



Staff Report

Meeting Date: April 5, 2021

From Jordan Wheeler, City Manager

SUBJECT: Wastewater Rate Model and Funding Plan Update

BACKGROUND:

In [November 2020](#), the City Council received an update on the city's rate model and funding plan and proposed rate increases for the Wastewater System Improvements Project. In December 2020, the Council decided at that time to move back the timing on the planned rate increase until 2021 in response to the coronavirus pandemic. With the delay, staff has continued to work with our consultants, engineers, and financial advisors to update the rate model and funding plan with the most recent information as the project has progressed.

Additionally, in January 2021, [the city was invited by the EPA to submit an application for the Water Infrastructure Finance and Innovation Act \(WIFIA\) loan](#). This means we are now incorporating the WIFIA loan in rate modeling assumptions.

Even with the WIFIA loan, the city needs to provide a non-federally funded match and secure additional debt financing sources such as Revenue Bonds, Clean Water State Revolving Fund Loans, and the Full Faith and Credit Obligation for the private sewer laterals. The Wastewater System Improvements Project is a massive capital investment that will require rate increases in order to fund the project and service the debt. Rate discipline (implementing regular rate increases as planned) is an important factor for the city to maintain credit worthiness for bond rating companies and the EPA in order to meet our obligations for the WIFIA program.

Our financial consultants from FCS Group will be presenting the updated rate model to the City Council with the proposed wastewater rate increase. In addition, our consultants who are helping us with the EPA WIFIA application will be attending to provide information about WIFIA and the application process.

Wastewater System Improvement Project Overview and Update

The wastewater system improvement project will address our system's significant deficiencies and challenges with reliably meeting our permit requirements. The city's aging infrastructure at the existing wastewater treatment plant has degraded treatment performance, and the aging collection system experiences high infiltration and inflow into the sewer pipes. Our treated wastewater currently discharges to Tickle Creek, a small stream with limited capacity and stringent regulatory oversight. Tickle Creek is

subject to the Oregon Department of Environmental Quality's (DEQ) Three Basins Rule, which prohibits discharge increases regardless of treated wastewater volumes.

Because of these challenges, Sandy's wastewater system is subject to an Oregon DEQ Mutual Agreement and Order for violating permitted discharge levels during the permitted season, and for discharges during the unpermitted season. The completed and adopted Wastewater System Facilities Plan outlines the corrective measures the city is taking to address our wastewater system needs.

The project involves a multi-year, multi-phased system-wide upgrade and expansion to achieve compliance with Sandy's NPDES permit, further protect water quality, and plan for a growing community. The project has four major elements:

- **Collection System Improvements:** Rehabilitation of approximately 55,000 feet of aging pipelines in the two worst leaking basins in the collection system. These improvements will reduce the volume of water treated and discharged from the WWTP, while also reducing the risk of sanitary overflows. The City has contracted with Oxbow Construction for this work. The pipes have been scoped and the design is complete. The Guaranteed Maximum Price for the construction work will be presented to Council on April 19 for approval.
- **Existing Treatment Plant Improvements:** This work includes replacing aging treatment equipment and installing new equipment at the plant in order to achieve permit compliance. The upgrades will improve treatment performance and energy efficiency. West Yost preliminary design report was completed this summer and the City Council will be considering approving the engineering contract on November 16.
- **New Membrane Bioreactor (MBR) treatment plant and Diversion Pump Station:** The construction of new state of the art treatment plant will expand treatment capacity and produce Class A recycled water. The new plant will treat approximately 50% of flows and be designed for future expansion to accommodate Sandy's growing population.
- **New Outfall and Effluent Pump Station:** The construction of new pipes and pump station from the MBR treatment plant that will discharge high-quality effluent to the Sandy River, which has a greater assimilative capacity than Tickle Creek. The new facilities will be designed to accommodate long term needs for expanded treatment capacity. This element of the project includes exploring the construction of wetlands to reduce the discharge volumes into the Sandy River and offset any long term temperature impacts. The city is working with DEQ on the process for a new NPDES permit for the Sandy outfall and will be issuing an RFP for permitting assistance and alternative assessments on temperature mitigation strategies.

