



MEMORANDUM

TO: WES Advisory Committee

FROM: Ron Wierenga, Environmental Services Manager

DATE: January 19, 2022

SUBJECT: WES Rules and Standards Update

BACKGROUND

Clackamas Water Environment Services is updating its Sanitary and Stormwater Rules and Standards. The proposed Rules and Standards documents were available for public comment beginning March 17, 2021 and ending April 17, 2021. Available information included:

- 2021 Rules **draft**
- 2021 Stormwater Standards **draft**
- 2021 Sanitary Standards **draft**
- 2021 Buffer Standards **draft**

WES' Rules and Standards Update Project will review existing rules and standards and recommend updates to: reflect new technologies, approaches, and development patterns; address regulatory changes and requirements; and provide uniform and streamlined development review and approval processes across WES's service area.

Significant modifications to WES' Rules and Standards include the following:

- Fiscal policies regarding dwelling unit assignments for system development charges, developer reimbursements, and low income discounts
- Sanitary connection requirements, conveyance design standards, and pollution pretreatment requirements
- Stormwater performance standards (retention, water quality, flow control), project thresholds, exemptions, and in-lieu fees
- Stormwater facility selection and design, facility types and allowable uses, prioritization, minimum design criteria
- Easements, maintenance, and use of public properties

At this critical step in the stakeholder involvement process we are gathering a final round of recommendations and comments on the documents before ordinance adoption in the first half of 2022. Note that there will be adoption hearings and formal public comment taken at that time.



NEXT STEPS

Anticipated Schedule:

- March-April 2021 Public Review and Comment
- November – January 2022-WES Advisory Committee Review
- January-March 2022: Final Document Revisions
- April-May 2022: Adoption Hearings
- July 2022: Implementation

OPTIONS

Please list options here.

1. The WES Advisory Committee concurs with the proposed key policy changes in the draft Rules and Standards and recommends staff engage the Board of County Commissioners in ordinance adoption.
2. The WES Advisory Committee discusses key policies and recommends continued discussion at the March 2022 WES Advisory Committee Meeting, delaying the Board adoption process and implementation until later in 2022.

STAFF RECOMMENDATION

The WES Advisory Committee concurs with the proposed key policy changes in the draft Rules and Standards and recommends staff engage the Board of County Commissioners in ordinance adoption.

KEY POLICY RECOMMENDATIONS

Policy: Annexation Into the District

Issue

- WES's 2013 Urban Services Policy Memorandum is not codified in the Rules.

Current Policy

- Properties not with WES's service district must annex into a city and WES prior to obtaining WES services.

Policy Change

- Rules Section 1.5 - *If a property is currently outside of the District boundary, and not within an incorporated City boundary, then the property owner must first seek annexation into the appropriate City. The District will not process a petition for annexation until a City has either approved an annexation into the City, or denied annexation into the City.*
- **Significance**
 - Gives WES clearer authority to require annexation prior to providing service.
 - District annexation can still occur if a city denies annexation request.

Policy: Public Use of WES Property

Issue

- Currently no rules regarding activity on WES-owned properties, and difficult to regulate certain activities, like camping and making fires.

Current Policy

- NA/New Policy. Generally 'No Trespassing' now.

Policy Change

- *Rules Section 7 - Specifies allowable uses of WES property.*



Significance

- Provides clarity on allowed uses of WES-owned property, in alignment with other County Departments, such as NCPRD's natural areas.

Policy: Low Income Discounts

Issue

- Qualifying income limit for families is capped a level for two family members.
- Eligibility based on outdated federal poverty guidelines rather than the more commonly used OR State median income level.

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- Section 4.3.2 - Allows for a 50% discount of the monthly service charge with qualifying limits set at 185% of the federal poverty guidelines, for families set at limits for a two-person household.

Policy Change

- Rules Section 6.3.3: *...shall be 50 percent (50%) of the monthly sewer user charge.... qualifying limits shall be set at sixty percent (60%) of the most recently published Oregon State Median Income (SMI)...shall be incrementally based on household size.*

Significance

- Qualifying criteria based on Oregon State Median Income not Federal Poverty guidelines which streamlines proof of eligibility for customers.
- Increasing income limits for larger households.

Policy: Reimbursement Districts

Issue

- Property developers are not reimbursed for the cost of offsite sewers that future users connect to.

Current Policy

- NA/New Policy

Policy Change

- Rules Section 6.6 Reimbursement District - *A Developing Party who is not otherwise eligible for SDC credits...may request that WES establish a Reimbursement District.*

Significance

- Developers can get reimbursed for future connections to infrastructure they've built.
- Potentially new fees for significant WES staff time/resources to establish reimbursement districts, collect payments etc.

Policy: Sanitary Equivalent Dwelling Unit (Non-Residential)

Issue

- Non-Residential EDU assignments are not representative of impact to the sewer system, like for warehouses and storage units.

Current Policy

- Table VII - EDUs are assigned to various categories of non-residential uses, or otherwise calculated based on a land/building area formula.



Policy Change

- Updated Rules Table A-1 to increase square footage formula for warehouse and storage facilities.

Significance

- EDU assignments and associated SDCs better aligned with costs/impacts to the sewer system.
- Minor loss in WES's SDC revenue.

Policy: Sanitary Equivalent Dwelling Unit (Residential)

Issue

- Residential EDU assignments aren't aligned with water usage and impact to the sanitary system.

Current Policy

- Table VII - EDUs assigned to detached residential units regardless of dwelling size; attached units and ADUs assigned 80% of single family

Policy Change

- Updated Rules Table A-1 to include 5 categories of EDU assignments for detached residential with EDU assignments ranging from 70% to 120% of a standard residential unit, based on typical occupancy.
- Apartments assigned 80% and ADUs assigned 60% of a standard residential unit.

Significance

- SDCs better aligned with costs/impacts to the sanitary system
- No impact on SDC revenue or funding for CIP
- Aligns with County transportation impact fee methodology
- Sanitary Equivalent Dwelling Unit (Residential)

Policy: System Development Charge Financing

Issue

- SDC financing policy has no limits on types or amount of SDCs that can be financed, causing cash flow interruptions and commitment of WES staff resources for financing agreements, due diligence, collecting payments, etc.

Current Policy

- Section 4.1.8 - Allows for installment payments of SDCs over a 10-year period for all projects regardless of type and size.

Policy Change

- Rules Section 6.2.10 - *Installment payments for SDCs are limited to residential and multi-family developments that have been assigned ten (10) or fewer EDUs.*

Significance

- Aligns with original intent of the financing policy to support small residential sewer connections.
- Reduces financial risk to the District.



Policy: Sanitary Sewer Pipe Slopes

Issue

- Sanitary standards only allow for slopes less than 1% if traditional DEQ criteria for pipes flowing half-full is met, which is rare and requires variances for projects with site constraints.

Current Policy

- Section 5.2.3 – Minimum pipe slope design standard is 1% for a sewer mainline, and 2% for dead-end lines. Allows for shallower slopes for different sizes of pipes that flow half-full.

Policy Change

- Sanitary Standards Section 5.2.3 - *...designed with the minimum slope of 1.0%, except for dead-end lines, for which the District requires a minimum slope of 2.0%.*
- *Table 2 allows for shallower pipe slopes where more homes are served, stating 0.75% slope allowed for pipes serving 20-40 homes, and 0.5% slope for pipes serving greater than 40 homes.*
- *Added provisions allowing designs that meet Oregon State Sanitary Design Guidelines (OAR 340-52)*

Significance

- Sets minimum pipe slope at 0.5%, slightly higher than currently allowed but more projects will qualify.
- Adequate pipe slope requirements reduce cost of maintenance to District and the risk of SSO's.

