CALL TO ORDER – 6:04 PM

Budget Committee Members Present: Commissioner Bernice Bagnall; Commissioner Jim Doane, PE; Commissioner Jim Duggan, PE; Carl Fisher; Craig Hopkins; Marilyn McWilliams (arrived at 6:19 p.m.); Commissioner Todd Sanders; John Velehradsky, PE (retired); Mike Whiteley, PE

Budget Committee Member Absent: Commissioner Dick Schmidt

Staff Present: Tom Hickmann, PE, Chief Executive Officer; Paul Matthews, Chief Financial Officer/Budget Officer; Joe Healy, Senior Management Analyst; Justin Carlton, Financial Operations Manager; Shital Patel, CPA, Technical Services Accountant; Carrie Pak, PE, Chief Engineer; Joel Cary, Water Resources Division Manager; Matt Oglesby, Asset Management Division Manager; Pete Boone, PE, Water Operation Division Manager; Nick Augustus, PE, Engineering Division Manager; Clark Balfour, General Counsel; Dave Kraska, PE, Water Supply Program Director; Joelle Bennett, PE, Water Supply Program Assistant Director; Lisa Houghton, CPA, WWSP Finance Manager; Andrew Carlstrom, Customer Service Manager; Andrea Watson, Communications and Public Affairs Supervisor; Justin Dyke, Outreach and Engagement Coordinator; Tim Boylan, IT Services Director; Debbie Carper, District Recorder

Other Attendees: Tom Bloomer, PE, Peterson Structural Engineers

AGENDA

A. Introductions and Budget Committee Orientation – Paul Matthews, Budget Officer

Mr. Matthews reviewed the agenda for the workshop and asked if there were any follow-up questions from the first workshop (see attached presentation). There were none. Next, he reviewed staff’s goals for the second workshop.

Mr. Hickmann said the District is at a crucial point as it enters a heavy construction phase and prepares for a regional operations phase. He reminded the Budget Committee of the inherent uncertainty the District faces, including the levels of financial accuracy dependent upon stages of project definition, before briefly mentioning the priorities driving the next budget biennium.

[Recorder’s Note: Budget Committee Member Marilyn McWilliams arrived at 6:19 p.m.]
B. Presentation of District’s Financial Performance

Mr. Matthews reviewed the District’s financial management process. He said the District’s financial performance revolves around expenditures, revenue and cash flow, with the addition of debt in future biennia. He provided data on all three, covering cumulative operating expenditures, cumulative capital expenditures, water sales revenue, system development charge revenue and the District’s cash position.

Next, Mr. Matthews outlined regional unemployment data before describing the number of customers in shutoff status and what that translates to in dollar value and average length of time bills are outstanding. The District maintains GIS-based maps which present the locations within the District where customers are struggling the most in paying their bills. All this information culminates in key findings that will shape the next biennial budget.

Finally, he described the Board-approved financial strategy, including projected water rate increases. The rate setting process will occur this summer.

In response to questions, Mr. Matthews said staff hypothesizes the decrease in water sales revenue is due to a combination of the pandemic, a reaction to increased water rates, recent weather and what is happening in the regional economy. He also said revenue forecasts include projected higher density development with the accompanying trend of newer construction using more water efficient fixtures.

Mr. Matthews reviewed the Oregon local budget process, explained the inherent appropriations categories and described how joint ventures have modified the District’s budget hierarchy. At the next workshop, staff will present more information on how money moves between these funds. He concluded his presentation with overall personnel services trends that have affected the budget.

C. Presentations by Departments/Divisions:

- Customer Services – Andrew Carlstrom, Customer Service Manager

Mr. Carlstrom reviewed the divisions within his department and listed the goals for Customer Services in the coming biennium: modernization, increasing feedback through surveys and staff development.

He reviewed the personnel services budget request and said the changes relate to turnover in three divisions with the increase in general services attributed to benefits assumptions related to the Business Analyst vacancy prior to filling the position. One of the limited duration positions for the Customer Information System (CIS) project was eliminated by hiring a consultant instead.

Next, Mr. Carlstrom reviewed the materials and services budget request and said the increases in general services reflect the anticipated advanced metering infrastructure (AMI) strategy development, additional training and the surveys initiative while also including reductions in
conservation rebates. The reductions in customer service and utility billing reflect increasing numbers of customers using electronic billing, reducing the need for printing and mailing. He noted the leak adjustment budget continues its upward trend. Field customer service is increasing due to meter maintenance resulting from a recent meter box assessment project. Reduction in communications is due to fewer printed materials.

He said there will be no requested capital outlay following the conclusion of the data cap (data capture devices which are the meter reading handheld electronic devices) replacement budgeted in the current biennium. The CIS is listed in the District’s Capital Improvement Program (CIP) rather than in capital outlay.

In response to a question, Mr. Carlstrom said the budget request for leak adjustments is $787,000. Mr. Matthews said he will provide the current budgeted amount at the next workshop; as water bills have increased, corresponding leak adjustment costs have risen as well.

Mr. Carlstrom provided an update on the CIS project, which is designed to better facilitate the meter to cash cycle. He summarized the project and provided a cost estimate. Mr. Carlstrom said additional resources were needed to meet the aggressive implementation schedule. He reviewed the project lifecycle, briefly touched on objectives of the project and emphasized the constraints that accompany the project scope, schedule and budget.

In response to a question, he said the temporary, project meeting space is still onsite and will be used again once District staff can return to the office.

Mr. Carlstrom described AMI and listed its benefits. Mr. Hickmann said the City of Bend fully implemented AMI in 2012 and since that time, Bend staff has notified more than 14,000 customers of leaks. Leaks can often be detected, and customers notified, on the same day they occur. AMI provides a repository of data valuable to both staff and customers. Mr. Carlstrom said AMI is integral to the modernization of the District’s meter to cash cycle.

Finally, he described the surveys initiative to be led by communications staff.

- Engineering and Operations – Carrie Pak, PE, Chief Engineer

Ms. Pak noted in renewing the lease for the CIS temporary meeting space, staff was able to negotiate a lower rate.

She provided an overview of her department’s budget for the next biennium, including the goals of continuing to deliver high-quality water, build an asset management program, prepare for the operation of the Willamette Water Supply System (WWSS) and increase staff by two positions.

