



Adopted Budget

2019-2021



TUALATIN VALLEY
WATER DISTRICT

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www.TVWD.org



OUR MISSION

To Provide Our Community Quality Water and Customer Service

BUDGET COMMITTEE MEMBERS

District Representatives

Carl Fisher
Craig Hopkins
Marilyn McWilliams
John Velehradsky P.E. (Retired)
Mike Whiteley P.E.

Board of Commissioners

Bernice Bagnall, Board President
Jim Doane P.E.
Jim Duggan P.E.
Dr. Todd Sanders
Dick Schmidt

MANAGEMENT STAFF

Chief Executive Officer (Effective 8/1/2019)

Tom Hickmann

Chief Financial Officer

Paul Matthews

General Counsel

Clark Balfour

Human Resources Director

Amy Blue

Chief Engineer

Carrie Pak P.E.

Water Supply Program Manager

David Kraska P.E.

Customer Service Manager

Andrew Carlstrom

Information Technology Services Director

Tim Boylan

BUDGET OFFICER

Tod Burton, Financial Planning & Debt Project Manager

TUALATIN VALLEY WATER DISTRICT

At a Glance...

The Tualatin Valley Water District (TVWD or the District) is the second largest water provider in the State of Oregon and is located in suburban Washington County, west of Portland. The current boundaries of the District were formed in 1991 by the merger of two separate, non-contiguous water districts – Wolf Creek and Metzger. The District is organized as a domestic water supply district authorized under Oregon Revised Statutes 264, and governed by a five-member Board of Commissioners, elected to four-year terms by District voters. The Board of Commissioners, with help from our staff, sets our policies and procedures. Listed below are some key District statistics:

General Statistics

- Service territory: 42 square miles
- District population: 214,800
- Service connections: 59,501
- Customer base: 94.6% residential & multifamily; 5.4% commercial/industrial/fireline/irrigation
- Water sales (volume): 68.2% residential & multifamily; 29.9% commercial/industrial/government; 1.9% wholesale/wheeled water
- Percent of total water sales (volume) by ten largest customers: 12.6%
- Number of District employees: 144 (2019-21 Adopted Budget)

Water System

- Average daily demand: 23.33 million gallons/day; 8.5 billion gallons/year
- Peak consumption: 45.4 million gallons/day
- 23 reservoirs (covered tanks)
- 67 million gallons stored in reservoirs
- 12 pump stations
- Miles of pipeline: 750
- Sources include water purchased from the Portland Water Bureau using the Bull Run Watershed & Columbia South Shore Wellfield, and the Joint Water Commission Hagg Lake, Barney Reservoir and directly from Tualatin River (during wintertime)
- Aquifer Storage & Recovery: 300 million gallons storage; 3 million gallons/day for peak summer use

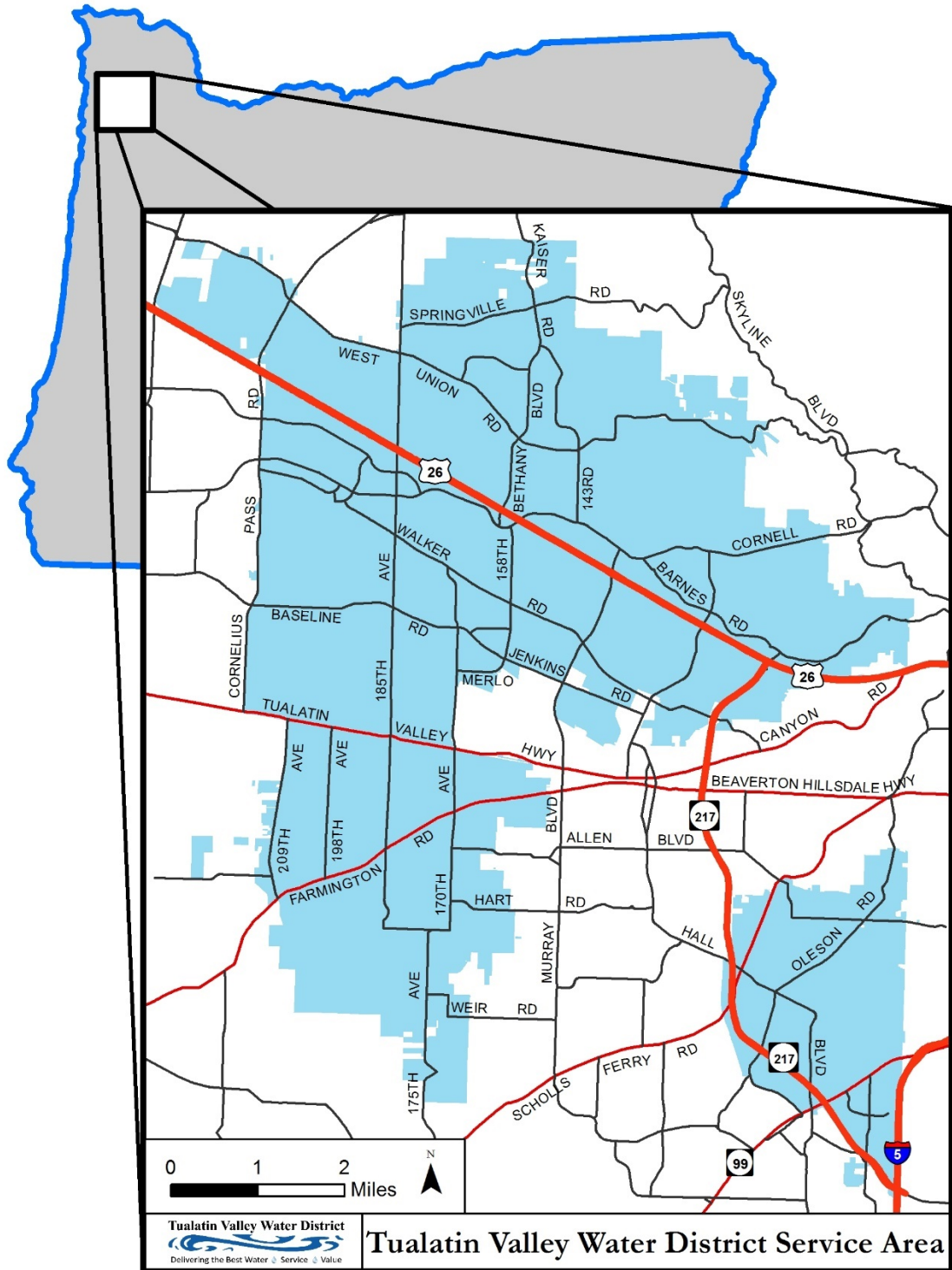
TVWD also:

- Provides billing services to Clean Water Services, including sewer-only accounts (71,570 accounts)
- Provides meter reading and billing services to the City of Beaverton (21,381 accounts)
- Serves as the region's managing agency on the development of the Willamette Water Supply System and Intake Facilities Commission

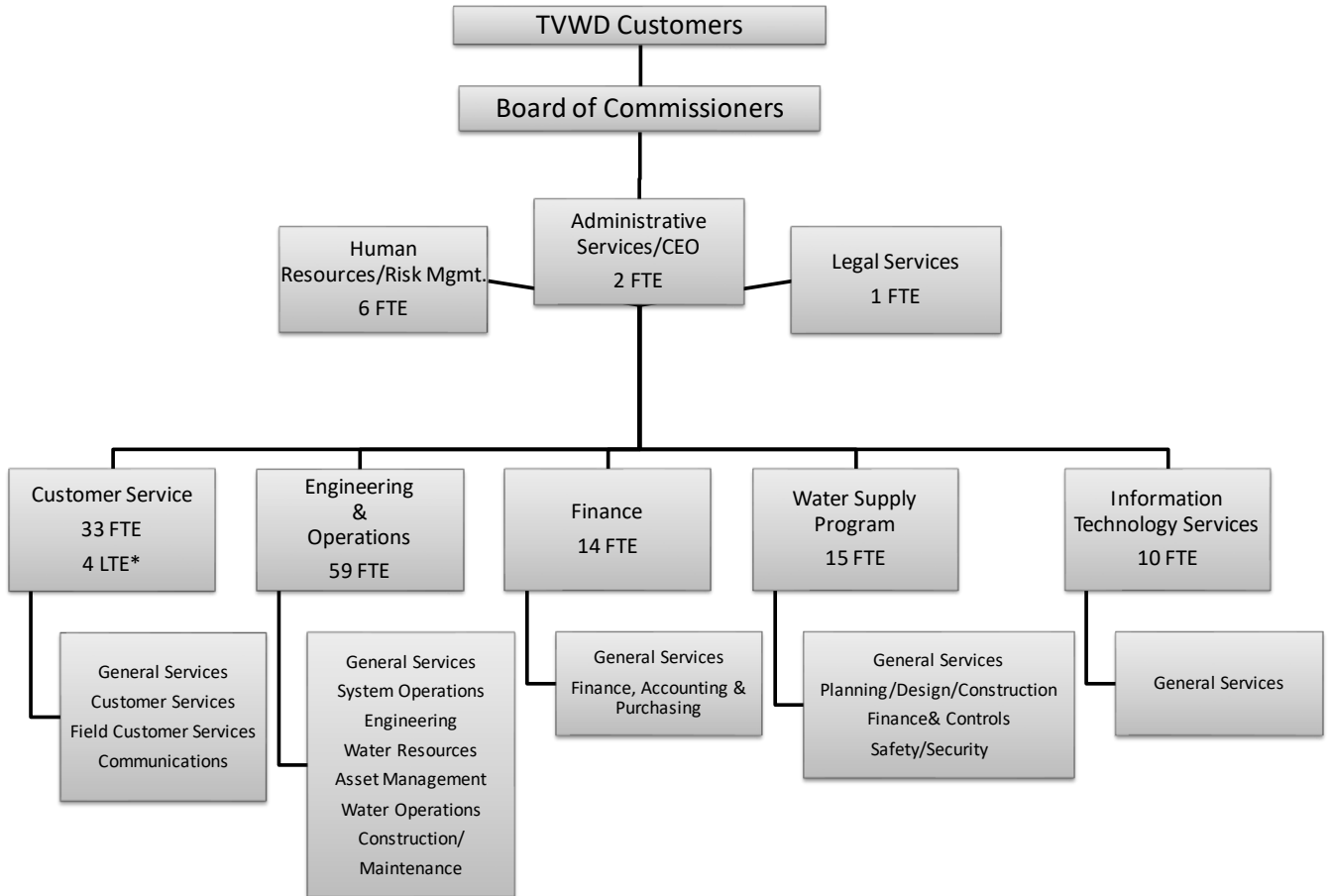
District Profile:

The District is within and serves a significant portion of Washington County, Oregon. The county is the second largest in the state with an estimated 2018 population of 598,850, which represents an increase of 1.4% annually over the past ten years. Customer growth (meter installations) for the District has grown by about 1.0% annually over the same ten-year period. Washington County also has the highest median household income in the state – \$69,743, compared to \$60,212 for Oregon and \$60,336 nationally. The District's service area is largely single-family residential and multifamily, and is home to several large electronics and food processing businesses, which have contributed significantly to the economy of the county. Other principle industries are agriculture, trade, healthcare, and business services. Nike's World Headquarters is located in the District, as are Reser's Fine Foods, Maxim Integrated Products and an Intel facility. A light rail corridor running through the District (from Hillsboro to the Portland airport and Gresham) has a special zoning overlay for high-density use. Future growth potential for TVWD's service area is expected to be in single family housing, apartments, condominiums, and commercial development.

Service Area Map of the Tualatin Valley Water District Washington County, Oregon



**TUALATIN VALLEY WATER DISTRICT
ORGANIZATIONAL CHART
(Adopted 2019-21 Budget)**



* LTE – Limited-Term Position

DISTINGUISHED BUDGET PRESENTATION AWARD

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the **Tualatin Valley Water District for its biennial budget for the period beginning July 1, 2017.**

In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

This award is valid for a period of two years only. We believe our current budget document continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

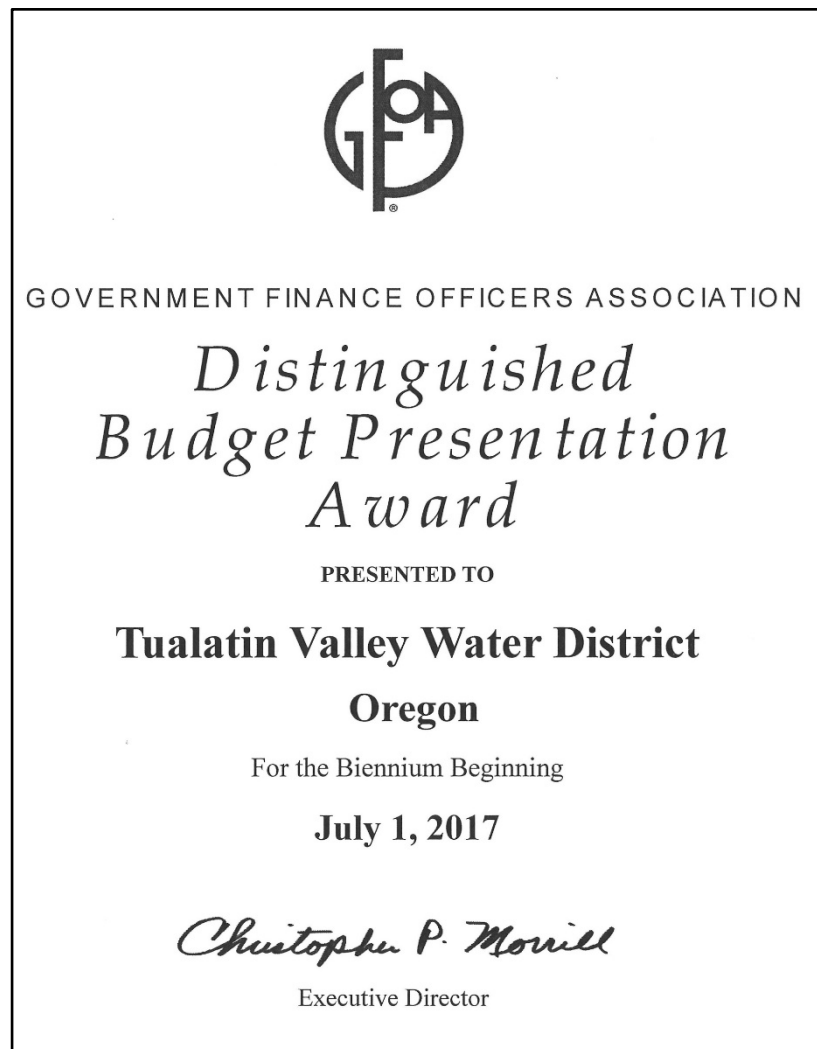


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The Adopted 2019-21 Budget document may be viewed online through the following link:

<https://www.tvwd.org/finance/page/budget>

This on-line document can be downloaded as a PDF. The Table of Contents includes bookmarks and links for ease of navigation

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TUALATIN VALLEY
WATER DISTRICT

Tualatin Valley Water District



Delivering the Best Water  Service  Value

July 1, 2019

Members of the Board of Commissioners

Bernice Bagnall, Board President
Jim Doane, P.E.
Jim Duggan, P.E.
Dr. Todd Sanders
Dick Schmidt

BUDGET MESSAGE

We are pleased to present the Tualatin Valley Water District (District or TVWD) Adopted Biennial Budget for 2019-21. The budget was unanimously adopted by the Board of Commissioners on June 19, 2019 following a public hearing. The budget was also unanimously approved by the District's Budget Committee on May 30, 2019 following a public hearing. This budget message provides background information and highlights portions of the budget document to aid your review of the Adopted Budget. The budget message is organized into the following sections:

- Budget Process, Format, and Basis
- Board Goals and Key Initiatives
- Financial Policies and Long-Term Planning
- 2019-21 Biennium Budget Summary
- Willamette Water Supply & the Six-Year In-District Capital Improvement Plan
- Concluding Thoughts and Future Planning

As a special district and a water utility, TVWD's costs and planning efforts revolve around the imperative to provide high-quality water on demand to all residential and business customers within the District's service area. This 2019-21 Adopted Budget reflects alignment to the District's strategic planning efforts and the District's priority to build a long-term water supply in partnership with neighboring cities to meet the projected water demands of both current and future TVWD customers and within the region.

To deliver water to TVWD customers, the District maintains approximately 750 miles of pipe, ranging in size from 2 to 60 inches. Twelve pumping stations are on-line to move water throughout the District. There are 23 finished water reservoirs with a combined storage capacity of 67 million gallons (MG). All pump stations and 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 systems.

District's Board has long recognized the need to balance water supplies among multiple sources. Currently, the District purchases about 70% of its water through a wholesale contract with the City of Portland. The remainder of the water needed by the District (about 30%) comes from the District's ownership share in the Joint Water Commission (JWC) and Barney Reservoir Joint Operating Commission (BJOC), and the District's aquifer storage and recovery facility (ASR) at Grabhorn.

Maintaining a reliable and efficient water system is a major focus at TVWD. Capital improvement projects are planned and constructed throughout the year to meet current and future water needs, maintain a resilient infrastructure, and provide service-level redundancy. At any given time, the District has a variety of these projects underway, including pipe upgrades, reservoir construction, and facility improvements.

In addition to the types of capital activities noted above, the District is engaged in a major infrastructure project to develop a new water source on the mid-Willamette River for the Tualatin Valley. This project is commonly referred to as the Willamette Water Supply Program (WWSP), and includes significant capital investments that are part of two new regional water entities.

1. Willamette Water Supply System (WWSS) Commission – The WWSS will soon be a joint venture of the District and the cities of Hillsboro and Beaverton to construct and operate supply facilities that convey raw water from the intake facility on the Willamette River, treat the raw water to potable standards, and convey the potable water to each partner's distribution systems. The District will serve as the managing agency for the WWSS.
2. 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, operate, and construct improvements at the raw water intake facility located at the existing Willamette River Water Treatment Plant in Wilsonville. The District serves as the managing agency for the WIF.

The District also serves as the managing agency to the Willamette River Water Coalition (WRWC). Its partners include TVWD, and the cities of Tigard, Tualatin and Sherwood. The primary charge of the WRWC is to develop and maintain water rights on the Willamette River for regional needs.

Taken together these three entities form the foundation of regional partnerships to build and maintain a long-term water supply. As TVWD's most important priority, this Adopted 2019-21 Budget includes resources to continue implementation of the Board's direction to develop the District's next increment of water supply on the Willamette River. With operations planned to begin in 2026, the WWSP continues to be a key theme for this and future budgets.

BUDGET PROCESS, FORMAT, AND BASIS

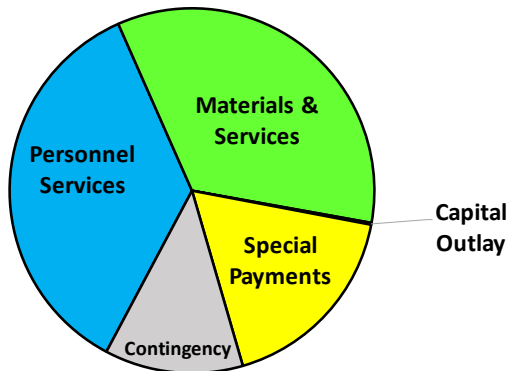
Management and staff prepare the District's budget guided by the Board's policy direction. Six departmental budgets are prepared by the Chief Executive Officer (CEO) and department managers. These operating budgets are combined with the fund level budgets, the District's six-year Capital Improvement Plan (CIP), and the WWSP and its related funds, to create a consolidated budget request. The consolidated budget request is then analyzed for financial sufficiency using the District's long-term financial plan and reviewed by the CEO, Chief Financial Officer, and Budget Officer.

The District prepares a biennial budget as allowed by Oregon Local Budget Law (Oregon Revised Statutes, Chapter 294). This Adopted Budget covers the period from July 1, 2019 to June 30, 2021. The general presentation format is to show the actual history for the last two completed periods, the revised budget for the prior biennium, and the Adopted 2019-21 Budget for this biennium.

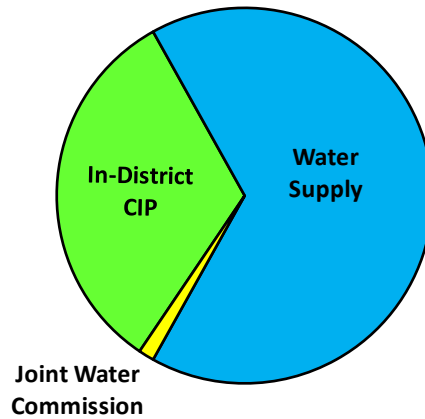
The Adopted 2019-21 Budget has an updated fund structure to reflect the District’s role as a service provider to TVWD customers and as the managing agency to plan, design and construct the Willamette water supply. The Adopted 2019-21 Budget consists of the funds as shown below.

TVWD Serving Customers

General Fund



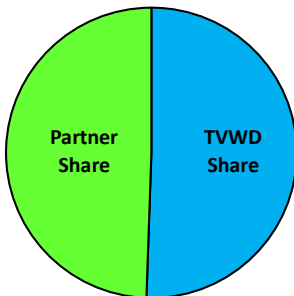
Capital Improvement Fund



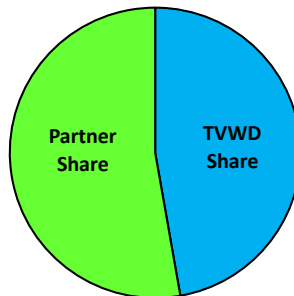
- ✓ **Supporting Funds**
 - Capital Reserves
 - Debt Proceeds
 - Debt Service
 - Customer Emergency Assistance

TVWD As Willamette Water Supply Program Managing Agency

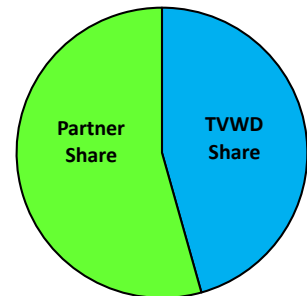
Willamette Water Supply System Fund



Willamette Intake Facilities Fund



Willamette River Water Coalition Fund



These three funds are considered joint ventures funds. As such, they are not included in the District’s audited financial statements and are instead subject to separate auditor reviews for financial statement preparation and reporting. More information about the District’s funds and fund structure can be found in Section 6 *Fund Summaries*.

The formal public review process begins when a consolidated “Proposed Budget” is presented to the Budget Committee, by fund, for consideration, public comment, and approval. The budget, as approved by the Budget Committee, is then presented to the Board of Commissioners who conducts a second public hearing, makes revisions if necessary, and adopts the budget by resolution.

In accordance to Oregon Local Budget Law, the resolution authorizing budget appropriations is adopted by fund for the budget period in the categories of Personnel Services, Materials & Services, Capital Outlay, Debt Service, Contingency, Special Payments, and Transfers.

A copy of the Adopted 2019-21 Budget Resolution can be reviewed on page 2-25 of this *Budget Message*. The budget process, including a description of Oregon Local Budget Law, is presented in greater detail in Section 3 *User’s Guide*.

The District reports costs as a single enterprise. For financial reporting purposes, financial statements are presented on a full accrual basis of accounting. In this method, revenues are recorded when they are earned and expenses are recorded at the time liabilities are incurred regardless of the timing of related cash inflows and outflows.

The District’s budget is prepared using the modified accrual basis of accounting. Under modified accrual basis of accounting, revenues are recognized as soon as they are both measurable and available. Measurable means the amount of the transaction can be determined and revenues are considered available when they are collected within the current period or expected to be collected soon enough thereafter to be used to pay liabilities of the current period. Although the District is currently debt free, future debt service will be budgeted on a cash basis to provide the reader complete information pertaining to the District’s outstanding long-term debt obligations.

Under the definition of Oregon Local Budget Law, the Adopted 2019-21 Budget is balanced, meaning the resources in each fund are equal to the expenditures and other requirements in that fund.

BUDGETING FOR WIFIA AND DEBT ISSUANCE

One of the most exciting developments during 2018 was the selection of the District and one of its WWSS partners, the City of Hillsboro (Hillsboro), by the US Environmental Protection Agency (EPA) to apply for up to \$616.6 million in long-term, low-cost supplemental loans, administered through EPA’s Water Infrastructure Finance and Innovation Act (WIFIA).

The WIFIA program is a federal loan and guarantee program that aims to accelerate investment in the nation’s water infrastructure by providing credit assistance for regionally and nationally significant projects.

The selection of the District and Hillsboro followed a competitive application process. WIFIA funding will comprise up to 49% of the WWSS project costs. Key benefits of the WIFIA loan program include flexible terms, a low fixed interest rate at closing, and the ability to defer repayment, as well as make prepayments.

The District estimates that its share of WIFIA funding will save TVWD ratepayers over \$230 million through 2045, free up financial resources for other purposes, and lower the overall levels of annual revenues required from water service rates and other charges.

The Adopted 2019-21 Budget includes appropriation of \$25 million for the first District draws of WIFIA proceeds.

Currently, the District does not plan to issue revenue bonds during the biennium instead relying on WIFIA draws and available cash. However, the District may accelerate its plan to issue revenue

bonds depending on interest rates, and the most favorable capital financing strategy of deploying WIFIA proceeds, cash and revenue bonded debt to finance its capital program.

Should revenue bond or other forms of debt issuance be considered for the 2019-21 biennium, the Board will first be required to adopt a Supplemental 2019-21 Budget as allowed under Oregon Budget Law. For more information on the District’s financing plans see Section 5 - *Multi-Year Financial Outlook*.

ORGANIZATIONAL STRATEGIC PLANNING AND KEY INITIATIVES

The District’s vision, mission and values are shown below.

<p><i>TVWD Vision</i> Delivering the Best Water ♦ Service ♦ Value</p> <p><i>TVWD Mission</i> To Provide Our Community Quality Water and Customer Service</p> <p><i>TVWD Values</i> Reliability ♦ Integrity ♦ Stewardship ♦ Excellence ♦ Safety</p>

In 2012, the Board adopted a set of Desired Results to reinforce its policy objectives and decision-making. TVWD’s Desired Results are analogous to what other organizations may call organizational goals. The District refers to these as Desired Results to emphasize the District’s focus more on the results of actions than the actions themselves. These Desired Results stem from the District’s Vision, Mission and Values and summarize what District Board and staff seeks to accomplish through policies and programmatic efforts.

TUALATIN VALLEY WATER DISTRICT DESIRED RESULTS
1. The Water Supply Meets Community Needs and Expectations
2. The Community Is Confident in Our Water, Service, and Employees
3. We Are Good Stewards of Our Financial Resources
4. We Are Good Stewards of Natural Resources
5. We Are Good Stewards of Our Own Assets and Resources (People & Physical Assets)

With the Desired Results in mind, a Strategic Core Team consisting of Board members and staff meet prior to the kick-off of each budget development cycle to discuss industry trends, regional issues, District needs, and organizational strengths and challenges. The Core Team includes two Commissioners, the Chief Executive Officer, the District’s department managers, Human Resources Director, and other key staff members. This strategic planning process forms the basis for setting the District upcoming biennium budget priorities and recommended resource allocations.

In November 2018, the Board of Commissioners approved six District Initiatives and directed staff to develop the 2019-21 biennial budget prioritizing these efforts. These initiatives are in addition to the development of the WWSP long-term water supply, which the District considers an integral part of its core mission. The table on the next page lists the approved 2019-21 District Initiatives.

2019-21 District Initiatives

Program for Management and Operation of the Willamette Water Supply System
<ul style="list-style-type: none"> ➤ Develop resource requirements for the operation, maintenance, and governance of the Willamette Water Supply System ➤ Complete planning study to identify needs ➤ Gain support of District Board, staff, and WWSP partners
Debt Program
<ul style="list-style-type: none"> ➤ Develop a long-term debt program, including WIFIA, and its ongoing requirements ➤ Maintain continuity with other partners in financing the WIF and WWSS ➤ Stay up-to-date on emerging best practices, current market conditions, changing regulatory and statutory requirements pertaining to debt issuance and management
Strategic Communications Program
<ul style="list-style-type: none"> ➤ Complete the planning and resourcing process to identify the needs, priorities, and budget requirements associated with implementation of the District’s Strategic Communications Plan ➤ Strengthen the network to support customers with affordability concerns while communicating and demonstrating the value of the District’s investment in a new regional water supply
Develop and Implement CIS
<ul style="list-style-type: none"> ➤ Develop a strategy for a new Customer Information System (CIS) and begin its implementation ➤ Develop and gain approval of initial project IGA with Clean Water Services ➤ Implement and stabilize new CIS
District Resiliency Program
<ul style="list-style-type: none"> ➤ Coordinate all District resiliency efforts, including the ERP, infrastructure resiliency, security (cyber and physical) planning, continuity of operations and community/family outreach ➤ Update the District’s Risk & Resilience Plan (VA) per “America’s Water Infrastructure Act of 2018” ➤ Establish long-range CIP to meet Oregon Resiliency Program (ORP) objectives by 2065
Human Capital Strategy
<ul style="list-style-type: none"> ➤ Proactively address changing workforce demographics and trends ➤ Departments establish cross-training programs for key positions and leadership continuity ➤ Align strategic human capital with the District’s mission and goals ➤ Build a framework for workforce development and talent management that will meet current and future trends and regulatory requirements

More detail on the District Initiatives, including the status of initiatives approved for the 2019-21 biennium, can be found in Section 4 *Strategic Planning and Performance Measures*.

Development of a future long-term water supply through the District’s participation in the Willamette Water Supply Program, as well as many of the District Initiatives represent major, multi-year initiatives that provide overall direction to management and staff. District Initiatives include incremental improvements to the day-to-day operations of the District. Examples of both goals are provided in the next section, which highlights the WWSP and some of the District’s Initiatives in the upcoming biennium.

Willamette Water Supply Program

Supports: Desired Result 1 - *The Water Supply meets Community Needs and Expectations*

As noted above, the planning, design and construction of a new water supply is considered an integral element of the District's core mission. TVWD is implementing an expansion of its existing portfolio of water sources through participation in the Willamette Water Supply Program (WWSP).

The WWSP was established to develop and deliver the Willamette Water Supply System (WWSS) and Willamette Intake Facilities (WIF) to the District and its partners by 2026.

When complete, the WWSS will consist of a new state-of-the-art water treatment plant, two fifteen million-gallon reservoirs, and over thirty-one miles of seismically resilient large diameter pipeline. It is a once-in-a-generation project intended to meet the long-term water demands for residential, commercial, and industrial customers of the District and its partners. The WWSS partners include the District and the cities of Hillsboro and Beaverton.

The WIF is a smaller effort than the WWSS, however, it includes more partners. The WIF owns, operates, and maintains the intake facilities at the current Willamette River Water Treatment Plant in Wilsonville, which serves the cities of Wilsonville and Sherwood. These intake facilities will be upgraded and seismically hardened to serve both the existing Wilsonville plant and the planned WWSS water treatment plant. WIF partners include the District, and the cities of Hillsboro, Beaverton, Wilsonville, Sherwood, and Tigard.

The WIF Commission was established by intergovernmental agreement in April 2018, and the District's Board of Commissioners approved a supplemental budget to create a new Willamette Intake Facilities Fund (Fund 44) and appropriate 2017-19 expenditures.

The WWSS Commission will also be set up through an intergovernmental agreement, which as the writing of this Budget Message, has been approved by the governing bodies of the District, Hillsboro and Beaverton. A new WWSS fund (Fund 45) with appropriations is included in the Adopted 2019-21 Budget. It is anticipated that early in the 2019-21 biennium the WWSS Commission will meet to finalize its initial annual workplan, which is currently in draft form.

The District serves as managing agency to both the WWSS and WIF, which are governed by TVWD and its partners. District staffing for both entities is budgeted in the General Fund (Fund 01) within the *Water Supply Program Department* found in Section 14. Labor and overhead expenditures are reimbursed to the General Fund as staff charges time to the WWSS and WIF operating and capital projects.

While planning, design and construction of the WIF and WWSS will continue for the next several years, the District is already thinking ahead of operating the new Willamette supply.

In line with the District's initiative to plan for the management and operations of the WWSS two new staff positions are included in the Adopted 2019-21 Budget; a Willamette Supply Manager whose primary role will be to oversee the WWSS, WIF and Willamette River Water Coalition (WRWC) and Willamette Supply Operations Supervisor whose primary role will be provide planning and eventual oversight of the WWSS water treatment plant and transmission operations.

An interdisciplinary team from both the District and Hillsboro representing operations, water quality, asset management, risk management, and finance have been meeting for the past year to undertake a needs assessment and build the foundation for the eventual operation of WWSS.

As the managing agency, TVWD's Adopted 2019-21 Budget includes all WWSS and WIF expenditures in the two separate funds, which are recorded as investment in joint ventures. Both the District's and partner shares are recognized as contributed capital and contract reimbursements, depending on the type of expenditure.

In addition, TVWD's share of the WWSS and WIF capital expenditures are budgeted as Capital Outlay in the District's Capital Improvement Fund (Fund 11). This budgeting method is necessary to allow the District to pay for its share of the WWSS and WIF projects, while at the same time serve as the managing agency to record and maintain all partnership shares in the separate WWSS and WIF funds.

Supports: Desired Result 3 – We are Good Stewards of Our Financial Resources

The District's success, along with its partner the City of Hillsboro, in being selected to apply for a WIFIA loan was a key milestone to fund a large portion of the Willamette supply project at a significant savings to ratepayers. Leading up to the beginning of the 2019-21 biennium the District has already completed several foundational tasks supporting its initiative to develop its debt program including: updating its financial policies and long-term financial plan; obtaining an indicative rating of AA+ from Standard & Poor's; and receiving Board approval of a new Master Bond Declaration. Staff is currently working with the EPA on the WIFIA Loan Agreement, which is anticipated to be completed during the summer of 2019.

In total, the Adopted 2019-21 Budget includes \$217.3 million in operating and capital appropriation for the WWSS. Hillsboro's and Beaverton's shares are \$107.5 million and the District's share \$109.8 million.

For the WIF, the Adopted 2019-21 Budget includes \$7.5 million in operating and capital appropriation with the partner's share being about \$3.9 million and the District's share \$3.6 million.

More information on the WWSP and its projects is provided in Section 16 *Willamette Water Supply System* and Section 17 *Willamette Intake Facilities*. The District's share of these projects is also included in Section 15 *Capital Improvement Plan*.

The WWSP website <http://www.ourreliablewater.org/> provides additional information on the WWSP including its history, project maps, current activities to-date, a schedule of upcoming events and other relevant information.

OTHER DISTRICT INITIATIVES

Develop and Implement a Customer Information System (CIS)

Supports: Desired Result 2 - *The Community is Confident in our Water, Service and Employees*

The District uses a custom utility billing system, developed in-house, to prepare and manage customer billings. The District performed the last major upgrade to this system in 2007. In addition to billing for water services, the District uses this system for billing sanitary sewer and surface water management services under intergovernmental agreements with Clean Water Services and the City of Beaverton.

The District's 2015 Information Technology Master Plan identified the current utility billing system as requiring significant ongoing maintenance and development costs. As technologies have evolved, utilities like the District have benefited from implementing commercial-off-the-shelf solutions for utility billing.

Moreover, current technology trends have integrated additional customer care functions directly into the billing software and offer what the market generally refers to as a Customer Information System (CIS). These integrated CIS solutions include the functionality that the current utility billing system provides with the additional functionality of a customer-centered information system, and an improved ability to integrate with financial management and computerized maintenance management systems.

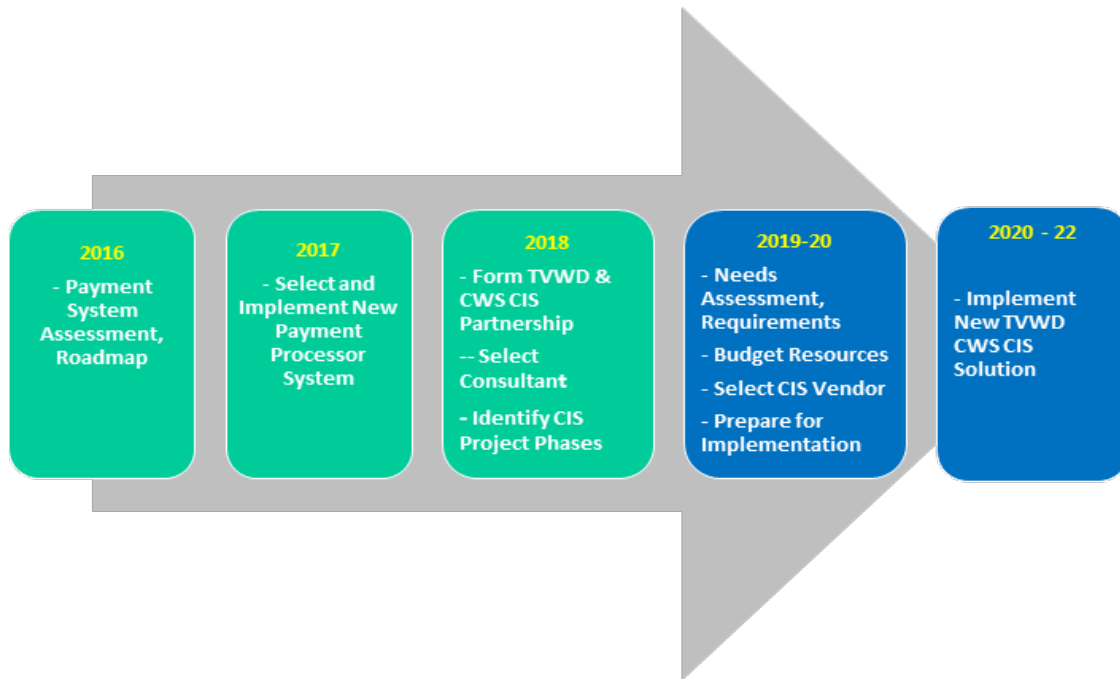
The 2017-19 biennium budget included funding for developing a CIS replacement strategy. One of the first milestones was the implementation of a new third-party on-line payment gateway, which went "live" in September 2017. The new payment gateway greatly improved the user experience for both District customers and staff. In addition, the new payment processor vendor demonstrated improved leverage with the merchant card providers, which has stabilized the cost of merchant fees charged to the District. This payment provider gateway will be integrated into the new District CIS.

Also, during 2017-19 the District brought Clean Water Service on as a partner and joint owner of the CIS project. A consulting firm was hired to prepare a comprehensive "meter to cash" review of the District's current business processes for utility billing, suggest utility industry best practices, and begin identifying the phases, costs and staffing needs to implement a new CIS over the next three years.

The District has budgeted a total of \$9.4 million for the CIS project in its Capital Improvement Plan, including \$8.1 million in the 2019-21 Biennium. This budget appropriation includes the cost shares for the District and Clean Water Services. Both hosted and cloud-based solutions will be considered. Project costs include items such as CIS application software, hardware and licensing, project management and implementation services, testing, training, integration with other District systems, and internal staff costs. The District has a current cost-sharing agreement with Clean Water Services. The agreement will be updated for the vendor selection, implementation, and post "go-live" phases.

Four limited-term customer service positions are included in the Adopted 2019-21 Budget. These positions will backfill existing staff positions who will be assigned either full or part-time to the CIS project. One limited-term position or permanent staff member will serve as a project scheduler.

As shown in the figure below, the District expects to complete the CIS needs assessment, vendor selection, and make substantial progress towards implementation during the 2019-21 biennium. “Go live” of the core CIS is expected to be completed during the first year of the 2021-23 biennium.



District Resiliency Program and Human Capital Strategy

Supports: Desired Result 5 – *We are Good Stewards of our own Assets and Resources (People & Physical Assets)*

Two other District initiatives are directed towards resiliency of District assets and operations, and resiliency of TWVD’s workforce.

The District’s Resiliency Program efforts include prioritizing capital improvement projects that provide water system reliability, redundancy of service, and construction of seismically resilient infrastructure. Physical and cyber-security also remain as District initiatives to protect against data and financial losses, as well as provide continuity of operations. One such effort in the Adopted 2019-21 Budget is updating the District vulnerability assessment (VA) and emergency response plan (ERP) in compliance with America’s Water Infrastructure Act of 2018. An allocation of \$250,000 for professional services is budgeted in the Risk Management Division of the Administrative Services Department to complete the VA/ERP assessment during the 2019-21 biennium.

On the human capital side, staffing at the District has changed significantly during the past few years due to retirements and the realignment of duties to reflect changing work requirements brought on by new technology and commitments such as the WWSP. To address these challenges, proactively managing staffing requirements remains a District priority.

Prior to the beginning of the 2017-19 Biennium an outside consultant completed a study on the District’s organization and its staffing needs. The study resulted in two recommendations, which were implemented immediately. A separate Information Technology (IT) Services Department (formally a division in Finance) was established with the IT Director reporting directly to the Chief

Executive Officer. This change elevated IT to the District's management team and recognized its importance as a service provider to all other TVWD departments.

In addition, the Engineering Services and Field Operations Departments were reorganized into a single department under the direction of the Chief Engineer. This reorganization created several service level efficiencies including placing water distribution system operations and maintenance under a single department; promoting closer coordination between staff engineers and construction/maintenance field crews on project execution; and creating an asset management division consolidating facilities, building and grounds, fleet, and geographic information system (GIS) services under one function.

Although no additional reorganizations are planned in the Adopted 2019-21 Budget, the District will continue to enhance the effectiveness of the District's work force through cross-training, mentoring, and other direct training. The District will also continue to document its operational procedures and identify information gaps where institutional knowledge should be preserved. The Human Resources Division will continue to take the lead on this District-wide effort during the next biennium.

Finally, the new biennium continues the District's internship and seasonal worker programs aimed at students to attract future employees to the District and the industry in general. The Adopted 2019-21 Biennium Budget continues with the District's existing program of five engineering and operations internships. In addition, the Budget continues with the seasonal worker program by funding five positions in the Asset Management Division to work on field and facility related projects.

Partnerships

The District's partnerships in the WWSP, Joint Water Commission, and Barney Reservoir Joint Operating Commission combine common objectives and broader expertise in pursuit of providing reliable long-term water supplies. A similar synergy is achieved for the promotion of conservation and sustainability practices within the region through District's memberships in the Regional Water Providers Consortium and Partners for a Sustainable Washington County Community.

TVWD's active involvement with organizations such as the American Water Works Association (AWWA) and its Pacific Northwest Section creates opportunities for the District to share its leadership and knowledge, while learning from others on matters important to the industry. The Adopted 2019-21 Budget in the Administrative Services Department includes \$265,000 in regional partnerships to continue these activities. Membership dues for AWWA and other professional associations are budgeted in individual departments.

In addition, the District provides services to Clean Water Services and the City of Beaverton for utility billing and meter reading and operates a joint fueling operation that also serves the Tualatin Hills Park and Recreation District. These partnerships improve service quality for customers in common and enhance economies of scale for delivery of these services.

Finally, the District offers customers backflow device testing services performed by independent certified testers to reduce customer costs of compliance while helping to protect the safety of the water supply. A significant amount of General Fund support is received for these services. During 2019-21, projected revenue from these partnerships include \$3.4 million, which represents about 4.0% of the General Fund operating budget.

FINANCIAL POLICIES AND LONG-TERM PLANNING

The District maintains a set of financial policies, which were updated and adopted by the Board in March 2019, in preparation for the WIFIA loan and other debt financings required for the WWSP.

The purpose of the financial management policies is to guide the District's management in its financial affairs, including policies and procedures for financial planning, budgeting, debt management, accounting and reporting, business case evaluations, and other related matters.

These policies follow GFOA best practices, provide specific guidance to the District management and affirm the Board's commitment to the practices of sound financial management.

A summary of TVWD's financial policies including their purpose, goals and requirements can be found in Section 3 *User's Guide*. A complete set of the District Financial Policies can be found on the District's website at <https://www.tvwd.org/finance>.

The tables below provide examples of the District Financial Management Policies that drive the preparation of the Adopted 2019-21 Budget.

DISTRICT BUDGET
<p>Purpose: The District makes program and service decisions to allocate scarce resources for operational or capital needs through its budget process.</p>
<p>Section 3.4.4 Basis of Budgeting</p> <p>The District prepares its budget on a modified accrual basis. For budget purposes, the District recognizes revenues when they are both measurable and available. Measurable means the amount of the transaction can be determined and revenues are considered available when they are collected within the current period or expected to be collected soon enough thereafter to be used to pay liabilities of the current period. Expenses are recognized when the liability is incurred. An exception to this rule on recognizing expenses is debt service. The payment of debt service is recognized when payments are due. Other accounting treatments under generally accepted accounting principles (GAAP) such as depreciation, are not considered expenses under the District's budgetary basis.</p>
<p>Section 3.4.5 Sufficiency of Operating Revenues</p> <p>The District's budget shall require that operating revenues be enough to cover operating expenses (excluding depreciation), and that net revenues are sufficient to comply with bond covenant requirements each year. Sufficiency of operating revenues shall be included in determining water rates, fees, and charges.</p>
<p>Section 3.4.6 Capital Planning</p> <p>Each biennium, the District shall develop and adopt a six-year Capital Improvement Plan (CIP) that details capital projects and fixed asset acquisitions for the District consistent with its current Water System Master Plan, Financial Plan, fleet and facility plans, asset management plan and capital plans prepared by other agencies with whom the District has contractual or other legal obligations (e.g., the District's joint ventures). The District's Chief Engineer will prioritize Adopted projects based on criteria reflecting the direction and policies established by the Board and needs of the District. The District's Chief Engineer will identify significant operating expenses associated with each project that will be required when the asset is placed into service.</p>

WATER RATES, FEES, & CHARGES

Purpose: This Policy describes the Board’s general rate-setting goals and directives.

4.3.1 Cost-of-Service Framework

The District’s water rates, fees, and charges should reflect the costs of providing the various services to the District’s customers, following generally accepted ratemaking methodologies. The cost of service should include operating and capacity costs and send appropriate price signals to customers to encourage the wise use of water.

4.3.2 Water Rates

Water rates should be adjusted annually, with those annual adjustments adopted on a biennial or annual basis depending on financial planning needs.

MINIMUM FUND BALANCES & RESERVES

Purpose: This policy guides the development of minimum cash balances that directly affect the District’s Financial Plan, rates and charges, and budget.

5.3.1 Working Capital

Working capital shall be at least equal to two months’ operations and maintenance expense (i.e., 60 days cash on hand).

5.3.2 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 shall be determined through the financial planning process and identified in the District’s Financial Plan.

Financial Plan

One of the keystones of the District’s Financial Management Policies is the development and ongoing maintenance of the long-term Financial Plan. The District’s long-term financial planning process is intended to stimulate discussion and create a long-range perspective for the Board and other decision makers.

The Financial Plan assists in avoiding financial challenges; stimulating long-term and strategic thinking; creating a consensus on long-term financial direction; and communicating with internal and external stakeholders.

Specifically, the Financial Plan is intended to assist the District with the following:

- ✓ Setting water rates over the long term, thereby avoiding unnecessary and/or unexpected large increases in rates and customer bills
- ✓ Providing the Board, customers, and the debt market insight into the District’s long-term financial needs
- ✓ Promoting sound financial management through long-range planning.
- ✓ Contributing to the preservation or enhancement of the District’s credit rating(s).

- ✓ Informing the biennial operating and capital budget development process by identifying current budgetary needs and considering the phasing of changes to service levels, particularly capital improvement projects.

Among its many components the District financial plan includes long-term forecasts for growth of customers and water demands, sources and uses of funds, operating expenditures, capital expenditures, use of cash vs. debt, and compliance with debt covenants.

The District's most recent update of the Financial Plan was accepted by the TVWD Board in May 2019. Again, a key driver was preparing the District for WIFIA and the financial requirements of the WWSP.

More detailed information on the District's long-term Financial Plan can be found in Section 5 *Multi-Year Financial Outlook*. A complete version of the May 2019 Financial Plan can be found on the District's website at <https://www.tvwd.org/finance/page/financial-plan>.

2019-21 ADOPTED BIENNIAL BUDGET SUMMARY

The Sources & Uses of Funds table on the following page presents summary data comparing the key resources and requirements of the Adopted 2019-21 Budget to the Adopted 2017-19 Budget.

The funds summarized on this table are of five types: General, Capital Projects, Reserves, Debt Service, and Agency. All funds work together to support the water utility and manage the District's partnerships. Total budgeted positions increase from 139 to 144 over the biennium.

Specific budget detail for each fund can be found in Section 6 *Fund Summaries* and Section 7 *General Fund Resources and Expenditures*.

SOURCES & USES OF FUNDS

	2017-19 Biennial Revised Budget	2019-21 Biennial Adopted Budget	% Change from Revised 2017-19 Biennial
SOURCES OF FUNDS			
Operating Revenue			
Water Service Charges and Fees	\$ 122,275,000	\$ 149,248,486	22.1%
Right of Way Fee collections	1,760,350	1,446,000	-17.9%
Contract Reimbursements	3,173,910	5,198,492	63.8%
Other Fees & Revenues	4,024,650	4,319,349	7.3%
Construction Revenue from Other Funds	7,163,988	10,194,616	42.3%
Non-Operating Revenue			
System Development Charges	10,741,700	11,426,151	6.4%
Contrib. & Assessments	57,500,716	224,854,690	291.0%
Interest Earnings	2,961,673	4,199,254	41.8%
Total Revenues:	\$209,601,987	\$410,887,038	96.0%
Transfers In From Other Funds	195,494,340	283,005,543	44.8%
Debt Resources	-	25,000,000	
Combined Beginning Fund Balance:	102,816,660	132,950,815	29.3%
TOTAL RESOURCES & TRANSFERS	\$ 507,912,987	\$ 851,843,395	67.7%
USES OF FUNDS			
Operating Expenses			
Personnel Services	\$ 40,052,089	\$ 43,536,651	8.7%
Materials and Services	37,429,378	44,391,964	18.6%
Total Operating Budget	77,481,467	87,928,615	13.5%
Capital Budget			
Capital Outlay	174,881,292	404,589,611	131.4%
Debt Service	-	-	0.0%
Total Capital Budget	174,881,292	404,589,611	131.4%
Special Payments	1,760,350	21,446,000	1118.3%
Total Expenditures:	254,123,109	513,964,226	102.3%
Contingency	14,741,900	15,209,000	3.2%
Total Expenditures & Contingency:	268,865,009	529,173,226	96.8%
Transfers Out To Other Funds	195,494,340	283,005,543	44.8%
Total Budget Appropriations:	464,359,349	812,178,769	74.9%
Ending Fund Balance *	43,553,638	39,664,627	-8.9%
TOTAL USES, TRANSFERS, CONTING.	\$ 507,912,987	\$ 851,843,395	67.7%
TOTAL FTE's	139.0	144.0	3.6%

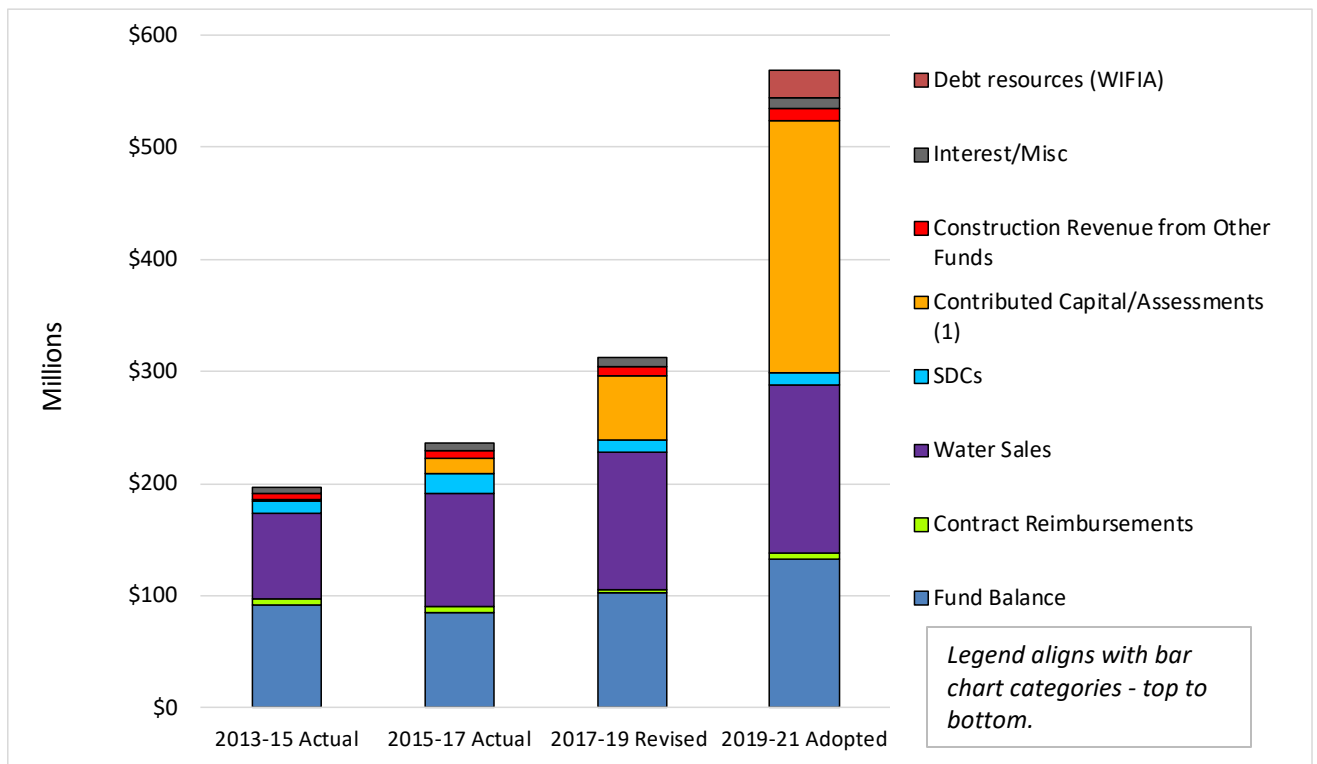
*Unappropriated Ending Fund Balance include District resources available for future use.

In accordance with Oregon budget law, total budget appropriations must include interfund Transfers and exclude ending fund balances. Total appropriations for the Adopted 2019-21 Budget are \$812.2 million, a 74.9% or \$347.8 million increase from the current biennium budget. The key appropriation category that contributes to this increase is Capital Outlay, particularly for projects in the WWSS and WIF, as well as the District’s share of Capital Outlay for those projects, which are budgeted in the Capital Improvements Fund.

The projected unappropriated ending fund balance of \$39.7 million will be available for future use. This fund balance represents the combined assets in excess of projected 2019-21 revenues less all appropriations, including Contingency, which can be moved to an expenditure category upon approval by the Board of Commissioners.

District Expenditures Excluding Transfers

District operating expenditures consist of Personnel Services, and Materials & Services including purchased water. As a utility, capital construction is also significant as the District maintains its infrastructure, improves service reliability and plans for its future water supply through participation in the WWSP. The Adopted 2019-21 Budget continues this work as illustrated on the chart below.



Note 1: Includes TVWD share of WWSS/WIF capital budgeted in the District’s Capital Improvement Fund.

Operating Expenditures

- The Adopted 2019-21 Budget operating expenditures for all funds (including Personnel Services, and Materials & Services) increase 13.5% for the biennium or 6.5% annually. A primary driver for the increase is Materials & Services expenditures in the WWSS and WIF funds, which represent services that will be provided by District staff serving as the managing agency for both funds. Those labor costs will be reimbursed to the District’s General Fund by the WWSS and WIF partners.

- In looking at the General Fund alone, the Adopted 2019-21 Budget for Personnel Services is up \$3.5 million, an 8.7% increase over the prior biennium or 4.3% on an annualized basis. The budget includes two positions supporting the WWSP joint ventures and operational planning for the water supply system itself, and the four limited-term positions supporting the CIS implementation. In addition, one limited-term Information Technology systems administrator position funded during the 2017-19 biennium was not renewed. This results in total full-time positions increasing from 139 to 144 FTE.

All District staff positions are budgeted in the General Fund. Capitalized labor and overhead for staff working on in-District CIP, WWSS and WIF projects are reimbursed to the General Fund. In addition, the other WWSS and WIF partners are invoiced for their share of District labor and overhead for the water supply projects.

Medical and dental premiums are estimated to increase about 8.0% annually during the 2019-21 period. The District continues to seek ways to reduce the financial challenges of increasing medical insurance through loss prevention and wellness efforts, review of providers with more competitive rates, and management/staff engagement to seek ways to control costs.

The Adopted 2019-21 Personnel Services budget also includes the District's ongoing participation in the Oregon Public Employees Retirement System (PERS). The District will contribute an average of 17.9% of payroll to PERS during the first year of the biennium. However, PERS rates are anticipated to be reduced to 11.3% as a result of the District establishing a PERS side account. (See Section 5 *Multi-Year Financial Outlook*, page 5-3 and Section 7, page 7-4 *General Fund Resources and Expenditures* for more information.) District employees continue to pay their mandatory 6.0% contribution.

- Purchased water, and associated power for pumping, is the largest Materials & Services expenditure representing about 28% of the District's total General Fund operating budget. Based on projected water demand, the District has budgeted purchased water and power at \$24.4 million, a 9.0% increase from 2017-19.

The City of Portland wholesale water rate is increasing 11.4% for the first year with a smaller increase planned for year two. The JWC rate is increasing 5.3% for the first year with a projected 3.5% increase in year two. The District is also planning for a \$54,000 cost increase in electrical power to pump water within the distribution system. This increase is largely driven by the pumping requirements for the Miller Hill aquifer storage and recovery (ASR) well, which is anticipated to be placed in service during the biennium.

Capital Expenditures, Special Payments Contingency, Debt Service

- Appropriation in the Adopted 2019-21 Budget for in-District capital construction is \$63.8 million, 65% higher than 2017-19 as the District enters an intensive investment cycle for water system infrastructure investments and the CIS project. Section 16 *Capital Improvement Plan (CIP)*, provides an overview of the District's six-year capital program including descriptions and planned expenditures for each project.

In addition, the CIP in Section 16 includes the Adopted 2019-21 Budget expenditures for the District's ownership share of the JWC/Barney Reservoir and, importantly the WWSS WIF. These joint ventures expenditures are budgeted at \$115.7 million.

Capital Outlay in the WWSS and WIF funds are appropriated at \$217.3 million and \$7.6 million respectively. Both the District's and partners' share are recognized in the WWSS and WIF funds as contributed capital.

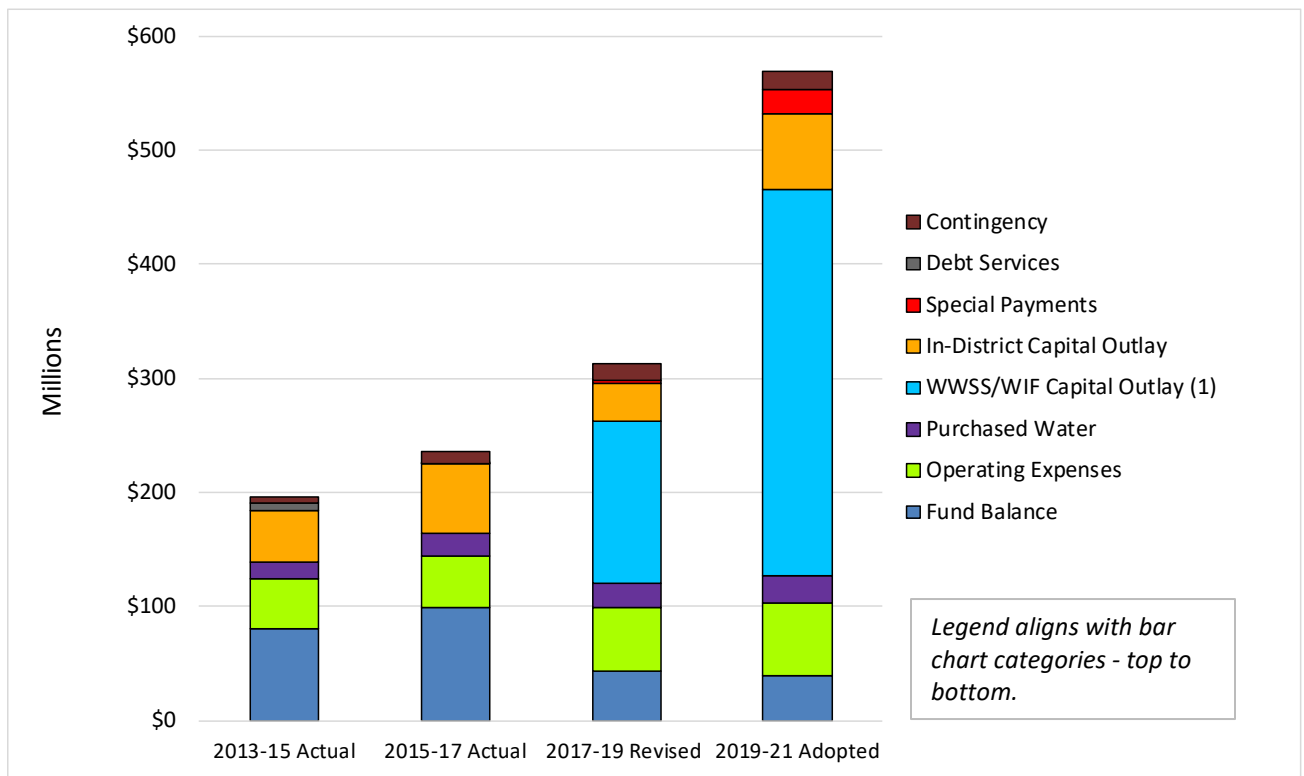
- General Fund equipment Capital Outlay varies each budget period based on scheduled replacements. The Adopted 2019-21 Budget for Capital Outlay of \$212,200 represents a 64.8% decrease from 2017-19 driven primarily by completing a major IT replacement cycle during the biennium. Budgeted equipment costs include security, facility needs such as new photocopier, and ongoing information technology hardware/software upgrades that meet the District's capitalization threshold of \$7,500 and a life in excess of one year.
- Special Payments in the Adopted 2019-21 Budget are \$21.5 million. Appropriations include \$1.5 million for right-of-way (ROW) fees paid to the cities of Hillsboro, Beaverton and Tigard where TVWD's customers live within the cities' boundaries, and \$20 million to fund a PERS Side Account as described in more detail in Section 5 *Multi-Year Financial Outlook* and Section 7 *General Fund Resources and Expenditures*.
- The Adopted 2019-21 Budget includes a General Fund general operating contingency of \$15 million. Smaller contingencies of \$173,000 in the WWSS Fund and \$36,000 in the WIF are also budgeted. Contingency resources can only be accessed for expenditure or appropriated as a fund transfer with approval by the TVWD Board. Use of any WWSS and WIF Contingency must also be approved by their respective governing commissions.
- No debt service is budgeted for 2019-21 at this time. The District anticipates making its first WIFIA draw of \$25.0 million. Interest will be capitalized for future debt payments as allowed by the WIFIA program.

District Resources Excluding Transfers

Resources for District operations and capital investment come primarily from sales of water to TVWD customers. These revenues are supplemented by SDCs, interest earnings, and fund balances.

In addition, with the District serving as the managing agency for the WWSS and WIF a significant resource to the Adopted 2019-21 Budget is contributed capital representing both the District’s and partner share of expenditures for the water supply project.

As the chart below shows, overall District resources (net of Transfers) are projected to increase about 96.0% for the upcoming biennium. By far the largest increase is for Contributed Capital, a non-operating revenue budgeted at \$224.9 million, an increase of \$167.4 million from the prior biennium.



Note 1: Includes both TVWD’s and the partners’ share of WWSS and WIF Fund Capital Outlay.

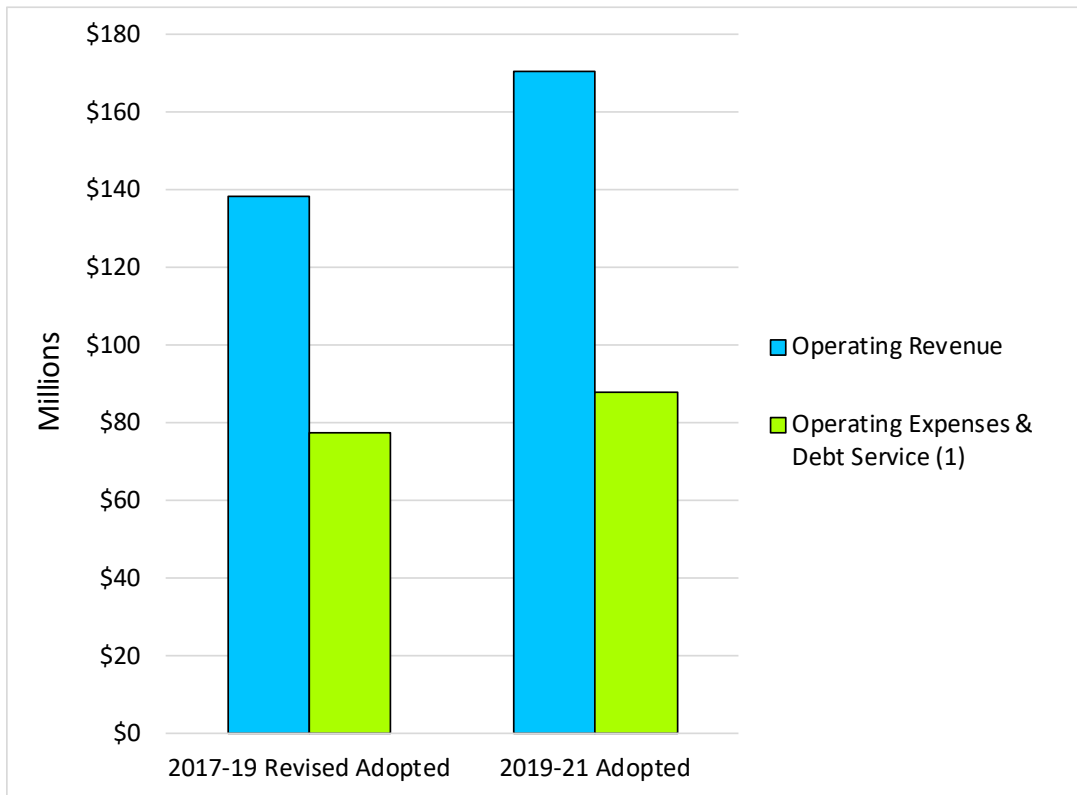
The combined beginning fund balance includes the District’s General, Capital Reserve, WRWC, and Customer Emergency Assistance funds. During the 2019-21 biennium, the Capital Reserve Fund will serve as the primary fund for holding the District’s current reserves and unappropriated fund balance for future use. It is anticipated the District will set up additional reserve funds depending on the timing and requirements of the next revenue bond debt issuance. WIFIA draws will be held in the Debt Proceeds Fund.

Operating Revenue

- Adopted 2019-21 water service revenue and fees are projected at \$149.2 million, 22.1% higher than 2017-19. The District continues to experience moderate growth at a pace of about 0.75% annually. Projected water sales revenue also reflects the withdrawal of approximately 4,000 District customers to the City of Beaverton based on a 2018 urban services agreement entered into between the District and city.

For 2019-21, the District is planning for annual rate increases consistent with its Financial Plan accepted by the Board in May 2019. Approval of water rates and charges are subject to a separate Board action. Annual revenue increases over the 2019-21 biennium are projected at 3.9%. TVWD will continue with its financial planning discipline articulated by the District's financial policies: maintaining its long-term financial forecast to anticipate funding needs and adjust for changes to its operating and capital improvement plans; setting rates annually to meet revenue requirements; and recommending rate changes that are predictable and stable to avoid sudden or unexpected increases.

- Other sources of operating revenue include contract reimbursements, miscellaneous revenue for services, and receipts for right-of-way fees that are passed through to three cities imposing this fee. Contract reimbursements are projected at \$5.2 million. These are for utility billing and meter reading services provided to Clean Water Services and the City of Beaverton, reimbursements for operating a joint fueling facility with the local parks district and non-capitalized costs for WWSS and WIF activities. Miscellaneous revenue of \$5.7 million include meter installations paid by separate fees, other water service fees, and backflow device testing.
- Overhead charged to other funds at \$10.5 million represents reimbursements to the General Fund for capitalized labor, equipment and overhead for in-District CIP projects and work on the WWSP.
- As illustrated on the graph on the following page, water service charge revenue, along with other operating revenue, continue to cover all operating expenditures. Water sales and miscellaneous revenue also contribute to ongoing capital improvement and replacement costs. In the future, net revenues to the District will also meet the coverage requirements for debt service. Revenue in excess of budgeted requirements is used as fund balance or reserves available for future appropriation.



Note 1: Debt Service is currently not required for the 2019-21 Budget

Other Non-Operating Revenue

- In anticipation of continued steady growth, SDC revenue is projected to be about \$11.4 million. The past two years have been strong for new development within the District. By the end of the 2017-19 biennium SDCs collections are estimated to be about \$12.0 million, 12.2% higher than budget. Revenue from SDCs are based on projected future growth from the District’s 2015 Water System Master Plan and updated financial plans, as well as annual increases to SDC fees indexed to inflationary changes of construction costs.
- Interest earnings are expected to increase 40% to \$4.2 million. The District anticipates yields will continue to return to historic norms in future years, but is conservatively projecting a slow growth in yields averaging 2.8% for the 2019-21 biennium.

WILLAMETTE WATER SUPPLY & THE SIX-YEAR CAPITAL IMPROVEMENT PLAN

The District’s participation in the WWSP through the WWSS is the primary driver for TVWD’s capital requirements during the 2019-21 biennium and beyond. For more information, see Section 16 *Willamette Water Supply System Fund*. During 2019-21, work on the future water supply will continue on a number of permitting, design, construction, real estate and easement acquisition, and program management activities as detailed in this budget document.

Moreover, each biennium the District updates its six-year Capital Improvement Plan (CIP) for in-District projects, which is presented in detail in Section 15 *Capital Improvement Plan*. New project requests and status updates on existing projects, including those under construction, are

prepared by the Engineering and Operations Department and presented for review by the Chief Executive Officer, Chief Financial Officer and Budget Officer prior to being included in the budget.

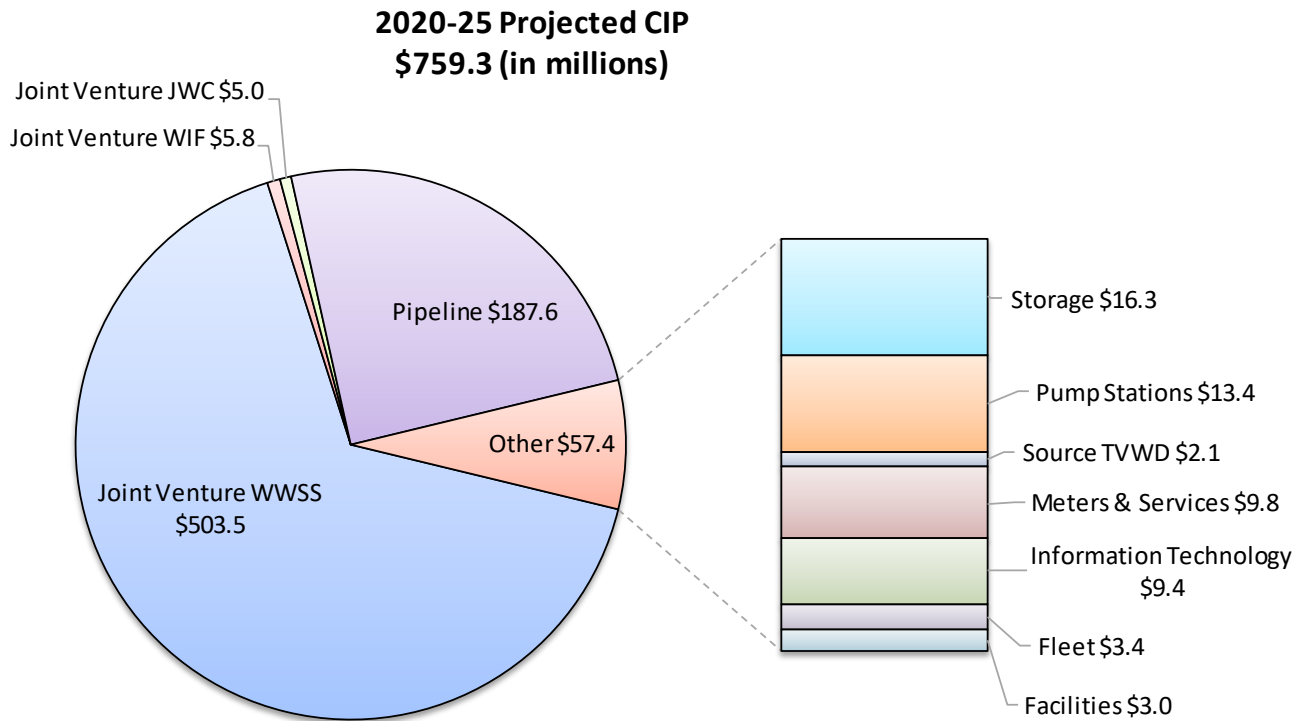
The in-District CIP planned for the next six years will emphasize upgrading or replacing critical reservoirs, pump stations, and water distribution system pipelines, strengthen seismic resiliency, address fire flow demands and provide enhanced reliability of service.

In addition, the District will be preparing for the WWSS by constructing a pipeline to serve the east side of TVWD’s service area (including Metzger), and by constructing other turnouts from the main WWSS supply line to serve District customers.

Fleet replacements, the District’s Customer Information System (CIS) project, and several facility and security improvements are also included in the Adopted CIP.

Finally, the District’s participation in JWC projects, including a share of its water treatment plant expansion project, and District’s financial participation in the WWSS and WIF are reflected in the CIP.

The pie chart below summarizes the District’s six-year CIP included in the Adopted 2019-21 Budget. As illustrated in the chart, the investments in the WWSS dominate the District’s expenditures for Capital Outlay over the next six-year cycle.



Capital Improvement Plan and Relationship to the Adopted 2019-21 Budget

Appropriations for the first two years of the in-District CIP are incorporated in the Adopted 2019-21 Budget and reflected as Capital Outlay in the Capital Improvement Fund. JWC joint venture projects are recorded by the City of Hillsboro in its role as the JWC managing agency. The District records all joint venture activity for the WWSS and WIF as the Willamette managing agency.

The Adopted 2019-21 Budget includes appropriation of \$179.5 million in the District's Capital Improvement Fund. Key projects for the biennium include:

A. Source (TVWD)

- \$103,500 for Miller Hill ASR in FY2020

B. Storage

- \$1.03MM – Taylors Ferry Reservoir Replacement & Seismic Upgrades (2019-21 portion of \$8.1MM)

C. Pump Stations

- \$5.37MM – Farmington Rd. Booster Pump Station

D. Pipeline

➤ Mains Replacement Program

- \$1.11MM – SW Greenberg - Oak to Prospect
- \$1.15MM – Todd St & Linda Ln - Mainline replacement & upgrade

➤ Fire Flow Improvements

- \$6.93MM – Metzger N-S 498 Zone Improvements

➤ Other Pipeline

- \$4.69MM – Farmington Rd BPS 16-inch Discharge Main
- \$14.2MM – Metzger Pipeline East (2019-21 portion of \$112MM six-year cost; \$114.9MM total project cost)

E. Facilities

- \$156K – Headquarters Lobby Improvements
- \$421K – Safety and Security Improvements (2019-21 portion of \$476K total)

F. Fleet Replacements

- \$1.31MM – 2019-21 portion of ongoing replacements program

G. Information Technology (Computer Hardware/Software)

- \$8.18MM – Customer Information System (2019-21 portion of \$9.4MM total)

H. Meters and Services

- \$2.83MM – 2019-21 portion of ongoing program for service installations for new and existing residential and commercial customers

I. Joint Venture: WIF

- \$3.62MM – District's share of WIF costs for new fish screens, air burst system improvements, and seismic improvements to the expanded intake within the raw water facility at the Willamette River Water Treatment Plant. (2019-21 portion of \$5.75MM total District share)

J. Joint Venture: WWSS

- \$109.8MM – District's share of WWSS costs for design and construction of the WWSS projects, real estate and easements, permitting and mitigation, legal expenses, program management services, and management reserves. (2019-21 portion of \$503.5MM total District share in six-year CIP)

K. Joint Venture: JWC

- \$2.31MM – District's share of JWC costs for treatment plant improvements, Fern Hill reservoir repairs, and other capital projects, repairs, and replacements. (2019-21 portion of \$5.03MM total District share in six-year CIP)

CONCLUDING THOUGHTS AND FUTURE PLANNING

The District's financial status is strong and is projected to remain strong over the long term. TVWD presents an Adopted 2019-21 Budget that reflects the direction provided by the Board of Commissioners, aligns with District strategic priorities and financial policies, and continues work on key initiatives such as long-term water supply development and infrastructure improvements for reliability and seismic resiliency. Ongoing system maintenance, customer support, asset management, sustainability and conservation also remain important priorities with programmatic efforts in these areas included in the department budgets.

The District's preliminary rating for the WIFIA application from Standard & Poor's of AA+ and its prior revenue bond ratings from Moody's and Standard & Poor's of Aa2 and AA+, respectively, serve as an indication of the strong financial position of the District and its capable management.

TVWD will continue to use its financial plan to prepare for future opportunities, trends, and challenges. As the District continues developing an additional water supply through participation in the Willamette Water Supply Program and continued investment in the Joint Water Commission, management will monitor capital and operating expenditures, debt levels, and investment balances to minimize purchase water costs and limit unexpected water rate increases.

The District's continuing emphasis on cost-effective operations and comprehensive long-range planning will be essential to enable TVWD to meet its mission of providing quality water and customer service to the community.


ACKNOWLEDGEMENTS AND SUBMISSION

We want to acknowledge the creative energy of staff and their dedication to the customers of the Tualatin Valley Water District. This document represents the expertise and resourcefulness of the department managers, supervisors, and staff. We also want to thank the members of the Board of Commissioners and Budget Committee for your continuing support and thoughtful analysis of the issues facing the District. It is with your help that we are able to face challenges and maintain a strong financial position.

We hereby respectfully present this Tualatin Valley Water District Adopted Budget for the 2019-21 Biennium.



Mark Knudson, P.E.
Chief Executive Officer



Paul L. Matthews
Chief Financial Officer



Tod A. Burton
Budget Officer

Tualatin Valley Water District



Delivering the Best Water Service Value

RESOLUTION NO. 18-19

A RESOLUTION ADOPTING THE BUDGET AND MAKING APPROPRIATIONS FOR THE TUALATIN VALLEY WATER DISTRICT FOR THE 2019-21 BIENNIUM.

WHEREAS, pursuant to the requirements of ORS Chapter 294, the Board of Commissioners of the Tualatin Valley Water District is required to adopt the budget and make appropriations for the District for the 2019-21 biennium; and

WHEREAS, on May 30, 2019, following public notice and hearing thereon, the duly appointed and authorized Budget Committee unanimously approved the biennial budget proposed for 2019-21, now on file at the District office, and recommended adoption by the Board of Commissioners; and being fully advised.

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

Section 1: In compliance with Oregon Local Budget Law under ORS 294, the Board of Commissioners of the Tualatin Valley Water District hereby adopts the biennial budget of the District as approved on May 30, 2019 by the Budget Committee of Tualatin Valley Water District.

Section 2: Establish two new budgetary funds for the District called Debt Proceeds and Willamette Water Supply System.

Section 3: That the amounts for the biennium beginning July 1, 2019 and for the purposes shown are hereby appropriated as follows:

GENERAL FUND

Appropriations:

Personnel Services	\$43,536,651
Materials and Services	42,131,195
Capital Outlay	212,200
Special Payments	21,446,000
General Operating Contingency	15,000,000
Transfer to Other Funds	<u>78,482,822</u>
Appropriations Total (General Fund)	\$200,808,868

CAPITAL IMPROVEMENT FUND

Appropriations:

Capital Outlay	<u>\$179,522,721</u>
Appropriations Total (Capital Improvement Fund)	\$179,522,721

CAPITAL RESERVE FUND

Appropriations:

Transfer to Other Funds	<u>\$179,522,721</u>
Appropriations Total (Capital Reserve Fund)	\$179,522,721

DEBT PROCEEDS FUND

Appropriations:

Transfer to Other Funds	<u>\$25,000,000</u>
Appropriations Total (Debt Proceeds Fund)	\$25,000,000

CUSTOMER EMERGENCY ASSISTANCE

Appropriations:

Materials and Services	<u>\$33,000</u>
Appropriations Total (Customer Emergency Assistance Fund)	\$33,000

WILLAMETTE RIVER WATER COALITION FUND

Appropriations:

Materials and Services	<u>\$167,000</u>
Appropriations Total (Willamette River Water Coalition Fund)	\$167,000

WILLAMETTE INTAKE FACILITIES FUND

Appropriations:

Materials and Services	\$346,615
Capital Outlay	7,557,825
General Operating Contingency	<u>36,000</u>
Appropriations Total (Willamette Intake Facilities Fund)	\$7,940,440

WILLAMETTE WATER SUPPLY SYSTEM FUND

Appropriations:

Materials and Services	\$1,714,154
Capital Outlay	217,296,865
General Operating Contingency	<u>173,000</u>
Appropriations Total (Willamette Water Supply System Fund)	\$219,184,019

TOTAL APPROPRIATIONS: \$812,178,769

Section 4: That the Budget Officer, in accordance with ORS 294.458(2), shall file with the Oregon Department of Revenue a true copy of this resolution and the Exhibit A Notice of Budget Hearing attached hereto and by this reference incorporated herein.

Approved and adopted at a regular meeting held on the 19th day of June 2019.

*Original signatures on file
Not included for security purposes*

Bernice Bagnall, President

*Original signatures on file
Not included for security purposes*

Todd Sanders, Secretary

FORM LB-1

A public meeting of the Tualatin Valley Water District will be held on June 19, 2019 at 7:00 pm at 1850 SW 170th Avenue, Beaverton, Oregon, 97003. The purpose of this meeting is to discuss the budget for the fiscal year beginning July 1, 2019 as approved by the Tualatin Valley Water District Budget Committee. A summary of the budget is presented below. A copy of the budget may be inspected at the Tualatin Valley Water District, between the hours of 8:00 a.m. and 4:30 p.m. or online at www.tvwd.org/budget. This budget is for a biennial budget period 2019-21.

Contact: Tod Burton, Financial Planning & Debt Project Mgr. Ph: (503) 848-3040 Email: tod.burton@tvwd.org

FINANCIAL SUMMARY - RESOURCES			
TOTAL OF ALL FUNDS	Actual Amount	Revised Budget	Approved Budget
	Biennium 2015-17	This Biennium 2017-19	Next Biennium 2019-21
Beginning Fund Balance/Net Working Capital	85,686,250	102,816,660	132,950,815
Fees, Licenses, Permits, Fines, Assessments & Other Service Charges	101,190,314	122,275,000	149,248,486
Federal, State and All Other Grants, Gifts, Allocations and Donations	0	0	0
Revenue from Bonds and Other Debt	0	0	25,000,000
Interfund Transfers / Internal Service Reimbursements	119,335,217	202,658,328	293,200,159
All Other Resources Except Current Year Property Taxes	42,257,364	80,162,999	251,443,935
Current Year Property Taxes Estimated to be Received	0	0	0
Total Resources	348,469,145	507,912,987	851,843,395

FINANCIAL SUMMARY - REQUIREMENTS BY OBJECT CLASSIFICATION			
Personnel Services	31,219,216	40,052,089	43,536,651
Materials and Services	33,746,999	37,429,378	44,391,964
Capital Outlay	61,764,542	174,881,292	404,589,611
Debt Service	0	0	0
Special Payments	336,823	1,760,350	21,446,000
Interfund Transfers	112,873,465	195,494,340	283,005,543
Contingencies	0	14,741,900	15,209,000
Unappropriated Ending Balance and Reserved for Future Expenditure	108,528,100	43,553,638	39,664,626
Total Requirements	348,469,145	507,912,987	851,843,395

FINANCIAL SUMMARY - REQUIREMENTS AND FULL-TIME EQUIVALENT EMPLOYEES (FTE) BY ORGANIZATIONAL UNIT OR PROGRAM *			
Name of Organizational Unit or Program			
FTE for that unit or program			
Administrative Services Department	5,273,173	5,304,102	7,318,326
FTE	11	9	9
Customer Service Department	7,837,044	10,771,644	11,619,810
FTE	31	33	37
Engineering & Operations Department	18,725,005	22,736,722	25,024,592
FTE	59	60	59
Finance Department	8,760,436	8,173,340	8,559,876
FTE	23	14	14
Water Supply Program	2,238,506	3,949,419	4,870,901
FTE	9	13	15
Information Technology Services Department	0	5,513,149	5,567,941
FTE	0	10	10
Water Purchases (General Fund)	18,744,720	22,351,335	24,364,600
FTE	0	0	0
Capital Improvements Fund	26,287,531	38,611,964	179,522,721
FTE	0	0	0
Willamette Water Supply Program Fund	38,506,648	139,426,441	0
FTE	0	0	0
Capital Reserve Fund	105,149,954	151,120,797	207,101,734
FTE	0	0	0
Bond Construction Fund	0	0	0
FTE	0	0	0
Debt Proceeds Fund	0	0	25,000,000
FTE	0	0	0
Revenue Bond Debt Service Fund	374	0	0
FTE	0	0	0
Customer Emergency Assistance	39,868	56,782	45,805
FTE	0	0	0
Willamette River Water Coalition Fund	348,509	128,716	188,948
FTE	0	0	0
Willamette Intake Facilities Fund	0	2,575,672	7,940,440
FTE	0	0	0
Willamette Water Supply System Fund	0	0	219,184,019
FTE	0	0	0
Non-Departmental / Non-Program	116,557,378	97,192,903	125,533,683
FTE	0	0	0
Total	348,469,145	TVWD Adopted 2019-21 Budget	851,843,395
Total FTE	133	139	144

STATEMENT OF CHANGES IN ACTIVITIES and SOURCES OF FINANCING *

Total Approved 2019-21 Budget General Fund operating budget expenditures increase 11.5% for the two-year period. The approved appropriations support personnel services costs, including two staff positions in the Water Supply Program Department and four limited-term staff positions in the Customer Service Department to provide support on the Customer Information Systems project. Materials and services costs include a 9.0% increase in purchased water and pumping power costs for wholesale water purchased from the City of Portland Water Bureau and purchases from the District's participation in the Joint Water Commission.

Total capital outlay expenditures increase 131%, driven by the timing and scope of the District's participation in the Willamette River Water Supply Program (WWSP) and serving as manager agency for both the Willamette Water Supply System (WWSS) and Willamette Intake Facilities (WIF) joint ventures. Approved In-District capital improvements plan (CIP) expenditures continue to be planned for reservoir, pump station, and pipeline construction and upgrades. No debt service is included in the Approved 2019-21 Budget. The District anticipates closing its loan with the US Environmental Protection Agency Water Infrastructure Finance and Innovation Act (WIFIA) program during calendar year 2019 and begin taking draws budgeted at \$25 million during the 2019-21 biennium.

Transfers to other funds, although not an expenditure category, represents the largest appropriation item in the Approved 2019-21 Budget at \$283 million. The District uses a Capital Reserve Fund to hold substantially all current and future District reserves. This fund supports the in-District CIP and the District's share of the WWSS and WIF. Transfers to the Capital Reserve Fund are initiated through the General Fund, and during the biennium transfers out from the fund will support the District's capital project expenditures. General Fund operating contingency is budgeted at \$15 million and contingencies of \$173,000 and \$36,000 are approved for the WWSS and WIF funds respectively. Contingency can only be accessed through approval by resolution by the District Board of Commissioners.

Total Approved 2019-21 Budget resources, including transfers, reserves and fund balance increase 67.7%. Primary revenues to support operating, WWSS, WIF and in-District CIP expenditures include water rates and service fees, contributed capital from WWSS and WIF partners, contract reimbursements for services provided to other entities, and meter and services installation fees paid by customers/developers. Water services charges and fees increase 22.1% based on projected rates and fees for services, projected water demand, and customer growth. System development charges are conservatively projected to increase 6.4% based on development trends. WWSS and WIF partners pay their portion of water supply project expenditures. The Approved 2019-21 Budget includes \$224.8 million in contributed capital and reimbursements by WWSS/WIF partners.

PROPERTY TAX LEVIES

	Rate or Amount Imposed	Rate or Amount Imposed	Rate or Amount Approved
Permanent Rate Levy (rate limit _____ per \$1,000)	0	0	0
Local Option Levy	0	0	0
Levy For General Obligation Bonds	0	0	0

STATEMENT OF INDEBTEDNESS

LONG TERM DEBT	Estimated Debt Outstanding on July 1.	Estimated Debt Authorized, But Not Incurred on July 1
General Obligation Bonds	\$0	\$0
Other Bonds	\$0	\$0
Other Borrowings	\$0	\$0
Total	\$0	\$0

* If more space is needed to complete any section of this form, insert lines (rows) on this sheet or add sheets. You may delete unused lines.

