multiplying the number of meters for each size by the equivalency factors used by TVWD in determining the fixed charges for its retail customers.

Table 1: Emergency Supply Costs and Assessment to Emergency Connection

	Net O&M	Return [1]	Depr.	Total	
FY2020 Supply Costs ($ millions)	$19.038	$4.118	$6.484		
		Days/Yr [2]	Ratio		
Emergency Supply Requirements		3	0.82%		
	Net O&M	Return [1]	Depr.	Total	
Emergency Supply Cost Summary	$156,473	$33,845	$53,291	$243,608	(a)
Total Equivalent Meters [3]:				84,349	(b)
Annual Unit Costs (per Equiv. Meter)				**$2.89**	(c) = (a)÷(b)

	Equivalent Meters	Annual	Monthly
Emergency Supply Costs ***per Equivalent Meter***			
System-wide average		$2.89	$0.2408
Emergency Supply Costs ***for Separated Customers***			
Emergency Supply Cost for Area 4-s [4][5]	**1,504**	**$4,345.80**	**$362.15**

[1] Total return on assets based on a 2.25% rate of return, consistent with the Oregon Bond Index A-Rated 20-Year Bond rate as of 01-02-20.

[2] Days per year assuming annual average day demand (ADD).

[3] Includes equivalent meters in COB Wheeled Areas.

[4] Separated equiv. meters based on meters by size in Phases 1 & 2 of Area 4 separation.

[5] Total equiv. meters in IGA Area 4 = 4,743

2.1.2.2 Water Consumption Charge

When appropriate under the terms of this IGA, TVWD will assess a water consumption charge that is consistent with the following:

- The cost-of-service methodology described in Exhibit F of the Service Area IGA, and
- The Oregon Bond Index A-Rated 20-Year Bond Rate for the first date after the beginning of the calendar year in which rates will be effective.
- The published rate for TVWD's guaranteed purchased quantity from the PWB.

Currently, the water consumption charge is valued at $2.42 per CCF[4], which includes proportional shares of the functional costs described in Section 2.1.1 above. As of December 2021, the additional charge for the potable water from the PWB is $1.250 per CCF[5], for a total estimated water consumption charge of $3.67 per CCF. The consumption charge will be subject to change annually, consistent with the City's annual wheeling rate updates and changes in the rate imposed by the PWB.

2.2 RECOVERY OF COSTS RELATED TO FIRE PROTECTION

2.2.1 Description of Service

If necessary for fire events, the City may use the Emergency and Fire Connection with TVWD to suppress fire within Area 4-s. This service includes related *indirect fire* costs incurred by TVWD, as described in Section 2.1.7.2 of Exhibit F of the Service Area IGA:

- **Indirect Fire** – This function includes the costs allocated to meet the fire flow requirements of the system. These costs are generally included in oversizing of storage and pumping facilities, and transmission and distribution pipes.

2.2.2 Description of Charges

2.2.2.1 Fixed Monthly Charge

Table 2 (next page) provides a summary of the cost calculation for Fire Protection. Based on TVWD's projected FY2020 costs and the methodologies described here and in Exhibit F of the Service Area IGA, the City's monthly cost for this service would be $21.33 per hydrant per month also subject to change annually.

[4] 1 CCF = one hundred cubic feet of water, or approximately 748 gallons.
[5] The actual rate charged the City will be updated as necessary and based on the then-current rate from the PWB. The current rate from the PWB is established in City of Portland Ordinance No. 190424.

Table 2: System-wide Fire Protection Costs and Assessment to Emergency Connection

	Hydrants by Area	Revenue Requirements Net O&M	Return [1]	Depr.	Total	Avg Indirect ($/Hydrant)
Annual Indirect Fire Costs (by Service Area)						
Wolf Creek 385/435	**3,335**	$238,124	$249,197	$366,319	**$853,640**	**$255.96**
All Other Areas	2,387	248,608	260,271	440,935	949,814	397.91
Total Indirect Fire Costs		$486,732	$509,468	$807,254	$1,803,454	
Direct Fire Costs		383,289	5,009	10,634	398,931	
Total Annual Fire Costs		$870,020	$514,477	$817,888	$2,202,385	
% of Total Revenue Requirements					*3.5%*	

Indirect Fire Protection Costs *per Hydrant*	Hydrants	Annual	Monthly
Wolf Creek 385/435 Service Area		$255.96	$21.33
Indirect Fire Protection Costs *for Separated Customers*			
Fire Protection Cost for Area 4-s [2][3]	**130**	**$33,274.80**	**$2,772.90**

[1] Return on assets based on a 2.25% rate of return, consistent with the Oregon Bond Index A-Rated 20-Year Bond rate as of 01-02-20.

[2] Separated hydrants (i.e., 130) include those in Phases 1 & 2 of Area 4 planned separation.

[3] Total hydrants within IGA Area 4 = 312

2.2.2.2 Water Consumption Charge

See Section 2.1.2.2 above for a description of the consumption charge applicable per this IGA.