Ms. Pak said additional staff requests do not significantly change the personnel services budget.
The additional requests in materials and services relate to four initiatives: professional services to complete the development of the asset management program, condition assessments for reservoirs and pump stations to support that program, a geographic information system (GIS) master plan update and work needed to meet the latest regulatory requirements resulting in the revision to the Lead and Copper Rule (LCR). Specifically, increases in the Water Resources Division budget result from the need to increase personnel for water quality data management solution implementation to meet the needs of the District and future WWSS operations. Construction and maintenance increases are due to the need to secure contract services as well as demolish the Cornell and Bonny Slope reservoirs to surplus the properties to sell as buildable sites.

The increase in capital outlay is due to $300,000 for project management software as part of staff project management training.

Budget Committee members expressed appreciation for receiving the hard copy information with more detailed information on the budget requests and CIP.

Ms. Pak described CIP objectives, gave an overview of District water distribution system assets and said CIP projects have several drivers: the Water Master Plan, Supervisory Control and Data Acquisition (SCADA) Master Plan, Asset Management Plan as well as the needs of staff and other agencies and developers.

In response to a question, staff said the 158th Avenue (near Highway 26) electricity generating station is still in service, providing energy for onsite SCADA. The other electricity generating station at the Center Street facility still generates electricity that is sold to PGE for use in the electrical grid.

Ms. Pak reviewed the main information covered in CIP fact sheets that were provided to the Budget Committee and said if additional federal funding sources are secured, that information would be added to the fact sheets. She described how projects are prioritized and tied to criticality ratings before listing the infrastructure needs under each level of criticality. Next, Ms. Pak gave an overview of some of the necessary and completed CIP projects. Finally, she reviewed CIP project categories and the funding requests for each category and noted the fact sheet page number references for applicable project. She said the development of the asset management program will heavily shape future CIP requests.

- Water Supply – David Kraska, PE, Water Supply Program Director

Mr. Kraska gave an overview of his department’s budget. He explained that the decrease in personnel services relates to deferring filling three positions.

His presentation shifted to the Willamette Intake Facilities (WIF) and WWSS funds. He reiterated the Willamette Water Supply Program (WWSP) mission and provided an overview of the WIF and how it interrelates with the WWSS. Capital spending on both will dramatically increase in the near-term, as influenced by a variety of external factors.
In response to a question, Mr. Kraska said costs outlined in this portion of his presentation are shared by all involved partners. TVWD is the managing agency who appropriates all the funds and is in turn reimbursed by partners.

Mr. Kraska explained the annual costs and schedule update process to develop the WWSP “baseline” for the year. He described how costs and schedule risks were managed in producing the latest baseline, which included a few WWSS project and staffing deferrals.

He provided a reminder of what is involved in completion of the WIF and gave an update on the construction cost estimate and project schedule before showing photos of some of the completed and current project elements. Next, he provided a similar overview of the WWSS, including a map of the system, a chart of project delivery progress, the construction schedule, work planned for the upcoming biennium and cost shares between TVWD and its partners. Mr. Kraska concluded his presentation with information on the benefits WWSP has had on the regional economy.

D. Closing Remarks – Paul Matthews, Budget Officer

Mr. Matthews provided a reminder of upcoming Budget Committee meetings.

ADJOURNMENT

There being no further business, President Bagnall adjourned the workshop at 8:39 p.m.

Bernice Bagnall, President

Todd Sanders, Secretary
2021-23 Biennial Budget Committee Workshop

Workshop #1: March 23, 2021
Workshop #2: April 8, 2021
Workshop #3: April 22, 2021
Budget Committee Meeting and Public Hearing: May 25, 2021

Budget Committee Workshop #2 Agenda

Opening
• Questions from last workshop
• Review of workshop goals
• Comments from the CEO
• Update on financial performance and strategy

Overview of Department Requests
• Customer Service
• Engineering/Operations
• Water Supply Program

Closing
• Questions
• Next steps and adjournment
Questions from Workshop #1

Budget Committee Workshop #2 Agenda

Overall Goals

• Discuss assumptions for budget request
• Answer or gather questions from the Budget Committee
• Do not deliberate or make decisions
TVWD is in Transition

Suburban Water Provider Phase
- Serve customers water purchased under wholesale contracts
- Manage a complex transmission and distribution system
- Prepare for the WWSP Construction Phase

WWSP Construction Phase
- Serve customers water purchased under wholesale contracts
- Manage a complex transmission and distribution system
- Manage the construction of a $1.3 billion program
- Prepare for the Regional Operations Phase

Regional Operations Phase
- Serve customers water produced by WWSS/WIF
- Manage a complex transmission and distribution system
- Manage the newly created WIF and WWSS

But Uncertainty Persists

Things you know
Things you know you don’t know
Things you don’t know you don’t know
Things you thought you knew but didn’t
Construction Risks Exists

<table>
<thead>
<tr>
<th>Estimate Class</th>
<th>Expected Accuracy Range</th>
<th>Level of Project Definition</th>
<th>Typical Purpose</th>
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<td>Low: -20% to -50%</td>
<td>0% to 2%</td>
<td>Concept Screening</td>
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<tr>
<td>Class 2</td>
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<td>30% to 70%</td>
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<td></td>
<td>High: +3% to +15%</td>
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Source: The Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R-97.

Priorities for the Coming Biennium

<table>
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<tr>
<th>Human Investment</th>
<th>Intergovernmental Relations</th>
<th>Business Intelligence</th>
<th>Efficiency Through Modernization</th>
<th>Current Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prepare employees to be successful in meeting the future requirements of the District.</td>
<td>• Improve relationships with local governments and neighboring utilities to solidify TVWD as a necessary and desired regional resource.</td>
<td>• Improve planning and the District's ability to respond by developing actionable information from disparate sources of data.</td>
<td>• Improve the service levels provided to our customers and find long-term strategies to lower the cost of doing so.</td>
<td>• Successfully execute and complete the initiatives currently underway.</td>
</tr>
</tbody>
</table>
Update on Financial Performance and Strategy

2021-23 Biennial Budget Committee Workshop

District Financial Management Process

FY 2020
- 7.8 Billion Gallons of Water
- Over 6,000 water quality samples collected
- 630,000 Meter Reads
- 540,000 Bills/Notices Generated
- 752 Miles of Pipe Maintained
- 3,747 Fire Hydrants Maintained

- Master Plan
- Customer Forecast
- Operations Plan
- Capital Improvement Plan
- Debt Plan
- Reserves and Fund Balances
- Revenue Requirements

- Strategic Plan
- Financial Plan
- Capital Improvement Plan
- Resources and Requirements

Deliver
Financial Plan
Rates
Budget

Over sight
Over sight
Over sight
Over sight

Revenue Requirements
Customer Forecast
Customer Classification
Block Structure
Conservation
Fixed and Volume Charges
Elements of Financial Performance

Expenditures
- Operating expenditures
- Capital expenditures
- Debt service

Revenue
- Water rates and other operating revenue
- SDCs

Cash Flow
- Collections
- Working capital
- Capital reserves

Cumulative Operating Expenditures

Note: These graphs are based on unaudited estimates.
Cumulative Capital Expenditures

Note: These graphs are based on unaudited estimates.