The city is currently working on phase 1A of the project which includes the collection system improvements in sewer basins 2 and 8 and the priority improvements to the existing wastewater treatment plant. This phase is predominantly being funded by a Clean Water State Revolving Fund planning and construction loan.

Upcoming Work and Next Planning Steps

The City Council will be receiving the reports and presentation on the Detailed Discharge Alternatives Evaluation from Murraysmith on April 5. The Evaluation, funded by the State, looked at alternatives to a Sandy River discharge such as expansion of the recycled water program, researched location options for the Sandy River outfall, completed temperature and degradation analyses, and included the feasibility of the temperature mitigation strategy of constructing wetlands at the former site of Roslyn Lake.

The city is working with our owner's representative, Leeway Engineering Solutions, to develop an RFP for a consultant to assist the city with our Sandy discharge permitting efforts. Secure a new NPDES permit for the Sandy River Discharge is next on the critical path to . As part of that work, the consultants will further analyze the options for mitigating the potential temperature exceedances that are projected to occur until 2040. Those mitigation measures could include constructing wetlands at Roslyn Lake, building chillers, or other alternatives.

Updated Rate Model

The utility rate model is a financial planning tool that outlines needed wastewater rate increases based on the operating and capital improvement budgets, and assumptions regarding debt financing for the wastewater system improvements project (Clean Water State Revolving Fund loan and WIFIA loans, and Revenue Bonds). An objective is to ensure that the city's revenue will cover our minimum debt coverage ratios (1.5 coverage ratio), fund balance minimums, and cash flow for operations and capital expenses.

In December, consultants presented two scenarios for the projected rate increases (with WIFIA and without WIFIA). The updated rate model now assumes WIFIA as a major funding source as well as Revenue Bonds and the SRF loan funding. The first Revenue Bond (debt financing that is secured by the utility fees) is still planned to be issued in next fiscal year 2021-22.

On the expense side, the model incorporates the most recent cost project cost estimates, budgets, revenue estimates with the next rate increase effective July 1, capital spending schedule, WIFIA terms and drawdown, and financings. The model also includes an estimate for the Roslyn Lake constructed wetland. Extending the pipe from the preferred Sandy River discharge at Revenue Bridge and constructing the wetlands is estimated at \$15 million. All costs have also been escalated by a cost inflation factor.

One unknown variable is if the city was successful in receiving additional state or federal funds via state appropriation or earmarks or federal infrastructure funding.

These funds would reduce future rate increases as the amount of debt financing would decrease.

The proposed rate increase is 15% and would be effective July 1. The 15% increase would result in a base fee increase of \$3.09 and volume charge increase of \$0.79/ccf per month for residential customers.

The consultants from FCS Group will be again be presenting the rate model updates and proposed rate increase.

WIFIA Application Process

In January, the City was informed that we were one of 54 agencies across the country to be selected by the Environmental Protection Agency (EPA) to submit a full application to receive a Water Infrastructure Finance and Innovation Act (WIFIA) loan. City staff and the consultant team have already been meeting with the EPA team in preparation of the application submittal.

WIFIA loans provide favorable terms including low interest rates, flexible installments, no interest accrual on undisbursed funds, and an extended repayment period that includes deferred repayments until 5 years after project completion. This allows the city to reduce and spread out the

The City has been invited to submit an application for assistance up to \$33,445,100 (or an amount not to exceed 49% of the total eligible project costs). The City estimates that WIFIA financing will save the community at least \$13 million through 2040.

The city hired Barney Worth and Kevin Hanway to manage the city's WIFIA application process. Kevin and his team have experience with the WIFIA program and were instrumental in the city's successful letter of interest. Kevin will be attending the Council meeting to provide a brief overview on the WIFIA program and the application process.