2.3 SUMMARY

The charges presented in Table 1 and Table 2 are summarized in Table 3 below.

Table 3: FY2020 Cost of Emergency Connection for Area 4-s

Type	Source	Annual	Monthly
Fire Protection	Table 2	$33,274.80	$2,772.90
Emergency Supply	Table 1	4,345.80	362.15
Totals		**$37,620.60**	**$3,135.05**

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 10-22

A RESOLUTION ESTABLISHING A PROCESS FOR PROPOSED ADJUSTMENTS TO WATER RATES EFFECTIVE NOVEMBER 1, 2022

WHEREAS, the Board of Commissioners (Board) of the Tualatin Valley Water District (District) adopted Resolution 07-22 on May 18, 2022 approving the District's 2022-23 Financial Plan (Financial Plan); and

WHEREAS, the District's Financial Plan includes increases in water rates to fund the District's capital investment and operating expenditures; and

WHEREAS, to implement the increases in water rates included in the Financial Plan, the Board desires to provide direction to management to establish an appropriate public process.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: Staff is directed to schedule a public hearing for August 17, 2022, during the Board's regular meeting to consider changes in the District's water rates.

Section 2: Staff is authorized to undertake those activities consistent with Oregon law to notify the public of the public hearing.

Section 3: Staff is directed to provide an opportunity for the public to learn about the proposal to change the District's water rates in three events held in August 2022.

Section 4: Public comment received by the District on or after July 20, 2022, and before 4:00 pm on August 25, 2022, shall be included in the public record for consideration by the Board of Commissioners in its deliberations.

Approved and adopted at a regular meeting held on the 20th day of July 2022.

Todd Sanders, President

Jim Doane, Secretary

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 11-22

A RESOLUTION AMENDING THE LOCAL CONTRACT REVIEW BOARD RULES DIVISION 120-010 TO ADD GOVERNMENTAL AFFAIRS, PUBLIC POLICY AND COMMUNICATIONS AS A CLASS SPECIAL PROCUREMENT AND TO APPROVE A CONTRACT WITH CFM STRATEGIC COMMUNICATIONS, INC., CFM ADVOCATES.

WHEREAS, this matter comes before the Board of Commissioners acting in its capacity as the Local Contract Review Board for Tualatin Valley Water District pursuant to ORS 279A.060 and Resolution 14-84; and

WHEREAS, the Local Contract Review Board adopted Local Contract Review Board Rules (Rules) by Resolution 12-12 on May 20, 2012, and has made amendments by various resolutions since; and

WHEREAS, District staff has recommended amendments to the Rules as set forth below and on Exhibit A, attached hereto and incorporated by refence, and being advised.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT ACTING AS THE LOCAL CONTRACT REVIEW BOARD THAT:

Section 1: Division 120-010 Classes of Procurements is amended to provide that Government Affairs, Public Policy, and Communications shall be a Class Special Procurement as set forth on Exhibit A, attached hereto and incorporated by reference.

Section 2: The District is authorized to enter into a contract with CFM Strategic Communications, Inc., CFM Advocates for Government Affairs, Public Policy and Communications as a Class Special Procurement according to the business judgment of the Public Contracting Officer.

Section 3: The Chief Executive Officer, as the designated Public Contracting Officer under the Rules, is authorized to incorporate these amendments into the Rules and take action as reasonable and necessary.

Approved and adopted at a regular meeting held on the 20th day of July 2022.

Todd Sanders, President

Jim Doane, Secretary

Exhibit A

DIVISION 120 – PROCUREMENT CLASSIFICATIONS

120-010 – Classes of Procurements

(1) **Special Procurements**

(A) Special procurements cover two procedures where competitive bidding is not required: “Class-Special Procurements” and “Contract-Specific Procurements”.

i) Class-Special Procurements consist of entering into a series of contracts over time for the acquisition of a specified class of goods or services.

ii) Contract-Specific Procurements consist of entering into a single contract or a number of related contracts for the acquisition of specified goods or services on a one-time basis or for a single project.

(B) To seek approval of a Special Procurement, a written request must be submitted to the Board that describes the proposed contracting procedure, the goods or services to be acquired, and the circumstances that justify the use of a special procurement whereby:

i) The special procurement is unlikely to encourage favoritism in the awarding of a Public Contract or substantially diminishes competition for Public Contracts, and

ii) Results in substantial cost savings to the District or to the public, or

iii) Substantially promotes the public interest in a manner that could not be realized through competitive bidding methods.

(C) When the Board approves a Class-Special Procurement, the District may award contracts to acquire goods or services within that class without making a subsequent request to the Board.