Customer Demands Remain Soft
Comparison of Gallons Per Capita Per Day

Daily Avg Gallons per Capita (12-month rolling avg.)
Historical Avg (5-yr rolling)
**Cumulative Water Sales Revenue**

![Graph showing cumulative water sales revenue with actual and budgeted lines.]

*Note: These graphs are based on unaudited estimates.*

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**Water Sales Revenue**

![Bar chart showing water sales revenue with favorable and unfavorable comparisons.]

*Note: These graphs are based on unaudited estimates.*
System Development Charge Revenue

Note: These graphs are based on unaudited estimates.
District’s Cash Position

Note: These graphs are based on unaudited estimates.

Improvements in Labor Market Slows

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<td>3.3</td>
<td>3.5</td>
<td>14.9</td>
<td>14.3</td>
<td>11.6</td>
<td>10.4</td>
<td>8.5</td>
<td>7.9</td>
<td>6.8</td>
<td>6.0</td>
<td>6.4</td>
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<td>3.2</td>
<td>14.3</td>
<td>14.2</td>
<td>11.6</td>
<td>11.0</td>
<td>8.9</td>
<td>8.2</td>
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<td>6.2</td>
<td>6.1</td>
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<td>Washington County</td>
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<td>2.7</td>
<td>2.8</td>
<td>12.2</td>
<td>12.2</td>
<td>9.9</td>
<td>9.2</td>
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<td>5.8</td>
<td>5.1</td>
<td>5.4</td>
<td>5.6</td>
<td>5.4</td>
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</table>
Number of Customers in “Shutoff” Status

Accounts Receivable of Customers in “Shutoff” Status
Age of Accounts Receivable of Customers in “Shutoff” Status

![Bar chart showing the age of accounts receivable in days for different months from April 2020 to February 2021.]

Locations of Struggling Customers

Heat Map

- Based on District’s GIS
- Shows density of dollar balances of bills by location
- Areas of most concern are bluer in color
District’s Financial Performance 2021-23 Biennium

Key Findings

- Operating expenditures below budget
- Capital expenditures below budget
- Water sales revenue below projections
- System development charges exceed plan, but slowing
- Projected ending fund balances higher than forecast
- Remain debt free -- $50 million in WIFIA Loan available
- Starting 2021-23 biennium with manageable challenges

Water Rate Forecast

Financial Strategy

- Board considered several financial strategies with various levels of financial risk
- Board approved financial strategy that lowered overall financial risk and overall costs to customers
- Financial plan will be published in May

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<tr>
<th>Effective Date</th>
<th>Typical Monthly Bill</th>
<th>Change</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td>Current (Nov 2020)</td>
<td>$56.33</td>
<td></td>
<td></td>
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<tr>
<td>Nov 2021</td>
<td>$61.65</td>
<td>$5.32</td>
<td>9.4%</td>
</tr>
<tr>
<td>Nov 2022</td>
<td>$67.48</td>
<td>$5.83</td>
<td>9.5%</td>
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</table>

1Single-family residential customer with 5/8-inch meter using 7 CCF per month
Budget Process and Highlights

Andrew Carlstrom
Manager, Customer Service

Oregon Local Budget Process

**Requested Budget**
- Management develops department-level requests

**Proposed Budget**
- Budget officer prepares Proposed Budget for Budget Committee Action

**Approved Budget**
- Budget Committee approves budget in for consideration for Adoption

**Adopted Budget**
- Board of Commissioners adopts budget and sets appropriations
Oregon Local Budget Appropriations Categories

Types of Appropriations

- Personnel Services
- Materials & Services
- Capital Outlay
- Special Payments
- Debt Service
- Interfund Transfers
- General Operating Contingency

Historical Budget Hierarchy

TVWD

Funds

Appropriations Categories

Personnel Services
Materials & Services
Capital Outlay
Special Payments
Interfund Transfers
General Operating Contingency
New Budget Hierarchy

TVWD
Funds
Appropriations Categories
- Personnel Services
- Materials & Services
- Capital Outlay
- Special Payments
- Interfund Transfers
- General Operating Contingency

Joint Ventures
Funds
Appropriations Categories
- Materials & Services
- Capital Outlay
- Special Payments
- General Operating Contingency

Budget Preparation Hierarchy

TVWD
Departments
Appropriations Categories
- Personnel Services
- Materials & Services
- Capital Outlay
- Special Payments
- Interfund Transfers
- General Operating Contingency

Joint Ventures
Funds
Appropriations Categories
- Materials & Services
- Capital Outlay
- Special Payments
- General Operating Contingency
Budget Updates

Personnel Services

- Increases in benefits costs have slowed
  - Health insurance rates declined by 2.3% at last renewal
  - PERS costs have been offset by:
    - Side account and match from Employer Incentive Fund
    - PERS reforms
    - Changing demographics
- Retirements
  - Newer employees generally cost less than those retiring
  - Often lower benefits costs
- Continue to verify assumptions

Questions and Answers
Customer Services

Customer Service Department

2021-23 Biennial Budget Committee Workshop
Customer Service

Customer Service Operating Budget

Modernization
- Meter to cash transformation
- CIS implementation
- AMI strategy

Feedback
- Surveys initiative
- Customer and employee feedback to inform decision making

Develop Staff
- Skills for transformation
- Internal training capacity

- Graph showing expenditures over time (2015-2017 actual, 2019-2021 budget, 2021-2023 proposed budget) for Personnel Services, Materials & Services, Capital Outlay, and FTEs.
## Requested Personnel Services