The Tualatin Valley Water District (TVWD) budget document contains a variety of information in narrative, table, and graphic form. A guide describing the general layout of the budget is offered here to assist the reader in finding specific information throughout the document.

This **User's Guide** contains information to acquaint the reader with TVWD as an entity. The first page, TVWD at a Glance, provides an overview of vital statistics and areas of responsibility. Following that is a map, and an organizational chart. As a Special District organized under Oregon Revised Statute 264, TVWD is subject to Oregon Local Budget Law (ORS 294). This Users Guide contains a description of the budget process to maintain compliance with the law and provide District customers with opportunities for input. A summary of TVWD's Financial Policies is included, as well as a discussion of the District's general obligation debt limitation.

An Appendix at the end of this document in Section 19 includes a glossary explaining terminology and acronyms used throughout this document, as well as supplemental information about the District.

The "flow" of the budget document begins in Section 2, with the **Budget Message**. This is in the form of a letter to the Budget Committee highlighting key elements of the budget and identifying any significant changes from prior years. At its core, the Budget Message is simply a written explanation of the budget and its priorities. It is prepared by the Chief Executive Officer, Chief Financial Officer and Budget Officer, and presented in public hearing to the Budget Committee.

Section 4 outlines District's **Strategic Planning** efforts covering the status and progress towards the 2017-19 District Initiatives and initiatives that are included in the Adopted 2019-21 Budget. Section 4 also outlines a few Performance Measures designed to track progress towards key initiatives adopted by the Board of Commissioners. More data regarding each performance measure may also be found in individual department sections (Sections 9 – 14):

- Section 9 – Administrative Services Department
- Section 10 – Customer Service Department
- Section 11 – Engineering & Operations Department
- Section 12 – Finance Department
- Section 13 – Water Supply Program Department
- Section 14 – Information Technology Services Department

Following established public financial management best practices and guidance from GFOA, the District is engaged in continual long-range financial planning and forecasting. Section 5 provides information on the District's **Financial Plan**.

Long-range planning is essential in the utility business. Water supply, transmission, and distribution infrastructure is long-lived in nature, and system improvements often require many years of advanced planning and permitting before construction can begin.

A 30-year financial forecasting model is used as the framework within which revenues, reserves, operating costs, and capital costs are projected and analyzed. The forecast is updated about every six months, and is used to run alternative scenarios to project the financial effects of various courses of action, determine District revenue requirements and cash flow needs, test the affordability and timing of debt issuance, and confirm the feasibility of the financial plan against certain benchmarks such as required reserve levels and debt service coverage targets.

The next portion, Section 6, **Fund Summaries**, describes the District's fund structure and includes the summary budget forms required by the state for each individual fund. The majority of the budget centers around the General Fund – much of the financial activity of the operation takes place in the General Fund, and all staff positions are located here. The other eight funds exist to account for capital improvements, TVWD's Willamette Water Supply Program (WWSP) partnerships, capital reserves, debt proceeds, future debt service, and customer emergency assistance.

The next sections deal specifically with the **General Fund**. Section 7 outlines General Fund Resources, Expenditures, and provides a summary of department expenditures. Because of the central role of the General Fund, additional detail is provided in Sections 8 - 14 highlighting TVWD's largest single operating expense – Purchased Water, and staffing and expenditure activity of the six **individual departments** housed within the General Fund.

Section 15 covers TVWD's six-year **Capital Improvement Plan (CIP)** including both in-District CIP projects and District's share of joint venture projects for the Joint Water Commission, WWSS and WIF. A discussion of the assumptions underlying the plan is provided with anticipated funding sources and individual project descriptions. The first two years of the CIP are included in the budget as capital outlay in the **Capital Improvement Fund**.

The next three sections address three of the District's funds that pertain to future water supply and the District's role as managing agency.

The **Willamette Water Supply System Fund (WWSS)** in Section 16 is new fund established as part of the Adopted 2019-21 Budget. This fund accounts for all resource and expenditure activity associated with the development of the WWSS including a new water treatment plant, terminal storage reservoirs and approximately thirty-one miles of transmission pipeline. Partners in the WWSS include the District and the cities of Hillsboro and Beaverton. TVWD serves as the managing agency of the WWSS – consequently, all appropriations for the WWSS, primarily capital expenditures, are included in the District's budget.

The **Willamette Intake Facilities Fund (WIF)** in Section 17 was established by the Board of Commissioners during the 2017-19 biennium. This fund accounts for all resource and expenditure activity associated operating, maintaining and performing capital improvements at the intake facilities at the Willamette River Water Treatment Plant in Wilsonville. WIF members include the cities of Beaverton, Hillsboro, Sherwood, Tigard, Tualatin, Wilsonville, and TVWD. The cities of Wilsonville and Sherwood receive water out of the existing water treatment plant in Wilsonville. TVWD, Hillsboro and Beaverton will be served by the future WWSS, and Tigard and Tualatin are investing in the WIF as a potential future water resource. TVWD serves as the managing agency of the WIF. As with the WWSS, all appropriations for the WIF are included in the District's budget.

Section 18, **Willamette River Water Coalition Fund (WRWC)**, accounts for the activities of the four member agencies that includes the cities of Tigard, Tualatin and Sherwood. TVWD, which serves as the managing agency for the WRWC. This intergovernmental entity was created to develop and maintain water rights on the Willamette River for regional needs.

We hope this guide will be helpful to the reader and we welcome suggestions for improvement.

The Budgeting Process

Overview

Each year the District's Board of Commissioners holds a goal/strategic planning session to discuss progress on existing goals and develop new key strategic initiatives. The strategic initiatives are divided into broad subject areas. Most key initiatives represent major multi-year efforts, but initiatives can also include incremental improvements to the day-to-day operations of the District. A summary of the District's Strategic Planning is shown in Section 4. This goal-setting session provides overall direction to management and staff, and the long-range financial plan (Section 5) and capital plans (Sections 15-17) are the expressions of that direction over a 6 to 30-year period. The biennial budget defines the needs and allocations of available resources to implement the first two years of the long-range plans.

Biennial Budget Process

The budget process the District follows is consistent with Oregon Local Budget Law requirements. Further detail about requirements can be found in ORS 294. The phases of the process are:

Requested (December-March): The initial "in-house" development of departmental budgets formally begins, and the financial forecast is updated to reflect preliminary estimates for resources and expenditures. Development of the District's capital improvement plan and participation in the WWSS starts earlier in the fall with its planned expenditures and timing also included in the update of the long-term forecast.

Both the District's operating and capital plans receive extensive internal management review and analysis prior to preparing information for the Budget Committee. The requested operating budget, capital improvement plan and WWSP joint venture funds are presented to the Budget Committee in workshops to highlight key efforts planned for the upcoming biennium and to show significant changes from the current budget period. The results of the financial plan, including assumptions and risks, are also presented to the committee. A key objective of this phase of budget development is to solicit input by the budget committee early in the process.

Proposed (April/May): The Proposed Budget is prepared and published by the Budget Officer using the results from the District's internal review process and input from Budget Committee workshops. This document includes the budget message, which explains the budget and discloses any significant changes in the District's financial position. The Proposed Budget is presented to the Budget Committee in a specially noticed public meeting. The committee receives the document, takes public testimony, holds discussions and deliberations, and amends the budget as necessary. If more meetings are required, the committee schedules them at this time. When deliberations and amendments are complete, the committee votes to approve the budget and recommend it to the Board for adoption. A budget is "Approved" only once by the Budget Committee.

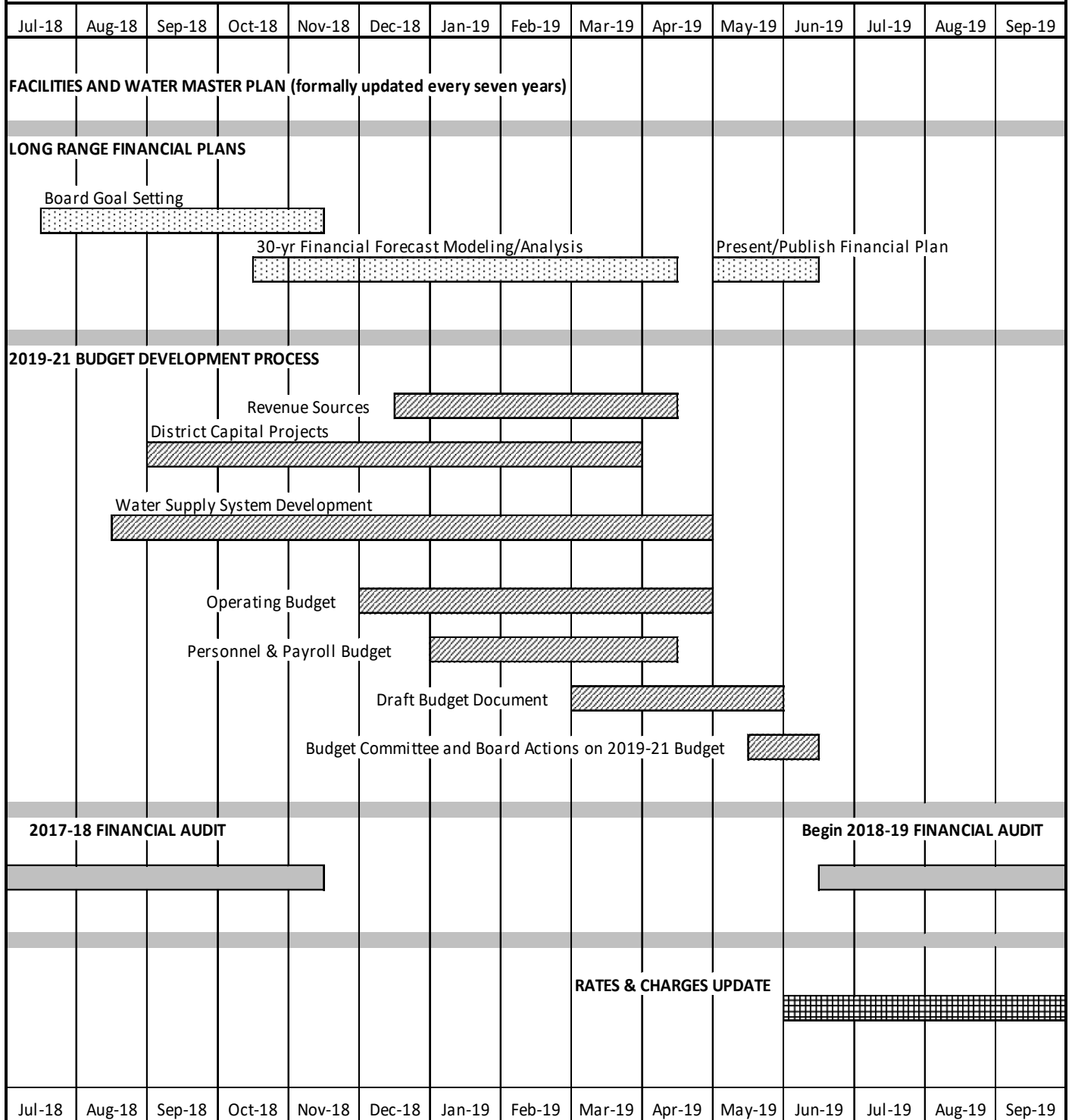
Approved (May/June): Once the budget has moved to approved status it can only be amended by the Board. If amendments by the Board exceed \$10,000 (for biennial budgets) or 10 percent (whichever is greater) in any fund, they must publish a financial summary and hold a separate public hearings process.

Adopted (June): In this final phase of the budget process a financial summary of the approved budget is published. The Board holds a public hearing to take testimony, make amendments as necessary, and formally adopt the budget. The appropriations resolution then is filed with the Oregon Department of Revenue.

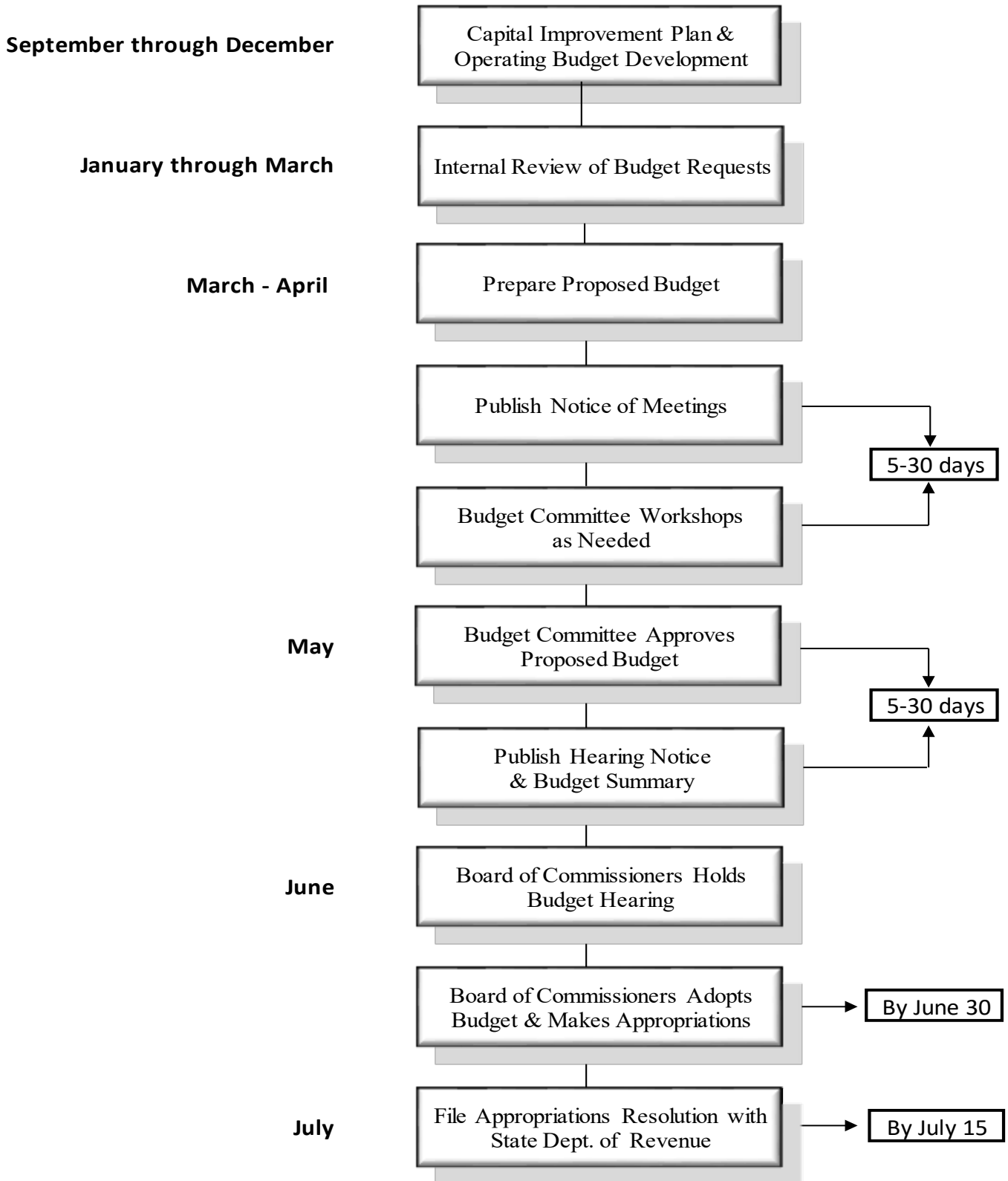
Amended: Oregon Local Budget Law allows amendments to the budget after adoption. Budgets can be amended to address new or unforeseen needs that arise during the biennium. The District's Board may adopt resolution changes that decrease one appropriation and increase another. Changes over 10% to any fund or transfers from contingency of more than 15% of fund appropriations require a supplemental budget process similar to the biennial budget process, including a public hearing.

TUALATIN VALLEY WATER DISTRICT

LONG-RANGE PLANNING AND BUDGET PROCESS SCHEDULE



**TUALATIN VALLEY WATER DISTRICT
BUDGET PROCESS/SCHEDULE IN SUMMARY**



**TUALATIN VALLEY WATER DISTRICT
2019-21 BUDGET CALENDAR**

FIRST YEAR	EVENT
9/12/18	Engineering and Finance (invited as needed) - Capital Improvement Plan CIP project tracking. Weekly. CIP tracking monthly.
10/24/18	BOARD OF COMMISSIONERS MEETING - Budget Committee Appointments, Budget Schedule Review
11/28/18	BOARD OF COMMISSIONERS MEETING - Supplemental Budgets - WIF, WRWC, Right-of Way Fees. CAFR Report/Acceptance
12/4/18	Start Operating Budget Preparation Activity - Budget Workbooks and Decision package forms to Management Team.
12/4/18	Leadership Team Meeting CEO Budget direction. Managers preview budget priorities. Supervisors and key staff invited
12/19/18	Draft WWSS/WIF Operating and CIP Budgets Due from Water Supply Program (Requires coordination with Hillsboro)
12/19/18	Draft District CIP Due to Finance from Engineering, Asset Management, Customer Service, and Information Technology
12/19/18	BOARD OF COMMISSIONERS MEETING - No Budget Topics Scheduled
12/31/18	System Development Charge Accounting Complete (for prior fiscal year)
N/A	BOARD OF COMMISSIONERS WORK SESSION - Cancelled Jan 1 Holiday
1/9/19	WWSS Financial Coordination Meeting with Hillsboro. FY 20 Budget and Baseline 4.0
1/16/19	BOARD OF COMMISSIONERS MEETING - Annual Investment Policy Adoption, System Development Charge Update. No Budget Topics
1/24/19	Begin Capital Improvement Plan and WWSS/WIF CEO Reviews (Engineering, Water Supply Field Ops, Customer Service)
1/29/19	Finance Committee - Financial Policies, Master Bond Declaration Review
1/29/19	BOARD OF COMMISSIONERS WORK SESSION - CEO budget direction, CIP/Forecast scenarios, CIP project updates
2/1/19	Departmental Operating and Capital Outlay Requests due to Finance
2/11/19	Complete Capital Improvement Plan and WWSP CEO Review
Week of 2/19	Begin Operating Budget Reviews CEO, Department Managers, Finance
2/20/19	BOARD OF COMMISSIONERS MEETING - CIP Least Cost Analysis. No Budget Topics Scheduled
2/21/19	JWC/BJOC Operations and Finance Committee - CIP and Budget. Finalize requested budget
2/26/19	Finance Committee - Financial Policies, Master Bond Declaration Review
2/28/19	BUDGET COMMITTEE TOUR - Customer Information System Update, District Tour of Facilities
3/5/19	BOARD WORK SESSION - Board Goals Update, Results of Finance Plan Scenarios, Master Bond Declaration, WWSS IGA
3/15/19	Publish Notice of March 25 Budget Committee Workshop #1 - Oregonian and Website
3/19/19	Key Customer Breakfast - Budget Process and WIFIA
3/20/19	BOARD OF COMMISSIONERS MEETING - Master Bond Declaration/Ordinance, Finance Policies, LCRB Class Exemption for Municipal Advisor
3/28/19	BUDGET COMMITTEE WORKSHOP #1 - CEO Update, FY 2017-19 In Review, Financial Plan, Water Supply Program CIP
4/1/19	CEO BUDGET REVIEW - Complete "Pencils Up" Version plus WWSS and WIF
4/2/19	BOARD OF COMMISSIONERS WORK SESSION - CIS Update. No Budget Topics
4/9/19	Intergovernmental deliverables - Utility Billing 2019-20 to Clean Water Services & City of Beaverton
4/9/19	Intergovernmental deliverables - Meter Reading FY 2019-20 to City of Beaverton
4/12/19	Publish Notice of April 24 Budget Committee Workshop #2 -Oregonian and Website
4/17/19	BOARD OF COMMISSIONERS MEETING - 1st Reading WWSS IGA, 2nd Reading Master Bond Declaration/Ordinance
4/24/19	BUDGET COMMITTEE WORKSHOP #2 - Departmental Operating Plans, 2019-21 Requested Budget Summary
5/7/19	BOARD OF COMMISSIONERS WORK SESSION - Financial Plan Briefing
5/15/19	BOARD OF COMMISSIONERS MEETING - Accept Financial Plan
5/16/19	Mail CIP Report TO Bureau of Labor & Industries (ORS 279C.305) - 30 days prior to adoption
5/17/19	Notice of Budget Committee Meeting Published in Oregonian and Website
5/17/19	TVWD Proposed Budget on Washington County TSCC Website (No Less than 10 days prior to meeting)
5/24/19	Proposed Delivered to Budget Committee (FCS)
5/24/19	Proposed Budget available for inspection. Posted on website including meeting agenda
5/30/19	BUDGET COMMITTEE MEETING (6:00 P.M.) PRESENTATION OF PROPOSED BUDGET, COMMITTEE DELIBERATIONS, CONSIDER APPROVAL

TUALATIN VALLEY WATER DISTRICT
2019-21 BUDGET CALENDAR

FIRST YEAR	DATE	EVENT
	6/3/19	Submit Notice of Budget Hearing and Financial Summary (LB1) Oregonian.
	6/4/19	BOARD OF COMMISSIONERS WORK SESSION - No Budget Topics Scheduled
	6/14/19	Publish Notice of Budget Hearing - LB1 in Oregonian (ORS 294.416). No less than five days before hearing
	6/19/19	BOARD OF COMMISSIONERS MEETING - Budget Hearing, Adopt Budget, Make Appropriations
	7/15/19	DEADLINE TO SUBMIT TVWD BUDGET RESOLUTION TO STATE DEPT OF REVENUE
	7/17/19	BOARD OF COMMISSIONERS MEETING - Water Rates Process and Schedule
	8/1/19	Mail Public Notice for TVWD Rate Hearing (OR 264.312)
	8/9/19	Submit GFOA Budget Award Submission - due 90 days after adoption
	8/14/19	Water Rates Open House #1
	8/21/19	BOARD OF COMMISSIONERS MEETING - Public Hearing on Water Rates. No Board action
	8/24/19	Water Rates Open House #2
	9/3/19	BOARD WORK SESSION - Water Rates Topics TBD
	9/18/19	BOARD OF COMMISSIONERS MEETING - Water Rates & Fees Resolution Adoption



Tualatin Valley Water District

Financial Policies

Overview

In March 2019, the TVWD of Commissioners adopted updated financial policies. The purpose of the financial management policies is to guide the District's management of its financial affairs, including policies and best practices related to financial planning, budgeting, debt management, accounting and reporting, business case evaluations, and other related matters. These policies provided specific guidance to the District's management and affirms the Board's commitment to the practices of sound financial management.

A complete set of the District Financial Policies can be found on the District's website at <https://www.tvwd.org/finance>.

These policies follow GFOA best practices to institutionalize good financial management practice, manage risks to the District's financial condition, and support good bond ratings.

The following pages summarize the purpose, goals and requirements of the District financial policies.

LONG-RANGE FINANCIAL PLAN

Purpose: Long-term financial planning is the process of aligning financial capacity with long-term service objectives. This policy provides guidance on conducting the District's long-range financial plan.

Goals: This Policy is intended to assist the District in the following:

- Setting water rates over long term.
- Providing insight into the District's long-term financial needs.
- Promoting sound financial management.
- Contributing to the preservation or enhancement of the District's credit rating(s).
- Informing the biennial operating and capital budget development process.

Requirements:

1. Biennial preparation or more frequent updates of the Financial Plan.
2. Consider new and updated information contained in other planning documents (e.g. Water Master Plan, Capital Improvement Plans, Biennial Budget).
3. Forecast sources and uses of funds, capital expenditures, cash and debt usage, compliance with debt covenants, designated levels of cash reserves, revenue requirements, and growth in customers and demand.

Continued on next page

FINANCIAL POLICIES (Cont.)

DISTRICT BUDGET

Purpose: The District makes program and service decisions to allocate scarce resources for operational or capital needs through its budget process.

Goals: The District's budget provides guidance to District management by:

- Establishing priorities for work during the budget period.
- Establishing the legal spending limits for achieving those priorities.

Requirements:

1. Biennial budget process.
2. Compliance with Oregon Local Budget Law.
3. Citizens' Budget Committee.
4. Basis of budgeting.
5. Sufficiency of operating revenues.
6. Capital Improvement Plan.
7. Supplemental budgets, when necessary.

WATER RATES, FEES, & CHARGES

Purpose: This Policy describes the Board's general rate-setting goals and directives.

Goals: The goal of this policy is to provide the District's management guidance in setting rates, fees, and charges consistent with the Board's policy direction.

Requirements:

1. Cost-of-service framework.
2. Water rates adjusted annually.
3. System development charges.
4. Cost recovery for services provided to other entities.
5. Miscellaneous fees and charges.

MINIMUM FUND BALANCES & RESERVES

Purpose: This policy guides the development of minimum cash balances that directly affect the District's Financial Plan, rates and charges, and budget.

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

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

Requirements: The District shall manage the following consistent with financial goals:

1. Working capital – shall be as least two months' operations and maintenance expense.
2. Capital reserves – as identified in the District's Financial Plan.
3. Debt service reserves – as required for debt issuance.

FINANCIAL POLICIES (Cont.)

DEBT FINANCING

Purpose: This policy provides guidance on the issuance, structure, and management of the District's long- and short-term debt.

Goals: This policy is intended to assist the district in the following:

- Evaluating available debt issuance options.
- Maintaining appropriate capital assets for present and future needs.
- Promoting sound financial management through timely information and disclosure.
- Protecting and enhancing the District's credit rating(s).
- Safeguarding the legal use of the District's financing authority.

Requirements: The District shall consider the following and comply with all related policies in managing debt financing:

1. Type and use of debt.
2. Federal, state, or other loan programs.
3. Debt refinancing.
4. Debt structure considerations.
5. Method of sale.
6. Investment of proceeds.
7. Credit/Ratings objectives.
8. Investor relations.
9. Tax and arbitrage rebate compliance.
10. Post-Issuance disclosure.
11. Consultants, advisors and underwriters.

ACCOUNTING STANDARDS & FINANCIAL REPORTING

Purpose: This policy provides guidance to management on the accounting standards to be used by the District and expectations of financial reporting.

Goals: To provide management guidance to produce and disseminate timely financial statements to meet the needs of the public, investors, and other District stakeholders.

- Providing accurate, transparent, and reliable accounting of the District's financial performance.
- Timely disclosure of the District's financial performance.

Requirements: The District shall comply with the following accounting and reporting policies:

1. Basis of accounting – compliance with GAAP and GASB.
2. Reporting entity.
3. Capitalization standards.
4. Depreciable lives and depreciation rates.
5. Accounting for joint ventures.
6. Valuation of inventory.
7. Indirect cost allocation plan.
8. Reporting including monthly reporting and annual preparation of a Comprehensive Annual Financial Report (CAFR).

FINANCIAL POLICIES (Cont.)

INTERNAL CONTROLS

Purpose: Internal controls are used by management to mitigate the risk that the District's resources are not properly used.

Goals: Internal controls focus on operational effectiveness and efficiency, fraud prevention, reliable financial reporting, and compliance with laws, regulations, and policies to meet the following goals:

- Managing the risk of financial transactions.
- Establishing the legal authority of the procurement function.
- Building public confidence in the District's stewardship of its economic resources and management of its risks.
- Safeguarding the integrity of the District's procurement and accounting systems and protect against corruption, fraud, waste, and abuse.

Requirements:

1. Compliance with formal procurement rules.
2. Purchasing Limits.
3. Approval requirements for payments.
4. Obligations (Contracts, Leases, Etc.).

BUSINESS CASE EVALUATIONS

Purpose: Business case evaluations are used to guide the expenditure of resources by capturing the rationale for undertaking a specific project or task.

Goals: The goal of these policies is to promote efficient resource allocation through well-informed decision making by the District. The policies are intended to:

- Protect the District's economic resources by forecasting the expected returns from the District's efforts and investments.
- Provide a common framework for evaluating business decisions throughout the District.

Requirements:

1. The CFO shall periodically publish guidance for the conduct of business case evaluations, including appropriate discount rates.
2. The District shall evaluate alternatives that meet the service level at the least cost.

OTHER BOARD FINANCIAL GOALS & OBJECTIVES

Purpose: The Board has adopted other financial goals and objectives that do not fall within one of the above categories.

Goals: To provide additional guidance to management on other Board financial goals and objectives.

Requirements:

1. The District shall purchase water for distribution to balance the need to minimize cost and maximize water quality and reliability for its customers.
2. The District will have access to multiple sources of supply with the goal to provide redundant supplies to all customers.
3. The District shall maintain an Asset Management Plan that protects the value of the District's infrastructure and maximizes the value of the District's expenditures on operations and maintenance.

District Debt Limitation

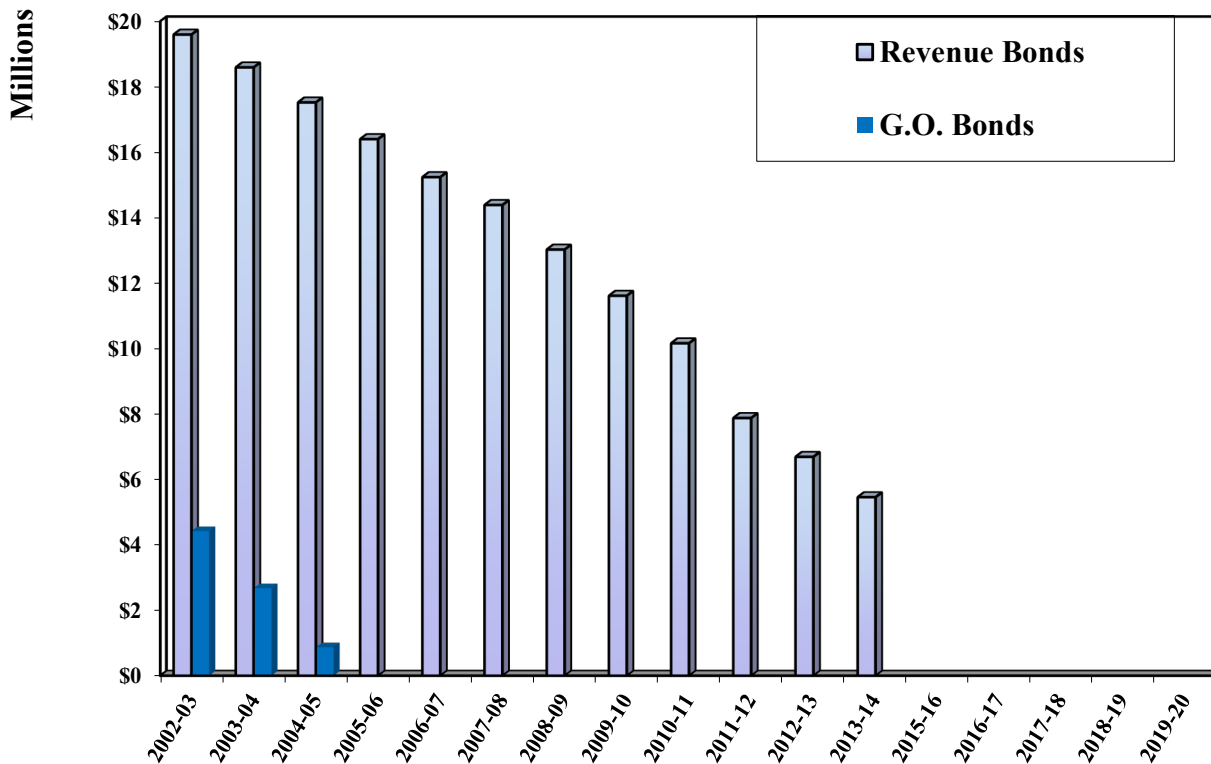
Oregon Revised Statute 264.250(3) limits general obligation (GO) indebtedness of water supply districts with a population of 300 or more to ten percent of true cash value of all taxable property. The real market value of the taxable property within the Tualatin Valley Water District boundaries is \$41.2 billion according to information provided by the Washington County Assessor’s Office. That value would allow the District to issue up to \$4.12 billion in GO debt. The District last issued GO debt in 1993 and retired the last of that obligation in 2005, leaving a theoretical debt margin available of \$4.12 billion.

The District has no current or future plans to issue general obligation indebtedness. Per District’s debt management policies revenue bonds and other financing sources, including federal and state loan programs will be used in preference to GO bonds.

The District’s authority to issue revenue bonds is contained in the Oregon state Uniform Revenue Bond Act (ORS 288.805 – 288.945). There is no explicit limitation on the amount of revenue debt that may be issued, but as a practical matter debt issuance is limited by available revenues and customer affordability concerns.

As in the prior biennium, the District’s 2019-21 biennium begins debt free. However, the District is planning to access WIFIA loan proceeds to begin a new debt issuance program during the 2019-21 biennium for Willamette Water Supply Program. Should the District issue other forms of debt (e.g. revenue bonds or bond anticipation notes) during the biennium, staff will bring to the Board a recommended budget amendment as allowed under Oregon Local Budget Law for debt issuance appropriation authority.

Bond Principal Outstanding
(As of June 2015, TVWD has no debt outstanding)



SECTION 4

STRATEGIC PLANNING & PERFORMANCE MEASURES

Tualatin Valley Water District's strategic planning efforts continue to evolve and reflect a more comprehensive understanding of the District's vision, mission, and values, and the planning and actions that stem from those. These efforts enable TVWD to better respond to future trends and challenges as it serves its customers.

As in past years, a Strategic Core Team made up of staff and members of the Board of Commissioners discussed and addressed industry trends, regional issues, District needs, and organizational strengths and challenges. The 2019-21 development process started in July 2018 with a strategic planning retreat including the entire Board, Chief Executive Officer and department managers. Across-functional strategic planning workgroup was then convened including the Chief Executive Officer, department managers, and coordinators for the District's Strategic Planning, Risk Management, and Communications programs. Based on the Board's feedback and priorities identified in their strategic planning retreat, this workgroup proposed the District's 2019-21 biennium budget priorities and recommended resource allocations. As described below, the resulting District Initiatives for 2019-21 were subsequently approved by the Board in November 2018.

The District's vision, mission, and values are the foundation for the organization, providing a clear direction and helping each employee and group make appropriate decisions on a day-to-day basis.

<p style="text-align: center;"><i>TVWD Vision</i> Delivering the Best Water ♦ Service ♦ Value</p> <p style="text-align: center;"><i>TVWD Mission</i> To Provide Our Community Quality Water and Customer Service</p> <p style="text-align: center;"><i>TVWD Values</i> Reliability ♦ Integrity ♦ Stewardship ♦ Excellence ♦ Safety</p>

Significant District-wide, departmental and employee results and measures are tracked and reported monthly to management and the Board of Commissioners. District Desired Results and Key Initiatives are incorporated into important District plans such as Willamette Water Supply Program, water system master and facilities plans, biennial budget, in-District six-year capital improvement plan, and long-term financial plan.

TVWD's Desired Results are what other organizations may call organizational goals. They are referred to as Desired Results to emphasize the District's focus on the results of actions more than the actions themselves. These Desired Results stem from the District's Vision, Mission and Values and summarize what District staff, programs and policies seek to accomplish. The following set of Desired Results was adopted by the Board of Commissioners in December 2012.

TUALATIN VALLEY WATER DISTRICT DESIRED RESULTS
1. The Water Supply Meets Community Needs and Expectations
2. The Community Is Confident in Our Water, Service and Employees
3. We Are Good Stewards of Our Financial Resources
4. We Are Good Stewards of Natural Resources
5. We Are Good Stewards of Our Own Assets and Resources (People & Physical Assets)

The figure below provides an overview of the District’s strategic planning steps and timeline:

Tualatin Valley Water District Strategic Planning Process Schedule for the 2019-21 Biennium	
The Strategic Planning process to establish Desired Results and Key Initiatives for the upcoming biennium starts several months before budget development begins.	
<u>2018</u>	
September	Review 2017-19 initiatives and identify potential carry-overs to 2019-21
September	Identify environmental drivers and objectives for 2019-21
September	Develop proposed focused list of initiatives
September	Assess initiatives with Desired Results, Board Goals, and environmental drivers
September	Select final recommendations for presentation to the Board
October	2017-19 Initiatives and Key Projects presented to Board in Work Session
November	2019-21 Initiatives presented to Board in Work Session
November	Board adopts final 2019-21 Initiatives at Regular Meeting
<u>Dec 2018 through June 2019</u>	
	Initiatives and priorities utilized in budgetary process
Ongoing	Managers review progress of initiatives at Management Team meetings
Ongoing	Semi-annual progress reports to Board of Commissioners

UPDATE ON 2017-19 INITIATIVES AND KEY PROJECTS

Much progress was made during the 2017-19 biennium, with 9 of the 15 strategic projects (i.e., initiatives and key projects) classified as *complete, ongoing, or scheduled for completion within biennium*.

- Complete – meaning the strategic project has concluded in full.
- Ongoing – meaning the strategic project has resulted in a program or continuing process considered “business as usual” within the District.
- Scheduled for completion within biennium – strategic project will conclude by June 30, 2019.

The table at the top of the next page present the 2017-19 Initiatives and Key Projects that are *complete, ongoing, or scheduled for completion within biennium*.

**Summary of 2017-19 Strategic Projects
(Complete, Ongoing, or Scheduled for Completion by June 30, 2019)**

#	Description	Dept.	Target Date	Status	Status
KP1	Finalize Urban Service Agreement	Admin	Completed	C	✓
KP3	Establish District-wide Records Management Program	Admin	Ongoing	G	●
KP4	Evaluate Regional Land Mobile Radio System	HR	Completed	C	✓
KP6	Implement Key Findings from IT Master Plan	IT	Jun-19	G	●
KP7	Revenue Bond Debt Program	Finance	Ongoing	G	●
DI1	Develop Management and Operating Resources for WWSS	Admin	Jun-19	G	●
DI2	Resource & Implement Strategic Communications Plan	Customer Svc.	Jun-19	Y	●
DI3	Ratepayer Communication Strategy	Customer Svc.	Jun-19	Y	●
DI4	Review of Organizational Staffing Requirements & Effectiveness	HR	Completed	C	✓

KP Key Project
DI District Initiative

On Schedule	G	●
Some issues slowing this down	Y	●
Completed	C	✓

2019-21 DISTRICT INITIATIVES

Strategic projects for the 2019-21 biennium were based on the Board’s priorities and goals identified in their July 2018 strategic planning retreat and were subsequently refined by the District’s cross-functional strategic planning workgroup. The resulting six initiatives are described as District-wide efforts that represent the following:

- Are transitional or transformational for the District, and/or
- Require significant resources, and/or
- Require participation from throughout the District, and/or
- Require significant coordination for success.

The six initiatives were approved by the Board at their November 2018 regular meeting. The table on the next page provides brief summaries of the 2019-21 initiatives. These initiatives are over and above the essential day-to-day work already being accomplished by the District.

District Initiatives for the 2019-21 Biennium

Program for Management and Operation of the Willamette Water Supply System
<ul style="list-style-type: none"> ➤ Develop resource requirements for the operation, maintenance, and governance of the Willamette Water Supply System ➤ Complete planning study to identify needs ➤ Gain support of District Board, staff, and WWSP partners
Debt Program
<ul style="list-style-type: none"> ➤ Develop a long-term debt program and its ongoing requirements ➤ Maintain continuity with other partners in financing the WIF and WWSS ➤ Stay up-to-date on emerging best practices, current market conditions, changing regulatory and statutory requirements pertaining to debt issuance and management
Strategic Communications Program
<ul style="list-style-type: none"> ➤ Complete the planning and resourcing process to identify the needs, priorities, and budget requirements associated with implementation of the District’s Strategic Communications Plan ➤ Strengthen the network to support customers with affordability concerns while communicating and demonstrating the value of the District’s investment in a new regional water supply
Develop and Implement CIS
<ul style="list-style-type: none"> ➤ Develop a strategy for a new Customer Information System (CIS) and begin its implementation ➤ Develop and gain approval of initial project IGA with Clean Water Services ➤ Implement and stabilize new CIS
District Resiliency Program
<ul style="list-style-type: none"> ➤ Coordinate all District resiliency efforts, including the ERP, infrastructure resiliency, security (cyber and physical) planning, continuity of operations and community/family outreach ➤ Update the District’s Risk & Resilience Plan (VA) per “America’s Water Infrastructure Act of 2018” ➤ Establish long-range CIP to meet Oregon Resiliency Program (ORP) objectives by 2065
Human Capital Strategy
<ul style="list-style-type: none"> ➤ Proactively address changing workforce demographics and trends ➤ Departments establish cross-training programs for key positions and leadership continuity ➤ Align strategic human capital with the District’s mission and goals ➤ Build a framework for workforce development and talent management that will meet current and future trends and regulatory requirements

As shown in the table on the next page, each District Initiative is assigned a lead department and, as applicable, supporting departments have been identified to contribute to development and delivery. Many of the District Initiatives are included in the 2019-21 budget and six-year Capital Improvement Plan and represent priorities for resource allocation.

Department Involvement in District Initiatives for 2019-21

District Initiative	CEO	HR	CS	E/O	FIN	WSP	IT
Program for Management and Operation of the Willamette Water Supply System	X			O	O	O	O
Debt Program	O			O	X	O	
Strategic Communications Program	O		X	O		O	
Develop and Implement CIS			X				O
District Resiliency Program		X		O	O		
Human Capital Strategy	O	X	O	O	O	O	O

Key:	
CEO	Administrative Services
HR	Human Resources (includes Risk Mgmt)
CS	Customer Service
E/O	Engineering & Operations
FIN	Finance
WSP	Water Supply Program
IT	Information Technology Services

- X = Lead Department
- O = Other significant department involvement

DISTRICT INITIATIVES AND DESIRED RESULTS

The following table presents the ways that each initiative ties into the District’s set of Desired Results.

District Initiatives	Desired Results				
	Water Needs & Expectations	Community Confidence in TVWD	Stewards of Financial Resources	Stewards of Natural Resources	Stewards of People and System
Program for Management and Operation of the WWSS	✓	✓	✓	✓	✓
Debt Program	✓	✓	✓		
Strategic Communications Program	✓	✓	✓		✓
Develop and Implement CIS		✓	✓		✓
District Resiliency Program	✓	✓	✓	✓	✓
Human Capital Strategy	✓	✓	✓		✓

The District will continue to review and update its initiatives with each biennium cycle. In the interim, staff will provide semi-annual progress updates to the District’s Board, customers, and stakeholders as part of the ongoing effort to achieve the Desired Results listed above.

Performance Measure Development

TVWD continues to use measures to track performance in areas that move the organization closer to its vision, mission and values. The strategic planning process builds upon District goals, and places an emphasis on the results of staff actions and District policies. Performance measures, as well, exist to measure the results of the District's efforts.

Measures are listed below under the appropriate Desired Result with responsible department.

DESIRED RESULT 1: The water supply meets community needs and expectations

DESIRED RESULT 1 PERFORMANCE MEASURES	Department responsible
No violations of National Primary Drinking Water Regulations Target met 17-18. Met 18-19.	Engineering/OPS
≥ 90% of unplanned outages responded to within 4 hours Target met 17-18. Met 18-19.	Engineering/OPS

DESIRED RESULT 2: The community is confident in our water, service and employees

DESIRED RESULT 2 PERFORMANCE MEASURES	Department responsible
TVWD maintains leadership role in ≥50% of IGAs, partnerships, etc. Target met 17-18. Met 18-19.	Admin
≥15% of District employees actively participate in water industry related organizations Target met 17-18. Met 18-19.	District

DESIRED RESULT 3: We are good stewards of our financial resources

DESIRED RESULT 3 PERFORMANCE MEASURES	Department responsible
Number of unscheduled maintenance events is ≤ 60. Target met 17-18. Met 18-19.	Engineering/OPS
District bond rating (S&P) is AA+ or better N/A 17-18. N/A 18-19 (TVWD had no outstanding debt during these periods). Note: S&P Indicative Rating for WIFIA Loan (Feb 2019) was AA+	Finance
Regular hours worked per workable hours available is ≥ 85% Target met 17-18 (85.1%). Met 18-19 (86.3%).	IT

DESIRED RESULT 4: We are good stewards of natural resources

DESIRED RESULT 4 PERFORMANCE MEASURES	Department responsible
District implements no Stage 3 (mandatory usage reduction) or greater measures in curtailment plan Target met 17-18. Met 18-19.	Customer Service
Average water usage in gallons per capita per day (GPCD) for single- and multi-family accounts is 100 GPCD or less Target met 17-18 (Avg. 95.6 GPCD). TBD 18-19 (Avg. 98.4 GPCD).	Engineering/OPS
Number of water efficiency fixture rebates provided is \geq 1,200. Target met 17-18. Expected to be Met 18-19.	Customer Service

DESIRED RESULT 5. We are good stewards of our own assets and resources (people and assets)

DESIRED RESULT 5 PERFORMANCE MEASURES	Department responsible
No incidents of vandalism reported that exceed insurance deductible (\$1000) Target met 17-18. Met 18-19.	Admin
90%+ of our #1 hiring choices accept a position offer Target met 17-18 (15 of 16 accepted). Target met 18-19 (16 out of 18 accepted).	Admin
90%+ of employees with last performance review of 3.0 or better (excluding retirements) stay at the District Target met 17-18 (93%). Target met 18-19 (96%).	Admin
85% safety corrective actions completed on schedule (with Safety Committee recommendations) Target not met 17-18 (83%). Target met 18-19 (85%).	Admin



The District uses a 30-year financial forecast model (Forecast) to analyze alternative scenarios related to future revenue needs, cash reserves, operating expenditures, and capital expenditures. The 30-year timeframe allows the District to plan for the financial impacts of the Willamette Water Supply Program, in-District capital expenditures, potential changes in customers and demands, and other important factors.

Although the 30-year financial forecast is an indispensable management tool to assess the feasibility and effects of future capital and operating plans, it does not establish future rate strategies. Establishing those rate strategies is a prerogative of the Board and undertaken separately as part of the District's rate setting process.

New this year, the District has published a *2019-20 Financial Plan* document that summarizes the Forecast results, which are based on the District's data and assumptions contained in the May 2019 version of its 2019-21 Budget, which was adopted as proposed, including capital improvement plan (CIP) costs, operations and maintenance (O&M) costs, rate and non-rate revenues, and system development charge (SDC) collections. For more detail on these and other assumptions used in the Forecast model, please refer to the District's *2019-20 Financial Plan*, which can be found on the District's website <https://www.tvwd.org/finance/page/financial-plan>

Willamette Water Supply Program

In 2013, the District's Board decided to expand the District's portfolio of water sources and develop a new water supply on the Willamette River. This project, which began in fiscal year ending June 30, 2014 (FY2014), is commonly referred to as the Willamette Water Supply Program (WWSP), and includes capital improvements that are part of two new regional water entities.

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. The District serves as the managing agency for the WIF.
2. Willamette Water Supply System (WWSS) Commission – The WWSS will soon be a joint venture of the District and the cities of Hillsboro and Beaverton¹ 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. The District will serve as the managing agency for the WWSS.

Total WWSP costs (including inflation) are substantial at approximately \$1.3 billion. Until 2018, the District had assumed that it would fund its projected share (approximately \$729 million) with cash and revenue bond proceeds.² In July 2018, the District and its WWSS partner, the City of Hillsboro (Hillsboro), were selected by the U.S. Environmental Protection Agency (EPA) to apply for up to \$616.6 million in long-term, low-cost supplemental loans, administered through EPA's Water Infrastructure Finance and Innovation Act (WIFIA) Program. The District estimates that its share of WIFIA funding will save its ratepayers over \$230 million through 2045, free up financial resources for other purposes, and lower the overall levels of annual revenues required from rates and charges.

¹ The District and the cities are in the process of adopting the intergovernmental agreement required to form the WWSS. As currently planned, the new WWSS entity will be established on July 1, 2019.

² WWSP partner costs will be funded individually by the District's partners, with payments made through the District as Managing Agency of the WWSP.

With the development of the WIF and WWSS, scheduled to be available by July 1, 2026, the District plans to replace its water purchased from Portland with this new source.

Key Policies Guiding the Forecast

- Until FY2027, water purchases will continue to be balanced between the Portland and Joint Water Commission (JWC) sources, with an average of 13.16 MGD purchased from Portland through FY2026.
- Capital costs will be funded with a blend of cash and debt (WIFIA and revenue bonds).
 - Cash for capital comes from water rate revenue, SDCs, and capital reserve fund balances.
 - Related to debt financing, the District will manage its finances to meet or exceed a combined target debt service coverage (DSC) ratio of 2.0 times annual debt service.
 - Rather than assuming bond insurance will be available, the District anticipates funding a debt service reserve from each revenue bond issue.
- The District's combined year-end fund balance will be maintained at 250 days (or more) of operating expenditures.
- Other key policies guiding the Forecast include those defined in the District's *Financial Management Policies* document, which was adopted by the Board of Commissioners on March 20, 2019 by Resolution 08-19.

Customer Withdrawals, Water Demands, and Revenue Impacts

In February 2018, the District entered into a service area agreement (Beaverton Service Area Agreement) with the City of Beaverton (Beaverton). 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. Effective July 1, 2018, Beaverton withdrew approximately 4,000 water services from the District.

In the coming years, the District expects Beaverton to withdraw some additional customers. The timing and the ultimate number of customers that will be affected by withdrawal is not now certain. However, the water demand forecast underlying this Financial Plan incorporates Beaverton's planned withdrawal of an additional 286 services. The District assumed this withdrawal would be effective by the end of FY2019, so the 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.

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 is projected to be gradual. As the implementation of the agreement continues and transfers are completed, the District will refine the assumed revenue impacts included in the forecast model.

Other Demographic Assumptions Underlying the Revenue Forecast

- **Customer Growth** – Before factoring in assumed losses to Beaverton, the assumed annual customer growth rate begins at 0.75% in FY2020 through FY2021, and then the growth rate 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.

- **Water Sales** – Water usage per customer has remained relatively stable over the past several years. A typical single-family residential customer uses about 700 cubic feet (7 CCF) of water per month.³ In the Forecast, the District assumes that past conservation savings are permanent and forecasts sales growth at approximately one-third of a percent (i.e., 0.34%) through FY2029. This “capping” of water sales is related to a combination of factors including mild weather and a successful conservation program that have depressed summer water sales, and the District’s similar experience to the nation-wide trends towards smaller family sizes and widespread assimilation of water-efficient appliances.

After FY2029, the District assumed that sales growth would begin to align with customer growth, ultimately zeroing out in FY2036.

- **Changes in Rate Revenue** – In FY2020, after factoring in past and projected withdrawals to Beaverton, the District expects an internal rate revenue loss of approximately 5.8% from the FY2019 total. In future years, the combination of low customer growth and stagnant sales results in annual internal revenue growth rates that decline from approximately 0.45% in FY2021 to approximately 0.35% in FY2029.

Key Economic Assumptions Included in the Forecast

- **Operations and Maintenance (O&M) Costs** – Most O&M costs (i.e., personnel services and materials and services costs) were projected to escalate from FY2021 budget data at 4.5% annually.
- **Pension Side Account Deposits** – Like many pension plans, the Oregon Public Employees Retirement System (OPERS) plans currently have an unfunded actuarial liability (UAL). The OPERS UAL is allocated to employers of the plan.

The District estimates its current share of OPERS UAL is approximately \$20 million. In addition, District management believes the discount rate that OPERS uses to value the UAL may be reduced in the future. A reduction in the discount rate, everything else being equal, increases the OPERS UAL and the UAL allocated to the District. Based on analysis conducted by OPERS consultants and actuaries, a change in the assumed discount rate by 1% could add another \$10 million to the District’s UAL.

The Adopted 2019-21 Budget includes \$20 million to fund an OPERS side account with two deposits of \$10 million each. The deposits will be separated in time to mitigate market risks since the OPERS investments of side accounts carry greater market risk than the District’s investment portfolio. Funding the side account results in lower OPERS 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.⁴

The Forecast also includes an additional \$10 million in FY2022 (the subsequent biennium) to account for the likely change in the assumed discount rate. At that time, the Board and Budget Committee will be asked to consider funding another side account to offset the expected increased UAL resulting from a possible reduction in the PERS discount rate. Alternatively, if no OPERS side account is funded, the \$10 million would be available to offset the expected increase in OPERS rates resulting from the change in the assumed discount rate.

- **Wholesale Water Rates** – Portland Water Bureau (Portland) wholesale contract rates were provided by Portland. Through FY2026, annual changes are projected to vary from an increase of

³ One hundred cubic feet of water (1 CCF) is equal to approximately 748 gallons.

⁴ 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.

10.7% (FY2023) to a reduction of -0.5% (FY2024). Staff will closely monitor PWB wholesale rate increases and adjust the Forecast accordingly.

Based on recent trends, JWC rates are estimated to increase by 4.5% per year.

- WIFIA** – WIFIA issuance costs are estimated to be \$500,000, funded from WIFIA loan proceeds in FY2020. The District assumes that the total WIFIA loan amount will include \$53.3 million of accumulated interest on funds drawn (capitalized interest) from FY2020 to FY2026. The total WIFIA loan amount of \$423.8 million will be repaid over 35 years, beginning after “substantial completion” of the WWSP. The District assumes that “substantial completion” of the WWSP will be in FY2026 and that WIFIA repayments will begin in FY2027. Currently, the District is using a 3.5% assumed interest rate for the WIFIA financing and capitalized interest calculation. The actual rate will be set by the WIFIA program at the time the WIFIA loan is closed.
- Revenue Bonds** – Each projected revenue bond issuance assumes issuance costs of 1.5% and a reserve requirement equal to its maximum annual debt service (MADS). Revenue bond debt repayments were projected for all bond issuances using a 30-year term and 5.5% interest rate. A detailed summary of the Forecast’s estimated debt financings is included in the *2019-20 Financial Plan* at *Section 5.4 – Schedule of Future Debt Issuance*.

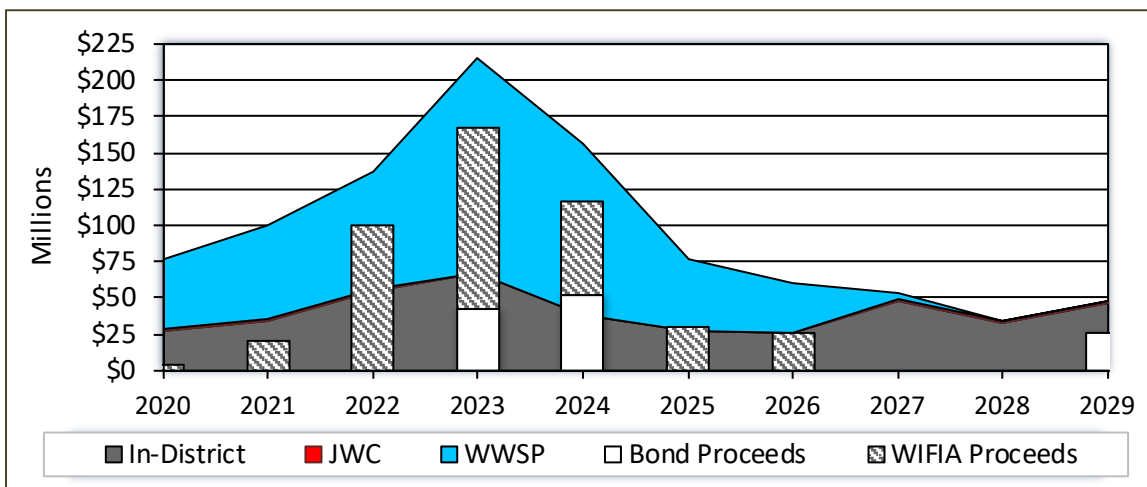
Additional details on the Forecast’s economic assumptions are available in the *2019-20 Financial Plan* at *Section 6 – Financial Forecast*.

Planned Capital Expenditures, Financing, and District Reserves

Over the next ten years, the forecast results are driven largely by anticipated capital spending on the WWSP. As discussed above, the District will require outside debt financing throughout the WWSP construction period. In addition to assumed WIFIA draws from FY2020 through FY2026, the District’s capital investments may require an initial revenue bond sale by FY2023. The District may accelerate its bonding strategy should WWSP cashflow requirements change or if other conditions exist that make entering the debt market sooner a more favorable option. In any event, the exact amount and timing of bond sales will be determined as future CIP expenditures and cash flow requirements are refined.

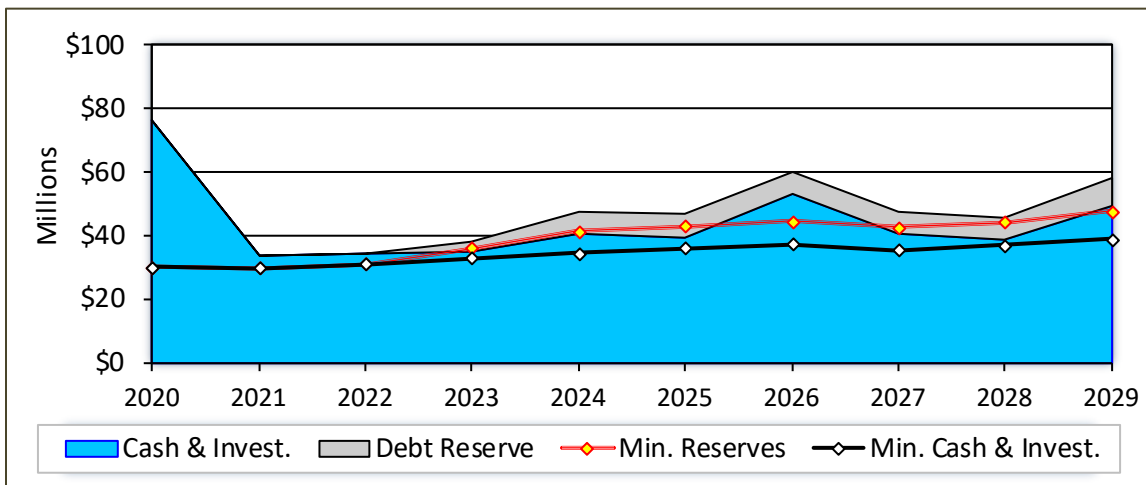
Investments in future supply projects and the financing considerations for those projects dominate TVWD’s cash-flow forecast through FY2029 as shown in the *CIP and Financing* graph below.

CIP and Financing by Fiscal Year



In addition to the debt proceeds presented in the *CIP and Financing* graph on the previous page, cash reserves will also be used for capital expenditures, to the extent that they are available (more than minimum fund balance requirements). Based on the assumptions of this analysis, the Forecast projects that the District will meet or exceed its minimum reserves balance targets in each year during the planning period, as shown on the graph below.

Year-End Reserves by Fiscal Year

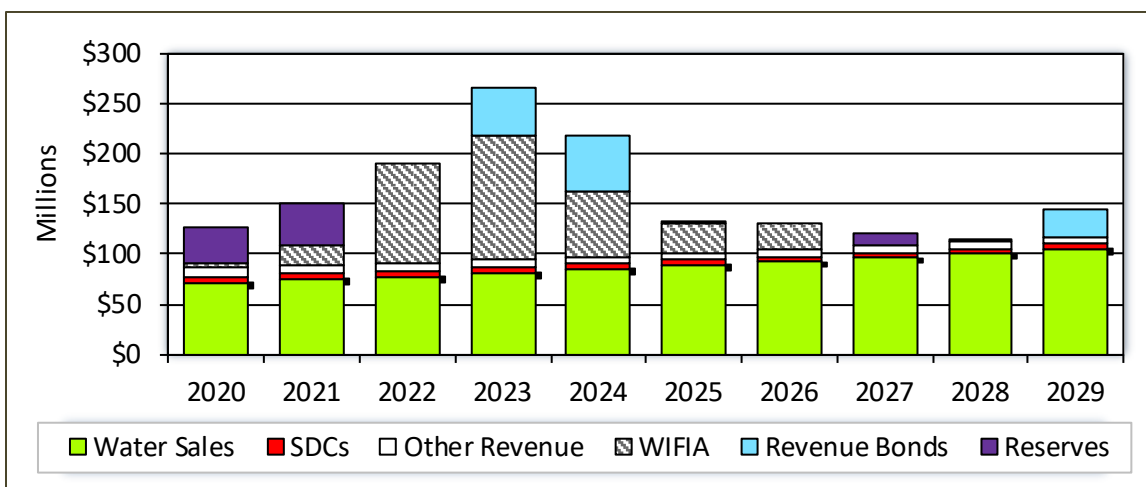


In the *Reserves* graph above, *Cash & Investments* includes General Fund and Capital Reserve Fund balances. The *Debt Reserve* includes funds from revenue bond proceeds that are required to be held in lieu of bond insurance. The *Minimum (Total) Reserves* and *Minimum Cash & Investments* targets are included for reference.

Projected Sources of Funds

The graph below presents a summary of the District’s projected sources of funds over the next ten years.

Projected Sources of Funds by Fiscal Year



The table at the top of the next page presents the same information in tabular detail.

Revenues and Other Funding Sources by Fiscal Year

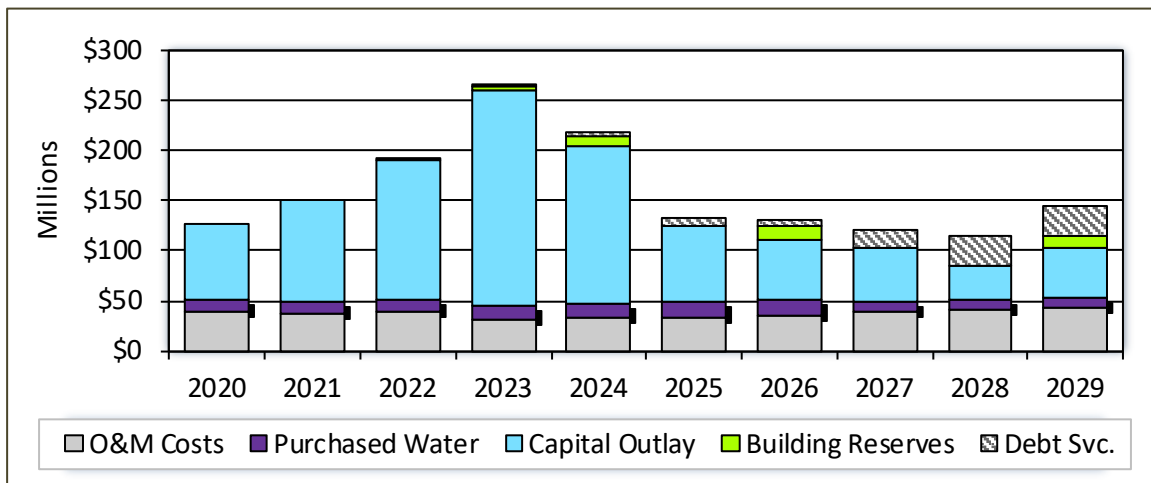
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Totals
Water Sales	\$71.6	\$74.7	\$77.9	\$81.3	\$84.8	\$88.4	\$92.2	\$96.2	\$100.3	\$104.6	\$871.9
SDCs	5.7	5.7	5.7	5.7	5.7	5.7	5.6	5.6	5.5	5.4	56.3
Other Revenue	8.7	7.6	7.0	7.2	7.4	7.5	7.8	6.4	6.3	6.6	72.4
WIFIA	5.0	20.0	100.0	125.0	65.0	30.0	25.5	-	-	-	370.5
Revenue Bonds	-	-	-	46.7	56.2	-	-	-	-	28.1	131.0
Reserves	36.6	42.5	-	-	-	0.7	-	12.5	2.0	-	94.3
Totals	\$127.6	\$150.5	\$190.6	\$265.8	\$219.1	\$132.3	\$131.1	\$120.6	\$114.1	\$144.7	\$1596.4

Detailed descriptions for each of the items listed above are included in the *2019-20 Financial Plan at Section 6.3 – Projected Sources of Funds*.

Projected Uses of Funds

The graph and table below present summaries of the District’s projected uses of funds through FY2029.

Projected Uses of Funds by Fiscal Year



The table below presents a tabular detail of the projected uses of funds over the next ten years.

Annual Expenditures and Increases in Reserves by Fiscal Year

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Totals
O&M Costs [1]	\$38.8	\$37.7	\$39.8	\$31.8	\$33.9	\$34.1	\$35.5	\$39.1	\$40.8	\$43.0	\$374.5
Purchased Water [2]	12.1	12.3	11.9	13.0	13.1	14.2	14.7	9.9	10.4	10.9	122.6
Capital Outlay	76.6	100.5	138.1	216.0	157.4	77.0	60.3	53.9	34.6	48.7	963.2
Building Reserves	-	-	0.8	3.4	9.5	-	13.5	-	-	12.7	40.0
Debt Service	-	-	-	1.6	5.1	7.1	7.1	17.7	28.3	29.2	96.1
Totals	\$127.6	\$150.5	\$190.6	\$265.8	\$219.1	\$132.3	\$131.1	\$120.6	\$114.1	\$144.7	\$1596.4

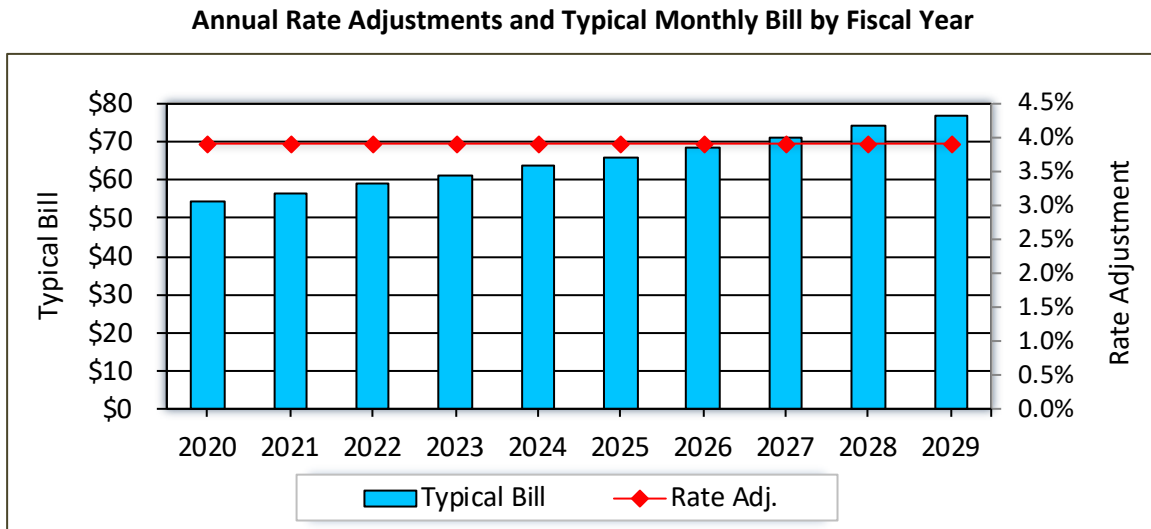
[1] O&M costs shown include debt issuance costs and OPERS side account deposits (\$10 million/yr in FY2020-22).

[2] Costs shown represent TVWD’s Purchased Water Program, which includes pumping power costs.

Detailed descriptions for each of the items listed above are included in the *2019-20 Financial Plan at Section 6.4 – Projected Uses of Funds*.

Projected Customer Impacts

Based on the assumptions and results of this analysis, the District determined that it could meet near-term financial targets with rate revenue adjustments of 3.9% annually over the next ten years, shown below with typical monthly bills by fiscal year.⁵



Many assumptions are employed in an analysis like this. For this reason, results are not concrete in nature but are planning estimates. In the future, the actual rate adjustments required to fund revenue requirements may vary from the estimates presented here. Future capital requirements, O&M costs, customer demands, and other assumptions will influence the accuracy of the estimates as time passes and projections become reality.

Risks to the Forecast

Specific risks that the District will be monitoring include the following:

- Projected purchased water rate increases from Portland which may be impacted by:
 - Costs of future treatment facilities in the Portland system
 - Changes to peaking factors
 - Contract difficulties
 - Other Portland O&M and CIP
- Interest rates that may be impacted by:
 - Loss of tax-exempt bonds
 - District's credit rating
 - General increase in interest rates
- WWSP
 - Timing of program expenditures
 - Project definition
 - Fluctuations in construction costs
 - Loss of a partner

⁵ Typical monthly bill includes monthly fixed charge plus 7 CCF of water multiplied by the volumetric rate (\$/CCF).

- Others
 - Economic downturn
 - Changes in water demands
 - Annexations with withdrawals
 - Curtailment of water sales

Although risks are generally thought of as negative, the District may also realize positive risks (opportunities) as it pushes ahead with the WWSP, begins a debt program, and works towards partnerships with neighboring cities. Specific opportunities that the District will be monitoring include:

- WWSP
 - Cost savings through value engineering
 - Refinement of project definition
 - Favorable bid environment and resulting construction costs
 - Gaining partners
- Others
 - Economic growth
 - Favorable financing programs
 - Other unplanned savings

Conclusion

The District will continue to take great care to manage risk by following prudent management practices. This includes frequent updates to the 30-year financial forecast, and reviewing rates and revenues annually to see if additional adjustments are necessary. However, establishing rate strategies remains a prerogative of the Board and is undertaken as a separate process.

Setting water rates involves a series of policy decisions that the Board will develop over time. Historically, the Board considered these policies and specific water rate adjustments each July and August, with the effective date of new water rates in November (after the summer watering season). Beginning with the 2017 rate adoption process, the Board now considers policies and water rate adjustments for a two-year period, with annual water rate changes effective each November. That process, based on this Adopted 2019-21 Budget, will commence in July 2019.

SECTION 6

FUND SUMMARIES

The Tualatin Valley Water District is a water utility enterprise currently made up of nine funds including two new funds in the Adopted 2019-21 Budget.

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. District financial reserves are held in the Capital Reserve Fund.

The Debt Proceeds Fund is a new fund in the Adopted 2019-21 Budget that will account for the District’s draws of WIFIA loan proceeds, as well as any future revenue bond debt issuance. The Revenue Bond Debt Service Fund accounts for the District’s debt service obligations. The District is currently debt free until it begins to take draws from its WIFIA loan, and while there are no appropriations in this fund in the Adopted 2019-21 Budget, it will be maintained for future use.

The District is a member of, and provides management services for, the Willamette River Water Coalition (WRWC), the Willamette Intake Facilities (WIF) Commission and the Willamette Water Supply System (WWSS) Commission and accounts for the activities of each of these joint ventures in a separate fund. The WIF Fund was established during 2017-19 through a supplemental budget action approved by the TVWD Board. The WWSS Fund is a new fund in the Adopted 2019-21 Budget.

Six Funds Directly Support the Water Utility	
General Fund (01)	Administration, operations, and maintenance activity. All District staff are budgeted in this fund.
Capital Improvement Fund (11)	Accounts for the resources and expenditures used for acquisition or construction of major capital facilities not funded by bond proceeds.
Capital Reserve Fund (18)	Holds resources for current and future capital improvement and water supply projects.
Debt Proceeds Fund (22)	Holds proceeds from the District's debt portfolio including the revenue bonds, WIFIA loan proceeds, and other types of borrowings.
Revenue Bond Debt Service Fund (31)	Accounts for repayment of principal and interest on the District's revenue bonds.
Customer Emergency Assistance Fund (43)	Accounts for the resources, administration, and customer payments for those who qualify for emergency assistance.
Three Funds Manage Partnerships (Note 1)	
Willamette Water Supply System Fund - WWSS (45)	An ORS chapter 190 Joint Venture with the cities of Beaverton, Hillsboro, and TVWD. TVWD serves as the managing agency providing administration, operations, project management and accounting services.
Willamette Intake Facilities Fund - WIF (44)	An ORS chapter 190 Joint Venture with the cities of Beaverton, Hillsboro, Sherwood, Tigard, Wilsonville and TVWD. TVWD serves as the managing agency providing general administration, project management, and accounting services.
Willamette River Water Coalition Fund - WRWC (41)	An ORS chapter 190 Joint Venture with the cities of Sherwood, Tigard, Tualatin, and TVWD. TVWD serves as the managing agency providing general administration and accounting services.

Note 1: These funds are considered joint ventures funds. As such, they are not included in the District’s audited financial statements and are instead subject to separate auditor reviews for financial statement preparation and reporting.

FINANCIAL POSITION BY FUND

A. THE GENERAL FUND

The General Fund budget is developed by organizational units referred to as divisions within the District, then aggregated per object classification for appropriation. All operating departments and District staff are accounted for in the General Fund. Beginning with the Adopted 2019-21 Budget, there are six departments, ranging in size from 9 to 59 staff members. The departments are:

1. Administrative Services
2. Customer Service
3. Engineering and Operations
4. Finance
5. Water Supply Program
6. Information Technology (IT) Services

Additionally, the Purchased Water budget is in the General Fund as a non-departmental expenditure. Purchased Water represents the District's single largest Materials and Services (M&S) expenditure and staff from Administrative Services, Engineering and Operations, and Finance play a role in its management and administration. Detailed information on Purchased Water and each of the departmental budgets is contained in Sections 8 through 14 of this document.

The major source of revenue for the General Fund is water sales. Approximately 80% of water sales revenue is based on a volume rate per hundred cubic feet (CCF, or 748 gallons) of water used. The remainder of water sales revenue is received from fixed charges based on meter size. Since water volume usage varies from one year to another depending on weather, significant fluctuations are possible in end-of-year fund balances.

Personnel Services: The Adopted 2019-21 Budget for Personnel Services is up \$3.5 million, an 8.7% increase over the prior biennium or 4.3% on an annualized basis. Six new positions are budgeted this biennium. These include two full-time positions in the Water Supply Program - a Willamette water supply manager and an operations supervisor who will be responsible for administration and operations planning for the WWSS and WIF; and four limited-term customer service representatives in the Customer Service Department who will support the Customer Service Information System Project (CIS) implementation. In addition, one limited-term senior systems administrator position in the IT Services Department has been eliminated for a net change of five positions in the Adopted 2019-21 Budget.

Budgeted personnel services provide resources for the new staff positions, merit-based salary increases estimated to average 4.8% per year, and increases in medical benefit costs averaging about 8.0% annually. The District continues to seek ways to reduce the financial challenges of increasing medical premiums through loss prevention and wellness efforts, review of the insurance markets for more competitive rates, and management/staff engagement to seek ways to control costs.

Pension costs through the Oregon Public Employees Retirement System (PERS) are up from 14.1% of payroll to an average of 17.9% of payroll for the first year of the 2019-21 biennium. However, these PERS rates are anticipated to be reduced to about 11.3% of payroll in the second year with the District's establishment of a PERS side account. (See Section 7, page 7-4 *General Fund Resources and Expenditures* for more information.) District staff continue pay for their six percent Individual Account Plan (IAP) contributions as part of the employee portion of PERS.

The District continues to closely monitor legislative and legal developments concerning PERS.

Materials and Services (M&S): Adopted General Fund M&S expenditures are up \$5.7 million, a 15.8% increase over the prior biennium or 7.6% on an annualized basis. Key drivers for this cost increase include the District's share of WWSS and WIF partnership dues, professional services expenses for the District to update its vulnerability and emergency response plan in compliance with the America's Water Infrastructure Act of 2018, increases in overall water system, fleet and facilities expenditures and purchased water, which comprises 58.7% of the General Fund's M&S expenditures.

Purchased water costs are \$2.0 million higher over the current biennium, primarily due to increased wholesale water rates. The Purchased Water Program budget reflects wholesale rate increases from the City of Portland and the Joint Water Commission of 11.4% and 5.3%, respectively, for the first year of the biennium. Second year increases are estimated at 3.5%. Purchased water expenditures also include leased water and interruptible supplies, the District's operational costs based on its 35% ownership share in Barney Reservoir, and pumping power costs. The offset to these higher costs to purchased water are higher projected water sales revenue.

This second-year wholesale water rate increase from Portland is subject to change based on new capital assets that may be added to the wholesale rate calculation. Staff will continue to monitor these items for potential budgetary impacts during the biennium.

Capital Outlay for Equipment: The District capitalizes all equipment acquisitions that meet a threshold of \$7,500 and estimated useful life in excess of one year. Requests for capital equipment purchases in the Adopted 2019-21 Budget are \$212,200, a decrease of 64.8% from the prior biennium driven primarily by the completion of a replacement and upgrade cycle of Information Technology servers, back-up systems, end-user computers, and related hardware and software.

Fleet replacements continue to be budgeted in the Capital Improvement Fund, rather than the General Fund as was done historically. This change has allowed the District to efficiently capitalize internal labor costs associated with the required customizations for vehicles to be placed into service.

A listing of Capital Outlay items included in the Adopted 2019-21 Budget can be found at the end of each of the departmental sections. A schedule of fleet replacements can be found on page 15-73.

Special Payments: Special Payments include right-of-way (ROW) fees paid to neighboring cities where TVWD's customers live within the cities' boundaries. Cities impose a fee based on a percentage of the gross water sales for those customers and the District passes the fee through on the customer's water bill. ROW fees are budgeted at \$1.4 million for the 2019-21 biennium.

Other Special Payments in the Adopted 2019-21 Budget include the funding of a PERS side account at \$20 million, which will reduce the District's pension liability and future rates paid to the Oregon PERS.

Transfers: At \$78.5 million, Transfers to Other Funds are \$11.4 million higher than the 2017-19 biennium. Nearly all this appropriation is for transfers from the General Fund to the Capital Reserve Fund for current and future capital related expenditures. The Adopted 2019-21 Budget also includes a \$25,000 transfer to the Customer Emergency Assistance Fund for the District share of that program's expenditures.

Contingency: The General Operating Contingency is reserved for any unanticipated but well-defined needs. The Adopted 2019-21 Budget includes \$15.0 million in contingency, representing 18% of the General Fund operating budget excluding Capital Outlay and Special Payments. Use of General Operating Contingency requires approval by the Board of Commissioners. In addition, Oregon Local Budget Law specifies certain public hearing and notice requirements depending on the size and scope of a budget adjustment involving contingency

B. CAPITAL IMPROVEMENT FUND

The Capital Improvement Fund does not maintain a fund balance. All reserves for current and future capital investments are held in the Capital Reserve Fund and transferred as needed. The sole resource for the Capital Improvement Fund is transfers from the Capital Reserve Fund budgeted at \$179.5 million matching the requirements listed below.

The Adopted 2019-21 Budget includes expenditures of \$63.8 million for the District's capital improvements including fleet and IT projects and \$115.7 million to fund joint venture capital improvements at the Joint Water Commission, the Willamette Intake Facilities, and continuing the development of the Willamette Water Supply System.

For a complete listing of District's capital projects in the Adopted 2019-21 Budget please see Section 15 *Capital Improvement Plan*.

C. CAPITAL RESERVE FUND

The Capital Reserve Fund is used to hold resources available for current and future capital investments for the District. Historically, the District held reserves in the General and the Capital Improvement Funds. 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.

Resources for the fund include an anticipated fund balance in the amount of \$86.2 million, system development charges, meter install fees and interest earnings totaling an additional \$17.4 million, and transfers in from the General Fund and Debt Proceeds Fund in the amount of \$103.5 million. The Capital Reserve Fund requirements include transfers out to the Capital Improvement Fund in the amount of \$179.5 million.

D. DEBT PROCEEDS FUND

The Debt Proceeds Fund is a new fund for the 2019-21 biennium. It is established to track the proceeds received by the District from United States Environmental Protections Agency's Water Infrastructure Finance and Innovation Act (WIFIA) loan program, revenue bonds, and other types of borrowings. The Adopted 2019-21 Budget includes \$25 million in WIFIA loan proceeds. No other debt issuance or borrowing is planned for 2019-21 biennium.

E. REVENUE BOND DEBT SERVICE FUND

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 cash redeemed its last outstanding revenue bonds in June of 2015 and does not currently plan to issue revenue bonds during the 2019-21 biennium. However, the fund will be maintained for future use.

F. CUSTOMER EMERGENCY ASSISTANCE FUND

The Customer Emergency Assistance (CEA) Fund was established as part of the 2015-17 Budget. Its purpose is to account for the resources and requirements used to provide limited emergency assistance to qualified

District customers. A third-party administrator reviews and qualifies requests from customers facing temporary financial hardships.

The resources for the CEA Fund are transferred in from the General Fund and come from voluntary contributions from customers, District staff, and the Board. The 2019-21 Adopted Budget includes resources for the CEA Fund totaling \$45,805, which includes a July 1, 2019 balance of \$9,065. The Adopted 2019-21 Budget appropriates \$33,000 for customer assistance and administrative costs. A projected amount of \$12,805 remaining unspent at the end of the 2019-21 biennium will remain in the CEA Fund to meet future customer assistance needs.

G. WILLAMETTE WATER SUPPLY SYSTEM FUND

The Willamette Water Supply System (WWSS) Fund is a new fund in the 2019-21 biennium and it replaces the Willamette Water Supply Program (WWSP) Fund. The WWSS Commission is a new joint venture formed by an intergovernmental agreement with the cities of Beaverton, Hillsboro, and the District. The WWSS Commission is established to design, construct, and operate the WWSS for the mutual benefit of the partners. The system is scheduled to be operational by July 2026.

Prior to establishment of the WWSS Commission, TVWD and Hillsboro began work to design and construct the WWSS under an interim design and construction agreement. TVWD served as the managing partner for that agreement and accounted for the resources and requirements of those activities in the WWSP Fund. With the establishment of the WWSS Commission, the assets and liabilities are transferred to the new joint venture. The District serves as the managing agency for the WWSS, and as such, appropriates the full costs for operations and capital outlay in the WWSS Fund, while the District's share of the operational and capital costs of the WWSS are budgeted in the General Fund and CIP Fund respectively. Additionally, the District's labor and overhead costs are reimbursed by the WWSS Fund to the General Fund.

The Adopted 2019-21 Budget for the WWSS Commission includes \$1.7 million in M&S and \$217.3 million in Capital outlays. The fund also has a general operating contingency of \$173,000. Further details about the WWSS Commission budget, including WWSS capital projects, is in Section 16 *Willamette Water Supply System Fund*.

H. WILLAMETTE INTAKE FACILITIES FUND

The Willamette Intake Facilities (WIF) Fund was established in April 2018, when the District entered into an intergovernmental agreement with cities of Beaverton, Hillsboro, Sherwood, Tigard and Wilsonville to create the WIF Commission. The WIF Commission's purpose is to own, operate, and maintain the assets of the WIF, which are used to draw and distribute water to the existing Willamette River Water Treatment Plant serving the cities of Sherwood and Wilsonville, and to the future Willamette Water Supply System (WWSS) Treatment Plant being constructed to serve the WWSS members which include Beaverton, Hillsboro, and TVWD.

The District serves as the managing agency of the WIF and is responsible for planning, budgeting, administration, accounting, and capital project management. The budget is set by the WIF governing body and administered by the District. Resources are funded through member dues for operations and capital contributions for Capital Outlay. The Adopted 2019-21 Budget includes \$346,615 in M&S appropriations and \$7.6 million in Capital Outlay. Further details about the WIF budget can be found in Section 17 *Willamette Intake Facilities Fund*.

I. WILLAMETTE RIVER WATER COALITION

This partnership 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 organization's purpose is to preserve water rights to the Willamette River as a potential future 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. The balance at July 1, 2019 is projected at \$20,794. The Adopted 2019-21 Budget includes M&S expenditures of \$167,000. The anticipated ending fund balance at June 30, 2021 is \$21,948. Additional information on the WRWC Fund is in Section 18 *Willamette River Water Coalition*.

J. WILLAMETTE WATER SUPPLY PROGRAM FUND - Retired

The Willamette Water Supply Program (WWSP) Fund was established in 2014 to track resources and expenditures associated with the development of the Willamette Water Supply System. Under the terms of an interim design and construction agreement with the City of Hillsboro, TVWD was the managing partner and appropriated all the costs while receiving reimbursements from Hillsboro. Effective July 1, 2019, the WWSS Commission joint venture supersedes the interim design and construction agreement, and therefore the WWSP Fund is retired with the 2019-21 biennium.

K. FINANCIAL POSITION AND FUND BALANCES

The District is beginning the 2019-21 biennium in a strong financial position. Combined beginning fund balances total \$133 million. These strong balances allow the District to continue to fund planned capital expenditures while taking a deliberate and comprehensive approach to its future debt issuance plans and debt program development.

Factors contributing to this current position include strong water sales – trending more than \$14 million above 2015-17 budget; system development charges – trending \$9.8 million above budget; and lower overall operating and capital spending. Capital expenditures, in particular, can vary based on the timing and final scope and design of projects. Additionally, several of the pipeline projects for the WWSS are being constructed in partnership with Washington County road projects, and are therefore affected by the County's schedule.

The combined 2019-21 ending fund balance primarily held in the General and Capital Reserve Funds is estimated to be \$39.7 million. These resources will be reserved for future capital expenditures.

The following pages provide summary information on all the District funds. The tables on pages 6 and 7 of this section display a combined summary of all funds for the Adopted 2019-21 Budget in comparison to the current Adopted 2017-19 Budget and the actual results for the 2015-17 biennium. Pages 8 and 9 provide fund by fund detail for the Adopted 2019-21 Budget. Beginning on page 10, additional historical information and appropriation detail for all the District's funds is provided.