(D) Examples of Board approved Class-Special Procurements (formerly Exemptions) are:

i) Equipment repair and overhaul under $75,000.

ii) Contracts for price regulated items.

iii) Laboratory and medical supplies.

iv) Documents, goods and services protected by intellectual property law, including but not limited to computer software, computer software maintenance, copyrighted materials and periodicals.

v) Purchases of used personal property under $75,000.

vi) Advertising contracts.

vii) Investment contracts - The District invests public funds pursuant to the Investment Policy Guidelines reviewed and adopted by the Board of Commissioners in January of each calendar year.

viii) Telecommunication systems and service contracts.

ix) Personal Service Contracts where the value is estimated to be under $150,000, and where services are performed by an independent contractor in a professional capacity such as l legal services, medical or therapeutic services, occupational health and safety consultant, information technology consultants and other professional consultants, consultants with expertise in financial, occupational, architectural, engineering, photogrammetric mapping, transportation planning or land surveying services. Personal services also include artistic services or services of a specialized, creative and research oriented nature, or educational training. The determination to use this exemption shall be made by the PCO or his designee.

x) District General Counsel.

xi) A Public Improvement Project where:

a) A private contractor working for another public agency or on a private development project and is required to make improvements, which impact the District's water system.

This may include alterations to the District's system that would not otherwise occur at that time but for this project. In these cases, the schedule does not permit time to put the project out to bid and the District cannot provide the work force to complete the work. For example, the site may involve new construction where another government entity would not allow street cuts for the next five years once the paving is complete, or the addition of a District contractor would impair the public agency or private entity's ability to complete the job; or

b) It is more economical and efficient to perform the District's portion of the work by inclusion of the public agency's or private entity's contractor.

xii) Maintenance, repair and operations goods and services needed during the course of the day and purchased against annual purchase orders.

xiii) The term length of Willamette Water Supply Program ("WWSP") contracts for professional and personal service contracts may extend beyond the five year term limitation outlined in these Rules to 2026 or other such date required to complete the WWSP.

xiv) Municipal Advisory Services, including debt management, debt issuance and financial advisory services.

xv) Insurance Agent of Record

xvi)

~~xv)~~xvii) Government Affairs, Public Policy, and Communications

(2) **Small Procurements** [ORS 279B.065 and ORS 279C.335(c)]

When the amount of the contract does not exceed $10,000, the District may obtain written, electronic or competitive quotes or may select a vendor/contractor through direct appointment. Amendments over the $10,000 amount shall not exceed an additional $1,000 for a total of $11,000, unless the Amendment is approved by a department manager. This amendment limit does not apply to price agreements as they are term agreements and not individual purchases.

A procurement may not be artificially divided or fragmented so as so constitute a Small Procurement to avoid application of these Rules or ORS 279B.

(3) **Intermediate Procurements (ORS 279B.070)**

When the amount of the contract is more than $10,000 but less than $150,000, the District will use good faith efforts to obtain three informally solicited, competitive quotes electronically or on paper. For procurements exceeding $25,000 and not involving a purchase for vehicle fuel, a written solicitation shall be issued according to these Rules. The District shall keep a written record of the source and amount of the quotes received. If three (3) quotes are not available; a lesser number will suffice provided that a written record is made of the effort to obtain the quotes.

Cumulative amendments for intermediate procurements shall not exceed twenty-five percent (25%) of the original contract price, unless approved by the department manager and submitted to the Purchasing Agent/Inventory Controller for amendment of the Purchase Order or Contract. This amendment limit does not apply to price agreements as they are term agreements and not individual purchases.

A procurement may not be artificially fragmented to avoid application of these Rules or ORS 279B.

(4) **Emergency Procurements**

The PCO or his designee may make or authorize others to make Emergency Procurements for goods or services in an emergency. The District shall document the nature of the emergency and describe the method used for the selection of the particular contractor within 2-5 days following the emergency incident. The emergency documentation shall be kept on file with the contract, purchase order, or invoice covering the costs of the emergency.

(5) **Sole Source Procurements**

The District may award a contract for goods or services without competition where the PCO determines in writing that the goods or services, or class of goods or services, are available from only one source.

(A) The sole source determination must be based on written findings that may include:

i) That the efficient utilization of existing goods requires the acquisition of compatible goods or services;

ii) That the goods or services required for the exchange of software or data with other public or private agencies are available from only one source;

iii) That the goods or services are for use in a pilot or experimental project; or

iv) Other finding that supports the conclusion that the goods or services are available from only one source.

(B) Where practicable, the District shall negotiate with the sole source to obtain contract terms advantageous to the District.

120-020 – Intermediate Procurements (Informal) - Requests for Proposals (RFP) and Invitations to Bid (ITB) Under $150,000

The District may, at its discretion, use RFP or ITB competitive procurement methods for intermediate procurements greater than $10,000 and less than $150,000 subject to the following conditions:

(1) Minimum contractual requirements are stated clearly in the Solicitation Document.

(2) For purchases above $25,000 and not involving the purchase of fuel: Solicitation documents shall be provided to all bidders and shall include an Invitation to Bid or Request for Proposal letter, a scope of work or specification, an example of the purchase order or contract and the Bidder/Proposer Certifications and Representations form.

(3) Evaluation criteria to be applied in awarding the contract and the role of an evaluation committee are stated clearly in the RFP Solicitation Document. Criteria used to identify the proposal that best meets the District's needs may include but are not limited to cost, quality, service, compatibility, product reliability, operating efficiency expansion potential and proposer capability.