RECOMMENDATION:

Staff recommends the Council receive the presentation on the updated rate model, discuss, and provide direction for staff to bring back the proposed rate increase for a public hearing and adoption for implementation July 1, 2021.

LIST OF ATTACHMENTS/EXHIBITS:

1. Wastewater Rate Model Presentation, April 2021
2. WIFIA Overview Presentation

City of Sandy Sewer Rate Update



**Presented to the Sandy City
Council**

Monday, April 5, 2021

Prepared by FCS GROUP



Key Assumptions

Annual Cost Inflation

- Personnel: 2.11%
- Materials & Equipment: 1.56%
- Transfers: 1.56%
- Services: 1.56%
- Interest: 2.75%

Annual Growth Rate

- 2.8% per year

Operating Forecast

- Rate revenue based on actuals and the BN 19-21 budget, escalated by the anticipated customer growth
- Operating costs and non-rate revenues based on BN19-21 budget, adjusted for inflation in future years

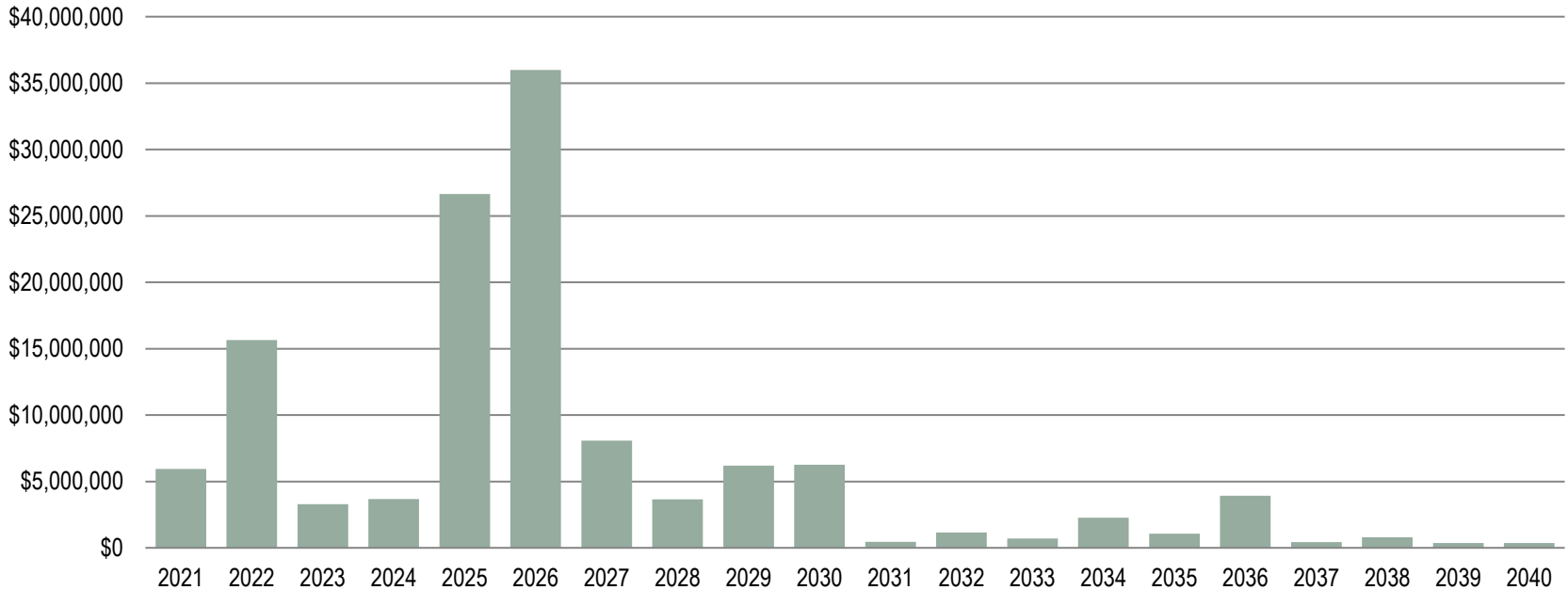
Financial Policies

- Min. Fund Balance Target: 45 days of O&M
- Annual system reinvestment funding



Capital Needs Forecast

Capital Spending (Escalated)