ALL FUNDS SUMMARY

	1st Preceding Biennium Actual	Prior Adopted Revised Biennial	Biennial Adopted
RESOURCES			
	<u>2015-2017</u>	<u>2017-2019</u>	<u>2019-2021</u>
Beginning Fund Balance	85,686,250	100,227,872	132,950,815
Management Reserve	-	2,588,788	-
Tot. Beg. Fund Bal & Reserves:	85,686,250	102,816,660	132,950,815
Water Service Charges	101,190,314	122,275,000	149,248,486
Right of way fee collections	241,891	1,760,350	1,446,000
Admin. Fees	1,315,800	1,210,530	1,178,849
Other Revenues	1,073,442	581,120	771,510
Contract Reimbursements	4,735,239	3,173,910	5,198,492
Overhead charges to other funds	6,441,752	7,163,988	10,194,616
Total Misc. Revenues:	13,808,124	13,889,898	18,789,467
Meter/Service Installations	2,210,220	2,233,000	2,368,990
System Development Charges	16,958,432	10,741,700	11,426,151
Contributed Capital	13,940,696	57,500,716	224,854,690
Interest Earnings	1,781,644	2,961,673	4,199,254
Tot. Operating Resources	149,889,430	209,601,987	410,887,038
Tot. Resources before trans.	235,575,680	312,418,647	543,837,852
Debt Resources			
Revenue Bond Sale	-	-	-
WIFIA Draw	-	-	25,000,000
Total Debt Resources			25,000,000
TRANSFERS IN FROM:			
General Fund	84,850,750	67,334,000	78,482,822
Capital Improvement Fund	-	5,460,289	-
Water Supply Fund	-	-	-
Revenue Bond Fund	-	-	-
Capital Reserve Fund	28,042,715	122,700,051	179,522,721
Debt Proceeds Fund	-	-	25,000,000
WRWC	-	-	-
Cust. Emergency Asst. Fund	-	-	-
Total Transfers In:	112,893,465	195,494,340	283,005,543
TOTAL RESOURCES	348,469,145	507,912,987	851,843,395

ALL FUNDS SUMMARY

	1st Preceding Biennium Actual	Prior Adopted Revised Biennial	Biennial Adopted
REQUIREMENTS	<u>2015-2017</u>	<u>2017-2019</u>	<u>2019-2021</u>
Operating Expenditures:			
Personnel Services	31,219,216	40,052,089	43,536,651
Materials & Services	33,746,999	37,429,378	44,391,964
Total Operating Expenditures:	64,966,215	77,481,467	87,928,615
Capital Expenditures:			
Capital Outlay	61,764,542	174,881,292	404,589,611
Debt Service	-	-	-
Total Capital Expenditures:	61,764,542	174,881,292	404,589,611
Special Payments			
Special Payments	336,823	1,760,350	21,446,000
Tot. Expend. before trans.	127,067,579	254,123,109	513,964,226
TRANSFERS OUT TO:			
General Fund		5,460,289	-
Capital Improvements Fund	5,146,339	38,611,964	179,522,721
Water Supply Fund	22,896,376	84,088,087	-
Revenue Bond Fund	-	-	-
Capital Reserve Fund	84,830,750	67,300,000	103,457,822
WRWC	-	-	-
Customer Emergency Assistance Fund	20,000	34,000	25,000
Total Transfers Out:	112,873,465	195,494,340	283,005,543
Contingency	-	14,741,900	15,209,000
TOTAL APPROPRIATIONS	239,941,044	464,359,349	812,178,769
(Expend.+Trans+Conting.)			
Program Reserve		-	-
Ending Fund Balance:	108,528,101	43,553,638	39,664,627
TOTAL REQUIREMENTS	348,469,145	507,912,987	851,843,395

ALL FUNDS SUMMARY BY FUND: 2019-2021

RESOURCES

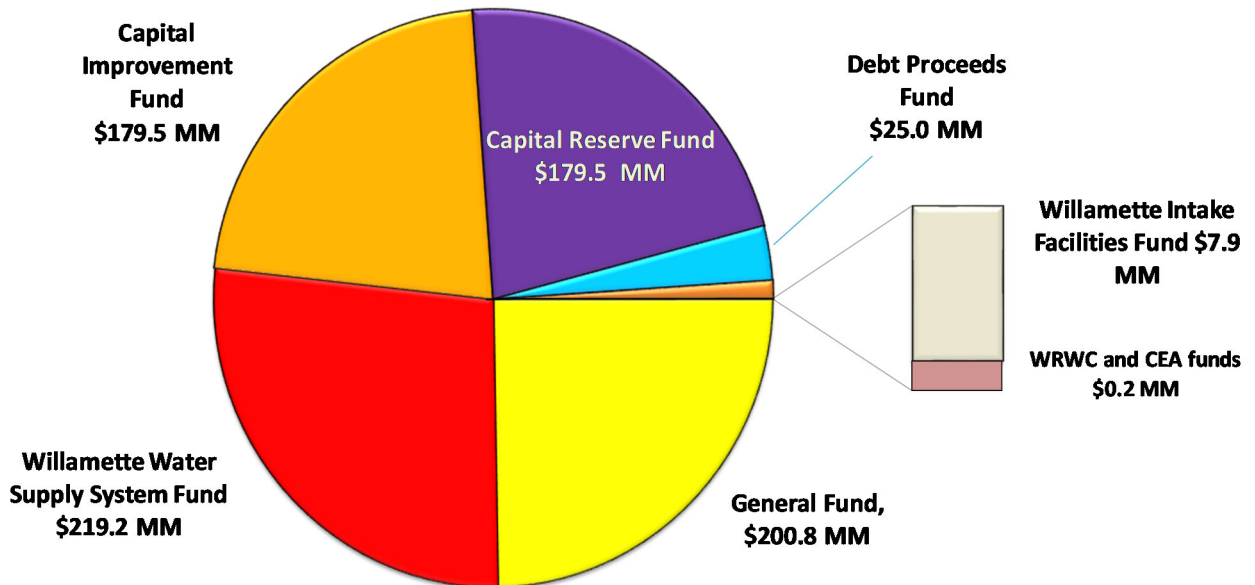
									TOTAL
	General Fund	Capital Improvements	Capital Reserve	Debt Proceeds	WRWC	Customer Emergency Assistance	Water Intake Facilities	Willamette Water Supply System	ALL FUNDS
Beginning Fund Balance	46,685,284	-	86,235,671	-	20,794	9,065	-	-	132,950,815
Management Reserve	-	-	-	-	-	-	-	-	-
Tot. Beg. Fd. Bal & Reserves:	46,685,284	-	86,235,671	-	20,794	9,065	-	-	132,950,815
Water Service Charges	149,248,486	-	-	-	-	-	-	-	149,248,486
Right of way fee collections	1,446,000	-	-	-	-	-	-	-	1,446,000
Admin. Fees	1,178,849	-	-	-	-	-	-	-	1,178,849
Other Revenues	592,770	-	-	-	167,000	11,740	-	-	771,510
Contract Reimbursements	2,928,724	-	-	-	-	-	382,615	1,887,154	5,198,492
Overhead charges to other funds	10,194,616	-	-	-	-	-	-	-	10,194,616
Total Misc. Revenues:	16,340,959	-	-	-	167,000	11,740	382,615	1,887,154	18,789,467
Meter/Service Installations	-	-	2,368,990	-	-	-	-	-	2,368,990
System Development Charges	-	-	11,426,151	-	-	-	-	-	11,426,151
Contributed Capital	-	-	-	-	-	-	7,557,825	217,296,865	224,854,690
Interest Earnings	585,000	-	3,613,100	-	1,154	-	-	-	4,199,254
Tot. Operating Resources	166,174,445	-	17,408,241	-	168,154	11,740	7,940,440	219,184,019	410,887,038
Tot. Resources before trans.	212,859,729	-	103,643,912	-	188,948	20,805	7,940,440	219,184,019	543,837,852
Debt Resources									
Revenue Bond Sale	-	-	-	-	-	-	-	-	-
WIFIA Draw	-	-	-	25,000,000	-	-	-	-	25,000,000
Total Debt Resources	-	-	-	25,000,000	-	-	-	-	25,000,000
TRANSFERS IN FROM:									
General Fund	-	-	78,457,822	-	-	25,000	-	-	78,482,822
Capital Improvement Fund	-	-	-	-	-	-	-	-	-
Water Supply Fund	-	-	-	-	-	-	-	-	-
Revenue Bond Fund	-	-	-	-	-	-	-	-	-
Capital Reserve Fund	-	179,522,721	-	-	-	-	-	-	179,522,721
Debt Proceeds Fund	-	-	25,000,000	-	-	-	-	-	25,000,000
WRWC	-	-	-	-	-	-	-	-	-
Cust. Emergency Asst. Fund	-	-	-	-	-	-	-	-	-
Total Transfers In:	-	179,522,721	103,457,822	-	-	25,000	-	-	283,005,543
TOTAL RESOURCES	212,859,729	179,522,721	207,101,734	25,000,000	188,948	45,805	7,940,440	219,184,019	851,843,395

ALL FUNDS SUMMARY BY FUND: 2019-2021

REQUIREMENTS

	General Fund	Capital		Debt Proceeds	WRWC	Cust. Emerg.	Water Intake	Willamette	TOTAL
		Improvements	Capital Reserve			Asst	Facilities	Water Supply	
								System	ALL FUNDS
Operating Expenditures:									
Personnel Services	43,536,651	-	-	-	167,000	33,000	346,615	1,714,154	43,536,651
Materials & Services	42,131,195	-	-	-	-	-	-	-	44,391,964
Total Operating Expenditures:	85,667,846	-	-	-	167,000	33,000	346,615	1,714,154	87,928,615
Capital Expenditures:									
Capital Outlay	212,200	179,522,721	-	-	-	-	7,557,825	217,296,865	404,589,611
Debt Service	-	-	-	-	-	-	-	-	-
Total Capital Expenditures:	212,200	179,522,721	-	-	-	-	7,557,825	217,296,865	404,589,611
Special Payments:									
ROW Fees	1,446,000	-	-	-	-	-	-	-	1,446,000
PERS Side Account	20,000,000	-	-	-	-	-	-	-	20,000,000
Tot. Expend. before trans.	107,326,046	179,522,721	-	-	167,000	33,000	7,904,440	219,011,019	513,964,226
TRANSFERS OUT TO:									
General Fund	-	-	-	-	-	-	-	-	-
Capital Improvement Fund	-	-	179,522,721	-	-	-	-	-	179,522,721
Water Supply Fund	-	-	-	-	-	-	-	-	-
Revenue Bond Fund	-	-	-	-	-	-	-	-	-
Capital Reserve Fund	78,457,822	-	-	25,000,000	-	-	-	-	103,457,822
WRWC	-	-	-	-	-	-	-	-	-
Customer Emergency Assistance Fund	25,000	-	-	-	-	-	-	-	25,000
Total Transfers Out:	78,482,822	-	179,522,721	25,000,000	-	-	-	-	283,005,543
Contingency	15,000,000	-	-	-	-	-	36,000	173,000	15,209,000
TOTAL APPROPRIATIONS (Expend.+Trans+Conting.)	200,808,868	179,522,721	179,522,721	25,000,000	167,000	33,000	7,940,440	219,184,019	812,178,769
Management Reserve	-	-	-	-	-	-	-	-	-
Ending Fund Balance:	12,050,861	-	27,579,013	-	21,948	12,805	-	-	39,664,627
TOTAL REQUIREMENTS	212,859,729	179,522,721	207,101,734	25,000,000	188,948	45,805	7,940,440	219,184,019	851,843,395

Adopted 2019 - 21 Budget Appropriations by Fund



RESOURCES SUMMARY

GENERAL FUND
Fund 01

FORM LB-20

TUALATIN VALLEY WATER DISTRICT

ACTUAL 13-15	HISTORICAL DATA		I T E M	BIENNIAL BUDGET FOR 2019-2021		
	ACTUAL 15-17	AMENDED BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
\$60,532,011	\$64,612,132	\$33,270,658	BEGINNING FUND BALANCE			
			NET WORKING CAPITAL	\$46,685,284	\$46,685,284	\$46,685,284
			OTHER RESOURCES			
\$76,038,340	\$101,190,314	\$122,275,000	WATER SALES	\$149,248,486	\$149,248,486	\$149,248,486
	\$241,891	\$1,760,350	RIGHT OF WAY FEE COLLECTIONS	\$1,446,000	\$1,446,000	\$1,446,000
\$988,460	\$1,315,800	\$1,210,530	ADMINISTRATIVE FEES	\$1,178,849	\$1,178,849	\$1,178,849
\$11,679,670	\$0	\$0	SYSTEM DEVELOPMENT CHARGES	\$0	\$0	\$0
\$500,969	\$786,114	\$459,400	OTHER RESOURCES	\$592,770	\$592,770	\$592,770
\$808,228	\$530,606	\$1,631,800	INTEREST EARNINGS	\$585,000	\$585,000	\$585,000
\$3,352,670	\$3,017,652	\$2,760,600	CONTRACT REIMBURSEMENTS	\$2,928,724	\$2,928,724	\$2,928,724
\$5,949,409	\$6,441,752	\$7,163,988	OVERHEAD CHARGES TO CONSTRUCTION	\$10,194,616	\$10,194,616	\$10,194,616
		\$5,460,289	TRANSFER IN FROM CAP IMP FUND - CAPITAL INV. IN JOINT VENTURE	\$0	\$0	\$0
(\$542,470)			LOSS IN JOINT VENTURES			
\$374			Residual Equity Transfer			
\$836,501			Deposits returned from other entities			
\$160,144,162	\$178,136,261	\$175,992,615	TOTAL RESOURCES	\$212,859,729	\$212,859,729	\$212,859,729

REQUIREMENTS SUMMARY

FORM LB-30			GENERAL FUND Fund 01		TUALATIN VALLEY WATER DISTRICT		
HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021			
ACTUAL 13-15	ACTUAL 15-17	AMENDED BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED	
\$28,258,491	\$31,219,216	\$40,052,080	PERSONNEL SERVICES	\$43,536,651	\$43,536,651	\$43,536,651	
\$25,928,246	\$29,902,883	\$36,384,982	MATERIALS & SERVICES	\$42,131,195	\$42,131,195	\$42,131,195	
\$1,611,704	\$456,784	\$602,300	CAPITAL OUTLAY	\$212,200	\$212,200	\$212,200	
	\$336,823	\$1,760,350	SPECIAL PAYMENTS, ROW FEES	\$1,446,000	\$1,446,000	\$1,446,000	
			SPECIAL PAYMENTS, PERS SIDE ACCOUNT CONTRIBUTIONS	\$20,000,000	\$20,000,000	\$20,000,000	
			TRANSFERS TO OTHER FUNDS				
\$28,593,263	\$84,830,750	\$67,300,000	TO CAPITAL IMPROVEMENT/RESERVE FUNDS	\$78,457,822	\$78,457,822	\$78,457,822	
\$4,003,919		\$0	TO WILLAMETTE WATER SUPPLY FUND	-	-	-	
	\$20,000	\$34,000	TO CUSTOMER EMERGENCY ASSISTANCE FUND	25,000	25,000	25,000	
<u>\$7,136,408</u>	<u>\$0</u>	<u>\$0</u>	TO REVENUE BOND DEBT SERVICE FUND	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	
\$39,733,590	\$84,850,750	\$67,334,000	TOTAL TRANSFERS	\$78,482,822	\$78,482,822	\$78,482,822	
		\$14,729,000	GENERAL OPERATING CONTINGENCY	\$15,000,000	\$15,000,000	\$15,000,000	
\$39,733,590	\$85,187,573	\$83,823,350	TOTAL SPECIAL PAYMENTS, TRANSFERS & CONTINGENCY	\$114,928,822	\$114,928,822	\$114,928,822	
\$95,532,031	\$146,766,456	\$160,862,712	TOTAL EXPENDITURES	\$200,808,868	\$200,808,868	\$200,808,868	
		\$0	RATE STABILIZATION	\$0	\$0	\$0	
\$64,612,131	\$31,369,805	\$15,129,903	UNAPPROPRIATED FUND BALANCE	\$12,050,861	\$12,050,861	\$12,050,861	
\$160,144,162	\$178,136,261	\$175,992,615	TOTAL REQUIREMENTS	\$212,859,729	\$212,859,729	\$212,859,729	

PERSONNEL SERVICES

FORM LB-31			GENERAL FUND Fund 01	TUALATIN VALLEY WATER DISTRICT BIENNIAL BUDGET FOR 2019-2021		
HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	AMENDED BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
PERSONNEL SERVICES						
ADMINISTRATIVE SERVICES DEPARTMENT						
\$1,883,927	\$1,793,993	\$1,450,330	GENERAL SERVICES	\$1,646,779	\$1,646,779	\$1,646,779
\$0	\$1,128,547	\$1,269,186	HUMAN RESOURCES	\$1,321,621	\$1,321,621	\$1,321,621
\$0	\$627,799	\$705,006	RISK MANAGEMENT	\$720,957	\$720,957	\$720,957
\$1,883,927	\$3,550,339	\$3,424,522	ADMINISTRATIVE SERVICES DEPARTMENT SUBTOTAL	\$3,689,357	\$3,689,357	\$3,689,357
CUSTOMER SERVICE DEPARTMENT						
\$1,242,405	\$670,058	\$938,562	General Services	\$1,005,351	\$1,005,351	\$1,005,351
\$2,163,521	\$2,261,427	\$2,743,791	Customer Service & Utility Billing	\$3,435,492	\$3,435,492	\$3,435,492
\$2,730,565	\$2,889,207	\$3,500,644	Field Customer Service	\$3,618,604	\$3,618,604	\$3,618,604
\$0	\$0	\$905,971	Communications	\$986,238	\$986,238	\$986,238
\$6,136,491	\$5,820,692	\$8,088,968	CUSTOMER SERVICE DEPARTMENT SUBTOTAL	\$9,045,685	\$9,045,685	\$9,045,685
ENGINEERING AND OPERATIONS DEPARTMENT						
\$1,281,063	\$490,865	\$505,742	General Services	\$558,748	\$558,748	\$558,748
\$5,012,922	\$5,331,601	\$4,524,070	System Operations	\$5,272,462	\$5,272,462	\$5,272,462
\$2,989,124	\$2,793,444	\$2,951,345	Engineering	\$3,543,785	\$3,543,785	\$3,543,785
\$1,142,774	\$1,054,906	\$1,497,739	Water Resources	\$1,648,220	\$1,648,220	\$1,648,220
\$1,046,908	\$1,194,011	\$2,549,790	Asset Management	\$2,488,632	\$2,488,632	\$2,488,632
\$0	\$792,714	\$989,890	Water Operations	\$535,207	\$535,207	\$535,207
\$2,632,923	\$2,793,694	\$4,329,311	Construction And Maintenance	\$4,160,366	\$4,160,366	\$4,160,366
\$14,105,714	\$14,451,235	\$17,347,887	ENGINEERING AND OPERATIONS DEPARTMENT SUBTOTAL	\$18,207,420	\$18,207,420	\$18,207,420
FINANCIAL SERVICES DEPARTMENT						
\$771,295	\$499,106	\$765,994	General Services	\$791,473	\$791,473	\$791,473
\$2,245,862	\$2,600,084	\$3,337,436	Finance And Accounting	\$3,589,569	<u>\$3,589,569</u>	<u>\$3,589,569</u>
\$3,017,157	\$3,099,190	\$4,103,430	FINANCIAL SERVICES DEPARTMENT SUBTOTAL	\$4,381,042	\$4,381,042	\$4,381,042
\$1,212,489	\$2,200,965	\$3,898,713	WATER SUPPLY PROGRAM SUBTOTAL	\$4,798,806	\$4,798,806	\$4,798,806
\$1,902,713	\$2,096,794	\$3,188,560	INFORMATION TECHNOLOGY DEPARTMENT SUBTOTAL	\$3,414,341	\$3,414,341	\$3,414,341
\$28,258,491	\$31,219,215	\$40,052,080	TOTAL PERSONNEL SERVICES	\$43,536,651	\$43,536,651	\$43,536,651

MATERIALS & SERVICES

FORM LB-31			GENERAL FUND Fund 01	TUALATIN VALLEY WATER DISTRICT		
HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	AMENDED BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			MATERIALS & SERVICES			
\$15,175,539	\$18,744,720	\$22,351,335	OTHER GENERAL FUND M&S: WATER PURCHASES	\$24,364,600	\$24,364,600	\$24,364,600
			ADMINISTRATIVE SERVICES DEPARTMENT			
\$928,549	\$885,665	\$867,313	General Services	\$2,265,479	\$2,265,479	\$2,265,479
\$0	\$188,468	\$239,447	Human Resources	\$512,870	\$512,870	\$512,870
\$0	\$648,698	\$747,820	Risk Management	\$832,620	\$832,620	\$832,620
\$928,549	\$1,722,831	\$1,854,580	ADMINISTRATIVE SERVICES DEPT. SUBTOTAL	\$3,610,969	\$3,610,969	\$3,610,969
			CUSTOMER SERVICE DEPARTMENT			
\$770,601	\$430,122	\$551,810	General Services	\$511,000	\$511,000	\$511,000
\$1,128,347	\$1,402,850	\$1,519,193	Customer Service	\$1,521,625	\$1,521,625	\$1,521,625
\$139,663	\$165,329	\$226,533	Field Customer Service	\$233,660	\$233,660	\$233,660
\$0	\$0	\$385,140	Communications	\$267,340	\$267,340	\$267,340
\$2,038,611	\$1,998,301	\$2,682,676	CUSTOMER SERVICE DEPT. SUBTOTAL	\$2,533,625	\$2,533,625	\$2,533,625
			ENGINEERING AND OPERATIONS DEPARTMENT			
\$1,422,467	\$419,900	\$992,490	General Services	\$1,117,970	\$1,117,970	\$1,117,970
\$610,350	\$870,056	\$795,040	System Operations	\$990,900	\$990,900	\$990,900
\$14,401	\$18,257	\$27,500	Engineering	\$9,500	\$9,500	\$9,500
\$425,609	\$631,476	\$843,725	Water Resources	\$1,117,323	\$1,117,323	\$1,117,323
\$1,454,512	\$1,482,943	\$1,762,850	Asset Management	\$2,287,079	\$2,287,079	\$2,287,079
\$126,745	\$208,077	\$120,330	Water Operations	\$191,000	\$191,000	\$191,000
\$778,841	\$654,391	\$733,100	Construction and Maintenance	\$1,062,800	\$1,062,800	\$1,062,800
\$5,149,408	\$4,285,100	\$5,275,035	ENGINEERING AND OPERATIONS DEPARTMENT SUBTOTAL	\$6,776,572	\$6,776,572	\$6,776,572
			FINANCE DEPARTMENT			
\$426,933	\$497,124	\$418,540	General Services	\$363,735	\$363,735	\$363,735
\$1,278,108	\$1,710,901	\$1,891,020	Finance And Accounting	\$2,369,100	\$2,369,100	\$2,369,100
\$1,705,041	\$2,208,025	\$2,309,560	FINANCE DEPARTMENT SUBTOTAL	\$2,732,834	\$2,732,834	\$2,732,834
\$286,648	\$37,541	\$50,706	WATER SUPPLY PROGRAM SUBTOTAL	\$72,095	\$72,095	\$72,095
\$644,454	\$906,365	\$1,861,089	INFORMATION TECHNOLOGY SERVICES DEPARTMENT SUBTOTAL	\$2,040,500	\$2,040,500	\$2,040,500
\$25,928,250	\$29,902,883	\$36,384,981	TOTAL MATERIALS & SERVICES	\$42,131,195	\$42,131,195	\$42,131,195

CAPITAL OUTLAY
CAPITAL OUTLAY, TRANSFERS & CONTINGENCY
GENERAL FUND

FORM LB-31

Fund 01

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	AMENDED BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			CAPITAL OUTLAY			
\$0	\$0	\$0	LAND	\$0	\$0	\$0
\$0	\$0	\$0	BUILDINGS	\$0	\$0	\$0
\$0	\$0	\$0	OTHER IMPROVEMENTS	\$0	\$0	\$0
\$1,611,705	\$456,784	\$602,300	EQUIPMENT	\$212,200	\$212,200	\$212,200
\$1,611,705	\$456,784	\$602,300	TOTAL CAPITAL OUTLAY	\$212,200	\$212,200	\$212,200
	\$336,823	\$1,760,350	SPECIAL PAYMENTS (ROW FEES)	\$1,446,000	\$1,446,000	\$1,446,000
			SPECIAL PAYMENTS (PERS SIDE ACCOUNTS)	\$20,000,000	\$20,000,000	\$20,000,000
			TRANSFERS TO OTHER FUNDS			
\$28,593,263	\$84,830,750	\$67,300,000	TO CAPITAL IMPROVEMENT/RESERVE FUNDS	\$78,457,822	\$78,457,822	\$78,457,822
\$4,003,919	\$0	\$0	TO WILLAMETTE WATER SUPPLY FUND	\$0	\$0	\$0
	\$20,000	\$34,000	TO CUSTOMER EMERGENCY ASSISTANCE FUND	\$25,000	\$25,000	\$25,000
<u>\$7,136,408</u>	<u>\$0</u>	<u>\$0</u>	TO REVENUE BOND DEBT SERVICE FUND	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
\$39,733,590	\$84,850,750	\$67,334,000	TOTAL TRANSFERS	\$78,482,822	\$78,482,822	\$78,482,822
		<u>\$14,729,000</u>	<u>OPERATING CONTINGENCY</u>	<u>\$15,000,000</u>	<u>\$15,000,000</u>	<u>\$15,000,000</u>
\$95,532,036	\$146,766,455	\$160,862,711	TOTAL EXPENDITURES	\$200,808,868	\$200,808,868	\$200,808,868
<u>\$64,612,132</u>	<u>\$31,369,794</u>	<u>\$15,129,894</u>	UNAPPROPRIATED ENDING FUND BALANCE	<u>\$12,050,861</u>	<u>\$12,050,861</u>	<u>\$12,050,861</u>
\$160,144,168	\$178,136,249	\$175,992,605	TOTAL REQUIREMENTS	\$212,859,729	\$212,859,729	\$212,859,729

CAPITAL PROJECT FUND
CAPITAL IMPROVEMENT FUND

FORM LB-10

Fund 11

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
RESOURCES						
\$30,441,838	\$20,994,493	\$0	BEGINNING FUND BALANCE	\$0	\$0	\$0
\$337,705	\$98,688	\$0	INTEREST INCOME	\$0	\$0	\$0
\$1,894,127	\$48,011	\$0	CONTRIBUTED CAPITAL	\$0	\$0	\$0
\$0	\$0	\$0	METER & SERVICE INSTALLATIONS	\$0	\$0	\$0
\$0	\$0	\$0	OTHER REVENUE	\$0	\$0	\$0
TRANSFERS:						
\$28,593,263	\$5,146,339	\$38,611,964	FROM CAPITAL RESERVE FUND	\$179,522,721	\$179,522,721	\$179,522,721
			FROM GENERAL FUND			
			FROM BOND PROCEEDS FUND			
\$61,266,933	\$26,287,531	\$38,611,964	TOTAL RESOURCES	\$179,522,721	\$179,522,721	\$179,522,721
REQUIREMENTS						
CAPITAL OUTLAY:						
\$6,144,763	\$2,666,486	\$155,300	SOURCE PROJECTS, TVWD	\$103,500	\$103,500	\$103,500
\$13,335,528	\$7,826,326	\$12,622,500	STORAGE (RESERVOIR) PROJECTS	\$2,504,400	\$2,504,400	\$2,504,400
\$8,990,137	\$6,556,056	\$1,374,000	PUMP STATIONS	\$5,900,500	\$5,900,500	\$5,900,500
		\$917,600	VALVES & VAULTS & OTHER EQUIPMENT	\$0	\$0	\$0
\$9,176,217	\$5,653,774	\$10,576,475	PIPELINE	\$40,874,233	\$40,874,233	\$40,874,233
\$435,569	\$895,092	\$4,562,800	FACILITIES, FLEET & IT	\$11,092,900	\$11,092,900	\$11,092,900
		\$0	LAND	\$0	\$0	\$0
\$2,190,226	\$2,689,796	\$2,943,000	METERS & SERVICES	\$3,334,000	\$3,334,000	\$3,334,000
			JOINT VENTURE PROJECTS	\$115,713,188	\$115,713,188	\$115,713,188
\$40,272,440	\$26,287,531	\$33,151,675	TOTAL CAPITAL OUTLAY	\$179,522,721	\$179,522,721	\$179,522,721
		\$5,460,289	TRANSFER TO GENERAL FUND FOR JOINT VENTURES			
\$40,272,440	\$26,287,531	\$38,611,964	TOTAL REQUIREMENTS	\$179,522,721	\$179,522,721	\$179,522,721
\$20,994,493	\$0	\$0	TOTAL ENDING BALANCE	\$0	\$0	\$0
\$61,266,933	\$26,287,531	\$33,151,675	T O T A L	\$179,522,721	\$179,522,721	\$179,522,721

CAPITAL PROJECT FUND
RESOURCES AND EXPENDITURES
WATER SUPPLY FUND

FORM LB-10

Fund 15

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			RESOURCES			
\$0	\$0	\$0	BEGINNING FUND BALANCE	\$0	\$0	\$0
\$2,439,178	\$1,717,587	\$0	CONTRACT REIMBURSEMENTS	\$0	\$0	\$0
\$608,440	\$13,892,685	\$55,034,651	CONTRIBUTED CAPITAL	\$0	\$0	\$0
\$4,003,919	\$22,896,376	\$84,088,087	INTERFUND TRANSFERS	\$0	\$0	\$0
		\$303,703	MISCELLANEOUS INCOME	\$0	\$0	\$0
\$7,051,537	\$38,506,648	\$139,426,441	TOTAL RESOURCES	\$0	\$0	\$0
			EXPENDITURES			
\$0	\$0	\$0	TOTAL PERSONNEL SERVICES	\$0	\$0	\$0
\$4,275,252	\$3,486,421	\$765,189	TOTAL MATERIALS & SERVICES	\$0	\$0	\$0
\$2,776,285	\$35,020,227	\$138,661,252	TOTAL CAPITAL OUTLAY	\$0	\$0	\$0
		\$0	OPERATING CONTINGENCY	\$0	\$0	\$0
\$7,051,537	\$38,506,648	\$139,426,441	TOTAL EXPENDITURES	\$0	\$0	\$0
\$0	\$0	\$0	UNAPPROPRIATED ENDING BALANCE	\$0	\$0	\$0
\$7,051,537	\$38,506,648	\$139,426,441	TOTAL REQUIREMENTS	\$0	\$0	\$0

SPECIAL REVENUE FUND
CAPITAL RESERVE FUND

FORM LB-10

Fund 18

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	AMENDED BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			RESOURCES			
	\$0	\$66,927,909	BEGINNING FUND BALANCE	\$86,235,671	86,235,671	86,235,671
	\$0	\$2,588,788	MANAGEMENT RESERVE	\$0	0	0
	\$1,150,552	\$1,329,400	INTEREST INCOME	\$3,613,100	3,613,100	3,613,100
	\$2,210,220	\$2,233,000	CONTRIBUTED CAPITAL (I.E. METERS & SERVICES)	\$2,368,990	2,368,990	2,368,990
	\$16,958,432	\$10,741,700	SYSTEM DEVELOPMENT CHARGES	\$11,426,151	11,426,151	11,426,151
	\$84,830,750	\$67,300,000	TRANSFERS IN: FROM GENERAL FUND FOR CAPITAL FROM DEBT PROCEEDS FUND	\$78,457,822 \$25,000,000	\$78,457,822 \$25,000,000	\$78,457,822 \$25,000,000
\$0	\$105,149,954	\$151,120,797	TOTAL RESOURCES	\$207,101,734	207,101,734	207,101,734
			EXPENDITURES			
	\$5,146,339	\$38,611,964	TRANSFERS OUT OF FUND: TRANSFERS TO CAPITAL IMPROVEMENT FUND	\$179,522,721	179,522,721	179,522,721
	\$22,896,376	\$84,088,087	TRANSFERS TO WATER SUPPLY FUND	\$0	0	0
			TRANSFERS TO WILLAMETTE INTAKE FACILITIES			
			TRANSFERS TO WILLAMETTE WATER SUPPLY SYSTEM			
	\$28,042,715	\$122,700,051	TOTAL TRANSFERS OUT OF FUND	\$179,522,721	179,522,721	179,522,721
		\$2,588,788	MANAGEMENT RESERVE --RESTRICTED	\$0	0	0
\$0	\$77,107,239	\$25,831,958	UNRESTRICTED ENDING BALANCE	\$27,579,013	\$27,579,013	\$27,579,013
\$0	\$105,149,954	\$151,120,797	T O T A L	\$207,101,734	207,101,734	207,101,734

SPECIAL REVENUE FUND
DEBT PROCEEDS FUND

FORM LB-10

Fund 22

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	AMENDED BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			RESOURCES			
			BEGINNING FUND BALANCE	\$0	0	0
			INTEREST INCOME	\$0	0	0
			DEBT PROCEEDS	\$25,000,000	25,000,000	25,000,000
\$0	\$0	\$0	TOTAL RESOURCES	\$25,000,000	25,000,000	25,000,000
			EXPENDITURES			
			TRANSFERS OUT OF FUND:			
			TRANSFERS TO CAPITAL IMPROVEMENT FUND	\$0	\$0	\$0
			TRANSFERS TO CAPITAL RESERVE FUND	\$25,000,000	\$25,000,000	\$25,000,000
			TRANSFERS TO WIF			
			TRANSFERS TO WWSS			
	\$0	\$0	TOTAL TRANSFERS OUT OF FUND	\$25,000,000	25,000,000	25,000,000
\$0	\$0	\$0	UNRESTRICTED ENDING BALANCE	\$0	\$0	\$0
\$0	\$0	\$0	T O T A L	\$25,000,000	\$25,000,000	\$25,000,000

DEBT SERVICE FUND
RESOURCES & EXPENDITURES
REVENUE BOND DEBT SERVICE FUND

FORM LB-10

Fund 31

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			I T E M	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	Revised BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			RESOURCES			
\$109,582	\$374	\$0	CASH ON HAND FOR REVENUE BONDS	\$0	\$0	\$0
\$7,136,408	\$0	\$0	TRANSFERS FROM GENERAL FUND	\$0	\$0	\$0
\$0	\$0	\$0	MISCELLANEOUS REVENUE - REV. BONDS	\$0	\$0	\$0
\$734	\$0	\$0	INTEREST ON INVESTMENTS	\$0	\$0	\$0
\$0	\$0	\$0	PROCEEDS FROM BOND SALE	\$0	\$0	\$0
		\$0	CONTINGENCY TRANSFER IN			
\$7,246,724	\$374	\$0	TOTAL RESOURCES	\$0	\$0	\$0
			REQUIREMENTS			
\$6,705,000	\$0	\$0	EXPENDITURE FOR BOND PRINCIPAL	\$0	\$0	\$0
\$541,350	\$0	\$0	EXPENDITURES FOR INTEREST	\$0	\$0	\$0
\$7,246,350	\$0	\$0	TOTAL EXPENDITURES - REVENUE BONDS	\$0	\$0	\$0
\$0	\$0	\$0	REVENUE BOND RESERVE	\$0	\$0	\$0
\$0	\$374	\$0	RESIDUAL EQUITY TRANSFER	\$0	\$0	\$0
\$374	\$0	\$0	ENDING BALANCE FOR REVENUE BONDS	\$0	\$0	\$0
\$7,246,724	\$374	\$0	TOTAL REQUIREMENTS	\$0	\$0	\$0

SUPPLEMENT

REVENUE BOND DEBT SERVICE FUND

Fund 31

TUALATIN VALLEY WATER DISTRICT

FORM LB-36

HISTORICAL DATA			SCHEDULE OF PAYMENTS ISSUE DATE PAYMENT DATES	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	Revised BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			-- PRINCIPAL PAYMENTS --			
			ISSUE DATE PAYMENT DATES -----			
\$0	\$0	\$0	12/01/02 06/01/14, 06/01/15	\$0	\$0	\$0
\$2,515,000	\$0	\$0	08/01/05 06/01/14, 06/01/15	\$0	\$0	\$0
\$4,190,000	\$0	\$0	Full Refunding of 2005 Bonds	\$0	\$0	\$0
\$6,705,000	\$0	\$0	TOTAL PRINCIPAL PAYMENTS	\$0	\$0	\$0
			-- INTEREST PAYMENTS --			
			ISSUE DATE PAYMENT DATES -----			
\$0	\$0	\$0	12/01/02 12/01/13, 06/01/14, 12/01/14, 06/01/15	\$0	\$0	\$0
\$541,350	\$0	\$0	08/01/05 12/01/13, 06/01/14, 12/01/14, 06/01/15	\$0	\$0	\$0
\$541,350	\$0	\$0	TOTAL INTEREST PAYMENTS	\$0	\$0	\$0

AGENCY FUND
RESOURCES & EXPENDITURES
WILLAMETTE RIVER WATER COALITION INTERNAL SERVICE FUND

FORM LB-10

Fund 41

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			ITEM	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	AmendedBUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			RESOURCES			
\$105,153	\$79,251	\$21,243	BEGINNING FUND BALANCE			
			NET WORKING CAPITAL (ACCRUAL)	\$20,794	\$20,794	\$20,794
\$1,183	\$1,545	\$473	EARNINGS FROM TEMP INVESTMENTS	\$1,154	\$1,154	\$1,154
\$199,300	\$267,713	\$107,000	CONTRIBUTIONS	\$167,000	\$167,000	\$167,000
			CAPITAL OUTLAY RECEIPTS			
			OTHER RESOURCES			
			TRANSFERS FROM GENERAL FUND			
\$305,636	\$348,509	\$128,716	TOTAL RESOURCES	\$188,948	\$188,948	\$188,948
			EXPENDITURES			
\$226,385	\$324,435	\$120,600	MATERIALS & SERVICES	\$167,000	\$167,000	\$167,000
\$0	\$0	\$0	CAPITAL OUTLAY	\$0	\$0	\$0
\$226,385	\$324,435	\$120,600	TOTAL EXPENDITURES	\$167,000	\$167,000	\$167,000
			EQUITY ACCOUNTS (Est'd % for Budget/dues)			
51,965	15,785	(\$3,158)	TUALATIN VALLEY WATER DISTRICT (66.12%)	\$10,475	\$10,475	\$10,475
5,159	1,567	(\$299)	CITY OF SHERWOOD (6.24%)	\$3,192	\$3,192	\$3,192
5,999	1,822	(\$343)	CITY OF TUALATIN (7.36%)	\$3,345	\$3,345	\$3,345
16,128	4,899	(\$985)	CITY OF TIGARD (20.28%)	\$4,935	\$4,935	\$4,935
0	0	\$0	TRANSFERS	\$0	\$0	\$0
		\$12,900	OPERATING CONTINGENCY	\$0	\$0	\$0
\$79,251	\$24,074	(\$4,784)	UNAPPROPRIATED ENDING BALANCE	\$21,948	\$21,948	\$21,948
\$305,636	\$348,509	\$128,716	TOTAL REQUIREMENTS	\$188,948	\$188,948	\$188,948

INTERNAL SERVICE FUND
 RESOURCES & EXPENDITURES
 CUSTOMER EMERGENCY ASSISTANCE FUND

FORM LB-10

Fund 43

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			ITEM	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
		\$8,062	RESOURCES BEGINNING FUND BALANCE	\$9,065	\$9,065	\$9,065
	\$18,042	\$14,000	CONTRIBUTIONS FROM CUSTOMERS	\$10,000	\$10,000	\$10,000
	\$253	\$0	INTEREST EARNINGS	\$0	\$0	\$0
	\$1,573	\$720	OTHER RESOURCES (CWS employee contributions)	\$1,740	\$1,740	\$1,740
	\$20,000	\$34,000	TRANSFERS FROM GENERAL FUND	\$25,000	\$25,000	\$25,000
\$0	\$39,868	\$56,782	TOTAL RESOURCES	\$45,805	\$45,805	\$45,805
			EXPENDITURES			
			MATERIALS & SERVICES			
	\$7,000	\$7,800	Payments to servicing agent	\$8,000	\$8,000	\$8,000
	\$26,260	\$41,200	Payments to customers	\$25,000	\$25,000	\$25,000
\$0	\$33,260	\$49,000	TOTAL EXPENDITURES	\$33,000	\$33,000	\$33,000
		\$0	OPERATING CONTINGENCY	\$0	\$0	\$0
\$0	\$6,608	\$7,782	UNAPPROPRIATED ENDING BALANCE	\$12,805	\$12,805	\$12,805
\$0	\$39,868	\$56,782	TOTAL REQUIREMENTS	\$45,805	\$45,805	\$45,805

INTERNAL SERVICE FUND
RESOURCES & EXPENDITURES
WILLAMETTE INTAKE FACILITIES FUND

FORM LB-10

Fund 44

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			ITEM	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
		\$0	RESOURCES BEGINNING FUND BALANCE	\$0	\$0	\$0
		\$109,607	CONTRACT REIMBURSEMENTS	\$382,615	\$382,615	\$382,615
		\$0	INTEREST EARNINGS	\$0	\$0	\$0
		\$2,466,065	CAPITAL CONTRIBUTIONS	\$7,557,825	\$7,557,825	\$7,557,825
			TRANSFERS FROM CAPITAL IMPROVEMENT FUND	\$0	\$0	\$0
			TRANSFERS FROM DEBT PROCEEDS FUND	\$0	\$0	\$0
\$0	\$0	\$2,575,672	TOTAL RESOURCES	\$7,940,440	\$7,940,440	\$7,940,440
			EXPENDITURES			
		\$109,607	MATERIALS & SERVICES	\$346,615	\$346,615	\$346,615
		\$2,466,065	CAPITAL OUTLAY	\$7,557,825	\$7,557,825	\$7,557,825
		\$0	OPERATING CONTINGENCY	\$36,000	\$36,000	\$36,000
\$0	\$0	\$2,575,672	TOTAL EXPENDITURES	\$7,940,440	\$7,940,440	\$7,940,440
\$0	\$0	\$0	UNAPPROPRIATED ENDING BALANCE	\$0	\$0	\$0
\$0	\$0	\$2,575,672	TOTAL REQUIREMENTS	\$7,940,440	\$7,940,440	\$7,940,440

INTERNAL SERVICE FUND
RESOURCES & EXPENDITURES
WILLAMETTE WATER SUPPLY SYSTEM FUND

FORM LB-10

Fund 45

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA			ITEM	BIENNIAL BUDGET FOR 2019-2021		
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19		2019-21 PROPOSED	2019-21 APPROVED	2019-21 ADOPTED
			RESOURCES			
		\$0	BEGINNING FUND BALANCE	\$0	\$0	\$0
		\$0	CONTRACT REIMBURSEMENTS	\$1,887,154	\$1,887,154	\$1,887,154
		\$0	INTEREST EARNINGS	\$0	\$0	\$0
		\$0	CONTRIBUTED CAPITAL	\$217,296,865	\$217,296,865	\$217,296,865
		\$0	TRANSFERS FROM CAPITAL RESERVE FUND	\$0	\$0	\$0
		\$0	TRANSFERS FROM BOND PROCEEDS FUND	\$0	\$0	\$0
\$0	\$0	\$0	TOTAL RESOURCES	\$219,184,019	\$219,184,019	\$219,184,019
			EXPENDITURES			
		\$0	MATERIALS & SERVICES	\$1,714,154	\$1,714,154	\$1,714,154
		\$0	CAPITAL OUTLAY	\$217,296,865	\$217,296,865	\$217,296,865
		\$0	OPERATING CONTINGENCY	\$173,000	\$173,000	\$173,000
\$0	\$0	\$0	TOTAL EXPENDITURES	\$219,184,019	\$219,184,019	\$219,184,019
\$0	\$0	\$0	UNAPPROPRIATED ENDING BALANCE	\$0	\$0	\$0
\$0	\$0	\$0	TOTAL REQUIREMENTS	\$219,184,019	\$219,184,019	\$219,184,019



TUALATIN VALLEY
WATER DISTRICT

SECTION 7

GENERAL FUND RESOURCES AND EXPENDITURES

The General Fund accounts for nearly all the operating costs of the District, and over \$200 million, or 25% of all District budgetary requirements. On a day-to-day basis, all administration, operations, and maintenance activity is accounted for in the General Fund.

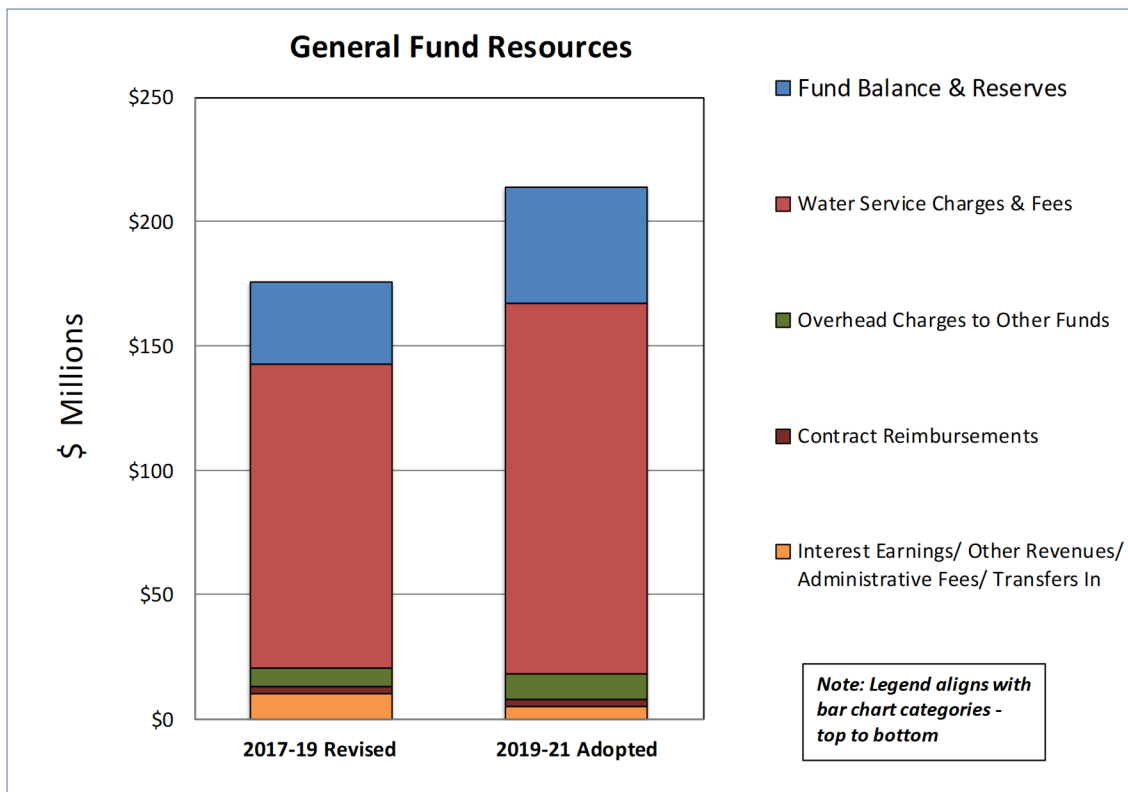
Resources for the General Fund include fund balances, contract reimbursements from partner agencies, interest earnings, and most significantly water service charges, which is the largest revenue source to the General Fund. Water service charges in the Adopted 2019-21 Budget are estimated at \$149.2 million. Water sales revenue is based on projected demands and the revenue requirements for the District’s operating and capital expenditure needs.

The District’s significant planned investments in the WWSP serve as the primary driver for developing water revenue increase projections. The water sales revenue in the Adopted 2019-21 Budget are based on rate revenue adjustments of 3.9% in each year of the biennium. (See page 5-7 in Section 5 *Multi-Year Financial Outlook*.) Approval of annual water rates and all other adjustments to the District’s rate and charges are subject to a separate Board action.

The General Fund also receives resources from the other funds. Overhead charges to other funds represent reimbursements made to the General Fund from the Capital Improvement Fund, the Willamette Water Supply System Fund, and the Willamette Intake Facilities Fund for capitalized labor, overhead, and the use of District equipment constructing capital assets. These resources are estimated to be \$10.2 million in the Adopted 2019-21 Budget.

An accounting change from years past has the accounting for the Capital Outlay for the Joint Water Commission not running through the General Fund. The District’s share of the Capital Outlay for the JWC is being accounted for in the Capital Improvement Fund as a Capital Outlay of the District for budgetary purposes. At each fiscal year-end, reclassification of the budgetary Capital Outlay for the all District’s ownership shares of Joint Ventures will be used to accommodate accounting under Generally Accepted Accounting Principles (GAAP).

As the graphic below shows, water sales revenue continues to be the District’s key resource.

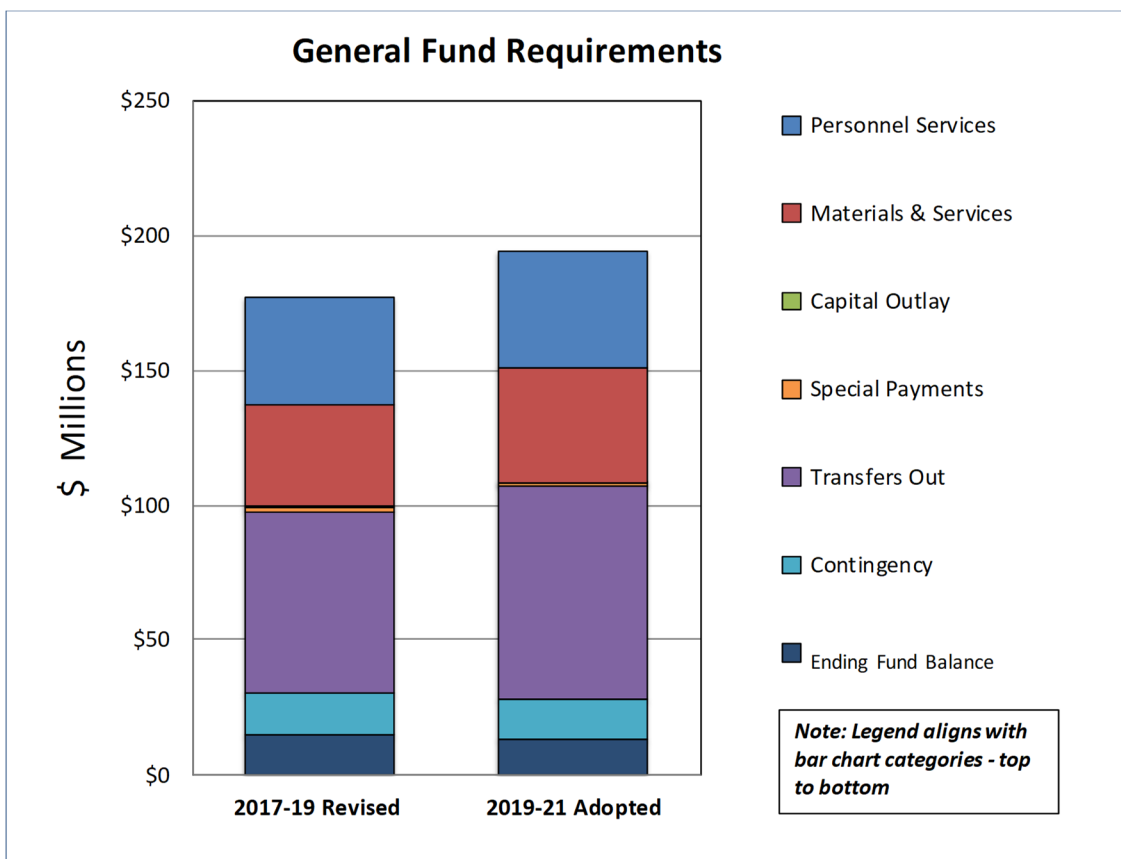


The requirements for the General Fund include Personnel Services (\$43.5 million) for the District's labor-related costs; Materials and Services (\$42.1 million) for purchased water and general operations and maintenance; Capital Outlay for equipment (\$212,000); Special Payments for utility right-of-way fees and Oregon Public Employee Retirement System (PERS) side account payments; Transfers to other funds to be held as reserves for capital expenditures; and a General Operating Contingency. More detail on the Adopted 2019-21 Budget for Personnel Services, Material and Services and Capital Outlay expenses can be found in Sections 8-14 *Purchased Water* and the six District departments.

The Special Payments appropriation category in the General Fund is used to pay utility right-of-way fees imposed by the cities of Beaverton, Hillsboro, and Tigard. These fees were implemented by the three cities during the latter part of the 2015-17 biennium. For the adopted 2019-21 biennium budget the appropriation for right-of-way fees is \$1,446,000. This is a decrease of over \$314k over the prior biennium due to the annexations by the City of Beaverton resulting in the withdrawal of 5,400 accounts.

Additionally, for the Adopted 2019-21 Budget, appropriations for Special Payments includes \$20 million for a new PERS side account. This side account reduces the District's unfunded actuarial liability (UAL) in future years as the account is used to offset current and future liabilities. (More detail on the PERS side account can be found on page 7-4).

The Adopted 2019-21 Budget for Transfers is \$78.5 million, representing the largest appropriation category in the General Fund. The transfer to the Capital Reserve Fund for current and future capital construction requirements is \$78.4 million. A \$25,000 transfer to the Customer Emergency Assistance represents the District share of support to this program. General Operating Contingency is budgeted at \$15 million. Under Oregon Local Budget Law, General Operating Contingency may be appropriated for unanticipated expenditures, which requires prior Board approval. Unappropriated ending fund balance in the General Fund is estimated in the Adopted 2019-21 Budget at just under \$12.1 million for future use.



GENERAL FUND DEPARTMENTS AND DIVISIONS

More General Fund expenditures are distributed among the District's six departments and Purchased Water fund level program. Each department has a General Services Division and, as applicable, other divisions grouped by core functions. Each General Services Division represents the management of that department and the activities that are in support of the department as a whole, such as training and education. Smaller departments are limited to just the General Services Division. Due to its size and significance, the Water Purchases Program is budgeted as a fund level expenditure, and is not part of any specific departmental budget (See Section 8 *Purchased Water*).

Below is the list of the District's departments and divisions:

Administrative Services

Responsible for leadership, administration, and oversight of the District; provides direct support to the TVWD Board of Commissioners; conducts legal services; manages District records; administers human resources and risk management.

Divisions: General Services: 10-01
 Human Resources: 10-11
 Risk Management: 10-12

Customer Service

Manages customer billing and payment; provides visitor reception and telephone call routing; reads and maintains water meters; turns accounts on and off; investigates customer matters; administers the District's conservation and key customer contact programs; and maintains District public information and community outreach.

Divisions: General Services: 20-01
 Customer Service & Utility Billing: 20-21
 Field Customer Service: 20-22
 Communications: 20-24

Engineering & Operations

Develops and implements Capital Improvement Plan; determines and monitors compliance with water system design and construction standards; reviews developer and construction projects; operates and maintains storage, transmission, and distribution; controls compliance with backflow regulations; performs locates to protect system from damage; ensures compliance with State and Federal water quality regulations. Conducts installations, relocates, repair, and maintenance for District mainlines, hydrants, valves, services, and vaults; manages mainline flushing program; maintains geographic information system (GIS), field mapping and asset documentation; manages District vehicle fleet and fueling facility; maintains all District facilities.

Divisions: General Services: 35-01
 System Operations: 35-31
 Engineering: 35-32
 Water Resources: 35-33
 Asset Management: 35-34
 Water Operations: 35-35
 Construction & Maintenance: 35-36

Finance

Responsible for all financial operations in the District including treasury, financial planning, and budget development; administers fiscal responsibilities, accounting, and payroll; manages debt issuance program; analyzes rates and charges; prepares financial forecasting; and coordinates purchasing and contracts.

Divisions: General Services: 50-01
 Accounting & Finance: 50-51

Water Supply Program

Provides administration of the Willamette Water Supply Program (WSSP) partnership; oversees planning, design, and construction of assets associated with Willamette Water Supply System and Willamette Intake Facilities commissions; provides financial oversight and reporting for the WWSP.

Divisions: General Services: 60-01

Information Technology Services

Responsible for the management and support of all aspects of the District's information technology (IT) systems, including all computer networks, major server environments, data and voice communications, and hardware and software; implements the District's strategic IT initiatives; provides offsite recovery of critical systems; maintains suite of enterprise applications; supports office and mobile work force; and develops the District's overall IT strategy. This department was formed in the 2017-19 Budget. Previously, IT Services was a division within the Finance and IT Department. The IT Services Department is led by a director reporting to the CEO.

Divisions: General Services: 70-01

Non-Departmental (Fund level) appropriation categories**Water Purchases Program**

Purchases water for the District through wholesale agreements with the City of Portland and an ownership share with the Joint Water Commission. As a district-wide expenditure, it is considered a separate program in the General Fund and not associated with any specific department. The Engineering Services Department is the primary group that budgets and manages the District's water purchases, with support from Administrative Services and the Finance Department. More information can be found in Section 8- Purchased Water.

Special Payments – RIGHTS OF WAY PAYMENTS

The Cities of Hillsboro, Beaverton and Tigard implemented right-of-way fees on water bills of customers of the District located within their city limits. Payments to the cities by the District constitute a Special Payment under Oregon Local Budget Law. The Board of Commissioners has implemented a right-a-way fees recovery strategy to generate enough resources to fund the Special Payments appropriation category.

Special Payments – PENSION SIDE ACCOUNT DEPOSITS

Employees of the District are provided retirement pensions through the Oregon Public Employees Retirement System (PERS). Like many pension plans, the PERS plans currently have an unfunded actuarial liability (UAL). The OPERS UAL is allocated to employers of the plan. The District estimates its current share of OPERS UAL is approximately \$20 million. The District's share of OPERS 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. The 2019-21 Adopted Budget includes Special Payment appropriations of \$20 million in the 2019-21 biennium is to fund an PERS side account with two deposits of \$10 million each. The deposits will 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. Funding the side account results in lower OPERS 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.

The table on the next page provides a summary of all the General Fund expenditures and appropriations for the Adopted 2019-21 Budget.

**TOTAL DISTRICT EXPENDITURES AND OTHER APPROPRIATIONS
GENERAL FUND**

HISTORICAL DATA			TUALATIN VALLEY WATER DISTRICT PERSONNEL SERVICES EXPENDITURE TOTALS BY DEPARTMENT	BUDGET FOR 2019-21			% CHG
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DEPARTMENT	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,883,927	\$3,550,339	\$3,424,522	ADMINISTRATIVE SERVICES	\$3,689,357	\$3,689,357	\$3,689,357	7.7%
\$6,136,491	\$5,820,692	\$8,088,968	CUSTOMER SERVICES	\$9,045,685	\$9,045,685	\$9,045,685	11.8%
\$14,105,713	\$14,451,235	\$17,347,887	ENGINEERING & OPERATIONS	\$18,207,420	\$18,207,420	\$18,207,420	5.0%
\$4,919,870	\$5,195,983	\$4,103,430	FINANCE	\$4,381,042	\$4,381,042	\$4,381,042	6.8%
\$1,212,489	\$2,200,965	\$3,898,713	WATER SUPPLY PROGRAM	\$4,798,806	\$4,798,806	\$4,798,806	23.1%
\$0	\$0	\$3,188,560	INFORMATION TECHNOLOGY SERVICES	\$3,414,341	\$3,414,341	\$3,414,341	7.1%
\$28,258,490	\$31,219,214	\$40,052,080	TOTALS	\$43,536,651	\$43,536,651	\$43,536,651	8.7%

HISTORICAL DATA			TUALATIN VALLEY WATER DISTRICT MATERIALS & SERVICES EXPENDITURE TOTALS BY DEPARTMENT	BUDGET FOR 2019-21			% CHG
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DEPARTMENT/PROGRAM	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$928,549	\$1,722,834	\$1,854,580	ADMINISTRATIVE SERVICES	\$3,610,969	\$3,610,969	\$3,610,969	94.7%
\$2,038,611	\$1,998,301	\$2,682,676	CUSTOMER SERVICES	\$2,533,625	\$2,533,625	\$2,533,625	-5.6%
\$5,149,407	\$4,285,100	\$5,275,035	ENGINEERING & OPERATIONS	\$6,776,572	\$6,776,572	\$6,776,572	28.5%
\$2,349,495	\$3,114,390	\$2,309,560	FINANCE	\$2,732,834	\$2,732,834	\$2,732,834	18.3%
\$286,648	\$37,541	\$50,706	WATER SUPPLY PROGRAM	\$72,095	\$72,095	\$72,095	42.2%
\$0	\$0	\$1,861,089	INFORMATION TECHNOLOGY SERVICES	\$2,040,500	\$2,040,500	\$2,040,500	9.6%
\$15,175,539	\$18,744,720	\$22,351,335	WATER PURCHASES PROGRAM	\$24,364,600	\$24,364,600	\$24,364,600	9.0%
\$25,928,249	\$29,902,886	\$36,384,981	TOTALS	\$42,131,195	\$42,131,195	\$42,131,195	15.8%

HISTORICAL DATA			TUALATIN VALLEY WATER DISTRICT CAPITAL OUTLAY EXPENDITURE TOTALS BY DEPARTMENT	BUDGET FOR 2019-21			% CHG
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DEPARTMENT	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$25,000	ADMINISTRATIVE SERVICES	\$18,000	\$18,000	\$18,000	-28.0%
\$124,846	\$18,051	\$0	CUSTOMER SERVICES	\$40,500	\$40,500	\$40,500	
\$797,058	(\$11,330)	\$113,800	ENGINEERING & OPERATIONS	\$40,600	\$40,600	\$40,600	-64.3%
\$689,801	\$450,063	\$0	FINANCE	\$0	\$0	\$0	
\$0	\$0	\$0	WATER SUPPLY PROGRAM	\$0	\$0	\$0	
\$0	\$0	\$463,500	INFORMATION TECHNOLOGY SERVICES	\$113,100	\$113,100	\$113,100	-75.6%
\$1,611,705	\$456,784	\$602,300	TOTALS	\$212,200	\$212,200	\$212,200	-64.8%

GENERAL FUND SPECIAL PAYMENTS, TRANSFERS, AND CONTINGENCY

HISTORICAL DATA			SPECIAL PAYMENTS, TRANSFERS, CONTINGENCY & RESERVES	BUDGET FOR 2019-21			% CHG
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19		PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$336,823	\$1,760,350	SPECIAL PAYMENTS	\$21,446,000	\$21,446,000	\$21,446,000	1118.3%
\$39,733,590	\$84,850,750	\$67,334,000	TRANSFERS	\$78,482,822	\$78,482,822	\$78,482,822	16.6%
\$0	\$0	\$14,729,000	GENERAL OPERATING CONTINGENCY	\$15,000,000	\$15,000,000	\$15,000,000	1.8%
\$39,733,590	\$85,187,573	\$83,823,350	TOTALS	\$114,928,822	\$114,928,822	\$114,928,822	37.1%

TOTAL GENERAL FUND BUDGET APPROPRIATION

HISTORICAL DATA				BUDGET FOR 2019-21			% CHG
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19		PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$95,532,034	\$146,766,457	\$160,862,711	TOTALS	\$200,808,868	\$200,808,868	\$200,808,868	24.8%

TOTAL GENERAL FUND OPERATING BUDGET LESS SPECIAL PAYMENTS, TRANSFERS & CONTINGENCY

BUDGET 17-19	BUDGET 17-19	BUDGET 17-19		PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$55,798,444	\$61,578,884	\$77,039,361	TOTAL OPERATING BUDGET	\$85,880,046	\$85,880,046	\$85,880,046	11.5%

TWD Adopted 2019-21 Budget

Below is a table listing all the positions in the District by grade, which includes the salary range and total Personnel Services costs.

PERSONNEL SERVICES

STAFFING SALARY AND WAGE ANALYSIS					GENERAL FUND	TUALATIN VALLEY WATER DISTRICT		
--- HISTORICAL DATA ---					CLASSIFICATION TITLE	BIENNIUM BUDGET FOR 2019-21		
ACTUAL (AT JUNE 30)		BUDGET				CLASS RANGE		ADOPTED TOTAL
2017	2018	18-19	19-20	20-21		FROM	TO	
					BY CONTRACT	N/A	N/A	465,028
1	1	1	1	1	1 CHIEF EXECUTIVE OFFICER			
					GRADE 13	129,314	205,397	1,921,387
1	1	1	1	1	1 CHIEF ENGINEER			
1	1	1	1	1	1 CHIEF FINANCIAL OFFICER			
1	1	1	1	1	1 GENERAL COUNSEL			
1	1	1	1	1	1 WATER SUPPLY PROGRAM DIRECTOR			
		1	1	1	1 INFORMATION TECHNOLOGY SERVICES DIRECTOR			
					GRADE 12	116,293	184,709	275,261
1	1	1			MANAGER OF SUPPORT SERVICES			
1		1			MANAGER OF FIELD OPERATIONS			
		1	1	1	1 WILLAMETTE WATER SUPPLY MANAGER			
					GRADE 11	104,582	166,105	1,170,705
1	1	1	1	1	1 HUMAN RESOURCES DIRECTOR			
1	1	1			1 INFORMATION TECHNOLOGY OFFICER			
2	2	2	1	1	1 PRINCIPAL ENGINEER			
	1		1	1	1 CUSTOMER SERVICE MANAGER			
	1	1	1	1	1 WATER SUPPLY DEPUTY PROGRAM DIRECTOR			
					GRADE 10	94,058	149,375	814,813
1		1			1 SENIOR ENGINEER			
	1	1	1	1	1 ENGINEERING DIVISION MANAGER			
	1	1	1	1	1 WATER OPERATIONS DIVISION MANAGER			
1	1	1			1 FINANCE AND ACCOUNTING SUPERVISOR			
			1	1	1 CONTROLLER			
					1 WILLAMETTE SUPPLY OPERATIONS SUPERVISOR			
		1			1 WATER RESOURCES DIVISION MANAGER			
		1			1 INFORMATION TECHNOLOGY ARCHITECT			
					GRADE 9	84,573	134,330	3,549,082
1	1	1	1	1	1 CONSTRUCTION/MAINTENANCE SUPERVISOR			
1	1	1	1	1	1 SYSTEMS OPERATIONS SUPERVISOR			
	1	1	1	1	1 WATER RESOURCES DIVISION MANAGER			
	1	1	1	1	1 ASSET MANAGEMENT DIVISION MANAGER			
1	1	1	1	1	1 FACILITIES SUPERVISOR			
1	1	1	1	1	1 FIELD CUSTOMER SERVICE SUPERVISOR			
1	1	1	1	1	1 PURCHASING AGENT/CONTRACTS COORDINATOR			
1	1	1	1	1	1 IT DEVELOPMENT COORD & PROGRAMMER			
19	24	26	22	23	SUBTOTAL FORWARD TO PAGE 2			8,196,276

Note: Personnel services by position include salary ranges only, and exclude other allowances, payroll taxes and benefits. These costs are totaled for the entire Adopted 2019-21 Budget at the bottom of the table on page 7-9.

PERSONNEL SERVICES

GENERAL FUND

TUALATIN VALLEY WATER DISTRICT

--- HISTORICAL DATA ---					CLASSIFICATION TITLE	BIENNIUM BUDGET FOR 2019-21		
ACTUAL (AT JUNE 30)		BUDGET				CLASS RANGE		ADOPTED TOTAL
2017	2018	18-19	19-20	20-21		FROM	TO	
19	24	26	22	23	BALANCE FORWARD			8,196,276
					GRADE 9 CONTINUED			
1	1	1	1	1	FINANCIAL PLANNING DEBT PROJ MGR			
1					EMERGENCY PLANNING,RISK & SECURITY COORD			
1	1	1	1	1	RISK MANAGEMENT COORDINATOR			
1	1	1	1	1	SENIOR PROJECT ENGINEER			
	1	1	1	1	COMMUNICATIONS & PUBLIC AFFAIRS SUPERVISOR			
	1	1	1	1	WWSP FINANCE & ADMIN SUPERVISOR			
	1		1	1	WWSP SENIOR ENGINEER			
		1	1	1	PERMITTING & OUTREACH MANAGER			
	1		1	1	INFORMATION TECHNOLOGY ARCHITECT			
					GRADE 8	76,066	120,800	3,456,576
1	1	3	3	3	CONSTRUCTION & MAINTENANCE LEAD			
1	1	1			MAINTENANCE CREW LEAD			
	1	1	1	1	DISTRIBUTION CREW LEAD			
1	1	1	1	1	VALVE CREW LEAD			
1	1	1	1	1	FIELD CUSTOMER SERVICE LEAD			
2	2	2			CONSTRUCTION INSPECTOR			
1	1	1			CROSS CONNECTION LEAD			
2	1	1	1	1	CUSTOMER SERVICE & BILLING SUPERVISOR			
1	1	1	1	1	FLEET COORDINATOR			
		1	1	1	MAINTENANCE ENGINEERING SUPERVISOR			
2	3	3			ENGINEER ASSOCIATE			
	1	1	1	1	SENIOR MANAGEMENT ANALYST			
1	1	1	2	2	GIS ANALYST			
			1	1	COMMUNICATIONS & PUBLIC AFFAIRS SUPERVISOR			
1	1	1	1	1	SENIOR NETWORK ADMINISTRATOR			
1	1	1	1	1	SENIOR SYSTEMS ADMINISTRATOR			
1	1	1	1	1	DATA ANALYST/ETL DEVELOPER			
1	1	1	1	1	SCADA TECHNICIAN			
1		1	1	1	PROGRAMMER SYSTEM ANALYST			
					GRADE 7	68,390	108,634	3,268,031
1					RESOURCE COORDINATOR			
1	1	1	1	1	COMMUNICATIONS /YOUTH EDUCATION COORDINATOR			
		1	1	1	EMERGENCY PROGRAM COORDINATOR			
1	1	1	1	1	CONSERVATION TECHNICIAN			
1					WATER QUALITY ANALYST			
1	1		1	1	SENIOR WQ INSPECTOR			
		1	1	1	SENIOR WQ SPECIALIST			
46	53	59	53	54	SUBTOTAL FORWARD TO PAGE 3			14,920,883

Note: Personnel services by position include salary ranges only, and exclude other allowances, payroll taxes and benefits. These costs are totaled for the entire Adopted 2019-21 Budget at the bottom of the table on page 7-9.

PERSONNEL SERVICES

GENERAL FUND

TUALATIN VALLEY WATER DISTRICT

HISTORICAL DATA---					CLASSIFICATION TITLE	BIENNIAL BUDGET FOR 2019-21		
UAL (AT JUNE 30)		BUDGET				CLASS RANGE FROM TO	ADOPTED TOTAL	
2017	2018	18-19	19-20	20-21				
46	53	59	53	54	BALANCE FORWARD			14,920,883
					GRADE 7 CONTINUED			
1	1	1	1	1	1 INVENTORY CONTROLLER & INDUSTRIAL BUYER			
	1				NETWORK & SYSTEMS ANALYST			
1	1				DEVELOPER, APPLICATION SUPPORT			
1	1	1	1	1	1 FLD SVC OPERATION SPECIALIST			
				2	2 CONSTRUCTION INSPECTOR II			
2		1			ENGINEERING TECHNICIAN II			
				3	3 ENGINEERING ASSOCIATE			
1	1	1	1	1	1 FLEET MECHANIC			
				1	1 PROPOSED BUSINESS ANALYST			
		1	1	1	1 BUSINESS ANALYST			
		1	1	1	1 TECHNICAL SERVICES ACCOUNTANT			
1	1	1	1	1	1 FIELD OPERATIONS ANALYST			
1		1	1	1	1 COMMUNITY AFFAIRS YOUTH COORDINATOR			
		1	1	1	1 PROJECT DELIVERY COORDINATOR			
					GRADE 6	61,506	97,692	5,428,282
5	5	5	5	5	5 FIELD SERVICE REPRESENTATIVE			
7	7	6	6	6	6 WATER WORKS CREW-DISTRIBUTION			
9	8	11	11	11	11 WATER WORKS CREW-CONST/MAINT			
10	10	6	6	6	6 WATER WORKS CREW-VALVE			
	1		1	1	1 ENGINEERING TECHNICIAN II			
1	1	2	2	2	2 ACCOUNTANT			
1	1	1	1	1	1 HUMAN RESOURCES ANALYST			
1	1				PROJECT ACCOUNTANT			
	1	1	1	1	1 DISTRICT RECORDER			
		1	1	1	1 SYSTEMS ADMINISTRATOR			
		1	1	1	1 CUSTOMER SERVICE & BILLING LEAD			
					GRADE 5	55,307	87,853	1,383,111
1	1	1	1	1	1 COMPUTER SUPPORT & SYSTEMS TECHNICIAN			
2	1				CUSTOMER SERVICE & BILLING LEAD			
1	1	1	1	1	1 PAYROLL SPECIALIST			
2	2	2	2	2	2 FACILITIES MAINTENANCE II			
1	1	1	1	1	1 HUMAN RESOURCE BENEFIT SPECIALIST			
1		1	1	1	1 OUTREACH & ENGAGEMENT COORDINATOR			
		1	1	1	1 WWSP OUTREACH COORDINATOR			
	1	1	1	1	1 GIS TECHNICIAN			
1	1	1	1	1	1 WATER QUALITY INSPECTOR			
1	1	1	1	1	1 WATER QUALITY SPECIALIST			
98	103	112	110	111	SUBTOTAL FORWARD TO PAGE 4			21,732,276

Note: Personnel services by position include salary ranges only, and exclude other allowances, payroll taxes and benefits. These costs are totaled for the entire Adopted 2019-21 Budget at the bottom of the table on page 7-9.

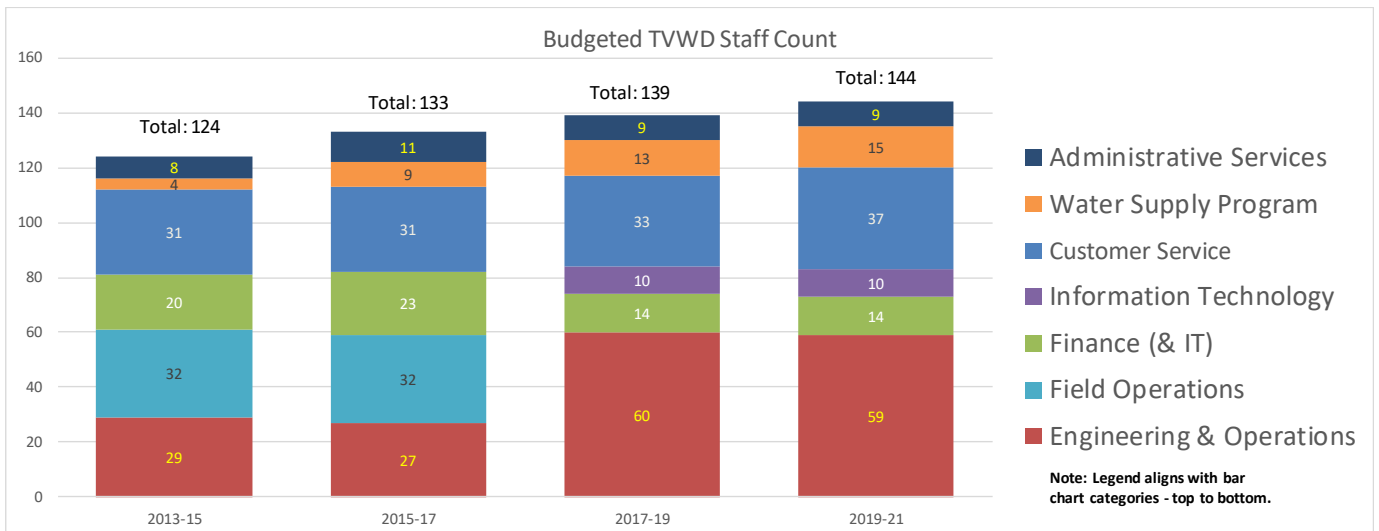
GENERAL FUND

TUALATIN VALLEY WATER DISTRICT

--- HISTORICAL DATA ---					CLASSIFICATION TITLE	BIENNIUM BUDGET FOR 2019-21		
ACTUAL (AT JUNE 30)		BUDGET				CLASS RANGE FROM TO	ADOPTED	
2017	2018	18-19	19-20	20-21			TOTAL	TOTAL
98	103	112	110	111	BALANCE FORWARD			21,732,276
					GRADE 4	49,733	79,004	1,432,858
6	6	6	6	6	6 METER READERS			
1	1	1	1	1	1 DOCUMENT & CONTROLS SPECIALIST			
		1	1	1	1 EXECUTIVE ASSISTANT			
			1	1	1 SENIOR BILLING SPECIALIST			
			1	1	1 ACCOUNTING SPECIALIST			
		1	1	1	1 ENGINEERING TECHNICIAN 1			
			1	1	1 PROPOSED CIS IMPLEMENT SCHEDULER LTD DUR			
					GRADE 3	44,741	71,046	2,210,551
1					6 ADMINISTRATION CLERICAL SUPPORT			
	4	6	6	6	6 ADMINISTRATIVE ASSISTANT			
1	1				DISTRICT SUPPORT			
1	1				CONSERVATION ASSISTANT			
6	8	10	10	10	10 CUSTOMER SERVICE REPRESENTATIVE			
			2	3	3 CSR - LIMITED DURATION DURING CIS IMPLEMENTATION			
3					BILLING SPECIALIST			
1					ENGINEERING CLERICAL SUPPORT			
1					CROSS CONNECTION SUPPORT			
1					FIELD OPERATIONS CLERICAL SUPPORT			
2	2	2	2	2	2 ACCOUNTING TECHNICIAN			
					GRADE 2	40,227	63,878	0
					GRADE 1	36,171	57,456	0
					TOTAL SALARY & WAGES			25,375,685
					ALLOWANCE FOR PART-TIME, OVERTIME, WEEKEND DUTY, CELL PHONE STIPENDS AND COMPENSATION ADJUSTMENTS			2,567,655
					PAYROLL TAXES AND BENEFITS			15,593,313
122	126	139	142	144	TOTAL PERSONNEL SERVICES			43,536,653

Notes: Personnel services by position include salary ranges only, and exclude other allowances, payroll taxes and benefits. Total Adopted 2019-21 Budget allowance, payroll and benefit related costs shown separately at the bottom of the table above.

The elimination of an IT Senior Systems Administrator, a limited duration position, coupled with 6 new positions brings the 2021 total FTE's to 144. Four of the new positions are limited duration for the implementation of the Customer Information System and two positions are for the Water Supply program.



Note: Effective for the 2017-19 biennium Engineering and Fields Operations were reorganized into a single department.



Purchased Water

No Staff

Purchased water is a fund level expenditure appropriated in the General Fund (01). The Engineering Services Department manages water purchases from the City of Portland and the Joint Water Commission (JWC).

Major Budget Changes for 2019-21

- For the first year of the 2019-21 biennium both the City of Portland Water Bureau (PWB) and Joint Water Commission (JWC) have informed the District to anticipate increases in rates for purchased water of 11.4% and 5.3% respectively. Through its wholesale agreement TVWD is contracted with the PWB to purchase an average of 13.16 million gallons per day. The JWC is passing through annual increases in staffing and material & services costs. TVWD only pays actual costs for its JWC water source. For the second year of the biennium, the District is projecting a smaller rate increase in purchased water costs from its Portland source and a 3.5% increase from the JWC source. It is anticipated the two-million gallons per day the District will be receiving by participating in the JWC water treatment plant expansion will come on-line in late calendar year 2019.
- Purchased Water budgeted expenditures include resources for purchasing summer and winter interruptible water from PWB, and leased water during the first year of the biennium from the JWC, prior to the water treatment plant expansion coming on-line. Interruptible and leased water along with TVWD aquifer storage and recovery facilities (ASR) are used to supplement peak day water demands as needed. Balancing these water supplies provides an effective means for the District to manage its purchased water costs.
- The Purchased Water budget also includes resources to support the District's share of operating costs for the Barney Reservoir Joint Operating Commission which is managed in conjunction with the JWC.
- Pumping power expenditures reflect estimated 1.0% annual increases in electricity rates and 1.0% annual growth in overall water demand. Pumping power expenditures also take into account the operation of the Miller Hill Aquifer Storage & Recovery ASR well coming on-line during the biennium.

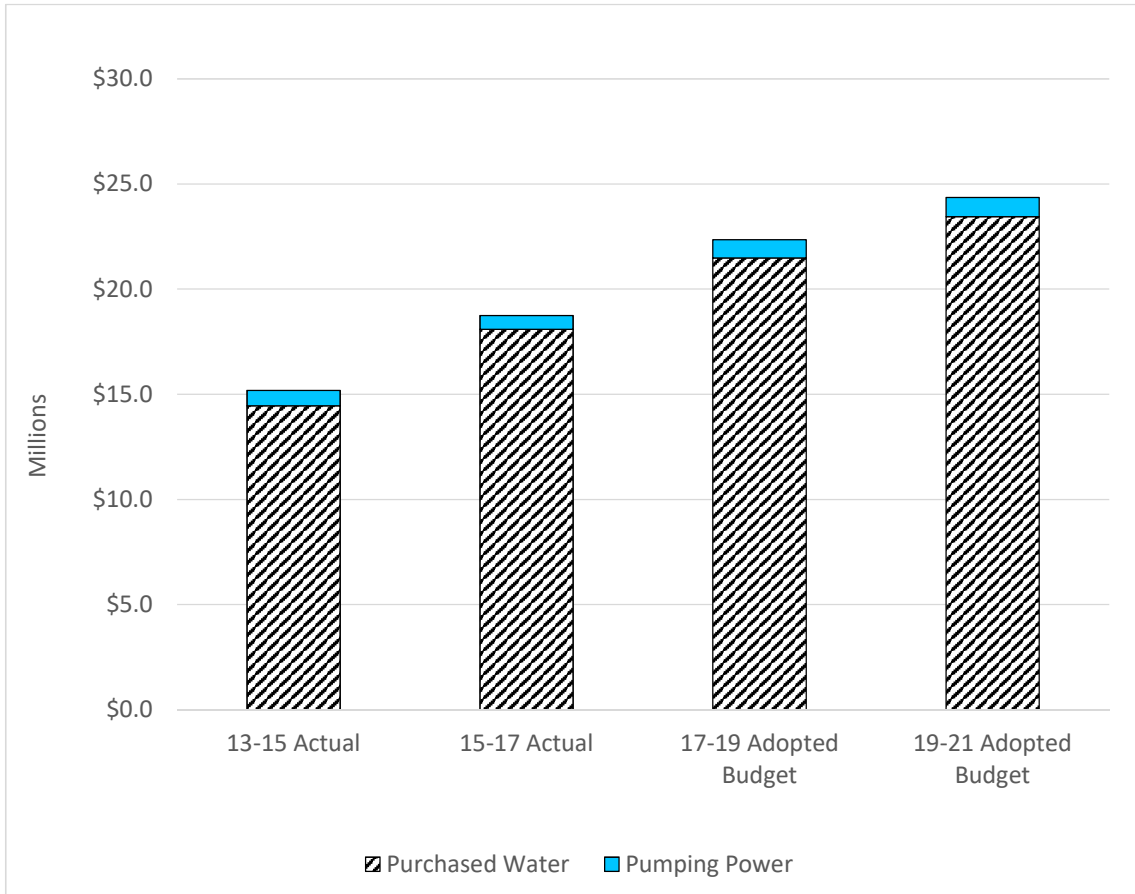
TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

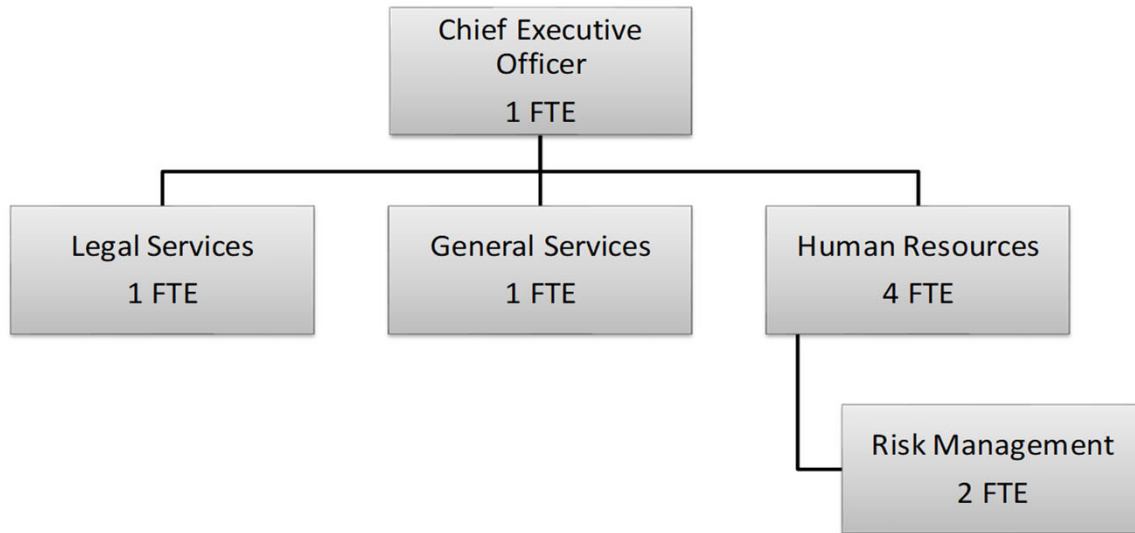
WATER PURCHASES AND PUMPING POWER (GENERAL FUND)

HISTORICAL DATA			WATER PURCHASES SUMMARY MATERIALS & SERVICES WATER PURCHASES		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$14,444,652	\$18,086,962	\$21,481,392	WATER PURCHASED	01-7470, 01-7471, 01-7472	\$23,440,300	\$23,440,300	\$23,440,300	9.1%
\$730,887	\$657,758	\$869,943	PUMPING POWER	01-7480	\$924,300	\$924,300	\$924,300	6.2%
\$15,175,539	\$18,744,720	\$22,351,335	WATER PURCHASES TOTALS		\$24,364,600	\$24,364,600	\$24,364,600	9.0%

**Purchased Water
2019-21 Expenditures**



Administrative Services

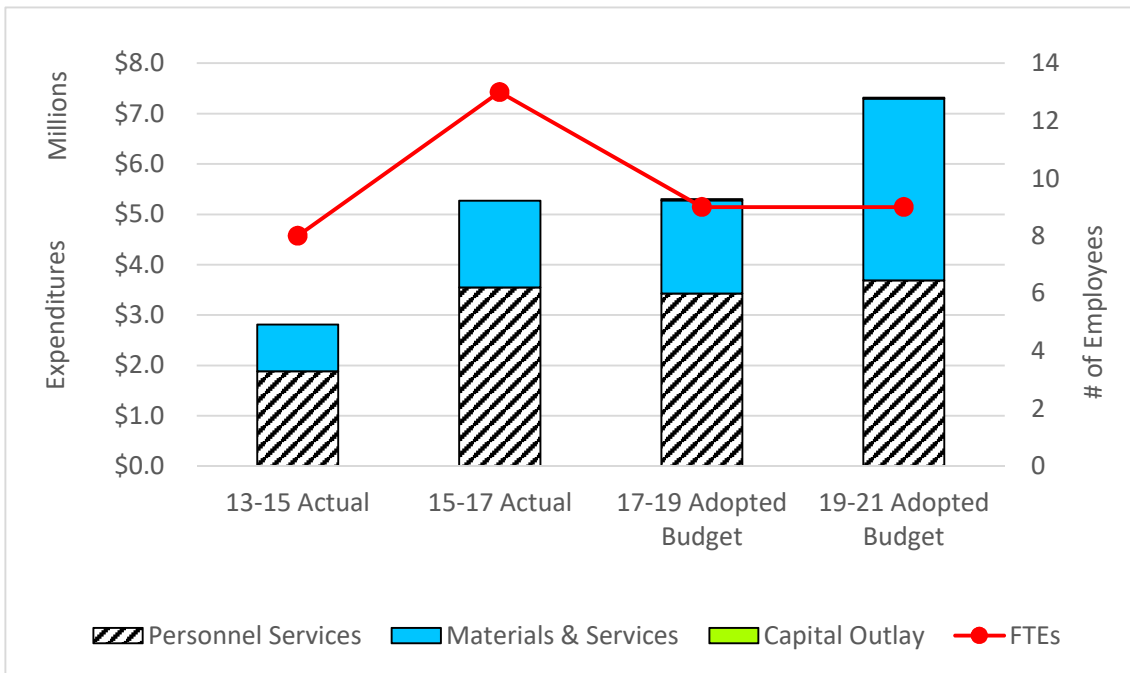


The Administrative Services Department is responsible for the overall administration of the District including direct support to the Board of Commissioners. In addition, this department is responsible for District legal services, human resources and risk management. During the 2019-21 biennium, Administrative Services will continue lead District efforts pertaining to oversight and coordination with regional partners, negotiation and monitoring of intergovernmental agreements, records management and workforce development.

Major Budget Changes for 2019-21

- A new Chief Executive Officer (CEO) will take over at the beginning of the biennium. The retiring CEO will continue to work on a part-time basis during the first quarter of FY 2020 to facilitate a smooth and complete transition.
- Outside legal services have been increased for continued negotiation of intergovernmental agreements and any potential litigation.
- The District will begin funding its share of dues for the new regional Willamette water supply commissions, including the Willamette Intake Facilities (WIF) and Willamette Water Supply System (WWSS) Commissions.
- Human Resources will implement NEOGOV for recruiting and personnel administration services.
- Risk Management will prepare Risk & Resiliency and Emergency Response Plans as required by America's Water Infrastructure Act of 2018.