<table>
<thead>
<tr>
<th>Division</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
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</thead>
<tbody>
<tr>
<td>General Services</td>
<td>$1,005,351</td>
<td>$1,085,748</td>
<td>$80,397</td>
<td>8.0%</td>
<td>3.9%</td>
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<tr>
<td>Customer Service &amp; Utility Billing</td>
<td>3,435,492</td>
<td>3,389,110</td>
<td>(46,382)</td>
<td>-1.4%</td>
<td>-0.7%</td>
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<tr>
<td>Field Customer Service</td>
<td>3,618,604</td>
<td>3,567,646</td>
<td>(50,958)</td>
<td>-1.4%</td>
<td>-0.7%</td>
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<tr>
<td>Communications</td>
<td>986,237</td>
<td>996,059</td>
<td>9,822</td>
<td>1.0%</td>
<td>0.5%</td>
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<tr>
<td><strong>Department Totals</strong></td>
<td><strong>$9,045,684</strong></td>
<td><strong>$9,038,562</strong></td>
<td><strong>($7,122)</strong></td>
<td><strong>-0.1%</strong></td>
<td><strong>0.0%</strong></td>
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## Requested Materials & Services

<table>
<thead>
<tr>
<th>Division</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
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</thead>
<tbody>
<tr>
<td>General Services</td>
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<td>$586,591</td>
<td>$75,591</td>
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<td>7.1%</td>
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<tr>
<td>Customer Service &amp; Utility Billing</td>
<td>1,521,624</td>
<td>1,497,452</td>
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<td>Field Customer Service</td>
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<td>28,987</td>
<td>12.4%</td>
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<td>Communications</td>
<td>267,340</td>
<td>221,100</td>
<td>(46,240)</td>
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<td><strong>Department Totals</strong></td>
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<td><strong>$2,567,790</strong></td>
<td><strong>$34,166</strong></td>
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## No Capital Outlay Requested

<table>
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<tr>
<th>Division</th>
<th>2019-21 Budget</th>
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<th>Change</th>
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<tbody>
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<td>General Services</td>
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## Customer Service Department Summary by Division

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<tr>
<th>Division</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
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<tbody>
<tr>
<td>General Services</td>
<td>$1,556,851</td>
<td>$1,672,339</td>
<td>$115,488</td>
<td>7.4%</td>
<td>3.6%</td>
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<td>Customer Service &amp; Utility Billing</td>
<td>4,957,116</td>
<td>4,886,562</td>
<td>($70,554)</td>
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<td>Field Customer Service</td>
<td>3,852,264</td>
<td>3,830,293</td>
<td>($21,971)</td>
<td>-0.6%</td>
<td>-0.3%</td>
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<td>Communications</td>
<td>1,253,577</td>
<td>1,217,159</td>
<td>($36,418)</td>
<td>-2.9%</td>
<td>-1.5%</td>
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<td><strong>Department Totals</strong></td>
<td><strong>$11,619,808</strong></td>
<td><strong>$11,606,352</strong></td>
<td><strong>($13,456)</strong></td>
<td><strong>-0.1%</strong></td>
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### Customer Service Department Summary by Appropriation Category

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<td>Personnel Services</td>
<td>$9,045,684</td>
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<td>($7,122)</td>
<td>-0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Materials &amp; Services</td>
<td>2,533,624</td>
<td>2,567,790</td>
<td>34,166</td>
<td>1.3%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Capital Outlay</td>
<td>40,500</td>
<td>0</td>
<td>(40,500)</td>
<td>-100.0%</td>
<td>-100.0%</td>
</tr>
<tr>
<td><strong>Department Totals</strong></td>
<td><strong>$11,619,808</strong></td>
<td><strong>$11,606,352</strong></td>
<td><strong>($13,456)</strong></td>
<td><strong>-0.1%</strong></td>
<td><strong>-0.1%</strong></td>
</tr>
</tbody>
</table>

---

### Update on Customer Information System Project

2021-23 Biennial Budget Committee Workshop
CIS & the Water Utility Meter to Cash Cycle

A CIS is an application providing utilities an integrated environment to perform functions of the meter to cash cycle.

Source: Water Research Foundation, Report #4583

Meter to Cash

- Manage Customer Account Data
- Read Meters
- Calculate Consumption & Manage Rates
- Prepare and Deliver Bills
- Process & Record Payments
- Manage Credit & Collections
- Conduct General Ledger & Revenue Analysis

CIS Project Summary

- Partnership project between District and Clean Water Services
  - “The Partners” are sharing CIS costs, decision-making, and ownership
  - Foundation of modernizing meter-to-cash operations
  - Essential for future improvements including AMI
- The Partners completed a rigorous CIS selection/contracting processes
  - The new CIS provider is Open International
  - Open’s product is called “SmartFlex”
  - Go-live scope includes CIS, batch processing, customer portal
- The Partners are now implementing the solution
  - The implementation schedule is fast – aggressive schedule
  - Go-live is currently projected for Q1 2022
- Configuration, not customization!
  - The Partners are committed to changing processes, not the system
CIS Project Cost Estimate

<table>
<thead>
<tr>
<th>Component</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1: Selection</strong></td>
<td></td>
</tr>
<tr>
<td>- Professional services: requirements development, needs assessment, CIS vendor/product selection, contract negotiation, legal</td>
<td></td>
</tr>
<tr>
<td><strong>Phase 2: Implementation</strong></td>
<td>$9.5 million</td>
</tr>
<tr>
<td>- Software, professional services</td>
<td></td>
</tr>
<tr>
<td>- Professional services: project management, implementation, data conversion and integration, testing, training</td>
<td></td>
</tr>
<tr>
<td>- Internal project Labor</td>
<td></td>
</tr>
<tr>
<td>- Contingency</td>
<td></td>
</tr>
</tbody>
</table>

CIS Project Lifecycle: 2018 - 2022

1. Initiation✓
   - Needs assessment
   - TVWD/CWS partnership
   - Budget resources

2. Selection Phase✓
   - CIS vendor selection
   - Contract negotiation
   - Transition to implementation

3. Implementation Phase
   - Planning, design, construction, testing, training, go-live, stabilization

4. Ongoing Operations & Continuous Improvement
   - Operations under new CIS
   - Continue implementing improvement roadmap
### Why CIS? Key Project Objectives