Policy: Sanitary Service Connection Ownership

Issue

- Significant risk and burden on the District for inspection, maintenance, and repair of service connections.

Current Policy

- Standards Section 5.5 - Owners are responsible for service connections from buildings to ROW or easement lines, and WES is responsible from ROW or easement lines to mainline.

Policy Change

- *Standards Section 5.6.1 – The property owner(s)... are responsible to maintain, repair and/or replace the pipeline from the building to and including the connection to the mainline located within the ROW or public easement.*

Significance

- Assigns responsibility and cost of service connection repairs to property/building owners.
- Reduces financial and sewer overflow risk to the District.



Policy: Stormwater Flow Control

Issue

- WES's flow peak-matching approach allows for longer durations of potentially erosive flows.
- Oregon DEQ's newly-issued stormwater permit requires a runoff retention standard, or an alternate approach that achieves similar results.

Current Policy

- Standards Section 5.4.4.1 – Peak-matching standard to reduce the 2-year, 24-hour post-developed runoff rate to a ½ of the 2-year, 24-hour pre-developed rate.

Policy Change

- Stormwater Standards Section 4.1.3 - *The duration of peak flow rates shall be less than the duration of peak flow rates from pre-development conditions for all peak flows between 42 percent of the 2-year peak flow rate up to the 10-year peak flow rate.*

Significance

- Performance standard based on control for rate and duration of runoff is more protective of stream stability and water quality.
- Redevelopment projects use a "grass" pre-developed condition.
- Potentially larger facilities on some sites relative to peak-matching standard, partially mitigated by WES's current infiltration requirement. Potentially increases cost.

Policy: Stormwater Onsite Infiltration

Issue

- WES's infiltration standard is often difficult for development projects to meet due to soil and slope site constraints, leading to design variance requests and use of alternate flow control standards.

Current Policy

- Standards Section 5.3 - Infiltration systems are required for all new developments and redevelopments that one-half inch of rainfall in 24 hours.

Policy Change

- Stormwater Standards Section 4.1 - *Infiltration is the preferred strategy to achieve the stormwater management performance standards...when designed to fully infiltrate the 10-year, 24-hour design storm, the facility is assumed to meet the flow control requirements.*

Significance

- Proposed flow duration matching standard is equally protective, aligns with Oregon City and Wilsonville, and will require fewer variance requests to meet.

Policy: Stormwater Water Quality Treatment

Issue

- Oregon DEQ's stormwater permit requires prioritizing Low Impact Development and Green Infrastructure, and that constructed controls meet a water quality treatment performance standard of 80% solids removal.



Current Policy

- Standards Section 5.2 - Requires capture and treatment of 80% of average annual runoff to the extent practicable, with the goal of 80% total suspended solids removal.

Policy Change

- Section 4.1.2 –*Required treatment volume equates to a water quality design storm of 1-inch over 24 hours . In general, water quality facilities should be vegetated facilities; however, the District allows the use of water quality mechanical devices where appropriate.*

Significance

- Water quality design storms are the same, however, makes meeting the water quality performance target a requirement. Use of some BMPs like hydrodynamic separators is no longer allowed.
- More details and guidance to support use of LID/Green Infrastructure to meet the water quality performance standard.

Policy: Stormwater Facility Maintenance Access

Issue

- Existing public and private facilities are often difficult, if not impossible, to maintain due to inadequate access. Currently no standards for private facilities.

Current Policy

- NA/New Policy for Private; Stormwater Standards Appendix I

Policy Change

- Standards Section 4.4.6 - *Stormwater ponds that require retaining walls will be limited to the height of 10 feet above the vegetated surface elevation for 50 percent of the circumference of the facility, and 6 feet for the remaining portion of the circumference.*
- Standards Section 4.4.7(8) - *Minimum maintenance access of 20 feet from the access point to structures is required.*

Significance

- Provides adequate access for WES to maintain stormwater facilities.
- Could require more land and add additional cost for development projects.

WES Rules and Standards Update

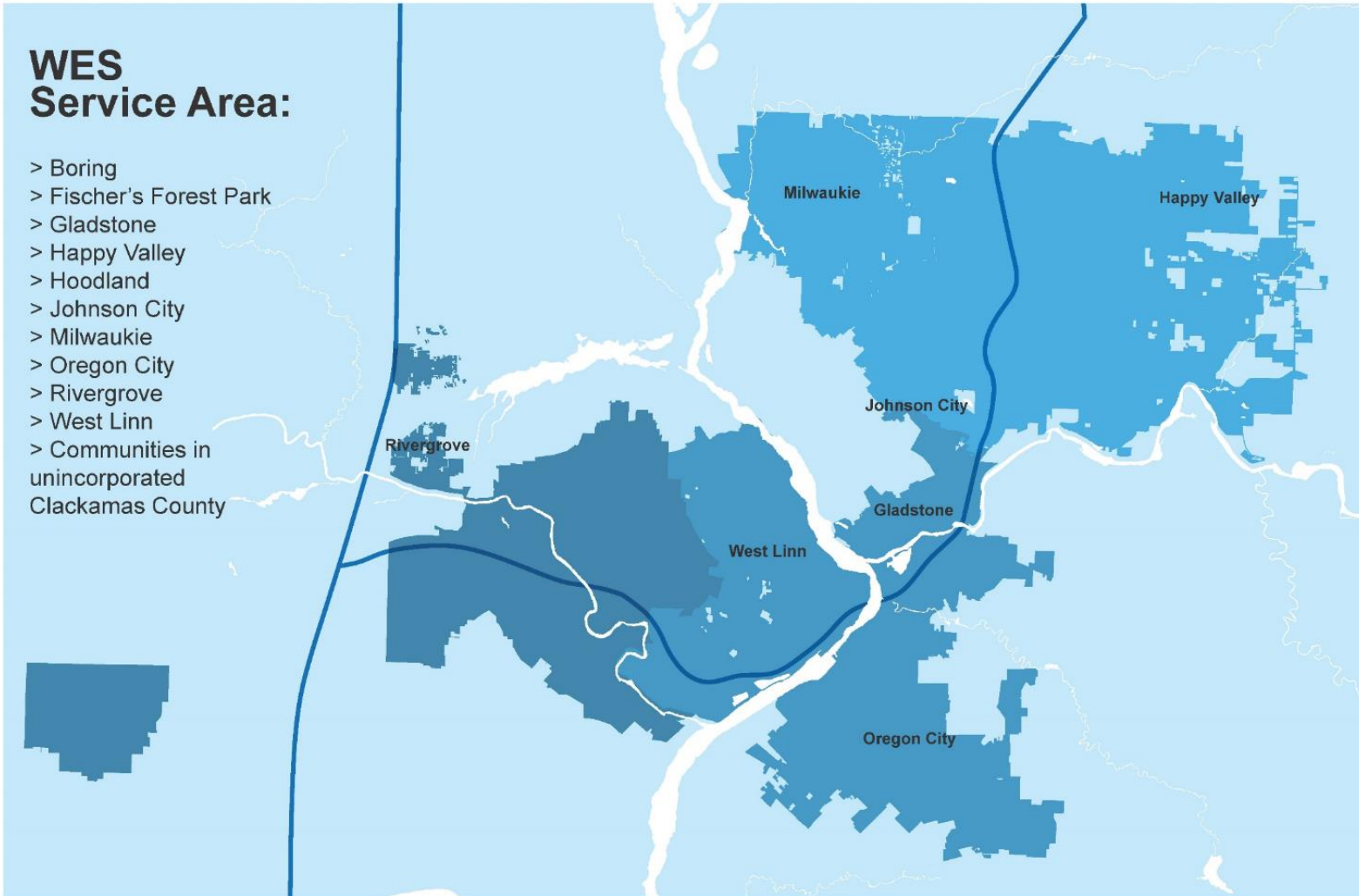
WES Advisory Committee

January 19th, 2022

Presentation Agenda

- Project Background
- Key Policy Discussions
- Recommendation
 - The WES Advisory Committee concurs with the proposed key policy changes in the draft Rules and Standards, and recommends staff engage the Board of County Commissioners in ordinance adoption.