Administrative Services 2019-21 Expenditures



Administrative Services Performance Measures

	Actual 14-15	Actual 15-16	Actual 16-17	Actual 17-18	Actual 18-19	Target 19-21	Target 19-21
% of our #1 hiring choices that accept a position offer	100%	94%	95%	94%	95%	90+%	90+%
% of employees with last performance review (excluding retirements) of 3.0 or better that stay at the District	100%	94%	96%	93%	96%	90+%	90+%
% of IGAs, partnerships, etc. in which TVWD maintains a leadership role	51%	51%	55%	65%	70%	≥50%	≥50%
# of incidents of vandalism reported that exceed insurance deductible (\$1000)	1	0	0	0	0	0	0
% of safety corrective actions completed on schedule (Safety Committee recommendations)	98%	81%	88%	83%	85%	85%	85%

All-Department Measures

% of employees actively participating in water industry related organizations	17%	16%	15%	17%	17%	≥15%	≥15%
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TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET

ADMINISTRATIVE SERVICES

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,883,927	\$1,793,993	\$1,450,330	DIVISION TOTAL-GENERAL SERVICES	\$1,646,779	\$1,646,779	\$1,646,779	13.5%
\$0	\$1,128,547	\$1,269,186	DIVISION TOTAL-HUMAN RESOURCES	\$1,321,621	\$1,321,621	\$1,321,621	4.1%
\$0	\$627,799	\$705,006	DIVISION TOTAL-RISK MANAGEMENT	\$720,957	\$720,957	\$720,957	2.3%
\$1,883,927	\$3,550,339	\$3,424,522	DEPARTMENT TOTALS	\$3,689,357	\$3,689,357	\$3,689,357	7.7%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$928,549	\$885,668	\$867,313	DIVISION TOTAL-GENERAL SERVICES	\$2,265,479	\$2,265,479	\$2,265,479	161.2%
\$0	\$188,468	\$239,447	DIVISION TOTAL-HUMAN RESOURCES	\$512,870	\$512,870	\$512,870	114.2%
\$0	\$648,698	\$747,820	DIVISION TOTAL-RISK MANAGEMENT	\$832,620	\$832,620	\$832,620	11.3%
\$928,549	\$1,722,834	\$1,854,580	DEPARTMENT TOTALS	\$3,610,969	\$3,610,969	\$3,610,969	94.7%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$25,000	DIVISION TOTAL-GENERAL SERVICES	\$18,000	\$18,000	\$18,000	N/A
\$0	\$0	\$25,000	DEPARTMENT TOTALS	\$18,000	\$18,000	\$18,000	N/A

HISTORICAL DATA			TOTAL DEPARTMENT BUDGET	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$2,812,476	\$2,679,661	\$2,342,643	DIVISION TOTAL-GENERAL SERVICES	\$3,930,258	\$3,930,258	\$3,930,258	67.8%
\$0	\$1,317,015	\$1,508,633	DIVISION TOTAL-HUMAN RESOURCES	\$1,834,491	\$1,834,491	\$1,834,491	21.6%
\$0	\$1,276,497	\$1,452,826	DIVISION TOTAL-RISK MANAGEMENT	\$1,553,577	\$1,571,577	\$1,553,577	6.9%
\$2,812,476	\$5,273,173	\$5,304,102	DEPARTMENT TOTALS	\$7,318,326	\$7,336,326	\$7,318,326	38.0%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET

GENERAL SERVICES DIVISION (10-01)

HISTORICAL DATA			ADMINISTRATIVE SERVICES DEPARTMENT SUMMARY MATERIALS & SERVICES GENERAL SERVICES DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$312,036	\$113,333	\$100,000	LEGAL FEES	01-10-01-7300	\$400,000	\$400,000	\$400,000	300.0%
\$59,641	\$128,917	\$107,000	PROFESSIONAL SERVICES	01-10-01-7310	\$93,000	\$93,000	\$93,000	-13.1%
\$65,732	\$47,694	\$46,125	BUSINESS EXPENSE	01-10-01-7330	\$42,300	\$42,300	\$42,300	-8.3%
\$84,681	\$77,127	\$120,090	EMPLOYEE TRAINING & ED	01-10-01-7340	\$120,080	\$120,080	\$120,080	0.0%
\$48,688	\$50,452	\$60,130	DUES & SUBSCRIPTIONS	01-10-01-7350	\$62,990	\$62,990	\$62,990	4.8%
\$28,203	\$5,189	\$4,100	OTHER SUNDRY	01-10-01-7360	\$9,150	\$9,150	\$9,150	123.2%
\$22,000	\$23,500	\$24,000	COMMISSIONER FEES	01-10-01-7370	\$30,000	\$30,000	\$30,000	25.0%
\$33,149	\$41,677	\$42,400	ELECTION EXPENSE	01-10-01-7390	\$60,000	\$60,000	\$60,000	41.5%
\$15,619	\$364	\$0	MISCELLANEOUS	01-10-01-7410	\$0	\$0	\$0	N/A
\$237,562	\$242,289	\$335,093	REGIONAL PARTNERSHIPS	01-10-01-7425	\$1,414,100	\$1,414,100	\$1,414,100	322.0%
\$2,020	\$123,044	\$0	PUBLIC INFORMATION	01-10-01-7450	\$0	\$0	\$0	N/A
\$0	\$14,287	\$10,000	TEMPORARY HELP	01-10-01-7525	\$10,000	\$10,000	\$10,000	0.0%
\$19,218	\$17,796	\$18,375	OFFICE EQUIPMENT MAINT	01-10-01-7550	\$23,860	\$23,860	\$23,860	29.8%
\$928,549	\$885,668	\$867,313	DIVISION TOTALS		\$2,265,479	\$2,265,479	\$2,265,479	161.2%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
ADMINISTRATIVE SERVICES - STAFF (10-01)

Senior manager: Chief Executive Officer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	N/A	Chief Executive Officer	N/A	1	1	1	
0	1	1	13	General Counsel	13	1	1	1	
1	1	1	4	Executive Assistant	4	1	1	1	
0	1	0	9	Communications & Public Affairs Supervisor	9	0	0	0	
0	1	0	7	Community & Youth Ed Coordinator	7	0	0	0	
0	1	0	7	Resources Coordinator	7	0	0	0	
1	0	0	11	Manager of Human Resources	11	0	0	0	
1	0	0	8	Strategic Planning Coordinator	8	0	0	0	
1	0	0	7	Executive Assistant	7	0	0	0	
1	0	0	6	Human Resources Analyst	6	0	0	0	
1	0	0	5	Human Resource Specialist	5	0	0	0	
1	0	0	3	District Support	3	0	0	0	
8	6	3		Total Staff		3	3	3	

Functions:

- S Overall administration of the District
- S Board of Commissioners support
- S Provide in-house legal services
- S Administrative support

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 P-T-D	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
13	0	0	0	AFTER-HOURS DUTY	7	0	0	0	
180	57	31	96	OVERTIME		30	30	60	
38	0	0	0		7	0	0	0	
27	51	31	96		4	30	30	60	
115	6	0	0		3	0	0	0	
0	0	0	0	CALLBACK		0	0	0	
					N/A				
786	274	0	0	PART-TIME		695	0	0	
786	274	0	0	Interns	3	0	0	0	
0	0	0	0	CEO Transition	N/A	695	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

HUMAN RESOURCES DIVISION (10-11)

HISTORICAL DATA			ADMINISTRATIVE SERVICES DIVISION SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
HUMAN RESOURCES DIVISION								
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$26,278	\$34,000	LEGAL FEES	01-10-11-7300	\$34,000	\$34,000	\$34,000	0.0%
\$0	\$92,443	\$84,000	PROFESSIONAL SERVICES	01-10-11-7310	\$352,890	\$352,890	\$352,890	320.1%
\$0	\$17,301	\$29,595	BUSINESS EXPENSE	01-10-11-7330	\$29,310	\$29,310	\$29,310	-1.0%
\$0	\$19,295	\$44,540	EMPLOYEE TRAINING & ED	01-10-11-7340	\$48,890	\$48,890	\$48,890	9.8%
\$0	\$8,135	\$8,202	DUES & SUBSCRIPTIONS	01-10-11-7350	\$8,500	\$8,500	\$8,500	3.6%
\$0	\$25,017	\$39,110	MISCELLANEOUS	01-10-11-7410	\$39,280	\$39,280	\$39,280	0.4%
\$0	\$188,468	\$239,447	DIVISION TOTALS		\$512,870	\$512,870	\$512,870	114.2%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
HUMAN RESOURCES DIVISION- STAFF (10-11)

Senior manager: Chief Executive Officer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	1	1	11	Human Resources Director	11	1	1	1	
0	1	1	6	Human Resources Analyst	6	1	1	1	
0	1	1	5	Human Resource Specialist	5	1	1	1	
0	1	1	6	District Recorder	6	1	1	1	
0	1	0	3	District Support	3	0	0	0	
0	5	4		Total Staff		4	4	4	

Functions:

- S *Develop, maintain, interpret and enforce personnel policies*
- S *Coordinate staff recruitment and selection; annual performance reviews*
- S *District benefits administration*
- S *Assist managers and supervisors on personnel issues; coordinate District-wide and supervisory training*

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 P-T-D	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
54	139	93	298	OVERTIME		139	139	278	
38	126	66	250		6	115	115	230	
16	13	27	48		5	24	24	48	
0	0	0	0	CALLBACK		0	0	0	
0	0	424	1100	PART-TIME		0	0	0	
0	0	424	1100						

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
RISK MANAGEMENT DIVISION (10-12)

HISTORICAL DATA			ADMINISTRATIVE SERVICES DIVISION SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
RISK MANAGEMENT DIVISION								
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$393,545	\$494,500	INSURANCE EXPENSE	01-10-12-7320	\$623,500	\$623,500	\$623,500	26.1%
\$0	\$16,197	\$25,000	SELF-INSURANCE	01-10-12-7325	\$23,000	\$23,000	\$23,000	-8.0%
\$0	\$16,592	\$41,500	HEALTH SERVICES	01-10-12-7415	\$22,650	\$22,650	\$22,650	-45.4%
\$0	\$67,559	\$81,420	SAFETY EXPENSE & SUPPLIES	01-10-12-7420	\$75,800	\$75,800	\$75,800	-6.9%
\$0	\$92,543	\$84,400	SECURITY	01-10-12-7455	\$75,170	\$75,170	\$75,170	-10.9%
\$0	\$20,492	\$21,000	EMERGENCY PLANNING	01-10-12-7460	\$12,500	\$12,500	\$12,500	-40.5%
\$0	\$41,771	\$0	MOBILE COMMUNICATIONS	01-10-12-7795	\$0	\$0	\$0	0.0%
\$0	\$648,698	\$747,820	DIVISION TOTALS		\$832,620	\$832,620	\$832,620	11.3%

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

RISK MANAGEMENT DIVISION - STAFF (10-12)

Senior manager: Chief Executive Officer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
	1	1	9	Risk Management Coordinator	9	1	1	1	
	1	1	7	Emergency Program Coordinator	7	1	1	1	
0	2	2		Total Staff		2	2	2	

Functions:

- S Provide a safe working environment for District employees
- S Ensure compliance with State and Federally mandated health and safety laws and regulations
- S Manage Worker Compensation Program
- S Handle District matters related to emergency planning, security, insurance and risk

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 P-T-D	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
0	0	0	0	OVERTIME		0	0	0	
0	0	0	0	CALLBACK		0	0	0	Both positions exempt
0	0	0	0	PART-TIME		0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

ADMINISTRATIVE SERVICES - CAPITAL OUTLAY

GL 01-10-01-8830

FY 2019-20

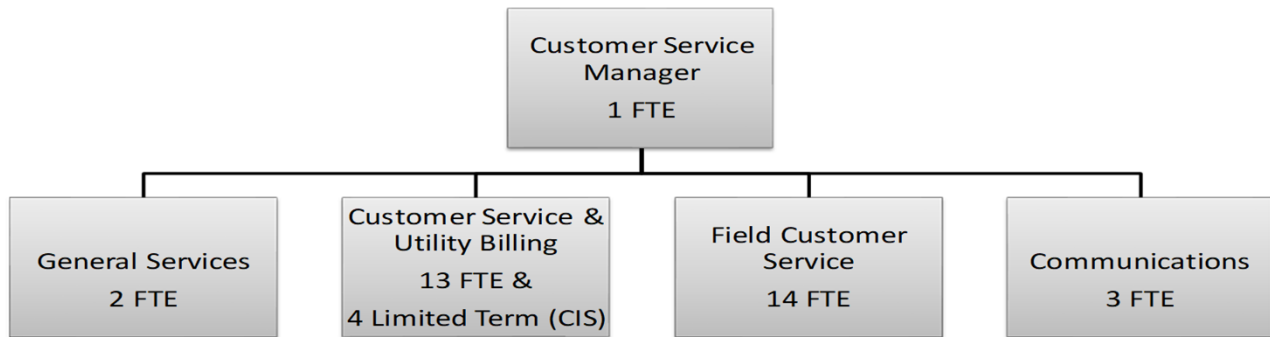
FY 2020-21

**Total Administrative Services
Capital Outlay Request**

\$	18,000	\$	-
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PROGRAM	CATEGORY OF PURCHASE	ITEM	QTY	DESCRIPTIONS AND RATIONALE	TOTAL AMT	EST. YEAR NEEDED
		Copier (Mail room copier replacement)	1	Copier replacement recommended. Maintenance and supply contract to increase 25% each year for current copier due to age of machine and multiple service issues.	\$ 18,000	October 2019

Customer Service Department



The Customer Service Department consists of the General Services, Customer Service/Utility Billing (CS/UB), Field Customer Service (FCS), and Communications Divisions. Included in the General Services Division is the Conservation program and a business analyst serving CS/UB. The CS/UB and FCS Divisions provide account and meter maintenance for over 63,000 water service connections. This includes all web, phone and field customer service responses, utility billing, and meter reading. Additionally the divisions provide contracted support to other entities including, meter reading for the City of Beaverton, and billing services for Clean Water Services, and the City of Beaverton.

The Communications Division leads the District’s publications, branding, external communications, social media outreach, and media relations. This division also manages the District's Key Customer Program.

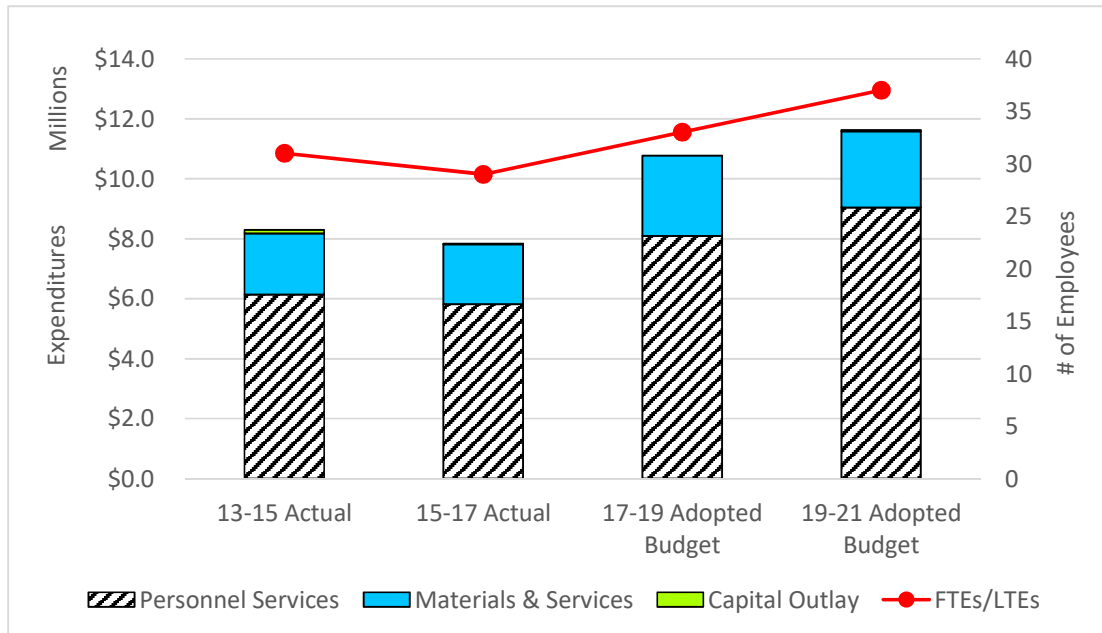
The focus of the Key Customer Contact Program is to maintain contact with key commercial, industrial and institutional customers and provide information in respect to the District’s current operations, emergency planning, water rates and charges, and capital improvement plans.

The Conservation Program staff administers the implementation of the District’s water conservation programs that are consistent with regional and state requirements, as well as administer residential and commercial customer rebate programs for high efficiency toilets and irrigation systems.

Major Budget Changes for 2019-21

- Continued development of Customer Information System (CIS) to replace the District's legacy utility billing system. Key task includes needs assessment, vendor selection and implementation, with a targeted "Go Live" date during FY 2022.
- Complete Advanced Metering Infrastructure/Automatic Meter Reading business case analysis.
- Position requests for three limited-term Customer Services representatives and one limited-term Project Scheduler to support the CIS project.
- Complete meter reading business case analysis.
- Continued implementation of the District's Strategic Communications Program - including updated website, expanded social media presence, and enhanced ratepayer outreach including affordability concerns and an expanded Key Customer Program.

Customer Service 2019-21 Expenditures



Note: Four positions in the 2019-21 Proposed Budget are Limited-Term positions for the Customer Information System (CIS) Project

Customer Service Performance Measures

	Actual 14-15	Actual 15-16	Actual 16-17	Actual 17-18	Actual 18-19	Target 19-21	Target 19-21
Number of times District goes to mandatory curtailment plan	0	0	0	0	0	0	0
# of water efficiency rebates. (Fewer rebate programs offered in later years)	2200	1900	1300	1300	1200	≥ 1200	≥ 1200

All-Department Measures

% of employees actively participating in water industry related organizations	17	16%	15%	17%	17%	≥15%	≥15%
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TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

CUSTOMER SERVICES

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,242,405	\$670,058	\$938,562	DIVISION TOTAL-GENERAL SERVICES	\$1,005,351	\$1,005,351	\$1,005,351	7.1%
\$2,163,521	\$2,261,427	\$2,743,791	DIVISION TOTAL-CUSTOMER SVCS & UTILITY BILLING	\$3,435,492	\$3,435,492	\$3,435,492	25.2%
\$2,730,565	\$2,889,207	\$3,500,644	DIVISION TOTAL-FIELD CUSTOMER SERVICE	\$3,618,604	\$3,618,604	\$3,618,604	3.4%
\$0	\$0	\$905,971	DIVISION TOTAL-COMMUNICATIONS	\$986,238	\$986,238	\$986,238	8.9%
\$6,136,491	\$5,820,692	\$8,088,968	DEPARTMENT TOTALS	\$9,045,685	\$9,045,685	\$9,045,685	11.8%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$770,601	\$430,122	\$551,810	DIVISION TOTAL-GENERAL SERVICES	\$511,000	\$511,000	\$511,000	-7.4%
\$1,128,347	\$1,402,850	\$1,519,193	DIVISION TOTAL-CUSTOMER SVCS & UTILITY BILLING	\$1,521,625	\$1,521,625	\$1,521,625	0.2%
\$139,663	\$165,329	\$226,533	DIVISION TOTAL-FIELD CUSTOMER SERVICE	\$233,660	\$233,660	\$233,660	3.1%
\$0	\$0	\$385,140	DIVISION TOTAL-COMMUNICATIONS	\$267,340	\$267,340	\$267,340	-30.6%
\$2,038,611	\$1,998,301	\$2,682,676	DEPARTMENT TOTALS	\$2,533,625	\$2,533,625	\$2,533,625	-5.6%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$124,846	\$18,051	\$0	DIVISION TOTAL-GENERAL SERVICES	\$40,500	\$40,500	\$40,500	N/A
\$124,846	\$18,051	\$0	DEPARTMENT TOTALS	\$40,500	\$40,500	\$40,500	N/A

HISTORICAL DATA			TOTAL DEPARTMENT BUDGET	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$2,137,852	\$1,118,231	\$1,490,372	DIVISION TOTAL-GENERAL SERVICES	\$1,556,851	\$1,556,851	\$1,556,851	4.5%
\$3,291,868	\$3,664,277	\$4,262,984	DIVISION TOTAL-CUSTOMER SVCS & UTILITY BILLING	\$4,957,117	\$4,957,117	\$4,957,117	16.3%
\$2,870,228	\$3,054,536	\$3,727,177	DIVISION TOTAL-FIELD CUSTOMER SERVICE	\$3,852,264	\$3,852,264	\$3,852,264	3.4%
\$0	\$0	\$1,291,111	DIVISION TOTAL-COMMUNICATIONS	\$1,253,578	\$1,253,578	\$1,253,578	-2.9%
\$8,299,948	\$7,837,044	\$10,771,644	DEPARTMENT TOTALS	\$11,619,810	\$11,619,810	\$11,619,810	7.9%

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

GENERAL SERVICES DIVISION (20-01)

HISTORICAL DATA			CUSTOMER SERVICE DEPARTMENT DIVISION SUMMARY MATERIALS & SERVICES GENERAL SERVICES DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$10,086	\$91,927	\$130,000	PROFESSIONAL SERVICES	01-20-01-7310	\$106,960	\$106,960	\$106,960	-17.7%
\$272,113	\$0	\$0	INSURANCE EXPENSE	01-20-01-7320	\$0	\$0	\$0	0.0%
\$7,055	\$0	\$0	SELF-INSURANCE	01-20-01-7325	\$0	\$0	\$0	0.0%
\$9,519	\$3,242	\$11,550	BUSINESS EXPENSE	01-20-01-7330	\$15,210	\$15,210	\$15,210	31.7%
\$23,544	\$15,996	\$62,230	EMPLOYEE TRAINING & EDUCATION	01-20-01-7340	\$81,030	\$81,030	\$81,030	30.2%
\$12,244	\$6,321	\$6,080	DUES & SUBSCRIPTIONS	01-20-01-7350	\$8,970	\$8,970	\$8,970	47.5%
\$32,641	\$29,436	\$26,205	OTHER SUNDRY	01-20-01-7360	\$29,500	\$29,500	\$29,500	12.6%
\$80,339	\$0	\$0	SAFETY EXPENSE & SUPPLIES	01-20-01-7420	\$0	\$0	\$0	0.0%
\$82,439	\$0	\$0	SECURITY	01-20-01-7455	\$0	\$0	\$0	0.0%
\$230,953	\$283,201	\$315,745	CONSERVATION	01-20-01-7785	\$269,330	\$269,330	\$269,330	-14.7%
\$9,668	\$0	\$0	MOBILE COMMUNICATIONS	01-20-01-7795	\$0	\$0	\$0	0.0%
\$770,601	\$430,122	\$551,810	DIVISION TOTALS		\$511,000	\$511,000	\$511,000	-7.4%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
GENERAL SERVICES DIVISION - STAFF (20-01)

Senior manager: Customer Service Manager

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	11	Customer Service Manager	11	1	1	1	
0	0	0	7	Business Analyst	7	1	1	1	
1	1	1	7	Conservation Technician	7	1	1	1	
1	1	1	3	Conservation Assistant	3	0	0	0	
1	0	0	9	Safety Coordinator	9	0	0	0	
1	0	0	9	Emergency Program Coordinator	9	0	0	0	
5	3	3		Total Staff		3	3	3	

Functions:

- S Provide overall Department management
- S Provide project management and analytical support to the CIS and other related utility billing service needs
- S Manage District conservation programs

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
32	46	16	30	OVERTIME		15	15	30	
30	46	16	30		7	15	15	30	Conservation Technician
2	0	0	0		3	0	0	0	
0	0	0	0	CALLBACK		0	0	0	
0	0	0	0	PART-TIME		0	0	0	

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
CUSTOMER SERVICE & UTILITY BILLING DIVISION (20-21)

HISTORICAL DATA			CUSTOMER SERVICE DEPARTMENT DIVISION SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$458,836	\$523,186	\$499,332	POSTAGE EXPENSE	01-20-21-7600	\$515,095	\$515,095	\$515,095	3.2%
\$25,778	\$3,775	\$10,000	BILLING ADJUSTMENTS	01-20-21-7610	\$10,000	\$10,000	\$10,000	0.0%
\$414,429	\$582,223	\$696,600	LEAK ADJUSTMENTS	01-20-21-7620	\$731,270	\$731,270	\$731,270	5.0%
\$64,433	\$64,433	\$73,871	CASH REMITTANCE	01-20-21-7645	\$14,600	\$14,600	\$14,600	-80.2%
\$51	\$108	\$200	CASH SHORT/OVER	01-20-21-7650	\$200	\$200	\$200	0.0%
\$164,820	\$230,811	\$239,190	BILL PRINTING & MAILING	01-20-21-7665	\$250,460	\$250,460	\$250,460	4.7%
\$1,128,347	\$1,404,535	\$1,519,193	DIVISION TOTALS		\$1,521,625	\$1,521,625	\$1,521,625	0.2%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
CUSTOMER SERVICE & UTILITY BILLING DIVISION - STAFF (20-21)

Senior manager: Customer Service Manager

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
2	1	1	8	Customer Service & Billing Supervisor	8	1	1	1	
0	2	1	3	Customer Service & Billing Lead	6	1	1	1	
0	0	1	4	Senior Billing Specialist	4	1	1	1	
7	9	10	3	Customer Service Representative	3	10	10	10	
3	0	0	3	Billing Specialist	3	0	0	0	
0	0	0	N/A	CIS Project Scheduler (Limited Duration)	3	1	1	1	Limited duration CIS
0	0	0	N/A	Customer Service Representative (Limited Duration)	3	2	3	3	Limited duration CIS
12	12	13		Total Staff		16	17	17	

Functions:

- S Utility billing; customer payment processing
- S Development and implementation of the CIS project
- S Customer account activity, i.e. Move-Ins and Move-Outs
- S Visitor reception and telephone call routing
- S Customer inquiries and issues requiring field customer service dispatch
- S Processing of customer mail and online account services

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
223	476	296	250	OVERTIME		136	136	272	
0	0	32	0		6	0	0	0	
0	0	0	50		6	36	36	72	CIS Implementation
223	476	264	200		3	100	100	200	CIS Implementation
0	0	0	0	CALLBACK		0	0	0	
0	0	0	0		3	0	0	0	
32	1121	741	600	PART-TIME		0	0	0	
32	1121	741	600		3	0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

FIELD CUSTOMER SERVICE DIVISION(20-22)

HISTORICAL DATA			CUSTOMER SERVICE DEPARTMENT DIVISION SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
FIELD CUSTOMER SERVICE DIVISION								
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$139,663	\$165,329	\$220,333	METER MAINTENANCE	01-20-22-7660	\$229,560	\$229,560	\$229,560	4.2%
\$0	\$0	\$6,200	SMALL TOOLS AND SUPPLIES	01-20-22-7790	\$4,100	\$4,100	\$4,100	-33.9%
\$139,663	\$165,329	\$226,533	DIVISION TOTALS		\$233,660	\$233,660	\$233,660	3.1%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
FIELD CUSTOMER SERVICE DIVISION - STAFF (20-22)

Senior manager: Customer Service Manager

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	9	Field Customer Service Supervisor	9	1	1	1	
1	1	1	8	Field Customer Service Lead	8	1	1	1	
1	1	1	7	Field Service Operation Specialist	7	1	1	1	
5	5	5	6	Field Service Representative	6	5	5	5	
6	6	6	4	Meter Reader	4	6	6	6	
14	14	14		Total Staff		14	14	14	

Functions:

- S Reading and maintenance of meters; installing meters in pre-set services
- S Investigating customer requests and assisting customers with leaks and other needs
- S Turning on and turning off of service connections

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
81	100	127	182	AFTER-HOURS DUTY		145	145	290	
0	26	0	14		9	14	14	28	
63	51	76	14		8	14	14	28	
0	23	25	28		7	21	21	42	
18	0	0	112		6	48	48	96	
0	0	26	14		4	48	48	96	
139	138	154	290	OVERTIME		130	130	260	
11	5	10	20		9	10	10	20	
34	2	20	30		8	15	15	30	
22	28	13	30		7	15	15	30	
60	44	23	150		6	30	30	60	
12	59	88	60		4	60	60	120	
282	215	172	320	CALLBACK		225	225	450	
15	41		30	TVWD	9	15	15	30	
96	61	99	30	TVWD	8	70	70	140	
93	76	42	80	TVWD	7	40	40	80	
65	21	8	160	TVWD	6	70	70	140	
13	16	23	20	TVWD	4	30	30	60	
324	454	0	0	PART-TIME		0	0	0	
324	454	0	0		3				

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

COMMUNICATIONS DIVISION (20-24)

HISTORICAL DATA			CUSTOMER SERVICE DEPARTMENT DIVISION SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
COMMUNICATIONS DIVISION								
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$217,240	PROFESSIONAL SERVICES	01-20-24-7310	\$109,700	\$109,700	\$109,700	-49.5%
\$2,020	\$0	\$167,900	PUBLIC INFORMATION	01-20-24-7450	\$157,640	\$157,640	\$157,640	-6.1%
\$2,020	\$0	\$385,140	DIVISION TOTALS		\$267,340	\$267,340	\$267,340	-30.6%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
COMMUNICATIONS DIVISION - STAFF (20-24)

Senior manager: Customer Service Manager

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	1	9	Communications & Public Affairs Supervisor	9	1	1	1	
0	0	1	7	Community & Youth Ed Coordinator	7	1	1	1	
0	0	1	5	Outreach & Engagement Coordinator	5	1	1	1	
0	0	3		Total Staff		3	3	3	

Functions:

- S Prepare District publications, utility bill inserts, internal and external communications
- S Coordinate community/stakeholder outreach and events
- S Coordinate customer outreach, feedback, responses to questions
- S Manage District website and social media outreach
- S Manage Key Customer Program
- S Coordinate media relations

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
15	0	0	0	AFTER-HOURS DUTY		0	0	0	
15	0	0	0			0	0	0	
33	13	14	80	OVERTIME		48	48	96	Increased Comms. Involvement in emergency incidents.
14	4	8	40		7	24	24	48	
19	9	6	40		5	24	24	48	
34	0	6	0	CALLBACK		0	0	0	
0	0	6			7				
34	0	0			5				
0	0	0	0	PART-TIME		0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

CUSTOMER SERVICES - CAPITAL OUTLAY

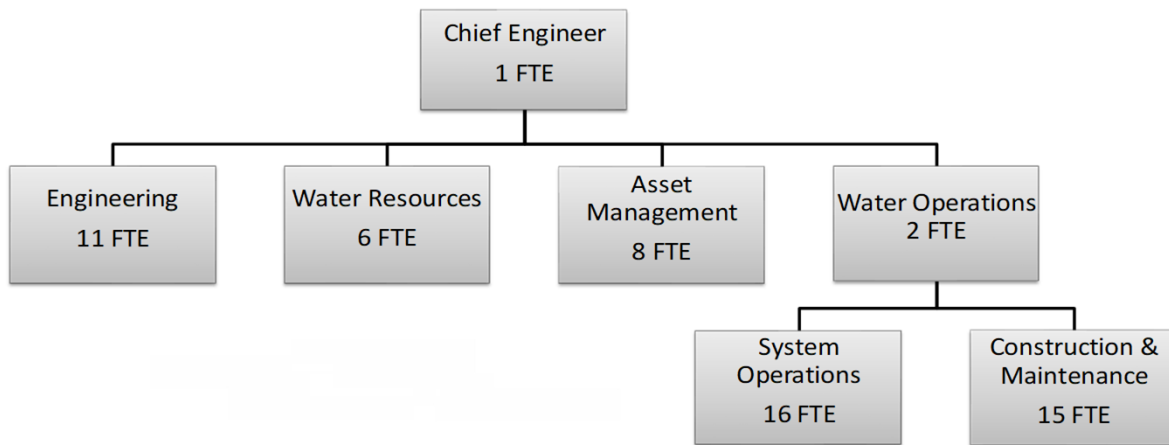
GL 01-20-01-8830
 FY 2019-20 FY 2020-21

Total Administrative Services
 Capital Outlay Request

\$ -	\$ 40,500
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PROGRAM	CATEGORY OF PURCHASE	ITEM	QTY	DESCRIPTIONS AND RATIONALE	TOTAL AMT	EST. YEAR NEEDED
Field Customer Service	Meter Reading	Meter Reading Datacaps	9	Based on normal replacement cycle	\$ 40,500	July 2020

Engineering and Operations Department



Effective for the 2017-19 biennium the Engineering and Operations Department was established by combining two departments – Engineering Services and Field Operations into one consolidated department led by the District’s Chief Engineer.

This reorganization created a number of service level efficiencies including placing water distribution system operations and maintenance under a single department; promoting closer coordination between staff engineers and construction/maintenance field crews on project execution; and creating an asset management division consolidating facilities, building and grounds, fleet, and geographic information system (GIS) services under one function.

System Operations perform day-to-day operations and maintenance of the water distribution system including pump stations, reservoirs and valves. The division also provides locating services for the District’s underground assets, coordinates water purchases from the Portland Water Bureau and Joint Water Commission and manages the District’s supervisory control and data acquisition (SCADA) system.

Engineering and Operations is also responsible for development and implementation of the District’s Capital Improvement Plan (CIP), and works in close coordination with the Willamette Water Supply Program. Construction and maintenance crews perform water system maintenance activities, undertake capital improvement upgrades and replacements, and respond to water system leaks and other service needs.

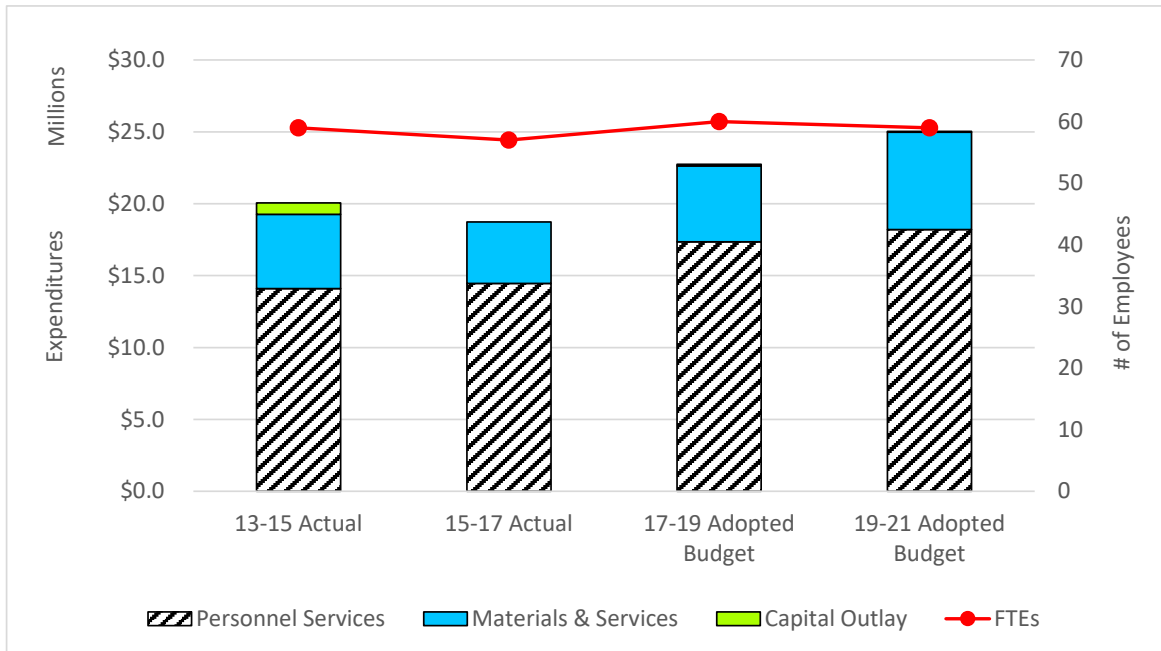
Development services provides development plan review, inspection services, water service/meter sales, fire flow testing and maintains the District’s design and construction standards.

The department also includes the District’s water resources division, which includes regulatory compliance, water quality monitoring and reporting, as well as backflow prevention.

Major Budget Changes and Objectives for 2019-21

- Improve system reliability by maintaining and replacing aging infrastructure.
- Continued project management of Capital Improvement Plan.
- Undertake security improvements at the District’s main office and other facilities.
- Active involvement in the Willamette Water Supply System (WWSS) including preparation for water supply integration, WWSS operations and maintenance planning, and source water protection planning.
- Continued water quality and regulatory compliance.

Engineering & Operations 2019-21 Expenditures



Engineering Performance Measures

	Actual 14-15	Actual 15-16	Actual 16-17	Actual 17-18	Actual 18-19	Target 19-21	Target 19-21
Gallons per capita per day demand	92.5	101.7	96	95.6	98.4	≤ 100	≤ 100
# of violations of National Primary Drinking Water Regulations	0	0	0	0	0	0	0

All-Department Measures

% of employees actively participating in water industry related organizations	17%	16%	15%	17%	17%	≥15%	≥15%
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TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

ENGINEERING AND OPERATIONS DEPARTMENT

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$476,346	\$490,865	\$505,742	DIVISION TOTAL - GENERAL SERVICES	\$558,748	\$558,748	\$558,748	10.5%
\$5,012,920	\$5,331,601	\$4,524,070	DIVISION TOTAL - SYSTEM OPERATIONS	\$5,272,462	\$5,272,462	\$5,272,462	16.5%
\$2,989,124	\$2,793,444	\$2,951,345	DIVISION TOTAL - ENGINEERING	\$3,543,785	\$3,543,785	\$3,543,785	20.1%
\$1,142,773	\$1,054,906	\$1,497,739	DIVISION TOTAL - WATER RESOURCES	\$1,648,220	\$1,648,220	\$1,648,220	10.0%
\$1,046,909	\$1,194,011	\$2,549,790	DIVISION TOTAL - ASSET MANAGEMENT	\$2,488,632	\$2,488,632	\$2,488,632	-2.4%
\$804,720	\$792,714	\$989,890	DIVISION TOTAL - WATER OPERATIONS	\$535,207	\$535,207	\$535,207	-45.9%
\$2,632,922	\$2,793,694	\$4,329,311	DIVISION TOTAL - CONSTRUCTION & MAINTENANCE	\$4,160,366	\$4,160,366	\$4,160,366	-3.9%
\$14,105,713	\$14,451,235	\$17,347,887	DEPARTMENT TOTALS	\$18,207,420	\$18,207,420	\$18,207,420	5.0%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,422,467	\$419,900	\$992,490	DIVISION TOTAL - GENERAL SERVICES	\$1,117,970	\$1,117,970	\$1,117,970	12.6%
\$610,350	\$870,056	\$795,040	DIVISION TOTAL - SYSTEM OPERATIONS	\$990,900	\$990,900	\$990,900	24.6%
\$14,401	\$18,257	\$27,500	DIVISION TOTAL - ENGINEERING	\$9,500	\$9,500	\$9,500	-65.5%
\$425,609	\$631,476	\$843,725	DIVISION TOTAL - WATER RESOURCES	\$1,117,323	\$1,117,323	\$1,117,323	32.4%
\$1,454,512	\$1,482,943	\$1,762,850	DIVISION TOTAL - ASSET MANAGEMENT	\$2,287,079	\$2,287,079	\$2,287,079	29.7%
\$126,745	\$208,077	\$120,330	DIVISION TOTAL - WATER OPERATIONS	\$191,000	\$191,000	\$191,000	58.7%
\$778,841	\$654,391	\$733,100	DIVISION TOTAL - CONSTRUCTION & MAINTENANCE	\$1,062,800	\$1,062,800	\$1,062,800	45.0%
\$5,149,407	\$4,285,100	\$5,275,035	DEPARTMENT TOTALS	\$6,776,572	\$6,776,572	\$6,776,572	28.5%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$797,058	(\$11,330)	\$113,800	DIVISION TOTAL - GENERAL SERVICES	\$40,600	\$40,600	\$40,600	-64.3%
\$797,058	-\$11,330	\$113,800	DEPARTMENT TOTALS	\$40,600	\$40,600	\$40,600	-64.3%

HISTORICAL DATA			TOTAL DEPARTMENT BUDGET	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$2,695,871	\$899,435	\$1,612,032	DIVISION TOTAL - GENERAL SERVICES	\$1,717,318	\$1,717,318	\$1,717,318	6.5%
\$5,623,270	\$6,201,657	\$5,319,110	DIVISION TOTAL - SYSTEM OPERATIONS	\$6,263,362	\$6,263,362	\$6,263,362	17.8%
\$3,003,525	\$2,811,701	\$2,978,845	DIVISION TOTAL - ENGINEERING	\$3,553,285	\$3,553,285	\$3,553,285	19.3%
\$1,568,382	\$1,686,382	\$2,341,464	DIVISION TOTAL - WATER RESOURCES	\$2,765,543	\$2,765,543	\$2,765,543	18.1%
\$2,501,421	\$2,676,954	\$4,312,640	DIVISION TOTAL - ASSET MANAGEMENT	\$4,775,711	\$4,775,711	\$4,775,711	10.7%
\$931,465	\$1,000,791	\$1,110,220	DIVISION TOTAL - WATER OPERATIONS	\$726,207	\$726,207	\$726,207	-34.6%
\$3,411,763	\$3,448,085	\$5,062,411	DIVISION TOTAL - CONSTRUCTION & MAINTENANCE	\$5,223,166	\$5,223,166	\$5,223,166	3.2%
\$19,735,696	\$18,725,005	\$22,736,722	DEPARTMENT TOTALS	\$25,024,592	\$25,024,592	\$25,024,592	10.1%

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

ENGINEERING AND OPERATIONS DEPARTMENT

GENERAL SERVICES DIVISION (35-01)

HISTORICAL DATA			ENGINEERING & OPERATIONS DEPARTMENT DIVISION SUMMARY		BUDGET FOR 2019-21			
MATERIALS & SERVICES GENERAL SERVICES DIVISION								
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,132,310	\$322,111	\$779,500	PROFESSIONAL SERVICES	01-35-01-7310	\$939,000	\$939,000	\$939,000	20.5%
\$86,902	\$0	\$0	INSURANCE EXPENSE	N/A	\$0	\$0	\$0	N/A
\$4,805	\$0	\$0	SELF INSURANCE	N/A	\$0	\$0	\$0	N/A
\$18,009	\$3,428	\$9,000	BUSINESS EXPENSE	01-35-01-7330	\$8,200	\$8,200	\$8,200	-8.9%
\$93,645	\$45,131	\$106,535	EMPLOYEE TRAINING & ED	01-35-01-7340	\$128,270	\$128,270	\$128,270	20.4%
\$23,272	\$16,514	\$32,905	DUES & SUBSCRIPTIONS	01-35-01-7350	\$42,500	\$42,500	\$42,500	29.2%
\$65,480	\$62,738	\$64,550	OTHER SUNDRY EXPENSES	01-35-01-7350	\$0	\$0	\$0	-100.0%
\$26,955	\$0	\$0	SECURITY & EMERGENCY PLANNING	N/A	\$0	\$0	\$0	N/A
\$0	\$104,820	\$0	SMALL TOOLS & SHOP SUPPLIES	N/A	\$0	\$0	\$0	N/A
\$12,014	\$191	\$0	DISPATCH	N/A	\$0	\$0	\$0	N/A
\$1,463,392	\$554,933	\$992,490	DIVISION TOTALS		\$1,117,970	\$1,117,970	\$1,117,970	12.6%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
GENERAL SERVICES DIVISION - STAFF (35-01)

Senior manager: Chief Engineer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	13	Chief Engineer	13	1	1	1	
1	1	0	3	Administrative Assistant	3	0	0	0	
2	2	1		Total Staff		1	1	1	

Functions:

- S Overall management for the department
- S Overall management of the Capital Improvement Plan

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
0	0	0	0			0	0	0	
0	0	0	0	OVERTIME		0	0	0	
0	0	0	0			0	0	0	
0	0	0	0	CALLBACK		0	0	0	
0	0	0	0			0	0	0	
0	0	0	0	PART-TIME		0	0	0	
0	0	0	0			0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

SYSTEM OPERATIONS DIVISION (35-31)

HISTORICAL DATA			SYSTEM OPERATIONS DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$54,754	\$46,700	UTILITIES	01-35-31-7560	\$56,000	\$56,000	\$56,000	19.9%
\$56,408	\$47,883	\$48,000	LOCATES	01-35-31-7678	\$64,400	\$64,400	\$64,400	34.2%
\$91,719	\$239,029	\$112,200	PUMP STATION MAINTENANCE	01-35-31-7690	\$119,000	\$119,000	\$119,000	6.1%
\$46,420	\$63,081	\$27,000	RESERVOIR MAINTENANCE	01-35-31-7700	\$74,500	\$74,500	\$74,500	175.9%
\$0	\$76,447	\$128,800	MAINLINE VALVE MAINTENANCE	01-35-31-7710	\$170,000	\$170,000	\$170,000	32.0%
\$18,913	\$36,263	\$44,500	AUTOMATIC VALVES MAINT	01-35-31-7715	\$85,000	\$85,000	\$85,000	91.0%
\$106,231	\$130,995	\$157,840	SCADA EXPENSE	01-35-31-7720	\$125,000	\$125,000	\$125,000	-20.8%
\$155,112	\$149,086	\$228,000	FLUORIDE & CHLORINE	01-35-31-7730	\$296,000	\$296,000	\$296,000	29.8%
\$3,641	\$2,401	\$2,000	CATHODIC PROTECTION	01-35-31-7735	\$1,000	\$1,000	\$1,000	-50.0%
\$478,444	\$799,940	\$795,040	DIVISION TOTALS		\$990,900	\$990,900	\$990,900	24.6%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
SYSTEM OPERATIONS DIVISION - STAFF (35-31)

Senior manager: Chief Engineer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	9	System Operations Supervisor	9	1	1	1	
1	1	1	8	WVO Distribution Crew Lead	8	1	1	1	
1	1	1	8	WVO Valve Crew Lead	8	1	1	1	
1	1	1	8	SCADA Technician	8	1	1	1	
7	6	6	6	WVO Distribution Crew	6	6	6	6	
9	7	6	6	WVO Valve Crew	6	6	6	6	
20	17	16		Total Staff		16	16	16	

Functions:

- S Operate and maintain the water distribution system; 24/7 monitoring and problem response
- S Monitor and maintain pumps, reservoirs, valves and related distribution system equipment
- S Manage the Supervisory Control and Data Acquisition (SCADA) system
- S Perform locates to protect the system from excavation activity
- S Monitor cathodic protection stations to evaluate potential system deterioration from electrolysis

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1504	1907	1045	1718	AFTER-HOURS DUTY		856	856	1712	
144	257	114	230		9	84	84	168	
39	98	70	114		8	191	191	382	
1321	1552	861	1374		6	581	581	1162	
533	337	341	298	OVERTIME		131	131	262	
13	5	12	20		9	10	10	20	
128	96	56	70		8	45	45	90	
392	236	273	208		6	76	76	152	
1573	1952	1207	1714	CALLBACK		830	830	1660	
56	100	61	100		9	54	54	108	
104	179	89	126		8	138	138	276	
1413	1673	1057	1488		6	638	638	1276	
1417	1203	888	2240	PART-TIME		1680	1680	3360	
1417	1203	888	2240		3	1680	1680	3360	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

ENGINEERING DIVISION (35-32)

HISTORICAL DATA			ENGINEERING DIVISION SUMMARY MATERIALS & SERVICES		ENGINEERING DIVISION			BUDGET FOR 2019-21		
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19		
\$13,514	\$18,257	\$27,500	ENGINEERING SUPPLIES	01-35-32-7740	\$9,500	\$9,500	\$9,500	-65.5%		
\$13,514	\$18,257	\$27,500	DIVISION TOTALS		\$9,500	\$9,500	\$9,500	-65.5%		

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
ENGINEERING DIVISION - STAFF (35-32)

Senior manager: Chief Engineer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	1	10	Engineering Division Manager	10	1	1	1	
2	1	1	9	Senior Project Engineer	9	1	1	1	
0	0	1	8	Maint. Engineering Supervisor	8	1	1	1	
1	1	0	9	Project Engineer	9	0	0	0	
1	3	3	7	Engineering Associate	7	3	3	3	
3	2	1	6	Engineering Technician II	6	1	1	1	
0	0	1	4	Engineering Technician I	4	1	1	1	
0	0	0	N/A	Construction Inspector II	6	1	1	1	
2	2	2	7	Construction Inspector III	7	1	1	1	
0	0	1	3	Administrative Assistant	3	1	1	1	
1	1	0	11	Principal Engineer	11	0	0	0	
10	10	11		Total Staff		11	11	11	

Functions:

- S Plan, design, and construct capital improvements
- S Implement mains replacement program
- S Long-range planning - seismic resiliency, master planning and water supply planning
- S Development services including design and construction standards, plan review, construction inspection and meter sales
- S Hydrant permit administration

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
73	140	46	56	AFTER-HOURS DUTY		28	28	56	
52	126	42	0		9	0	0	0	
21	14	4	56		7	28	28	56	Construction Inspector
249	104	133	190	OVERTIME		75	75	150	
0	0	0	0		10	0	0	0	
15	12	57	0		9	0	0	0	
203	89	54	150		7	40	40	80	
31	3	22	0		7	15	15	30	
0	0	0	40		3	20	20	40	
57	89	11	72	CALLBACK		20	20	40	
	15	4	0		9	0	0	0	
57	74	7	72		7	20	20	40	
1881	2137	1754	3120	PART-TIME		2080	2080	4160	
1881	2137	1754	3120	Engineering Intern	3	2080	2080	4160	Includes 2 P/T engr interns each for 6 months

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

WATER RESOURCES DIVISION (35-33)

HISTORICAL DATA			WATER RESOURCES DIVISION SUMMARY MATERIALS & SERVICES WATER RESOURCES DIVISION		BUDGET FOR 2017-19			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$553,599	\$104,861	\$145,500	WATER QUALITY PROFESSIONAL SVCS	01-35-33-7310	\$173,076	\$173,076	\$173,076	19.0%
\$60,790	\$61,730	\$98,605	WATER QUALITY SUPPLIES & EXP	01-35-33-7430	\$234,647	\$234,647	\$234,647	138.0%
\$0	\$464,885	\$599,620	BACKFLOW CONTRACT TESTING	01-35-33-7435	\$709,600	\$709,600	\$709,600	18.3%
\$614,388	\$166,592	\$843,725	DIVISION TOTALS		\$1,117,323	\$1,117,323	\$1,117,323	32.4%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
WATER RESOURCES DIVISION (35-33)

Senior manager: Chief Engineer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	10	Water Resources Division Manager	9	1	1	1	
1	1	1	7	Sr Water Quality Specialist	7	1	1	1	
1	1	1	6	Water Quality Specialist	5	1	1	1	
1	1	1	8	Sr Water Quality Inspector	7	1	1	1	
1	1	1	4	Water Quality Inspector	5	1	1	1	
1	1	1	3	Administrative Assistant	3	1	1	1	
6	6	6		Total Staff		6	6	6	

Functions:

- S *Compliance with state and federal water quality rules and regulations*
- S *Review proposed rules and regulations*
- S *Collect and analyze water samples from distribution system; maintain testing equipment*
- S *Respond to water quality complaints from customers; collect and analyze samples from customers*
- S *Administer backflow program; provide routine notices and enforce program as needed*

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
87	64	0	0	AFTER-HOURS DUTY		0	0	0	
0	0	0	0		9	0	0	0	
48	44	0	0		7	0	0	0	
39	20	0	0		6	0	0	0	
0	0	0	0		5	0	0	0	
64	46	29	40	OVERTIME		45	35	80	
21	5	1	40		7	10	10	20	
20	8	0	0		5	20	10	30	
16	1	0	0		4	0	0	0	
7	32	28	0		3	15	15	30	
166	60	6	40	CALLBACK		20	20	40	
82	42	0	40		7	10	10	20	
84	18	0	0		5	10	10	20	
0	0	6	0		3	0	0	0	
0	379	0	0	PART-TIME		0	0	0	
0	379	0	0		3	0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

ASSET MANAGEMENT DIVISION (35-34)

HISTORICAL DATA			ASSET MANAGEMENT DIVISION SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	ASSET MANAGEMENT DIVISION DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$61,028	\$99,200	PROPERTY MAINTENANCE	01-35-34-7400	\$84,636	\$84,636	\$84,636	-14.7%
\$464,548	\$550,294	\$626,600	FACILITIES MAINTENANCE	01-35-34-7405	\$887,780	\$887,780	\$887,780	41.7%
\$242,246	\$226,555	\$262,100	UTILITIES	01-35-34-7560	\$265,409	\$265,409	\$265,409	1.3%
\$297,770	\$340,995	\$350,200	VEHICLE MAINTENANCE	01-35-34-7760	\$576,250	\$576,250	\$576,250	64.5%
\$499,180	\$304,071	\$404,900	GAS, DIESEL & FUEL	01-35-34-7780	\$414,144	\$414,144	\$414,144	2.3%
\$0	\$0	\$19,850	OIL, PROPANE & MISC FLUIDS	01-35-34-7782	\$33,360	\$33,360	\$33,360	68.1%
\$0	\$0	\$0	SMALL TOOLS	01-35-34-7790	\$25,500	\$25,500	\$25,500	N/A
\$1,503,744	\$1,482,943	\$1,762,850	DIVISION TOTALS		\$2,287,079	\$2,287,079	\$2,287,079	29.7%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
ASSET MANAGEMENT DIVISION (35-34)

Senior manager: Chief Engineer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	1	9	Asset Management Division Manager	9	1	1	1	
1	1	1	7	Field Operations Analyst	7	0	0	0	
1	1	1	8	GIS Analyst	8	1	1	1	
0	1	1	5	GIS Technician	5	1	1	1	
1	1	1	9	Building & Grounds Maint. Supervisor	9	1	1	1	
1	1	1	8	Fleet Coordinator	8	1	1	1	
1	1	1	7	Fleet Mechanic	7	1	1	1	
2	2	2	5	Facilities Maintenance II	5	2	2	2	
7	8	9		Total Staff		8	8	8	

Functions:

- S Asset management program administration
- S Geographic information system (GIS) mapping
- S Facilities - landscaping, building maintenance, custodial services, security and space planning
- S Fleet maintenance, replacement - vehicles, heavy equipment, power tools
- S Fuel purchasing and operation of the joint fueling facility

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
102	219	69	182	AFTER-HOURS DUTY		20	20	40	
84	109	16	134		9	0	0	0	
18	110	53	48		5	20	20	40	
327	284	159	392	OVERTIME		120	120	240	
141	120	60	172		9	40	40	80	
66	35	47	70		8	30	30	60	
5	0	0	20		7	10	10	20	
22	59	0	0		6	0	0	0	
93	70	52	130		5	40	40	80	
183	350	90	210	CALLBACK		75	75	150	
139	125	4	124		9	5	5	10	
0	0	9	40		8	20	20	40	
9	66	0	10		7	5	5	10	
35	159	77	36		5	45	45	90	
1746	3020	2260	6640	PART-TIME		2800	2800	5600	
0	0	0	1040	GIS Intern	3	0	0	0	Five Seasonal Help, 3.5 months
1746	3020	2260	5600	Summer Help	3	2800	2800	5600	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

WATER OPERATIONS DIVISION (35-35)

HISTORICAL DATA			WATER OPERATIONS DIVISION SUMMARY		BUDGET FOR 2019-21			
			MATERIALS & SERVICES GENERAL SERVICES DIVISION					
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$106,558	\$116,793	\$120,330	SMALL TOOLS & SHOP SUPPLIES	01-35-35-7790	\$191,000	\$191,000	\$191,000	58.7%
\$106,558	\$116,793	\$120,330	DIVISION TOTALS		\$191,000	\$191,000	\$191,000	58.7%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
WATER OPERATIONS DIVISION - STAFF (35-35)

Senior manager: Chief Engineer

Staffing:

11-13	13-15	15-17	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	10	Water Operations Division Manager	10	1	1	1	
1	1	1	3	Administrative Assistant	3	1	1	1	
1	1	1	12	Manager of Field Operations	12	0	0	0	
2	2	2		Total Staff		2	2	2	

Functions:

- S Manage system operations, construction and maintenance
- S Division administrative support

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
						0	0	0	
36	4	36	34	OVERTIME		30	30	60	
0	0	0	0		10	0	0	0	
36	4	36	34		3	30	30	60	
1	0	0	0	CALLBACK		0	0	0	
0	0	0	0		10	0	0	0	
1	0	0	0		3	0	0	0	
0	0	0	0	PART-TIME		0	0	0	
0	0	0	0			0	0	0	

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
CONSTRUCTION & MAINTENANCE DIVISION (35-36)

HISTORICAL DATA			CONSTRUCTION & MAINTENANCE DIVISION SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	CONSTRUCTION/MAINTENANCE DIVISION DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$969,368	\$712,475	\$733,100	GENERAL SYSTEM MAINTENANCE	01-35-36-7670	\$1,062,800	\$1,062,800	\$1,062,800	45.0%
\$969,368	\$712,475	\$733,100	DIVISION TOTALS		\$1,062,800	\$1,062,800	\$1,062,800	45.0%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
CONSTRUCTION/MAINTENANCE DIVISION- STAFF (35-36)

Senior manager: Chief Engineer

Staffing:

13-15	15-17	17-19	17-19 GRADE	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	9	Construction & Maintenance Supervisor	9	1	1	1	
2	2	3	8	Construction & Maintenance Lead	8	3	3	3	
9	9	11	6	Water Works Operator	6	11	11	11	
12	12	15		Total Staff		15	15	15	

Functions:

- S Construct, repair, and replace water system assets
- S Mainline flushing program
- S Respond to system leaks and other emergency needs

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
63	211	375	350	AFTER-HOURS DUTY		456	456	912	
0	0	91	100		9	88	88	176	
0	0	118	20		8	246	246	492	
63	211	166	230		6	122	122	244	
382	480	646	564	OVERTIME		357	357	714	
0	0	79	36		9	48	48	96	
54	67	144	82		8	144	144	288	
328	413	423	446		6	165	165	330	
663	801	361	740	CALLBACK		400	400	800	
0	0	3	10		9	30	30	60	
90	112	82	80		8	90	90	180	
573	689	276	650		6	280	280	560	
0	0	0	0	PART-TIME		0	0	0	

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
ENGINEERING & OPERATIONS - 2019-21 CAPITAL OUTLAY

GL 01-35-01-8830

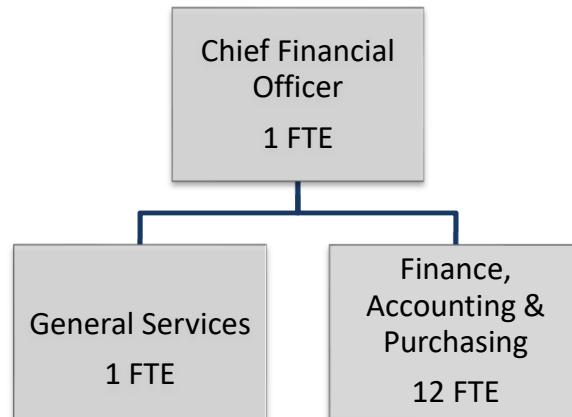
2019-20 2020-21

Total 2019-2021 Engineering & Operations Capital
Outlay

\$	40,600	\$	32,600	\$	8,000
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DIVISION OR PROGRAM	ITEM	DESCRIPTIONS AND RATIONALE	TOTAL AMT	EST. MONTH NEEDED	EST. YEAR NEEDED
Construction/Maint.		HDPE pipe equipment. Fusing equipment for 6" and 8" HDPE.	\$25,000	October	2020
Water Resources	2	Hach CA610 Replacement	\$7,600	One each year. Increase to \$8,000 second year	2020/2021

Finance Department



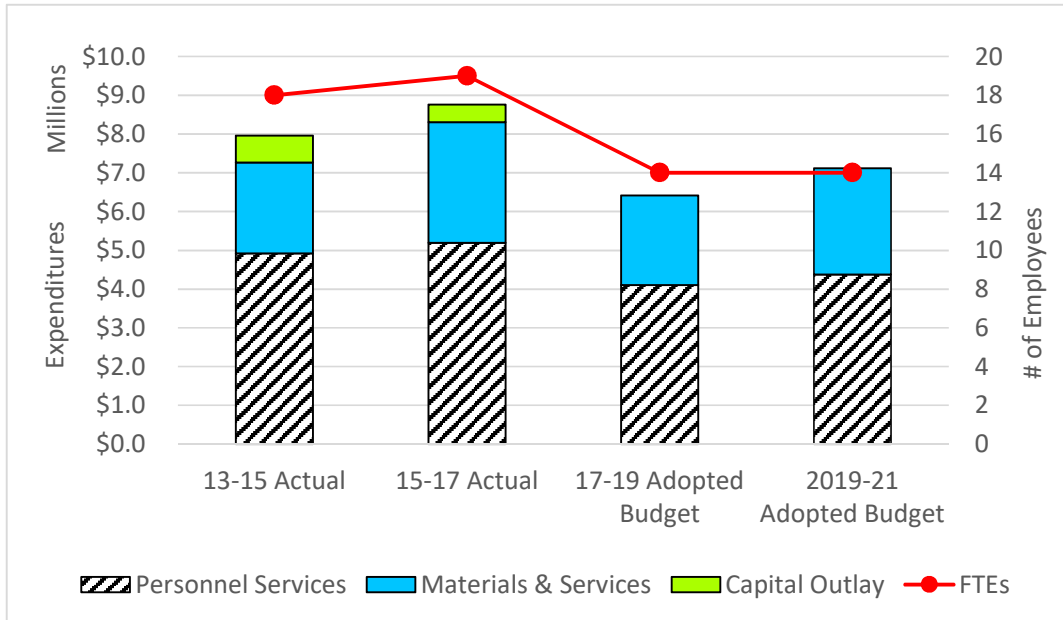
The Finance Department is responsible for all financial operations in the District including accounting and reporting, treasury, investments, financial planning, budget development and monitoring, financial forecasting, debt issuance and management, and water rates and charges. In addition, the Finance Department oversees and District's purchasing and contracting functions, and warehouse inventory control.

Major Budget Changes for 2019-21

Major initiatives for the coming two years include preparing the District to finance its long-term water supply capital improvements and supporting the financial administration of the Willamette Water Supply System.

- Prepare and execute the District's long-term debt program including closing the District's Water Infrastructure Finance & Innovation Act (WIFIA) loan.
- In support of WIFIA, implement Single-Audit Standards following the Uniform Guidance from Office of Management and Budget (OMB).
- Update accounting procedures and reporting for accounting for new joint ventures including the Willamette Intake Facilities (WIF) and Willamette Water Supply System (WWSS).
- Improve the District's Enterprise Resource Planning software used for financial management and human resource management by implementing electronic document management capabilities.
- Outsource payroll processing to the third-party provider.
- Control future Public Employee Retirement System costs by implementing a PERS side account.

Finance 2019-21 Expenditures



Finance Performance Measures

	Actual 14-15	Actual 15-16	Actual 16-17	Actual 17-18	Actual 18-19	Target 19-21	Target 19-21
Minimum District bond rating (S&P). No outstanding debt since FY 2015	N/A	N/A	N/A	N/A	N/A	TBD	TBD
Regular hours worked per workable hours available (2080 hrs. x # of staff)	83%	85%	86%	85%	87%	≥85%	≥85%

All-Department Measures

% of employees actively participating in water industry related organizations	17%	16%	15%	17%	17%	≥15%	≥15%
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TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

FINANCE DEPARTMENT

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$771,295	\$499,106	\$765,994	DIVISION TOTAL-GENERAL SERVICES	\$791,473	\$791,473	\$791,473	3.3%
\$2,245,862	\$2,600,084	\$3,337,436	DIVISION TOTAL-ACCOUNTING & FINANCE	\$3,589,569	\$3,589,569	\$3,589,569	7.6%
\$1,902,713	\$2,096,793	\$0	DIVISION TOTAL-INFORMATION TECHNOLOGY	\$0	\$0	\$0	N/A
\$4,919,870	\$5,195,983	\$4,103,430	DEPARTMENT TOTALS	\$4,381,042	\$4,381,042	\$4,381,042	6.8%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$426,933	\$497,124	\$418,540	DIVISION TOTAL-GENERAL SERVICES	\$363,735	\$363,735	\$363,735	-13.1%
\$1,278,108	\$1,710,901	\$1,891,020	DIVISION TOTAL-ACCOUNTING & FINANCE	\$2,369,100	\$2,369,100	\$2,369,100	25.3%
\$644,454	\$906,365	\$0	DIVISION TOTAL-INFORMATION TECHNOLOGY	\$0	\$0	\$0	N/A
\$2,349,495	\$3,114,390	\$2,309,560	DEPARTMENT TOTALS	\$2,732,834	\$2,732,834	\$2,732,834	18.3%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$689,801	\$450,063	\$0	DIVISION TOTAL-GENERAL SERVICES	\$0	\$0	\$0	N/A
\$689,801	\$450,063	\$0	DEPARTMENT TOTALS	\$0	\$0	\$0	N/A

HISTORICAL DATA			SPECIAL PAYMENTS	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$336,823	\$1,760,350	SPECIAL PAYMENTS CATEGORY TOTAL	\$1,446,000	\$1,446,000	\$1,446,000	-17.9%
\$0	\$336,823	\$1,760,350	DEPARTMENT TOTALS	\$1,446,000	\$1,446,000	\$1,446,000	-17.9%

HISTORICAL DATA			TOTAL DEPARTMENT BUDGET	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,888,029	\$1,446,293	\$1,184,534	DIVISION TOTAL-GENERAL SERVICES	\$1,155,208	\$1,155,208	\$1,155,208	-2.5%
\$3,523,970	\$4,310,985	\$5,228,456	DIVISION TOTAL-ACCOUNTING & FINANCE	\$5,958,669	\$5,958,669	\$5,958,669	14.0%
\$2,547,167	\$3,003,158	\$0	DIVISION TOTAL-INFORMATION TECHNOLOGY	\$0	\$0	\$0	N/A
\$0	\$0	\$1,760,350	SPECIAL PAYMENTS	\$1,446,000	\$1,446,000	\$1,446,000	-17.9%
\$7,959,166	\$8,760,436	\$8,173,340	DEPARTMENT TOTALS	\$8,559,876	\$8,559,876	\$8,559,876	4.7%

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

FINANCE DEPARTMENT

GENERAL SERVICES DIVISON (50-01)

HISTORICAL DATA			FINANCE DEPARTMENT DIVISION SUMMARY MATERIALS & SERVICES GENERAL SERVICES DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$0	LEGAL FEES	01-50-01-7300	\$35,000	\$35,000	\$35,000	N/A
\$351,890	\$431,303	\$346,730	PROFESSIONAL SERVICES	01-50-01-7310	\$220,500	\$220,500	\$220,500	-36.4%
\$15,466	\$5,732	\$3,500	BUSINESS EXPENSE	01-50-01-7330	\$3,550	\$3,550	\$3,550	1.4%
\$0	\$0	\$0	BUSINESS SERVICES	01-50-01-7335	\$39,650	\$39,650	\$39,650	N/A
\$47,230	\$49,758	\$50,070	TRAINING & EDUCATION	01-50-01-7340	\$44,795	\$44,795	\$44,795	-10.5%
\$11,383	\$10,330	\$18,240	DUES & SUBSCRIPTIONS	01-50-01-7350	\$20,240	\$20,240	\$20,240	11.0%
\$964	\$0	\$0	OTHER SUNDRY	01-50-01-7360	\$0	\$0	\$0	N/A
\$426,933	\$497,124	\$418,540	DIVISION TOTALS		\$363,735	\$363,735	\$363,735	-13.1%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
GENERAL SERVICES DIVISION - STAFF (50-01)

Senior manager: Chief Financial Officer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	13	Chief Financial Officer	13	1	1	1	
0	0	1	3	Administrative Assistant	3	1	1	1	
1	0	0	9	Purchasing Agent/ Contracts Coordinator	9	0	0	0	
2	1	2		Total Staff		2	2	2	

Functions:

- S Overall management for the department
- S Specific emphasis on financial forecasting, debt planning, audit services, special studies, intergovernmental agreements
- S Department administrative support

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
0	0	0	0			0	0	0	
0	0	18	40	OVERTIME		20	20	40	
0	0	18	40		3	20	20	40	
0	0	0	0	CALLBACK		0	0	0	
0	0	0	0			0	0	0	
0	0	0	0	PART-TIME		0	0	0	
0	0	0	0			0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

ACCOUNTING & FINANCE DIVISION (50-51)

HISTORICAL DATA			FINANCE DEPARTMENT DIVISION SUMMARY		BUDGET FOR 2019-21			
			MATERIALS & SERVICES ACCOUNTING & FINANCE DIVISION					
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$82,607	\$101,730	\$91,520	AUDIT FEES	01-50-51-7490	\$190,720	\$190,720	\$190,720	108.4%
\$702,145	\$1,145,076	\$1,221,000	BANKING & TREASURY SERVICES	01-50-51-7500	\$1,409,050	\$1,409,050	\$1,409,050	15.4%
\$0	\$115	\$0	BOND SALE EXPENSES	01-50-51-7505	\$300,000	\$300,000	\$300,000	N/A
\$1,950	\$1,226	\$9,600	INTEREST EXPENSE	01-50-51-7510	\$3,500	\$3,500	\$3,500	-63.5%
\$113,772	\$87,686	\$127,200	OFFICE EXPENSE	01-50-51-7530	\$124,900	\$124,900	\$124,900	-1.8%
\$150,541	\$169,853	\$164,000	COLLECTION EXPENSE	01-50-51-7630	\$169,500	\$169,500	\$169,500	3.4%
\$208,200	\$207,702	\$267,700	BAD DEBT EXPENSE	01-50-51-7640	\$161,430	\$161,430	\$161,430	-39.7%
\$18,894	(\$2,486)	\$10,000	INVENTORY ADJUSTMENT	01-50-51-7770	\$10,000	\$10,000	\$10,000	0.0%
\$1,278,109	\$1,710,901	\$1,891,020	DIVISION TOTALS		\$2,369,100	\$2,369,100	\$2,369,100	25.3%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
ACCOUNTING & FINANCE DIVISION- STAFF (50-51)

Senior manager: Chief Financial Officer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	1	10	Finance and Accounting Supervisor	10	0	0	0	
0	0	0		Controller	10	1	1	1	
1	1	1	9	Financial Planning and Debt Project Manager	9	1	1	1	
0	1	1	9	Purchasing Agent/ Contracts Coordinator	9	1	1	1	
0	0	1	8	Senior Management Analyst	8	1	1	1	
1	1	1	7	Inventory Controller & Industrial Buyer	7	1	1	1	
0	0	1	7	Technical Services Accountant	7	1	1	1	
2	2	2	6	Accountant	6	2	2	2	
1	1	2	3	Accounting Technician	3	2	2	2	
1	1	0	6	Project Accountant	6	0	0	0	
1	1	1	5	Payroll Specialist	5	1	1	1	
0	0	1	5	Accounting Specialist	4	1	1	1	
1	1	0	7	Financial Analyst	7	0	0	0	
9	10	12		Total Staff		12	12	12	

Functions:

- S Prepare financial statements for annual audit and accounting of joint ventures
- S Provide full service accounting services including accounts payable, accounts receivable and payroll
- S Administer procurement cards.
- S Oversee and maintain internal control systems.
- S Update and monitor the financial contract and intergovernmental agreement costs.
- S Provide financial and cost accounting and reporting for internal use and to meet state and federal requirements.
- S Prepare biennial budget and six-year capital improvement plan; update and report on financial plan
- S Manage District investments and debt management program.
- S Update cost-of-service studies; conduct annual water rates, fees and charges review
- S Issues solicitations, negotiate contract terms, issue contracts and purchase orders; maintain TVWD's Local Contract Review Board Rules.
- S Provide warehouse staffing support; perform buying functions and inventory control

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		17	17	34	
0	0	0	0		7	17	17	34	
81	154	114	92	OVERTIME		90	70	160	
34	19	15	20		7	10	10	20	
24	46	11	16		6	20	20	40	
6	76	74	40		5	20	20	40	
0	0	7	0		4	20	10	30	
17	13	7	16		3	20	10	30	
437	504	259	0	PART-TIME		0	0	0	
373	0	0	0	Finance Intern	2	0	0	0	
64	504	259	0	Accounting Transition		0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

INFORMATION TECHNOLOGY DIVISION (50-52)

HISTORICAL DATA			FINANCE DEPARTMENT DIVISION SUMMARY		BUDGET FOR 2019-21			
			MATERIALS & SERVICES INFORMATION TECHNOLOGY DIVISION					
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$81,720	\$135,702	\$0	HARDWARE & MAINTENACE	01-50-52-7575	\$0	\$0	\$0	N/A
\$433,849	\$413,861	\$0	SOFTWARE & MAINTENANCE	01-50-52-7576	\$0	\$0	\$0	N/A
\$0	\$157,263	\$0	SUBSCRIPTION SERVICES	01-50-52-7577	\$0	\$0	\$0	N/A
\$128,885	\$159,657	\$0	COMMUNICATION SERVICES	01-50-52-7590	\$0	\$0	\$0	N/A
\$0	\$39,881	\$0	COMMUNICATION HARDWARE	01-50-52-7591	\$0	\$0	\$0	N/A
\$644,454	\$906,365	\$0	DIVISION TOTALS		\$0	\$0	\$0	N/A

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
INFORMATION TECHNOLOGY DIVISION- STAFF (50-52)

Senior manager: Chief Financial Officer

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
1	1	0	11	Information Technology Officer	11	0	0	0	
0	0	0	10	Senior Business Analyst	10	0	0	0	
1	1	0	9	Development Coordinator/Programmer	9	0	0	0	
0	1	0	9	Data Analyst/ETL Developer	8	0	0	0	
1	1	0	8	Programmer System Analyst	8	0	0	0	
1	1	0	8	Senior Network Administrator	8	0	0	0	
1	1	0	8	Senior Systems Administrator	8	0	0	0	
1	1	0	7	Application Developer	7	0	0	0	
1	1	0	5	Computer Support and Systems Technician	5	0	0	0	
7	8	0		Total Staff		0	0	0	

Note: Information Technology Services was established as a separate department beginning in the 2017-19 biennium. See Section 14 Information Technology Services Department

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
0	0	0	0			0	0	0	
264	295	0	0	OVERTIME		0	0	0	
112	125	0	0		9	0	0	0	
65	65	0	0		8	0	0	0	
35	19	0	0		7	0	0	0	
0	12	0	0		6	0	0	0	
52	74	0	0		5	0	0	0	
4	11	0	0	CALLBACK		0	0	0	
4	11	0	0		8	0	0	0	
0	0	0	0	PART-TIME		0	0	0	

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

FINANCE - 2019-21 CAPITAL OUTLAY

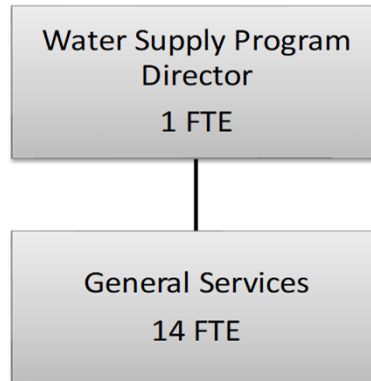
GL 01-50-01-8850

FY 2019-20 FY 2020-21 2019-2021

Total Finance Technology Capital Outlay	\$ -	\$ -	\$ -
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DIVISION OR PROGRAM	CATEGORY OF PURCHASE	ITEM	DESCRIPTIONS AND RATIONALE	TOTAL AMT	EST. MONTH NEEDED	EST. YEAR NEEDED
Finance	Computer Software	Tyler Content/Document Management	Budgeted in Information Technology Services Capital Outlay 01-70-01-8850			
		Annual Licensing	Budgeted in Information Technology Services Capital Outlay 01-70-01-8850			

Water Supply Program



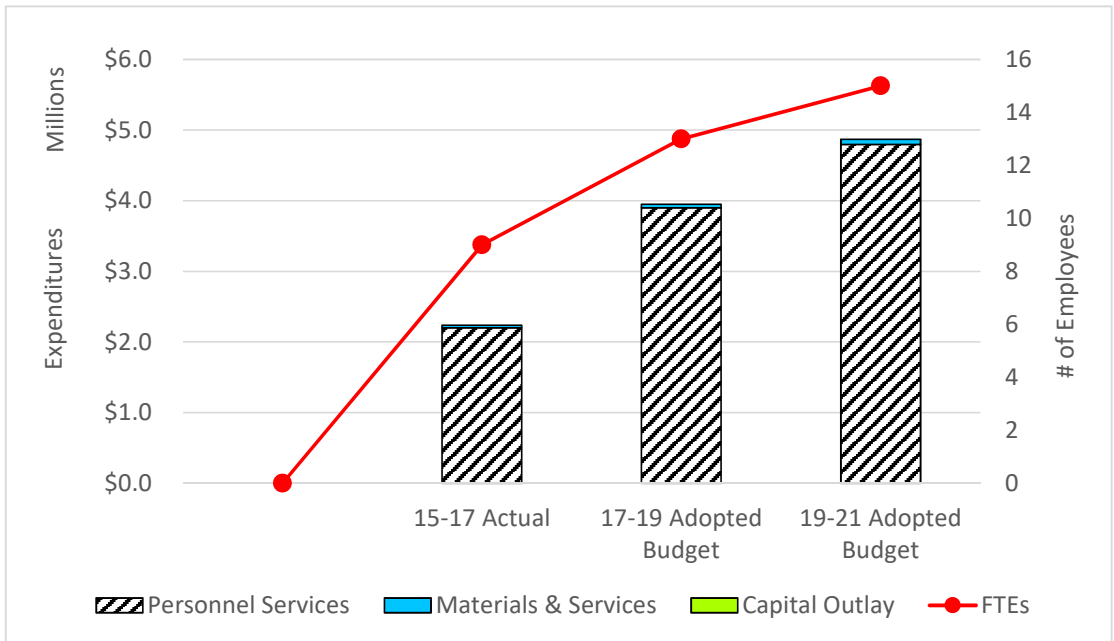
The Water Supply Program Department (WSP) is responsible for managing the planning, design and construction of the Willamette supply system, as well as managing finance, administration, communication, and coordination with the Willamette Water Supply System (WWSS) partners. Additionally, the WSP Department serves as the primary group overseeing the District's managing agency responsibilities for the WWSS partnership as well as the Willamette Intake Facilities (WIF) Commission and Willamette River Water Coalition (WRWC).

The WSP Department houses the TVWD staff responsible for the WWSS, WIF, and WRWC, although other District staff may support the partnerships as needed. Budgeted expenditures include Personnel Services for fifteen staff, and Materials & Services associated with staff support costs. Expenditures directly associated with WWSS, WIF, and WRWC are appropriated in their respective funds. WSP labor and overhead expenditures are reimbursed to the General Fund by the WWSS, WIF and WRWC Funds as staff charges their time to capital and expense projects associated with the different partnerships.

Major Budget Changes for 2019-21

- Establishment of the WWSS and WIF intergovernmental agreements and TVWD's role as the managing agency for both partnerships.
- Addition of two FTEs to provide administration and operational leadership for the WWSS and WIF partnerships.
- Budgeted Materials & Services Expenditures are for staff support costs such as membership dues for professional associations and training and education. All partnership related costs are appropriated directly in the WWSS (Fund 45) and WIF (Fund 44) Funds.

Water Supply Program 2019-21 Expenditures



Note: The Water Supply Program (WSP) Department was established at the start of the 2015-17 biennium.

Water Supply Program Performance Measures*

*Performance measures under development for the next biennial budget period.

All-Department Measures

	Actual 14-15	Actual 15-16	Actual 16-17	Actual 17-18	Actual 18-19	Target 19-21	Target 19-21
% of employees actively participating in	17%	16%	15%	17%	17%	≥15%	≥15%

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

WATER SUPPLY PROGRAM DEPARTMENT

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,212,489	\$2,200,965	\$3,898,713	DIVISION TOTAL -GENERAL SERVICES	\$4,798,806	\$4,798,806	\$4,798,806	23.1%
\$1,212,489	\$2,200,965	\$3,898,713	DEPARTMENT TOTALS	\$4,798,806	\$4,798,806	\$4,798,806	23.1%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$286,648	\$37,541	\$50,706	DIVISION TOTAL -GENERAL SERVICES	\$72,095	\$72,095	\$72,095	42.2%
\$286,648	\$37,541	\$50,706	DEPARTMENT TOTALS	\$72,095	\$72,095	\$72,095	42.2%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$0	DIVISION TOTAL -GENERAL SERVICES	\$0	\$0	\$0	0.0%
\$0	\$0	\$0	DEPARTMENT TOTALS	\$0	\$0	\$0	0.0%

HISTORICAL DATA			TOTAL DEPARTMENT BUDGET	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$1,499,137	\$2,238,506	\$3,949,419	DEPARTMENT TOTAL-WSP	\$4,870,901	\$4,870,901	\$4,870,901	23.3%
\$1,499,137	\$2,238,506	\$3,949,419	DEPARTMENT TOTALS	\$4,870,901	\$4,870,901	\$4,870,901	23.3%

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

WATER SUPPLY PROGRAM DEPARTMENT (60-01)

HISTORICAL DATA			WATER SUPPLY PROGRAM DEPARTMENT SUMMARY MATERIALS & SERVICES		BUDGET FOR 2019-21			
GENERAL SERVICES								
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$31,962	\$361	\$0	PROFESSIONAL SERVICES	01-60-01-7310	\$0	\$0	\$0	0.0%
\$10,469	\$11,176	\$4,250	BUSINESS EXPENSE	01-60-01-7330	\$2,725	\$2,725	\$2,725	-35.9%
\$19,369	\$22,914	\$42,020	EMPLOYEE TRAINING & EDUCATION	01-60-01-7340	\$62,180	\$62,180	\$62,180	48.0%
\$4,929	\$3,090	\$3,936	DUES & SUBSCRIPTIONS	01-60-01-7350	\$6,690	\$6,690	\$6,690	70.0%
\$448	\$0	\$500	OTHER SUNDRY	01-60-01-7360	\$500	\$500	\$500	0.0%
\$124,477	\$0	\$0	PUBLIC INFORMATION	01-60-01-7450	\$0	\$0	\$0	0.0%
\$94,994	\$0	\$0	CONSERVATION	01-60-01-7785	\$0	\$0	\$0	0.0%
\$286,648	\$37,541	\$50,706	DIVISION TOTALS		\$72,095	\$72,095	\$72,095	42.2%

TUALATIN VALLEY WATER DISTRICT

2019 - 2021 BIENNIAL BUDGET

WATER SUPPLY PROGRAM DEPARTMENT - STAFF (60-01)

Senior manager: Water Supply Program Director

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	1	1	13	Water Supply Program Director	13	1	1	1	
0	0	0	N/A	Willamette Supply Manager	12	1	1	1	Proposed New Position
0	0	1	11	Water Supply Deputy Program Director	11	1	1	1	
0	1	2	11	Principal Engineer	11	1	1	1	
0	0	0	N/A	Willamette Supply Operations Supervisor	10	0	1	1	Proposed New Position Begins Yr. 2
0	1	1	11	Senior Engineer	9	1	1	1	
0	1	1	9	Finance & Administrative Supervisor	9	1	1	1	
0	0	1	9	Permitting & Outreach Manager	9	1	1	1	
0	1	1	8	GIS Analyst	8	1	1	1	
1	1	1	7	Communications & Public Affairs Supervisor	8	1	1	1	
0	1	1	7	Project Delivery Coordinator	7	1	1	1	
0	0	0	N/A	Outreach Coordinator	5	1	1	1	
0	1	1	4	Document & Controls Specialist	4	1	1	1	
0	1	2	3	Administrative Assistant	3	2	2	2	
1	0	0	7	Resource Coordinator	7	0	0	0	
1	0	0	7	Community & Youth Ed Coordinator	7	0	0	0	
3	9	13		Total Staff		14	15	15	

Functions:

- S Oversees the administration of the Willamette Water Supply Program
- S Oversees planning, design, and construction of assets associated with Willamette Water Supply System (WWSS) and Willamette Intake Facilities Commission (WIF)
- S Provides financial oversight and reporting for the Willamette River Water Coalition (WRWC), WWSS and WIF

Personnel Services Hours:

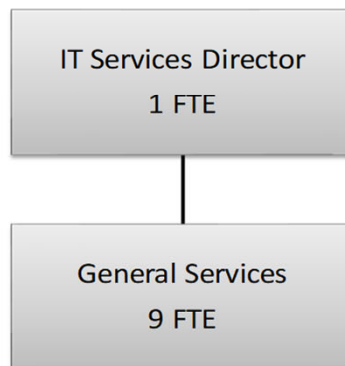
Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 P-T-D	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
3	0	0	0	AFTER-HOURS DUTY		0	0	0	
3	0	0	0		6	0	0	0	
0	216	159	120	OVERTIME		90	90	180	
0	0	0	20		7	0	0	0	
0	3	28	20		4	10	10	20	
0	213	131	80		3	80	80	160	
28	0	1	0	CALLBACK		0	0	0	
28	0	1	0		6	0	0	0	
0	945	889	0	PART-TIME		0	0	0	
0	945	889	2080	Engineering Intern	3	0	0	0	

TUALATIN VALLEY WATER DISTRICT
2019-2021 BIENNIAL BUDGET



Information Technology Services Department



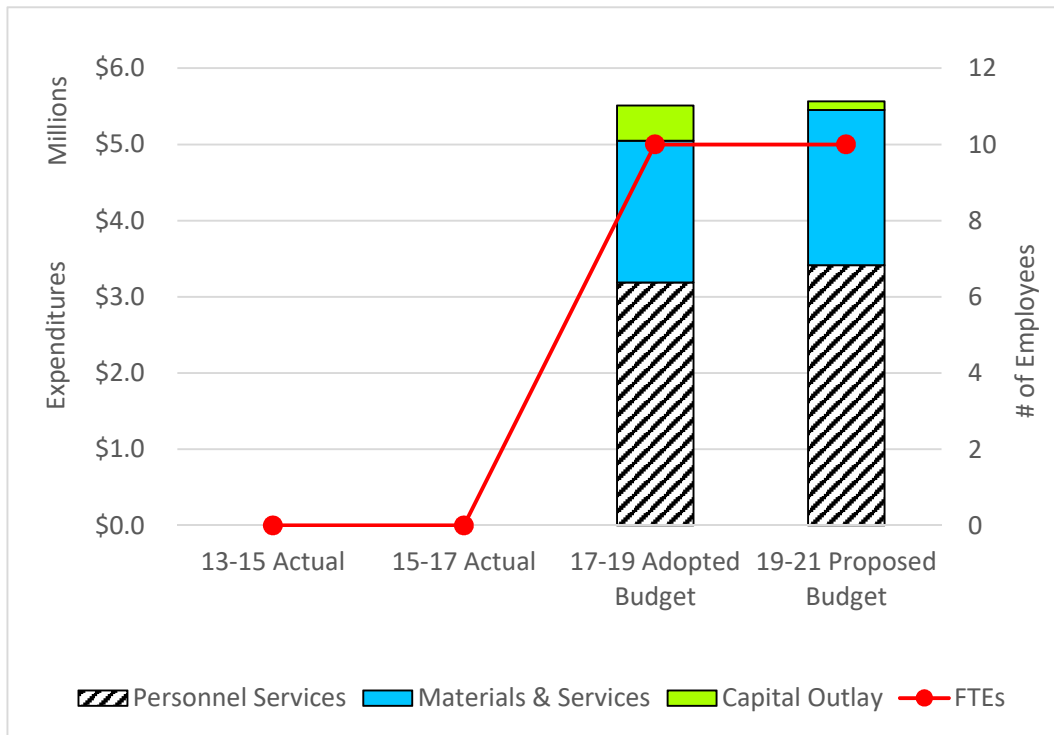
The Information Technology Services Department is responsible for the management and support of all aspects of the District's information technology (IT) systems, including all data and voice communications hardware and software, as well as development and execution of the District's overall IT strategy.

The IT Services Department was new department beginning with the 2017-19 biennium. Previously IT was a separate division of the Finance & Information Technology Department. A significant initiative for the department has been deployment of new service-oriented IT governance model. Establishing IT as a separate department was an important step in the process.

Major Budget Changes for 2019-21

- Elimination of the limited-term Senior Systems Administrator and addition of a Business Analyst position. This position will perform business process and functional analysis in support of evaluating, selecting, implementing, and managing District software applications and systems.
- Provide focused resources for the successful selection and implementation of the District's new Customer Information System (CIS) billing system.
- Increase technology resiliency via redundant telecommunication circuits including a second internet circuit, network equipment, server infrastructure.
- Enhance the District's cyber-security posture and compliance with America's Water Infrastructure Act of 2018 (AWIA).

Information Technology Services 2019-21 Expenditures



Note: The Information Technology Services (IT) Department was established as a separate department effective for the 2017-19 Biennium. Previously IT was a division of the Finance Department.

Information Technology Performance Measures*

*Performance measures under development for the next biennial budget period.