1. **Address current and projected business needs**
2. **Provide improved system reliability**
3. **Increase customer satisfaction**
4. **Improve supportability through:**
   - Minimizing new system customization
   - Regular, vendor-provided technology updates
   - Complete legacy platform retirement
5. **Provide greater integration with key business systems**
6. **Manage risk through:**
   - Better controls
   - Data management, including customer information
   - Vendor support
7. **Provide a sustainable, predictable support cost model**

---

### CIS Triple Constraint: Scope-Schedule-Budget

- **Established Project Go-Live Scope**
  - CIS, batch processing, customer self-service portal
  - Foundation of modernizing meter-to-cash operations
- **Established Project Schedule**
  - 14.5-month implementation to go-live
  - 4-month post go-live stabilization period
- **Established Project Budget**
  - $9.5 million: implementation, third-party services, staff labor
  - Costs shared between Partners per intergovernmental agreement

*Due to COVID-19, CIS project implementation phase activity to date has been conducted entirely in a virtual environment.*
Advanced Metering Infrastructure (AMI)

What is Advanced Metering Infrastructure, or AMI?

- AMI is a system that collects time-differentiated consumption information.
- Rather than collecting one/two readings per month, an AMI system (with “smart meters”) is configurable to take meter data multiple times per day.
- Some of the benefits of an AMI system include:
  - Improved consumption information to customers
  - Automating the meter reading process
  - Reduced estimated reads
  - Reduced truck rolls to investigate reads
  - Improved leak detection
  - Reduced theft
  - System water loss and distribution information

Sources: Water Research Foundation, Report #4583, TVWD AMI Business Case
### TVWD AMI Initiative

- **AMI will be an integral component of modernizing TVWD’s meter to cash cycle.**
  - The purpose of the AMI initiative is to provide innovative AMI technologies that support the needs and expectations of TVWD customers and operations.
  - The new CIS is an integrated solution with AMI-required meter data management functionality built into the product.
  - AMI is one path for TVWD to achieve implementation of monthly billing, a key recommendation of the Rate Advisory Committee.

### TVWD AMI Initiative (continued)

- **An AMI implementation is a large project and a multiyear effort.**
  - The 2021 – 2023 includes funds for starting the project through development of the District’s AMI strategy: $200,000
  - Total project implementation cost estimate to be presented to Board after strategy development.
  - TVWD will pursue partnerships and external funding opportunities for AMI.
  - Like CIS, the AMI initiative will be a multidisciplinary effort within TVWD.
Surveys

2021-23 Biennial Budget Committee Workshop

The TVWD Surveys Initiative

- **Useful feedback is necessary to:**
  - Measure and understand the TVWD customer experience (Cx).
  - Measure and understand the TVWD employee experience (Ex).
  - Provide trend data for District decision making.

- **The surveys initiative in the 2021 – 2023 budget:**
  - Includes funds to be used for consultant and software in designing, delivering, and interpreting external and internal surveys.

- **TVWD will use external expertise as well as develop internal staff capacity.**
  - The Communications division will lead the surveys initiative, working with other District departments.
Questions and Answers

Engineering and Operations

TVWD crews working on a main replacement project.
Engineering and Operations Department

Carrie Pak, P.E.
Chief Engineer

Engineering and Operations Operating Budget

- Continue delivering high-quality water
- Asset Management Program
- WWSS Readiness
- Staff Development
  - Two new staff
    - SCADA Staff
    - Water Works Operator

![Expenditures Chart]

- Personnel Services
- Materials & Services
- Capital Outlay
- FTEs
### Requested Personnel Services

<table>
<thead>
<tr>
<th>Division</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Services</td>
<td>$558,748</td>
<td>$572,291</td>
<td>$13,543</td>
<td>2.4%</td>
<td>1.2%</td>
</tr>
<tr>
<td>System Operations</td>
<td>5,272,462</td>
<td>5,789,431</td>
<td>516,969</td>
<td>9.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Engineering</td>
<td>3,543,785</td>
<td>3,142,702</td>
<td>(401,083)</td>
<td>-11.3%</td>
<td>-5.8%</td>
</tr>
<tr>
<td>Water Resources</td>
<td>1,648,222</td>
<td>1,519,250</td>
<td>(128,972)</td>
<td>-7.8%</td>
<td>-4.0%</td>
</tr>
<tr>
<td>Asset Management</td>
<td>2,488,632</td>
<td>2,904,878</td>
<td>16,246</td>
<td>0.7%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Water Operations</td>
<td>535,207</td>
<td>573,517</td>
<td>38,310</td>
<td>7.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Construction &amp; Maint.</td>
<td>4,160,366</td>
<td>4,156,152</td>
<td>(4,214)</td>
<td>-0.1%</td>
<td>-0.1%</td>
</tr>
</tbody>
</table>

**Department Totals**

| Budget Totals          | $18,207,422 | $18,258,221 | $50,799 | 0.3% | 0.1% |

### Requested Materials & Services

<table>
<thead>
<tr>
<th>Division</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Services</td>
<td>$1,117,970</td>
<td>$2,029,246</td>
<td>$911,276</td>
<td>81.5%</td>
<td>34.7%</td>
</tr>
<tr>
<td>System Operations</td>
<td>990,900</td>
<td>965,150</td>
<td>(25,750)</td>
<td>-2.6%</td>
<td>-1.3%</td>
</tr>
<tr>
<td>Engineering</td>
<td>9,500</td>
<td>15,500</td>
<td>6,000</td>
<td>63.2%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Water Resources</td>
<td>1,117,323</td>
<td>1,363,301</td>
<td>245,978</td>
<td>22.0%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Asset Management</td>
<td>2,287,080</td>
<td>2,372,248</td>
<td>85,168</td>
<td>3.7%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Water Operations</td>
<td>191,000</td>
<td>181,500</td>
<td>(9,500)</td>
<td>-5.0%</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Construction &amp; Maint.</td>
<td>1,062,800</td>
<td>1,421,000</td>
<td>358,200</td>
<td>33.7%</td>
<td>15.6%</td>
</tr>
</tbody>
</table>

**Department Totals**

| Budget Totals          | $6,776,573 | $8,347,945 | $1,571,372 | 23.2% | 11.0% |
# Requested Capital Outlay