WES Rules & Standards



Rules/Standards by Area:

- Administrative Rules for CCSD#1 & SWMACC
- WES Rules (2018)
- TCSD Sanitary Rules
- CCSD#1 Sanitary Rules
- CCSD#1 Sanitary Standards
- SWMACC Stormwater Rules
- CCSD#1 Stormwater Rules
- CCSD#1 Stormwater Standards

Project Outreach and Engagement

Stakeholder Interviews

- Development engineers
- Planners
- Others who use the rules and standards

August 2018

Policy and Technical Issues Workshops

- WES
- DTD
- Happy Valley
- Consulting Engineers

June 2018 – March 2019

Task Force Meetings

- People who use the rules
 - ✓ Developers
 - ✓ Engineers
 - ✓ Partner Cities

October 2018 – January 2019

Community Briefings

- Interest Groups & Neighborhood Associations
- Business Community
- Informational forums

November 2019 - March 2020

Public Review Process

- Public review drafts
- WES Advisory Committee
- County commission hearings

April 2020 – Current

Community Briefings

WES Presentations (Fall 2019- Spring 2020)

- Oregon City Chamber/Government Affairs Committee (October 14, 2019)
- North Clackamas Chamber (November 4, 2019)
- North Clackamas Watersheds Council (November 6, 2019)
- WES Advisory Task Force (November 12, 2021)
- Clackamas Soil and Water Conservation District (November 21, 2019)
- Clackamas River Basin Council (November 21, 2019)
- Happy Valley Business Alliance (November 27, 2019)
- WES Engineering Advisory Group (December 5, 2019)
- WES Hosted Forums (December 5 & 10, 2019)
- Home Builders Association (April 7, 2020)

Direct

Communication/Informational Flyer

- Clackamas County Economic Development Commission
- South Clackamas CPO
- Stafford Hamlet CPO
- Sunnyside CPO
- Clackamas County Business Alliance
- Oregon City Business Alliance

WES Advisory Committee

- 03/29/2018 – Introduction
- 06/14/2018 - Update
- 09/28/2018 - Update
- 01/10/2019 - Update
- 07/18/2019 – Update EDU Methodology
- 10/24/2019 – Update EDU Methodology
- 11/14/2019 – Update EDU Methodology
- 01/30/2020 - Update
- 09/17/2020 – Update and Next Steps
- 07/15/2021 – Update and Next Steps
- 11/18/2021 – Key Policy Proposals

Key Policy Changes

Annexation Into the District

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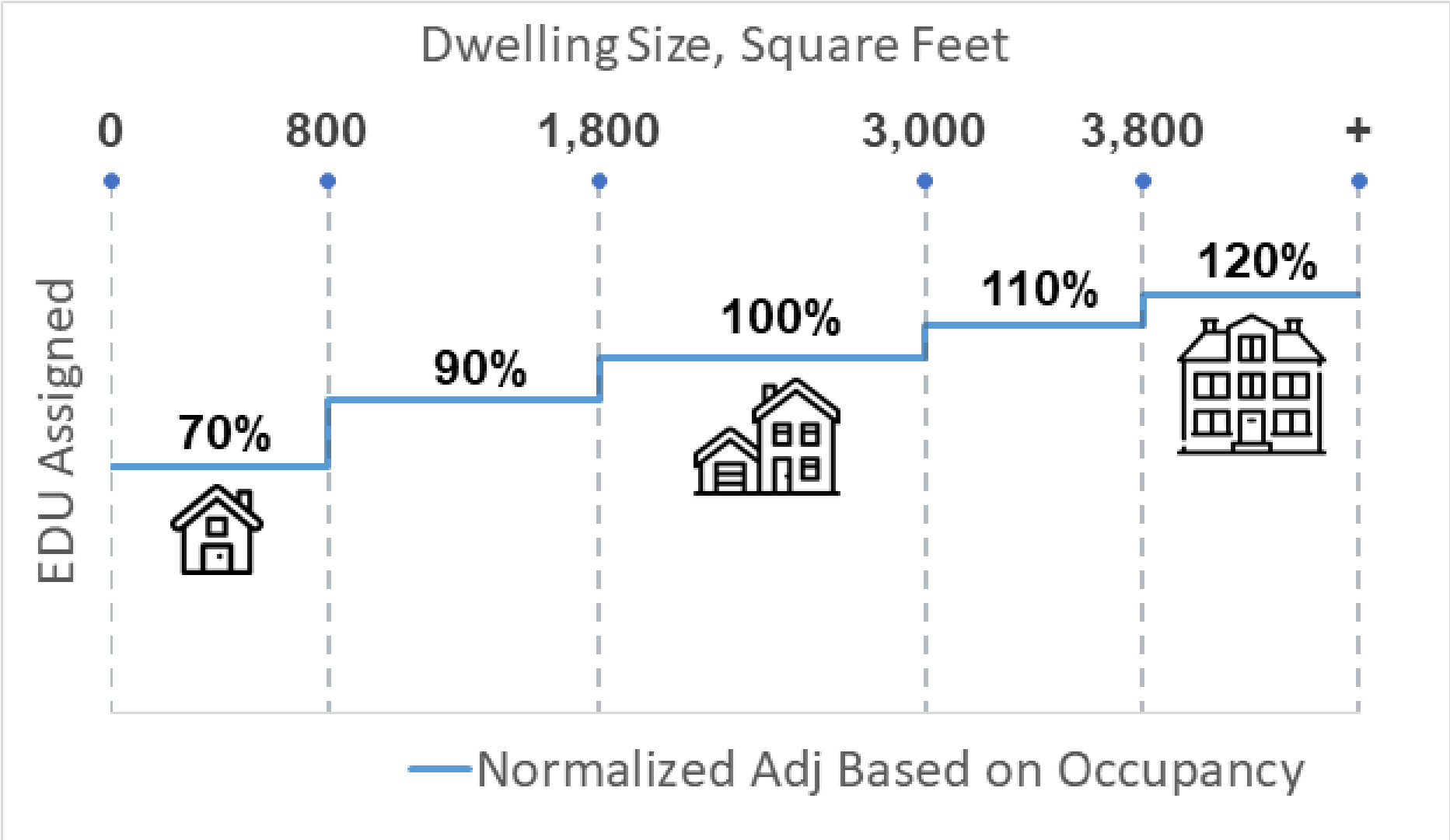
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Significance

- Provides adequate access for WES to maintain stormwater facilities.
- Could require more land and add additional cost for development projects.