All-Department Measures

	Actual 14-15	Actual 15-16	Actual 16-17	Actual 17-18	Actual 18-19	Target 19-21	Target 19-21
% of employees actively participating in water industry related organizations	17%	16%	15%	17%	17%	≥15%	≥15%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET

INFORMATION TECHNOLOGY SERVICES DEPARTMENT

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$3,188,560	DIVISION TOTAL-GENERAL SERVICES	\$3,414,341	\$3,414,341	\$3,414,341	7.1%
\$0	\$0	\$3,188,560	DEPARTMENT TOTALS	\$3,414,341	\$3,414,341	\$3,414,341	7.1%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$1,861,089	DIVISION TOTAL-GENERAL SERVICES	\$2,040,500	\$2,040,500	\$2,040,500	9.6%
\$0	\$0	\$1,861,089	DEPARTMENT TOTALS	\$2,040,500	\$2,040,500	\$2,040,500	9.6%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$463,500	DIVISION TOTAL-GENERAL SERVICES	\$113,100	\$113,100	\$113,100	-75.6%
\$0	\$0	\$463,500	DEPARTMENT TOTALS	\$113,100	\$113,100	\$113,100	-75.6%

INFORMATION TECHNOLOGY SERVICES DEPARTMENT

HISTORICAL DATA			TOTAL DEPARTMENT BUDGET	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$5,513,149	DIVISION TOTAL-GENERAL SERVICES	\$5,567,941	\$5,567,941	\$5,567,941	1.0%
\$0	\$0	\$5,513,149	DEPARTMENT TOTALS	\$5,567,941	\$5,567,941	\$5,567,941	1.0%

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET

GENERAL SERVICES DIVISON (70-01)

HISTORICAL DATA			IT SERVICES DEPARTMENT DIVISION SUMMARY MATERIALS & SERVICES GENERAL SERVICES DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG 17-19
\$0	\$0	\$289,000	PROFESSIONAL SERVICES	01-70-01-7310	\$164,000	\$164,000	\$164,000	-43.3%
\$0	\$0	\$800	BUSINESS EXPENSE	01-70-01-7330	\$1,250	\$1,250	\$1,250	56.3%
\$0	\$0	\$27,930	TRAINING & EDUCATION	01-70-01-7340	\$25,000	\$25,000	\$25,000	-10.5%
\$0	\$0	\$2,900	DUES & SUBCRIPTIONS	01-70-01-7350	\$2,300	\$2,300	\$2,300	-20.7%
\$0	\$0	\$237,500	HARDWARE & MAINTENACE	01-50-52-7575	\$268,850	\$268,850	\$268,850	13.2%
\$0	\$0	\$480,089	SOFTWARE & MAINTENANCE	01-50-52-7576	\$576,440	\$576,440	\$576,440	20.1%
\$0	\$0	\$528,370	SUBSCRIPTION SERVICES	01-50-52-7577	\$584,880	\$584,880	\$584,880	10.7%
\$0	\$0	\$230,500	COMMUNICATION SERVICES	01-50-52-7590	\$375,180	\$375,180	\$375,180	62.8%
\$0	\$0	\$64,000	COMMUNICATION HARDWARE	01-50-52-7591	\$42,600	\$42,600	\$42,600	-33.4%
\$0	\$0	\$1,861,089	DIVISION TOTALS		\$2,040,500	\$2,040,500	\$2,040,500	9.6%

TUALATIN VALLEY WATER DISTRICT 2019 - 2021 BIENNIAL BUDGET

INFORMATION TECHNOLOGY DIVISION- STAFF (70-01)

Senior manager: Information Technology Services Director

Staffing:

13-15	15-17	17-19	17-19 GRADE	JOB TITLE	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	1	13	Information Technology Services Director	13	1	1	1	
0	0	1	10	Information Technology Architect	9	1	1	1	
0	0	1	9	Development Coordinator/Programmer	9	1	1	1	
0	0	1	8	Data Analyst/ETL Developer	8	1	1	1	
0	0	1	8	Programmer System Analyst	8	1	1	1	
0	0	1	8	Senior Network Administrator	8	1	1	1	
0	0	1	8	Senior Systems Administrator	8	1	1	1	
0	0	0	N/A	Business Analyst	7	1	1	1	New Position
0	0	1	6	Systems Administrator	6	1	1	1	
0	0	1	5	Computer Support & Systems Technician	5	1	1	1	
0	0	1	9	Senior Systems Administrator (Limited Duration)	9	0	0	0	
0	0	10		Total Staff		10	10	10	

Functions:

S	<i>Provide IT strategic planning and facilitate IT governance</i>
S	<i>Coordinate information and telecommunications systems</i>
S	<i>Provide deployment support and integration services for major applications (e.g. Logos, CIS, GIS, Cityworks)</i>
S	<i>Provide planning and stewardship for district software purchases and software licensing; coordinate software contract reviews</i>
S	<i>Support end-user, desktop and mobile computing needs throughout the District</i>
S	<i>Support and enhance the network and server infrastructure to meet the district's computing needs and reliability expectations</i>
S	<i>Manage information security across all networks</i>
S	<i>Manage databases and data storage needs, including database integrity and system recoverability</i>

Personnel Services Hours:

Hours, by grade, required for each type of staffing need.

13-15	15-17	17-19 Thru 12/18	17-19 BUDGET	TYPE OF STAFFING	GRADE	19-20 ADOPTED	20-21 ADOPTED	19-21 ADOPTED	COMMENTS
0	0	0	0	AFTER-HOURS DUTY		0	0	0	
0	0	0	0			0	0	0	
264	295	249	380	OVERTIME		165	165	330	
112	125	70	80		9	40	40	80	
65	65	58	120		8	60	60	120	
35	19	0	50		7	0	0	0	
0	12	78	50		6	25	25	50	
52	74	43	80		5	40	40	80	
4	11	4	20	CALLBACK		10	10	20	
4	11	4	20		8	10	10	20	
0	0	0	0	PART-TIME		0	0	0	

TUALATIN VALLEY WATER DISTRICT
2019 - 2021 BIENNIAL BUDGET
INFORMATION TECHNOLOGY - 2019-21 CAPITAL OUTLAY

GL 01-70-01-8850

	2019-21	FY 2019-20	FY 2020-21
Total Information Technology Services	\$ 113,100	\$ 78,100	\$ 35,000
Capital Outlay			

DIVISION OR PROGRAM	CATEGORY OF PURCHASE	ITEM	DESCRIPTIONS AND RATIONALE	TOTAL AMT	EST. MONTH NEEDED	EST. YEAR NEEDED
IT	Computer Hardware	Network Equipment Refresh	Normal network equipment refresh + one spare network switch and firewall	\$ 19,200	Dec	2019
IT	Computer Hardware	NetApp Installation & data migration	Assistance for NetApp storage implementation and data migration from old to new platform.	\$ 15,000	Dec	2019
IT	Computer Hardware	Infrastructure Hardware Refresh	Refresh of server and security devices that will reach end of life.	\$ 15,000	Sept	2019
IT	Computer Software	Barracuda Installation & data migration	Assistance for Barracuda back up system implementation and data migration from old to new platform.	\$ 5,000	Dec	2019
District	Computer Hardware	Thin Client Implementation	Replacing 15 computers with thin client devices and new monitors	\$ 23,900	Dec	2019
Finance	Computer Software	Tyler Content/Document Management	Improve efficiency of staff allowing scaling of work without adding additional FTE. Mitigates future challenges for WWSP by capturing records needed to capitalize assets after WWSS is completed	\$ 35,000	July	2020

CIP Overview

Each biennium the District updates its six-year capital improvement plan (CIP), which includes expenditures for in-District projects, the Willamette Water Supply Program (WWSP), and Joint Water Commission (JWC).

The WWSP was established to develop and deliver the Willamette Intake Facilities (WIF) and Willamette Water Supply System (WWSS) to the District and its partners by July 2026. Once complete, the WWSS will be a seismically hardened water supply system designed to meet the long-term needs of the District's residential, commercial, and industrial customers. The District serves as managing agency to both the WIF and WWSS, which are set up as commissions governed by TVWD and its partners. More information on the WWSP and its projects is provided in Section 16 *Willamette Water Supply System* and Section 17 *Willamette Intake Facilities*.

The JWC is a partnership of the District and the cities of Hillsboro, Beaverton and Forest Grove. The JWC operates a treatment plant and related storage and transmission facilities. As a member of the Joint Water Commission, the District owns capacity rights in JWC facilities. TVWD's capacity share of the JWC water treatment plant is 12.5 million gallons per day (MGD),¹ and the District owns rights to approximately 7,000 acre-feet of storage at Barney Reservoir, one of the two primary impoundments that provide raw surface water supply to the JWC (the other is Hagg Lake).

For capital asset accounting and financial reporting purposes, the JWC and Barney Reservoir operate as joint ventures with assets being held by the JWC, and each member entity reflecting their respective ownership shares as investments in joint ventures. JWC members share actual operating and maintenance costs in proportion to their water usage and ownership shares. As a member of the JWC, the District also participates in the development of its budget.

For in-District projects, status updates on current projects and new project requests are prepared by the Engineering and Operations Department. The Adopted 2019-21 Budget and six-year CIP include in-District capital projects and the District's share of the WIF, WWSS and JWC projects all appropriated as capital outlay in the Capital Improvement Fund.

As managing agency TVWD also incorporates the budgets adopted by the WWSS and WIF Board of Commissioners into the District's biennial budget, which are recorded as investment in joint ventures.

The District budgets for minor capital outlay items such as security and field equipment, heating/cooling/air conditioning (HVAC), and certain information technology hardware and software in the General Fund. For policy guidance, the District uses a capitalization threshold for machinery, furniture, and equipment of expenditures exceeding \$7,500 and a life in excess of one year. CIP projects in the Capital Improvement Fund are generally reserved for water system infrastructure, fleet and larger facility and information technology projects requiring a significant amount of internal labor and overhead that can be capitalized as part of the project.

Related to the WWSP is a need to include water supply and major conveyance projects in the in-District CIP. One such in-District project is Metzger Pipeline East, which will deliver WWSS water to the District's Metzger service area by 2026.

¹ The District currently owns 12.5 MGD of JWC treatment capacity, expanding to 14.5 MGD in FY2020

CIP Projected Expenditures, Categories, and Sources of Funding

The table below presents a summary of the six-year CIP for the Adopted 2019-21 Budget.²

SIX YEAR CIP FY2020-2025 (in \$ millions)

Project Category	Adopted Budget		Projected				Totals
	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	
Source (TVWD)	\$0.1	-	\$1.1	\$0.7	\$0.1	-	\$2.0
Storage	0.4	2.1	7.4	0.4	3.0	3.1	16.3
Pump Stations	1.0	4.9	1.1	3.2	3.0	0.1	13.4
Pipeline	20.6	20.3	39.7	58.6	28.4	20.1	187.6
Facilities	0.8	0.8	1.4	-	-	-	3.0
Fleet Replacements	0.7	0.6	0.5	0.5	0.5	0.6	3.4
Information Technology	3.1	5.1	1.2	-	-	-	9.4
Meters & Services	1.6	1.8	1.5	1.6	1.7	1.7	9.8
Joint Venture: WIF	0.4	3.3	2.1	-	-	-	5.8
Joint Venture: WWSS	47.3	62.4	79.9	148.2	117.7	48.0	503.5
Joint Venture: JWC	1.7	0.6	1.2	0.5	0.7	0.4	5.0
Totals	\$77.6	\$101.9	\$137.1	\$213.7	\$155.0	\$73.9	\$759.3

For this budget, the District categorized capital improvement projects into the eleven categories listed below. These project categories are used to improve the tracking and transparency of CIP projects.

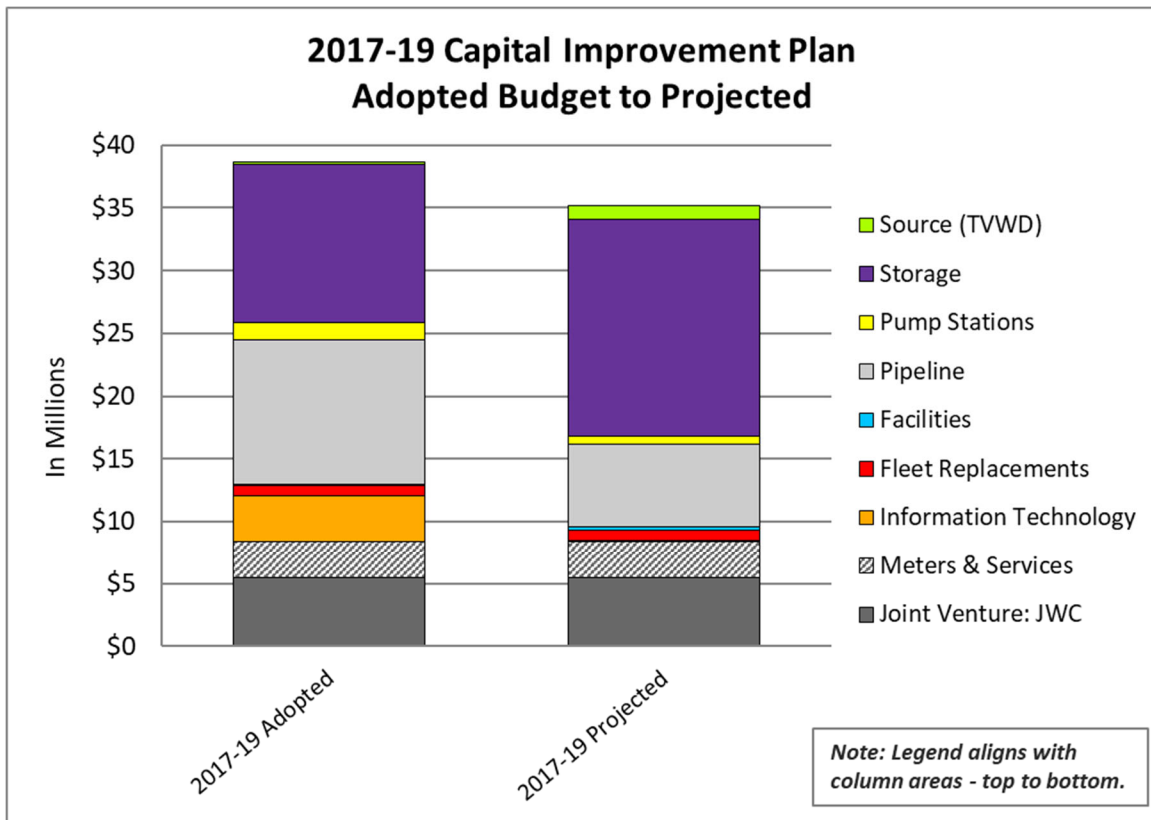
- A. Source (TVWD):** Includes the development, upgrade or expansion of infrastructure related to water supply resources.
- B. Storage:** Upgrades, expansion, replacement, and repairs of reservoirs and related infrastructure.
- C. Pump Stations:** Upgrades, expansion, replacement, and repairs of pump stations and related equipment (e.g., motors and monitoring systems).
- D. Pipeline:** Upgrades, expansion, replacement, and repairs of water transmission mains and distribution lines.
- E. Facilities:** Includes equipment replacements and improvements at District facilities for seismic upgrades, space planning, and safety/security.
- F. Fleet Replacements:** Scheduled replacements and new vehicles serving District operating, maintenance and capital construction needs.
- G. Information Technology (Computer Hardware/Software):** Typically, this category includes upgrades, expansion, and replacement of computer hardware and software requiring a significant amount of internal staff labor and overhead. For the Adopted 2019-21 Budget, only the Customer Information System (CIS) project is included.³ All other information technology expenditures are budgeted in Section 14 *Information Technology Services Department* as either capital outlay or materials & services, depending whether the expenditure will be capitalized or expensed.
- H. Meters and Services:** Includes new and replacement water meters and service installations. New services are paid from separate fees and developer contributions.

² All costs presented in this section (Section 15) include assumed inflation or construction cost escalation.

³ The new CIS will be developed in partnership with Clean Water Services. For more information, see page 15-74.

- I. **Joint Venture: WIF** – Includes the District’s share of a raw water intake facility located at the current Willamette River Water Treatment Plant in Wilsonville, Oregon.⁴
- J. **Joint Venture: WWSS** – Includes District’s share of Willamette Water Supply System resources, including 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.⁵
- K. **Joint Venture: JWC** – Includes the District’s share of developments, upgrades, and expansions of water supply resources funded through TVWD’s joint venture partnership in the JWC.

For comparison, the graph below presents the CIP for the Adopted 17-19 Budget and projected biennial expenditures.⁶ Note that the bulk of the Information Technology capital budget was not spent during the 2017-19 biennium. This is because the CIS project has shifted to the 2019-21 biennium.



In most years, funding for the CIP is principally derived from water rates, system development charges (SDCs), separate fees paid by customers and developers, and available fund balance. However, as the WWSP activities ramp up into a period of significant annual expenditures, the District will rely increasingly on outside debt financing to fund large portions of its capital investments.

⁴ The WIF is a joint venture of the District and the cities of Beaverton, Hillsboro, Sherwood, Tigard, and Wilsonville. The District serves as the Managing Agency for the WIF.

⁵ The WWSS will soon be a joint venture of the District and the cities of Hillsboro and Beaverton. The District and the cities are currently in the process of adopting the intergovernmental agreement required to form the WWSS. As currently planned, the new WWSS entity will be established on July 1, 2019.

⁶ The WIF and WWSS joint ventures were not established prior to the Adopted 17-19 Budget, so they are not included in the graph.

The WWSP began in FY2014 and will be complete in FY2026. Its total program cost (including inflation) is substantial at approximately \$1.3 billion. Until 2018, the District had assumed that it would fund its projected share (approximately \$729 million) with cash and revenue bond proceeds.⁷ In July 2018, the District and its WWSS partner, the City of Hillsboro (Hillsboro), were selected by the U.S. Environmental Protection Agency (EPA) to apply for up to \$616.6 million in long-term, low-cost supplemental loans, administered through EPA’s Water Infrastructure Finance and Innovation Act (WIFIA). The District estimates that its share of WIFIA funding (estimated at \$370 million) will save its ratepayers over \$230 million through 2045, free up financial resources for other purposes, and lower the overall levels of annual revenues required from rates and charges.

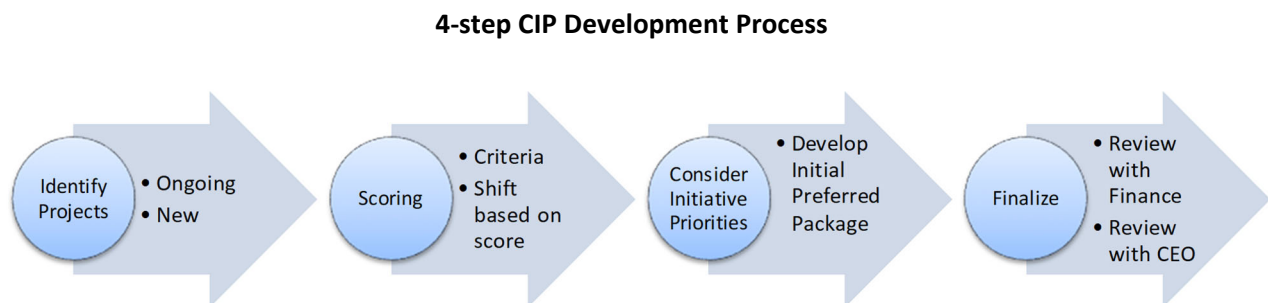
Most CIP projects are also eligible to be financed with revenue bonded debt. The District has reimbursement authority, as permitted under federal law, to issue revenue bonds to reimburse for certain capital projects. A determination will be made during the 2019-21 biennium on the timing for future revenue bond issues to provide funding for both in-District capital projects and the District’s share of WWSP projects.

CIP Development Process, Prioritization and Individual Project Pages

As investments in the District’s water system infrastructure and future water supply take on increasing importance in terms of their financial requirements, the District continues to refine and enhance its CIP development process. The Engineering and Operations Department leads a cross-departmental team to develop the CIP using a deliberate approach to select and prioritize projects, and confirm the financial feasibility of the CIP with available and projected resources.

Key inputs included the District’s 2018 Water Master Plan Update, JWC capital requirements, and projects identified as necessary for service reliability, seismic resiliency, and replacement of aging infrastructure.

The following graphic illustrates the basics of the District’s CIP development process.



1. Identify Projects

Project identification involved selecting both:

- Ongoing CIP projects funded but not completed during the 2017-19 biennium, and
- New projects determined as critical to the District’s water system.

Project identification also considered the seismic vulnerability and reliability of other critical water system assets, mains replacement needs, and projects performed by in-house District staff such as smaller pipeline projects, meter installations based on projected customer growth.

⁷ WWSP partner costs will be funded individually by the District’s partners, with payments made through the District as Managing Agency of the WWSP.

A key financial consideration in developing the CIP for the Adopted 2019-21 Budget is balancing in-District capital improvements with the current and future requirements of the WWSP Program. The District’s financial planning assumptions for the capital needs of the WWSP are covered in more detail in Section 5 – *Multi-Year Financial Outlook*.

2. Scoring and Ranking Criteria

Each CIP project was scored and ranked in accordance to the criteria shown below. Higher scored projects were prioritized as either critical or near-term, mid-term, or long-term. All projects were placed on a long-term CIP schedule with cost estimates corresponding to their place on the schedule.

	Criteria	Ranking Considerations
1.	Project Urgency	Mandated projects (e.g. external commitments to partners) time sensitive, ongoing projects
2.	Customer Criticality	Service to critical customers such as hospitals & industries, projects that affect large portions of customer base
3.	Growth/ Future Demands	Expand services and facilities to meet anticipated growth/water demand
4.	Water Quality	Current and anticipated water quality regulatory requirements
5.	Asset Condition	Replacement of aging infrastructure including known deficiencies, and the installation pipelines with improved soil corrosion control protection
6.	Reliability	Seismic resiliency, reliability of service, redundancy in water system distribution operations
7.	Safety & Security	Public and private fire protection, facility security enhancements, worker safety (e.g. confined spaces)
8.	Cost Effectiveness/ Community Benefit	Improvements to distribution system to reduce pumping requirements, horizontal directional drilling to reduce surface street repair and repaving
9.	Environment	Consideration of impacts to natural environment, mitigate construction impacts to public, incorporate environmentally preferable sustainability elements in projects

Three *Key Drivers* were identified for each project included in the Adopted six-year CIP. Of the nine evaluation criteria listed above, the Key Drivers represent the three criteria most relevant in the consideration of each project. Beginning on page 15-16, the project information sheets list each project’s Key Drivers along with brief descriptions of the rationale for their selection.

3. Consider District Initiatives, Ongoing Programs, and Board Direction on Risk Management

This step involved developing a prioritized CIP that considered the District's Initiatives and ongoing programs that pertain to capital projects:

- **2019-21 District Initiative – District Resiliency Program**, including the following objectives:
 - Coordinate all TVWD resiliency efforts including the All Hazards Emergency Response Plan, infrastructure resiliency, security (cyber and physical) planning, continuity of operations and community/family outreach.
 - TVWD's Risk & Resilience Plan updated per "America's Water Infrastructure Act of 2018".
 - Long-range CIP established to meet Oregon Resiliency Program (ORP) objectives by 2065.
- **Ongoing program – Asset Management/Aging Infrastructure Strategy**, including objectives:
 - Asset Management strategy to include all water system infrastructure.
 - Preventative maintenance performed to maximize the useful life of assets.
 - Asset replacements based on condition assessment data and maintenance history.

These programs are not new to the District. Upgrades and replacements of aging infrastructure and improving seismic resiliency of storage, pumping, and pipeline assets have been District objectives for many years. Additionally, the 2018 Water Master Plan Update led to planning for level-of-service goals based on current and future conditions, and helped in project prioritization for the Adopted 2019-21 Budget.

This step also included presenting alternative CIPs to the Board for its determination on the level of risk (e.g., system vulnerabilities, potential for service interruptions) that the District would accept going forward. This involved a three-step process:

- 1) With Board guidance, develop a list of alternative financial planning scenarios based on varying levels of capital spending (including associated risks) and alternative service levels.
 - *The list of scenarios was developed at the Board's work session on January 29, 2019.*
- 2) Develop the financial planning analyses to examine the effects of the chosen scenarios on the District's future rate increases, projected debt requirements, and levels of financial reserves.
 - *This work was completed during the month of February 2019.*
- 3) Present the results of the scenario analysis to the Board at its March 5, 2019 work session.

The results of the March 5, 2019 work session were then used to develop this Adopted CIP budget.

4. Internal Review and Adopted CIP

The preferred CIP was reviewed internally by Finance and the Chief Executive Officer, analyzed again with the financial forecast in light of other District requirements such as the WWSP and the District's preliminary 2019-21 operating budget estimates, and updated in accordance to the direction provided by the CEO. The CIP was then reviewed by the Budget Committee and Board of Commissioners at the first 2019-21 Budget Committee Workshop (March 28, 2019), as part of the regular budget development and public review process.

All projects in the Adopted 2019-21 Budget and Six-Year CIP are presented later in this section, beginning on page 15-11. Each project information sheet includes a map or picture, key drivers, a detailed project description,⁸ additional information including category and project manager, funding sources, an

⁸ As applicable, project descriptions also include a discussion on environmental/sustainability elements that will be incorporated into design and construction.

assessment of future operating cost impacts, and budget information. Project budget information is listed for the 2017-19 biennium, the Adopted 2019-21 Budget, the following four-year timeframe, and future year requirements if needed for projects that extend beyond the six-year CIP.

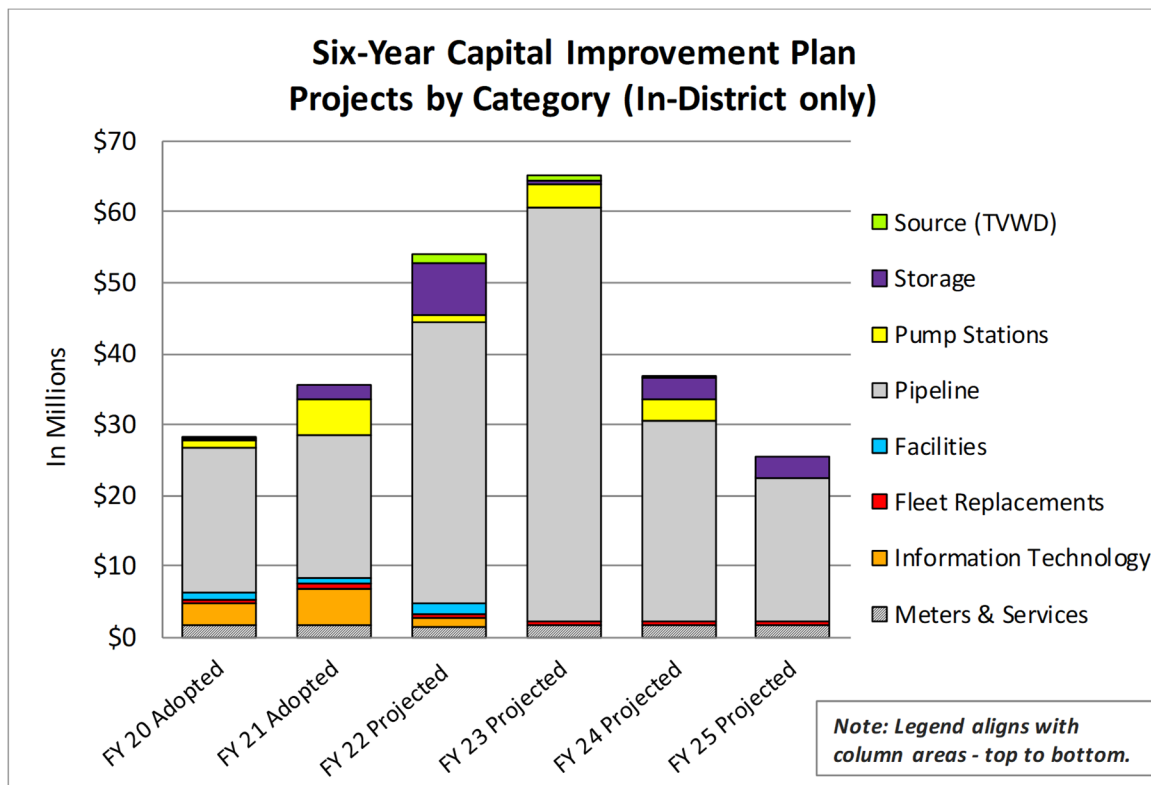
Six-Year CIP

The projected total cost of the six-year CIP is \$759.3 million. The largest components of TVWD’s capital program over the next several years include infrastructure improvements to replace aging infrastructure, enhance service reliability, perform seismic upgrades of critical facilities, and the WWSP, which is discussed in Section 16 *Willamette Water Supply System* and Section 17 *Willamette Intake Facilities*.

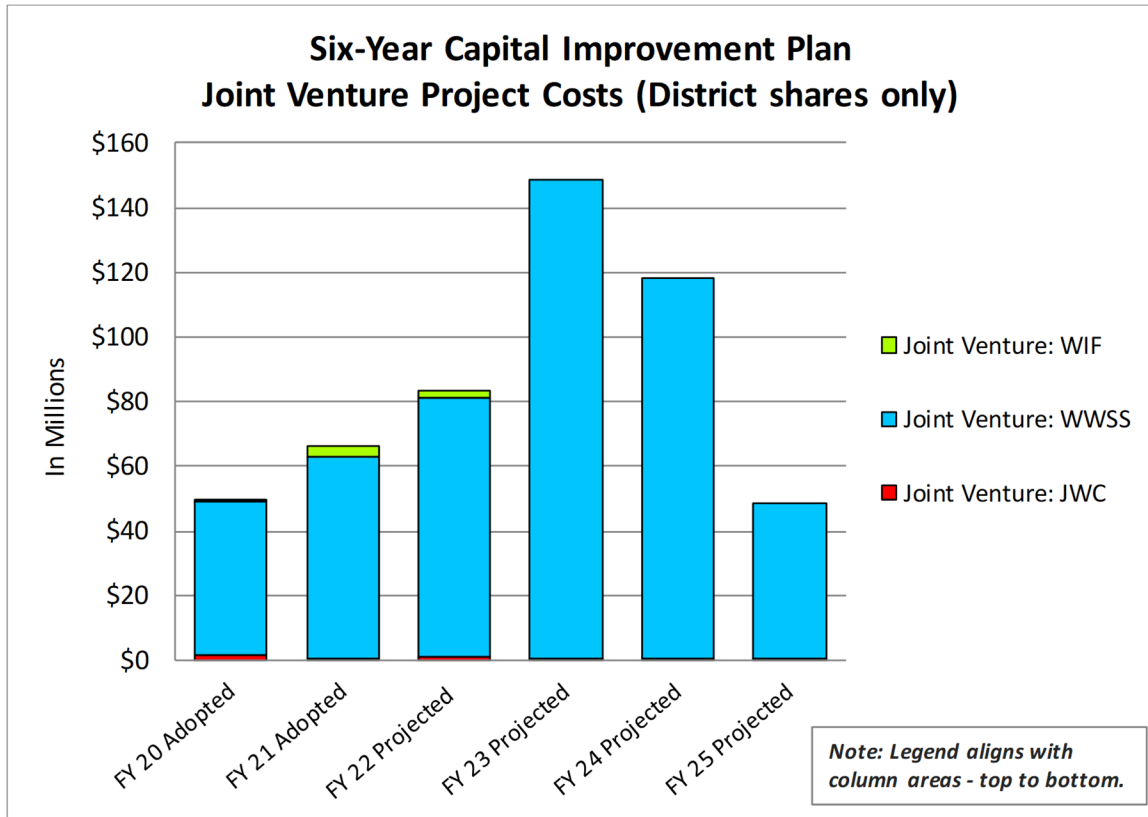
The largest group of *in-District* CIP expenditures is in the pipeline category (\$187.6MM), including the District’s ongoing mains replacement program (\$41.5MM), fire flow improvements identified by the District’s 2018 Master Plan Update (\$16.8MM), and Metzger Pipeline East (\$112MM). Other significant expenditures in the six-year CIP include the new CIS (\$9.4MM) and several projects for storage (\$16.3MM) and pump stations (\$13.4MM).

Costs from *joint ventures* comprise the bulk of the District’s six-year CIP, particularly those related to the WWSP, which is responsible for \$509.3 million. This includes the District’s share of project costs for the WIF (\$5.75MM) and WWSS (\$503.5MM). The JWC has also requested approximately \$5 million for the District’s share of project costs through FY2025.

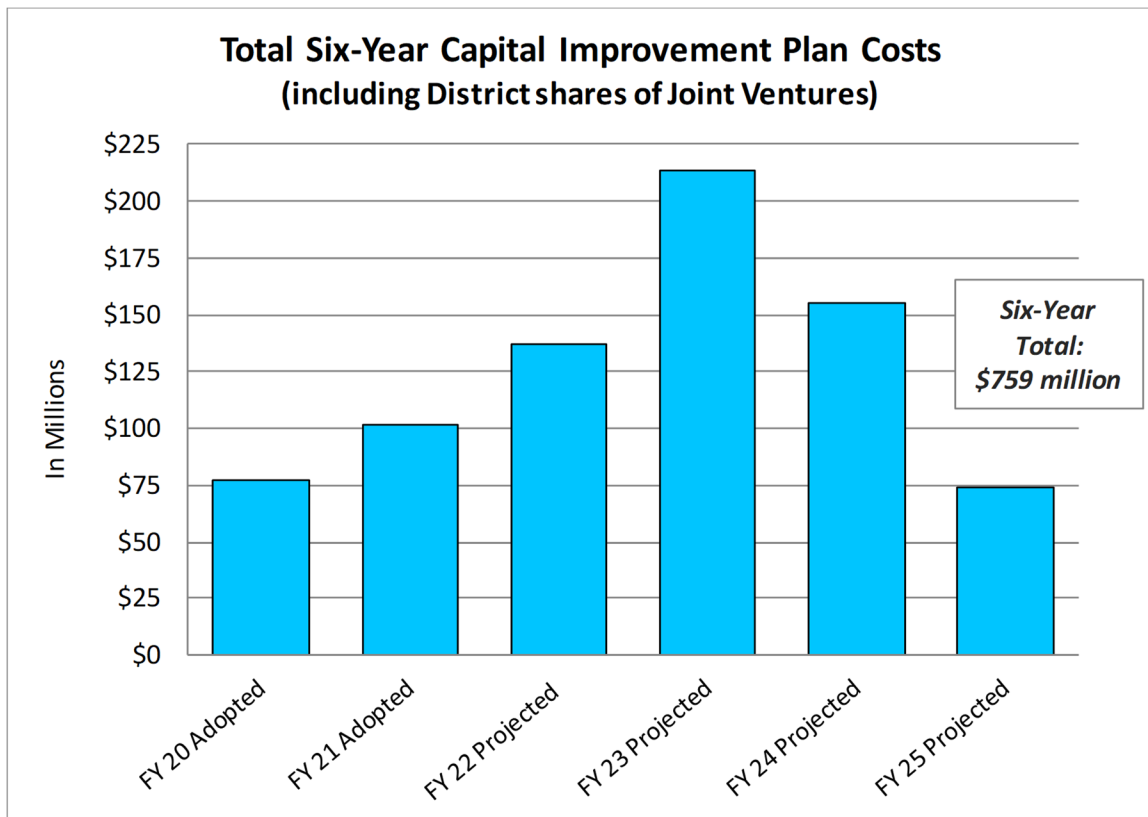
The graph below presents projected six-year costs for *in-District* projects by category.



The next graph shows the District's share of projected six-year costs for *joint venture* projects.



This graph presents *total projected costs* for the six-year CIP.



CIP Appropriations in the Adopted 2019-21 Budget

Appropriations for the first two years of the CIP, including in-District projects and the District's share of WIF, WWSS and JWC, are incorporated in the Adopted 2019-21 Budget and reflected as capital outlay in the Capital Improvement Fund. The budget includes appropriation of \$63.8 million for in-District CIP activity, \$3.7 million for WIF, \$109.7 million for WWSS and \$2.3 million for JWC.

Key projects for this upcoming biennium include the following, listed by category:

A. Source (TVWD)

- No major expenditures planned for 2019-21 biennium
- \$103,500 for Miller Hill ASR in FY2020

B. Storage

- \$1.03MM – Taylors Ferry Reservoir Replacement & Seismic Upgrades (2019-21 portion of \$8.1MM)
- \$697K – Florence Lane Reservoir Coatings & Cathodic Improvements
- \$322K – Somerset Reservoir Modifications

C. Pump Stations

- \$5.37MM – Farmington Rd. Booster Pump Station

D. Pipeline

➤ Mains Replacement Program

- \$683K – Pettygrove & 135th Ave Main Replacement & Fire Flow
- \$932K – NW 119th Ave Main Replacement
- \$1.11MM – SW Greenberg - Oak to Prospect
- \$989K – SW Tualatin Valley Hwy
- \$1.15MM – Todd St & Linda Ln - Mainline replacement & upgrade:
- \$3.95MM – Other Mains Replacement Program projects (2019-21 portion of ongoing program)

➤ Agency-Driven Projects

- \$842K – SW 198th- Farmington Rd to TV Hwy Pipeline Relocation
- \$467K – 80th Ave at Florence Lane & Taylors Ferry Rd Pipeline Relocation

➤ Fire Flow Improvements

- \$6.93MM – Metzger N-S 498 Zone Improvements
- \$1.25MM – Hampton St from 68th Ave to 66th Ave
- \$535K – 69th Ave from Dartmouth St to Atlanta St

➤ Other Pipeline

- \$4.69MM – Farmington Rd BPS 16-inch Discharge Main
- \$400K – North Road Pipeline Landslide Repair
- \$14.2MM – Metzger Pipeline East (2019-21 portion of \$112MM six-year cost; \$114.9MM total project cost)

E. Facilities

- \$305K – Engineering/Operations Space Reorganization
- \$156K – Headquarters Lobby Improvements
- \$289K – Headquarters Yard Modifications
- \$421K – Safety and Security Improvements (2019-21 portion of \$476K total)
- \$187K – Board Room Audio Visual Improvements

F. Fleet Replacements

- \$1.31MM – 2019-21 portion of ongoing replacements program

G. Information Technology (Computer Hardware/Software)

- \$8.18MM – Customer Information System (2019-21 portion of \$9.4MM total)

H. Meters and Services

- \$2.83MM – 2019-21 portion of ongoing program for service installations for new and existing residential and commercial customers

I. Joint Venture: WIF

- \$3.62MM – District’s share of WIF costs for new fish screens, air burst system improvements, and seismic improvements to the expanded intake within the raw water facility at the Willamette River Water Treatment Plant. (2019-21 portion of \$5.75MM total District share)

J. Joint Venture: WWSS

- \$109.8MM – District’s share of WWSS costs for design and construction of the WWSS projects, real estate and easements, permitting and mitigation, legal expenses, program management services, and management reserves. (2019-21 portion of \$503.5MM total District share in six-year CIP)

K. Joint Venture: JWC

- \$2.31MM – District’s share of JWC costs for treatment plant improvements, Fern Hill reservoir repairs, and other capital projects, repairs, and replacements. (2019-21 portion of \$5.03MM total District share in six-year CIP)

The remainder of this section provides both summary information and the individual project pages on the District’s Adopted 2019-21 Budget and six-year Capital Improvement Plan.

TUALATIN VALLEY WATER DISTRICT
 2019-2021 BIENNIAL BUDGET
 Adopted Capital Improvement Plan by Project Category
 Capital Improvements Fund (Fund 11)

Category / Project	Value	Page
A. Source		
Miller Hill ASR	\$103,500	15 - 18
Total Source	<u>\$103,500</u>	
B. Storage		
ST-9 Grabhorn Reservoir Replacement - Tank 1 (5 MG)	\$362,500	15 - 20
Taylors Ferry Reservoir Replacement & Seismic Upgrades	1,030,000	15 - 23
ST-8 Reservoir Isolation Valve Program	51,800	15 - 25
Florence Lane Reservoir Coatings & Cathodic Improvements	696,500	15 - 26
Steel Reservoir Gutters and Downspouts	42,100	15 - 27
Somerset Reservoir Modifications	321,500	15 - 28
Total Storage	<u>\$2,504,400</u>	
C. Pump Stations		
Catlin Crest / Viewmont pump station replacement/relocation	\$207,000	15 - 29
BP-4 Farmington Road BPS	5,366,000	15 - 31
Taylors Ferry Booster Pump Station	75,000	15 - 34
Pump Replacement Program	252,500	15 - 35
Total Pump Stations	<u>\$5,900,500</u>	
D. Pipeline		
Mains Replacement Program	\$3,955,000	15 - 36
Pettygrove & 135th Ave Main Replacement & Fire Flow	683,000	15 - 37
NW 119th Ave Main Replacement	931,500	15 - 38
SW Greenberg - Oak to Prospect	1,110,000	15 - 39
SW Tualatin Valley Hwy	988,500	15 - 40
Todd St & Linda Ln - Mainline replacement & upgrade	1,145,000	15 - 41
Pipeline Upgrades and Renewals - Agency Driven		
Agency-Driven Pipeline Upgrade & Renewal Projects	812,300	15 - 42
SW 198th- Farmington Rd to TV Hwy Pipeline Relocation	841,500	15 - 43
80th Ave at Florence Lane & Taylors Ferry Rd Pipeline Relocation	467,000	15 - 44
Jenkins Road Bridge Pipeline Relocation	186,500	15 - 45
Walker Rd 12" Replacement - 185th to 174th	385,500	15 - 46
Development Opportunity & Reimbursement Projects		
Unidentified Development Opportunity & Reimbursement Projects	527,000	15 - 47
Fire Flow Improvements		
P-156 - Metzger N-S 498 Zone Improvements	\$6,925,000	15 - 49
P-166 - Hampton St from 68th Ave to 66th Ave	1,245,500	15 - 50
P-164 - 69th Ave from Dartmouth St to Atlanta St	534,800	15 - 51
Other Pipeline		
P-5 Farmington Rd BPS 16-inch Discharge Main	4,689,000	15 - 57
North Road Pipeline Landslide Repair	400,000	15 - 58
Minor System Improvements	210,500	15 - 59
Metzger Pipeline East	10,184,004	15 - 60
Metzger Pipeline East Real Estate	1,053,110	15 - 61
Metzger Pipeline East System-wide Costs	2,938,520	15 - 62
PRV / Vault Replacements & Upgrades: Unidentified Projects	450,500	15 - 63
Transmission Mains CARV Rehabilitation	210,500	15 - 64
Total Pipeline	<u>\$40,874,234</u>	

TUALATIN VALLEY WATER DISTRICT
 2019-2021 BIENNIAL BUDGET
 Adopted Capital Improvement Plan by Project Category
 Capital Improvements Fund (Fund 11)

Category / Project	Value	Page
E. Facilities		
Engineering/Operations Space Reorganization	\$305,000	15 - 66
Headquarters Lobby Improvements	155,500	15 - 67
Headquarters Yard Modifications	289,000	15 - 68
Safety and Security Improvements	421,000	15 - 69
Board Room Audio Visual Improvements	186,500	15 - 70
HVAC Replacements	191,600	15 - 71
Headquarters Lighting Improvements	52,800	15 - 72
Total Facilities	<u>\$1,601,400</u>	
F. Fleet		
Fleet Replacements (per schedule)	<u>\$1,311,500</u>	15 - 73
Total Fleet	<u>\$1,311,500</u>	
G. Information Technology (Computer Hardware/Software)		
Expected Uses of Funds:		
Customer Information System	<u>\$8,180,000</u>	15 - 74
Total Computer Hardware/Software	<u>\$8,180,000</u>	
G. Meter and Service Installations		
Service Installations	\$2,825,000	15 - 75
Customer Service: Meter Installations	<u>509,000</u>	15 - 76
Total Meter & Service Installations	<u>\$3,334,000</u>	
H. Joint Venture (TVWD Share of Total Project Costs)		
Joint Venture: WIF	\$3,622,465	15 - 78
Joint Venture: WWSS	109,780,923	15 - 79
JWC WTP improvements to existing 75 MGD	303,500	15 - 80
JWC WTP improvements to increase to 85 MGD	427,500	15 - 81
JWC Fern Hill Reservoir 1 Repair	100,000	15 - 82
JWC Misc. Capital Projects, Repairs, & Replacements	523,500	15 - 83
BRJOC Capital Repair/Replacement	128,200	15 - 84
JWC Water Line Cathodic Protection	66,900	15 - 85
JWC Powder Activated Carbon Injection System Expansion	154,500	15 - 86
JWC Spring Hill Pumping Plant Mitigation Project	140,200	15 - 87
JWC Disinfection Facility (chlorine replacement)	18,300	15 - 88
JWC Intake Facility Expansion Site	106,000	15 - 89
JWC Equipment Replacement	341,200	15 - 90
Total Joint Venture	<u>\$115,713,188</u>	
Total 2019-21 Construction Fund Expenditures and Transfers	<u>\$63,809,534</u>	
Total 2019-21 Expenditures and Transfers including Joint Ventures	<u>\$179,522,722</u>	

Tualatin Valley Water District Six-Year CIP Planned Expenditures (FY2020-25)

PROJECT TITLE	Page	2017-19 Projected	2019-2021 Biennial Budget 6-Year CIP						Totals	
			FY2020 Adopted	FY2021 Adopted	FY2022 Projected	FY2023 Projected	FY2024 Projected	FY2025 Projected	Eight-Year FY2018-25	Six-Year FY2020-25
SOURCE: TVWD										
Metzger Supply Improvements for WWSS	15 - 16	\$ -	\$ -	\$ -	\$ -	\$ 574,000	\$ -	\$ -	\$ 574,000	\$ 574,000
WCSL valve & Center St Seismic & Piping Improvements	15 - 17	-	-	-	1,110,000	-	-	-	1,110,000	1,110,000
Miller Hill ASR	15 - 18	336,270	103,500	-	-	-	-	-	439,770	103,500
Water Quality Integration Projects	15 - 19	-	-	-	-	115,000	119,000	-	234,000	234,000
TOTAL SOURCE: TVWD		\$ 336,270	\$ 103,500	\$ -	\$ 1,110,000	\$ 689,000	\$ 119,000	\$ -	\$ 2,357,770	\$ 2,021,500
STORAGE										
ST-9 Grabhorn Reservoir Replacement - Tank 1 (5 MG)	15 - 20	\$ 14,614,782	\$ 362,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,977,282	\$ 362,500
ST-3 Goyak Reservoir Seismic Upgrades	15 - 21	-	-	-	416,000	430,500	-	-	846,500	846,500
ST-4 Cooper Mountain 3 Reservoir	15 - 22	-	-	-	-	-	2,970,000	3,075,000	6,045,000	6,045,000
Taylors Ferry Reservoir Replacement & Seismic Upgrades	15 - 23	100,000	-	1,030,000	6,950,000	-	-	-	8,080,000	7,980,000
ST-1 Rosander 2 Reservoir	15 - 24	-	-	-	-	-	-	-	-	-
ST-8 Reservoir Isolation Valve Program	15 - 25	-	51,800	-	-	-	-	-	51,800	51,800
Florence Lane Reservoir Coatings & Cathodic Improvements	15 - 26	-	-	696,500	-	-	-	-	696,500	696,500
Steel Reservoir Gutters and Downspouts	15 - 27	-	20,700	21,400	-	-	-	-	42,100	42,100
Somerset Reservoir Modifications	15 - 28	-	-	321,500	-	-	-	-	321,500	321,500
TOTAL STORAGE		\$ 14,714,782	\$ 435,000	\$ 2,069,400	\$ 7,366,000	\$ 430,500	\$ 2,970,000	\$ 3,075,000	\$ 31,060,682	\$ 16,345,900
PUMP STATIONS										
Catlin Crest / Viewmont pump station replacement/relocation	15 - 29	\$ 534,400	\$ 207,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 741,400	\$ 207,000
BP-1 Cooper Mountain Booster Pump Station Expansion	15 - 30	-	-	-	332,500	2,765,000	-	-	3,097,500	3,097,500
BP-4 Farmington Road BPS	15 - 31	-	621,000	4,745,000	-	-	-	-	5,366,000	5,366,000
BP-6 Rosander Booster Pump Station	15 - 32	-	-	-	-	-	-	-	-	-
Florence Lane Booster Pump Station Improvements	15 - 33	-	-	-	-	344,500	2,860,000	-	3,204,500	3,204,500
Taylors Ferry Booster Pump Station	15 - 34	-	-	75,000	628,500	-	-	-	703,500	703,500
Pump Replacement Program	15 - 35	-	124,000	128,500	133,000	137,500	142,500	147,500	813,000	813,000
TOTAL PUMP STATIONS		\$ 534,400	\$ 952,000	\$ 4,948,500	\$ 1,094,000	\$ 3,247,000	\$ 3,002,500	\$ 147,500	\$ 13,925,900	\$ 13,391,500

Tualatin Valley Water District Six-Year CIP Planned Expenditures (FY2020-25)

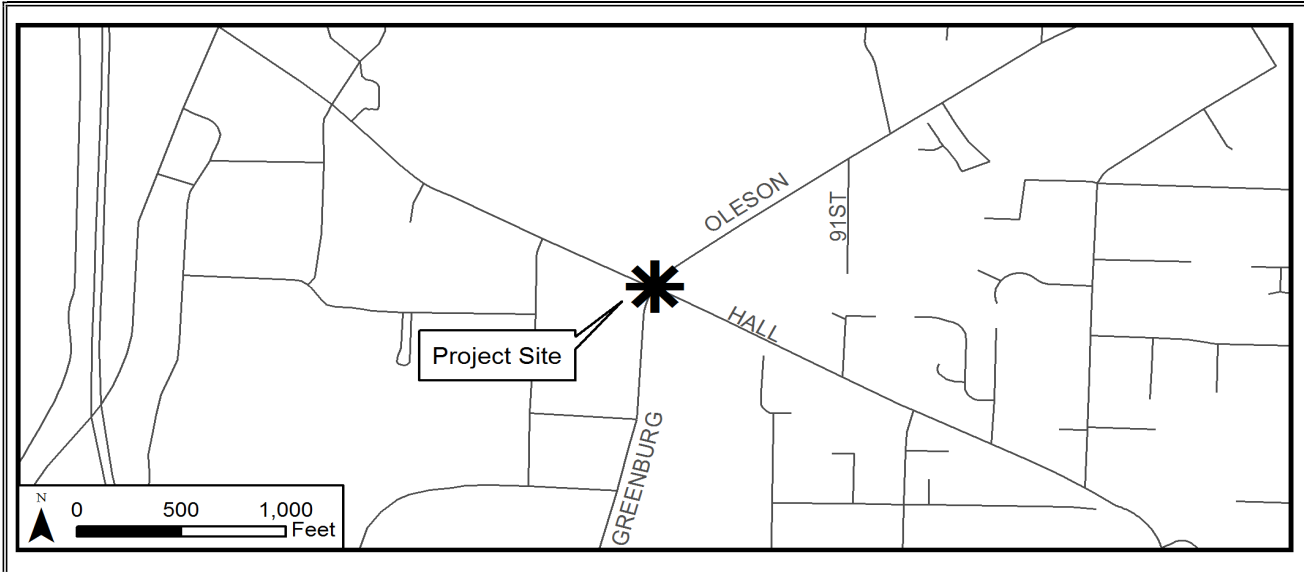
PROJECT TITLE	Page	2017-19 Projected	2019-2021 Biennial Budget 6-Year CIP						Totals	
			FY2020 Adopted	FY2021 Adopted	FY2022 Projected	FY2023 Projected	FY2024 Projected	FY2025 Projected	Eight-Year FY2018-25	Six-Year FY2020-25
PIPELINE										
P-4 Mains Replacement Program	15 - 36	\$ 3,551,776	\$ 2,135,000	\$ 1,820,000	\$ 6,465,000	\$ 6,435,000	\$ 9,145,000	\$ 10,660,000	\$ 40,211,776	\$ 36,660,000
Pettygrove & 135th Ave Main Replacement & Fire Flow	15 - 37	-	683,000	-	-	-	-	-	683,000	683,000
NW 119th Ave Main Replacement	15 - 38	135,348	931,500	-	-	-	-	-	1,066,848	931,500
SW Greenberg - Oak to Prospect	15 - 39	-	-	1,110,000	-	-	-	-	1,110,000	1,110,000
SW Tualatin Valley Hwy	15 - 40	-	-	988,500	-	-	-	-	988,500	988,500
Todd St & Linda Ln - Mainline replacement & upgrade	15 - 41	-	-	1,145,000	-	-	-	-	1,145,000	1,145,000
Pipeline Upgrades and Renewals - Agency Driven										
Agency-Driven Pipeline Upgrade & Renewal Projects	15 - 42	657,740	51,800	760,500	1,185,000	1,230,000	1,270,000	1,315,000	6,470,040	5,812,300
SW 198th- Farmington Rd to TV Hwy Pipeline Relocation	15 - 43	-	841,500	-	-	-	-	-	841,500	841,500
80th Ave at Florence Lane & Taylors Ferry Rd Pipeline Relocation	15 - 44	-	467,000	-	-	-	-	-	467,000	467,000
Jenkins Road Bridge Pipeline Relocation	15 - 45	-	186,500	-	-	-	-	-	186,500	186,500
Walker Rd 12" Replacement - 185th to 174th	15 - 46	-	-	385,500	-	-	-	-	385,500	385,500
Development Opportunity & Reimbursement Projects										
Unidentified Development Opportunity & Reimbursement Projects	15 - 47	312,361	259,000	268,000	277,000	287,000	297,000	307,500	2,007,861	1,695,500
Transmission Improvement Program	15 - 48	-	-	-	-	-	-	-	-	-
Fire Flow Improvements										
P-156 - Metzger N-S 498 Zone Improvements	15 - 49	300,000	6,925,000	-	-	-	-	-	7,225,000	6,925,000
P-166 - Hampton St from 68th Ave to 66th Ave	15 - 50	-	155,500	1,090,000	-	-	-	-	1,245,500	1,245,500
P-164 - 69th Ave from Dartmouth St to Atlanta St	15 - 51	-	51,800	483,000	-	-	-	-	534,800	534,800
P-161 - Pacific Hwy from Hwy 217 to 71st Ave	15 - 52	-	-	-	1,110,000	1,855,000	-	-	2,965,000	2,965,000
P-80 - Viewmont Dr south of Barnes	15 - 53	-	-	-	-	215,500	-	-	215,500	215,500
P-165 - 72nd Ave from Cherry Dr to Hunziker	15 - 54	-	-	-	-	-	297,000	1,405,000	1,702,000	1,702,000
P-99 - Polsky Rd / Hawthorne Ln / to Scenic Dr	15 - 55	-	-	-	-	-	356,500	2,900,000	3,256,500	3,256,500
Future Fire Flow Improvements	15 - 56	-	-	-	-	-	-	-	-	-
Other Pipeline										
P-5 Farmington Rd BPS 16-inch Discharge Main	15 - 57	-	414,000	4,275,000	-	-	-	-	4,689,000	4,689,000
North Road Pipeline Landslide Repair	15 - 58	-	400,000	-	-	-	-	-	400,000	400,000
Minor System Improvements	15 - 59	-	103,500	107,000	111,000	115,000	119,000	123,000	678,500	678,500
Metzger Pipeline East	15 - 60	2,892,514	4,591,157	5,592,846	28,801,425	46,651,365	15,030,323	1,440,443	105,000,075	102,107,561
Metzger Pipeline East Real Estate	15 - 61	-	623,140	429,970	-	-	-	-	1,053,110	1,053,110
Metzger Pipeline East System-wide Costs	15 - 62	-	1,460,136	1,478,384	1,441,661	1,417,245	1,506,140	1,534,404	8,837,971	8,837,971
PRV / Vault Replacements & Upgrades: Unidentified Projects	15 - 63	113,875	221,500	229,000	237,500	245,500	254,000	263,000	1,564,375	1,450,500
Transmission Mains CARV Rehabilitation	15 - 64	-	103,500	107,000	111,000	115,000	119,000	123,000	678,500	678,500
TOTAL PIPELINE		\$ 7,963,614	\$ 20,604,533	\$ 20,269,701	\$ 39,739,586	\$ 58,566,610	\$ 28,393,963	\$ 20,071,347	\$ 195,609,356	\$ 187,645,741

Tualatin Valley Water District Six-Year CIP Planned Expenditures (FY2020-25)

PROJECT TITLE	Page	2017-19 Projected	2019-2021 Biennial Budget 6-Year CIP						Totals	
			FY2020 Adopted	FY2021 Adopted	FY2022 Projected	FY2023 Projected	FY2024 Projected	FY2025 Projected	Eight-Year FY2018-25	Six-Year FY2020-25
FACILITIES										
Seismic Upgrades District Headquarters	15 - 65	\$ -	\$ -	\$ -	\$ 1,185,000	\$ -	\$ -	\$ -	\$ 1,185,000	\$ 1,185,000
Engineering/Operations Space Reorganization	15 - 66	-	165,500	139,500	-	-	-	-	305,000	305,000
Headquarters Lobby Improvements	15 - 67	-	155,500	-	-	-	-	-	155,500	155,500
Headquarters Yard Modifications	15 - 68	-	-	289,000	-	-	-	-	289,000	289,000
Safety and Security Improvements	15 - 69	-	207,000	214,000	55,400	-	-	-	476,400	476,400
Board Room Audio Visual Improvements	15 - 70	-	186,500	-	-	-	-	-	186,500	186,500
HVAC Replacements	15 - 71	-	31,100	160,500	83,200	-	-	-	274,800	274,800
Headquarters Lighting Improvements	15 - 72	-	20,700	32,100	33,300	-	-	-	86,100	86,100
TOTAL FACILITIES		\$ -	\$ 766,300	\$ 835,100	\$ 1,356,900	\$ -	\$ -	\$ -	\$ 2,958,300	\$ 2,958,300
FLEET										
Fleet Replacements (per schedule)	15 - 73	\$ 800,900	\$ 674,000	\$ 637,500	\$ 499,000	\$ 516,500	\$ 534,500	\$ 553,000	\$ 4,215,400	\$ 3,414,500
TOTAL FLEET		\$ 800,900	\$ 674,000	\$ 637,500	\$ 499,000	\$ 516,500	\$ 534,500	\$ 553,000	\$ 4,215,400	\$ 3,414,500
INFORMATION TECHNOLOGY										
Customer Information System	15 - 74	\$ 10,000	3,110,000	5,070,000	1,225,000	-	-	-	9,415,000	9,405,000
TOTAL INFORMATION TECHNOLOGY		\$ 10,000	\$ 3,110,000	\$ 5,070,000	\$ 1,225,000	\$ -	\$ -	\$ -	\$ 9,415,000	\$ 9,405,000
METERS AND SERVICES										
Service Installations	15 - 75	\$ 2,455,700	\$ 1,335,000	\$ 1,490,000	\$ 1,540,000	\$ 1,595,000	\$ 1,650,000	\$ 1,710,000	\$ 11,775,700	\$ 9,320,000
Customer Service: Meter Installations	15 - 76	336,062	238,500	270,500	-	-	-	-	845,062	509,000
Automated Meter Reading Program (AMR)	15 - 77	415,000	-	-	-	-	-	-	415,000	-
TOTAL METERS AND SERVICES		\$ 3,206,762	\$ 1,573,500	\$ 1,760,500	\$ 1,540,000	\$ 1,595,000	\$ 1,650,000	\$ 1,710,000	\$ 13,035,762	\$ 9,829,000
JOINT VENTURES										
Joint Venture: WIF	15 - 78	\$ -	\$ 350,765	\$ 3,271,701	\$ 2,128,537	\$ -	\$ -	\$ -	\$ 5,751,002	\$ 5,751,002
Joint Venture: WWSS	15 - 79	-	47,348,659	62,432,264	79,896,470	148,166,181	117,680,516	48,006,928	503,531,018	503,531,018
JWC WTP improvements to existing 75 MGD	15 - 80	1,965,751	303,500	-	-	-	-	-	2,269,251	303,500
JWC WTP improvements to increase to 85 MGD	15 - 81	3,001,638	427,500	-	-	-	-	-	3,429,138	427,500
JWC Fern Hill Reservoir 1 Repair	15 - 82	-	100,000	-	-	-	-	-	100,000	100,000
JWC Misc. Capital Projects, Repairs, & Replacements	15 - 83	-	213,000	310,500	312,000	176,000	243,000	251,500	1,506,000	1,506,000
BRJOC Capital Repair/Replacement	15 - 84	-	81,300	46,900	48,500	50,200	52,000	53,800	332,700	332,700
JWC Water Line Cathodic Protection	15 - 85	-	21,200	45,700	47,300	48,900	50,700	52,400	266,200	266,200
JWC Powder Activated Carbon Injection System Expansion	15 - 86	-	26,500	128,000	-	-	-	-	154,500	154,500
JWC Spring Hill Pumping Plant Mitigation Project	15 - 87	-	39,700	100,500	-	-	-	-	140,200	140,200
JWC Disinfection Facility (chlorine replacement)	15 - 88	-	-	18,300	428,500	222,000	-	-	668,800	668,800
JWC Intake Facility Expansion Site	15 - 89	-	106,000	-	-	-	-	-	106,000	106,000
JWC Equipment Replacement	15 - 90	333,400	341,200	-	341,200	-	341,200	-	1,357,000	1,023,600
TOTAL JOINT VENTURES		\$ 5,300,789	\$ 49,359,323	\$ 66,353,865	\$ 83,202,507	\$ 148,663,281	\$ 118,367,416	\$ 48,364,628	\$ 519,611,809	\$ 514,311,020
TOTAL CIP		\$ 32,867,517	\$ 77,578,157	\$ 101,944,565	\$ 137,132,993	\$ 213,707,891	\$ 155,037,379	\$ 73,921,476	\$ 792,189,979	\$ 759,322,461
TOTAL CIP less JOINT VENTURES		\$ 27,566,728	\$ 28,218,833	\$ 35,590,701	\$ 53,930,486	\$ 65,044,610	\$ 36,669,963	\$ 25,556,847	\$ 272,578,170	\$ 245,011,441

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Metzger Supply Improvements for WWSS



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Associated improvements required to take water from the Willamette Water Supply System, and required to be done by 2026.
2.	Growth/Future Demands	Allows / supports additional growth and offsets reduction in Portland water.
3.	Reliability	The WWSS will be designed and constructed to current seismic resiliency standards.

PROJECT DESCRIPTION

These improvements will include operational and any other changes necessary to operate the new supply from the Willamette. The goal of this project is to move water from the WWSS turnout at Hall Blvd & Oleson Road to the Florence Lane tanks with the goal of maintaining low water age. The above-ground flow control facility, meter vault, and valving will be budgeted and delivered by the WWSP.

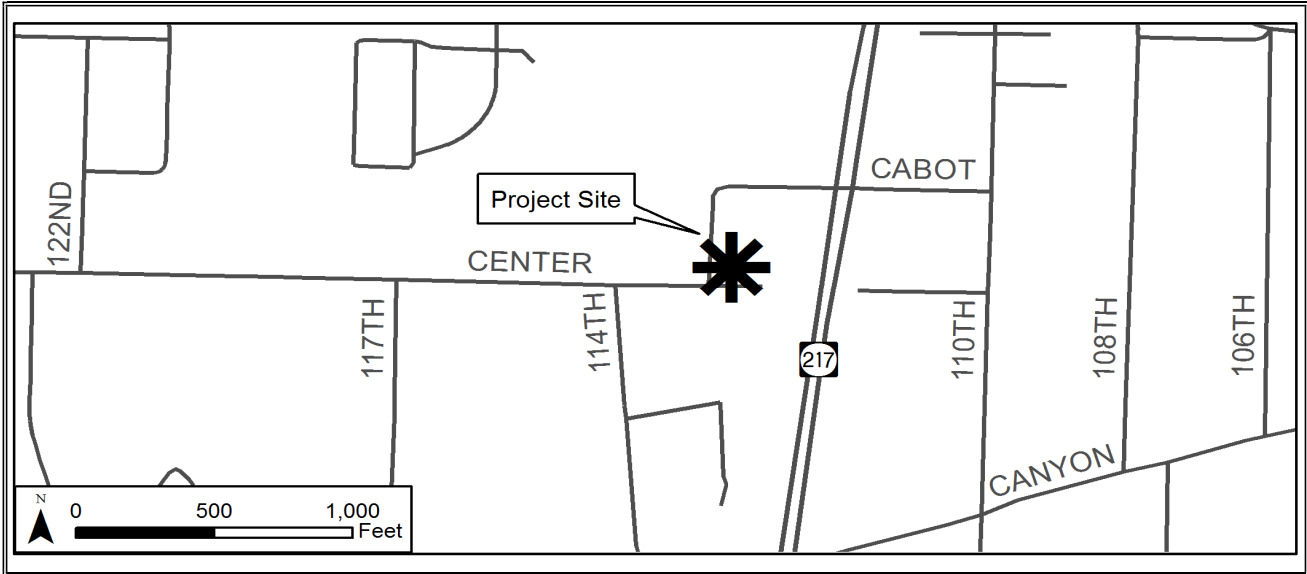
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Source	Water Rates:	Yes	There will be some minor increases to District operating costs for added infrastructure.	
Project Manager:	Nick Augustus	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	26	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	574,000	-	-	574,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: WCSL valve & Center St Seismic & Piping Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Associated improvements required to take water from the Willamette Water Supply System, and required to be done by 2026.
2.	Growth/Future Demands	Allows / supports additional growth and offsets reduction in Portland water.
3.	Reliability	The WWSS will be designed and constructed to current seismic resiliency standards.

PROJECT DESCRIPTION

These improvements include potentially installing a valve on the WCSL near the Inglewood connection to the 54" supply. It will also include seismic and other improvements at the Center Street generator facility to allow full utilization of the WWSS.

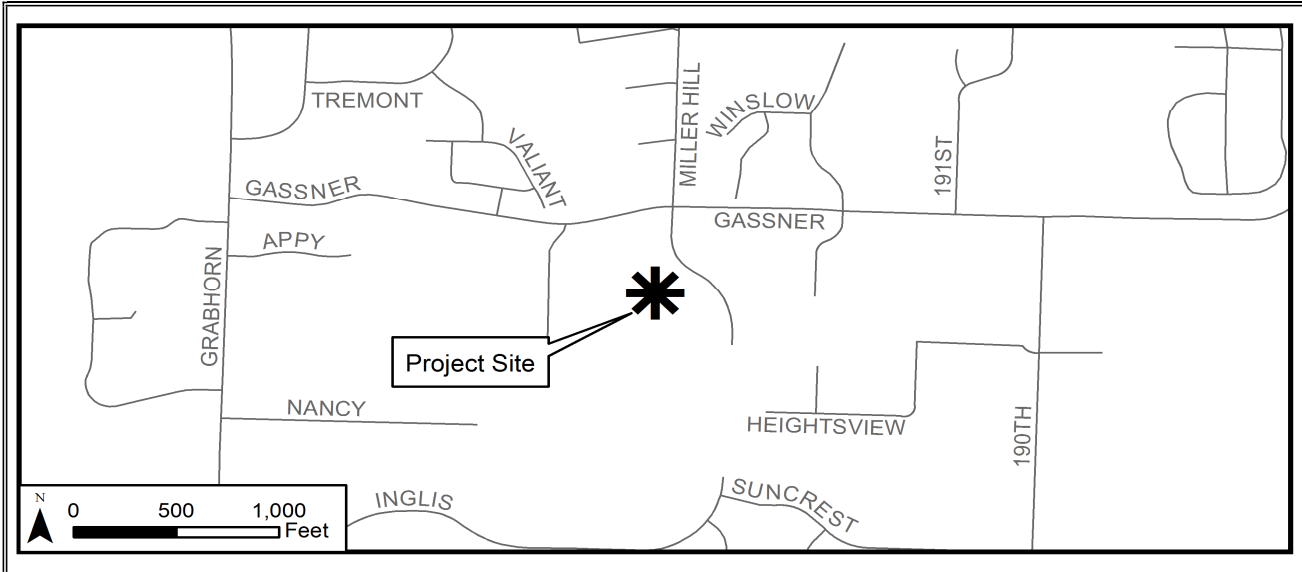
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Source	Water Rates: Yes	No anticipated impact on District operating costs.
		Service Fees: No	
Project Manager:	Nick Augustus	SDC Improvemt. Fee Elg.:	
Work Performed By:	Outside Contract	61%	
Total Priority Score:	26	Partner Cost Percentage:	0%

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	1,110,000	-	-	-	1,110,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Miller Hill ASR



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	On-going project to make the ASR functional.
2.	Growth/Future Demands	The original design of the ASR was to account for additional growth and water demand in the Cooper Mountain area.
3.	Reliability	The new facility is designed to meet seismic standards.

PROJECT DESCRIPTION

This project includes a new two million gallons-per-day (MGD) ASR facility located on Cooper Mountain to provide additional storage and supply to meet peak summer demands. It is the second TVWD ASR facility, joining the Grabhorn ASR that has been in operation for 11 years. The project is expected to be placed in service this biennium.

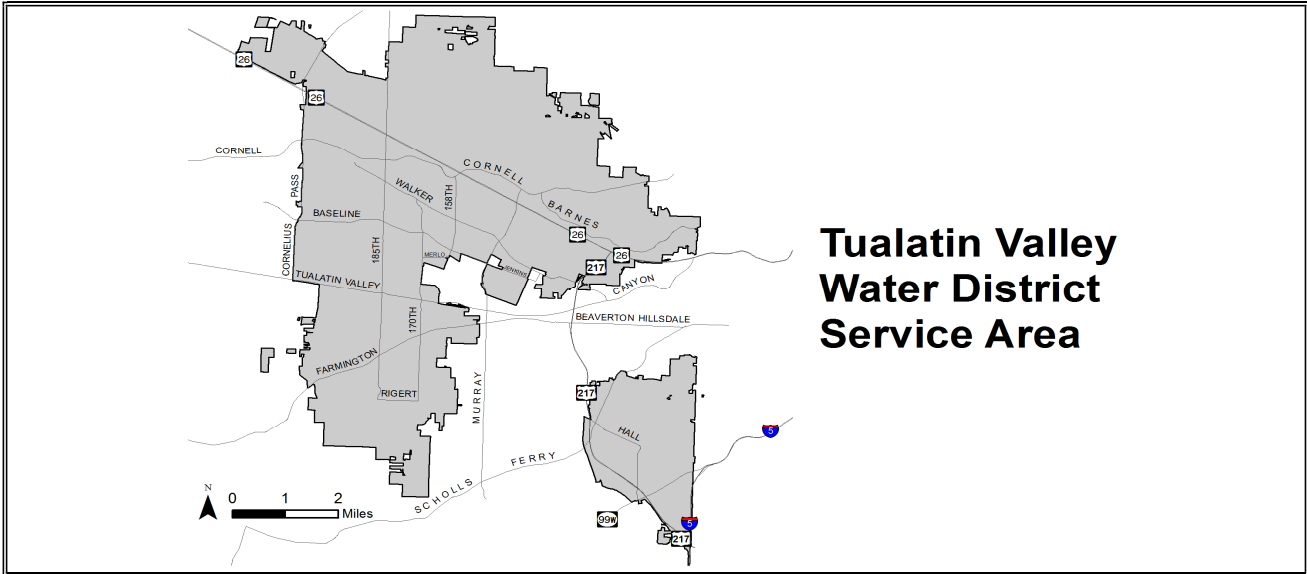
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Source	Water Rates: Yes	Operating costs will increase if this project is completed and placed into service.
Project Manager:	Pete Boone	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 85%	
Total Priority Score:	25	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	336,270	103,500	-	-	-	-	-	103,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Water Quality Integration Projects



KEY DRIVERS FOR CIP PROJECT

1.	Water Quality	This project is to address water quality considerations prior to the WWSS being tested and implemented as a source of supply.
2.	Growth/Future Demands	Projects associated with the WWSS allows / supports additional growth and offsets reduction in Portland water.
3.	Project Urgency	This work is necessary to be done prior to 2026.

PROJECT DESCRIPTION

These projects will be done in collaboration with the water system integration study and recommendations proposed as part of the WWSS. A Water Quality Integration firm has been hired as part of the WWSS and will be developing recommendations in collaboration with District personnel. Projects identified as part of that study will be implemented under this line item. These projects could include removing existing piping and other activities to study the future impact of changing water sources.

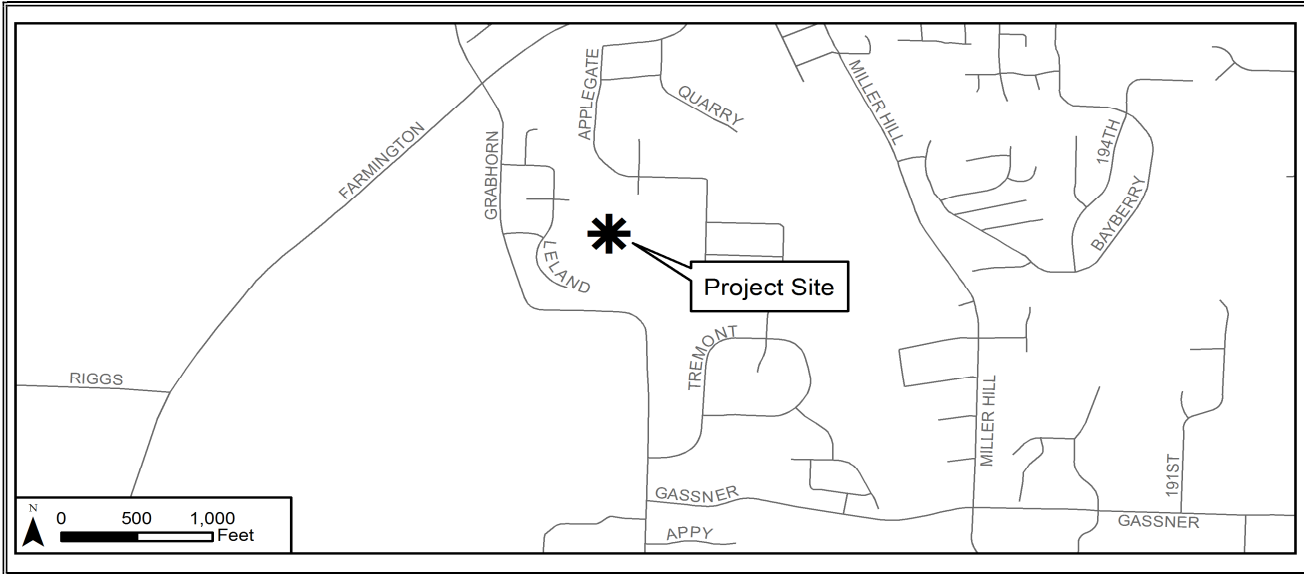
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Source	Water Rates: Yes	No anticipated impact on District operating costs.
Project Manager:	Joel Cary	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 61%	
Total Priority Score:	28	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	115,000	119,000	-	234,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: ST-9 Grabhorn Reservoir Replacement - Tank 1 (5 MG)



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	This project is on-going and nearing completion. The budget accounts for items associated with final completion of the project.
2.	Asset Condition	The existing reservoir was in disrepair and at the end of its useful life.
3.	Reliability	Improvements required to maintain reliable and seismically resilient facilities.

PROJECT DESCRIPTION

This project involves the demolition of the existing 5 MG concrete reservoir, then design and construction of a 5 MG pre-stressed concrete reservoir within the footprint of the existing reservoir. Onsite piping and valves will also be replaced.

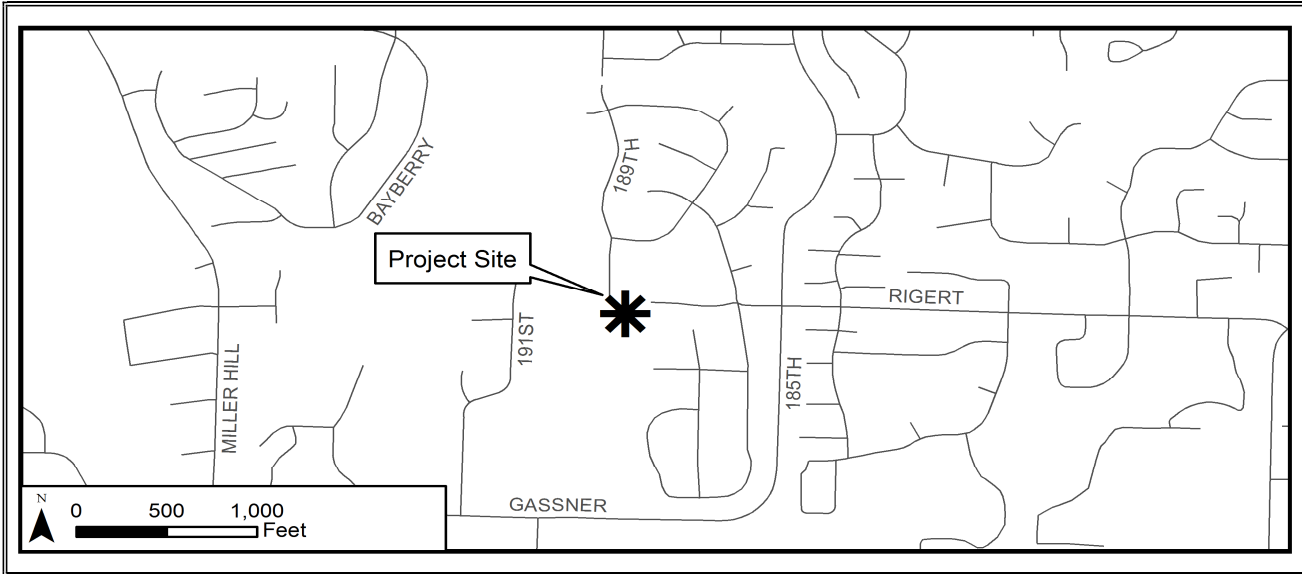
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	No anticipated impact on District operating costs. This project replaces existing infrastructure. Near-term operating costs are anticipated to be reduced.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	30	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
10,915,898	14,614,782	362,500	-	-	-	-	-	362,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: ST-3 Goyak Reservoir Seismic Upgrades



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The existing facility is in need of roof maintenance and seismic improvements. The reservoir cannot be completed until a second source of supply to the Cooper Mountain area is complete.
2.	Asset Condition	The facility was constructed in 1974 and is in need of maintenance in order to keep the reservoir functioning as intended.
3.	Reliability	This will bring the reservoir into compliance with seismic standards.

PROJECT DESCRIPTION

Structural upgrades are recommended for the Goyak Reservoir to improve seismic resilience at the facility. These upgrades were first recommended in the Concrete Water Reservoir Seismic Rehabilitation Project (2002, CH2MHILL) with a construction cost of \$340,000. In addition, the updated project includes repairs to fix leaking in the reservoir floor, which was estimated at \$20/square-foot. Farmington Road BPS and discharge main are necessary prior to performing these upgrades to reduce risk.

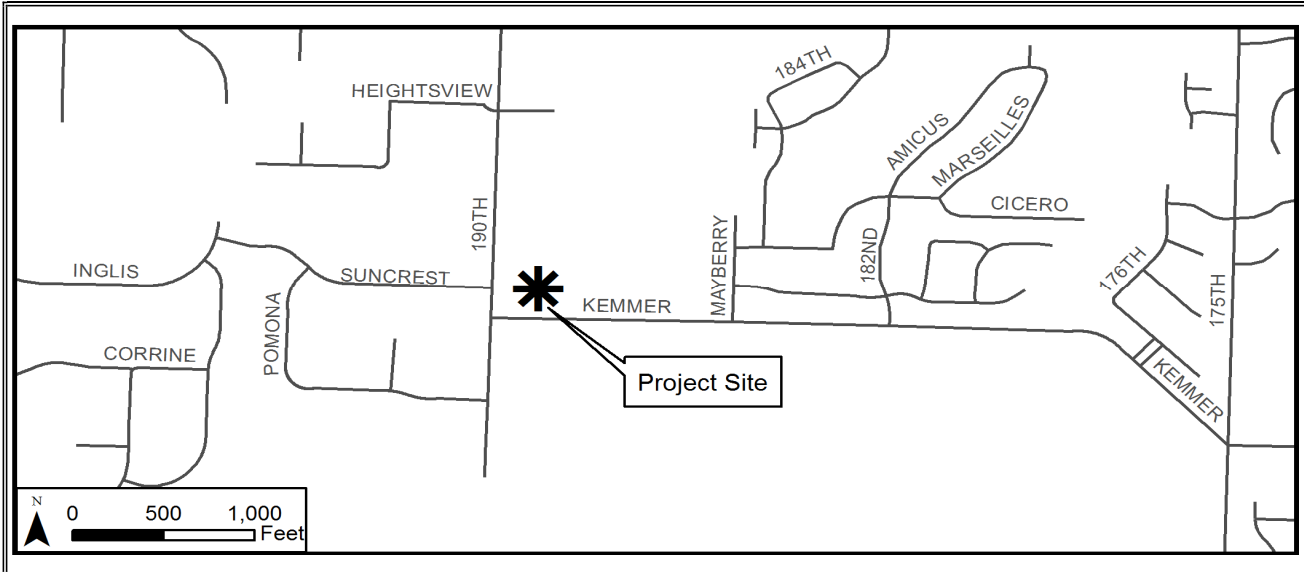
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	This project will reduce immediate maintenance costs, and will bring the tank up to current seismic standards. On-going maintenance is anticipated.	
Project Manager:	Ryan Smith	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	27	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	416,000	430,500	-	-	846,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: ST-4 Cooper Mountain 3 Reservoir



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	There are increasing time sensitivities to complete this project due to growth in the area.
2.	Growth/Future Demands	The project is being done to address storage deficiencies related to fire flow in the Cooper Mountain area.
3.	Reliability	This reservoir will establish seismically resilient storage in the Cooper Mountain upper pressure zones.

PROJECT DESCRIPTION

The Cooper Mountain 3 Reservoir project is recommended to address storage deficiencies in the 800 Zone and to provide seismically resilient storage. It is assumed that this 2.5-MG reservoir will be constructed at a District-owned property adjacent to the existing Cooper Mountain Pump Station and Reservoir.

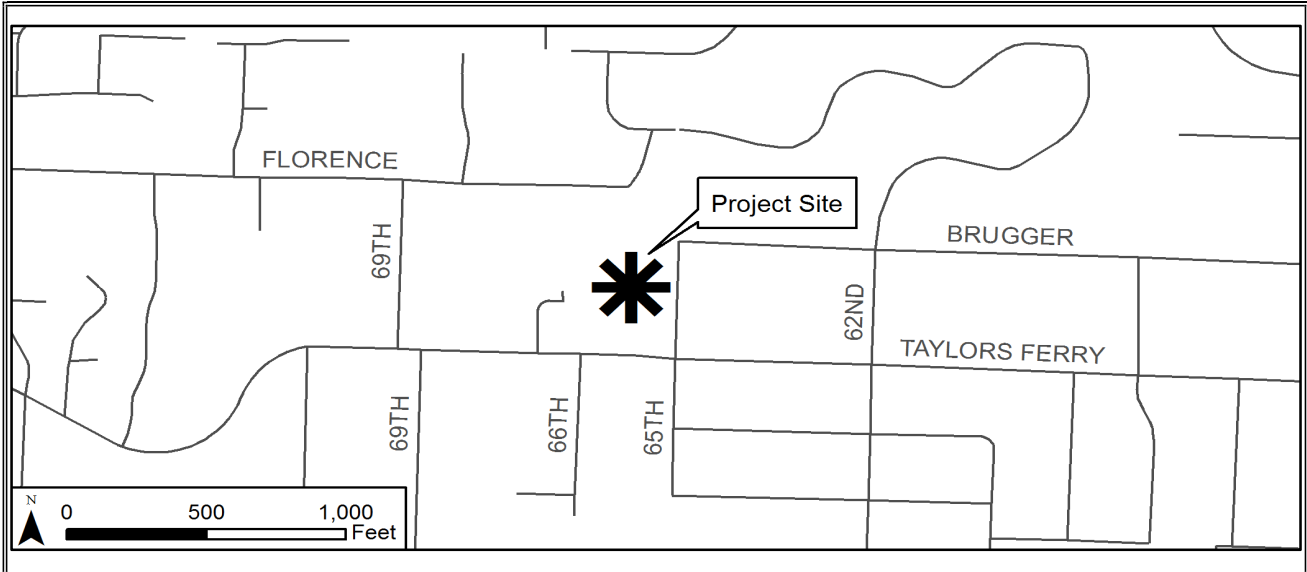
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	This replacement reservoir will result in a net 2.5 million gallon increase in storage with only a minor increase in operating costs for the first several years.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	85%		
Total Priority Score:	21	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	-	2,970,000	3,075,000	6,045,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: **Taylors Ferry Reservoir Replacement & Seismic Upgrades**



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	The existing concrete reservoir is approaching the end of its useful life. The concrete walls are cracked and an internal liner is being used to maintain a leak free reservoir. The steel tank is not seismically resilient, and the roof is in poor condition.
2.	Growth/Future Demands	Will provide additional storage required to accommodate projected growth in the Metzger service area.
3.	Reliability	Improvements required to provide a seismically resilient, reliable supply to the Metzger 498 pressure zone.

PROJECT DESCRIPTION

It is recommended that the District replace the existing 1.0-MG Taylors Ferry South Reservoir with a new 2.0-MG pre-stressed concrete reservoir in the same location, and that seismic upgrades and rehabilitation of the northern 2.3 MG steel tank be completed. These recommendations were first made in the Taylors Ferry Site Assessment (MSA, 2013) and it is reiterated here to improve the resiliency of storage in the Metzger service area. In the 2013 study, it was recommended that the northern 2.3 MG tank be rehabilitated and seismic upgrades be performed on that tank prior to replacing the southern tank due to the poor condition of the steel roof. A study is currently being done to further refine the scope and plan the site usage for this project. Potential FEMA funding for pre-disaster mitigation is being evaluated as a potential funding source for the northern steel tank. As part of this project, the existing office space is also being evaluated to provide more usable space of the site.

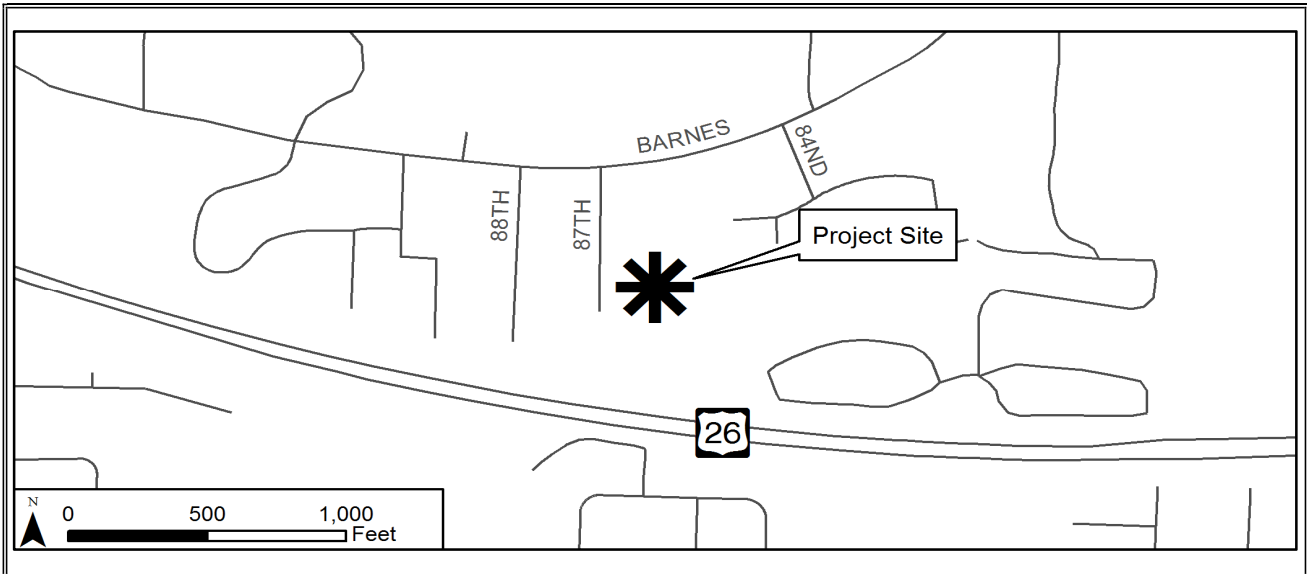
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	Operating costs will be reduced near term by removing the existing reservoir and constructing a new one in its place, and by maintaining the roof of the steel tank.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	31%		
Total Priority Score:	29	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	100,000	-	1,030,000	6,950,000	-	-	-	7,980,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: ST-1 Rosander 2 Reservoir



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	This project will add additional storage to the 575 pressure zone and is expected to be completed mid-term.
2.	Growth / Future Demands	The reservoir will address storage deficiencies due to increased growth in the 575 pressure zone.
3.	Reliability	The new facility will be designed to meet current seismic standards.

PROJECT DESCRIPTION

The Rosander 2 Reservoir project is recommended to address long-term storage deficiencies in the West Hills 575 Zone and to provide seismically resilient storage. It is assumed that the existing reservoir will remain in service while a new 1.0-MG reservoir is constructed along with the Rosander Pump Station Project (BP-6).

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	There will be a minor increase in operating expenses by adding a new facility.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	50%		
Total Priority Score:	21	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	-	-	-	-	3,495,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: ST-8 Reservoir Isolation Valve Program



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The valve isolation program could be required at any time due to seismic hazards in the area.
2.	Customer Criticality	This project could help maintain vital water resources for a large customer base.
3.	Reliability	The new valves will address seismic concerns for select facilities.

PROJECT DESCRIPTION

Seismically-activated isolation valves are recommended where one or more storage facilities are available to a pressure zone or operating area. Facilities with the valves are assumed to be isolated following a seismic event, thereby preventing water from draining into a leaking system. Seismically-actuated isolation valves are recommended for 11 of the District's 26 planned reservoirs for 2064. Each isolation valve will require an electronically actuated valve with control box, flow monitoring, and transmission equipment for SCADA. The District is currently evaluating the Shakealert system being implemented by the USGS. The District anticipates upgrading existing seismic valves to a Shakealert system in the near-term and evaluating other locations for installation in the future.