(4) The Solicitation Document clearly states all complaint processes and remedies available.

120-030 – Competitive Sealed Bidding (ORS 279B.055), Required for Purchases Above $150,000

The District may solicit and award a Public Contract for goods, or goods and services, or may award multiple Public Contracts for goods or services when specified in the Invitation to Bid, by competitive sealed bidding.

(1) The Invitation to Bid must include:

- (A) Time and date bids are due and the place at which the bids must be submitted. At the sole discretion of the District, bids may be submitted and received electronically.
- (B) The name and title of the person designated for the receipt of bids and the person designated by the District as the contact person for the procurement, if different.
- (C) A procurement description.
- (D) The time, date and place that prequalification applications, if any, must be filed and the classes of work, if any, for which bidders must be prequalified in accordance with ORS 279B.120.
- (E) A statement that the District may cancel the procurement or reject any or all bids in accordance with ORS 279B.100.
- (F) A statement that requires the contractor or subcontractor to possess an asbestos abatement license, if required under ORS 468A.710.
- (G) All contractual terms and conditions to the procurement.
- (H) Notice of any pre-bid conference with time, date and location, and whether attendance is mandatory.
- (I) A provision that provides that statements made by the District’s representatives at the time of the conference are not binding upon the District unless confirmed by written addendum. The form and instructions for submission of bids and any other special information.
- (J) A statement that each bidder must identify whether they are a resident bidder as defined by ORS 279A.120 (1).
- (K) Contractor’s certification of non-discrimination in obtaining required subcontractors in accordance with ORS 279A.110 (4).
- (L) How the District will notify bidders of addenda and how the District will make addenda available.

(2) The District may require bid security if it determines that bid security is reasonably necessary or prudent in protecting the interests of the District. All bid security will be returned to the bidders upon execution of the contract.

The District shall retain the bid security if a bidder who is awarded the contract fails to execute the contract promptly and properly. For purposes of this paragraph, prompt and proper execution of the contract includes all action by a bidder that is necessary to the formation of a contract in accordance with the Invitation to Bid, including the posting of performance security and the submission of proof of insurance as required by the Invitation to Bid.

(3) The District shall give public notice of an Invitation to Bid under this section. Public notice is intended to foster competition among prospective bidders. The District shall make the Invitation to Bid available to prospective bidders. Public notice must be published at least once in one newspaper of general circulation. In addition to these modes of publication, the District may use any other medium reasonably calculated to reach prospective bidders or proposers.

(4) The District shall open bids publicly at the time, date and place designated in the Invitation to Bid. When authorized by, and in accordance with, rules adopted under ORS 279A.065, bids may be submitted, received and opened through electronic means.

The amount of a bid, the name of the bidder and other relevant information as may be specified by rule adopted under ORS 279A.065 shall be recorded by the District. The record shall be open to public inspection.

Notwithstanding any requirement to make bids open to public inspection after the District's issuance of Notice of Intent to Award a Contract, the District may withhold from disclosure to the public, any trade secrets as defined in ORS 192.345 and information submitted to a public body in confidence as described in ORS 192.355, that are contained in the bid.

(5) The District shall evaluate all bids that are received before the time and date indicated for bid opening in the Invitation to Bid. The District shall evaluate the bids based on the requirements set forth in the Invitation to Bid. The requirements may include, in addition to the information described above:

(A) Criteria to determine minimum acceptability, such as inspection, testing, quality and suitability for intended use.

(B) Criteria that affect the bid price include, but are not limited to: discounts, transportation costs, total cost of ownership or operation of a product over its life.

The Invitation to Bid shall set forth the evaluation criteria to be used along with any characteristics from a qualified products list, where applicable. Criteria not listed in the Invitation to Bid or a qualified products list shall not be applied during bid evaluation.

(6) No bids received after the time and date indicated on the Invitation to Bid shall be considered and shall not be accepted.

(7) The District shall for the purpose of evaluating bids, apply any applicable preferences described in ORS 279A.120, 279A.125, ORS 282.210, and ORS 279A.128.

(A) 279A.120 covers preference for Oregon goods and services and non-resident bidders.

(B) ORS 279A.125 covers preference for goods manufactured with recycled products

(C) ORS 282.210 requires printing services, binding and stationery work to be performed within the State of Oregon.

(D) Per ORS 279A.128, the District may give a preference to a bidder or proposer for goods fabricated or processed or services that are performed entirely within the state of Oregon if the cost of those goods or services does not exceed more than ten percent (10%) of goods or services fabricated, processed or performed outside the state of Oregon. If more than one bidder or proposer qualifies for this preference, a further preference may be given to a qualifying bidder or proposer that resides in or is headquartered in this state. If the District wishes to use this preference, the preference must be included as part of the evaluation criteria listed in the solicitation.

(8) All decisions to permit the correction or withdrawal of bids or to cancel an award or a contract based upon bid mistakes shall be supported by a written determination by the District covering the reasons for the actions taken.