Next Steps

- Post draft Rules and Standards Docs and Policy Summaries – January 2022
- WES Advisory Committee Presentation – January 2022
- County Commissioners Policy Sessions – March 2022
- Formal Ordinance Adoption Public Hearings – May 2022

Recommendation

- The WES Advisory Committee concurs with the proposed key policy changes in the draft Rules and Standards, and recommends staff engage the Board of County Commissioners in ordinance adoption.

Questions?

Ron Wierenga, WES Environmental Services Manager

rwierenga@Clackamas.us

503-742-4581



MEMORANDUM

TO: WES Advisory Committee

FROM: Chris Storey, WES Special Projects
Erin Blue, Finance Manager

DATE: January 19, 2022

SUBJECT: Financial Policies for Decision

WES Finance has been developing financial policies for consideration by the Advisory Committee to guide the long term financial strategies of WES. These policies will be used in developing annual budgets, capital financing strategies, and rate projections amongst other items. It is our hope that we can receive guidance and direction from the WES Advisory Committee to allow for transparency and consistency in financial planning and overall fiscal approach.

Three policies were presented to the Advisory Committee for consideration at the November meeting. These are the same policies, being shared for additional dialogue and requested Committee action. The policies are:

WES Debt Management Policy: Clackamas County is adopting a debt policy for the entity as a whole, but WES is such a significant debt issuer that it is more appropriate to have a WES-specific policy. The attached proposal outlines the goals, process, procedure and range of options around debt issuances and management.

Of key note for the Advisory Committee is the policy goals reflected therein, namely:

- (i) efficient and cost-effective funding and completion of necessary WES infrastructure;
- (ii) gradual, relatively linear rate adjustments to avoid “rate shock”; and
- (iii) participation in the costs of constructed infrastructure by future users of the system.

WES Fee Policy: In addition to the monthly service charges for wholesale and retail wastewater and surface water that have already been addressed by the Advisory Committee, WES charges a range of other fees including septic dumping fees, plan review fees, late payment and certification fees, etc as part of the ordinary course of operating the utility. This draft policy proposed that fees be set at 100%

cost recovery for the programs that they support and that there be a rotating review of the fees to ensure that this is being achieved.

WES Operating Reserve Policy: As this last year has shown, unexpected events can place strains on the utility. The loss of revenue from the pandemic, unexpected expenses relating to responding to wildfires, ice storms and hypochlorite shortages emphasize the need to have a clear policy on maintaining sufficient reserves to ensure operations. The draft policy proposes, rather than a fixed amount, that WES maintain reserves equal to 60 days operating expenses.

Copies of the full proposed policies are attached for review. Staff will also make a presentation walking through in more detail the key points of each draft policy and providing additional information as requested by the Committee.

WES staff requests that the Committee vote on moving forward a recommendation for adoption of these policies.

CS/EB



CLACKAMAS

WATER
ENVIRONMENT
SERVICES

January 19, 2022



Financial Policies

Chris Storey, WES Special Projects

Erin Blue, Finance Manager



Presentation Outline

- Background
- Summary of Current and Proposed Policies
 - Operating Reserves
 - Analysis of proposed 60 days' reserve
 - Miscellaneous Fees
 - Debt
- Recommendation and next steps



Background

- Best Practice in Financial Management
- Overarching goals for proposed updates:
 - Align with updated County Financial Policies
 - Meet WES' specific business needs and industry best practices
 - Incorporate into FY 2022-23 budget and 10 year financial forecast

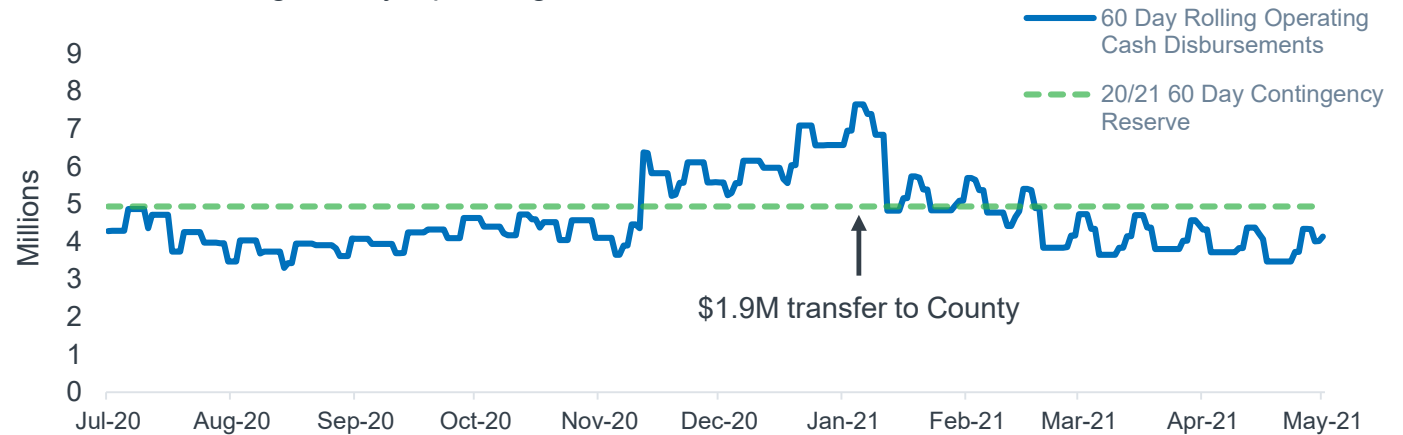
Operating Reserves

Policy Objectives	Current Policy	Proposed Policy	Impact / Achieves
<ul style="list-style-type: none"> • Stable, predictable rate increase • Strong bond ratings • Continuity of Operations • Flexibility to utilize complementary financial strategies 	<ul style="list-style-type: none"> • 60 days • Not in synch with long-range plan • Budgeted as a contingency • Accessed via Board action 	<ul style="list-style-type: none"> • 60 days for budget <u>and</u> long-range planning • Combination of budgeted contingency and/or designated reserve • Option for Rate Stabilization Account • Accessed via Board action or during budget/long-range planning with WESAC support 	<ul style="list-style-type: none"> • Funded via net revenue surplus so minimal financial impact • Alignment between budget and long-range planning models • Increased financial resiliency and mitigation of operational risk • Alignment with best practices

Response to Advisory Committee Questions

- **Analysis of 60 day operating reserves**
 - **Operating cash disbursements relatively consistent**
 - **Variability around payments of annual and quarterly billings from County**

FY 2020-21 Rolling 60 Day Operating Disbursements



Miscellaneous Fees

Policy Objectives	Current Policy	Proposed Policy	Impact / Achieves
<ul style="list-style-type: none"> • Cost recovery • Equitable fee structure 	<ul style="list-style-type: none"> • Full cost recovery • Lacks specificity 	<ul style="list-style-type: none"> • Full cost recovery w/ consideration on multi-year, programmatic basis • Development of cost-recovery model • Periodic review of fees • Potential inflationary adjustments • Potential phased approach for increases 	<ul style="list-style-type: none"> • Increased financial transparency • Consistent, rational model for overhead/indirect costs • Minimizes impact of rate adjustments • Alignment with WES' business needs

Debt

Policy Objectives	Current Policy	Proposed Policy	Impact / Achieves
<ul style="list-style-type: none"> • Compliance with legal and statutory requirements • Codification of best practices to promote financial sustainability • Alignment with WES' business needs 	<ul style="list-style-type: none"> • Currently no full debt policy • Debt used for capital financing • Financing term matches assets' useful lives • Lacks specificity 	<ul style="list-style-type: none"> • WES continues to operate independently from County debt process • Debt used for capital financing • Financing term matches assets' useful lives • Default assumptions of revenue obligations or bonds sold via competitive auction 	<ul style="list-style-type: none"> • Increased financial transparency • Efficient, cost-effective funding and completion of necessary infrastructure • Gradual, relatively linear rate adjustments • Alignment with best practices for utility debt issuance



Next Steps

- Finalization of proposed policies – request for motion to support
- Presentation for consideration thereafter as recommended by Advisory Committee to the BCC for adoption
- Incorporation into FY 2022-23 Budget and Financial Planning Cycle



Thank you
Questions?