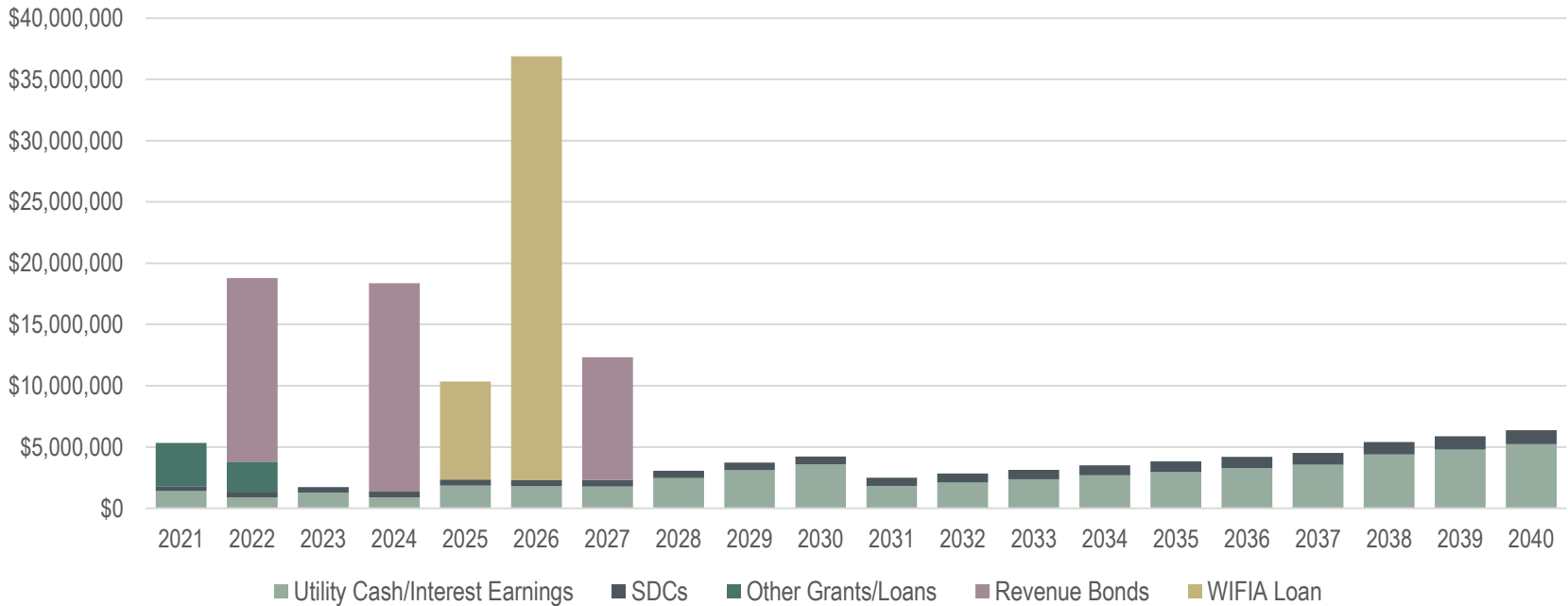


- **\$86.8 million in WIFIA-related projects from 2020 to 2026**
 - » \$18.9 million for Roslyn Lake Wetlands and Force main in 2026
- **\$40.2 million in other projects from 2020 to 2040**
- **\$127.0 million in total projects from 2020 to 2040**