<table>
<thead>
<tr>
<th>Division</th>
<th>Budget</th>
<th>Change</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Services</td>
<td>$40,600</td>
<td>$32,900</td>
<td>81.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34.5%</td>
</tr>
<tr>
<td>Department Totals</td>
<td>$40,600</td>
<td>$32,900</td>
<td>81.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34.5%</td>
</tr>
</tbody>
</table>

# Engineering and Operations Department Summary by Division

<table>
<thead>
<tr>
<th>Division</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Services</td>
<td>$1,717,318</td>
<td>$2,734,872</td>
<td>$1,017,554</td>
<td>59.3%</td>
<td>26.2%</td>
</tr>
<tr>
<td>System Operations</td>
<td>6,263,362</td>
<td>6,744,581</td>
<td>481,219</td>
<td>7.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Engineering</td>
<td>3,553,285</td>
<td>3,158,202</td>
<td>(395,083)</td>
<td>-11.1%</td>
<td>-5.7%</td>
</tr>
<tr>
<td>Water Resources</td>
<td>2,765,545</td>
<td>2,882,551</td>
<td>117,006</td>
<td>4.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Asset Management</td>
<td>4,775,712</td>
<td>4,929,124</td>
<td>153,412</td>
<td>3.2%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Water Operations</td>
<td>726,207</td>
<td>755,017</td>
<td>28,810</td>
<td>4.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Construction &amp; Maint.</td>
<td>5,223,166</td>
<td>5,577,152</td>
<td>353,986</td>
<td>6.8%</td>
<td>3.3%</td>
</tr>
<tr>
<td><strong>Department Totals</strong></td>
<td><strong>$25,024,595</strong></td>
<td><strong>$26,781,499</strong></td>
<td><strong>$1,756,904</strong></td>
<td><strong>7.0%</strong></td>
<td><strong>3.5%</strong></td>
</tr>
</tbody>
</table>
Engineering and Operations Department Summary by Appropriation Category

<table>
<thead>
<tr>
<th>Appropriations Category</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Services</td>
<td>$18,207,422</td>
<td>$18,258,221</td>
<td>$50,799</td>
<td>0.3%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Materials &amp; Services</td>
<td>6,776,573</td>
<td>8,399,778</td>
<td>1,623,205</td>
<td>24.0%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Capital Outlay</td>
<td>40,600</td>
<td>123,500</td>
<td>82,900</td>
<td>204.2%</td>
<td>74.4%</td>
</tr>
<tr>
<td><strong>Department Totals</strong></td>
<td><strong>$25,024,595</strong></td>
<td><strong>$26,781,499</strong></td>
<td><strong>$1,756,904</strong></td>
<td><strong>7.0%</strong></td>
<td><strong>3.5%</strong></td>
</tr>
</tbody>
</table>

Capital Improvement Program

Objectives:
- Capacity improvements
- Replacement
  - Condition assessment
  - Age
  - Resiliency
- Relocation – Agency Driven
Water Distribution System Assets

- 752 miles of pipe (2 to 54 inches)
- 41 pressure zones serving elevations from 150 ft. to 990 ft.
- 12 pump stations, over 55 pressure regulating facilities
- 23 active storage reservoirs
- 1 aquifer storage and recovery (ASR) facility with capacity of 300 MG
- 1 electrical generator station
- Over 150 water quality sampling stations

CIP Process

- Water Master Plan
- SCADA Master Plan
- Asset Management Plan
- Operations and Maintenance Staff
- Other Agencies
CIP Fact Sheet Anatomy

<table>
<thead>
<tr>
<th>PROJECT INFORMATION</th>
<th>FUNDING SOURCES</th>
<th>FUTURE OPERATING COST IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Category:</td>
<td>Storage</td>
<td>No anticipated impact on District operating costs. This project replaces existing infrastructure. Near-term operating costs are anticipated to be reduced.</td>
</tr>
<tr>
<td>Project Manager:</td>
<td>Andrew Barrett</td>
<td>Service Fees: No.</td>
</tr>
<tr>
<td>Work Performed By:</td>
<td>Outside Contract</td>
<td>0%</td>
</tr>
<tr>
<td>Total Priority Score:</td>
<td>30</td>
<td>Partner Cost Percentage: 0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUDGET INFORMATION &amp; PROJECT COSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 17-18 Budget</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>$10,153,000</td>
</tr>
</tbody>
</table>

CIP Prioritization

**Timing:**
- Sensitivity to time commitments
- External demands, growth, condition, or other 3rd party
- No points assigned, based on year needed

**Customer Criticality:**
- Level of importance based on cost per customer benefit
- Points: 1-3, 5

**Water Quality:**
- Adherence to water quality and regulatory requirements
- Points: 1-3, 5

**Asset Condition & Risk:**
- Probability of failure, consequence of failure. Related to known condition
- Points: 1, 3, 5, 10
CIP Prioritization

Reliability:
- Seismic resiliency, reliability of service, and redundancy
- Points: 1-4

Safety & Security (including fireflow):
- Fire protection, facility security, worker and public safety
- Points: 1-5

Cost Effectiveness / Community Benefit:
- Delay of other projects, partnership opportunity, other benefits or savings
- Points: 1, 3, 5

Environment:
- Mitigation of impacts to natural environment
- Points: 1-4

Criticality Ratings

Green
- great structural and mechanical conditions

Yellow
- some repairs needed; seismically and operationally vulnerable

Red
- major help needed now
Rating: Green

**Reservoirs:**
- Springville 1 & 2
- Bonny Slope Park 1 & 2
- Cooper Mountain 1 & 2
- Teufel
- Ridgewood View
- Grabhorn
- Garden Home
- Schell

**Pump Stations:**
- Teufel
- Bethany
- Thompson
- Ridgewood View
- Grabhorn ASR

Rating: Yellow

**Reservoirs:**
- Inglewood
- Sunset
- Thompson
- Florence Lane 1
- Florence Lane 2
- North Road*
- 189th Reservoir*
- Rosander

**Pump Stations:**
- Sunset
- Cooper Mtn
- Goyak
- 189th
- Florence Lane

* have recovery plan for emergencies
Rating: Red

**Reservoirs:**
- Taylors Ferry No 1
- Taylors Ferry No 2
- Goyak*
- Somerset

**Pump Stations:**
- Viewmont
- Catlin Crest
- Inglewood

*have recovery plan for emergencies

---

**Taylors Ferry Reservoir**

- Located in Metzger
- Built in ~1948 and 1975
- Serves 498 pressure zone
- Replace with 2-1.75 MG prestressed tanks
- Storage
- New on-site piping
Farmington Fluoride and Flow Control Facility