CLACKAMAS
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- | |
|---|
| <input type="checkbox"/> Administrative Policy
<input type="checkbox"/> Operational Policy |
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WES Policy

Name of Policy	Debt Management Policy	Policy #	
Policy Owner Name	Greg Geist	Effective Date	
Policy Owner Position	WES Director	Approved Date	
Approved By		Last Review Date	
Signature		Next Review Date	

I. PURPOSE

This policy provides guidance on the issuance, structure, and management of Water Environment Services' (WES) long- and short-term debt. This policy reflects debt management best practices as recommended by the Government Finance Officers Association (GFOA).

II. AUTHORITY

This policy is adopted through the Board of County Commissioner's (BCC) rule-making authority and is distinct from Clackamas County Debt Management Policy adopted in 2021. All references to the Board of County Commissioners in this document shall be with the BCC acting as the governing body of WES.

III. GENERAL POLICY

WES shall undertake and maintain all long- and short-term debt financings in compliance with applicable Federal law, the Oregon Constitution, Oregon Revised Statutes (ORS), and Oregon Administrative Rules (OAR). WES will further comply with Security and Exchange Commission (SEC) and Municipal Securities Rulemaking Board (MSRB) rules regarding ongoing disclosure, and oversight of participants in the municipal debt market including advisors and securities dealers. Finally, WES will comply with IRS regulations for tax-exempt and tax-advantaged debt issuance.

The Debt Management Policy sets forth the practices for debt issuance and the management of outstanding debt. The Policy establishes certain limits which recognize WES' capital requirements, its ability to repay financial obligations, and the existing legal, economic, financial, and debt market conditions. Specifically, the Policy is intended to assist WES in the following:

1. Evaluating available debt issuance options;
2. Maintaining appropriate capital assets for present and future needs;
3. Promoting sound financial management through accurate and timely information on financial conditions;
4. Protecting and enhancing WES' credit rating(s); and

5. Safeguarding the legal use of WES' financing authority through an effective system of internal controls.

IV. DEFINITIONS

- A) Arbitrage - refers to the difference between the interest paid on tax-exempt bonds and the interest earned by investing proceeds of tax-exempt bonds in higher-yielding taxable securities. Federal income tax laws generally restrict the ability to earn arbitrage in connection with tax-exempt bonds.
- B) Bond Counsel - an attorney or law firm retained by WES to advise and prepare debt issuance and continuing disclosure documents. An important function of Bond Counsel is to provide an opinion regarding the tax-exempt status of a bond issue.
- C) Continuing Disclosure – disclosure of material information provided to the marketplace by WES after the initial issuance of municipal debt. Such disclosures include, but are not limited to, annual financial information, certain operating information and notices about specified events affecting WES, the municipal debt itself or the project(s) financed.
- D) Credit Enhancement - the use of the credit of an entity other than WES to provide additional security in a bond or note financing. This term typically is used in the context of bond insurance, bank letters of credit and credit programs offered by federal or state agencies.
- E) Credit Rating - an opinion by a rating agency (e.g., Moody's Investors Service, and Standard & Poor's) on the creditworthiness of a bond issue.
- F) EMMA (Electronic Municipal Market Access System) - an online source operated by the MSRB providing free access to municipal disclosures and educational materials about the municipal securities market. EMMA serves as the source for official statements and other primary market disclosure documents for new issues of municipal debt, as well as the official source for continuing disclosures on outstanding debt issues.
- G) WES Director - For the purpose of this Policy each reference to the "WES Director" shall mean WES' Director or their designee, which may include but is not limited to the WES Assistant Director or the WES Finance Manager.
- H) Interfund Loans:
 - 1) *Capital Loan* – a loan between WES funds for the purpose of financing the design, acquisition, construction, installation, or improvement of real property.
 - 2) *Operating Loan* – a loan between WES funds for the purpose of paying operating expenses.
- I) Municipal Advisor - a person or firm registered and regulated by the Securities and Exchange Commission and MSRB who provides advice to

WES with respect to the issuance of municipal debt, including advice regarding structure, timing, terms, the method of sale and other matters concerning such financial obligations. SEC regulations require that Municipal Advisors maintain a fiduciary duty to advise and act in WES' best interest.

- J) Municipal Securities Rulemaking Board (MSRB) - a self-regulatory organization, consisting of representatives of securities firms, bank dealers, municipal advisors, issuers, investors and the public, that is charged with primary rulemaking authority over municipal securities dealers and municipal advisors. MSRB rules are approved by the SEC.
- K) Official Statement - a document prepared on behalf of WES in connection with a primary debt offering that discloses material information. Official statements typically include information regarding the purposes of the issue, how the securities will be repaid, and the financial and economic characteristics of the issuer. This information is used by investors and other market participants to evaluate the credit quality and potential risks of the primary offering.
- L) Refunding - a process whereby WES refinances outstanding bonds by issuing new bonds. The primary reason for refunding bonds is to reduce WES' interest costs. Other reasons include restructuring debt service payments, releasing restricted revenues, modifying bond covenants, and easing administrative requirements.
- M) Securities and Exchange Commission (SEC) - a federal agency responsible for supervising and regulating the securities industry. Although municipal securities are exempt from the SEC's registration requirements, Municipal Advisors and securities dealers are subject to SEC regulation and oversight.
- N) Tax Certificate - a document executed by WES at the time of initial issuance of tax-exempt bonds certifying to various matters relating to compliance with federal income tax laws and regulations, including arbitrage rules.
- O) Underwriter (or Investment Banker) - a municipal securities dealer that purchases a new issue of municipal debt from WES often for resale in the secondary market. The underwriter may acquire the securities either by negotiation with WES or by award based on competitive bidding

V. POLICY GUIDELINES

The WES Director is responsible for administering WES' debt programs, including the sale and management of debt, and monitoring ongoing federal and state regulatory compliance.

The County has delegated authority to WES to adopt this WES-specific policy.

WES shall make recommendations to the Board of County Commissioners as necessary to accomplish WES' debt financing objectives. The WES Director may choose to delegate authority to another member of the Finance Department staff to lead the debt management process and assume the responsibilities as outlined in this policy.

WES shall coordinate as necessary with the County Finance Department and County Treasurer's Office in connection with any planned or active debt issuance to ensure compliance with this Debt Management Policy and other rules and regulations.

Long-term debt obligations will not be used to fund general operations of WES. The scope, requirements, demands of WES' budget and financial plan, reserve levels, and the ability or need to expedite or maintain the programmed schedule of approved capital projects, will be considered when deciding to issue long-term debt. All borrowings must be authorized by the Board of County Commissioners.