(9) Cancellation of invitations to bid, rejection of bids or delay of award may be issued when the cancellation, rejection or delay is in the best interest of the District or the public. The reasons for the rejection, cancellation or delay must be made part of the procurement file. The District is not liable for any costs or expenses to proposers or bidders caused by or resulting from the cancellation or rejections.

(10) A Notice of Intent to Award shall be sent or transmitted to each bidder seven (7) days prior to award and the District may post the Notice of Intent to Award electronically or otherwise.

(11) If a contract is awarded, the District shall award the contract to the lowest responsible bidder whose bid substantially complies with the requirements and criteria set forth in the Invitation to Bid and with all prescribed public procurement procedures and requirements; or, when the Invitation to Bid specifies or authorizes the award of multiple contracts to responsible bidders; those bids must substantially comply with the requirements and criteria set forth in the Invitation to Bid and with all prescribed public procurement procedures and requirements and who qualify for award under the terms of the Invitation to Bid.

(12) The successful bidder shall promptly execute a contract, which includes all action necessary to implement the formation of a contract in accordance with the Invitation to Bid, including any performance security and proof of insurance required by the ITB.

(13) The District may issue a request for information (RFI), a request for interest or other preliminary documents to obtain information useful in the preparation of an Invitation to Bid.

120-040 – Multi-Step Solicitations for Procurements above $150,000

When the District considers it impractical to prepare a procurement description to support an award based on price, the District may issue a multi-step solicitations for goods/and or services requesting the submission of un-priced submittals, and later issue a Request for Proposals limited to the bidders whom the District has determined to be eligible to submit a priced offer under the evaluation criteria set forth in the initial solicitation.

(1) Phased Process: Multi-step solicitations are a phased process where proposers are pre-qualified in Request for Qualifications or providing information for products or services to be prequalified. The District’s evaluation team selects the most highly qualified consultants or products and the selected proposers/bidders are invited to provide a priced proposal. A Contract/Purchase Order is then awarded to the lowest responsive and responsible proposer.

NOTE: This process does not apply to On-Call Consultant Services Contracts where Requests for Qualifications are used and then selection is made for the purpose of selecting several qualified consultants/contractors to provide on-call services as needed for intermediate level procurements. See Division 300 for Rules on Selection of Architectural, Engineering and Related Services Solicitations and Contracts.

(2) Public Notice: Whenever multi-step solicitations are used, public notice for the first phase shall be given. Public notice is not required for the subsequent phases.

(3) Procedures in multi-step bidding, generally:

(A) Solicitation Protest: Prior to the closing of Phase 1, the District shall provide an opportunity to protest the solicitation under ORS 279B.405.

(B) Exclusion Protest: The District shall provide an opportunity for a bidder to protest exclusion from the second round of multi-step sealed solicitations pursuant to ORS 279B.410.

(C) Award Protest: The District shall provide an opportunity for bidders/proposers selected for the second round of the multi-step solicitations to protest its intent to award a contract pursuant to ORS 279B.410.

(4) Form: Multi-step solicitations shall be initiated by the issuance of RFP in the form and manner required for requests for competitive sealed proposals as specified in these Rules.

120-050 – Competitive Sealed Proposals - Procurements Above $150,000 (ORS 279B.060)

(1) The District may solicit and award a Public Contract for goods or services, or may award multiple Public Contracts for goods or services when specified in the solicitation via Request for Proposal (RFP)

The RFPs must include:

(A) The Time and Date by which sealed proposals must be received, and

(B) A place at which the proposals must be submitted, and

(C) Whether the proposals can be submitted electronically, and

(D) The name and title of the person designated for receipt of proposals, and

(E) The person designated by the District as the contact person for the procurement, if different, and

(F) A procurement description, and

(G) A time, date and place that prequalification applications, if any, must be filed and the classes of work, if any, for which the proposers must be prequalified, in accordance with ORS 279B.120, and

(H) A statement that the District may cancel the procurement or reject any or all proposals in accordance with ORS 279B.100, and

(I) A statement that requires the contractor or subcontractor to possess an asbestos abatement license, if required, under ORS 468A.710, and

(J) Provide the evaluation criteria, including how criteria are weighted, a discussion of the evaluation or selection process and how the proposer selection award is to be made, and

(K) All contractual terms and conditions applicable to the procurement.

(2) Requests for Proposals may also include:

(A) Identification of contractual terms or conditions the District reserves in the RFP for negotiations with proposers.

(B) Request that proposers propose contractual terms and conditions that relate to subject matter reasonably identified in the RFP.

(C) Contain or incorporate the form and content of the contract that the District will accept, or suggested contract terms and conditions that nevertheless may be the subject of negotiations with proposers.

(D) Announce the method of contractor selection, which may include but is not limited to:

i) Negotiation with the highest ranked proposer.

ii) Competitive negotiations.

iii) Multiple-tiered competition designed to identify a class of proposers that fall within a competitive range or to otherwise eliminate from consideration a class of lower ranked proposers, or any combination of methods authorized by rules adopted under ORS 279A.065.