- Located in Cooper Mtn Area
- Scope change
- WWSP intertie with a 6.5 MGD initial flow-through capacity; 17 MGD ultimate capacity
- Fluoride injection
- Flow control; future pump station

Somerset Reservoir

- Only storage in 1045 pressure zone
- Constructed in 1963
- Needs coating and safety improvements
- Complete seismic failure expected
- Capacity of 0.175 MG
- Additional future storage recommended in the long-term planning horizon
Metzger N-S Fire Flow Improvement

- Serves Tigard Triangle Area
- Successfully installed 10,000 feet of 12-inch and 16-inch pipe
- Trenchless crossing
- Steep terrain
- Liquifiable soil

Project Categories

- Source: WWSS, WIF, JWC
- Source: TVWD
- Storage
- Pump Stations
- Pipelines
  - Mains replacements
  - Fireflow improvements
  - Miscellaneous and Agency-driven
- Pipelines – Valves and Vaults
- Facilities, Fleet Replacements, Information Technology
- Meters and Services
# 2021-23 Biennium CIP Summary

<table>
<thead>
<tr>
<th>Category/Description</th>
<th>2021-2023 Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>$7.8</td>
</tr>
<tr>
<td>Storage</td>
<td>8.4</td>
</tr>
<tr>
<td>Pump Stations</td>
<td>2.0</td>
</tr>
<tr>
<td>Pipelines</td>
<td></td>
</tr>
<tr>
<td>Agency-Driven Pipeline Upgrades &amp; Renewals</td>
<td>7.0</td>
</tr>
<tr>
<td>Metzger Pipeline East (WWSP)</td>
<td>82.7</td>
</tr>
<tr>
<td>All Other Pipelines</td>
<td>10.0</td>
</tr>
<tr>
<td>Valves and Vaults</td>
<td>2.0</td>
</tr>
<tr>
<td>Facilities</td>
<td>1.8</td>
</tr>
<tr>
<td>Fleet Replacements</td>
<td>1.5</td>
</tr>
<tr>
<td>CIS</td>
<td>6.6</td>
</tr>
<tr>
<td>Meters &amp; Services</td>
<td>3.6</td>
</tr>
<tr>
<td><strong>Biennial Total</strong></td>
<td><strong>$133.5</strong></td>
</tr>
</tbody>
</table>

*Note: Values in millions.*

---

# Storage and Pumping Highlights – 2021-23

- **Farmington Fluoride & Flow Control Facility**  
  - Page 15-13
- **Taylors Ferry Reservoir Replacements**  
  - Page 15-15
- **Florence Lane Reservoir Coatings & Cathodic Improvements**  
  - Page 15-18
- **Somerset Reservoir Modifications**  
  - Page 15-20
- **Taylors Ferry Booster Pump Station design**  
  - Page 15-28
- **Pump Replacement Program**  
  - Page 15-31
## Pipeline Highlights - 2021-23

<table>
<thead>
<tr>
<th>Category</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small-diameter mains</td>
<td>Page 15-32</td>
</tr>
<tr>
<td>Agency-driven replacements</td>
<td>Page 15-44 to 15-50</td>
</tr>
<tr>
<td>Fire Flow Improvements</td>
<td>Pages 15-52 to 15-55, and 15-57</td>
</tr>
<tr>
<td>Metzger Pipeline East</td>
<td>Pages 15-61 to 15-63</td>
</tr>
</tbody>
</table>

### Percent of Breaks by Type (1999 – 2016)

- Shear: 72%
- Corrosion: 16%
- Other: 12%

## Other CIP items

- Vaults and PRV valves (Page 15-66 to 15-69)
- Facilities, Fleet (Pages 15-71 to 15-79)
- Customer Information Service (Page 15-80)
- Meters and services (15-81 to 15-82)
Six-Year CIP Summary

<table>
<thead>
<tr>
<th>Category/Description</th>
<th>6-year Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>$10.0</td>
</tr>
<tr>
<td>Storage</td>
<td>16.4</td>
</tr>
<tr>
<td>Pump Stations</td>
<td>13.6</td>
</tr>
<tr>
<td>Pipelines</td>
<td></td>
</tr>
<tr>
<td>Agency-Driven Pipelines</td>
<td>12.4</td>
</tr>
<tr>
<td>Metzger Pipeline East (WWSP)</td>
<td>115.1</td>
</tr>
<tr>
<td>All Other Pipelines</td>
<td>47.1</td>
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<tr>
<td>Valves and Vaults</td>
<td>3.9</td>
</tr>
<tr>
<td>Facilities</td>
<td>1.8</td>
</tr>
<tr>
<td>Fleet Replacements</td>
<td>4.3</td>
</tr>
<tr>
<td>CIS</td>
<td>6.6</td>
</tr>
<tr>
<td>Meters &amp; Services</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>6-year Total CIP</strong></td>
<td><strong>$242.8</strong></td>
</tr>
</tbody>
</table>

*Note: Values in millions.*

Six-Year CIP Project Highlights

- **Source Projects**
  - Metzger Supply Improvements for WWSS  
  - Booster Chlorination

- **Storage Projects**
  - Goyak Reservoir Seismic:
  - Rosander 2 Reservoir

- **Pipelines**
  - Mains replacement, agency-driven, development-driven
  - Fireflow improvements

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Questions and Answers

Water Supply
Water Supply Program Department

Dave Kraska, P.E.
WWSP Program Director

Water Supply Program Department Operating Budget

- Complete design work and related activities
- Initiate and advance 16 construction projects
- Continue planning for operations and system integration
Water Supply Program Department Summary by Appropriation Category

<table>
<thead>
<tr>
<th>Appropriations Category</th>
<th>2019-21 Budget</th>
<th>Requested Budget</th>
<th>Change</th>
<th>Percent Change</th>
<th>Annualized Percent</th>
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<tr>
<td>Materials &amp; Services</td>
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<td>76,990</td>
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Budget Summary Presentation Outline

Presented on March 23

- Water Supply Program (Department 60)
  - TVWD staff involved in delivering the WIF and the WWSS

Tonight's presentation:

- Willamette Intake Facilities (Fund 44)
  - Overview and status
  - Planned activities and budget for next biennium

- Willamette Water Supply System (Fund 45)
  - Overview and status
  - Planned activities and budget for next biennium
Willamette Water Supply Program Mission

Provide a cost-effective, reliable, and resilient water supply system by July 2026, that benefits current and future generations of the communities we serve and supports a vibrant local economy.