Debt cannot be issued to fund capital projects unless such capital projects have been included in WES' capital improvement plan (CIP). Inclusion in the CIP may occur as part of an action related to budget approval or budget adjustment approved by the Board of County Commissioners.

For debt-financed projects, WES shall consider making a cash contribution, "Pay-As-You-Go" funding, as a source of funds from either current resources or from outside cash funding sources (e.g., state or federal grants) to projects. The target cash contribution shall be determined on a case-by-case basis for each given project; however, a minimum cash contribution must be made to cover project costs which cannot be capitalized and/or are ineligible under the federal tax code on tax-exempt bonds.

WES' debt strategy shall be targeted at effectuating three purposes: (i) efficient and cost-effective funding and completion of necessary WES infrastructure; (ii) gradual, relatively linear rate adjustments to avoid "rate shock"; and (iii) participation in the costs of constructed infrastructure by future users of the system.

At least every three years, the WES Director shall review WES' Debt Management Policy and, if needed based on market, statutory or regulatory developments, recommend updates for approval. In addition, the Debt Management Policy may be updated at any time for any immediate needs (e.g., new regulations) subject to BCC approval.

Section VI describes the requirements and procedures of WES' Debt Management Policy and is organized under the following headings:

- A. Type and Use of Debt
- B. Federal, State or Other Loan Programs
- C. Debt Refinancing

- D. Debt Structure Considerations
- E. Method of Sale
- F. Investment of Bond Proceeds
- G. Credit Ratings/Objectives
- H. Bond Issuance Investor Relations
- I. Post Issuance Tax and Arbitrage Rebate Compliance
- J. Disclosure and Continuing Disclosure
- K. Consultants and Advisors
- L. Interfund Loans
- M. Reporting Requirements

VI. PROCESS AND PROCEDURES

A. Type and Use of Debt

WES will issue debt as needed and as authorized by the Board of County Commissioners in a form related to the type of improvement to be financed. No County general fund support or property tax revenues are anticipated, but may be included to further general county purposes as decided by the BCC in their role as the governing body of Clackamas County.

1. General Obligation Bonds - General obligation (GO) bonds are authorized under ORS 287A, payable from a dedicated tax levy and subject to voter approval by the electorate of WES and/or its underlying districts, namely Clackamas County Service District No. 1, the Surface Water Agency of Clackamas County, and the Tri-City Service District.
2. Revenue Bonds and Revenue Obligations - Revenue bonds issued under ORS 287A and Revenue Obligations issued under ORS 271 are payable from available revenues. Although other specific enterprise revenues can be used for debt service, no property taxes are pledged to the bonds.

Revenue bonds are not subject to constitutional or statutory debt limits, WES' debt will not exceed legal or contractual limitations, such as rate covenants or additional bonds tests imposed by then-existing financing covenants. Revenue bonds are typically not subject to voter approval; however, revenue bonds may be subject to referral.

3. Other Financing Tools - WES may utilize other financing long-term methods such as Certificates of Participation, Capital Leases secured by the property, or local improvement district financings secured by assessments.

In each case, the WES Director will consult with WES' Municipal Advisor and Bond Counsel on the feasibility of these capital financing instruments. This includes analyzing the effects on debt capacity, budget flexibility, cash

- flow sufficiency, cost of issuance, and other market factors. In all cases, any financing requires the approval of the Board of County Commissioners.
4. Variable Rate Obligations - WES will generally seek to obtain financing through fixed rate obligations. When appropriate, however, WES may choose to issue variable rate obligations. Such variable rate obligations may pay a rate of interest that varies according to a predetermined formula or a rate of interest that is based on a periodic remarketing of securities.
 5. Short-Term Financing - WES may issue short-term notes (e.g., Bond Anticipation, Revenue Anticipation and Grant Anticipation) when necessary and approved by the BCC. Anticipation notes are secured by a revenue pledge of anticipated bond proceeds, project revenues and/or anticipated grant resources. Prior to selling Revenue and Grant anticipation notes WES must identify a secondary source of repayment for the notes if expected project revenue/grant funding does not occur.

B. Federal, State, or Other Loan Programs

To the extent it benefits WES, WES may participate in federal, state, or other loan programs that are secured by any of the sources identified above. The WES Director shall evaluate the requirements of these programs to determine if WES is well served by employing them and make recommendations to WES Administrator and Board of County Commissioners. WES specifically will evaluate Clean Water Act State Revolving Fund loans and Water Infrastructure Finance and Innovation Act (WIFIA) financing options.

For purposes of this Policy, WES shall treat and report these commitments in a manner consistent with other WES debt obligations, although it is not required to consider such debt *pari passu* to issued revenue bonds or obligations unless required under the terms of such program. To the extent required by the loans or other outstanding debt agreements, WES shall include the financial requirements of these commitments when determining additional bonds tests, coverage requirements, debt limitations, continuing disclosure requirements and any other conditions imposed by WES' outstanding obligations.

C. Debt Refinancing

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

WES and the Municipal Advisor will monitor refunding opportunities for all outstanding debt obligations on a periodic basis applying established criteria in determining when to issue refunding debt and bring forth the recommended opportunities with appropriate Board of County Commissioners actions and related documentation.

For coordination purposes, notification should be made to the County Treasurer as soon as WES decides to move forward with a debt refinancing.

D. Debt Structure Considerations

1. Maturity of Debt - The final maturity of the debt shall not exceed, and preferably be less than, the remaining average useful life of the assets being financed, and to comply with Federal tax regulations, the average life of a financing shall not exceed 120% of the average life of the assets being financed.
2. Debt Service Structure - In consultation with the Municipal Advisor, debt service payments for new money issues will be structured according to the type of debt issuance (e.g., general obligation vs. revenue bonds), revenue sources and anticipated revenue collections. The WES Director will recommend debt service repayment plans based on overall affordability with the goal of repaying the debt as quickly as feasible.
3. Lien Structure - Senior and subordinate liens may be used to maximize the most critical constraint, either cost or capacity, thus allowing for the most beneficial leverage of revenues.
4. Reserve Funds - A reserve fund for a debt issuance may be required for credit rating or marketing reasons. If required, such reserve fund can be funded with:
 - a. The proceeds of a debt issue;
 - b. The reserves of WES; or,
 - c. A surety policy.

A cash reserve fund will be invested pursuant to the investment restrictions associated with the respective financing documents and WES' investment policy. For each debt issue, the WES Director will evaluate whether a reserve fund is necessary for credit rating or marketing purposes and the benefits of funding or maintaining the reserve requirement with cash or a surety policy, in addition to determining the benefits of borrowing the necessary funds or using cash reserves. This evaluation will be done in consultation with WES finance staff, Treasurer's Office and in consideration

of the chart of accounts structure. In general, the preferred method for providing required reserve funds shall be by surety.

5. Redemption Provisions - In general, WES will seek the right to optionally redeem debt at par as specified in the bond issuance documents no later than ten years after issuance. Redemption provisions will be established on a case-by-case basis, taking into consideration market conditions and the results of a call option analysis prior to the time of sale. Because the issuance of non-callable debt may restrict future financial flexibility, cost will not be the sole determinant in the decision to issue non-callable debt.
6. Credit Enhancement - Credit enhancement (e.g., bond insurance or letters of credit) on WES financings will only be used when net debt service is reduced by more than the cost of the enhancement. WES will evaluate the availability and cost/benefit of credit enhanced debt versus unenhanced debt prior to issuing any debt.