Capital Funding Assumptions

Capital Funding

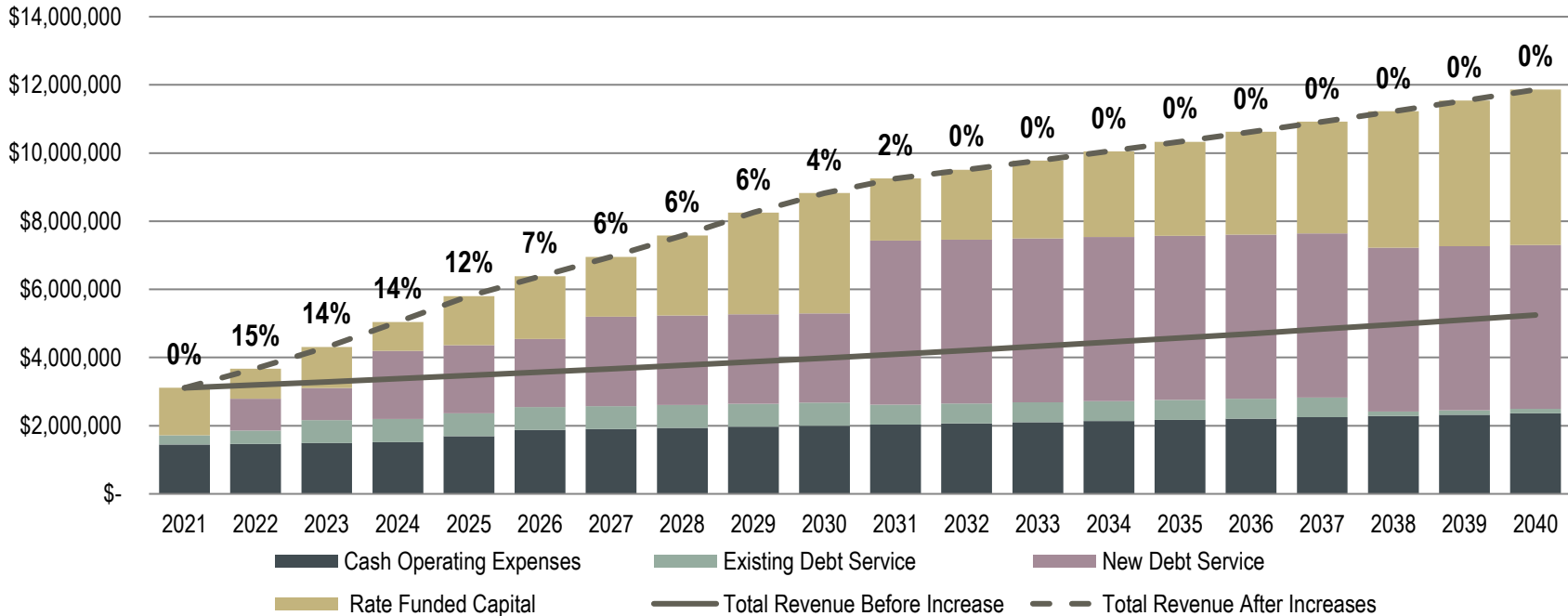


- **\$42.0 million in revenue bonds between 2020 and 2027**
- **\$42.5 million in WIFIA financing between 2025 and 2026**
- **Other loans, SDCs, utility cash, and interest earnings make up the difference**