(E) Contain a description of the manner in which proposals will be evaluated, including the relative importance of price and any other evaluation factors used to rate the proposals in the first tier of competition. If more than one tier of competitive evaluation is used, a description of the process under which the proposals will be evaluated in the subsequent tiers.

(3) The District may require proposal security in any form deemed prudent as supported by ORS 279B.060.

(A) The District shall return the proposal security to all proposers upon execution of the contract, or

(B) The District shall retain proposal security if a proposer who is awarded a contract fails to execute the contract promptly and properly. Prompt and proper execution of the contract includes all action by a proposer necessary to the formation of a contract in accordance with the RFP, including the posting of performance security and the submission of proof of insurance when required by the RFP. If contract negotiations or competitive negotiations are conducted, the failure, prior to award of the District and a proposer to reach agreement does not constitute grounds for the retention of proposal security.

(4) Public Notice of the RFP shall be given in the same manner as provided for public notice as required by ORS 279B.060.

(5) Proposals may be opened in a manner to avoid disclosure of contents to competing proposers during, when applicable, the process of negotiation, but the District shall record and make available the identity of all proposers as part of the District's public records from and after the opening of the proposals.

Proposals are not required to be open for public inspection until after the Notice of Intent to Award a contract is issued. The fact that proposals are opened at a meeting does not make their contents subject to disclosure, regardless of whether the public body opening the proposals fails to give notice of or provide for an executive session for the purpose of opening proposals.

Notwithstanding any requirement to make proposals open to public inspection after the District's issuance of Notice of Intent to Award a Contract, the District may withhold from disclosure to the public materials included in a proposal that are exempt or conditionally exempt from disclosure under the Oregon Public Records Law, ORS 192.345 and 192.355.

(6) If an RFP is canceled under ORS 279B.100 after proposals are received, the District may return the proposals to the proposer making the proposal. The District shall keep a list of returned proposals in the file for solicitation.

(7) As provided for in the RFP or in written addenda issued, the District may conduct site tours, demonstrations, individual or group discussions and other informational activities with

proposers before or after the opening of the proposals for the purpose of clarification to ensure full understanding of and responsiveness to the solicitation requirements or to consider and respond to requests for modifications of the proposal requirements. The District shall use procedures designed to accord proposers fair and equal treatment with respect to any opportunity for discussion and revision of proposals.

(8) For purposes of evaluation, when provided for in the Request for Proposal, the District may employ methods of contractor selection that include but are not limited to:

(A) An award or awards based solely on the ranking of proposals.

(B) Discussions leading to best and final offers, in which the District may not disclose private discussions leading to best and final offers.

(C) Discussions leading to best and final offers, in which the District may not disclose information derived from proposals submitted by competing proposers.

(D) Serial negotiations, beginning with the highest ranked proposer.

(E) Competitive simultaneous negotiations.

(F) Multiple-tiered competition designed to identify, at each level, a class of proposers that fall within a competitive range or otherwise eliminate from consideration a class of lower ranked proposers.

(G) A multi-step Request for Proposals requesting the submission of un-priced technical submittals, and then later issuing a Request for Proposals limited to the proposers whose technical submittals were determined to be qualified under the criteria set forth in the RFP.

(H) Any combination of methods described above, as authorized or prescribed by rules adopted under ORS 270A.065.

(9) Revisions of proposals may be permitted after the submission of proposals and before award for the purpose of obtaining best offers or best and final offers.

(10) After the opening of proposals, the District may issue or electronically post an addendum to the Request for Proposals that modifies the criteria, rating process and procedure for any tier of competition before the start of the tier to which the addendum applies The District shall issue or electronically post an addendum to all proposers who are eligible to compete under the addendum.

The District shall issue or post the addendum at least five (5) days before the start of the subject tier of competition or as otherwise determined by the District to be adequate to allow eligible proposers to prepare for competition in accordance with rules adopted under ORS 279A.065.

(11) The cancellation of RFPs and the rejection of proposals must be in accordance with ORS 279B.100.

(12) In the RFP, the District shall describe the methods by which the District will make the results of each tier of competitive evaluation available to the proposers who competed in the tier. The District shall include a description of the manner in which the proposers who are eliminated from further competition may protest or otherwise object to the District's decision.

(13) The District shall issue or electronically post the Notice of Intent to Award to each proposer who was evaluated in the final competitive tier.

(14) If a contract is awarded, the District shall award the contract to the responsible proposer whose proposal the District determines in writing to be the most advantageous based upon the

evaluation process and evaluation criteria described in the RFP, anyapplicable preferences; and, where applicable, the outcome of any negotiations authorized by the Request for Proposal. Other factors may not be used in the evaluation. When the RFP specifies or authorizes the award of multiple Public Contracts, the District shall award Public Contracts to responsible proposers who qualify for the award of a contract under the terms of the Request for Proposal.

(15) The District may issue a request for information, a request for interest, a request for qualifications or other preliminary documents to obtain information useful in preparation of an RFP.