E. Method of Sale

WES will select a method of sale that is the most appropriate when considering the financial market, transaction-specific and WES-specific conditions, and advantages. There are three basic methods of sale: Competitive Sale, Negotiated Sale, and Direct Placement. Each type of debt sale has the potential to provide the lowest cost or satisfy other priorities given the right conditions. The default for revenue bonds and revenue obligations shall be competitive sale.

In consultation with the Municipal Advisor, the WES Director will select the most appropriate method of sale considering the prevailing financial market and transaction-specific conditions. If a negotiated sale is expected to provide overall benefits, the senior managing underwriters and co-managers shall be selected through the process described in Section K.4.

F. Investment of Bond Proceeds

The County Treasurer is responsible for investing bond proceeds in accordance with legal requirements and WES' investment policy.

For each debt issuance WES staff will provide the County Treasurer with cash flow/projection spreadsheet(s), as known, so the County Treasurer can maximize the return on the investment of the bond proceeds.

G. Credit Ratings/Objectives

WES' objective is to maintain an excellent credit rating (or ratings) considering WES' financial condition as a way of balancing financing costs and cash flow. The WES Director shall be responsible for managing the relationship with WES' credit

rating agencies. This effort shall include providing the rating agencies with WES' annual budget, financial statements, and other information they may request. Full disclosure of operations will be made to the credit rating agencies.

The WES Director shall also coordinate periodic meetings with the rating agencies and communicate with them prior to each debt issuance. WES will evaluate the benefits of a higher rating at lower debt cost versus a lower rating that provides more debt capacity and flexibility.

H. Bond Issuance Investor Relations

The WES Director shall be responsible for managing relationships with bond issue related investors. The WES Director will also be responsible for responding to inquiries from institutional and retail investors related to bonds, and for proactively communicating with such bond issue related investors if necessary. Such communication shall be made only as permitted under applicable federal securities laws, in consultation with WES' bond counsel. Nothing in this section of this policy should be construed to supersede WES' investment policy managed by the County Treasurer as outlined in section F (above).

I. Post Issuance Tax and Arbitrage Rebate Compliance

WES will comply with all financing covenants to maintain the validity of the issuance of debt, including, but not limited to tax-exemption, arbitrage rebate compliance, insurance provisions, reporting and monitoring requirements. Any instance of noncompliance will be reported to the Board of County Commissioners.

1. External Advisors and Documentation - WES shall consult with bond counsel, County Counsel, County Treasurer, and advisors, as needed, throughout the debt issuance process to identify requirements and to establish procedures necessary or appropriate so that the bonds or other obligations will continue to qualify for tax-exempt status, if applicable.

Those requirements and procedures shall be documented in the tax certificate and agreement ("Tax Certificate") and/or other documents finalized at or before issuance of the bonds. Those requirements and procedures shall include future compliance with applicable arbitrage rebate requirements and certain other applicable post-issuance requirements of federal tax law throughout (and, in some cases, beyond) the term of the bonds. This shall include, without limitation, consultation in connection with any potential changes in use of bond-financed or refinanced assets.

WES may engage expert advisors to assist in the calculation of arbitrage rebate payable in respect of the investment of bond proceeds, unless the Tax Certificate documents that arbitrage rebate will not be applicable to an issue of bonds.

Unless otherwise provided by the transaction documentation relating to the bonds, unexpended bond proceeds shall be segregated from other funds of WES.

2. Investment Documentation - The investment of bond proceeds shall be managed by the County Treasurer (as outlined in section F). The County Treasurer shall prepare (or cause to be prepared) periodic statements regarding the investments and transactions involving bond proceeds. WES shall work with the County Treasurer before the issuance of any bonds to discuss and mutually agree on the frequency and information needed involving the bond proceeds.
3. Arbitrage Rebate and Yield - Unless the Tax Certificate documents that arbitrage rebate will not be applicable to an issue of bonds, the WES Director or County Treasurer, shall be responsible for:
 - a. Either (1) engaging the services of a rebate service provider and, prior to each rebate calculation date, causing the County Treasurer¹ and WES' selected Trustee² to deliver periodic statements concerning the investment of bond proceeds to the rebate service provider, or (2) undertaking rebate calculations themselves and retaining and obtaining periodic statements concerning the investment of bond proceeds³;
 - b. Providing to the rebate service provider additional documents and information reasonably requested;
 - c. Monitoring efforts of the rebate service provider;
 - d. Assuring payment of required rebate amounts, if any, no later than 60 days after each five-year anniversary of the issue date of the bonds, and no later than 60 days after the last bond of each issue is redeemed;
 - e. During the construction period of each capital project financed in whole or in part by bonds, monitoring the investment and expenditure of bond proceeds and consulting with the rebate service provider to determine compliance with any exceptions from the arbitrage rebate requirements during each 6-month spending period up to 6 months, 18 months, or two years, as applicable, following the issue date of the bonds; and
 - f. Retaining copies of all arbitrage reports, investment records and trustee statements.

¹ See Section I(2) for more information.

² See Section K(6) for more information.

³ See Section I(2) for more information.

4. Use of Bond Proceeds and Bond-Financed or Refinanced Assets

The WES Director shall be responsible for:

- a. Monitoring the use of bond proceeds including investment earnings in coordination with the County Treasurer, reimbursement of expenditures made before bond issuance, and the use of the financed asset throughout the term of the bonds. This is to ensure compliance with covenants and restrictions set forth in the Tax Certificate relating to the bonds;
- b. Maintaining records identifying the assets or portion of assets that are financed or refinanced with proceeds of each issue of bonds (including investment earnings and reimbursement of expenditures made before bond issuance), including a final allocation of the bond proceeds documented on or before the later of 18 months after an expenditure is paid or the related project is placed in service, and in any event before the fifth anniversary of the bond issuance;
- c. Consulting with bond counsel, other legal counsel, and other advisors in the review of any change in use or transfer of bond-financed or refinanced assets to ensure compliance with all covenants and restrictions set forth in the Tax Certificate relating to the bonds;
- d. To the extent WES discovers that any applicable tax restrictions regarding use of bond proceeds and bond-financed or refinanced assets will or may be violated, consulting promptly with bond counsel, other legal counsel, and other advisors to determine a course of action to preserve the tax-exempt status of the bonds (if applicable).

J. Disclosure and Continuing Disclosure

WES is required to provide disclosure, generally in the form of an official statement, relating to each public offering of debt. WES is responsible for providing complete and accurate information to be included in the official statement and is responsible for the overall content of the document, although it may rely on an external party (e.g., bond counsel or disclosure counsel) to assist in the creation of the document.

1. Primary Disclosure Policies - The WES Director is responsible for information requests relating to official statements to be used in the initial offering of WES' borrowings. The WES Director will request information required for disclosure to investors and rating agencies from relevant departments and will sign a statement attesting to the accuracy and completeness of the information therein. The Board of County Commissioners will be provided with a copy of the official statement for each issue of debt.

2. Continuing Disclosure Policies - Under Rule 15c2-12 of the Securities and Exchange Commission, adopted under the Securities Exchange Act of 1934, WES is required to enter a contract to provide "secondary market disclosure" relating to each publicly offered bond issue (referred to as an "undertaking"). The WES Director shall review any proposed undertaking to provide secondary market disclosure and negotiate any commitments therein.