Revenue Requirement Forecast

Revenue Requirement

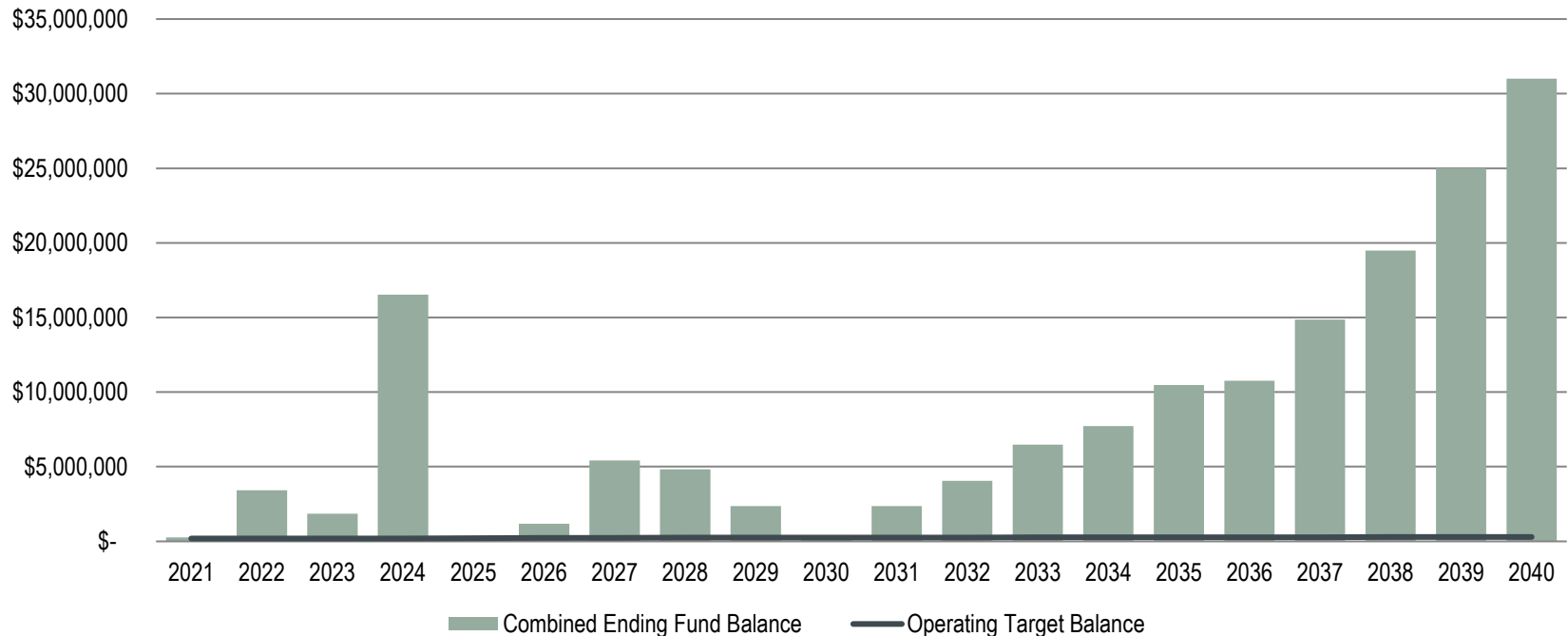


- **Rate increases are required to keep with up debt service, coverage requirements, and the cash-funded portion of the CIP**



Fund Balances

Ending Fund Balances



- **Fund balance spikes with injections of revenue bonds and WIFIA financing and then levels off as capital is paid for**



Sewer Rates

Rates	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
ATB Increases		0%	15%	14%	14%	12%	7%	6%	6%	6%	4%
Implementation Date:		1/1/2021	7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025	7/1/2026	7/1/2027	7/1/2028	7/1/2029
Residential											
Base	\$ 20.61	\$ 20.61	\$ 23.70	\$ 27.02	\$ 30.80	\$ 34.50	\$ 36.91	\$ 39.13	\$ 41.48	\$ 43.96	\$ 45.72
Volume (CCF)	5.29	5.29	6.08	6.94	7.91	8.85	9.47	10.04	10.65	11.28	11.74
Outside City Flat Rate	74.34	74.34	85.49	97.46	111.10	124.44	133.15	141.14	149.60	158.58	164.92
Single Family - Reduced											
Base	\$ 10.31	\$ 10.31	\$ 11.86	\$ 13.52	\$ 15.41	\$ 17.26	\$ 18.47	\$ 19.57	\$ 20.75	\$ 21.99	\$ 22.87
Volume	2.65	2.65	3.05	3.47	3.96	4.44	4.75	5.03	5.33	5.65	5.88
Commercial/Industrial											
Base	\$ 9.82	\$ 9.82	\$ 11.29	\$ 12.87	\$ 14.68	\$ 16.44	\$ 17.59	\$ 18.64	\$ 19.76	\$ 20.95	\$ 21.79
Volume (CCF)	7.18	7.18	8.26	9.41	10.73	12.02	12.86	13.63	14.45	15.32	15.93