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 12-22

A RESOLUTION TO APPOINT MEMBERS OF THE 2022 RATE ADVISORY COMMITTEE

WHEREAS, the Board of Commissioners is seeking input on rate design and customer assistance programs; and

WHEREAS, the Board of Commissioners has adopted a charter for the 2022 Rate Advisory Committee on May 18, 2022; and

WHEREAS, an outreach effort to find interested people to serve on the 2022 Rate Advisory Committee ended on 8:00 a.m. on August 12, 2022; and

WHEREAS, the Board appointed Commissioner Carl Fisher and Commissioner Jim Duggan as Rate Advisory Committee Liaisons; and

WHEREAS, the Rate Advisory Committee Liaisons worked with TVWD staff and the RAC Consultant to determine the methodology to appoint a diverse and representative group of citizen volunteers from the applicants; and being fully advised.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The Board hereby appoints the individuals named in Exhibit A to the 2022 Rate Advisory Committee. These volunteers have completed the interest form and were selected to form a group, which represents, among other things, a balance and diversity of customer demographics, customer rate classifications and geographic zones throughout the District.

Approved and adopted at a regular meeting held on the 17th day of August 2022.

______________________________ ______________________________

Todd Sanders, President Jim Doane, Secretary

Exhibit A: 2022 Rate Advisory Committee Membership

NAME	AFFILIATION	REPRESENTING
1. Todd Speight	Community Action, Washington	Customer Assistance Provider
2. Lisa Mentesana	Beaverton Resource Center	Customer Assistance Provider
3. Hannah Rockwood	Edwards Center	Culturally Specific Provider – Disabled Community
4. Zach Lindahl	Washington County Chamber of Commerce	Business Organization or Chamber
5. Jessie Dhillon	Property Management	North
6. Steve Marks		North
7. Madi Hyde		Southeast
8. Daryl Manullang		Bethany - North
9. Kyle Walker		Bethany - North
10. Long Tran		Aloha - Central
11. Samantha Rico		Aloha - Central
12. Allie Syes		Aloha - Central
13. Chai Saechao		Aloha - Central
14. June Boone		Aloha - Central
15. Chris Brown		Aloha - Central
16. Erin Walsh		Cooper Mountain - Southwest
17. Carlos Romo		Cooper Mountain - Southwest

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 13-22

A RESOLUTION ESTABLISHING WATER RATES FOR THE TUALATIN VALLEY WATER DISTRICT AS LISTED IN EXHIBIT A WITH AN EFFECTIVE DATE OF NOVEMBER 1, 2022

WHEREAS, the Board of Commissioners (Board) of the Tualatin Valley Water District (District) adopted Resolution 07-22 on May 18, 2022, approving the District's 2022-23 Financial Plan (Financial Plan); and

WHEREAS, the District's Financial Plan includes increases in water rates to fund the District's capital investment and operating expenditures; and

WHEREAS, a public hearing was held by the Board of Commissioners of the Tualatin Valley Water District on August 17, 2022, to consider increases in water rates to fund District operations, the purchase of water and capital improvements; and

WHEREAS, notice of the public hearing and its purpose was provided by mailing a notice of the hearing to the customers of the District in accordance with the requirement of Oregon Revised Statutes (ORS) 264.312; and

WHEREAS, based on the recommendations of the administrative staff of the District and the testimony heard, received and considered by the Board from the public hearing, the Board of Commissioners finds that:

1. It is necessary to adopt fixed and volume rates for water services provided by the District to provide resources to fund the costs of operating the District, fund necessary capital improvements and support the development of new water supplies; and,
2. The Financial Plan identifies current and future resources needed to continue implementation of the Willamette Water Supply System, and construct improvements to the District's water system infrastructure for seismic and system reliability purposes; and,
3. The District purchases its water supply for distribution within the District from the City of Portland, Oregon, and, as a partner, from the Joint Water Commission.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: This resolution takes effect November 1, 2022. The rates shown in Exhibit A attached hereto and by this reference incorporated herein, are hereby adopted by the District.

Section 2: This resolution does not change other charges adopted by the District other than those listed on the attached Exhibit A.

Section 3: The District shall make a copy of this resolution available to the public at the office of the District and through other media.

Approved and adopted at a regular meeting held on the 21st day of September 2022.