WIF/WWSS Overview

1. Willamette River intake, located in Wilsonville
2. New state-of-the-art water treatment plant
3. 30+ miles of large diameter transmission pipeline
4. Water storage tanks
Capital Spend Will Dramatically Increase in the Next Few Years

Influencers
- Demand on WWSS partner agency staff and resources
- Reliance on regional partners for delivering projects
  - WCLUT
  - PGE
- Effects on stakeholders
  - Ratepayers
  - Property owners and businesses
  - Motorists, pedestrians, and cyclists
- Challenging economic climate
  - Competition for regional construction resources
  - COVID-19
- Need for jurisdictional approvals and properties
  - Many permits and approvals remain
  - Dozens of easements remain
  - Risk of opportunistic behaviors
- Environment of continual change

WWSS & WIF Costs and Schedule (Baseline) are Updated Annually

Why adopt a Baseline and when?
- Board to adopt a capital improvement plan (IGA Section 5 & 8)
- Component of WWSS Financial Procedures (IGA Exhibit 6)
- Part of WWSS governance (WWSS MAM)
- Updated annually and modified if needed

How is it used?
- Planning and managing work
- Establishing fiscal year budgets
- Detecting potential changes or variances
- Input to risk analysis and management
- Reporting to Board, Partners, WIFIA, and public
- Input to financial forecasting by Partners
Managing Cost & Schedule Risk Related to Baseline 6.1

- Identified and evaluated a range of options to reduce spend on the WWSP through 2026 by between $30 million and $170 million
- Balanced maintaining the mission of the WWSP with the current realities
- Agreed on a limited number of changes to reduce spend through 2026 by about $50 million, while still delivering water by June 2026:

<table>
<thead>
<tr>
<th>Defer one reservoir</th>
<th>Defer most of PLW_2.0</th>
<th>Other deferrals</th>
</tr>
</thead>
</table>
| ![Diagram of reservoirs](image1.png) | ![Map of city](image2.png) | - Completing the fiber-optic communications network north of the WTP  
- Minor WTP components  
- Staff positions |
WILLAMETTE INTAKE FACILITIES

Co-located with the Willamette River Water Treatment Plant
Willamette Intake Facilities

Willamette Intake Facilities Components

LEGEND
- Willamette Intake Facilities (WIF)
- Willamette Water Supply System (WWSS)
- Willamette River Water Treatment Plant (WRWTP)
Fish Screens

Raw Water Pump Station Structure
Air Burst System

Compressors  Receiver Tank  Air Burst Valves

WIF-Related Elements of the WWSP’s RWF_1.0 Project

WIF Elements

WWSS Elements

- Raw Water Pipeline and Electrical Duct Bank
- Standby Power, Surge Control, and Upper Site Electrical Building
- Air Burst System Improvements
- New Fish Screens
- Seismic Improvement for Caisson and Pump Building
- Mechanical Pump Station Upgrades
Construction Cost Estimate Update

<table>
<thead>
<tr>
<th>Total Project Budget</th>
<th>Estimated WIF Share</th>
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<tr>
<td>$108,766,499</td>
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Note: Total project budget estimate does not include permitting and other allocated system-wide costs

RWF_1.0 Project Schedule

- Design Phase:
  - Complete
- Construction Phase 1
  - Mostly below-ground work
  - Started Q2 2020
  - Ends Q1 2022
- Construction Phase 2
  - Above-ground construction and equipping
  - Starts Q3 2022
Completed Construction Elements (Q1 2021)

- Mass Excavation
- Upper Site CFA Piles

Current Activities (Q1 2021)
**Ground Improvements**

- Jet Grout
- Batch Plant
- Deep Soil Mixing
Current Activities (Q1 2021)
Ground Improvement Spoils Handling

Current Activities (Q1 2021)
Upper Site

- Trenchless crossing launching and receiving shafts
- Foundation for air burst receiver tank
- Coordination for the raw water pump station seismic retrofit improvements
2021-23 WIF BIENNIUM
BUDGET ACTIVITIES

WIF-related Elements of the RWF_1.0 Project
21 – 23 Biennium

Construction Phase 1
• Starts Q2 2020
• Ends Q1 2022
• Ground stabilization
• Intake screens replacement
• Pump station seismic retrofit

Construction Phase 2
• Starts Q3 2022
• Ends Q4 2024
• Air-burst system improvements
• Building mechanical improvements
## WIF Requested Capital Outlay 2021-23 Biennium

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<tr>
<td>Other Partners</td>
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Note: Requested capital outlay includes budget for allocated system-wide costs

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**WILLAMETTE WATER SUPPLY SYSTEM**
## WWSP Map

As found on the front page of:

www.OurReliableWater.org

## Project Delivery Progress – Spring 2019

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### WWSP Schedule

As found on the front page of: www.OurReliableWater.org
2021-23 WWSS BIENNIAL BUDGET ACTIVITIES
WWSS Work Planned for FY 2021-23

- Complete design of 7 projects
- Advance construction of 16 projects
- Continued program management
  - WIFIA compliance and loan programs
  - Safety program
  - Communications and outreach program
  - Development of financial procedures
- Continued acquisitions
  - Real estate
  - Permits and land use approvals
- Plan
  - Water supply integration
  - Commissioning and start-up
  - Operations

WWSS Requested Capital Outlay 2021-23 Biennium

<table>
<thead>
<tr>
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<th>Amount</th>
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<tbody>
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<tr>
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<tr>
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### WWSP Summary

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</tr>
</tbody>
</table>

### Supporting Our Economy

- **Business Utilization:** Recent Activities
  - 94% of spend for WWSS is benefitting the local economy
  - 69 additional local businesses were accounted for from Q3 to Q4 reporting
  - Finalized 2020 Q4 utilization statistics
  - Publishing Semi-annual Business Utilization Report
Questions and Answers

Next Steps

- Future Workshops and Meetings
  - Workshop #3: April 22, 2021
  - Budget Committee Meeting and Public Hearing: May 25, 2021
- Questions for the Team