- **Rate increases start at 15% in FY 2021-22, decrease to 14% for two years, 12% for one year, and then trail off**



Sewer Rates Comparison

City	Wastewater Rates (6 CCF)
Lake Oswego	\$72.55
Sandy (FY 2021-22 Proposed)	\$60.20
Oregon City	\$59.79
Milwaukie	\$58.84
Gladstone	\$58.46
Wilsonville	\$55.24
Sandy (Existing)	\$52.35
West Linn	\$47.84
Tigard	\$46.57
Canby	\$46.20
Sherwood	\$44.46
Tualatin	\$44.26
Beaverton	\$44.14
Hillsboro	\$43.44
Cornelius	\$41.97
Monmouth	\$37.81

Thank you! Questions?

Doug Gabbard – Project Manager
(503) 252-3001
DougG@fcsgroup.com

www.fcsgroup.com

Typical wastewater capital project financing

Cost: \$68 million

Funding: \$61 million debt

Supported by rate revenue

Construction duration: 7 years



Typical infrastructure financing



Typical Project – \$68 million

- Revenue bonds: supported by rates
- Requires 3 serial bond issues; total \$61 million
- 30-year bond repayment
- Assume 4% interest
- Full bond amount received upon issuance
- Payments: principal & interest on full amount start year 1



financing to the rescue!

Our Typical Project – \$61 million debt

- \$33 million WIFIA loan
 - 30-year term
 - 2.14% interest (current rate)
- Plus revenue bond issued in Year 4
 - \$28 million
 - 30-year term
 - 4% interest

Typical infrastructure financing – “Pay Now”

\$ Cash Received – Funds received with bond issuance



\$ Payments – Repayment begins immediately

Bond 3 – Year 6

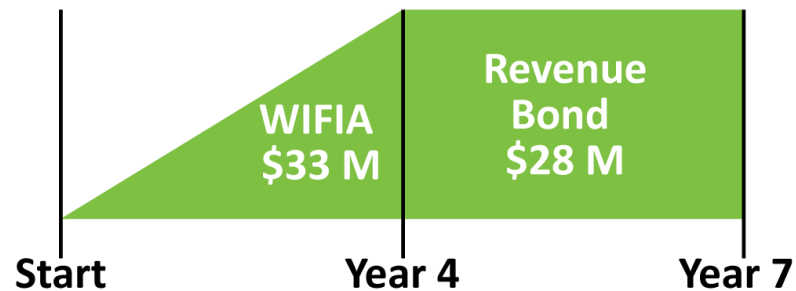
Bond 2 – Year 3

Bond 1 – Year 1



WIFIA financing – “Pay Later”

§ Cash Received – WIFIA funds received as needed



§ Payments – Payments can be deferred until after project completion



Summary of WIFIA benefits

- ✓ Broad eligibility criteria
- ✓ Lowest possible interest rates
- ✓ Flexible terms: draw down money only when needed; meanwhile – no interest accrues on undisbursed funds



Summary of WIFIA benefits

- ✓ Repayment deferred up to 5 years after project completion
- ✓ Provides certainty for long-range funding plan
- ✓ \$13 million savings for ratepayers in the first 15 years