______________________________	______________________________
Todd Sanders, President	Jim Doane, Secretary

TUALATIN VALLEY WATER DISTRICT
EXHIBIT A - WATER RATES

VOLUME WATER CHARGE:		Effective 11/1/2022
CLASS CODE 1	RESIDENTIAL	
BLOCK 1	0-28 CCF (PER BI-MONTHLY BILLING PERIOD)	$7.03
BLOCK 2	29 + (PER BI-MONTHLY BILLING PERIOD)	$10.02
CLASS CODE 2	MULTI-FAMILY	
BLOCK 1	UP TO 1.4 TIMES 12-MONTH MOVING AVERAGE	$7.03
BLOCK 2	OVER 1.4 TIMES 12-MONTH MOVING AVERAGE	$10.02
CLASS CODE 3	COMMERCIAL NON-PRODUCT	
BLOCK 1	UP TO 1.4 TIMES 12-MONTH MOVING AVERAGE	$7.03
BLOCK 2	OVER 1.4 TIMES 12-MONTH MOVING AVERAGE	$10.02
CLASS CODE 4	PRODUCTION PROCESSES	
BLOCK 1	UP TO 1.4 TIMES 12-MONTH MOVING AVERAGE	$7.03
BLOCK 2	OVER 1.4 TIMES 12-MONTH MOVING AVERAGE	$10.02
CLASS CODE 5	FIRELINE	
BLOCK 1	ALL CONSUMPTION	$7.03
CLASS CODE 6	IRRIGATION	
BLOCK 1	UP TO 1.4 TIMES 12-MONTH MOVING AVERAGE	$7.03
BLOCK 2	OVER 1.4 TIMES 12-MONTH MOVING AVERAGE	$10.02
CLASS CODE 7	TEMPORARY IRRIGATION	
BLOCK 1	UP TO 1.4 TIMES 12-MONTH MOVING AVERAGE	$7.03
BLOCK 2	OVER 1.4 TIMES 12-MONTH MOVING AVERAGE	$10.02
CLASS CODE 8	LOCAL GOVERNMENT WATER PURVEYORS Volume charges shall be at contractual rates.	

FIXED CHARGES (FOR ALL CLASS CODES):	Effective 11/1/2022	
METER SIZE OR EQUIVALENT SERVICE SIZE	MONTHLY	BI-MONTHLY
5/8"	$ 21.25	$ 42.50
3/4"	$ 23.41	$ 46.82
1"	$ 28.85	$ 57.70
1 1/2"	$ 38.77	$ 77.54
2"	$ 57.18	$ 114.36
3"	$ 159.22	$ 318.44
4"	$ 213.34	$ 426.68
6"	$ 343.82	$ 687.64
8"	$ 496.63	$ 993.26
10"	$ 816.83	$ 1,633.66

Note: If snowbird customers do not request a service turn-on from the District and there has been movement on the meter, the District will apply fixed charges for the entire 2-month billing cycle.

Private fire services are charged at the service size as determined by the nominal size of the backflow prevention assembly unless otherwise established by the District's Chief Engineer based on engineering equivalence. For service sizes not listed above, the next larger service size will be used.

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 14-22

A RESOLUTION ESTABLISHING REGULAR MONTHLY MEETING DATES OF THE BOARD OF COMMISSIONERS FOR THE CALENDAR YEAR 2023.

WHEREAS, the Board of Commissioners annually sets its regular meeting calendar by resolution, and hereby being fully advised.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The regular meetings shall be held the third Wednesday of each month at 6:00 p.m.

Section 2: Meeting dates may be changed by a motion of the Board.

Section 3: The meetings are to be held on Microsoft Teams and, when the Board decides to resume in-person meetings, at the Tualatin Valley Water District, Administrative Office, located at 1850 SW 170th Avenue, Beaverton, Oregon 97003.

Section 4: In accordance with ORS 192.640, public notice requirements, all meetings will be advertised as required.

Approved and adopted at a regular meeting held on the 21st day of December 2022.

Todd Sanders, President

Jim Doane, Secretary

TUALATIN VALLEY
WATER DISTRICT

RESOLUTION NO. 15-22

A RESOLUTION REVISING THE VISION STATEMENT FOR THE TUALATIN VALLEY WATER DISTRICT.

WHEREAS, the District has a vision statement that was adopted in 2011; and

WHEREAS, a revised vision statement for the District will help maintain organizational focus, aid in decision making, create a legacy, provide a framework for setting resource priorities and instill strategic leadership; and

WHEREAS, the District has undertaken a deliberate process to revise its vision statement that will provide those long-term benefits; and

WHEREAS, the District's staff, leadership and Board of Commissioners (Board) have worked through this deliberate process to create a shared inspirational, memorable and future-focused revised vision statement; and

WHEREAS, the deliberate process used to revise the vision statement included stakeholder interviews with staff and members of the Board, online surveys of staff, focused retreats with the District's leadership team and Board, and direct participation by the District's Mission, Vision, Values project team and project steering committees; and

WHEREAS, the Board values the vital role the District's high-quality water plays in sustaining thriving communities by protecting public health, supporting the economy and jobs and managing water resources; and

WHEREAS, the Board values equitably providing water every day for everyone through dependable and responsive service, investing in reliability and resiliency and providing the best value; and

WHEREAS, the Board desires that the community, leadership and staff have a revised vision statement endorsed and approved by the Board of Commissioners.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE TUALATIN VALLEY WATER DISTRICT THAT:

Section 1: The Board hereby declares that henceforth the District's vision statement shall be: "Our water sustains thriving communities – every day for everyone."

Section 2: The District's Chief Executive Officer (CEO) is directed to undertake those steps that the CEO deems prudent to integrate the District's revised vision statement into the District's culture and future mission and values statements.

Approved and adopted at a regular meeting held on the 21st day of December 2022.

______________________________	______________________________
Todd Sanders, President	Jim Doane, Secretary