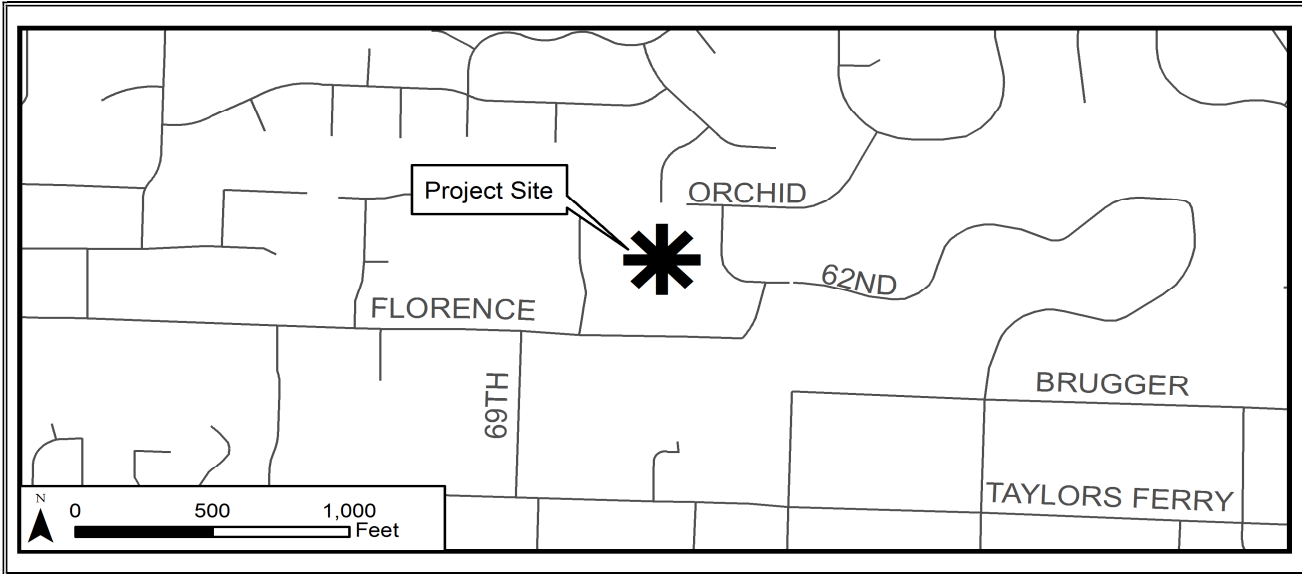
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	There will be a minor increase to operating expenses to incorporate and maintain the seismic isolation valves including power and an ethernet connection. Other operating expenses for the shakealert system are covered under the program.	
Project Manager:	Nick Augustus	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	20	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	51,800	-	-	-	-	-	51,800	2,119,200

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Florence Lane Reservoir Coatings & Cathodic Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	This maintenance project should be completed near-term.
2.	Asset Condition	The existing reservoir roof is corroding and in need of repair. This project is anticipated to extend the life of the asset.
3.	Reliability	This project is necessary to maintain reliable service. No seismic improvements are anticipated with this project.

PROJECT DESCRIPTION

The reservoir coatings are in poor condition and are in need of replacement. In addition, gutters and downspouts will reduce algae growth that is common on exterior tank walls, and will extend the life of the new coatings. This project involves sandblasting and recoating areas of coating failures. Containment is required to reduce impact to surrounding properties.

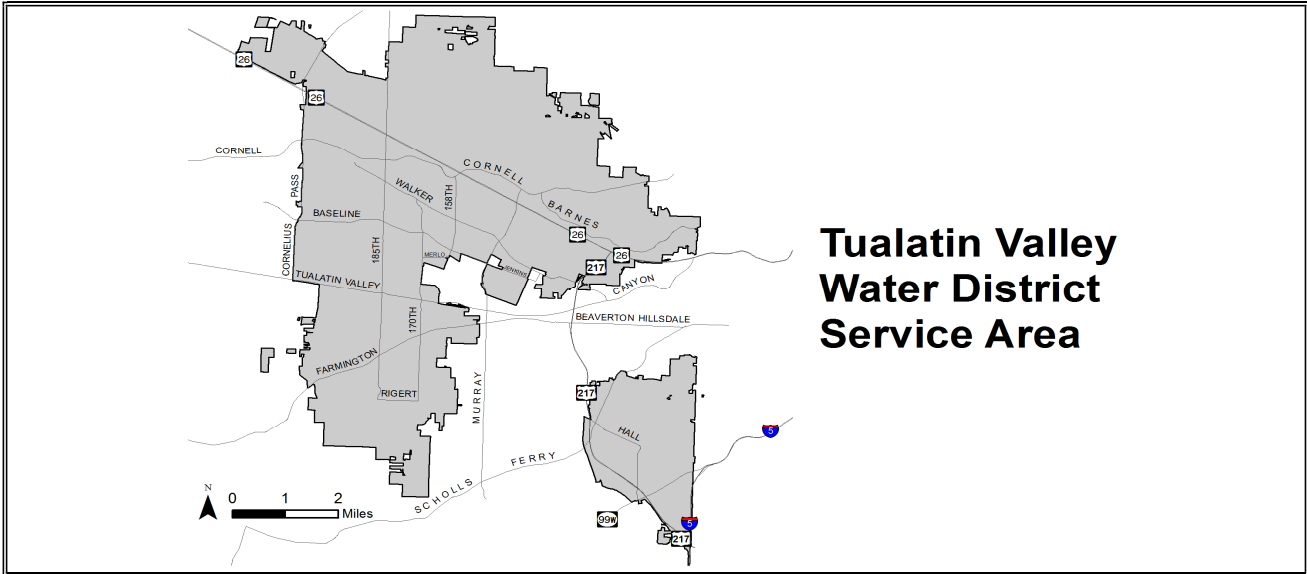
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	No anticipated impact on District operating costs.	
Project Manager:	Pete Boone	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemnt. Fee Elg.:	0%		
Total Priority Score:	29	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	696,500	-	-	-	-	696,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Steel Reservoir Gutters and Downspouts



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	This maintenance project should be completed near-term.
2.	Asset Condition	The existing reservoir roof experiences algae growth and issues associated with that growth, reducing the life expectancy of coatings. This project is anticipated to extend the life of the asset.
3.	Reliability	This project is necessary to maintain reliable service.

PROJECT DESCRIPTION

This project would add gutters and downspouts to steel tanks. This will reduce the algae growth that is common on exterior tank walls which will extend the life of the coatings.

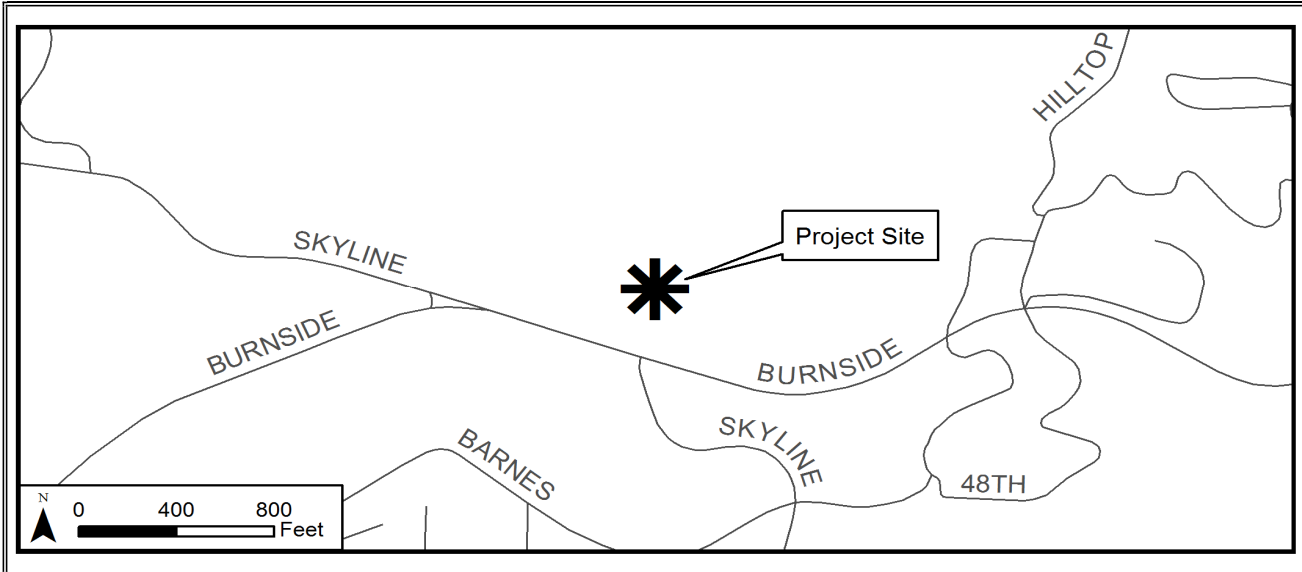
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	No anticipated impact on District operating costs.	
Project Manager:	Pete Boone	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	17	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	20,700	21,400	-	-	-	-	42,100	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Somerset Reservoir Modifications



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	This maintenance project should be completed near-term.
2.	Asset Condition	The existing reservoir is showing signs of corrosion and is in need of repair. This project is anticipated to extend the life of the asset.
3.	Safety / Security	The project will reduce risks associated with the outdated entry and access points.

PROJECT DESCRIPTION

This project will install gutters and downspouts on the tank. It also includes replacing the existing hatch, removing the ladder cage to comply with OSHA standards and fix exterior coatings on the reservoir.

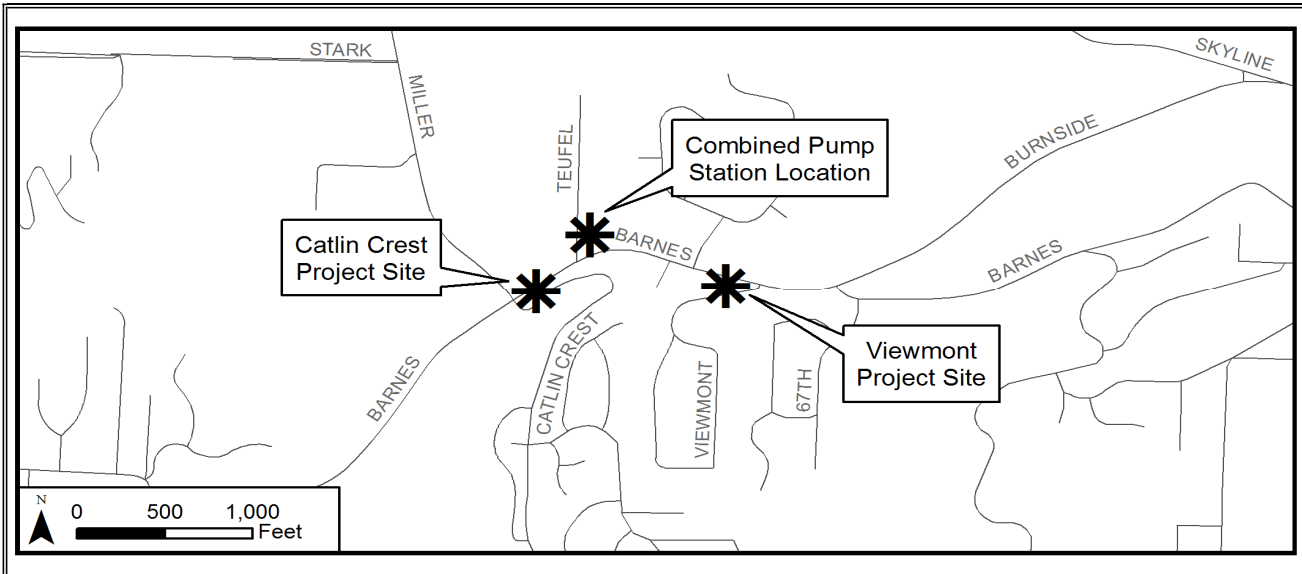
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	No anticipated impact on District operating costs.	
Project Manager:	Pete Boone	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	17	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	321,500	-	-	-	-	321,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Catlin Crest / Viewmont pump station replacement/relocation



KEY DRIVERS FOR CIP PROJECT

1.	Safety / Security	This project will help offset fire flow deficiencies in the pressure zones served by the Catlin Crest and Viewmont pump stations, and it will improve safety for operators.
2.	Asset Condition	The Catlin Crest and Viewmont pump stations are nearing the end of their useful lives. Several failures have occurred and maintenance and repair costs have been increasing.
3.	Customers Served	These pump stations pump directly to service in pressure zones without storage or redundant supply, so their reliable operation is critical to providing water service to the areas that they serve.

PROJECT DESCRIPTION

The Catlin Crest and Viewmont pump stations provide water service to a portion of the West Hills. The pump stations are nearing end of life, they require additional fire flow capacity, and are located in vaults with difficult access. The project includes piping improvements, combines the two previously separate pressure zones, and will include backup power connections through the Teufel Pump Station. It also assumes that a "pitless" pump station will be constructed.

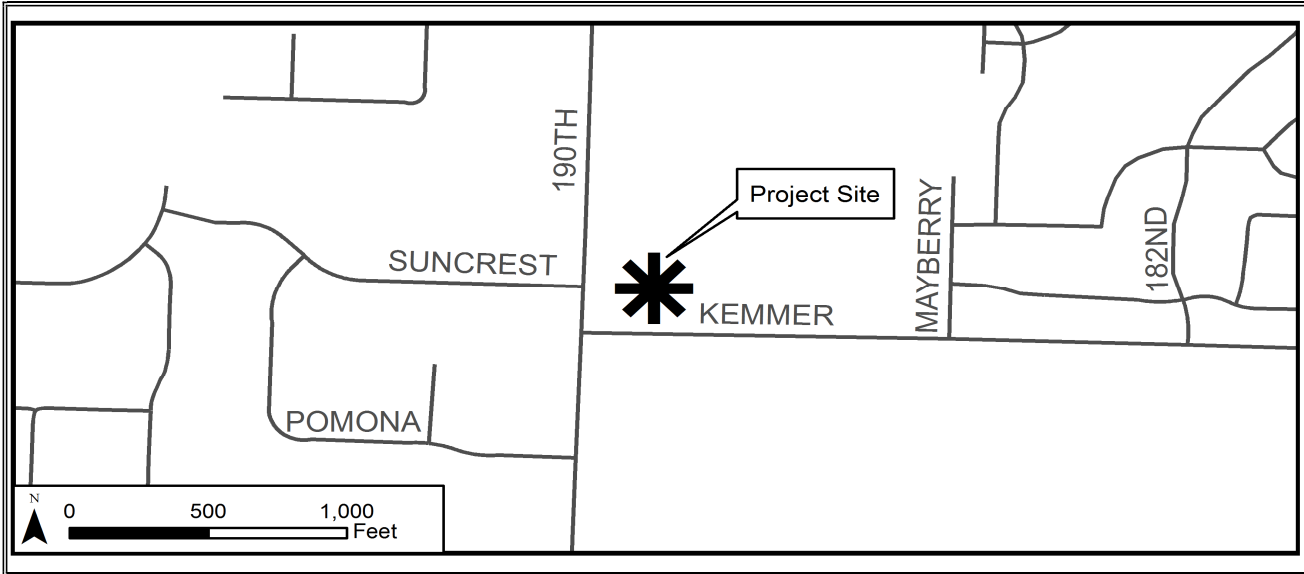
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pump Station	Water Rates:	Yes	The new combined pump station will lower the District's maintenance costs due to replacing aging infrastructure.	
Project Manager:	Ryan Smith	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	31	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
750,000	534,400	207,000	-	-	-	-	-	207,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: BP-1 Cooper Mountain Booster Pump Station Expansion



KEY DRIVERS FOR CIP PROJECT

1.	Safety & Security	This project will help offset fire flow deficiencies in the pressure zones served by the Cooper Mountain Pump Station. The 2015 Master Plan recommended a full replacement of the existing pump station. This project will improve the fire flow capacity in this area until funding is available for pump station replacement or rehabilitation.
2.	Customer Criticality	The Cooper Mountain Pump Station serves a significant portion of the District.
3.	Growth/Future Demands	This project will provide additional capacity to accommodate growth and future demands.

PROJECT DESCRIPTION

The Zone Supply Analysis determined that the existing Cooper Mountain Booster Pump Station (BPS) is deficient under firm and peak supply criteria. It is recommended that the District construct a new pump station or expand the existing Cooper Mountain BPS to provide an additional 0.5 mgd of firm capacity and 4 mgd of peak capacity for the 920 Operating Area. The District anticipates replacing 1 pump in order to delay the construction of a new pump station for two years.

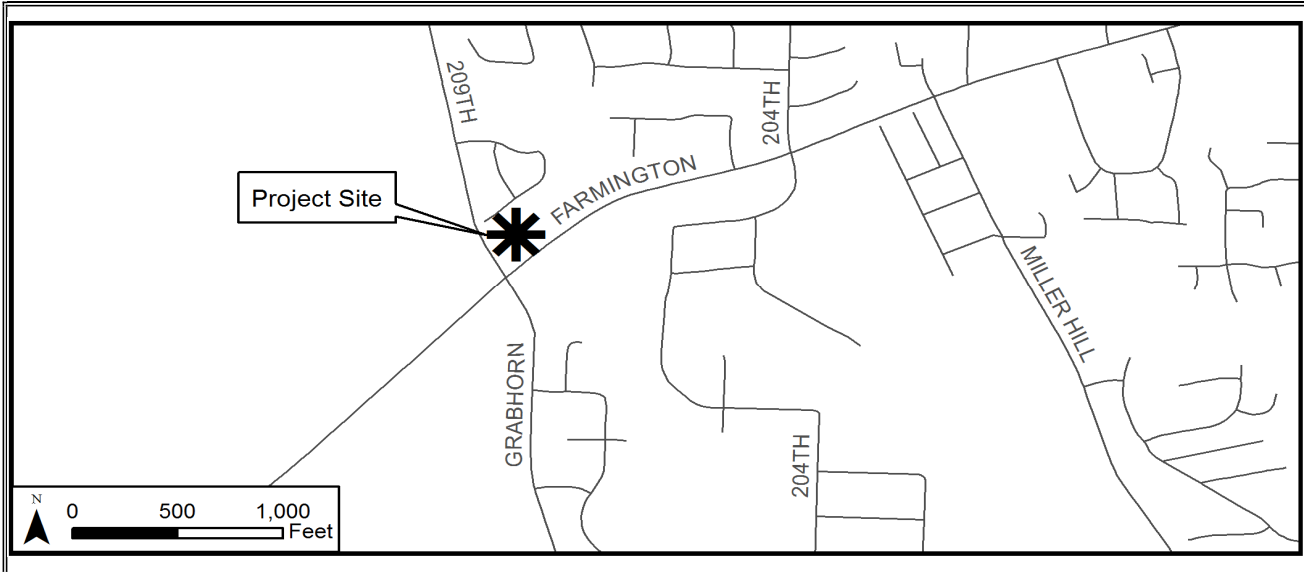
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pump Station	Water Rates:	Yes	This new pump station would replace the existing Cooper Mountain Pump Station resulting in a net no material impact to operating costs. Power costs may decrease slightly due to increased pumping efficiency.	
Project Manager:	TBD	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	100%		
Total Priority Score:	25	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	332,500	2,765,000	-	-	3,097,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: BP-4 Farmington Road BPS



KEY DRIVERS FOR CIP PROJECT

1.	Reliability	This project is necessary to provide a seismically resilient and redundant feed to the 800 pressure zone on Cooper Mountain.
2.	Project Urgency	The urgency of this project is driven by the necessity to maintain and improve the single feed to the top of Cooper Mountain. The Goyak Reservoir and Pump Station requires repairs which cannot be done without a second feed to the upper pressure zones.
3.	Growth / Future Demands	This project will incorporate receiving water from the WWSS and pumping the water up the hill to the 800 pressure zone. It will address growth / future demands in the Cooper Mountain area.

PROJECT DESCRIPTION

It is recommended that the District provide supply redundancy to the Cooper Mtn Area, which currently has one supply source from the 385 Zone via the 189th and Goyak Pump Stations. This project includes constructing a new pump station at Farmington Road to lift water from both the 385 Zone, and the incoming Willamette Supply pressure to the 800 Zone with a firm capacity of 4 mgd and a peak capacity of 7.5 mgd. The site selected is at the District owned property at SW Farmington Road & SW 209th Avenue.

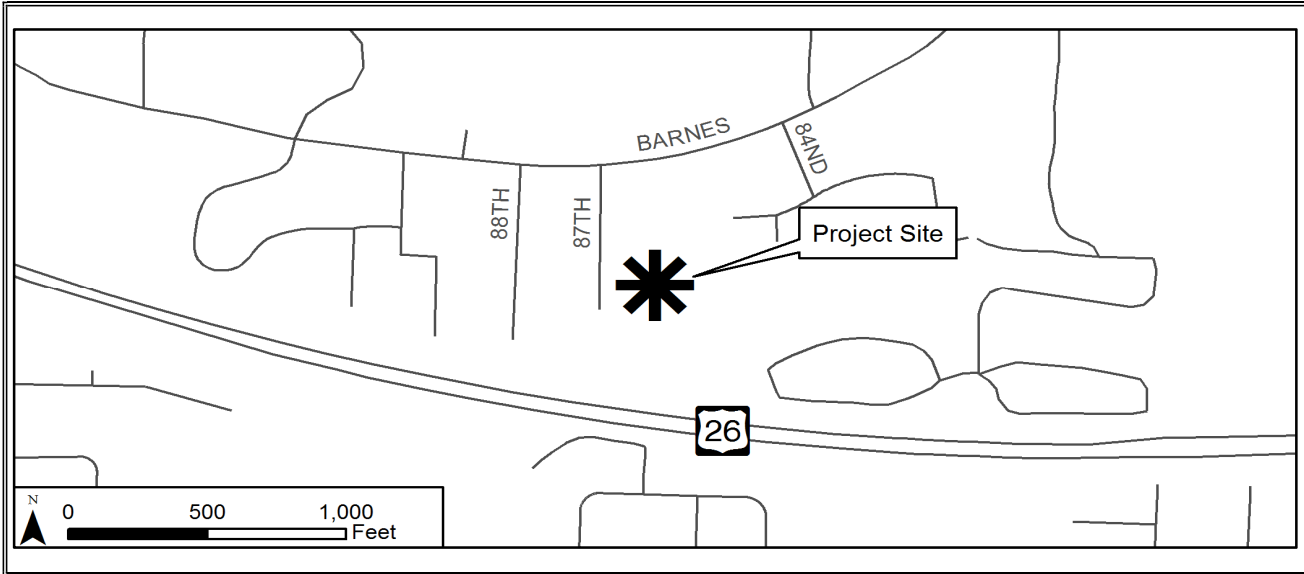
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pump Station	Water Rates:	Yes	It is assumed that approximately \$60,000/yr will be required for pumping from this new pump station, though these costs will be offset by reductions at the other parallel facilities. It will also add costs as a turnout and fluoride facility for the WWSS. This additional facility will require additional operator support to properly maintain. Approximately 1/3 FTE is anticipated.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	77%		
Total Priority Score:	29	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	621,000	4,745,000	-	-	-	-	5,366,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: BP-6 Rosander Booster Pump Station



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Adds redundancy to the West Hills pumping system.
2.	Growth/Future Demands	Provides pumping capacity to meet the demands of the projected growth in the West Hills area.
3.	Safety/Security	Pump Station will have secured access and be a seismically resilient facility.

PROJECT DESCRIPTION

Design, and construction of new Rosander Pump Station and 1,400 ft. of 24" discharge line to connect to existing 12" and 16" transmission lines near SW 84th. This project has been postponed until after 2024. It is intended to be constructed at the same time as the 2nd Rosander Reservoir.

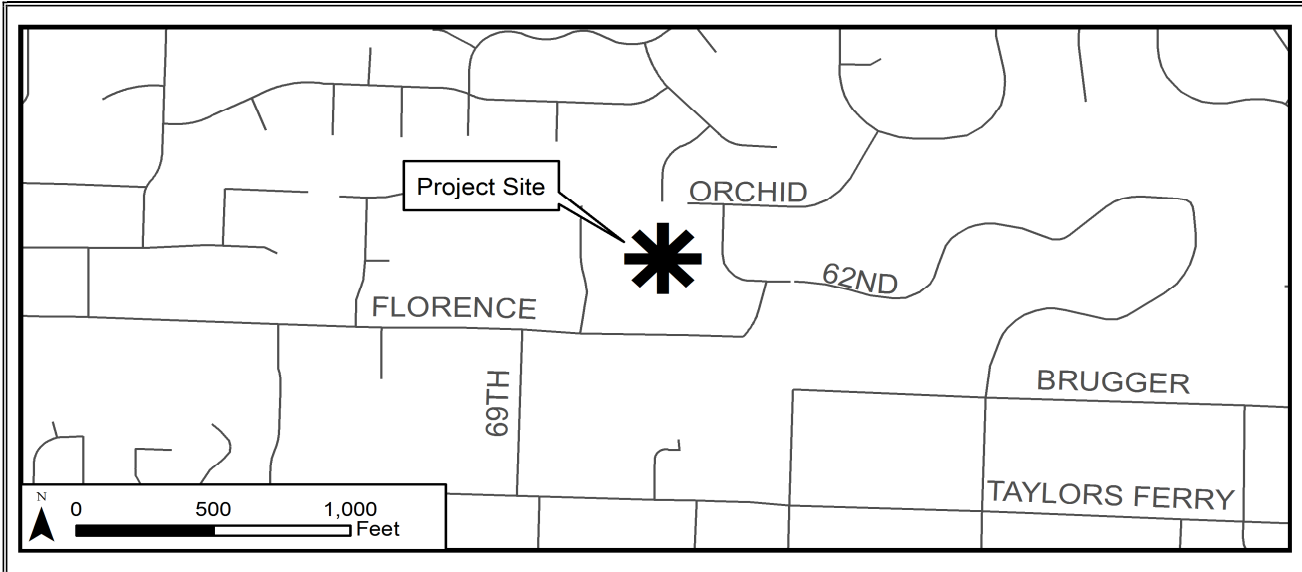
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Pump Station	Water Rates: Yes	The new pump station will replace the Sunset Pump Station and lower the District's maintenance costs.
Project Manager:	Andrew Barrett	Service Fees: No	
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.: 0%	
Total Priority Score:	24	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	-	-	-	-	3,115,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Florence Lane Booster Pump Station Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	These improvements need to be done prior to 2026 in order to receive water from the WWSS.
2.	Reliability	The improvements will allow for reliable, seismically resilient supply.
3.	Customer Criticality	This project serves a large customer base.

PROJECT DESCRIPTION

This project provides improvements to the existing pump station and is necessary to provide a resilient supply from the WWSS which enters the 426 zone, to the 498 zone. Valving may be required to pump out of the reservoirs to allow for turnover of the reservoirs, thus reducing water age in the reservoir.

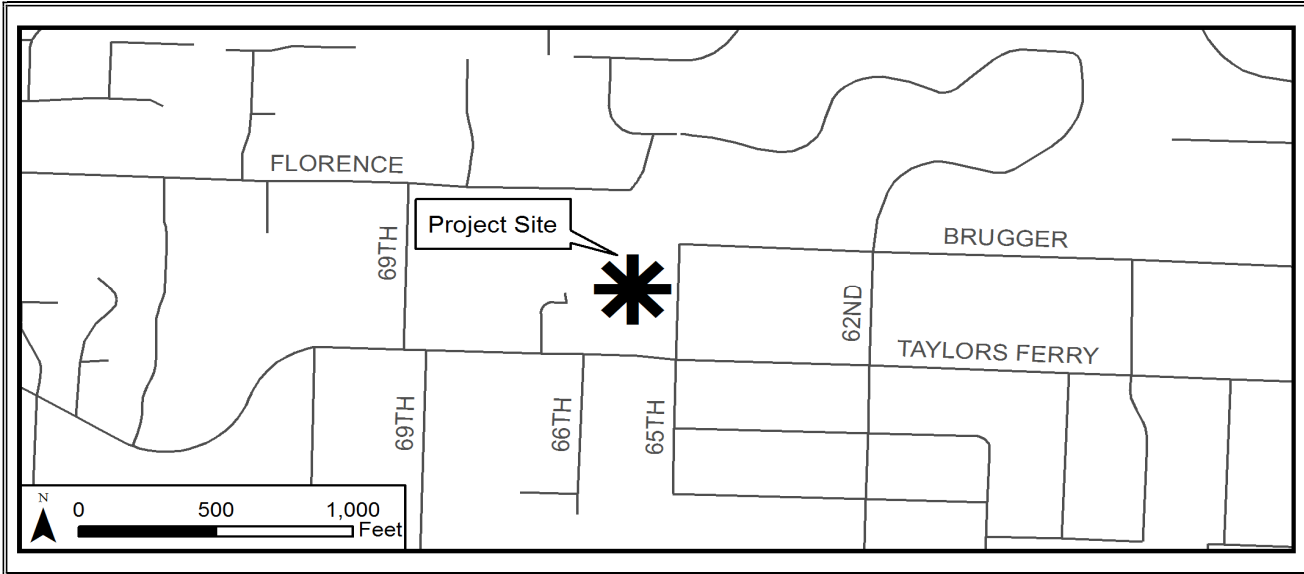
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Pump Station	Water Rates: Yes	No anticipated impact on District operating costs.
Project Manager:	Zach Lemberg	Service Fees: No	
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.: 0%	
Total Priority Score:	25	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	344,500	2,860,000	-	3,204,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Taylors Ferry Booster Pump Station



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	These improvements need to be done prior to 2026 in order to receive water from the WWSS.
2.	Reliability	The improvements will allow for reliable, seismically resilient supply.
3.	Customer Criticality	This project serves a small customer base in the 643 pressure zone.

PROJECT DESCRIPTION

Pump station and improvements on the Taylor's Ferry site to pump from the 498 zone to the 643 zone. This will allow the entire Metzger system to be served from the WWSS in 2026.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pump Station	Water Rates:	Yes	Operating costs for pumping to the 643 pressure zone will increase.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	21	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	75,000	628,500	-	-	-	703,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Pump Replacement Program



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	The District has pumps that are in need of replacement due to their deteriorating condition.
2.	Cost Effectiveness / Community Benefit	These replacements will allow the District to maintain the pump stations in proper working order.
3.	Reliability	This will allow for reliable service.

PROJECT DESCRIPTION

This program is intended to replace aging existing pumps as they approach the end of their useful life. The budget assumes replacing 2 pumps per year and an average asset life of 30 years.

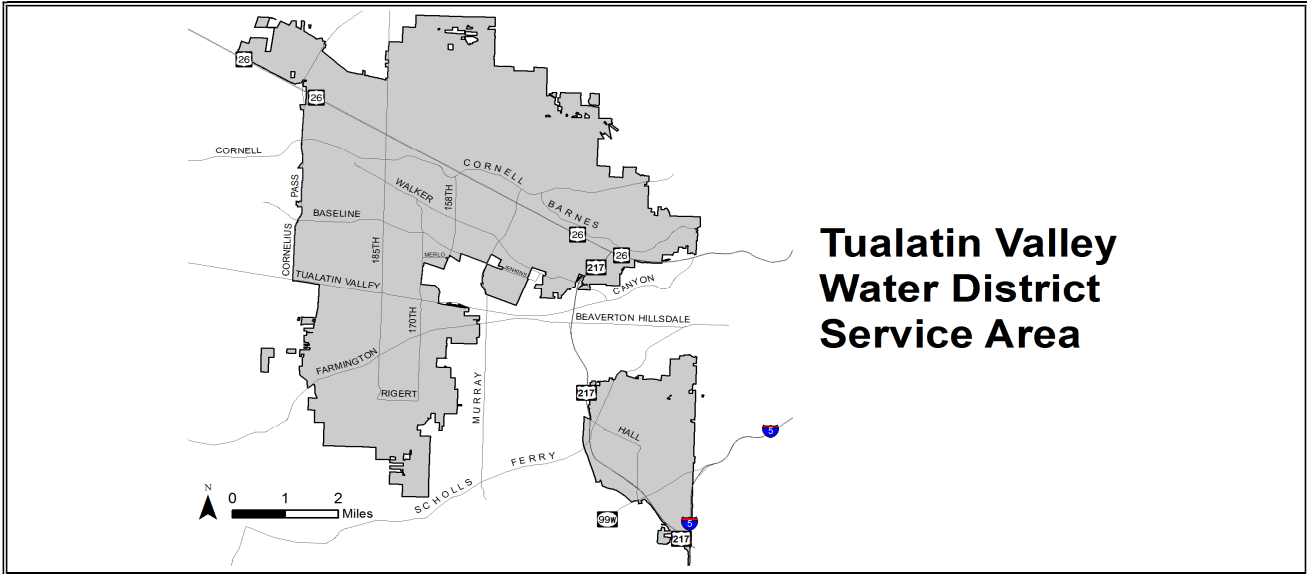
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pump Station	Water Rates:	Yes	Potential for a slight decrease in operating costs due to newer, more efficient pumps.	
Project Manager:	Ryan Smith	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	26	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	124,000	128,500	133,000	137,500	142,500	147,500	813,000	5,261,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-4 Mains Replacement Program



Tualatin Valley Water District Service Area

KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Replacement of aging infrastructure to provide new resilient pipelines capable of providing long-term, reliable service.
2.	Reliability	Improvements required to maintain reliable and seismically resilient facilities.
3.	Safety / Security	Enhances safety by improving level of service for customers and providing safe, reliable drinking water.

PROJECT DESCRIPTION

This work includes projects that are completed as part of the District's Mains Replacement Program. This program is a focused effort to identify, prioritize, design and replace pipelines based on asset management priorities and recommendations to replace existing failing infrastructure. These projects will be water main replacements that are required due to corrosion, or other identified aging condition of the existing water mains. Improvements will result in improved reliability and water quality as well as reduced liability associated with premature pipe failures and leaks.

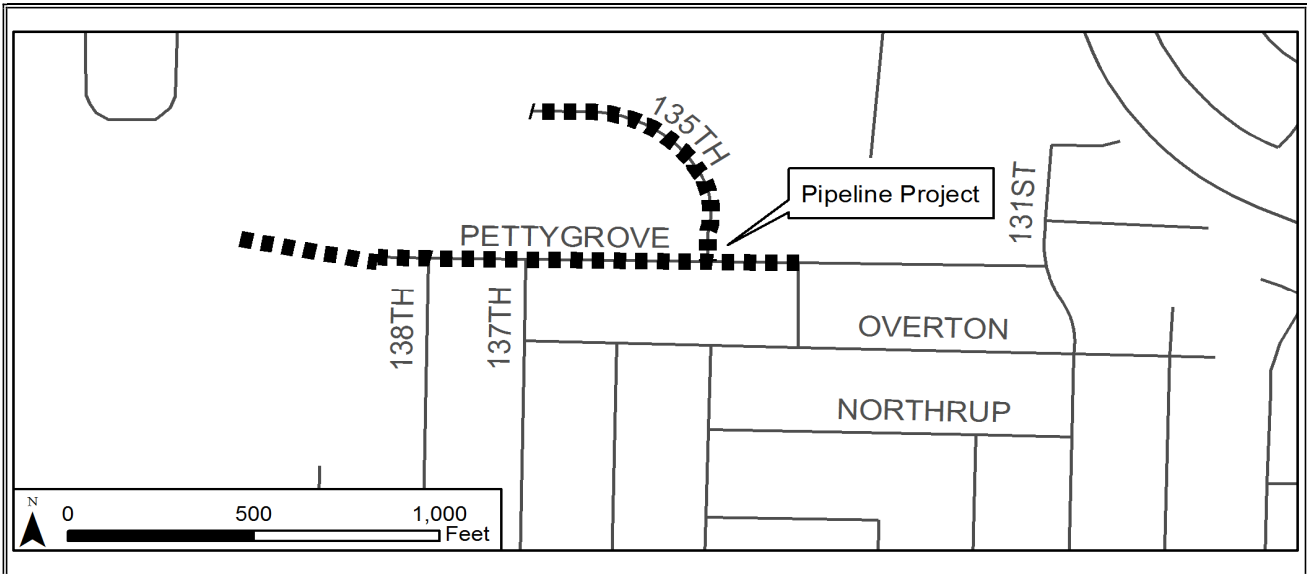
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	There may be a slight reduction in operating costs due to reduced main breaks. New installations are designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.
Project Manager:	Various	Service Fees:	No	
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%	
Total Priority Score:	26	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
3,000,000	3,551,776	2,135,000	1,820,000	6,465,000	6,435,000	9,145,000	10,660,000	36,660,000	350,750,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Pettygrove & 135th Ave Main Replacement & Fire Flow



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Replacement of aging infrastructure to provide new resilient pipelines capable of providing long-term, reliable service. This project was identified through leak history and by performing a condition assessment which revealed corrosion.
2.	Reliability	Improvements required to maintain reliable and seismically resilient facilities.
3.	Safety / Security	Enhances safety by improving level of service for customers and providing safe, reliable drinking water. This project also addresses fire flow deficiencies.

PROJECT DESCRIPTION

This project is being done to replace existing piping that is in poor condition as identified as part of the Mains Replacement Program. In addition, the existing main is undersized according to master plan recommendations for fire flow, thus the pipe along Pettygrove is being upgraded from 6-inch to 12-inch to support the proper fire flow. The project consists of approximately 2,100 LF of 12-inch water main, 1,100 LF of 4 and 8-inch water main.

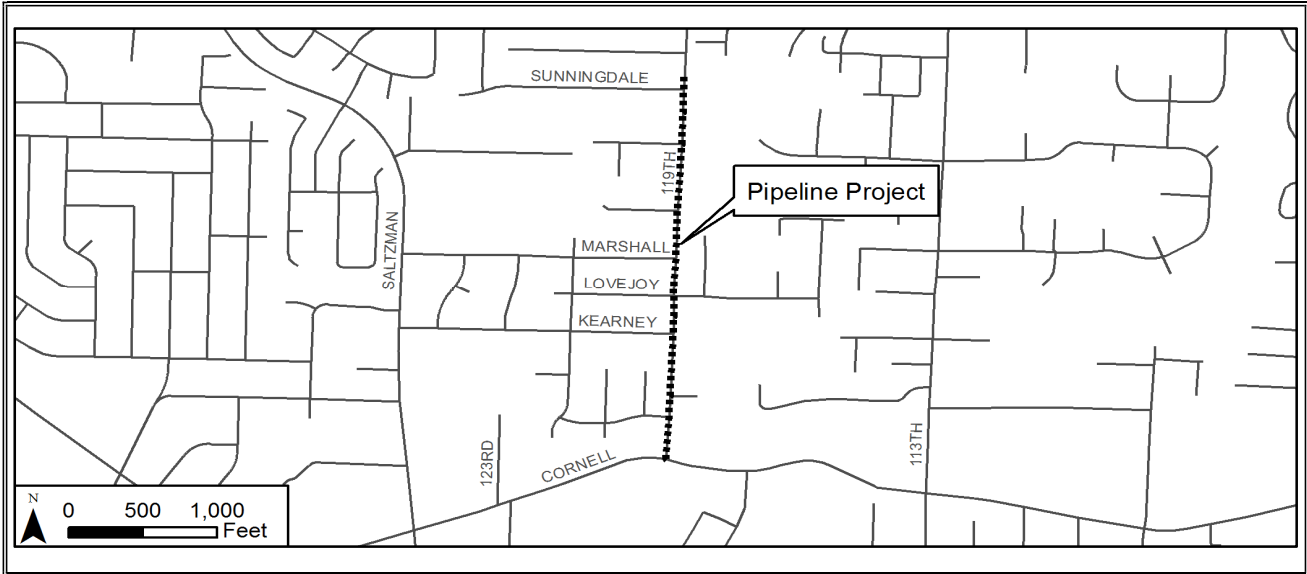
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Zach Lemberg	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	25	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	683,000	-	-	-	-	-	683,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: NW 119th Ave Main Replacement



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Replacement of aging infrastructure to provide new resilient pipelines capable of providing long-term, reliable service. This project was identified through leak history and by performing a condition assessment of the pipeline.
2.	Reliability	Improvements required to maintain reliable and seismically resilient facilities.
3.	Safety / Security	Enhances safety by improving level of service for customers and providing safe, reliable drinking water.

PROJECT DESCRIPTION

This project is being done to replace existing piping that is in poor condition as identified as part of the Mains Replacement Program. The existing main has failed in at least 2 locations and has resulted in large damages due to the size and pressure of this portion of the water main. The project involves replacement of approximately 2,400 LF of existing 12-inch diameter water main including services and other connections.

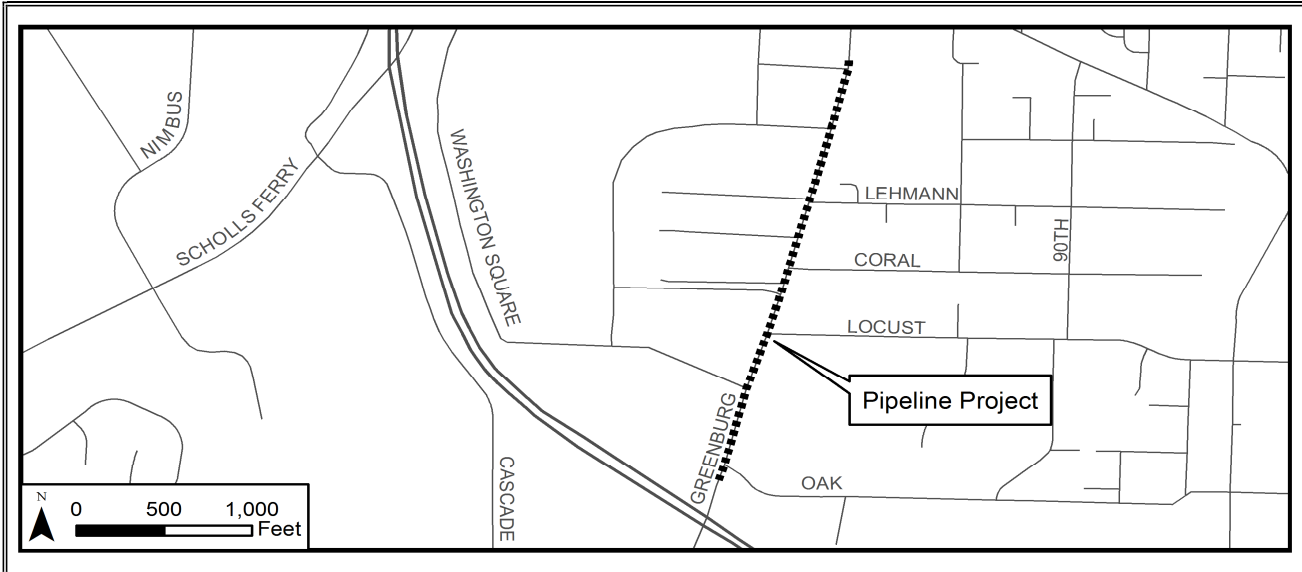
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	23	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	135,348	931,500	-	-	-	-	-	931,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: SW Greenberg - Oak to Prospect



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Replacement of aging infrastructure to provide new resilient pipelines capable of providing long-term, reliable service.
2.	Reliability	Improvements required to maintain reliable and seismically resilient facilities.
3.	Safety / Security	Enhances safety by improving level of service for customers and providing safe, reliable drinking water.

PROJECT DESCRIPTION

The main is noted as being in poor condition and in need of replacement. This involves replacement of approximately 2,600 LF of existing water main along SW Greenberg Road. Approximately 2,000 LF is being upgraded from 6-inch to 12-inch as well to account for fire flow deficiencies.

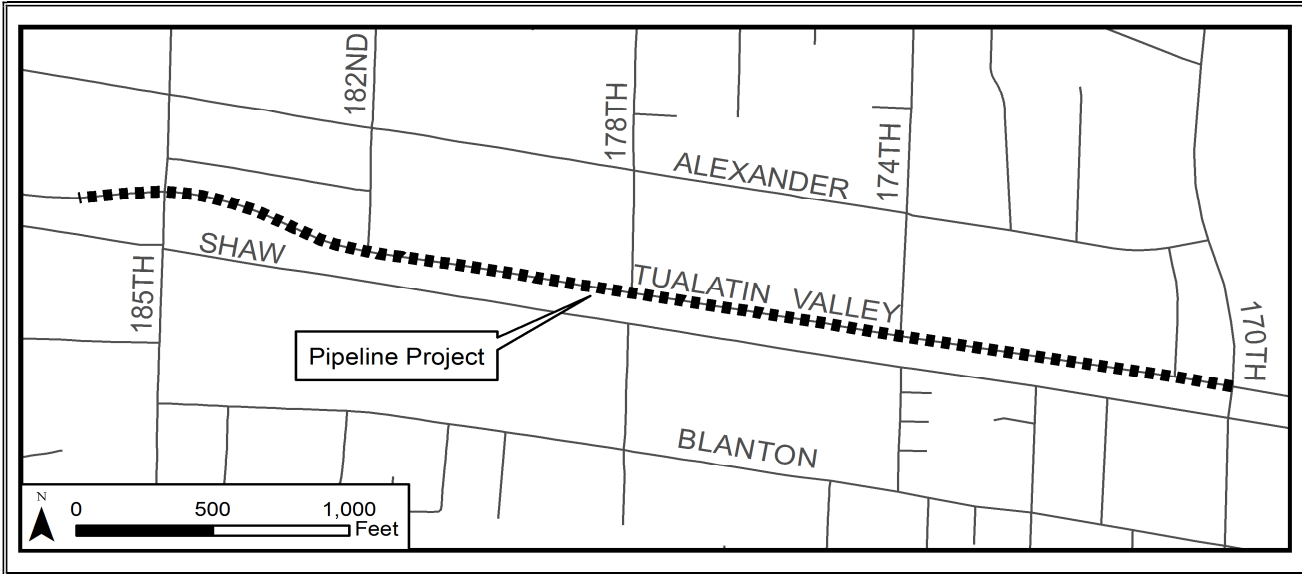
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Nick Augustus	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	31%		
Total Priority Score:	20	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	1,110,000	-	-	-	-	1,110,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: SW Tualatin Valley Hwy



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Replacement of aging infrastructure to provide new resilient pipelines capable of providing long-term, reliable service.
2.	Reliability	Improvements required to maintain reliable and seismically resilient facilities.
3.	Safety / Security	Enhances safety by improving level of service for customers and providing safe, reliable drinking water.

PROJECT DESCRIPTION

There have been leaks in the area, and after installing new services on the main, it has been noted to be in poor condition. The existing pipe was installed in 1955. The project consists of replacement of approximately 3,850 LF of 8-inch pipe.

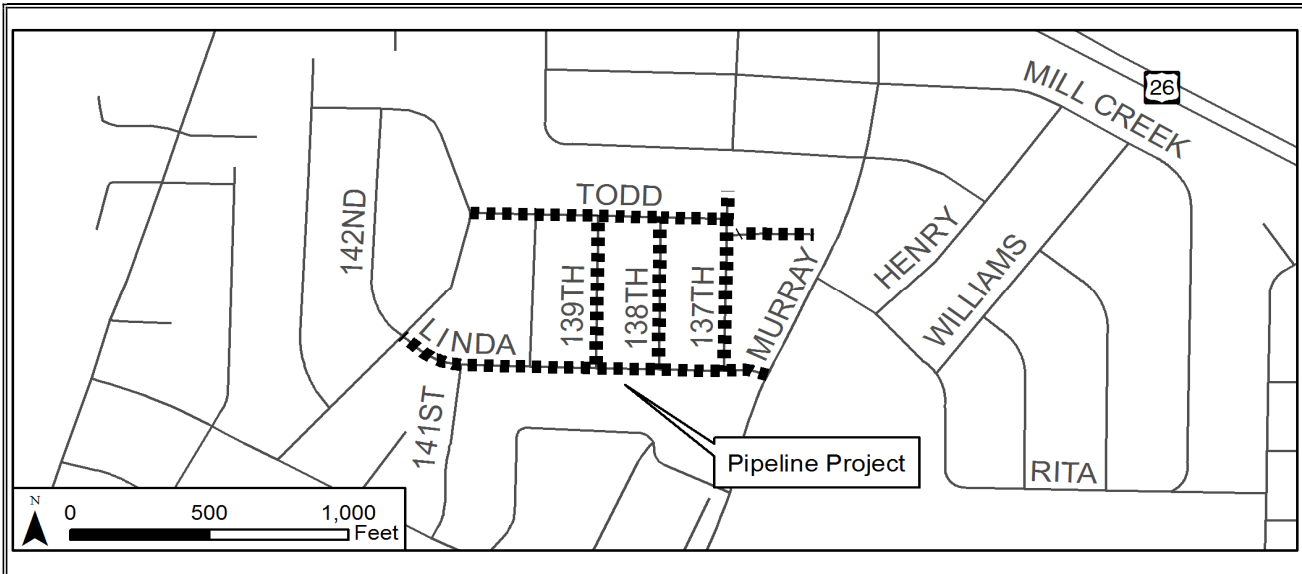
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Nick Augustus	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	20	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	988,500	-	-	-	-	988,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Todd St & Linda Ln - Mainline replacement & upgrade



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Pipelines in the area have had multiple leaks. Though the majority have been shear breaks, the main is also old, and requires some additional capacity due to fire flow.
2.	Reliability	Lead-joints are not a good restraint for seismic events. They need to be replaced with pipelines which account for the seismic vulnerabilities.
3.	Water Quality	Areas with lead joints have been identified as potential replacement projects. Further research is being done to determine if the lead joints have potential to be a water quality concern.

PROJECT DESCRIPTION

The existing pipe is lead-jointed, has had several breaks, and is deficient for fire flow. This project consists of a total of approximately 4,400 LF of 8-inch main, 1,650 of which is being upgraded from 4-inch, and the remaining 2,750 being upgraded from 6-inch.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. Perhaps a slight decrease in operating expenses due to reduced main breaks.	
Project Manager:	Nick Augustus	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	29	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	1,145,000	-	-	-	-	1,145,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Agency-Driven Pipeline Upgrade & Renewal Projects



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Upgrades or renewal work to the District's system that develop in response to new projects by Washington County, developers, or based on other needs.
2.	Asset Condition	Replacement of aging infrastructure to provide new resilient structures capability of providing long-term, reliable service.
3.	Reliability	Improvements required to maintain reliable and seismically resilient facilities.

PROJECT DESCRIPTION

This is a general category that allows for various pipeline upgrades and replacements typically associated with miscellaneous Washington County projects, projects related to development or other needs.

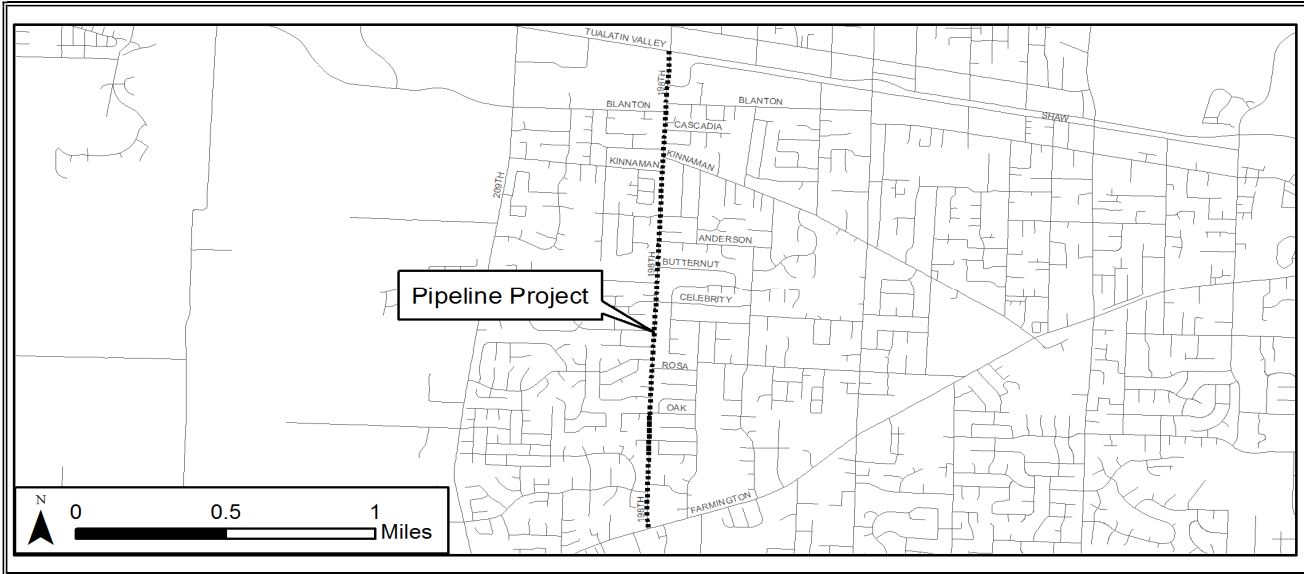
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Kevin Schmeltzer	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	27	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
1,330,000	657,740	51,800	760,500	1,185,000	1,230,000	1,270,000	1,315,000	5,812,300	46,915,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: SW 198th- Farmington Rd to TV Hwy Pipeline Relocation



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The county is performing road work requiring relocations be done by the District to avoid conflicts with the road design.
2.	Asset Condition	Replacement of aging infrastructure will provide new resilient structures capable of providing long-term, reliable service.
3.	Reliability	Relocations will be designed to maintain reliable and seismically resilient facilities.

PROJECT DESCRIPTION

This project is driven by a road widening project done by Washington County along SW 198th from Farmington Road to TV Hwy. The project will require meter relocations as well as watermain lowering and relocations near bridges. Approximately 500 LF of 16-inch and 8-inch pipe will be relocated near the bridges. The District is partnering with the county to have the relocations around the bridges done by the county's contractor to avoid potential coordination issues.

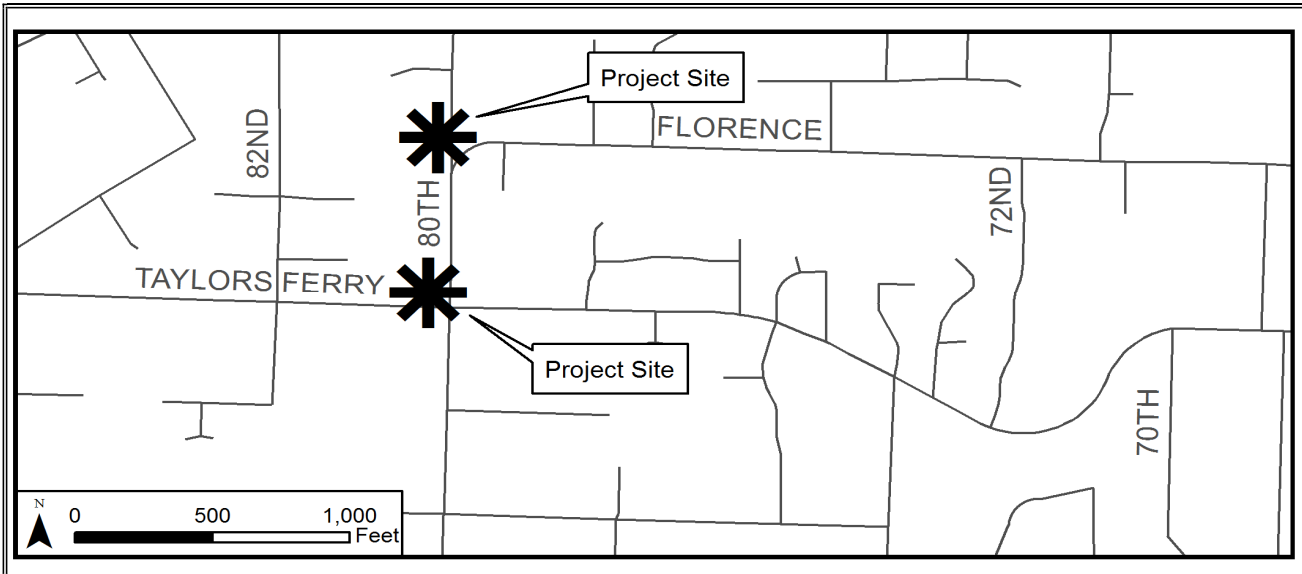
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Kevin Schmeltzer	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	27	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	841,500	-	-	-	-	-	841,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: 80th Ave at Florence Lane & Taylors Ferry Rd Pipeline Relocation



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The county is performing road work requiring relocations be done by the District to avoid conflicts with the road design.
2.	Asset Condition	Replacement of aging infrastructure will provide new resilient structures capable of providing long-term, reliable service.
3.	Reliability	Relocations will be designed to maintain reliable and seismically resilient facilities.

PROJECT DESCRIPTION

This project is driven by two culvert replacement projects being done by Washington County. The culverts are located at 80th Ave and Florence Lane and 80th Ave and Taylors Ferry Road. The project will require relocation of a 16-inch waterline at Florence Lane, and an 8-inch and 24-inch waterline relocation at the Taylors Ferry intersection. The county has recently combined these two projects into a single larger project with construction anticipated for summer 2019.

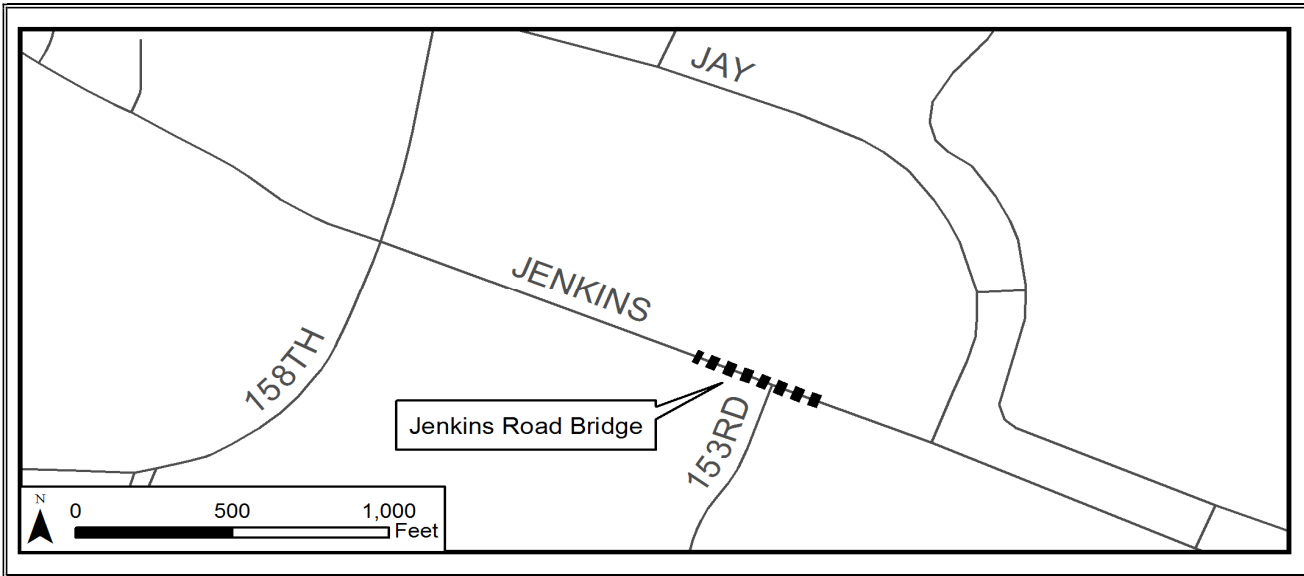
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Kevin Schmeltzer	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	27	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	467,000	-	-	-	-	-	467,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Jenkins Road Bridge Pipeline Relocation



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The county is performing road work requiring relocations be done by the District to avoid conflicts with the road design.
2.	Asset Condition	Replacement of aging infrastructure will provide new resilient structures capable of providing long-term, reliable service.
3.	Reliability	Relocations will be designed to maintain reliable and seismically resilient facilities.

PROJECT DESCRIPTION

This is a Washington County project to widen and improve this stretch of roadway. The waterline relocation is being done as part of the overall road project and consists of relocating a 12-inch watermain across the new bridge.

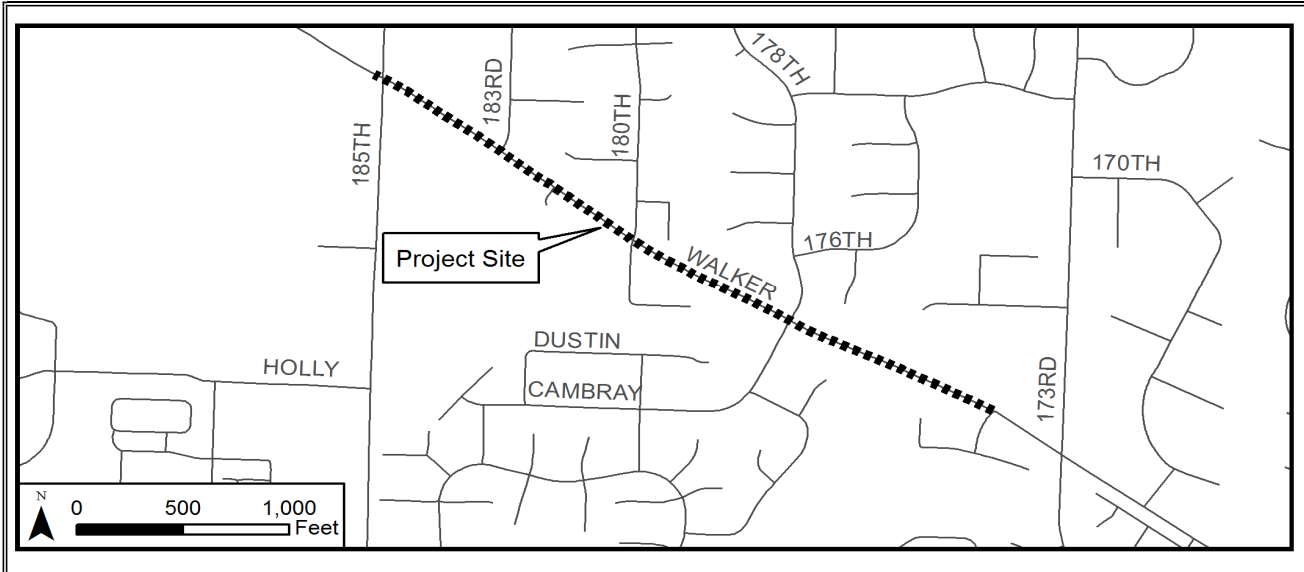
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Kevin Schmeltzer	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	27	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	186,500	-	-	-	-	-	186,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Walker Rd 12" Replacement - 185th to 174th



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The county is performing road work requiring relocations be done by the District to avoid conflicts with the road design.
2.	Asset Condition	Replacement of aging infrastructure will provide new resilient structures capable of providing long-term, reliable service.
3.	Reliability	Relocations will be designed to maintain reliable and seismically resilient facilities.

PROJECT DESCRIPTION

This is a Washington County project to widen and improve this stretch of roadway. The waterline relocation is being done as part of the overall road project.

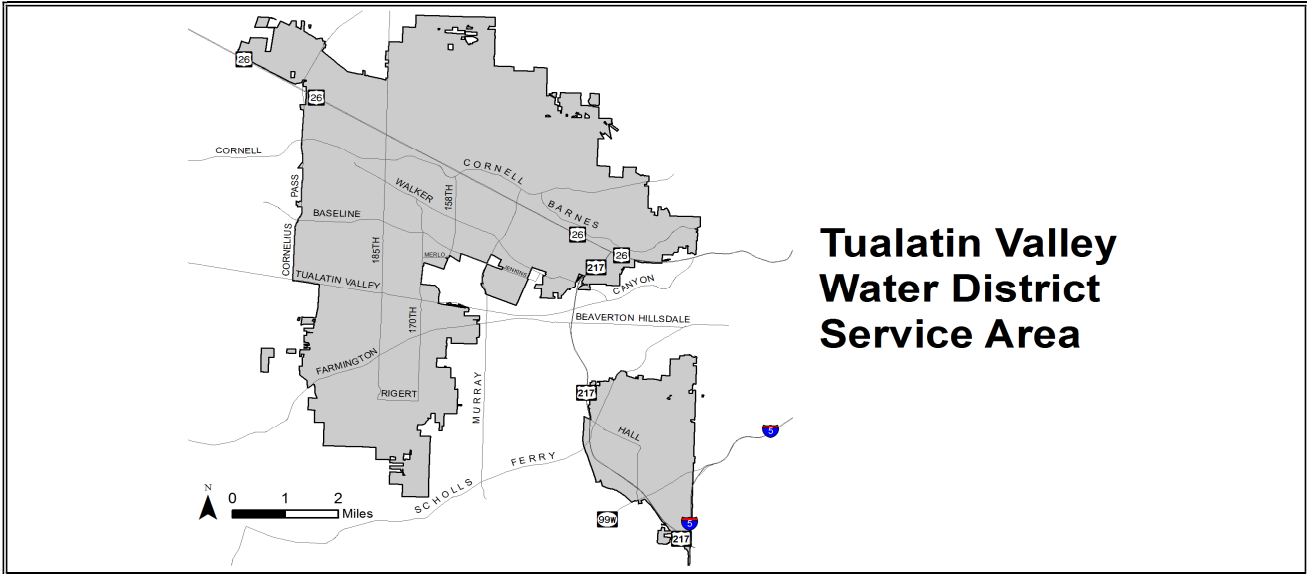
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact. New installations designed for site specific corrosion conditions resulting in longer expected design life of pipeline and reduced leakage for system.	
Project Manager:	Kevin Schmeltzer	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	27	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	385,500	-	-	-	-	385,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Unidentified Development Opportunity & Reimbursement Projects



KEY DRIVERS FOR CIP PROJECT

1.	Cost Effectiveness / Community Benefit	The District has benefitted from significant cost savings by partnering with development projects to upgrade, replace, or install new pipelines that have been identified as recommended improvements in the 2018 Master Plan Update.
2.	Reliability	Having funding available to participate in opportunity projects will allow the District to construct resilient backbone pipelines and other recommended improvements.
3.	Asset Condition	Having funding available to participate in opportunity projects will allow the District to replace failing pipelines.

PROJECT DESCRIPTION

This is a general project category to implement the 2018 Water Master Plan Update. Specifically, the project will be used to partner with other agencies and developers to install or replace pipelines and other infrastructure as identified in the 2018 Water Master Plan Update or other planning studies to provide fire flow improvements, replace aging infrastructure, or provide resilient backbone piping. By partnering with other projects, significant cost saving can be realized.

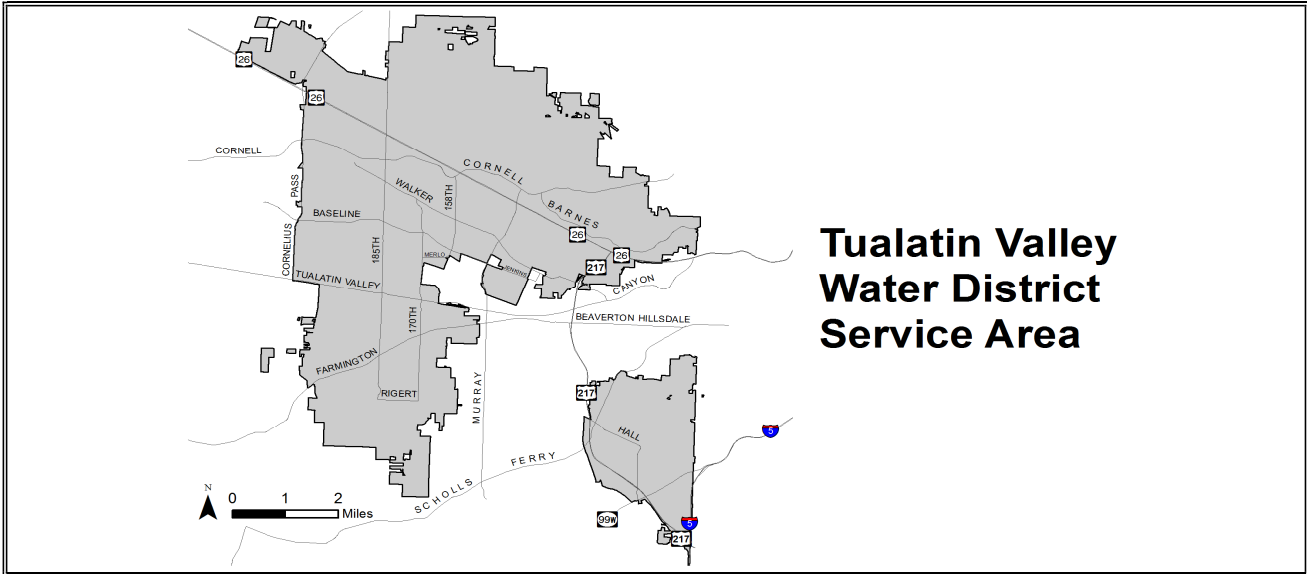
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates: Yes	No anticipated impact on District operating costs.
Project Manager:	Sarah Alton	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: Various	
Total Priority Score:	31	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
500,000	312,361	259,000	268,000	277,000	287,000	297,000	307,500	1,695,500	10,961,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Transmission Improvement Program



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Transmission mains require further condition assessment to determine current conditions. The majority of the improvements are driven by seismic resiliency.
2.	Reliability	Transmission mains are very important to delivering water. These projects will evaluate and provide seismically resilient supply transmission within the TVWD system.
3.	Customer Criticality	Transmission mains impact large customer bases and other critical customers.

PROJECT DESCRIPTION

The Transmission Improvement Program includes currently planned and recommended pipe improvements that increase transmission capacity to accommodate future demands and improve seismic resiliency in the District's backbone piping. For specific backbone piping, cost estimates for this Program reflect the need for higher seismic resiliency in transmission piping. The program includes new and replacement of existing transmission piping. Appendix B of the 2018 Master Plan Update provides a detailed list for these projects. The program will begin in the mid-term time horizon to allow for completion of the WWSP. Transmission improvements have been allocated into Tiers 1 to 3 based on criticality. Phases 1 through 3 of Tier 1 are assumed to be constructed in the mid-term. The remaining transmission projects (including Tier 1 Phase 4, Tier 2, and Tier 3 projects) are assumed to be constructed in the long-term planning horizon at an annual cost of approximately \$3,140,000.

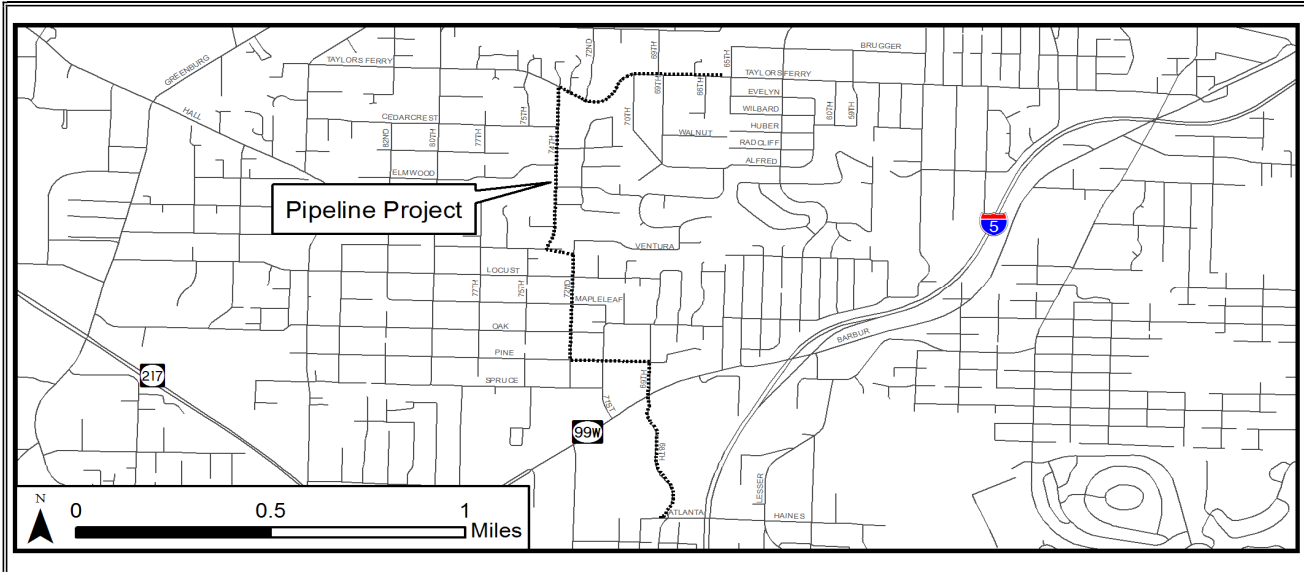
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	No material impact anticipated.
Project Manager:	Nick Augustus	Service Fees:	No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	TBD	
Total Priority Score:	22	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	-	-	-	-	171,441,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-156 - Metzger N-S 498 Zone Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements in the Metzger service area address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner. The project is also being done ahead of the westside light rail project.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

This project addresses fire flow deficiencies in the southeast side of the Metzger area. It consists of approximately 10,200 LF of 18-inch diameter piping from the Taylors Ferry Reservoir to Atlanta and 69th Pkwy (south of Pacific Hwy). The project is currently in the design phase, with the bulk of the design and construction expected to occur in FY 2020.

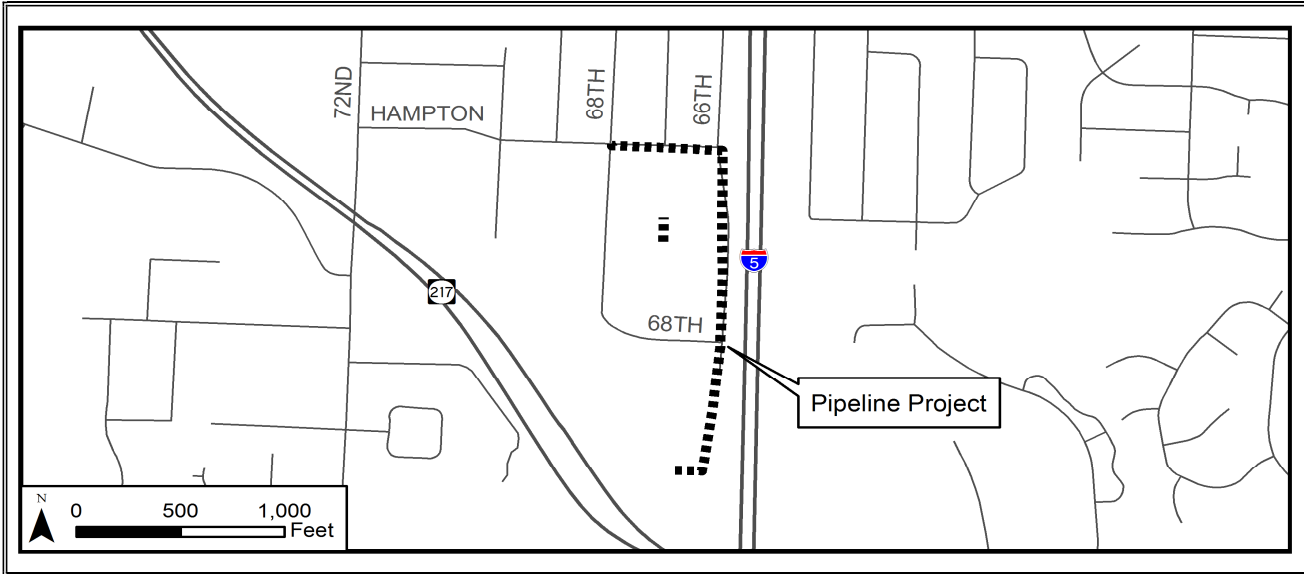
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.
Project Manager:	Andrew Barrett	Service Fees:	No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	38%	
Total Priority Score:	26	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
300,000	300,000	6,925,000	-	-	-	-	-	6,925,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-166 - Hampton St from 68th Ave to 66th Ave



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements in the Metzger service area address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

This project addresses fire flow deficiencies as identified in the master plan in the Metzger area from Hampton St, south along SW 66th Ave to the south end of the District. It consists of approximately 2,400 LF of 12-inch diameter pipe, upgrading both 6-inch and 8-inch existing pipe.

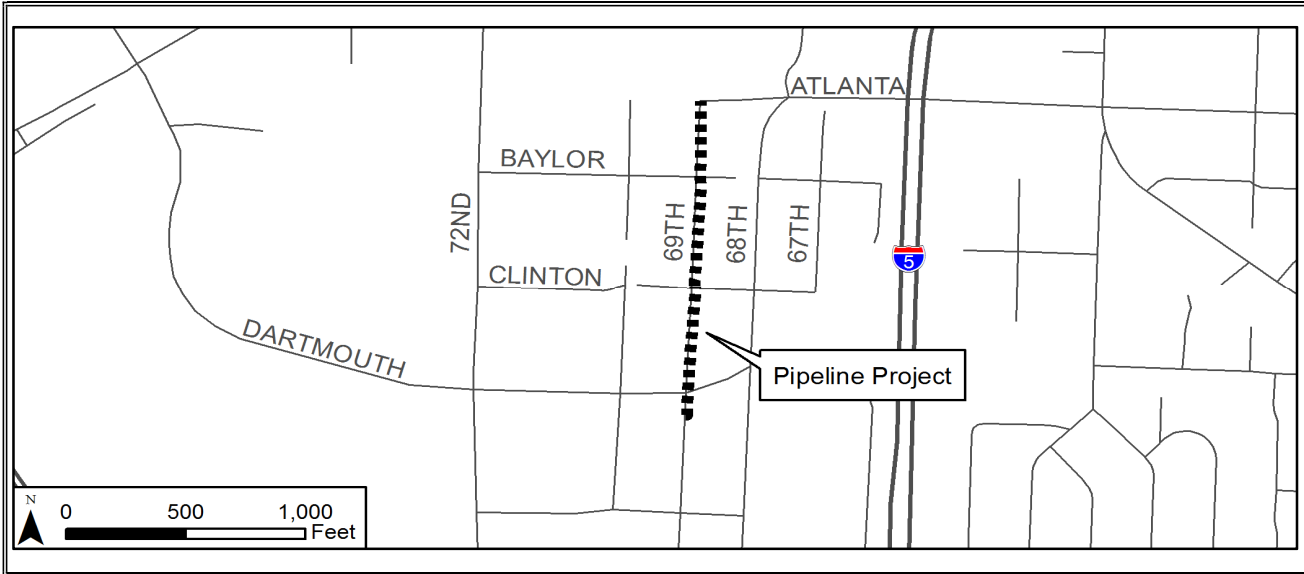
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.
Project Manager:	Zach Lemberg	Service Fees:	No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	39%	
Total Priority Score:	26	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	155,500	1,090,000	-	-	-	-	1,245,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-164 - 69th Ave from Dartmouth St to Atlanta St



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements in the Metzger service area address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

This project addresses fire flow deficiencies as identified in the master plan in the Metzger area on 69th Ave from Dartmouth St to Atlanta St. It consists of upgrading approximately 1,400 LF of 4-inch to 8-inch pipe.

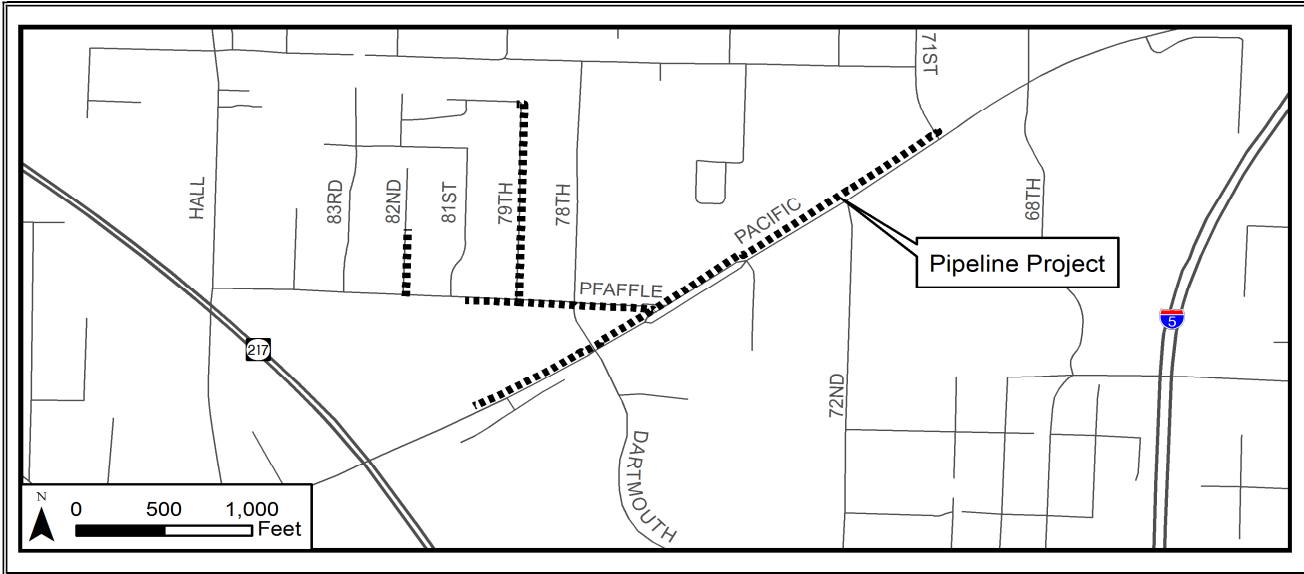
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates: Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.
Project Manager:	Zach Lemberg	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 39%	
Total Priority Score:	26	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	51,800	483,000	-	-	-	-	534,800	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-161 - Pacific Hwy from Hwy 217 to 71st Ave



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

This project addresses fire flow deficiencies as identified in the master plan in the Metzger area mainly along Pacific Hwy from Hwy 217-Pacific Ramp to 71st Ave and including connecting streets on Pfaaffe and 79th Ave. The project consists of approximately 7,200 LF of 8-inch and 6-inch piping being upgraded to 12-inch, and 1,300 LF of 4-inch being upgraded to 8-inch.

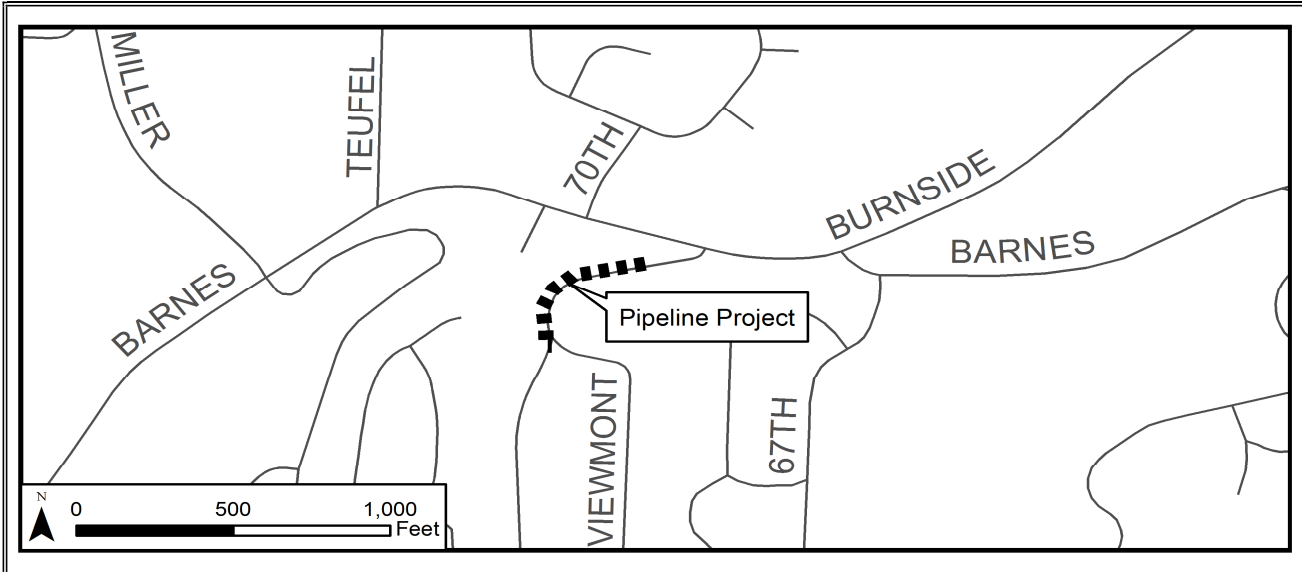
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.
Project Manager:	Zach Lemberg	Service Fees:	No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	33%	
Total Priority Score:	25	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	1,110,000	1,855,000	-	-	2,965,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-80 - Viewmont Dr south of Barnes



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

This project consists of replacing existing pipe at Viewmont Dr just south of Barnes Rd for fire flow only. This includes approximately 530 LF of 6-inch upgraded to 8-inch piping.

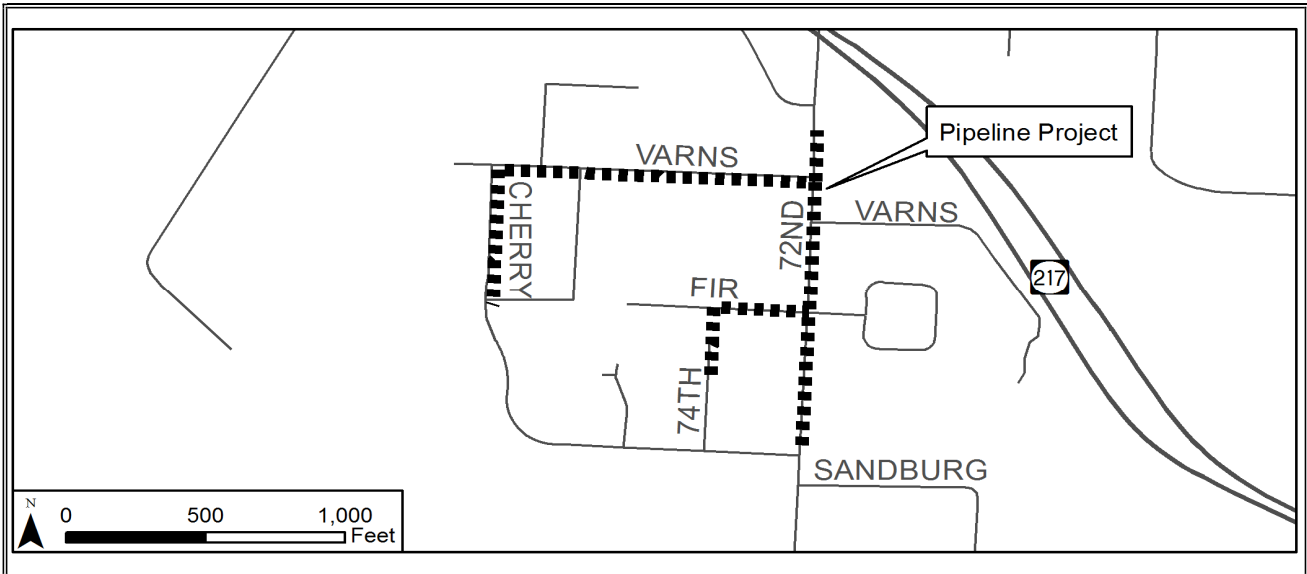
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.	
Project Manager:	Zach Lemberg	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	25	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	215,500	-	-	215,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-165 - 72nd Ave from Cherry Dr to Hunziker



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

This project consists of replacing existing piping on 72nd Ave from Cherry Dr to Hunziker Rd and side streets for fire flow only. This includes approximately 1,260 LF of 12-inch pipe, and 2,300 LF of 8-inch pipe.

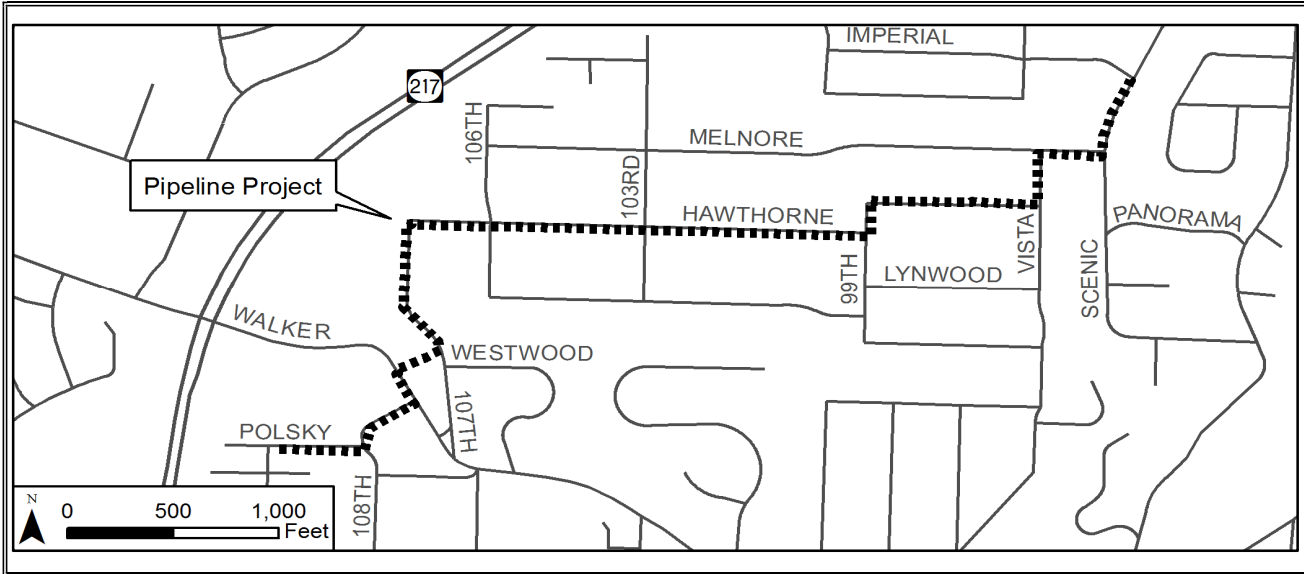
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.	
Project Manager:	Zach Lemberg	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	39%		
Total Priority Score:	25	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	-	297,000	1,405,000	1,702,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-99 - Polsky Rd / Hawthorne Ln / to Scenic Dr



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner. In addition, the existing piping was constructed in 1945 and is at the end of its useful life.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

This project addresses fire flow deficiencies as identified in the master plan and consists of replacing existing pipe at Polsky Rd/110th Ave to 107th Ave, north to Hawthorne Ln, east to SW Scenic Dr for fire flow only. This includes approximately 6,100 LF of 8 and 12-inch piping.

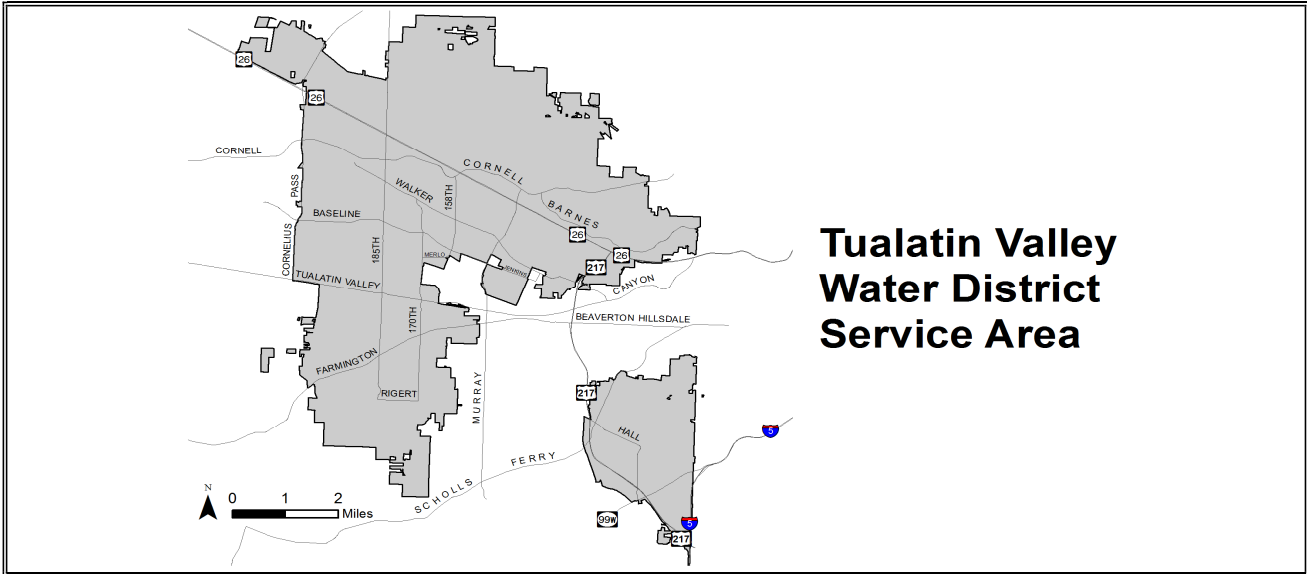
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.	
Project Manager:	Zach Lemberg	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	8%		
Total Priority Score:	25	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	-	356,500	2,900,000	3,256,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Future Fire Flow Improvements



**Tualatin Valley
 Water District
 Service Area**

KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	These improvements address fire flow deficiencies that have been identified through the Master Planning process.
2.	Project Urgency	These were prioritized during the Master Planning process and need to be completed in a timely manner.
3.	Growth / Future Demands	Fire flow projects will address both current and anticipated fire flow demands.

PROJECT DESCRIPTION

The Fire Flow Improvement Program includes recommended pipe improvements that are recommended to address specific fire flow criteria deficiencies. Appendix M of the District's Master Plan (Carollo 2018) provides a detailed list for these projects. The projects in this item are planned for completion in the mid-term time frame.

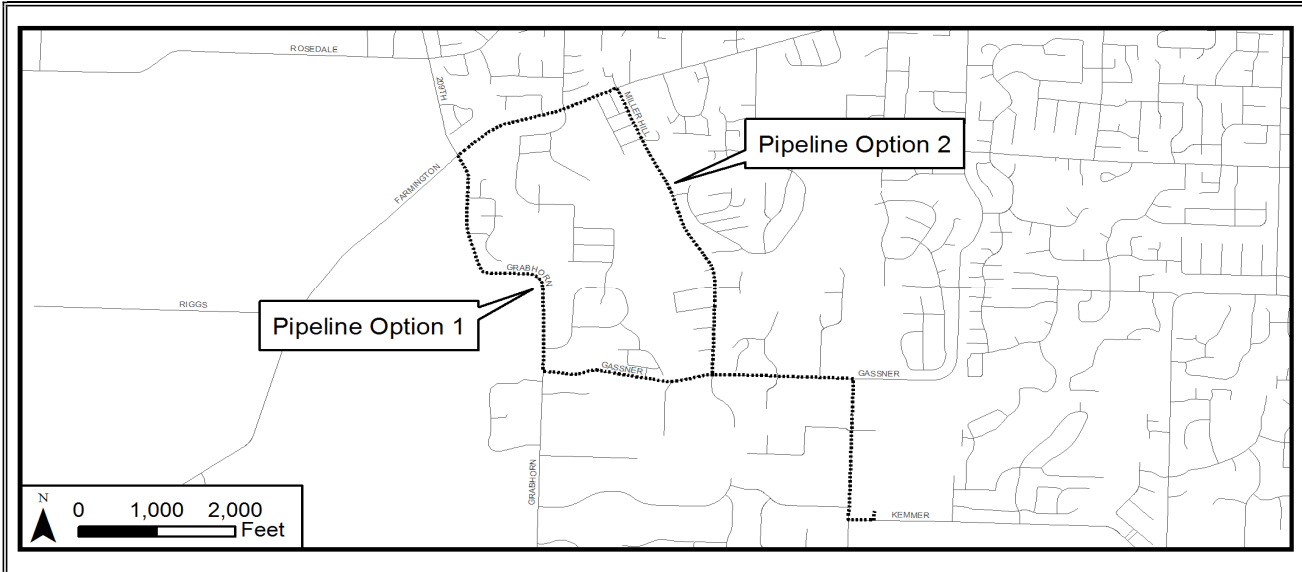
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	As improvements for deficiencies, operating cost impacts are not anticipated. For new pipes and extensions, the District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million in new pipe segments/extensions) for exercising valves and materials for valve maintenance. Marginal costs for mapping and locating new pipes may also be expected.
Project Manager:	Nick Augustus	Service Fees:	No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	Various	
Total Priority Score:	23	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	-	-	-	-	-	72,864,100

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: P-5 Farmington Rd BPS 16-inch Discharge Main



KEY DRIVERS FOR CIP PROJECT

1.	Reliability	Currently there is no redundant, seismically resilient supply to the Cooper Mountain area. This project addresses those concerns.
2.	Customer Criticality	This project will serve a large customer base.
3.	Project Urgency	This project is required to be done soon to allow for other critical maintenance activities for the Cooper Mountain area.

PROJECT DESCRIPTION

The Farmington Road BPS 16-inch Discharge line is essential to providing a reliable connection to the Cooper Mountain Reservoir from the Farmington Road BPS. This provides a redundant feed to the 800 pressure zone, and will allow the District to remove the 189th and Goyak pump stations from service while necessary repairs are made to the Goyak Reservoir and pump station. This could also replace the 12-inch line in 190th to the reservoir scheduled for long-term horizon- high velocity by 2036 (\$1,152,000 add).

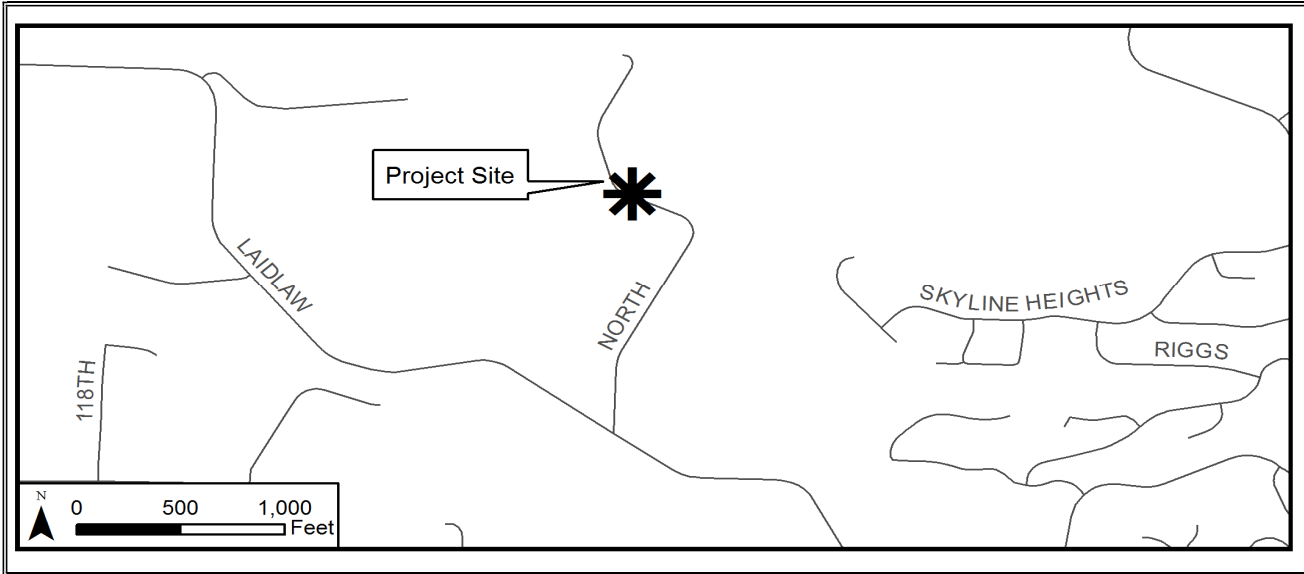
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	There will be added operating costs to maintain and operate the new waterline. The District estimates additional operating costs at approx. 0.06% of total capital cost (i.e., \$600 per \$1 million of capital). This is for exercising valves & materials for valve maintenance only; marginal costs for mapping and locating may also be expected.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	77%		
Total Priority Score:	28	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	414,000	4,275,000	-	-	-	-	4,689,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: North Road Pipeline Landslide Repair



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The project is currently being designed with construction anticipated in the coming months.
2.	Safety and Security	The landslide is immediately adjacent to TVWD's 24-inch waterline which serves the North Road Reservoir. This project is important to protect the waterline and homeowners which could be impacted by a failure of the waterline if the landslide were to continue.
3.	Cost Effectiveness / Community Benefit	This project is being done to avoid potential cost to replace the 24-inch waterline if the slope were to completely fail.

PROJECT DESCRIPTION

The existing slope on North Road has failed resulting in a landslide that is dangerously close to the District's existing large diameter pipeline that connects the North Road 3 MG Reservoir to the 820 pressure zone. This project will add a retaining wall to prevent the road from sliding further and damaging the pipe. Once the wall is constructed, the county will assume maintenance responsibilities for the wall.

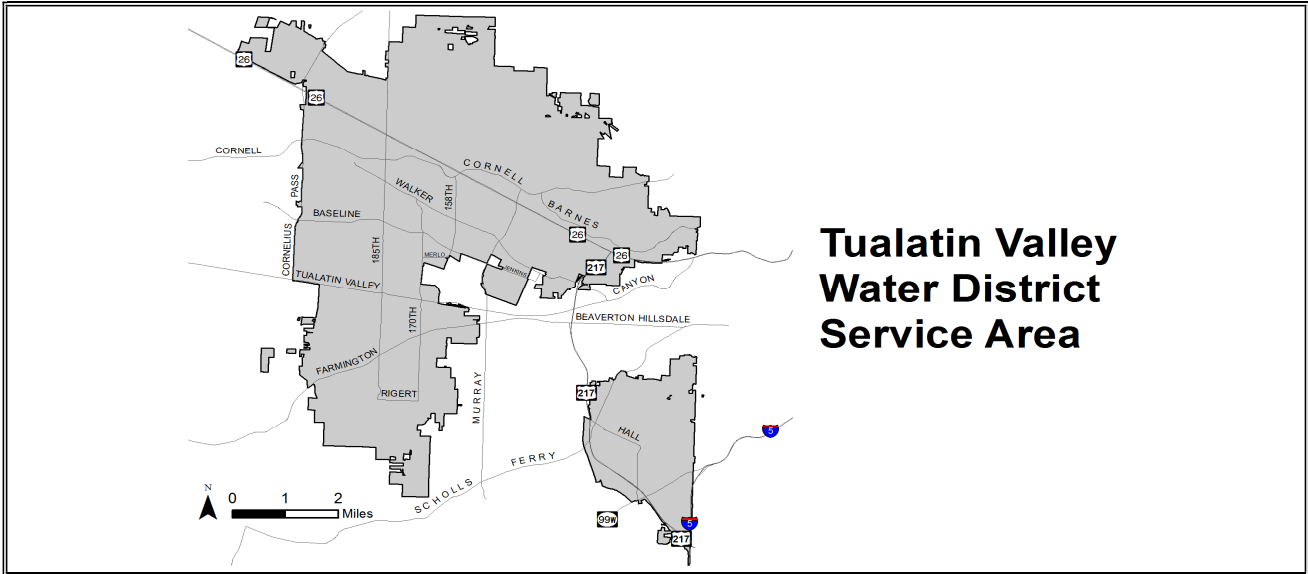
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No on-going operating cost. The new retaining wall is anticipated to be transferred to Multnomah County for ownership and maintenance.	
Project Manager:	Andrew Barrett	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	30	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	400,000	-	-	-	-	-	400,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Minor System Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Reliability	These minor projects will increase the reliability of the system.
2.	Asset Condition	As piping and other components of the water system age, they need to be replaced. These improvements will improve the longevity of the system.
3.	Project Urgency	As development or other assessments are done, these projects will need to be done on a short timeline.

PROJECT DESCRIPTION

Minor system improvements are necessary to maintain and improve the operations of the system as development and other projects occur. The projects in this line item could include installing new connections (jumpers), cutting in new valves, or other realignments of pipelines. This work has historically been done as part of General System Maintenance, however, where new infrastructure is being added, it will be tracked as a capital project.

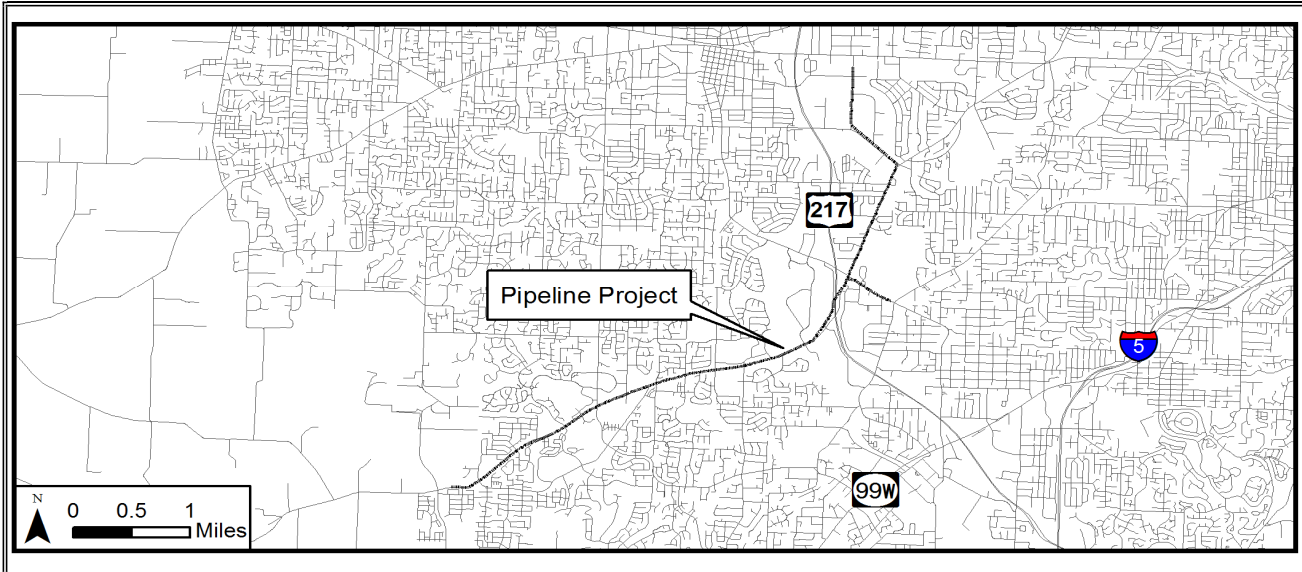
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	Operational costs are negligible with this line item, though there may be some slight decrease as aging components are replaced.	
Project Manager:	Pete Boone	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	27	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	103,500	107,000	111,000	115,000	119,000	123,000	678,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Metzger Pipeline East



KEY DRIVERS FOR CIP PROJECT

1.	Customer Criticality	This pipeline will deliver water to the entire District, and will serve as the main source of supply for both the Metzger and Wolf Creek areas.
2.	Project Urgency	The project must be complete prior to the WWSS coming online in 2026.
3.	Reliability	The new pipeline will be a reliable, seismically resilient source of supply.

PROJECT DESCRIPTION

This project referred to as MPE_1 consists of approximately 35,600 LF of 48-inch diameter welded steel pipeline and 2,400 LF of 24-inch diameter pipe to deliver water from the WWSS turnout at Roy Rogers Road and Scholls Ferry Road to both the Metzger and Wolf Creek areas of TVWD. This project is expected to be complete prior to the WWSS coming online.

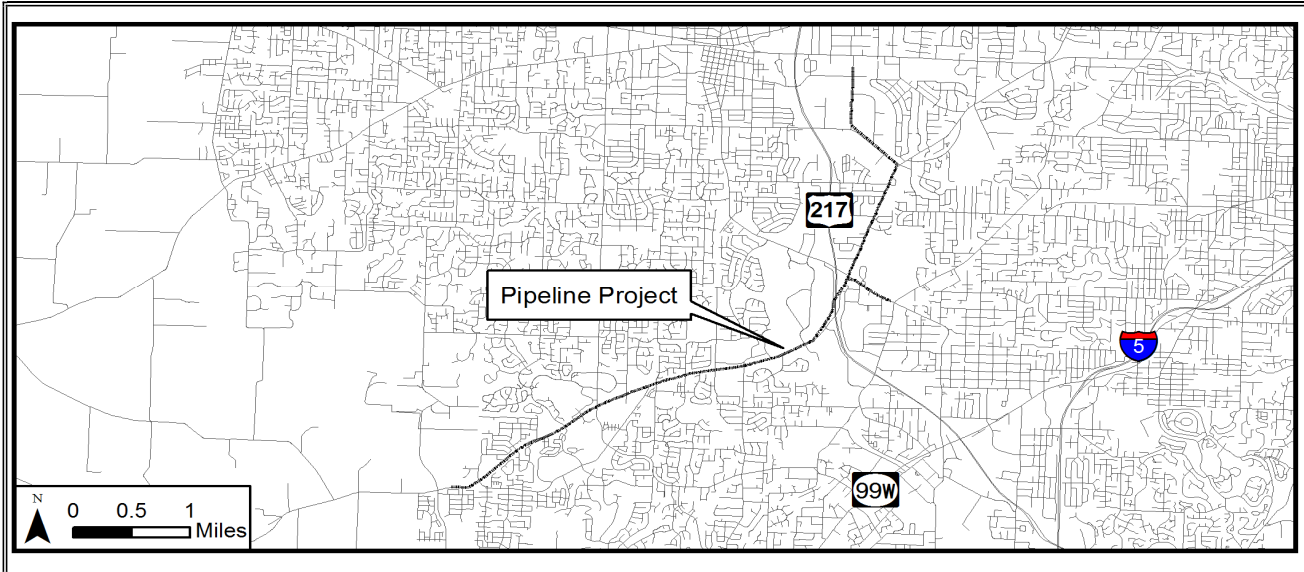
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	There will be added operating costs to maintain and operate the new waterline. These costs include mapping, locating, and operating valves associated with the new pipeline. As part of a WWSS operations cost forecast completed in 2018, District staff estimated that the annual cost of exercising valves plus materials for valve maintenance would be approximately \$45,000 in today's dollars.
Project Manager:	WWSP	Service Fees:	No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%	
Total Priority Score:	24	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	2,892,514	4,591,157	5,592,846	28,801,425	46,651,365	15,030,323	1,440,443	102,107,561	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Metzger Pipeline East Real Estate



KEY DRIVERS FOR CIP PROJECT

1.	Customer Criticality	This pipeline will deliver water to the entire District, and will serve as the main source of supply for both the Metzger and Wolf Creek areas.
2.	Project Urgency	The project must be complete prior to the WWSS coming online in 2026.
3.	Reliability	The new pipeline will be a reliable, seismically resilient source of supply.

PROJECT DESCRIPTION

The costs shown below represent the current projections for real estate related to Metzger Pipeline East.

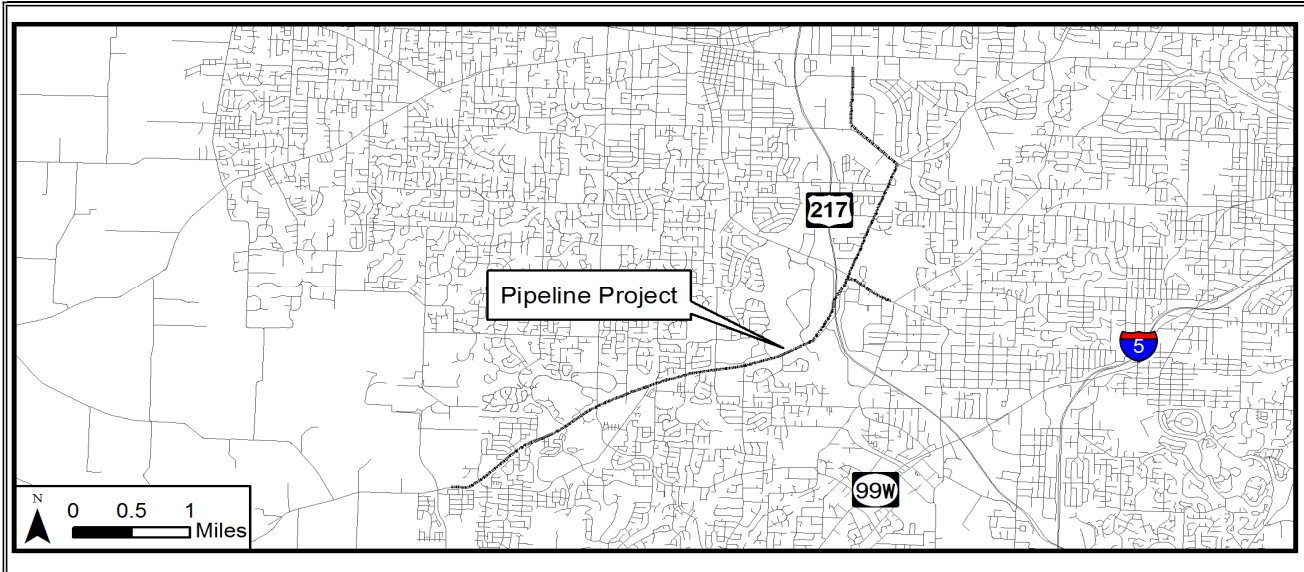
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	There is no anticipated change in operating costs associated with the land for the pipeline.	
Project Manager:	WWSP	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	24	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	623,140	429,970	-	-	-	-	1,053,110	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Metzger Pipeline East System-wide Costs



KEY DRIVERS FOR CIP PROJECT

1.	Customer Criticality	This pipeline will deliver water to the entire District, and will serve as the main source of supply for both the Metzger and Wolf Creek areas.
2.	Project Urgency	The project must be complete prior to the WWSS coming online in 2026.
3.	Reliability	The new pipeline will be a reliable, seismically resilient source of supply.

PROJECT DESCRIPTION

The costs shown below represent the current projections for WWSP system-wide costs related to Metzger Pipeline East.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	There is no anticipated change in operating costs associated with the system-wide costs required for the pipeline.	
Project Manager:	WWSP	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	24	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	1,460,136	1,478,384	1,441,661	1,417,245	1,506,140	1,534,404	8,837,971	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: PRV / Vault Replacements & Upgrades: Unidentified Projects



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Several of the District's Pressure Regulating Valves and associated vaults are at the end of their useful life and have experienced failures.
2.	Safety & Security	Operator safety will be improved by replacing or upgrading vaults and improving access.
3.	Customer Criticality	These facilities provide water to significant portions of the District's service area.

PROJECT DESCRIPTION

This line item will include replacements, upgrades, and safety improvements of pressure regulating valve vaults. Included in this line item is the 175th Ave. vault, which needs the piping replaced due to corrosion and the valves resized to fit the pressure zone's needs. Other representative projects include the Siler ridge and Oak street vaults, which also need new piping due to corrosion, and a way to keep the vaults dry so the District can get a longer life out of its valves.

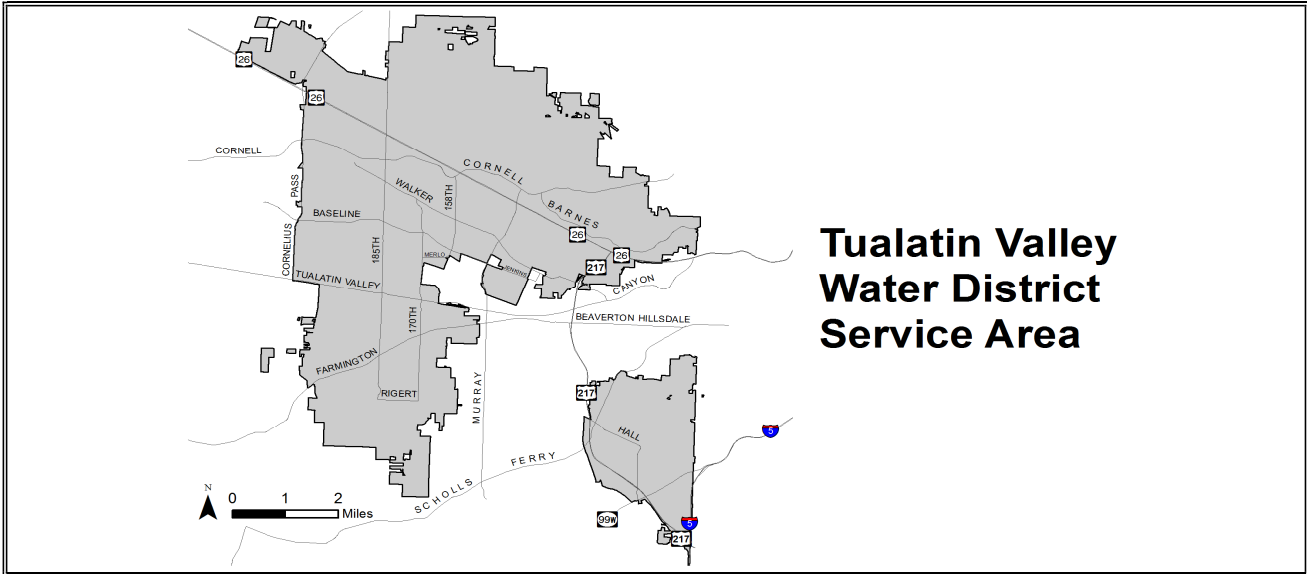
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates:	Yes	The addition of a PRV station will increase operating and maintenance costs nominally, but will also allow greater operational flexibility of the Miller Hill ASR.
Project Manager:	TBD	Service Fees:	No	
Work Performed By:	District Staff	SDC Improvemt. Fee Elg.:	0%	
Total Priority Score:	28	Partner Cost Percentage:	0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
400,000	113,875	221,500	229,000	237,500	245,500	254,000	263,000	1,450,500	9,382,500

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Transmission Mains CARV Rehabilitation



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	The district needs to maintain the existing CARVs and bring them up to current standards.
2.	Water Quality	These minor rehabilitation projects will address water quality concerns associated with the old CARVs.
3.	Safety and Security	There is a risk if the CARVs are not maintained, for there to be issues with the transmission pipelines along with potential water quality concerns.

PROJECT DESCRIPTION

This line item will include replacements, upgrades, and safety improvements of CARV valves and vaults. Rehabilitation and proper operation of the CARVs in the system is essential to maintaining pipelines, and avoiding damage to the pipelines.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	No material impact to operating expenses.	
Project Manager:	Pete Boone	Service Fees:	No		
Work Performed By:	District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	30	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	103,500	107,000	111,000	115,000	119,000	123,000	678,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Seismic Upgrades District Headquarters



KEY DRIVERS FOR CIP PROJECT

1.	Reliability	Upgrades facility to be more likely to withstand a seismic/security event.
2.	Asset Condition	Structural improvements to make the facility capable of providing long-term, reliable service. Opportunity projects such as painting, and carpet replacement will be done at the same time to capitalize on the project.
3.	Safety/Security	Structural improvements will improve safety/life safety/security for District Staff.

PROJECT DESCRIPTION

Planning, design, permitting, and construction of seismic, security, and work process improvements of multiple interior and/or exterior areas at the TVWD Headquarters. The improvements will increase life safety, security, and resilience. FY 2022 project will focus improvements for building seismic upgrade.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	No material impact. No expansion is planned and is already part of the routine maintenance performed by the Facility staff. No long term operating cost impact.	
Project Manager:	Matt Oglesby	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	18	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	-	1,185,000	-	-	-	1,185,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Engineering/Operations Space Reorganization



KEY DRIVERS FOR CIP PROJECT

1.	Growth/Future Demands	Efficiently repurpose underutilized space to meet the growing demands.
2.	Cost Effectiveness / Community Benefit	By repurposing space this will postpone building expansions.
3.	Asset Condition	Opportunity projects such as painting, and carpet replacement will be done at the same time to capitalize on the project.

PROJECT DESCRIPTION

Planning, design, purchasing and construction/remodel of multiple interior areas at the District Headquarters. Example areas: Engineering, Customer Service, and Operations. These areas need to be rearranged to increase productivity by consolidating work groups and maximize existing space to accommodate future needs. Included in the scope are opportunity projects like lighting, painting, carpet replacement, and workspace furnishing to be done at the same time. Work anticipated in FY 2021 includes space modifications necessary to finalize Engineering and Operations Dept re-organization.

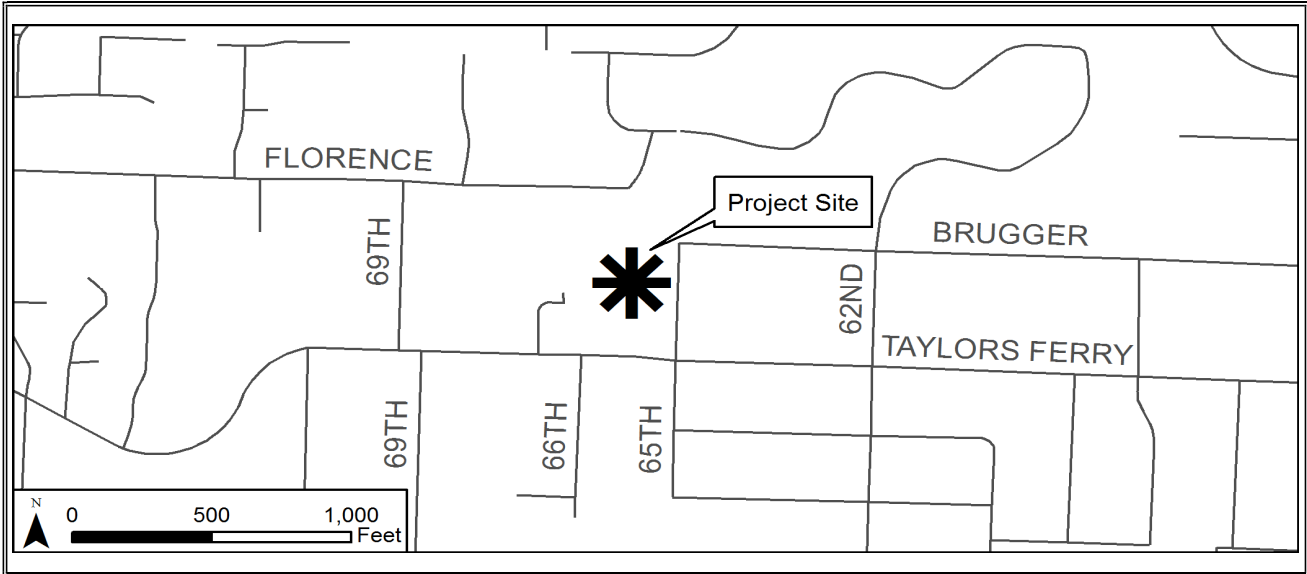
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	No material impact. No expansion is planned and is already part of the routine maintenance performed by the Facility staff. No long term operating cost impact.	
Project Manager:	Collin Fleming	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	17	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	165,500	139,500	-	-	-	-	305,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Headquarters Lobby Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Safety and Security	Lobby safety and security are essential to the customer service operations at TVWD.
2.	Project Urgency	The District is utilizing a consultant for the planning and design work for this project. The consultant will provide improvement recommendations to District staff.
3.	Asset Condition	The front lobby needs to be upgraded to meet the safety and security needs of the Customer Service Department. The flag poles will need to be replaced in order to comply with state law requirements.

PROJECT DESCRIPTION

The District has identified the customer lobby as an area that needs to be retrofitted with improvements in order to increase safety and security. This project includes planning, design, permitting, and construction/remodel to meet District objectives. This project will also include the addition of flag poles to meet state law; the passage of HB2892 in 2015 requires that the National League of Families' POW/MIA flag be flown along with the United States flag and the Oregon State flag upon or near public buildings that have existing flagpoles, which accommodate the proper display of three flags simultaneously.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	No material impact. No expansion is planned and is already part of the routine maintenance performed by the Facility staff. No long term operating cost impact.	
Project Manager:	Collin Fleming	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	17	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	155,500	-	-	-	-	-	155,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Headquarters Yard Modifications



KEY DRIVERS FOR CIP PROJECT

1.	Growth/Future Demands	Expanding covered storage area to increase the life of multiple assets such as fleet, inventory, and tools/equipment.
2.	Safety & Security	Increase the safety of pedestrians and vehicle traffic by making dedicated walking and driving paths. Possibly add an additional entry/exit for employees in the south parking lot.
3.	Reliability	Creating more storage by adding racking and additional covered areas will increase the amount of inventory we can store to be able to respond quicker to emergency situations.

PROJECT DESCRIPTION

Planning, design, permitting, and construction of multiple improvement projects to increase pedestrian/vehicle flow, storage, and covered parking for TVWD fleet. Evaluate and study an additional entry/exit from south parking lot to Merlo Rd.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	Small maintenance impact due to expanded building footprint. Some impact of utilities due to increase in enclosed and heated building. Building will have a low maintenance requirement on the Facility staff due to space being unoccupied.	
Project Manager:	Matt Oglesby	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	15	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	289,000	-	-	-	-	289,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Safety and Security Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Many of the safety and security hardware is at or near its end of life and is counted on to work daily. Replacing/upgrading the systems will make TVWD better equipped to be able to expand in the future.
2.	Safety & Security	Facility safety and security are essential to the operations at TVWD and these systems are critical for that to happen. The safety railing is needed to meet OSHA codes.
3.	Cost Effectiveness	These systems are more cost effective if replaced before the end of life. Many systems would need to be replaced ASAP if they failed which would be done at a premium cost.

PROJECT DESCRIPTION

Planning, design, purchasing, and installation of critical safety and security hardware. Safety railing needs to be added to many areas on the roof to protect staff from fall hazards per OHSA. The electronic security equipment is in need of replacement due to equipment being at the end of its life. The new equipment and software may be easily expanded in the future. Examples: Alarm Panel Replacement, CyberLock Phase 2, modernization of the Access Control System, Fire Panel, Security Cameras.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	Operating cost should decrease due to the new hardware taking less maintenance and time for reprogramming. Less vendor involvement is anticipated. Safety Improvement: Staff will not have to tie off when on the roof to do maintenance activities which will save them time.	
Project Manager:	Collin Fleming	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	17	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	207,000	214,000	55,400	-	-	-	476,400	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Board Room Audio Visual Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	The AV equipment continues to have hardware and software issues that cannot be remedied.
2.	Cost Effectiveness / Community Benefit	Time would be saved with each meeting setup due to the multiple issues that arise with each setup. As the meeting frequency increases the cost savings are amplified.
3.	Reliability	The new equipment would be more reliable and easily scalable to meet the ever growing needs of the Board Room.

PROJECT DESCRIPTION

Replacement of existing audio and visual equipment in the Board Room is necessary due to issues that cannot be fixed. Project includes planning, design, purchase and installation of audio and visual equipment with the option to live stream/record meetings. The existing equipment is beyond its useful life and is increasingly costlier to maintain and set up for various meeting configurations (e.g., TVWD Board, WIF, WWSS, Joint agency boards). The new system would streamline the setup and save time. This project will be closely coordinated with potential building seismic upgrades.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	Operating cost would decrease due to less maintenance need by the vendor (which has increased the last couple years) as well as less labor used to setup and troubleshoot issues.	
Project Manager:	Collin Fleming	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	13	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	186,500	-	-	-	-	-	186,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: HVAC Replacements



KEY DRIVERS FOR CIP PROJECT

1.	Reliability	The server room backup HVAC unit is needed due to the criticality of that room and a redundant system relieves some of the risk of overheating.
2.	Aging Infrastructure	Proactively prioritizing an HVAC replacement program. Many of the HVAC units are approaching the end of their lives. One unit dates to the original building, making it hard to find repair parts.
3.	Cost Effectiveness / Community Benefit	Systematically replacing the units will be more cost effective than replacing them when they stop working. Some units will need to have duct work replaced which cannot be done in an emergency.

PROJECT DESCRIPTION

Many of the HVAC units are in need of replacing due to the units reaching their life expectancy. This project would include the addition of a backup HVAC unit for the server room and a systematic replacement of the rest of the units. Replacement of HVAC units will be coordinated with any building improvements for seismic resiliency.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	Operating cost should decrease due to more efficient units which will decrease energy consumption. Less labor will be needed by staff in managing the repairs by vendors.	
Project Manager:	Collin Fleming	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	14	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	31,100	160,500	83,200	-	-	-	274,800	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Headquarters Lighting Improvements



KEY DRIVERS FOR CIP PROJECT

1.	Cost Effectiveness / Community Benefit	Partnering with the Energy Trust of Oregon, the new fixtures would decrease energy usage as well as maintenance by the Facilities staff. Re-lamping frequency would decrease due to the LED lights lasting 15-20 years instead of 4-5 years.
2.	Asset Condition	The light panel is outdated and needs to be replaced due to unreliability issues.
3.	Safety and Security	The outdoor lighting is inadequate for security light. The existing lighting is not instant on which is needed for a high security campus. Also, the light panel does not work properly with the motion sensors for the safety of our personnel.

PROJECT DESCRIPTION

Multiple interior and exterior lights have been found to have inadequate light for safety and security. This project would lay out a plan to replace light fixtures instead of re-lamping, which happens on a four-year rotation for proper illumination and maintenance issues. The light panels that are connected to the security system have become unreliable and need to be replaced. Facilities would work with the Energy Trust of Oregon to increase efficiency, improve light quality, increase security, and maximize rebates that are offered.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	Operating cost would decrease from more energy efficient system. Decreased replacement frequency results in lowered labor cost.	
Project Manager:	Matt Oglesby	Service Fees:	No		
Work Performed By:	Contract & District Staff	SDC Improvemnt. Fee Elg.:	0%		
Total Priority Score:	16	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	20,700	32,100	33,300	-	-	-	86,100	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 FLEET REPLACEMENT SCHEDULE

GL 11-40-01-8831

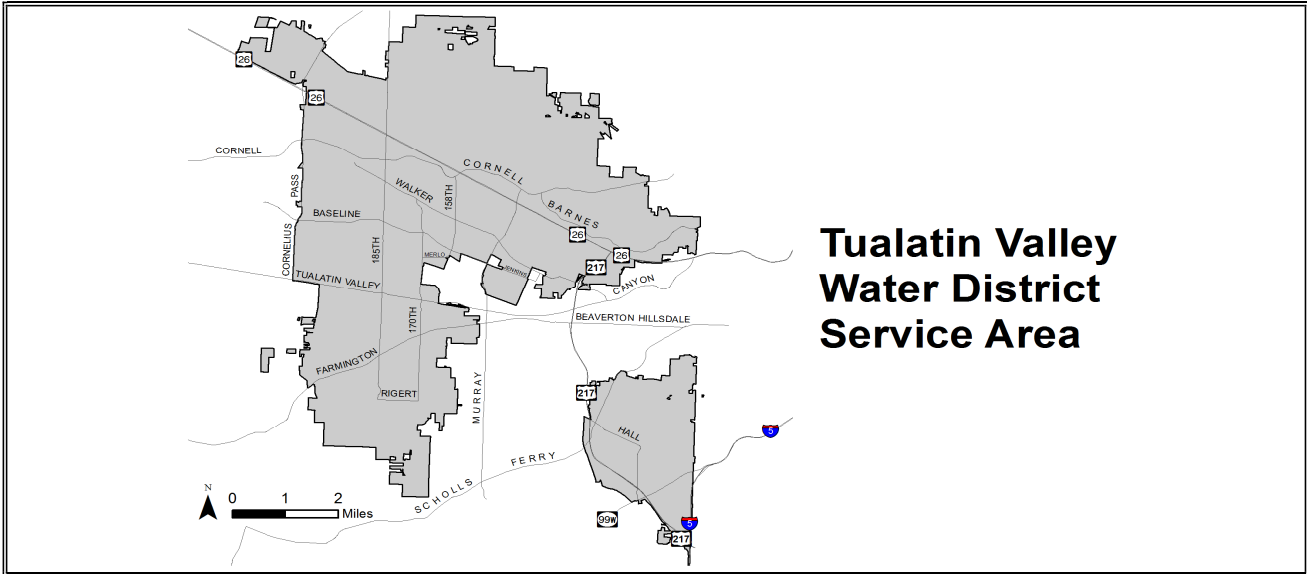
2019-2021 Fleet Costs

	FY 19-20	FY 20-21	Total
2019-2021 Fleet Costs	\$ 651,000	\$ 595,000	\$ 1,246,000

DIVISION OR PROGRAM	ITEM	QTY	DESCRIPTIONS AND RATIONALE	TOTAL AMT	EST. MONTH NEEDED	EST. YEAR NEEDED
ENG-Engineering	Compact PU Unit 6	1	Age Replacement	\$ 36,000	2	2021
FCS- Meter Reader	Upgrade Meter Reading Vehicle Fleet	2	Age Replacement	\$ 74,000	12	2020
System Ops-Locators	Locating Cargo Minivan Unit 76	1	Age Replacement	\$ 35,000	7	2020
Water Ops-Const/Maint	Dump Truck, Unit 45	1	Age Replacement	\$ 220,000	6	2020
Water Ops-Const/Maint Carry over for 17-19	Dump Truck, Unit 43	1	Age Replacement	\$ 196,000	10	2019
DISTRICT - Shared	Potable Hose Trailer	2	New Trailer	\$ 25,000	10	2020
Water Ops-Const/Maint	Back Hoe and Compactor Unit 119	1	Age Replacement	\$ 160,000	9	2020
Water Ops-Const/Maint	Track Hoe Unit 150	1	Age Replacement	\$ 135,000	2	2021
System Ops	One Ton Service truck, Unit 80	1	Age Replacement	\$ 85,000	5	2021
DISTRICT - Shared	Passenger Vehicle, Unit 19	1	Age Replacement	\$ 35,000	5	2020
Water Ops-Const/Maint	Full Size Pickup Unit 148	1	Age Replacement	\$ 45,000	3	2021
DISTRICT - Shared	Passenger Vehicle, Unit 71	1	Age Replacement	\$ 40,000	10	2019
Water Ops-Const/Maint	Heavy Trailer Unit 220 and 224	2	Age Replacement	\$ 30,000	9	2019
System Ops	1 1/2 Ton Service truck, Unit 82	1	Age Replacement	\$ 130,000	7	2019

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Customer Information System



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	The District's legacy utility billing system is outdated, requires significant internal support and lacks functionality necessary to meet District objectives such as improving the customer experience.
2.	Customer Criticality	The Customer Information System (CIS) impacts District customers as well as billing partners. Newer CIS technologies are expected to address customer satisfaction by expanding secure customer self-service options.
3.	Reliability	The CIS is a mission-critical system that must be reliable and flexible in order to meet current and future District needs, including potential affordability measures. The new CIS is expected to provide improved system reliability as compared to the legacy utility billing system.

PROJECT DESCRIPTION

This project, a joint venture with billing partner Clean Water Services, focuses on selecting and implementing a commercial Customer Information System (CIS) to replace the District's legacy utility billing system. The District and Clean Water Services will share costs for the project. CIS project phases will be: selection; implementation; and beginning ongoing operations under the new system. The CIS project timeline through cutover and new system stabilization is anticipated to take approximately three years. The District will continue to refine project cost estimates and staffing requirements throughout the project cycles and provide ongoing reporting to the Board of Commissioners and management. The project will involve extensive customer communications prior to cutover.

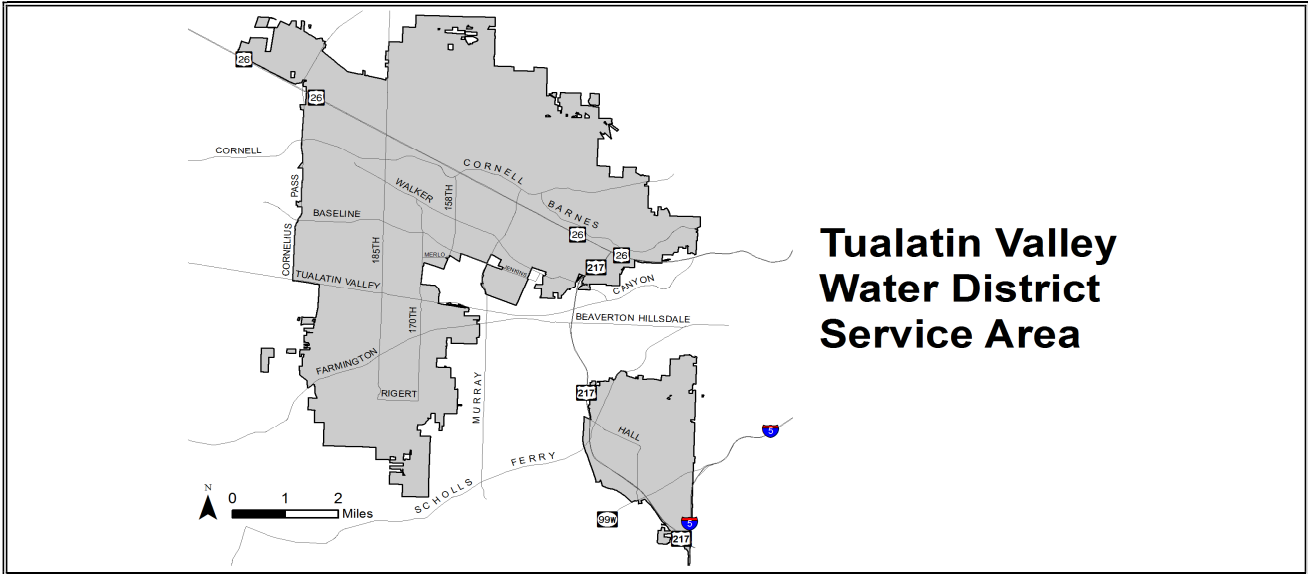
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT
Project Category:	Information Technology	Water Rates:	Yes	It is anticipated that internal IT support will be reduced. Annual software licensing and maintenance costs will be incurred. Expanded on-line and mobile payment options may reduce costs for bill printing/presentation, but increase merchant and bank transactions fees. \$105,000 will be incurred for one-time training and software needs in FY2021 and FY2022, with \$50,000 in FY2022 (2021-2023 biennium).
Project Manager:	Andrew Carlstrom	Service Fees:	No	
Work Performed By:	Contract & District Staff	SDC Improvemt. Fee Elg.:	0%	
Total Priority Score:	26	Partner Cost Percentage:	50%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
3,574,700	10,000	3,110,000	5,070,000	1,225,000	-	-	-	9,405,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Service Installations



KEY DRIVERS FOR CIP PROJECT

1.	Growth/Future Demands	Serves new customers as they are added to the District's service area, and replaces aging meters and services as-needed to provide reliable service.
2.	Reliability	Improvements required to maintain reliable water service to customers.
3.	Customer Criticality	Enhances safety by improving level of service for customers and providing safe, reliable drinking water.

PROJECT DESCRIPTION

This category of work involves the various ongoing installation and replacement of service installations and large meters by District crews in support of new development and customer base growth, and to replace aging infrastructure on an as-needed basis. The service and large meter installation work is completed by TWWD Field Operations. Costs for new service installations are paid by separate development fees.

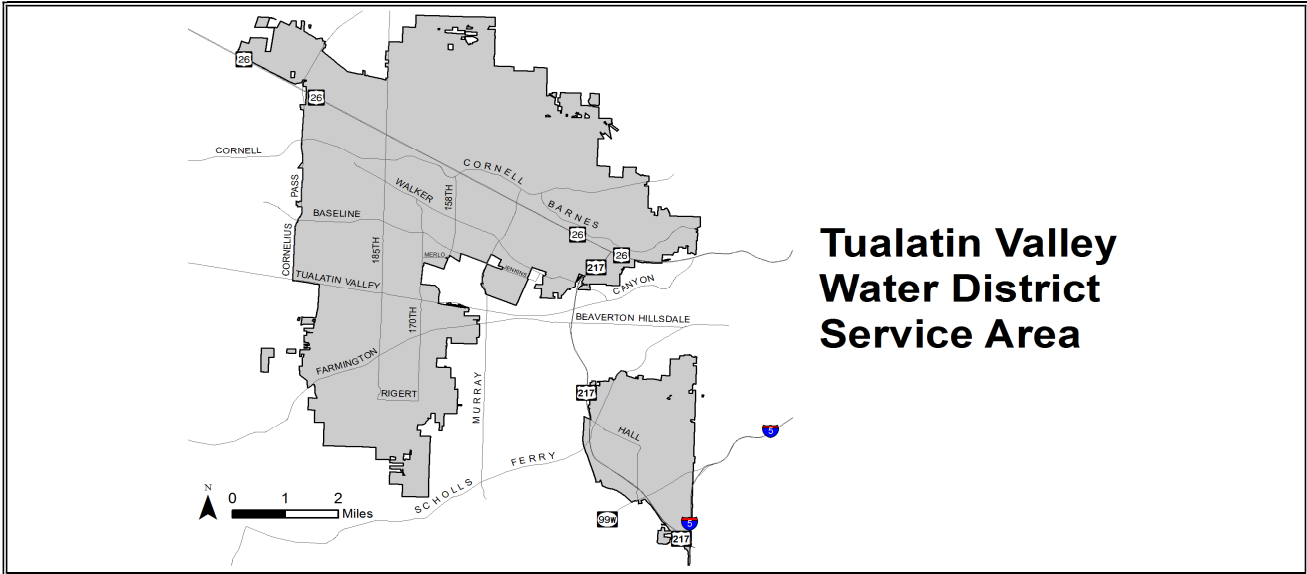
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Meters & Services	Water Rates: Yes Service Fees: Yes	Meter and service maintenance is an ongoing and routine District activity. Meters and services for new customers are recovered through separate fees.
Project Manager:	Field Operations	SDC Improvemt. Fee Elg.: 0%	
Work Performed By:	District Staff	Partner Cost Percentage: 0%	
Total Priority Score:	21		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
2,455,700	2,455,700	1,335,000	1,490,000	1,540,000	1,595,000	1,650,000	1,710,000	9,320,000	56,560,000

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Customer Service: Meter Installations



KEY DRIVERS FOR CIP PROJECT

1.	Growth/Future Demands	Serves new customers as they are added to the District's service area, and replacement of aging meters and services as needed to provide reliable service.
2.	Reliability	Improvements required to maintain reliable water service to customers.
3.	Customer Criticality	Enhances safety by improving level of service for customers and providing safe, reliable drinking water.

PROJECT DESCRIPTION

This category of work involves the various ongoing installation and replacement primarily residential meters and services by District crews in support of new development and customer base growth, and to replace aging infrastructure on an as needed basis. The meter installation work is completed by TVWD Field Customer Service. Costs for new meters installations are paid by separate development fees.

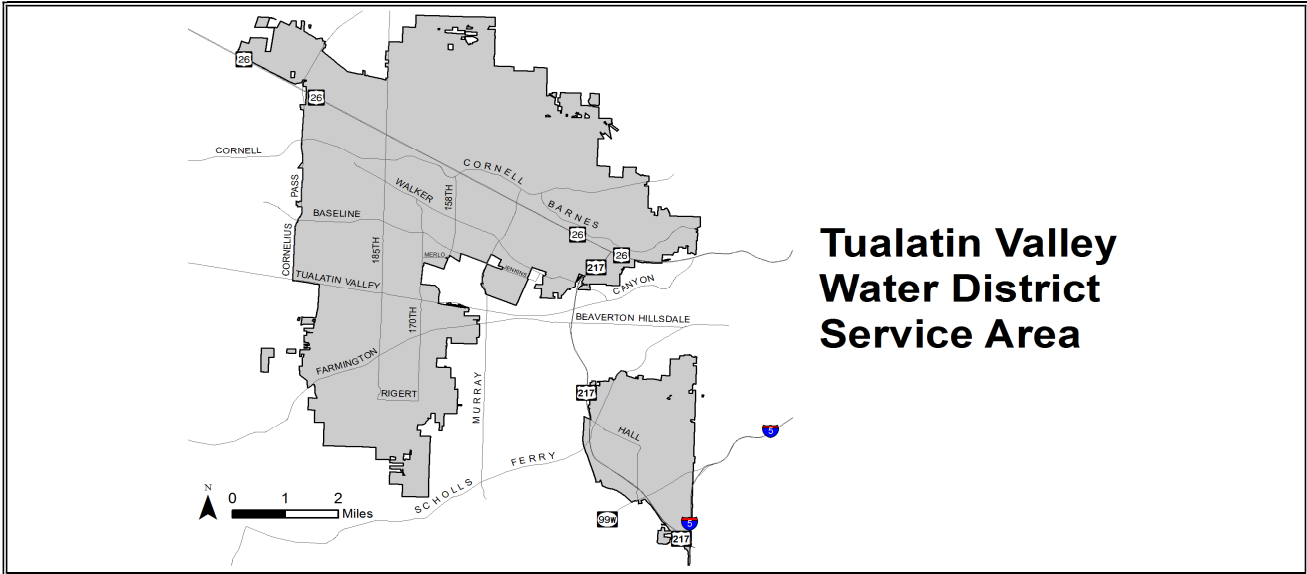
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Meters & Services	Water Rates: Yes	Meter and service maintenance is an ongoing and routine District activity. Meters and services for new customers are recovered through separate fees.
Project Manager:	Field Customer Service	Service Fees: Yes	
Work Performed By:	District Staff	SDC Improvemt. Fee Elg.: 0%	
Total Priority Score:	21	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
487,366	336,062	238,500	270,500	-	-	-	-	509,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Automated Meter Reading Program (AMR)



Tualatin Valley Water District Service Area

KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Replacement of aging infrastructure to provide new resilient appurtenances capable of providing long-term, reliable service.
2.	Reliability	Improvements required to maintain reliable and resilient facilities.
3.	Cost Effectiveness / Community Benefit	Provides new AMR meters to improve cost-effectiveness of long term operations to the District's customers.

PROJECT DESCRIPTION

This program is being postponed until the District considers and develops a plan based on the results of the upcoming AMR business case analysis.

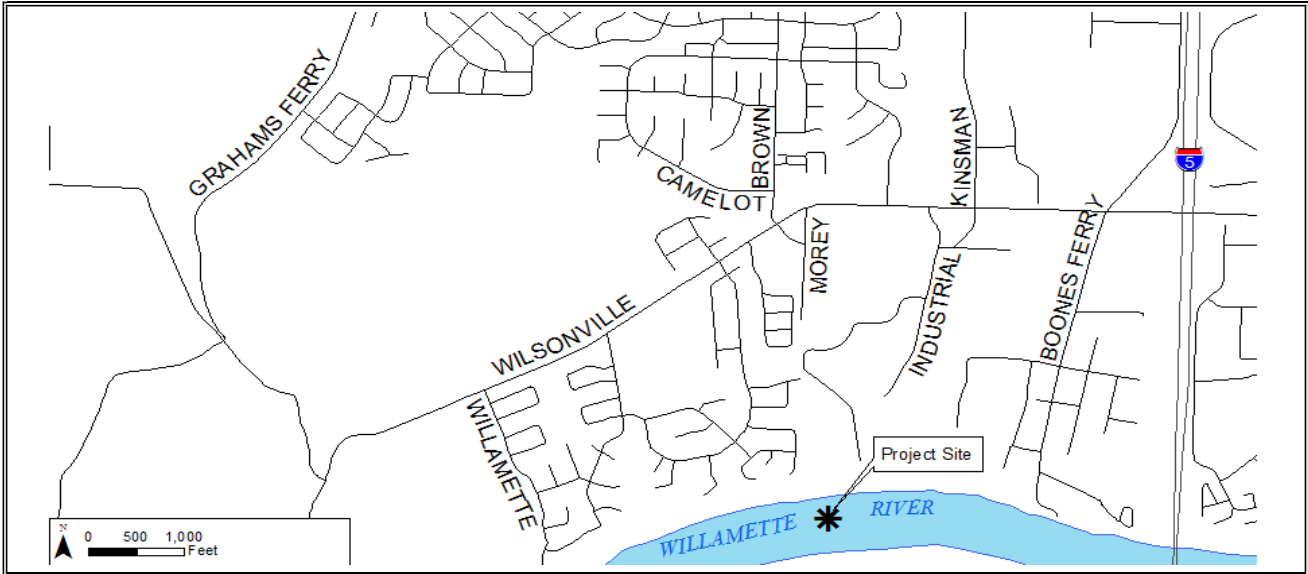
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Meters & Services	Water Rates:	Yes	AMR meters result in decreased labor costs over time. Each AMR battery will need to be replaced about every twelve years. The District will budget for these replacements in the future as needed.	
Project Manager:	Field Customer Service	Service Fees:	No		
Work Performed By:	District Staff	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	TBD	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	415,000	-	-	-	-	-	-	-	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Joint Venture: WIF



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	First piece of the Willamette Water Supply System (WWSS), which will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Program level costs associated with the Willamette Intake Facilities (WIF) Commission, including new fish screens, air burst system improvements, and seismic improvements to the expanded intake within the raw water facility at the Willamette River Water Treatment Plant (WRWTP). For more details on the WWSS raw water facility project (RWF 1.0), please see page F-2 in your budget workbook.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Joint Venture	Water Rates: Yes	The water intake improvements are either replacements or static in nature, and should not drive material net impacts on future operating costs. For details on the estimated cost impact of the future raw water facility (RWF 1.0), please see page F-2 in your budget workbook.
Project Manager:	David Kraska	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 61%	
Total Priority Score:	28	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	350,765	3,271,701	2,128,537	-	-	-	5,751,002	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: Joint Venture: WWSS



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	WWSS will be a new long-term supply source to meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Program level costs associated with supporting the development and implementation of the Willamette Water Supply System (WWSS), including design and construction of the WWSS projects, costs for real estate and easements, permitting and mitigation, legal expenses, program management services, and management reserves. For more details on individual WWSS projects, please see pages F-1 through F-12 in your budget workbook.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

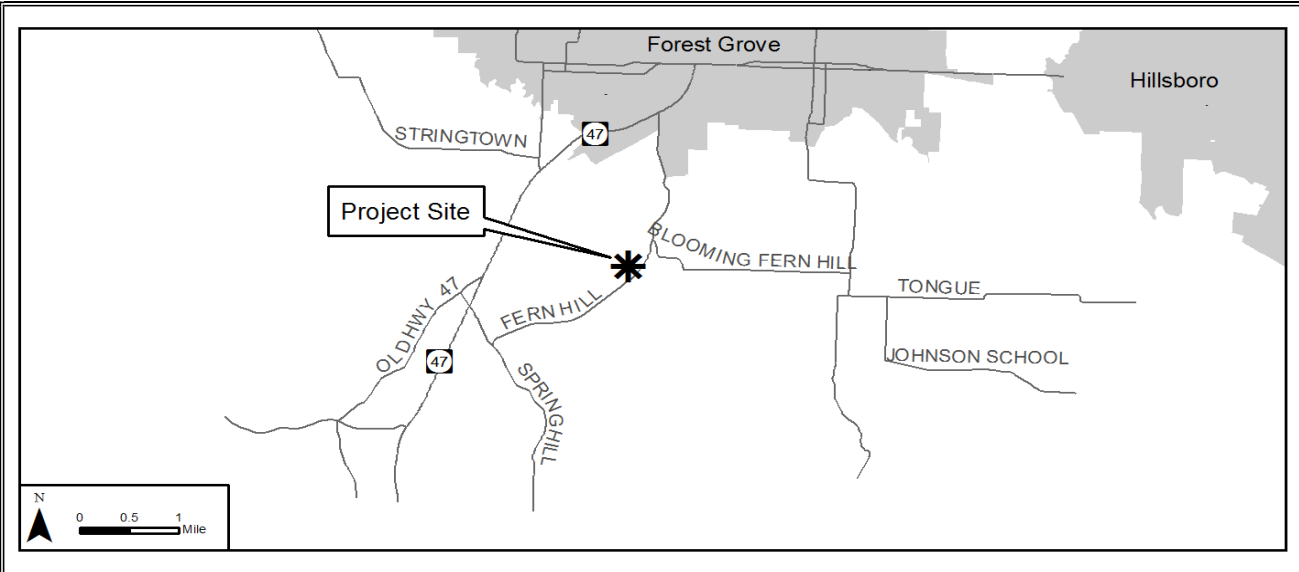
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Joint Venture	Water Rates:	Yes	Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. The District is projecting net savings of approximately \$5 million in FY2027 (i.e., a 36% decrease from FY2026), after shifting from 100% purchased water costs to a new balance of JWC water purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	David Kraska	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	28	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future (FY 26 & FY 27)
-	-	47,348,659	62,432,264	79,896,470	148,166,181	117,680,516	48,006,928	503,531,018	36,982,798

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC WTP improvements to existing 75 MGD



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	This project is on-going and nearing completion. The budget accounts for items associated with final completion of the project.
2.	Growth/Future Demands	Plant improvements increase production to meet growing demands cost effectively.
3.	Reliability	Improvements required to maintain reliable supply.

PROJECT DESCRIPTION

This project will return the Joint Water Commission (JWC) Water Treatment Plant to its rated capacity of 75 MGD. Each JWC partner will have a capacity share responsibility for this. Also included are design life safety improvements as recommended in the 2008 seismic study and further prioritized by Carolo in the Seismic CIP program, and a facility plan for the proposed WTP build-out based on the Willamette Supply decision.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

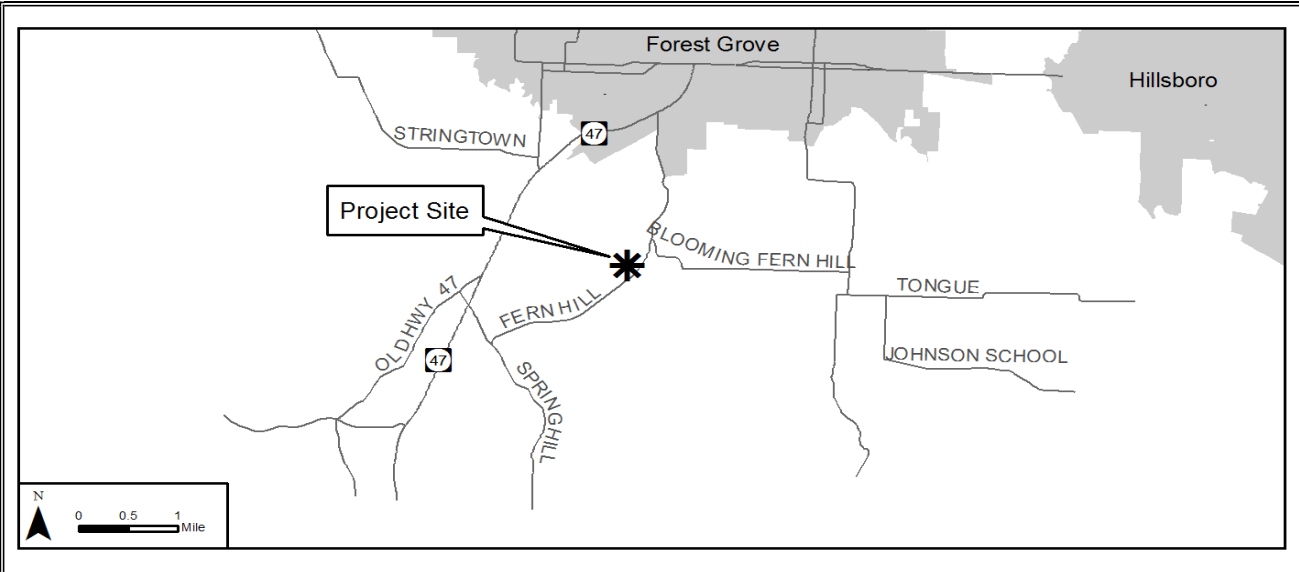
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	JWC	Water Rates:	Yes	No material impact anticipated with the exception of routine operational and maintenance costs. Efficiencies gained in plant operations and seismic safety may mitigate future capital replacement and maintenance costs.	
Project Manager:	Pete Boone	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
1,965,751	1,965,751	303,500	-	-	-	-	-	303,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC WTP improvements to increase to 85 MGD



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	This project is on-going and nearing completion. The budget accounts for items associated with final completion of the project.
2.	Growth/Future Demands	Plant expansion increases production to meet growing demands cost effectively.
3.	Reliability	Improvements required to maintain reliable supply.

PROJECT DESCRIPTION

This is a continuation from current fiscal year. The key component of this project is to expand the capacity from 75 to 85 MGD. Hillsboro will take 8 MGD of this expansion and TVWD will take 2 MGD. The treatment plant expansion design was awarded to CH2M and started in the second half of FY 15-16. Slayden Construction was selected as the CM/GC contractor for the project. Package I WTP improvement started in February 2017. Package II construction started in November of 2017. The Expansion is expected to be complete in fall 2019.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

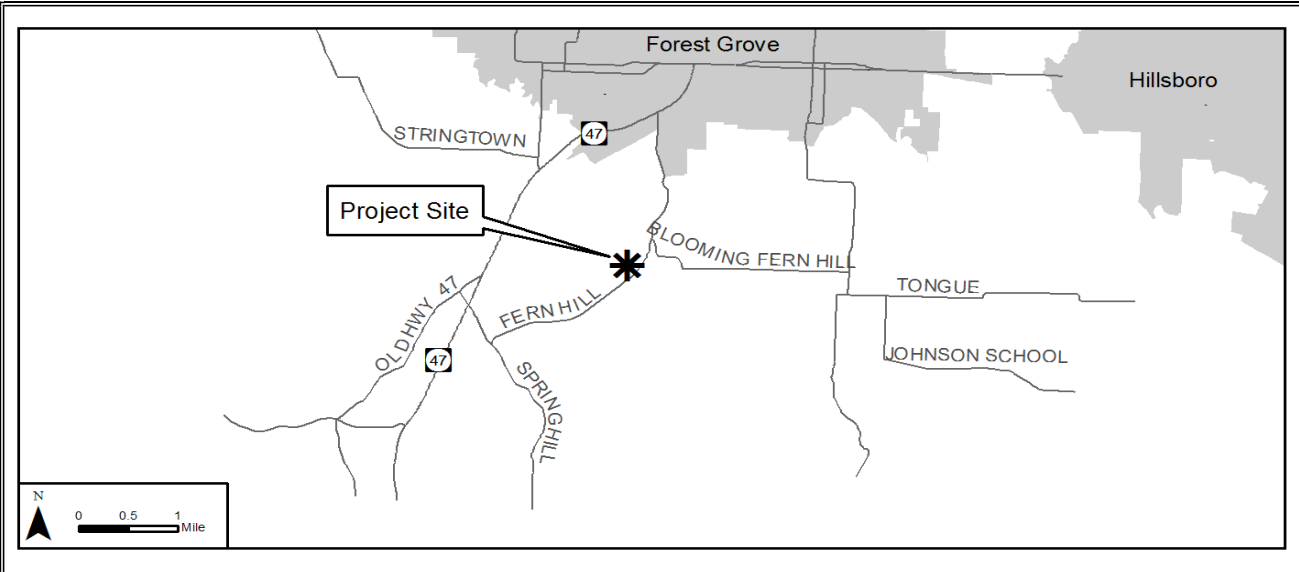
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	JWC	Water Rates:	Yes	A slight decrease in operating cost is anticipated since the District will no longer need to lease capacity.	
Project Manager:	Pete Boone	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemnt. Fee Elg.:	100%		
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
3,001,638	3,001,638	427,500	-	-	-	-	-	427,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Fern Hill Reservoir 1 Repair



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	The reservoir has concrete spalling around the interior perimeter of the tank and the roof has concrete cracking, exposed rebar, and poor drainage.
2.	Project Urgency	The reservoir is in need of repairs to address spalling around the interior perimeter of the tank and to prevent further cracking on the roof, protect exposed rebar, and fix poor drainage.
3.	Reliability	Improvements required to maintain reliable supply.

PROJECT DESCRIPTION

In June 2017, routine diving inspection of Fern Hill Reservoir #1 revealed concrete spalling around the interior perimeter of the tank. JWC contracted with OBEC Consulting Engineers to perform a full reservoir internal inspection ("boat float") and external inspection. Their report dated December 15, 2017 indicated that cosmetic repairs were required on the interior of the tank to address the spalling. In addition, OBEC identified that the exterior roof needs repairs to seal and prevent further existing concrete cracking, protect exposed rebar, and fix poor drainage. Estimates for the repairs (including engineering services and contingency) were provided by OBEC in a total of \$525,000. Design work will be performed in FY 18/19. Construction work will be performed in FY 19/20.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

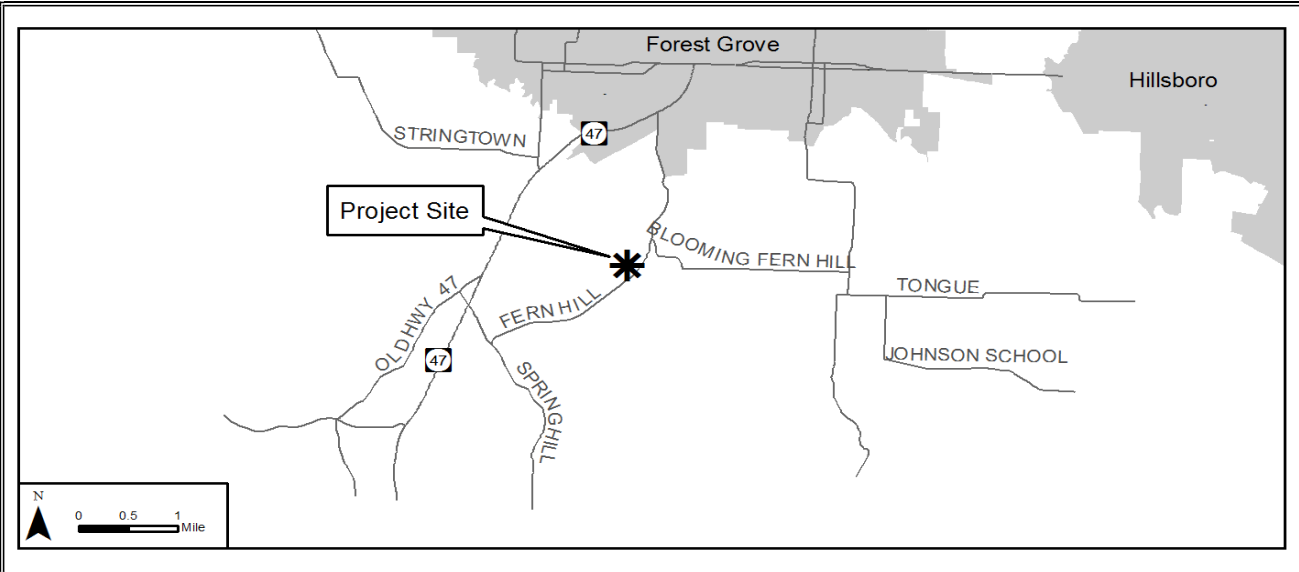
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	JWC	Water Rates:	Yes	No material impact anticipated.	
Project Manager:	TBD	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	100,000	-	-	-	-	-	100,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Misc. Capital Projects, Repairs, & Replacements



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Some pumps are from the 1970's, so they are unreliable, energy inefficient, and there are no spare parts available.
2.	Cost Effectiveness	In order to maximize savings in engineering and installation, the future replacement of two pumps was accelerated to be concurrent with the end-of-life replacement of two other pumps.
3.	Safety / Security	Some of these projects will repair facility roofs, while another will replace chemical storage buildings.

PROJECT DESCRIPTION

This collection of projects consists of minor capital repairs, replacements, updates, and unplanned miscellaneous expenses. Included are replacements of finished water and backwash pumps and motors, electrical assessments and improvements, a new FW 10 pump with a variable frequency drive, concrete in sedimentation basins (basins A, B, and C), roof repairs, replacement of the operations and chemical storage buildings, future annual capital repairs, and a master plan update in 2021. The JWC master plan was most recently amended in 2015.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

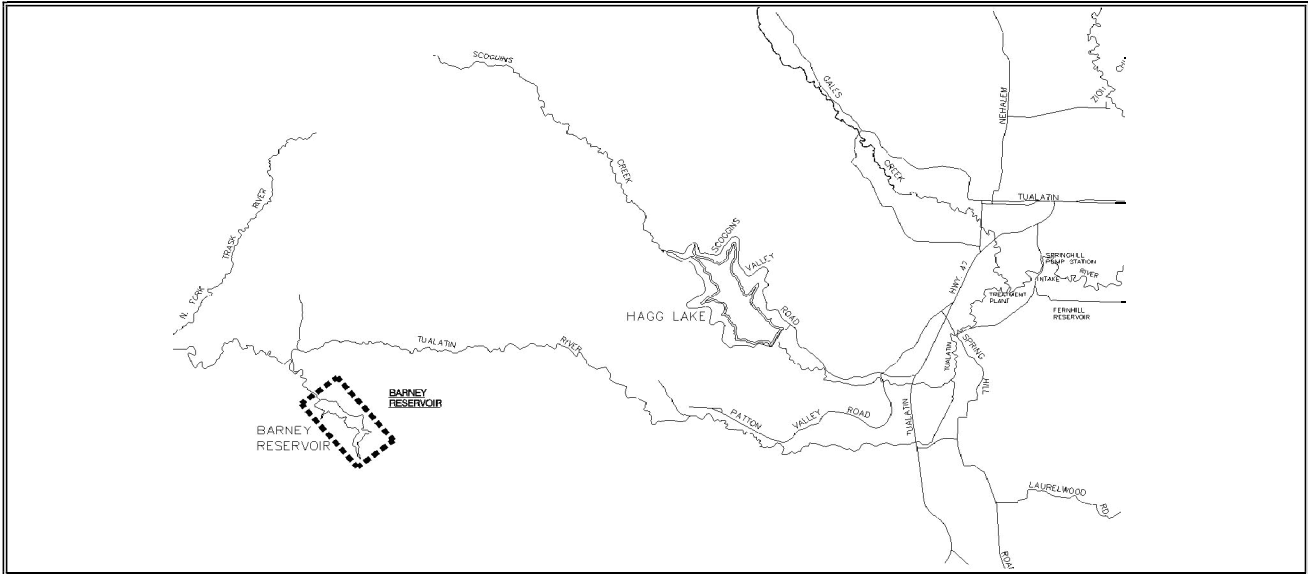
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	JWC	Water Rates:	Yes	Costs for JWC operations are passed through to JWC partners based on ownership shares and water purchases. Most of these capital projects are minor equipment upgrades and replacements, which will not have a significant operating cost impact.	
Project Manager:	TBD	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	213,000	310,500	312,000	176,000	243,000	251,500	1,506,000	10,513,500

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: BRJOC Capital Repair/Replacement



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Maintains supply for multiple water supply partners.
2.	Customer Criticality	Reserves funds to ensure continuity of service in the event of unanticipated maintenance or equipment repair needs.
3.	Reliability	Improvements required to maintain reliable supply.

PROJECT DESCRIPTION

This project funds a reserve for unanticipated capital expenses for the Barney Reservoir Joint Ownership Commission (BRJOC) partners. Reserve funds are allocated based on ownership shares of the reservoir facilities, of which the District is a 35% owner. Establishment of the reserve provides resources to the BRJOC in the event of unplanned capital expenditure needs. Use of the reserve requires approval by all BRJOC partners including the District.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%). The FY 19-20 amount includes the District's share of the flume fence project, budgeted at approximately \$175,000. The FY 19-20 budget also includes about 25% of a new server and software for water sampling (remainder covered by JWC and Hillsboro), and budget to cover about 30% of a new vehicle for water sampling.

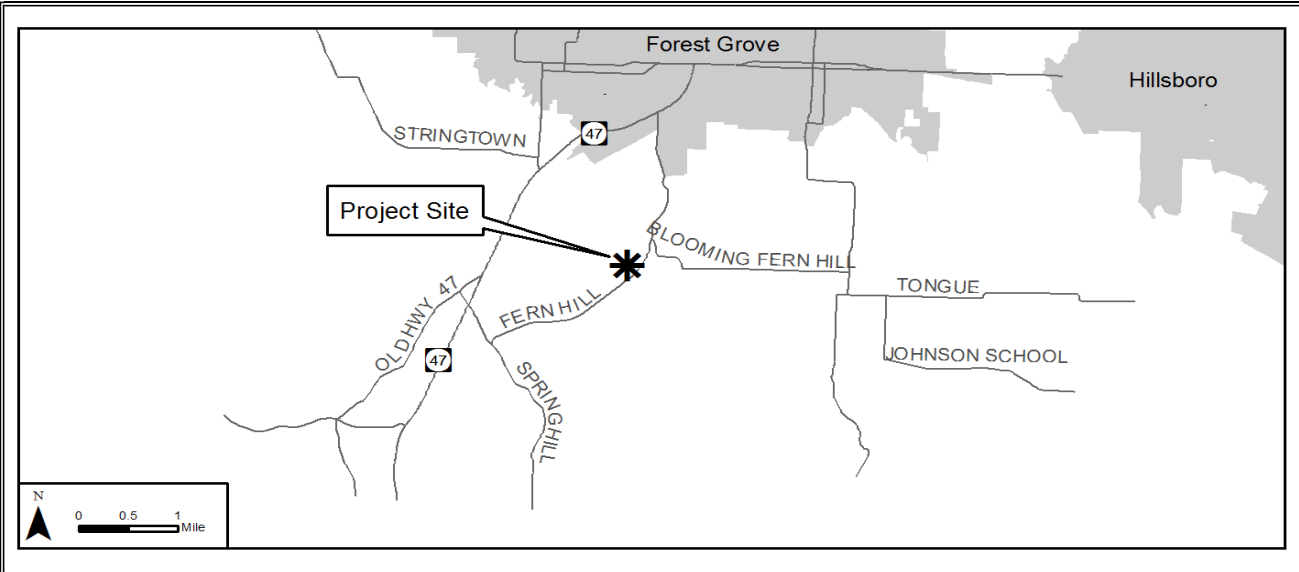
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	JWC	Water Rates: Yes	No material impact anticipated.
Project Manager:	TBD	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 0%	
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	81,300	46,900	48,500	50,200	52,000	53,800	332,700	1,918,300

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Water Line Cathodic Protection



KEY DRIVERS FOR CIP PROJECT

1.	Asset Condition	Project will reduce corrosion in water transmission lines.
2.	Cost Effectiveness	Project will increase the useful lives of water transmission lines.
3.	Reliability	Cathodic protection reduces the risk of service interruption due to leaks caused by corrosion.

PROJECT DESCRIPTION

Multiyear project to install cathodic protection devices to water transmission lines. FY 19-20 budget is for a study to identify optimal placement. Inspection will assess soil conditions and other factors to identify specific locations to install anodes. Thereafter, the budget is for installation of cathodic protection devices on identified sections of pipelines until project completion. Will increase the useful life of assets by reducing corrosion.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

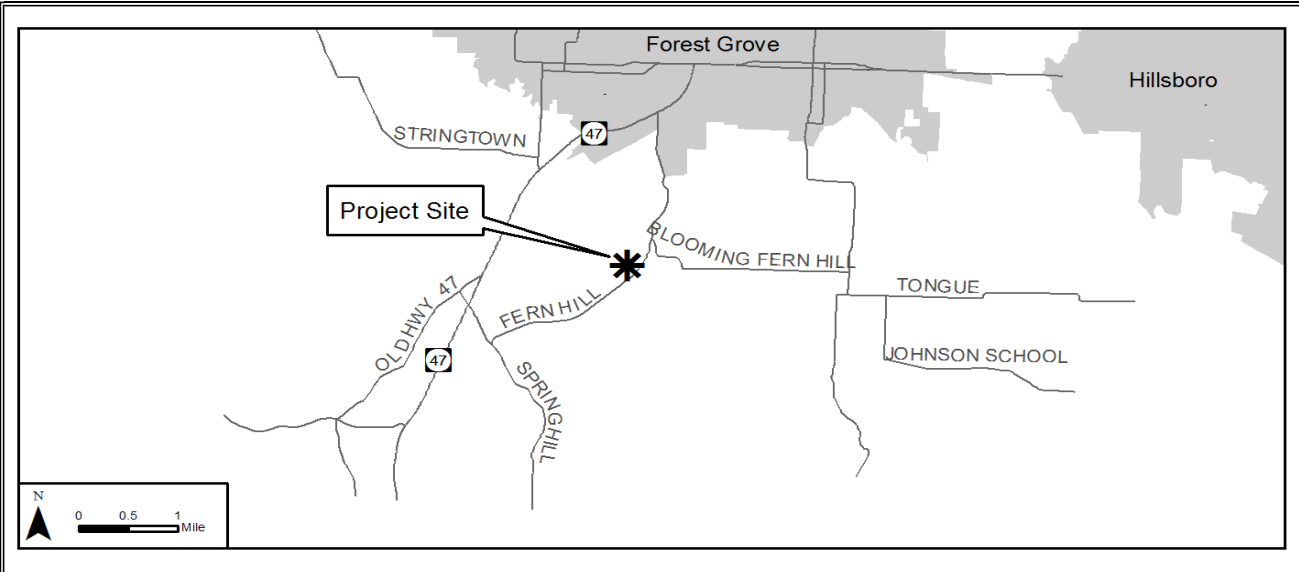
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	JWC	Water Rates:	Yes	Cathodic protection is anticipated to mitigate premature transmission line failure due to corrosive soils, thereby reducing future maintenance and repair costs.	
Project Manager:	TBD	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	21,200	45,700	47,300	48,900	50,700	52,400	266,200	228,800

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Powder Activated Carbon Injection System Expansion



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Expansion will increase capacity to treat water at the WTP.
2.	Safety / Security	Adding a second injector will provide the necessary capacity needed to treat water during a cyanotoxin event.
3.	Reliability	Improvements required to maintain reliable supply.

PROJECT DESCRIPTION

This project will expand the limited capacity to inject powder activated carbon (PAC) into the water treatment system. Current system is a single injector, but two injectors would be needed to treat the water in the event of a cyanotoxin event. The project includes a second PAC injector system, telemetry systems and controls, and a new PAC climate controlled storage building to store carbon. PAC will be integrated in the WTP as a "WTP process".

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

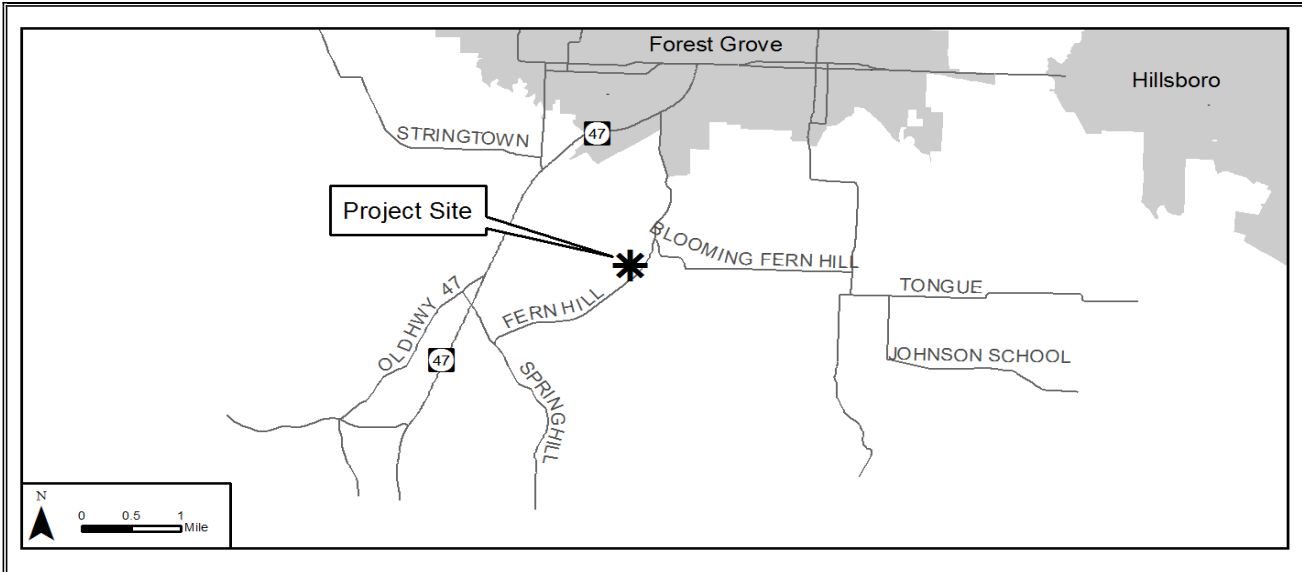
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	JWC	Water Rates:	Yes	This second PAC injector system and storage building will require a small increase in operating costs for maintenance and power. However, the availability of this backup system will help avoid potential higher costs and service disruptions during an emergency water quality event.	
Project Manager:	TBD	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	0%		
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	26,500	128,000	-	-	-	-	154,500	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Spring Hill Pumping Plant Mitigation Project



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Existing fish screen does not meet criteria set by National Marine Fisheries Service (NMFS) and the Oregon Department of Fish and Wildlife (ODFW).
2.	Cost Effectiveness	Mitigation, potentially in the form of a small culvert replacement, aims to avoid costs associated with the entire Spring Hill Pump Plant.
3.	Environment	Culvert replacement satisfies NMFS and ODFW criteria for providing safer fish passage.

PROJECT DESCRIPTION

The fish screen at the Spring Hill Pump Plant (SHPP) does not meet criteria set by NMFS and ODFW. When JWC submitted a new supplemental water right application on the Tualatin River for non-peak season flows, ODFW let us know that they will not approve the water right without a fish screen that meets their criteria (including approach velocities, sweeping velocities, and slot size). NMFS has signed off on the fish screen due to the small number of endangered and threatened fish that are present, so the Bureau of Reclamation and Tualatin Valley Irrigation District do not have any motivation or requirement to update the fish screen of the facility. In order to avoid paying costs associated with the entire SHPP, JWC proposed mitigation in lieu of fish screen or intake replacement. JWC completed a fish passage and impingement study over the last year that indicates that a mitigation project will be required for the JWC portion of the intake. JWC is investigating a small culvert replacement for the mitigation project.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

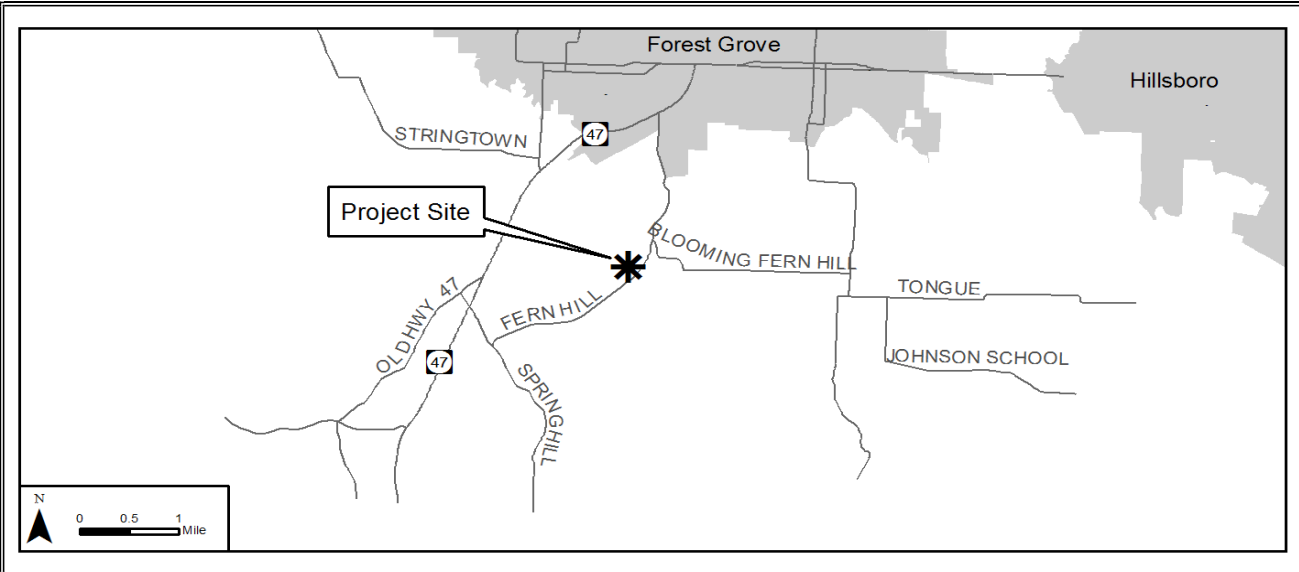
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	JWC	Water Rates:	Yes	No material impact anticipated. Avoids capital cost of replacing fish screen at the Spring Hill Pump Plant.	
Project Manager:	TBD	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemnt. Fee Elg.:	0%		
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage:	0%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	39,700	100,500	-	-	-	-	140,200	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Disinfection Facility (chlorine replacement)



KEY DRIVERS FOR CIP PROJECT

1.	Reliability	Improvements required to maintain reliable supply.
2.	Safety / Security	Producing chlorine on an as-needed basis will reduce chemical storage requirements.
3.	Asset Condition	This project will modernize operations at the JWC treatment facility.

PROJECT DESCRIPTION

The disinfection facility is a replacement to the existing chlorine gas system. Generating chlorine on-site will reduce the need to store large amounts of chlorine gas.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

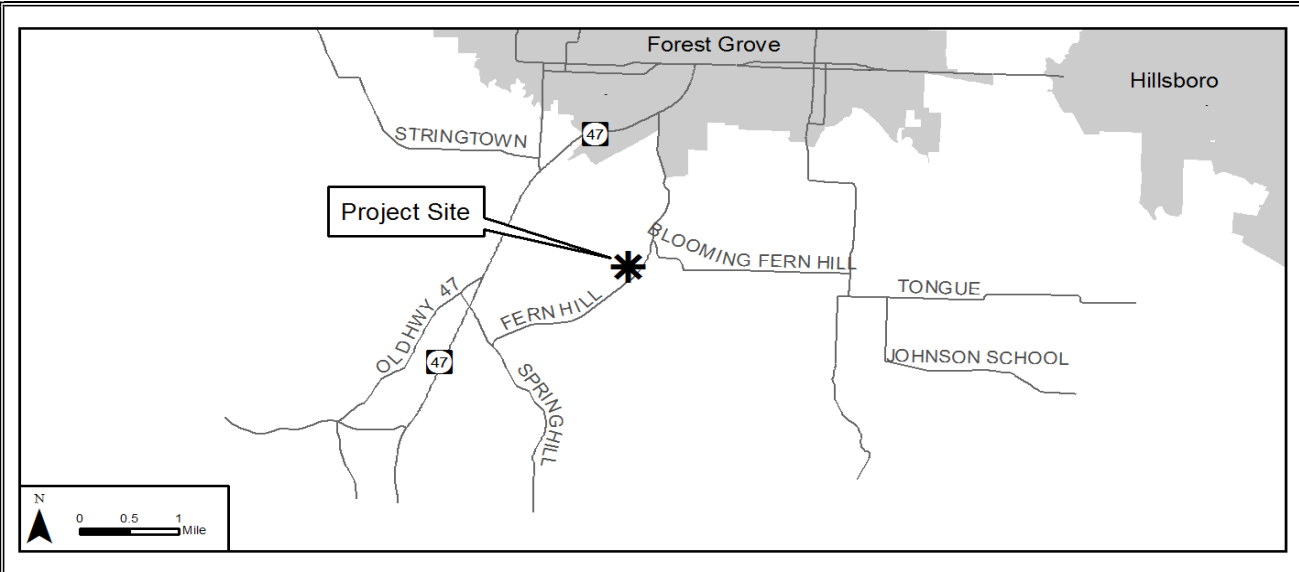
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	JWC	Water Rates: Yes	No material net impact is anticipated. There will be new operating costs associated with the facility, however, these costs will be offset by the reduction in costs from safely transporting and storing chlorine gas.
Project Manager:	TBD	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 0%	
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	-	18,300	428,500	222,000	-	-	668,800	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Intake Facility Expansion Site



KEY DRIVERS FOR CIP PROJECT

1.	Customer Criticality	The future larger intake will provide additional capacity for the JWC partners and their customers.
2.	Growth/Future Demands	Additional site space is required to expand the intake facility to meet growing demands cost effectively.
3.	Reliability	Improvements required to maintain reliable supply.

PROJECT DESCRIPTION

Purchase land to site a new intake facility in the future. This will replace the existing intake facility with a larger intake.

Cost shown below is TVWD's share of projected total cost. Therefore, under Funding Sources, the partner cost percentage (of the cost shown) is zero (0%).

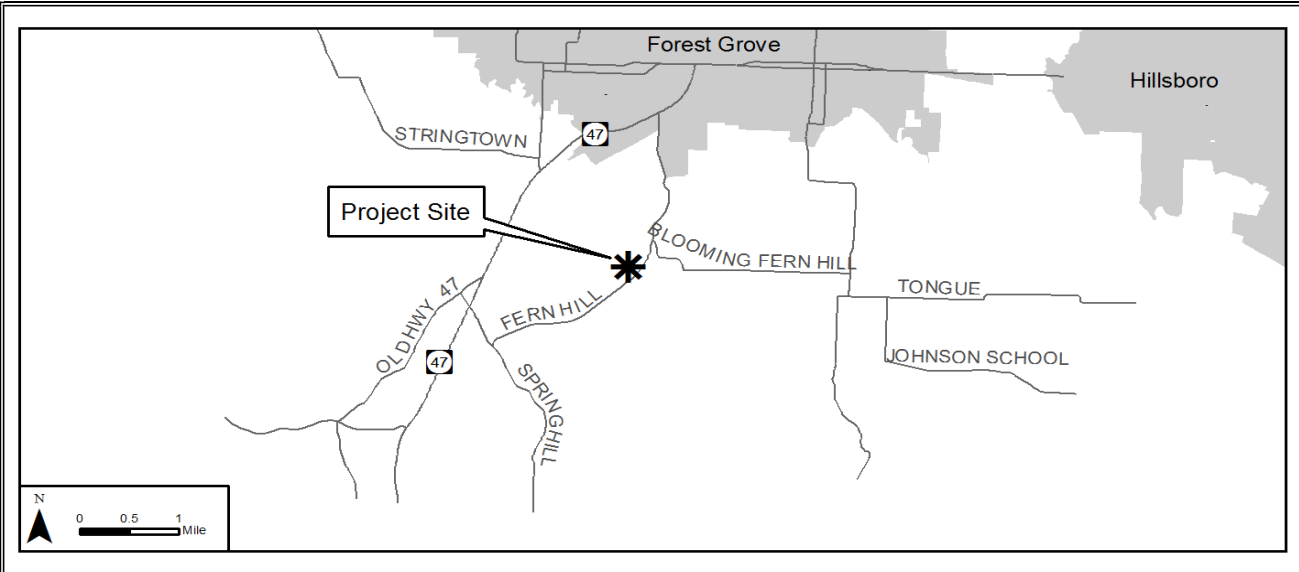
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	JWC	Water Rates: Yes	There is no anticipated change in operating costs associated with the land for the expansion site.
Project Manager:	TBD	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: TBD	
Total Priority Score:	This is a partnership project, agreed to by the JWC.	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
-	-	106,000	-	-	-	-	-	106,000	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: JWC Equipment Replacement



KEY DRIVERS FOR CIP PROJECT

1.	Project Urgency	Maintains supply for multiple water supply partners.
2.	Customer Criticality	Reserves funds to ensure continuity of service in the event of unanticipated maintenance or equipment repair needs.
3.	Reliability	Improvements required to maintain reliable supply.

PROJECT DESCRIPTION

This project funds a reserve for unanticipated capital expenses for the Joint Water Commission partners. Reserve funds are allocated based on ownership shares of Joint Water Commission facilities, of which the District is a 16.67% owner. Establishment of the reserve provides resources to the JWC in the event of unplanned capital expenditure needs. Use of the reserve requires approval by all JWC partners including the District.

Costs shown below are TVWD's share of projected total project costs. Therefore, under Funding Sources, the partner cost percentage (of the costs shown) is zero (0%).

PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	JWC	Water Rates: Yes	No material impact anticipated.
Project Manager:	Pete Boone	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 0%	
Total Priority Score:	NA	Partner Cost Percentage: 0%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-48)
333,400	333,400	341,200	-	341,200	-	341,200	-	1,023,600	4,094,400

Willamette Water Supply System (Fund 45)

No Staff

As part of the Willamette Water Supply Program (WWSP) the Willamette Water Supply System (WWSS) Fund accounts for the activities of the WWSS Commission; an intergovernmental agreement among the cities of Beaverton, Hillsboro, and TVWD. 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 Commission into the District's biennial budget. Resources for the fund include member dues and contributions for capital outlay. The WWSS is audited separately and the fund is not included as part of TVWD's audited financial statements.

Major Budget Changes for 2019-21

- The WWSS Fund is a new fund for the 2019-21 Biennium and replaces the District's Willamette Water Supply Program Fund (15) which was established in 2014 to track the costs associated with planning, design, and construction of the WWSS.
- Materials and Services appropriations are for general administration, insurance, auditing fees.
- Capital Outlay appropriations are for the permitting, design, construction and related costs for the WWSS which is scheduled for completion in July 2026. When complete, the WWSS will consist of a new state-of-the-art water treatment plant, two, fifteen million-gallon reservoirs, and over thirty-one miles of seismically resilient large diameter pipeline.
- A summary of the 2019-21 projects, six-year CIP, WWSP schedule and individual project pages begin on page 16-4. Total expenditures include both the District cost shares and those of the WWSS partners, the cities of Hillsboro and Beaverton.

TUALATIN VALLEY WATER DISTRICT

2019-2021 BIENNIAL BUDGET

WILLAMETTE WATER SUPPLY SYSTEM (FUND 45)

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	FUND TOTAL-WWSS GENERAL SERVICES	\$0	\$0	\$0	N/A
\$0	\$0	\$0	TOTAL PERSONNEL SERVICES	\$0	\$0	\$0	N/A

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	1. Total expenc 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	FUND TOTAL-WWSS GENERAL SERVICES	\$1,714,154	\$1,714,154	\$1,714,154	N/A
\$0	\$0	\$0	TOTAL MATERIALS & SERVICES	\$1,714,154	\$1,714,154	\$1,714,154	N/A

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	FUND TOTAL-WWSS GENERAL SERVICES	\$217,296,865	\$217,296,865	\$217,296,865	N/A
\$0	\$0	\$0	TOTAL CAPITAL OUTLAY	\$217,296,865	\$217,296,865	\$217,296,865	N/A

HISTORICAL DATA			TRANSFERS & CONTINGENCY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	GENERAL OPERATING CONTINGENCY	\$173,000	\$173,000	\$173,000	N/A
\$0	\$0	\$0	TOTAL TRANSFERS AND CONTINGENCY	\$173,000	\$173,000	\$173,000	N/A

HISTORICAL DATA			TOTAL EXPENDITURES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	TOTAL FUND EXPENDITURES	\$219,184,019	\$219,184,019	\$219,184,019	N/A

TUALATIN VALLEY WATER DISTRICT

2019-2021 BIENNIAL BUDGET

WILLAMETTE WATER SUPPLY SYSTEM (FUND 45)

GENERAL SERVICES DIVISON (60-01)

HISTORICAL DATA			WWSS DIVISION SUMMARY MATERIALS & SERVICES GENERAL SERVICES DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	OPERATING EXPENSE	45-60-01-7000	\$1,138,154	\$1,138,154	\$1,138,154	N/A
\$0	\$0	\$0	PROFESSIONAL SERVICES	45-60-01-7310	\$270,000	\$270,000	\$270,000	N/A
\$0	\$0	\$0	INSURANCE	45-60-01-7320	\$220,000	\$220,000	\$220,000	N/A
\$0	\$0	\$0	BUSINESS EXPENSE	45-60-01-7330	\$8,400	\$8,400	\$8,400	N/A
\$0	\$0	\$0	PROPERTY MAINTENANCE	45-60-01-7400	\$17,000	\$17,000	\$17,000	N/A
\$0	\$0	\$0	PUBLIC INFORMATION	45-60-01-7450	\$6,000	\$6,000	\$6,000	N/A
\$0	\$0	\$0	AUDIT	45-60-01-7490	\$30,600	\$30,600	\$30,600	N/A
\$0	\$0	\$0	LOCATES	45-60-01-7680	\$24,000	\$24,000	\$24,000	N/A
\$0	\$0	\$0	FUND TOTALS		\$1,714,154	\$1,714,154	\$1,714,154	N/A

TUALATIN VALLEY WATER DISTRICT
 2019-2021 BIENNIAL BUDGET
 Adopted Capital Improvement Plan by Project Category
 Willamette Water Supply Program

Project	Value	Page
WTP 1.0 Willamette Water Treatment Plant	\$11,131,263	16 - 7
RWF 1.0 Raw Water Facility	32,334,588	16 - 8*
PLM 1.0 WTP to Day Road	33,849,256	16 - 9
PLM 4.0 124th to Beef Bend Road	12,887,154	16 - 10
PLM 5.0 Beef Bend to Farmington	44,571,729	16 - 11
RES 1.0 Storage Reservoirs	3,666,094	16 - 12
PLW 1.0 Farmington to Frances	29,320,160	16 - 13
PLW 2.0 Frances to Hwy 26	4,092,997	16 - 14
MPE 1.0 Metzger Pipeline East	14,175,634	NA**
DCS 1.0 Distribution Control System	749,225	16 - 15
System-Wide Costs	52,252,224	16 - 16
Total 2019-21 WWSP Expenditures and Transfers	<u>\$239,030,324</u>	
Less: Willamette Intake Facilities (WIF) included in RWF 1.0*	\$7,557,825	
Less: MPE 1.0 Metzger Pipeline East**	14,175,634	
Net 2019-21 WWSS Expenditures and Transfers	<u><u>\$217,296,865</u></u>	

* Total project costs include Willamette Intake Facilities (WIF) Commission Shares.
 See Section 17 – Willamette Intake Facilities.

** The project pages for MPE 1.0 are included as 15-60 through 15-62 in Section 15 –
 Capital Improvement Plan.

Willamette Water Supply Program Six-Year CIP Planned Expenditures (FY2020-25)

PROJECT TITLE	Page	2017-19 Projected	2019-2021 Biennial Budget 6-Year CIP						Totals			Future Years (FY2026-27)
			FY2020 Adopted	FY2021 Adopted	FY2022 Projected	FY2023 Projected	FY2024 Projected	FY2025 Projected	Eight-Year FY2018-25	Six-Year FY2020-25		
			\$	\$	\$	\$	\$	\$	\$	\$		
WILLAMETTE WATER SUPPLY PROGRAM (WWSP)												
WTP 1.0 Willamette Water Treatment Plant	16 - 7	\$ 3,479,621	\$ 5,554,697	\$ 14,448,535	\$ 73,233,993	\$ 93,217,463	\$ 55,574,831	\$ 251,085,706	\$ 247,606,085	\$ 23,459,455		
RWF 1.0 Raw Water Facility	16 - 8*	6,086,097	29,596,149	14,872,428	14,512,574	24,716,704	2,276,171	94,798,562	88,712,465	-		
PLM 1.0 WTP to Day Road	16 - 9	3,878,000	21,248,458	19,308,296	2,721,738	-	-	59,757,290	55,879,290	-		
PLM 2.0 Kinsman Road	NA	630,404	-	-	-	-	-	630,404	-	-		
PLM 3.0 SW 124th Avenue Extension	NA	10,122,450	-	-	-	-	-	10,122,450	-	-		
PLM 4.0 124th to Beef Bend Road	16 - 10	2,551,956	9,740,269	32,944,200	62,091,641	6,770,943	-	117,245,893	114,693,937	-		
PLM 5.0 Beef Bend to Farmington	16 - 11	7,920,828	11,814,720	2,425,197	42,193,601	35,595,888	2,011,588	134,718,832	126,798,004	-		
RES 1.0 Storage Reservoirs	16 - 12	134,037	819,480	2,846,614	3,232,099	33,374,871	4,566,443	76,782,521	76,648,484	-		
PLW 1.0 Farmington to Frances	16 - 13	7,988,827	27,976,861	27,976,861	2,516,610	-	-	67,802,457	59,813,630	-		
PLW 2.0 Frances to Hwy 26	16 - 14	138,355	2,279,070	1,813,927	25,123,131	2,075,603	-	56,857,426	56,719,071	-		
MPE 1.0 Metzger Pipeline East	NA**	1,979,263	7,501,201	30,243,086	48,068,610	16,536,463	2,974,847	113,977,904	111,998,641	-		
DCS 1.0 Distribution Control System	16 - 15	244,656	375,349	292,125	836,699	1,720,251	1,251,996	5,094,952	4,850,296	505,920		
System-Wide Costs	16 - 16	36,876,499	23,643,543	23,821,694	20,120,377	17,654,704	15,524,159	166,189,656	129,373,157	37,695,718		
TOTAL WILLAMETTE WATER SUPPLY PROGRAM		\$ 81,970,993	\$ 141,335,052	\$ 194,687,651	\$ 323,532,160	\$ 231,662,890	\$ 84,180,035	\$ 1,155,064,053	\$1,073,093,060	\$ 61,661,093		

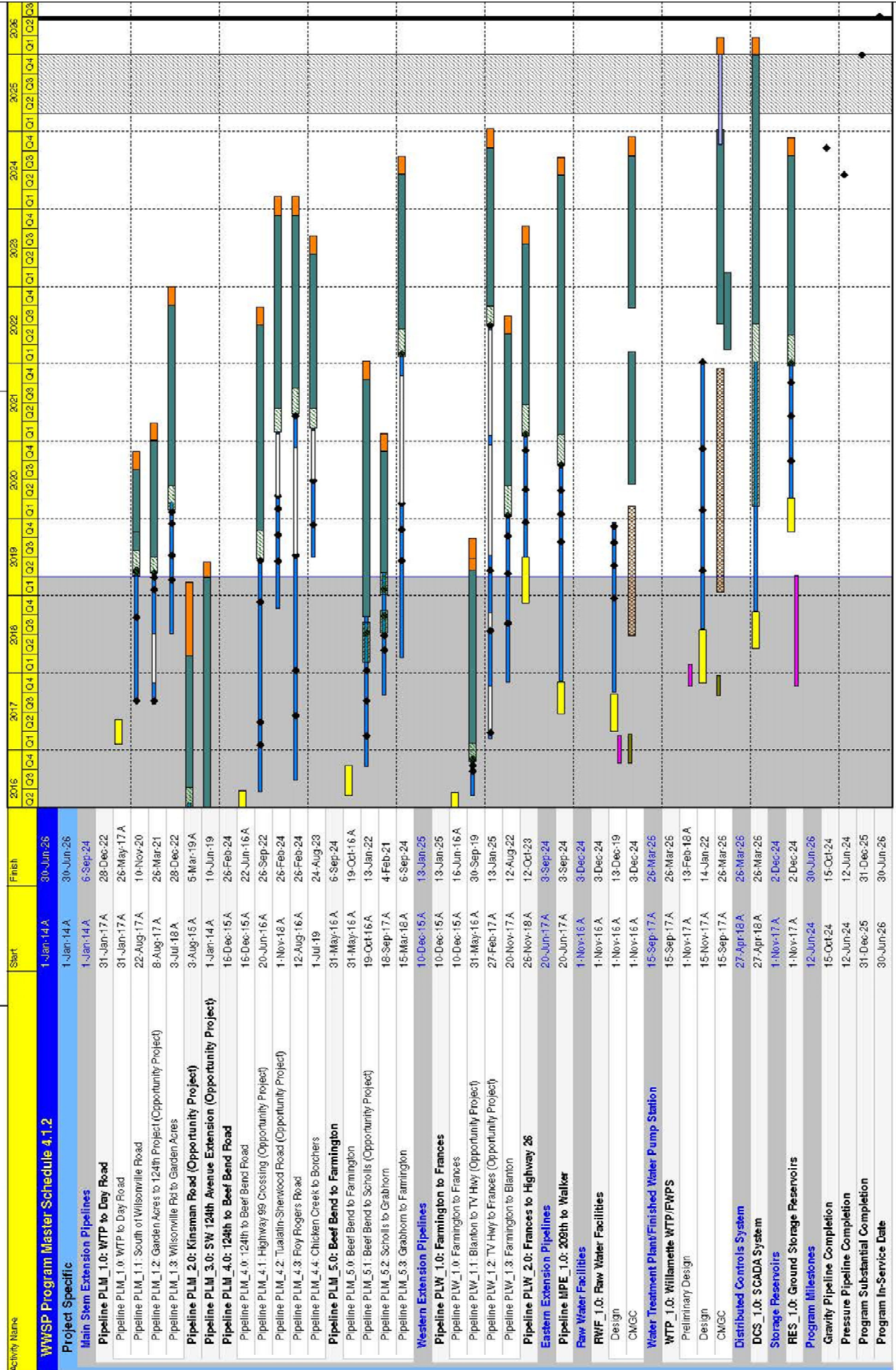
* Total project costs include Willamette Intake Facilities (WIF) Commission Shares. See Section 17 – Willamette Intake Facilities.

** MPE 1.0 values include share of system-wide costs. The project pages for MPE 1.0 are included as 15-60 through 15-62 in Section 15 – Capital Improvement Plan.

WWSP Monthly Program Bar Chart

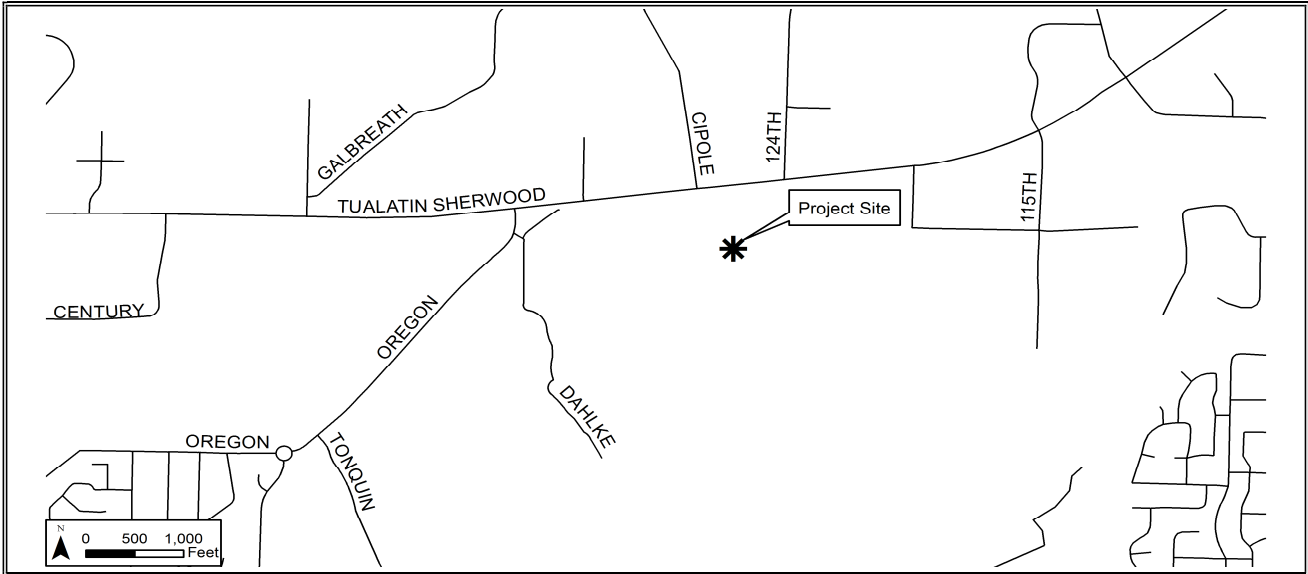
WWSP Program Master Schedule 4.1.2

Data Date: 31-Mar-19 | Print Date: 3-May-19
Layout: 01: WWSP Single Line Diagram RDE
TASK filter: 01: SINGLE LINE DIAGRAM Layout.



Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: WTP 1.0 Willamette Water Treatment Plant



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Design and construction of a new water treatment plant to provide seismically resilient supply to the WWSS Partners.

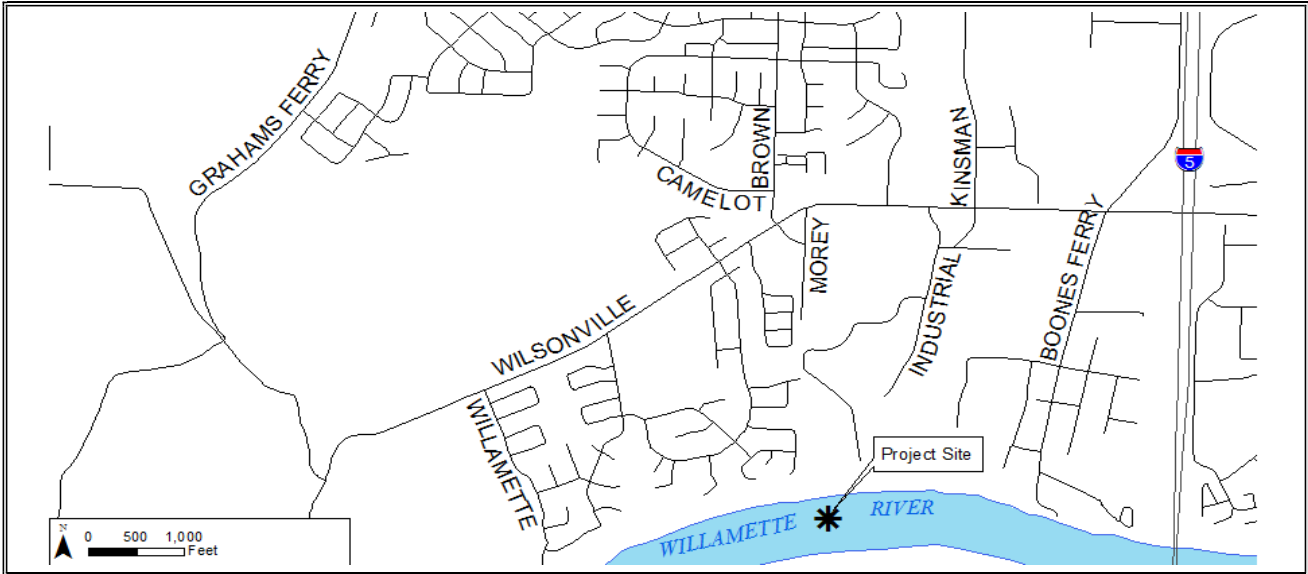
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	Overall, the WWSS will result in significant savings by eliminating purchase water costs from Portland. The District is projecting net savings of approximately \$5 million in FY2027 (i.e., a 36% decrease from FY2026), after shifting from 100% purchased water costs to a new balance of JWC water purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	37%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
-	3,479,621	5,576,566	5,554,697	14,448,535	73,233,993	93,217,463	55,574,831	247,606,085	23,459,455

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: RWF 1.0 Raw Water Facility



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Expansion of the existing raw water pump station and intake infrastructure at the Willamette River Water Treatment Plant (WRWTP). The expansion will increase the capacity of the facilities for the future WWSS to 60 mgd. Major project elements include new vertical turbine pumps with variable frequency drives, electrical facilities, water surge protection, backup power, a raw water pipeline at the WRWTP site, and seismic improvements.

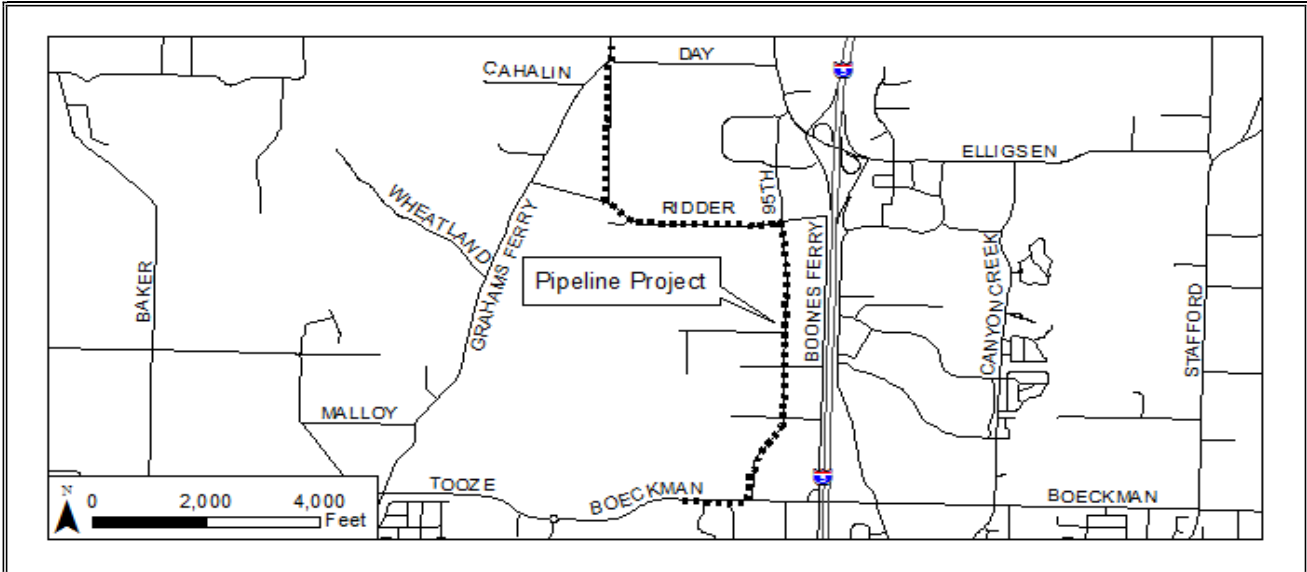
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Facilities	Water Rates:	Yes	Annual O&M costs for RWF 1.0 will be approx. \$12,500 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	46%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
6,128,688	6,086,097	2,738,440	29,596,149	14,872,428	14,512,574	24,716,704	2,276,171	88,712,465	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: PLM 1.0 WTP to Day Road



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Conveyance pipeline for raw water from the WWSS WTP intake located on the Willamette River in Wilsonville to the intersection of SW Garden Acres Road at Day Road located in Washington County. This package includes 16,780 linear feet of 66-inch diameter welded steel pipeline. The alignment traverses on and off paved roads, but mostly within the right-of-way, although 21 permanent easements will be required. Construction method will be open cut with four trenchless crossings under railroads or major roadway crossings.

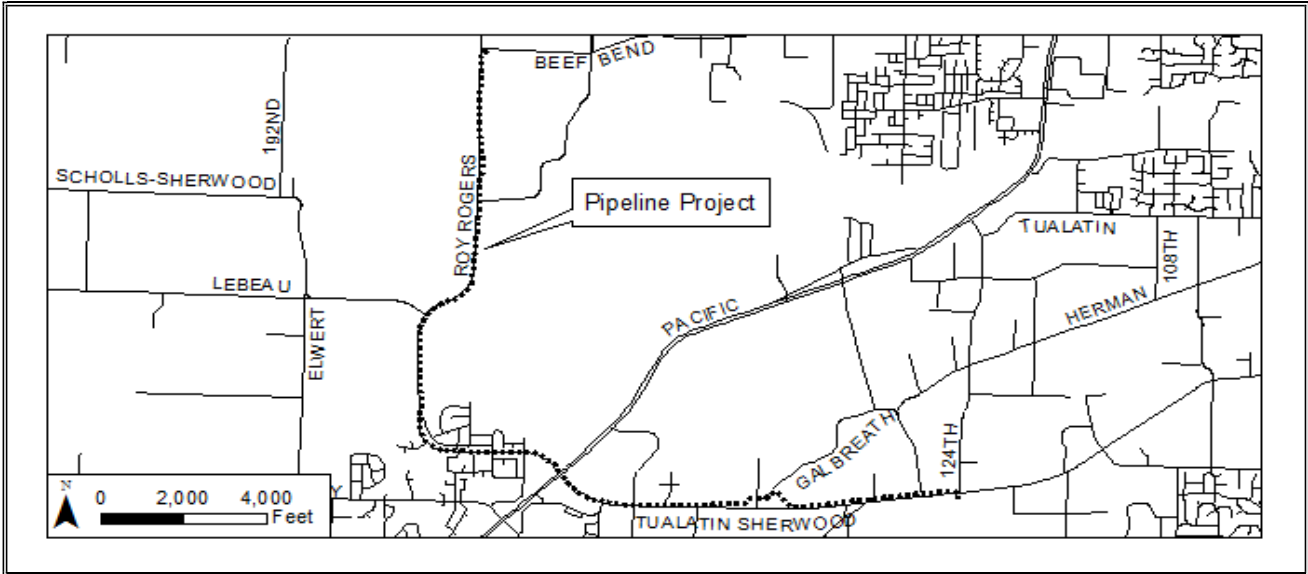
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	Annual O&M costs of valves on PLM 1.0 will be approx. \$36,000 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	41%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
15,515,952	3,878,000	12,600,798	21,248,458	19,308,296	2,721,738	-	-	55,879,290	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: PLM 4.0 124th to Beef Bend Road



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Conveyance pipeline for finished/treated drinking water from 124th Avenue at SW Tualatin Sherwood Road to SW Roy Rogers Road at SW Beef Bend Road. This package includes 25,200 linear feet (4.8 miles) of 66-inch diameter welded steel pipeline. Although alignment parallels SW Tualatin Sherwood Road some of the alignment is not within right-of-way and will require permanent easements. The alignment along Roy Rogers within Sherwood is within right-of-way and within a lane of traffic. However, as the alignment traverses north along SW Roy Rogers into rural Washington County, the alignment exits the road and right-of-way to minimize traffic impacts. This alignment contains a 2,274 foot trenchless crossing of the Tualatin River.

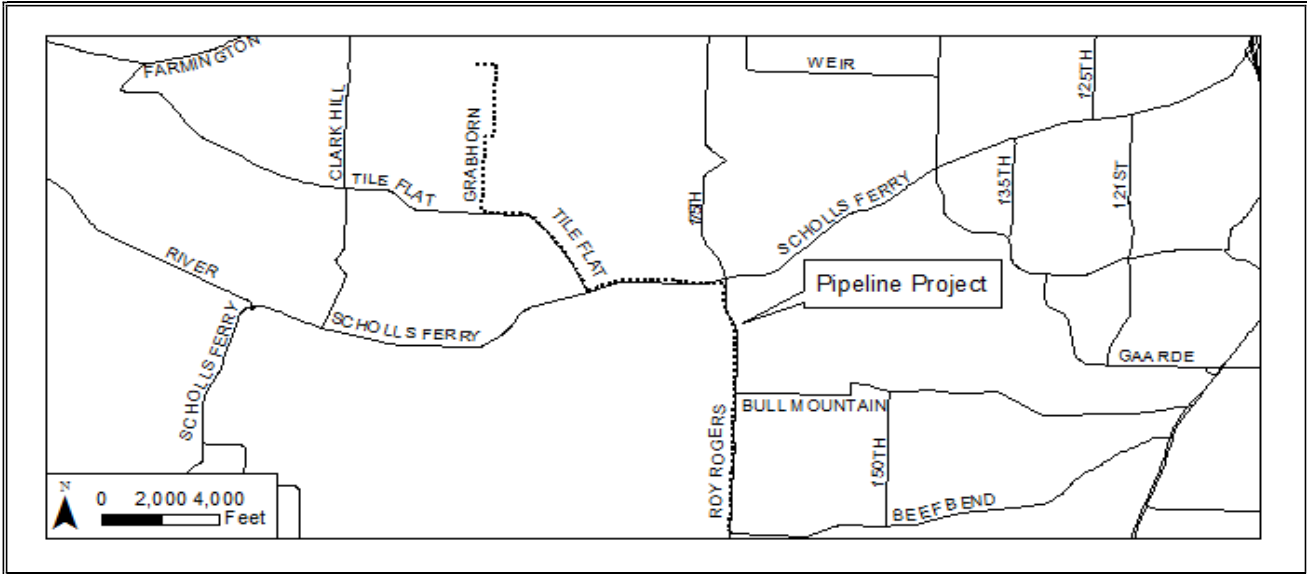
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	Annual O&M costs of valves on PLM 4.0 will be approx. \$55,000 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	41%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
5,079,605	2,551,956	3,146,884	9,740,269	32,944,200	62,091,641	6,770,943	-	114,693,937	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: PLM 5.0 Beef Bend to Farmington



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Conveyance pipeline for finished/treated drinking water from SW Roy Rogers Road at SW Beef Bend Road to SW Farmington Road at SW 209th Ave. This package includes 38,200 linear feet (7.2 miles) of 66-inch diameter welded steel pipeline. Although alignment parallels SW Roy Rogers Road, SW Scholls Ferry Road, SW Tile Flat Road, and SW Grabhorn Road, most of the alignment is not within right-of-way and will require permanent easements. Although the pipeline will be in right-of-way/lane of traffic along SW Koehler Rd and Clark Hills Rd, due to the small size of the road, permanent easements will still be required along most of this section. The alignment along Farmington Road will be completely in the right-of-way/lane of traffic and will not require any permanent easements. This alignment contains the inlet and outlet piping for the proposed reservoirs (RES_1.0).

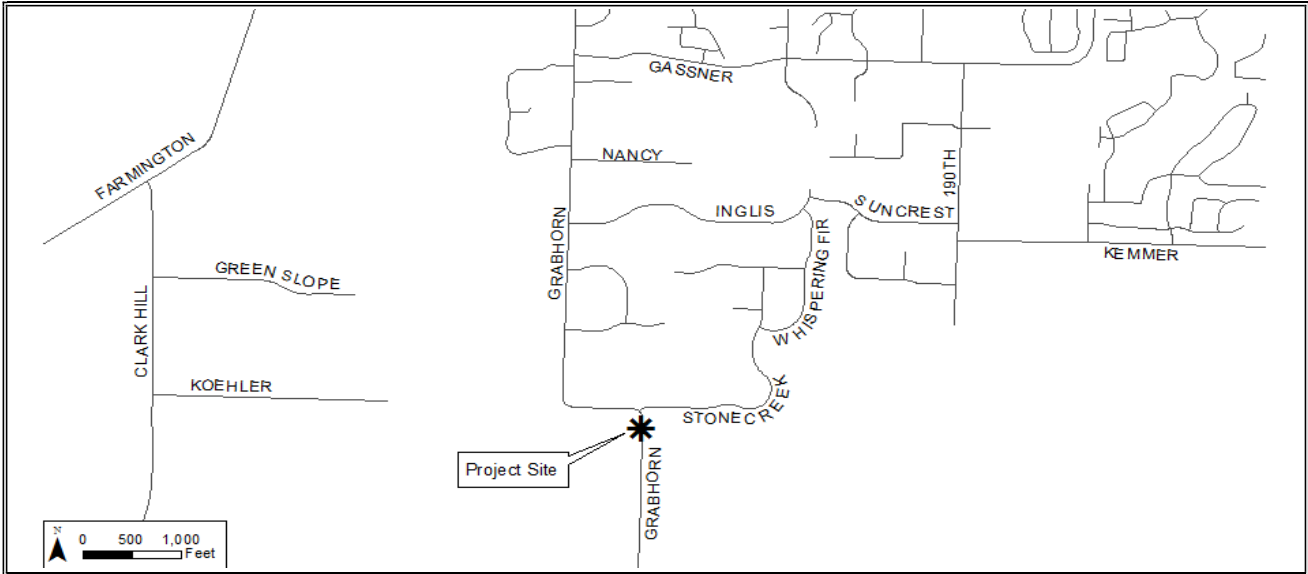
PROJECT INFORMATION		FUNDING SOURCES	FUTURE OPERATING COST IMPACT
Project Category:	Pipeline	Water Rates: Yes	Annual O&M costs of valves on PLM 5.0 will be approx. \$75,000 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.
Project Manager:	Mike Britch	Service Fees: No	
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.: 61%	
Total Priority Score:	NA	Partner Cost Percentage: 52%	

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
29,860,535	7,920,828	32,757,009	11,814,720	2,425,197	42,193,601	35,595,888	2,011,588	126,798,004	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: RES 1.0 Storage Reservoirs



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Terminal storage, with 30 MG divided into two independent 15-MG tanks to allow individual tanks to be taken offline for maintenance. Constructed with prestressed, cast-in-place, or conventionally reinforced, cast-in-place concrete.

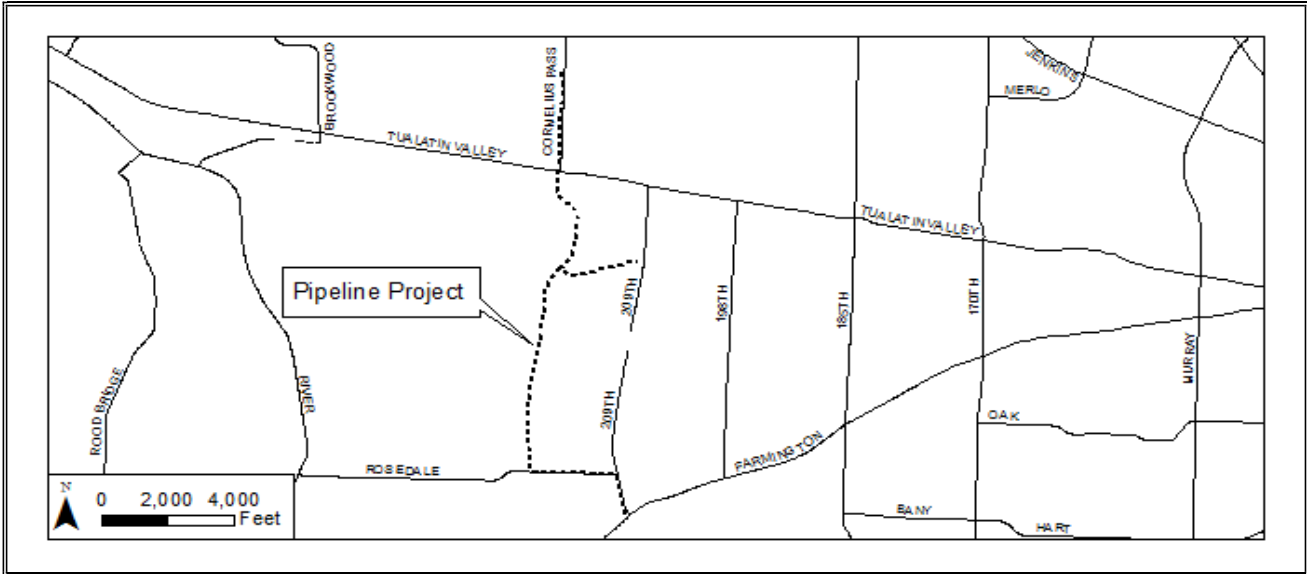
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Storage	Water Rates:	Yes	Annual O&M costs for RES 1.0 will be approx. \$26,000 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	61%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
-	134,037	819,480	2,846,614	3,232,099	31,808,976	33,374,871	4,566,443	76,648,484	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: PLW 1.0 Farmington to Frances



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Conveyance pipeline for finished/treated drinking water from SW Farmington Road at SW 209th Ave. to Cornelius Pass Road at Frances and the start of the Eastern Extension from Cornelius Pass at Kinnaman Rd to Kinnaman Rd at 209th Ave. This package includes 11,250 linear feet (2.1 miles) of 66-inch diameter, 2,700 linear feet (0.5 miles) of 54-inch diameter and 7,050 linear feet (1.3 miles) of 48-inch diameter welded steel pipelines. It is proposed that this entire alignment/segment of pipeline would be installed as a partnership during the construction of the new roads for these developments. Because of this partnership/opportunity, this work package would include the first 2,700 linear feet of the eastern extension, which would be within the new right-of-way of the development.

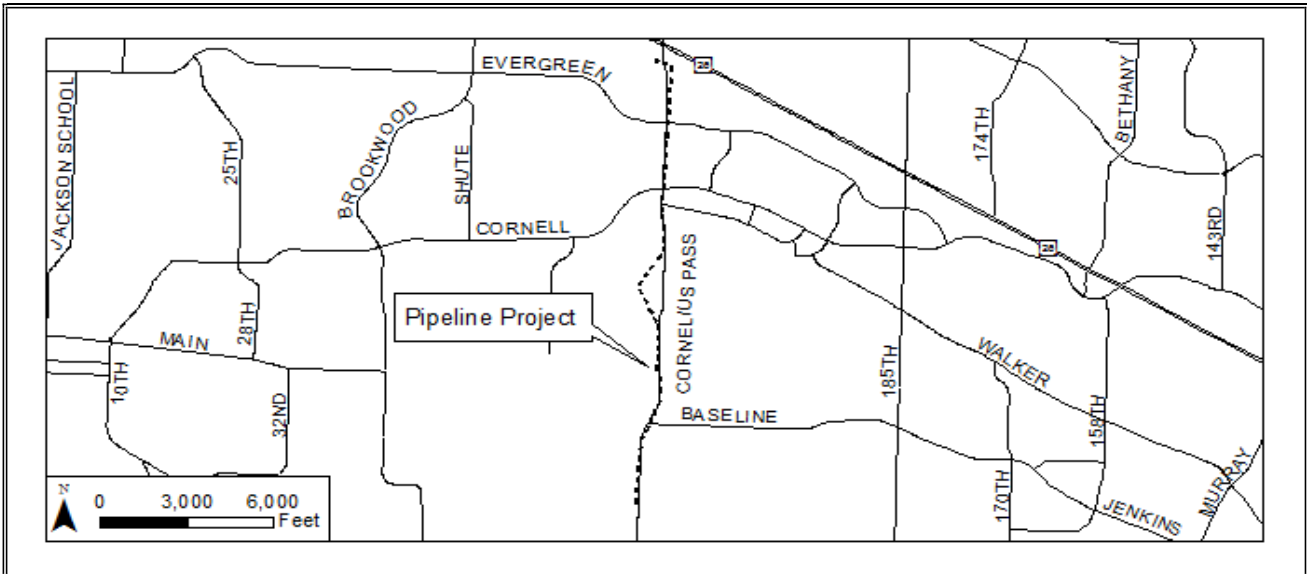
PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	Annual O&M costs of valves on PLW 1.0 will be approx. \$48,000 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	72%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
14,796,354	7,988,827	2,118,561	27,201,598	27,976,861	2,516,610	-	-	59,813,630	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: PLW 2.0 Frances to Hwy 26



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Conveyance pipeline for finished/treated drinking water Cornelius Pass Road at Frances Road to Cornelius Pass Road at Highway 26 where it connects into the existing supply lines for the City of Hillsboro and TVWD. This package includes 17,475 linear feet (3.3 miles) of 48-inch diameter and 5,725 linear feet (1.1 miles) of 36-inch diameter welded steel pipelines. Except for creek crossings, the alignment primarily is located within a lane of traffic along the entire alignment.

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	Pipeline	Water Rates:	Yes	Annual O&M costs of valves on PLW 2.0 will be approx. \$59,000 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	57%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
-	138,355	2,279,070	1,813,927	25,123,131	25,427,340	2,075,603	-	56,719,071	-

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: DCS 1.0 Distribution Control System



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	Project is a key element of the District's new long-term supply source that will meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Fiber optic cable and conduit installation along the entire 31 miles of pipeline including connection to the reservoirs and to the terminus of both Eastern and Western Extensions. This package assumes independent installation of conduit (no partnering with pipeline installation).

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	SCADA	Water Rates:	Yes	Annual O&M costs for DCS 1.0 will be approx. \$125,000 (today's dollars). Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. Projected net savings are \$5 million in FY2027 (i.e., 36% decrease from FY2026), after the shift from 100% purchased water to a mix of JWC purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	Mike Britch	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	41%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
-	244,656	375,349	373,877	292,125	836,699	1,720,251	1,251,996	4,850,296	505,920

Tualatin Valley Water District
 Adopted Capital Improvement Plan
 2019-21
 (Six-Year Projection)

PROJECT TITLE: System-Wide Costs



KEY DRIVERS FOR CIP PROJECT

1.	Project Criticality	Willamette Water Supply System (WWSS) will provide reliable and safe drinking water to the District's customers.
2.	Growth/Future Demands	System will be a new long-term supply source to meet current and future demands.
3.	Reliability	WWSS will increase overall reliability by providing a new, seismically hardened source for the District.

PROJECT DESCRIPTION

Program level costs associated with supporting the design and construction of the WWSS including costs for real estate and easements, permitting and mitigation, legal expenses, program management services, and management reserves

PROJECT INFORMATION		FUNDING SOURCES		FUTURE OPERATING COST IMPACT	
Project Category:	NA	Water Rates:	Yes	Overall, the WWSS will result in significant savings by eliminating purchased water costs from Portland. The District is projecting net savings of approximately \$5 million in FY2027 (i.e., a 36% decrease from FY2026), after shifting from 100% purchased water costs to a new balance of JWC water purchases plus the costs of WWSS treatment and pumping power.	
Project Manager:	David Kraska	Service Fees:	No		
Work Performed By:	Outside Contract	SDC Improvemt. Fee Elg.:	61%		
Total Priority Score:	NA	Partner Cost Percentage:	45%		

BUDGET INFORMATION & PROJECTED COSTS

FY 17-19 Budget	FY 17-19 Projected	FY 19-20 Budget	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	Six-Year (FY2020-25)	Future Years (FY2026-27)
57,113,178	36,816,499	28,608,681	23,643,543	23,821,694	20,120,377	17,654,704	15,524,159	129,373,157	37,695,718

Willamette Intake Facilities

(Fund 44)



No Staff

Also as part of the Willamette Water Supply Program (WWSP), the Willamette Intake Facilities (WIF) Fund accounts for the activities of the WIF Commission; an intergovernmental agreement whose members include the cities of Beaverton, Hillsboro, Sherwood, Tigard, Tualatin, Wilsonville, and TVWD. 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 Commissioner into the District's biennial budget. Resources for the fund include member dues and contributions for capital outlay. The WIF is audited separately and the fund is not included as part of TVWD's audited financial statements.

Major Budget Changes for 2019-21

- The WIF Commission was established in April of 2018 and TVWD became the managing agency at that time.
- Materials and Services appropriations are for general administration, insurance, auditing fees, and water quality monitoring.
- Capital Outlay appropriations are for the replacement of the intake screens and related airburst system necessary to expand the capacity of the intake to serve the future Willamette Water Supply System, as well as seismic improvements intended to reduce the risk of failure in the event of a large-scale earthquake.
- The WIF Commission budgetary appropriations support the RWF 1.0 Raw Water Facility project listed on page 16-8 of Section 16 - *Willamette Water Supply System* . Since the WIF is only part of the larger RWF 1.0 Raw Water Facility project and involve different partners, the WIF share of the assets are expended and recorded separately the WIF Fund.

WILLAMETTE INTAKE FACILITIES (FUND 44)

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	FUND TOTAL-WIF GENERAL SERVICES	\$0	\$0	\$0	0.0%
\$0	\$0	\$0	TOTAL PERSONNEL SERVICES	\$0	\$0	\$0	0%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$109,607	FUND TOTAL-WIF GENERAL SERVICES	\$346,615	\$346,615	\$346,615	216.2%
\$0	\$0	\$109,607	TOTAL MATERIALS & SERVICES	\$346,615	\$346,615	\$346,615	216.2%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$2,466,065	FUND TOTAL-WIF GENERAL SERVICES	\$7,557,825	\$7,557,825	\$7,557,825	206.5%
\$0	\$0	\$2,466,065	TOTAL CAPITAL OUTLAY	\$7,557,825	\$7,557,825	\$7,557,825	206.5%

HISTORICAL DATA			TRANSFERS & CONTINGENCY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	TRANSFERS	\$0	\$0	\$0	N/A
\$0	\$0	\$0	GENERAL OPERATING CONTINGENCY	\$36,000	\$36,000	\$36,000	N/A
\$0	\$0	\$0	TOTAL TRANSFERS AND CONTINGENCY	\$36,000	\$36,000	\$36,000	N/A

HISTORICAL DATA			TOTAL EXPENDITURES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$2,575,672	TOTAL FUND EXPENDITURES	\$7,940,440	\$7,940,440	\$7,940,440	208.3%

HISTORICAL DATA			WIF DIVISION SUMMARY MATERIALS & SERVICES GENERAL SERVICES DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$76,898	OPERATING EXPENSE	44-60-01-7000	\$249,165	\$249,165	\$249,165	224.0%
\$0	\$0	\$0	PROFESSIONAL SERVICES	44-60-01-7310	\$22,550	\$22,550	\$22,550	N/A
\$0	\$0	\$24,909	INSURANCE EXPENSE	44-60-01-7320	\$46,000	\$46,000	\$46,000	84.7%
\$0	\$0	\$2,800	BUSINESS EXPENSE	41-60-01-7330	\$3,600	\$3,600	\$3,600	28.6%
\$0	\$0	\$0	OTHER SUNDRY	41-60-01-7360	\$0	\$0	\$0	N/A
\$0	\$0	\$0	PUBLIC INFORMATION	41-60-01-7450	\$0	\$0	\$0	N/A
\$0	\$0	\$5,000	AUDIT FEES	41-60-01-7490	\$25,300	\$25,300	\$25,300	406.0%
\$0	\$0	\$109,607	FUND TOTALS		\$346,615	\$346,615	\$346,615	216.2%

TUALATIN VALLEY WATER DISTRICT
2019-2021 BIENNIAL BUDGET



Willamette River Water Coalition (Fund 41)



No Staff

The Willamette River Water Coalition (WRWC) Fund is used to account for the WRWC budget. WRWC's primary purpose is to maintain water rights on the Willamette River for the member agencies. Budget appropriations are approved annually by the WRWC Board, and incorporated into the District's budget. TVWD has been designated as the managing agency for the WRWC. Resources for the WRWC Fund come from dues paid by member agencies, which include TVWD, and the cities of Tigard, Tualatin and Sherwood. The WRWC Fund is audited separately as coordinated by the WRWC Board and District staff. This fund is not included in TVWD's audited financial statements.

Major Budget Changes for 2019-21

- TVWD remains the designated managing agency.
- Materials & Services appropriations primarily support WRWC activities including administration, water rights, governance, public outreach and interagency support.
- Professional Services expenditures includes WRWC's continued participation in the Willamette Basis Reallocation Study.

TUALATIN VALLEY WATER DISTRICT

2019-2021 BIENNIAL BUDGET

WILLAMETTE RIVER WATER COALITION (FUND 41)

HISTORICAL DATA			PERSONNEL SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	FUND TOTAL-WRWC GENERAL SERVICES	\$0	\$0	\$0	0.0%
\$0	\$0	\$0	TOTAL PERSONNEL SERVICES	\$0	\$0	\$0	0%

HISTORICAL DATA			MATERIALS & SERVICES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$226,385	\$324,435	\$120,600	FUND TOTAL-WRWC GENERAL SERVICES	\$167,000	\$167,000	\$167,000	38.5%
\$226,385	\$324,435	\$120,600	TOTAL MATERIALS & SERVICES	\$167,000	\$167,000	\$167,000	38.5%

HISTORICAL DATA			CAPITAL OUTLAY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	FUND TOTAL-WRWC GENERAL SERVICES	\$0	\$0	\$0	0.0%
\$0	\$0	\$0	TOTAL CAPITAL OUTLAY	\$0	\$0	\$0	0.0%

HISTORICAL DATA			TRANSFERS & CONTINGENCY	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$0	\$0	\$0	TRANSFERS	\$0	\$0	\$0	N/A
\$0	\$0	\$12,900	GENERAL OPERATING CONTINGENCY	\$0	\$0	\$0	-100.0%
\$0	\$0	\$12,900	TOTAL TRANSFERS AND CONTINGENCY	\$0	\$0	\$0	-100.0%

HISTORICAL DATA			TOTAL EXPENDITURES	BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$226,385	\$324,435	\$133,500	TOTAL FUND EXPENDITURES	\$167,000	\$167,000	\$167,000	25.1%

TUALATIN VALLEY WATER DISTRICT

2019-2021 BIENNIAL BUDGET

HISTORICAL DATA			WRWC DIVISION SUMMARY MATERIALS & SERVICES GENERAL SERVICES DIVISION		BUDGET FOR 2019-21			
ACTUAL 13-15	ACTUAL 15-17	BUDGET 17-19	DETAILED DESCRIPTION	GL #	PROPOSED BUDGET	APPROVED BUDGET	ADOPTED BUDGET	% CHG FROM 17-19
\$96,000	\$84,000	\$50,000	OPERATING EXPENSE	41-60-01-7000	\$50,000	\$50,000	\$50,000	0.0%
\$111,575	\$218,044	\$58,448	PROFESSIONAL SERVICES	41-60-01-7310	\$100,000	\$100,000	\$100,000	71.1%
\$15,810	\$20,339	\$3,517	BUSINESS EXPENSE	41-60-01-7330	\$5,000	\$5,000	\$5,000	42.2%
\$0	\$0	\$3,135	OTHER SUNDRY	41-60-01-7360	\$0	\$0	\$0	-100.0%
\$0	\$0	\$2,000	WATER QUALITY	41-60-01-7440	\$0	\$0	\$0	-100.0%
\$3,000	\$2,053	\$0	PUBLIC INFORMATION	41-60-01-7450	\$4,000	\$4,000	\$4,000	N/A
\$0	\$0	\$3,500	AUDIT FEES	41-60-01-7490	\$8,000	\$8,000	\$8,000	128.6%
\$226,385	\$324,435	\$120,600	FUND TOTALS		\$167,000	\$167,000	\$167,000	38.5%

TUALATIN VALLEY WATER DISTRICT
2019-2021 BIENNIAL BUDGET



TUALATIN VALLEY
WATER DISTRICT

DESCRIPTION OF THE TUALATIN VALLEY WATER DISTRICT

Website: www.tvwd.org

Finance Department: <https://www.tvwd.org/finance>

The District changed its name to the Tualatin Valley Water District (TVWD) in 1991, after being formed by the merger of the Wolf Creek Highway Water District and Metzger Water District. Historically, a number of water districts have served the area, the oldest of which was founded in 1922. Mergers and consolidations lead to the eventual formation of TVWD. The District is a domestic water supply district operating as authorized by Oregon Revised Statutes (ORS), chapter 264. The District is not a component unit of any other entity, as defined by the Governmental Accounting Standards Board.

A five-member Board of Commissioners (Board), elected at large to overlapping four-year terms, governs the District. The Board sets policy and appoints a Chief Executive Officer, who is charged with management of the District.

TVWD is organized into six departments. The six departments are Administrative Services, Customer Service, Engineering & Operations, Finance, Water Supply Program and Information Technology Services. The Adopted 2019-2021 Budget has an authorized total of 144 full-time employee positions, a net increase of five positions over the 2017-19 biennium.

TVWD BOARD OF COMMISSIONERS AS OF JULY 1, 2019

<i><u>NAME, BOARD POSITION</u></i>	<i><u>FOUR YEAR TERMS ENDING</u></i>
Bernice Bagnall, President	June 30, 2021
Dick Schmidt, Vice President	June 30, 2021
James Duggan, Treasurer	June 30, 2021
Dr. Todd Sanders, Secretary	June 30, 2023
Jim Doane, Acting Secretary	June 30, 2023

CHIEF EXECUTIVE OFFICER

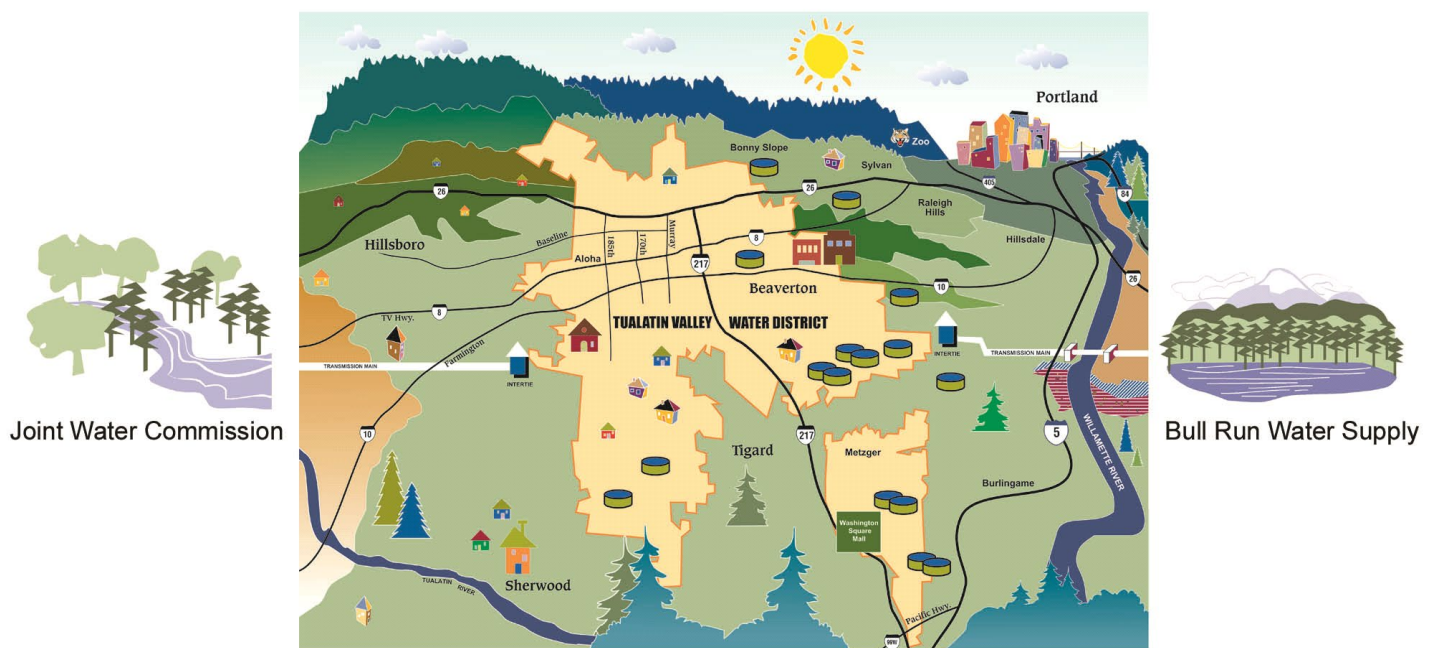
Tom Hickmann

Appointed May 2019
Began Service August 2019

TVWD is located west of the City of Portland, in suburban Washington County, Oregon. The District serves unincorporated urban areas of Washington County and portions of the cities of Beaverton, Hillsboro, and Tigard. As of June 30, 2019, TVWD served about 59,600 connections and an estimated population of 215,000. Population growth has averaged about 1.3 % annually over the past 10 years.

Located in northwestern Oregon, Washington County is one of the counties that comprise the Portland Metropolitan Statistical Area. The early economy of the Washington County area grew as a result of fertile agricultural and timberlands, and its access to the Willamette and Columbia rivers. The area began developing as a suburb of Portland, but has since developed its own economic base, which includes high technology, retail trade, and distribution. Large employers include Intel, Nike, Maxim Integrated Products, Reser's Fine Foods, and Providence Health Systems.

WATER SYSTEM



TVWD currently has two primary sources of water supply; the City of Portland source and the Joint Water Commission (JWC) source. Together, these two sources provide the District with 8.2 billion gallons of water annually.

The City of Portland water system consists of the Bull Run watershed and Columbia South Shore wellfield. In 2006, TVWD entered into an Intergovernmental Agreement with Portland that provides water supplies for an initial 10-year term. The contract is renewable for additional terms. During FY 2019, the District purchased an average of 65% of its supply from Portland through this agreement.

The Joint Water Commission (JWC) source obtains supplies from the Tualatin and Trask River watersheds with impoundments at Hagg Lake/Scoggins Dam and Barney Reservoir. The JWC is a partnership of TVWD and the cities of Hillsboro, Forest Grove, and Beaverton. The JWC partnership owns and operates water supply, treatment and transmission facilities. TVWD currently owns 12.5 million gallons per day (MGD) of capacity in the JWC treatment plant and similar capacity in the other JWC assets. The District also has a 35% ownership position in Barney Reservoir. In FY 2019, about 35% of the District's water supply came from the JWC.

In addition to these two primary sources, TVWD has an aquifer storage and recovery (ASR) well at its Grabhorn reservoir site. The Grabhorn ASR facility provides approximately 300 million gallons of treated water storage and can deliver up to three MGD of water for summer peak-season supply and emergency use. The District also maintains two back-up wells that provide up to two MGD for emergency use. An additional ASR well providing an additional two MGD of capacity is under development and anticipated to be operation during the summer of 2016.

Finally, the WRWC, in which TVWD is a member, has a 130 MGD permitted water right on the Willamette River as a future source. TVWD also owns a portion of the Willamette River Water Treatment Plant (WRWTP) located in Wilsonville. In 2007, TVWD assigned its water right to the WRWC, and the Oregon Water Resources Department issued the Final Order extending WRWC's Willamette River Water Right Permit until October 1, 2047.

These water rights will be used in conjunction with the District's development of the Willamette Water Supply Program (WWSP) over the next decade. The WWSP is a key theme for this Adopted 2019-21 Budget and future budgets. (See Section 2 - Budget Message page 2-7, Section 13 and Sections 15-18 for more information.) The WWSP website www.ourreliablewater.org provides additional detail.

The District's transmission and distribution system totals 750 miles in length, with pipelines ranging from 2 to 60 inches in diameter. The District has a total of 23 covered tanks in service with a combined storage capacity of 67 million gallons (MG) as well as 12 pump stations. All major pump stations and reservoirs are equipped with Supervisory Control and Data Acquisition (SCADA) equipment to monitor and control system operations.

CUSTOMER BASE AND ECONOMIC PROFILE

Substantially all of TVWD operating revenues are derived from the sale of water to residential, commercial and industrial customers. The District is 94.8% residential & multifamily, with the remaining 5.2% of customers classified as commercial, production and irrigation customers. Water is sold wholesale to other neighboring water providers through wheeling arrangements. As shown below, on an annual basis, water sales by volume are about 68% residential/multifamily, and 32% commercial and other non-residential customer classes. Revenue from residential customers comprises about 53% of total water sales revenue, with the remainder of revenue generated from other customer classes. The table below provides water consumption and sales by customer class for FY 2019.

Customer Class	Consumption/ CCF (1)	Percent Water Sales	Annual Revenue (Fixed & Volume Charges)	Percent Water Sales Revenue
Residential	4,881,529	48.3%	\$ 36,939,636	53.2%
Multifamily	2,036,097	20.1%	11,582,309	16.7%
Commercial	1,558,435	15.4%	9,664,417	13.9%
Production	955,576	9.4%	4,813,591	6.9%
Fireline	1,372	0.0%	2,533,309	3.6%
Irrigation	619,937	6.1%	3,833,497	5.6%
Temp Irrigation	9,251	0.1%	13,313	0.02%
Wholesale	52,280	0.5%	65,971	0.1%
Total	10,114,477	100%	\$ 69,446,042	100%

Note 1 CCF = 100 cubic feet. 1 CCF = 748 Gallons

Source: Tualatin Valley Water District, records, June 30, 2019 (unaudited)

The table below provides a listing of the District’s ten largest customers in FY 2019, their water usage in CCF during FY 2019 and their water usage as a percent of total customer usage in the District. The District is proud to be home to the Nike World Headquarters, two large high technology manufacturing facilities, a food processing firm and a major regional hospital.

LARGEST TVWD CUSTOMERS

CONSUMER	Consumption (CCF)	Percentage of Total District
Intel Oregon	314,707	3.11%
Maxim Integrated Products Inc	300,061	2.97%
Reser's Fine Foods	139,572	1.38%
Nike Inc	137,072	1.36%
Providence Health Systems	95,830	0.95%
Heritage Village Mobile Park	64,314	0.64%
Tualatin Hills Park & Recreation District	58,001	0.57%
Panzer Nursery	57,230	0.57%
Deveraux Glen Apartments	56,590	0.56%
Forest Ridge Apartments	54,620	0.54%
TOTAL	1,277,997	12.64%

Source: Tualatin Valley Water District records (unaudited)

The region the District serves continues to fare better than the state of Oregon as a whole for employment and income. Unemployment statistics are unavailable for the District, however, as of June 2018, the unemployment rate for Washington County stood at 3.2% compared to 4.0% for the state. This is the tenth year in a row for improved employment data. Business services, manufacturing, trade, and transportation, showed the most growth during the past year. Employment in construction and leisure/hospitality services also have seen improvements while government and education have remained relatively flat.

Washington County also enjoys the highest median household income in Oregon. Based on the most recent data available (2016), the county’s per capita income ranked first at \$69,743 and is almost 31% higher the state-wide median household income. The District is fortunate to serve one of the most economically viable areas of the state.

WATER RATES AND TYPICAL BILLS

The District’s water rate structure is based on a two-tier inclining block, which is common in the industry. Single-family residential customers are charged the higher block two rate after the first 14 CCF within a billing cycle. (1 CCF or hundred cubic feet = 748 gallons). All other customers classes, including multifamily and commercial, are assessed the higher block two rate for any water use in excess of 140% of their water volume based on a 12-month moving average calculated for each customer.

The District’s Board of Commissioners adjusts water annually following a public notification process and after conducting a public hearing. More recently, the Board has adopted annual rate increases for a two-year period to match its biennial budget cycle. Revised water rates go into effect each November 1st following the summer watering season.

More information on the District’s water rates – including current rates in effect can be found on the District’s website:

- Single-Family Residential rates:
<https://www.tvwd.org/customer-services/residential-water-rates.aspx>

- Commercial rates and all other customer classes:
<https://www.tvwd.org/district/page/commercial-water-rates>

The table below illustrates a typical monthly bill over the past seven years for a single-family residential customer, which represent about 93% of the District’s customer base. All water purchased in the table below is billed at the block one rate. Seasonal summer bills may be higher based on the water use for each customer.

Typical Single Family Residential Customer Bill (1)						
Effective Nov 1	Fixed Charge		Volume Charge		Total Monthly Bill	Monthly Increase
2018	\$	15.83	\$	36.61	\$ 52.44	\$ 6.22
2017		13.95		32.27	46.22	5.51
2016		12.29		28.42	40.71	5.13
2015		10.73		24.85	35.58	5.01
2014		9.22		21.35	30.57	2.96
2013		8.43		19.18	27.61	1.42
2012		7.64		18.55	26.19	----

Note 1: Based on 5/8” meter and 7 CCF of water volume per month. Most District customers are billed on a bi-monthly basis. The charges are shown as a monthly cost for ease of comparison to other utility services.

More information on the District’s financial reporting can be found on the District’s website:

1. **Biennial Budget** <https://www.tvwd.org/finance/page/budget>
2. **Annual Comprehensive Financial Reports**
<https://www.tvwd.org/finance/page/comprehensive-annual-financial-report-cafr>
3. **Long-Term Financial Plan** <https://www.tvwd.org/finance/page/financial-plan>
4. **Financial Policies**
https://www.tvwd.org/sites/default/files/fileattachments/finance/page/92/tvwd_financial_management_policies_-_march_2019.pdf

GLOSSARY

Adopted Budget: See Budget Phases.

Appropriation: The legal authorization to spend funds. The Board of Commissioners adopts a Resolution setting budget appropriation for the ensuing biennium. Expenditures cannot legally exceed appropriations, and appropriations lapse at the end of the biennium.

Approved Budget: See Budget Phases.

Aquifer Storage and Recovery (ASR): Pumping of winter water into an aquifer for recovery during summer peak season.

Assessed Value (AV): The value of a property, as determined by the Department of Assessment and Taxation. AV is used to compute the rate per \$1,000 needed to pay the District's General Obligation Debt. (**Note:** TVWD has no General Obligation Debt outstanding)

Asset Management: Maintaining data about equipment and property including maintenance activities, specifications, purchase date, expected lifetime, warranty information, service contracts, service history, spare parts, criticality (risk of failure), life cycle costs, and other information.

Average Daily Flow: The average flow in a system during a 24-hour period, expressed in million gallons per day (MGD), and determined for a multiple day period (i.e. month, quarter, year).

Audit: The annual review and report of the financial status and procedures of the District, performed by an outside auditor. The report addresses the financial condition of each fund and compares actual expenditure and revenues to budgeted amounts. The audit also reviews procedures for compliance with statutes.

Balanced Budget: Under Oregon Local Budget Law to be in balance, the resources in each fund must be equal to the expenditures and other requirements in that fund. OAR 150-294.352(1)(B).

Basis of Accounting and Budgeting: The District's financial statements and budget (except for debt service for the budget) are prepared using the accrual basis of accounting. Revenues are recorded at the time they are earned and expenses are recorded at the time liabilities are incurred. Accounting records are maintained on a governmental fund accounting basis, and the resolution authorizing appropriations is adopted by fund each year in the categories of operating expenses, debt service, capital outlay, contingency and operating transfers for each fund. Debt service is budgeted on a cash basis for the purpose of fully disclosing the annual debt obligations of the District. Depreciation and amortization are not budgeted.

Benchmarking: A systematic process of searching for best practices, innovative ideas, and highly effective operating procedures that leads to superior performance – and then adapting those practices, ideas and procedures to improve the performance of one's own organization.

Biennial Budget Period: A two-year budget period. For this budget, the period begins at 12:01 am July 1, 2011 and ends at midnight June 30, 2013

GLOSSARY (Continued)

Board of Commissioners: The five-member policy board for the District, elected by the District’s residents to staggered four-year terms.

Bond Coverage: Bond covenant to maintain coverage of 1.25 times Annual Debt Service of Net Revenues after payment of Revenue Bond Debt Service.

Bonded Debt: Debt that is in the form of Revenue Bonds. Repayment is made by operating revenues and/or capital contributions.

Bond Rating: A rating based on the issuer’s perceived ability to repay a bond debt. The District is currently debt freed, however, has an indicative bond rating with Standard and Poor’s (S&P) of AA+ as part of the application process for the District’s Water Infrastructure Financing & Innovation Act (WIFIA) loan. The District will be required to obtain bond ratings from two nationally recognized rating agencies prior to closing the WIFIA loan.

Budget: A written report showing the local government’s comprehensive financial plan for one budget period. It must include a balanced statement of actual revenues and expenditures during each of the last two budget periods, and estimated revenues and expenditures for the current and upcoming budget periods.

Budget Committee: The Board of Commissioners and five citizens (appointed by the Board to two and four-year terms), who review the Proposed Budget. Their action on the Proposed Budget results in the Approved Budget.

Budget Message: Explanation of the budget and the District’s financial priorities prepared by the Budget Officer.

Budget Officer: The person appointed by the Board of Directors to assemble budget material and information and to prepare the proposed budget.

Budget Period: A budget may be prepared for 12 months (a fiscal year) or 24 months. TVWD budgets over a 24-month (biennial budget) period.

Budget Phases: Local budget law and District procedures require that the adopted budget for each fiscal year or biennium be the result of a process that requires input by the Board of Commissioners, management, and citizens before final appropriations are authorized. These steps include:

- ***Requested Budget*** – The initial “in-house” development of the budget components. The requested budget is usually presented to the budget committee in workshops to solicit their input in the process.
- ***Proposed Budget*** – The document developed by District management based on the results of the internal review process and input from the budget committee members. The Proposed Budget is reviewed by the Budget Committee in a public hearing, where they take testimony, deliberate, and make amendments if necessary. When deliberations and amendments are complete, the committee votes to approve the budget and recommend it to the Board for adoption.

GLOSSARY (Continued)

- **Approved Budget** – Once the budget has moved to approved status it can only be amended by the Board. A financial summary is published, and the Approved Budget is submitted to the Board of Commissioners for adoption.
- **Adopted Budget** – In this final phase of the budget process the Board holds a public hearing to take testimony and hold deliberations. Amendments at this point are limited to \$10,000 or 10 percent (whichever is greater) per fund. The Board adopts a budget resolution to authorize appropriations.

Budget Resolution: The Resolution adopted by the Board of Commissioners that sets appropriations for the ensuing biennium. Expenditures cannot legally exceed appropriations, and appropriations lapse at the end of the biennium.

CCF: One hundred cubic feet. Equal to 748 gallons. A measure of volume commonly used by the water industry.

Capital Improvement Plan (CIP): Detailed description of projects and capital expenditures used to plan for financial requirements and construction needs over a six-year period. The District's CIP includes projects needed for additional source development, expanded storage facilities, distribution systems, & capital replacement projects.

Capitalization: The accumulation of costs to acquire or construct a fixed asset.

Capital Outlay: Items that generally have a useful life of one or more years, such as machinery, land, furniture, equipment or buildings. Items must exceed the District's capitalization threshold of \$7,500 and a life in excess of one year.

Chart of Accounts: A coding structure that defines all financial transactions of the District. The Chart is sufficiently detailed to track individual revenues and expenditures for any given program, department or fund.

Commodity Charge: The portion of a customer's water bill based on their usage, and measured by each account's water meter.

Computerized Maintenance Management System (CMMS): A CMMS software package maintains a database of information about an organization's maintenance operations. Typical functionality includes a work order system, asset management, and inventory control. Overall goals of CMMS are to improve efficiency and asset lives. The District's CMMS will be integrated with other systems including GIS, utility billing and the financial system.

Contingency: An appropriated amount in a given fund that can be used for the purchase of Personal Services, Materials and Services, or Capital Outlay. Expenditure of the contingency fund does not require a supplemental budget or public hearing, but does require Board action to transfer the contingency to line item appropriations(s).

Coverage Ratios: See Bond Coverage.

GLOSSARY (Continued)

Customer Information System (CIS): An application providing utilities an integrated environment to perform functions of the meter to cash cycle, (i.e. manage customer account information, generate billings, track consumption information, provide call center support, and handle customer inquiries.

Department: An administrative subdivision of the District charged with carrying on one or more major services or functions. TVWD's departments include Office of the Chief Executive, the Office of Community and Intergovernmental Relations, Finance and Information Technology, Engineering Services, Field Operations, and Customer and Support Services.

Division: An area of District activity organized as an administrative or functional unit. Each TVWD department includes a general services division, which includes overall department management and administrative support, departmental-wide material & services such as travel/training and business expense, and capital outlay. Most TVWD departments also have one or more additional divisions to track specific functional activities within the department.

Enterprise Fund: A fund established to account for operations that are financed and operated in a manner like private business enterprises. Enterprise utilities are usually self-supporting.

Environmental Protection Agency (EPA): An independent agency in the Executive branch of the federal government charged with protecting the natural environment. Primary functions are to abate and control pollution, conduct research, monitor, set standards and enforce pollution control, and support research and antipollution activities by other governmental, private and public entities. The EPA also manages the Water Infrastructure Finance & Innovation Act (WIFIA).

Equivalent Residential Unit (ERU): A 5/8" x 3/4" meter used as the basis for calculating the greater demand from larger meter sizes.

Fiscal Year: The period from 12:01 am July 1 to midnight the following June 30.

Fixed Charge: The portion of a customer's bill that is constant each month, based on meter size.

Fund: An independent budgetary, fiscal, and accounting entity used to track the expenditure and collection of appropriations for a specific purpose. The District has six budgetary funds for operations, reserves, debt management and construction.

Fund Balance: In the case of funds subject to budgetary accounting (which is the case for all of the District's funds) "Fund Balance" represents the excess of the fund's assets and estimated revenues for the period over its liabilities, reserves, and appropriations for the period.

General Obligation Debt: Long-term debt backed by the full faith and credit of the District's ratepayers based on assessed value of real property. The District has not issued any G.O. debt since 1993 and has paid off all outstanding issues.

Geographic Information System (GIS): is a system that captures, stores, analyzes, manages and presents data with reference to geographic location data.

GLOSSARY (Continued)

Gravity Flow: Water flowing by gravity from a higher to a lower elevation.

Line-item budget: The traditional form of budgeting, where proposed expenditures are based on individual objects of expense within a department.

Master Plan: The Water Master Plan adopted December 2018 to evaluate the District's water system and capital improvement needs on a long-term basis.

Oregon Administrative Rule (OAR): Written to clarify Oregon law, and has the authority of law.

Oregon Local Budget Law (ORS 294.305 – 294.565): State statutory provisions that require local governments and most special districts, including the District, to prepare and adopt annual or biennial budgets following a very specific process. Establishes standardized procedures for budget preparation and public notices; encourages citizen involvement before formal adoption including use of Budget Committees; and specifies procedures for amending a budget after adoption (Supplemental Budgets). Requirements of Oregon Local Budget Law are further specified in OAR 150-294.

Oregon Revised Statute (ORS): Oregon laws established by the legislature.

Oregon Department of Human Service's Drinking Water Program: A state department that administers and enforces drinking water quality standards for public water systems in the State of Oregon.

Peaking Rate: The rate charged for water used more than the normal allowable bi-monthly amount.

Project: A budget unit relating to a defined set of improvements or a study.

Property taxes: Ad valorem property tax imposed by a local government. In the past, TVWD levied ad valorem property taxes to repay General Obligation bonded debt. TVWD came off the tax rolls in 2005.

Proposed Budget: See Budget Phases.

Pump Station: A pumping facility that lifts water flow to a high enough elevation that it can flow by gravity.

Rate Stabilization Account: Account established for Revenue Bond Debt Service coverage purposes. Transfers to or from this account may be used to maintain bond covenant coverage ratios.

Requested Budget: See Budget Phases.

Reserve Fund: Established to accumulate money from one budget period to another for a specific purpose.

Resolution: An order of the Board of Commissioners. A resolution is required to formally adopt the budget.

Resources: Estimated beginning fund balances on hand at the beginning of the budget period, plus all anticipated revenues during the budget period.

Revenues: Revenues of the District available for expenditure in programs and projects.

GLOSSARY (Continued)

Revenue Bond: Long-term debt paid by revenues generated from water rates, system development charges and other available and authorized enterprise resources.

Safe Drinking Water Act (SDWA): The Act is the main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

Service connections: The physical connection of plumbing appurtenances, connecting the water main to the property line of the account being served.

Supplemental budget: Prepared to meet unexpected needs or to spend revenues not anticipated at the time the regular budget was adopted.

System Development Charge (SDC): A one-time fee charged by the District for new connections to the water system to cover the cost of developing new sources of supply, and storage and transmission facilities. This fee is charged to new customers to help mitigate the cost of financing new facilities, and to buy into the excess capacity paid for by existing ratepayers.

Transfers: Amounts distributed from one fund to finance activities in another fund. Shown as a requirement in the originating fund and a resource in the receiving fund.

Unappropriated Ending Fund Balance: Amount set aside in the budget to be used as a cash carryover to the next period's budget, to provide the local government with a needed cash flow until other money is received. This amount cannot be transferred by resolution or used through a supplemental budget during the period in which it is budgeted, unless there is a significant calamity or natural disaster.

Water Infrastructure Finance & Innovation Act (WIFIA): A federal loan program administered by Environmental Protection Agency. Provides long-term, low-cost supplemental credit assistance under customized terms to creditworthy water and wastewater projects of national and regional significance. The District and City of Hillsboro successfully applied for a WIFIA loan for the Willamette Water Supply System.

Willamette Intake Facilities (WIF): an intergovernmental agreement whose members include the cities of Beaverton, Hillsboro, Sherwood, Tigard, Tualatin, Wilsonville, and TVWD. 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

Willamette Water Supply System (WWSS): an intergovernmental agreement among the cities of Beaverton, Hillsboro, and TVWD. 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.

ACRONYMS AND ABBREVIATIONS

Acre-ft	Acre feet
APWA	American Public Works Association
AMR	Automated Meter Reading
ASCE	American Society of Civil Engineers
ASR	Aquifer Storage and Recovery
AWWA	American Water Works Association
BMP	Best Management Practice
BRJOC	Barney Reservoir Joint Ownership Commission
CAFR	Comprehensive Annual Financial Report
CARV	Combination Air Vacuum Relief Valve
CCF	One hundred cubic feet (one CCF equals 748 gallons of water)
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIMP	Capital Improvement Plan (acronym used by the Joint Water Commission)
CIP	Capital Improvement Plan
CMMS	Computerized Maintenance Management System
CPI	Consumer Price Index (Inflationary Measurement)
CWA	(Federal) Clean Water Act
CWS	Clean Water Services
ENG	Engineering Services Department
EPA	(United States) Environmental Protection Agency
ERU	Equivalent Residential Unit
ETO	Energy Trust of Oregon
FIN	Finance and Information Technology Department
FTE	Full Time Equivalent
FY	Fiscal Year
GASB	Governmental Accounting Standards Board
GF	General Fund
GFOA	Government Finance Officers Association
OGFOA	Oregon Government Finance Officers Association
GHG	Greenhouse Gas
GIS	Geographic Information System
GO	General Obligation (as in General Obligation Bonds)
GPD	Gallons per Day (unit of flow measurement)
GPCPD	Gallons per Capita per Day
GPM	Gallons per Minute (unit of flow measurement)
HRA	Health Reimbursement Account
HVAC	Heating, Ventilation, Air Conditioning

ACRONYMS AND ABBREVIATIONS (Continued)

IAP	Individual Retirement Account Plan (part of Public Employees Retirement System)
IGA	Intergovernmental Agreement
IT	Information Technology
IWRM	Integrated Water Resources Management
JWC	Joint Water Commission
Logos	Name of the District's financial software system provided by New World Systems
M&S	Materials and Services
MG	Million Gallons
MGD	Million Gallons per Day
N/A	Not available or does not apply
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
OSHA	Occupational Safety & Health Administration
PCI	Purchasing Card Industry
PERS	Public Employee Retirement System
PPO	Preferred Provider Organization
PRV	Pressure Reducing (or Relief or Regulating) Valve
PSWCC	Partners for a Sustainable Washington County Community
PWB	(City of) Portland Water Bureau
S&P	Standard & Poor's
SAS	Statement of Auditing Standards
SCADA	Supervisory Control and Data Acquisition
SDC	System Development Charge
SWM	Surface Water Management
TBWSP	Tualatin Basin Water Supply Project
THPRD	Tualatin Hills Park and Recreation District
TVID	Tualatin Valley Irrigation District
TVWD	Tualatin Valley Water District
UGB	Urban Growth Boundary
VFD	Variable Frequency Drive
WIFIA	Water Infrastructure Finance & Innovation Act
WCSL	Washington County Supply Line
WIF	Willamette Intake Facilities
WRWC	Willamette River Water Coalition
WWSP	Willamette Water Supply Program
WWSS	Willamette Water Supply System



TUALATIN VALLEY

WATER DISTRICT

This is the **Second** publication in a biennial series of financial communication tools:

2019 - 2020 Financial Plan (Issued May 2019)

2019 - 2021 Adopted Budget (Issued June 2019)

Comprehensive Annual Financial Report (CAFR) for the FY ended June 30, 2019 (Planned for Fall 2019)

2020 - 2021 Financial Plan (Planned May 2020)

Comprehensive Annual Financial Report (CAFR) for the FY ended June 30, 2020 (Planned for Fall 2020)

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