Additionally, bonds sold via the direct placement method may have specific disclosure requirements required by the purchaser.

Internal procedures shall be developed that identify the information that is obligated to be submitted in an annual filing, the dates on which filings are to be made, list the events required to be disclosed, and identify the person responsible for making the filings.

The Annual Report may fulfill annual financial information filing obligations. The information provided in the Annual Report does not have to be replicated when filing with the Electronic Municipal Market Access (EMMA) portal. If WES agrees to furnish information that is outside the scope of the Annual Report, that information may be included as a supplement to the Annual Report when filing with EMMA. On its completion, the Annual Report should be immediately submitted to EMMA.

Each time WES issues new bonds, the WES Director (in consultation with bond counsel and the municipal advisor) will review WES' compliance with prior continuing disclosure undertakings and make any necessary corrective filings.

In addition to continuing disclosure undertakings associated with public bond offerings as required by SEC Rule 15c2-12, WES may also be subject to ongoing reporting requirements associated with other debt obligations, such as bank loans.

K. Consultants and Advisors

1. Municipal Advisor - The County will retain an independent registered municipal advisor (MA) through a process administered by the WES Director consistent with the rules adopted by WES' Local Contract Review Board (LCRB). Selection of WES' MA should be based on the following:
 - a. Experience in providing consulting services to issuers similar to WES;
 - b. Ability to meet all regulatory requirements;
 - c. Knowledge and experience in structuring and analyzing large complex debt issues;
 - d. Ability to conduct competitive selection processes to obtain related financial services (including underwriters and other service providers);
 - e. Experience and reputation of assigned personnel; and
 - f. Fees and expenses.

WES expects that its MA will provide objective advice and analysis, maintain confidentiality of WES financial plans, and fully disclose any potential conflicts of interest.

2. Bond Counsel - For all debt issues, WES will engage and retain an external bond counsel through a process administered by the WES Director and County Counsel consistent with the rules adopted by WES' LCRB.

Where required by the lender and/or bond investors, debt issued by WES will include a written opinion by bond counsel affirming that WES is legally authorized to issue the debt, stating that WES has met all state constitutional and statutory requirements necessary for issuance, and determining the debt's federal income tax status. Bond Counsel may also assist in the drafting of the Official Statement in lieu of having a separate disclosure counsel.

3. Disclosure Counsel - WES may engage and retain, when appropriate, Disclosure Counsel through a process administered by the WES Director and County Counsel consistent with the rules adopted by WES' LCRB, to prepare official statements for debt issues. Disclosure Counsel will be responsible for providing that the official statement complies with all applicable rules, regulations, and guidelines and be a firm with extensive experience in public finance.

4. Underwriters - For negotiated sales, underwriters will be required to demonstrate sufficient capitalization and experience related to the debt issuance in question. The WES Director, in consultation with the Municipal Advisor, will establish a pool of qualified underwriters through a process consistent with the rules adopted by WES' LCRB and may designate one or more firms as eligible to be senior managers and one or more firms as eligible to be co-managers. Criteria to be used in the appointment of qualified underwriters will include:
 - a. Quality and applicability of financing ideas;
 - b. Demonstrated ability to manage the type of financial transaction in question;
 - c. Demonstrated ability to structure debt issues efficiently and effectively;
 - d. Demonstrated ability to sell debt across a wide span of investors;
 - e. Demonstrated willingness to put capital at risk;
 - f. Experience and reputation of assigned personnel;
 - g. Past performance and references; and
 - h. Fees and expenses.
5. Debt Issued Through Commercial Banks - The WES Director, in consultation with the Municipal Advisor may solicit proposals from commercial banks to provide lines of credit, letters of credit, direct bank placements, and other credit facilities, as needed.

A bank or pool of banks will be selected through a process administered by the WES Director consistent with the rules adopted by WES' LCRB.

Selection of such providers will be based upon the proposed financial terms deemed most advantageous to WES, including, but not limited to lowest interest cost, prepayment flexibility, terms and structure, and fees.

6. Trustee and Paying Agent Services - The County Treasurer will recommend the use and selection of the Trustee and Paying Agent services as needed, based on a competitive solicitation or other list of qualified financial institutions maintained by the Treasurer and allowed by Oregon Revised Statutes.

L. Interfund Loans

An interfund loan is a transfer between funds within WES for an approved amount and a plan of repayment during a specified period of time.

Interfund loans are subject to the requirements of ORS 294.468 and designed to provide financing resources to address cash flow needs of WES.

Interfund loans can be of two types:

1. Capital Loan: a loan between WES funds for the purpose of the design, acquisition, construction, installation, or improvement of real property.
2. Operating Loan: a loan between WES funds for the purpose of paying operating expenses.

Interfund loan requests must be reviewed and approved by the WES Director prior to a request for authorization by Board of County Commissioners. They are subject to the following requirements, including compliance with ORS 294.468:

- a. Loans will only be authorized after it has been demonstrated that reasonable consideration was given to other potential resources available to the department/fund requesting the loan.
- b. Interfund loans must be authorized by Board Resolution, stating the fund from which the loan is made, the destination fund, the purpose of the loan, the principal amount of the loan, the interest rate at which the loan shall be repaid, and a schedule for repayment of principal and interest.
- c. The interest rate on Capital and Operating Loans shall be set at the stated rate of interest paid by Oregon Local Government Investment Pool as reported by WES Treasurer at the time the loans are approved by the Board of County Commissioners, plus two percent (2% APR).
- d. Interfund loans cannot not be made from debt service reserve funds, or any other funds restricted by law, constitutional provisions, bond covenants, grantor requirements or other WES restrictions.
- e. Capital Loans cannot not exceed 10 years.
- f. Operating Loans cannot extend beyond end of the subsequent fiscal year.
- g. Interfund loans may be repaid in advance without any additional accrual of interest or other penalties.
- h. Performance of each interfund loan shall be monitored by WES Finance.
- i. Per the opinion of County Counsel, WES shall not make interfund loans to Clackamas County or their other component units.

M. Reporting Requirements

The WES Director will report to the Board of County Commissioners on an annual basis the following information:

- a. A summary of outstanding debt obligations to include the series name, original amount of issuance, outstanding principal amount, issue date, maturity dates, interest rates, and annual debt service;

- b. The amount of the net variable rate obligation and percentage as compared to outstanding debt, if applicable;
- c. Other considerations if applicable, including (but not limited to): refunding opportunities, performance of variable rate obligations, and/or proposed new debt issuances.

VII. ACCESS TO POLICY

This Policy is available on WES' and the County's website.

ADDENDA

The Clackamas County Investment Policy is available on the County's internet located here <https://www.clackamas.us/treasurer>.



Department: WES Finance	Version: 001
Written By: Chris Storey and Erin Blue	Reviewed and Approved By:
Policy Title: Water Environment Services Fees Policy	Title:
Effective Date: TBD	Signature:
Suggested Review Timeline: Annually	
Next Review Date: January 2023	

Water Environment Services Fees Policy

1. Purpose

A policy on fees sets forth long-term financially sustainable practices for cost-recovery and helps ensure fees are fair and equitable. This policy builds on the County’s Cost Recovery Policy by outlining specific fee policy objectives for Clackamas Water Environment Services (WES). This policy covers miscellaneous fees charged by WES and does not apply to sanitary sewer user charges, surface water user charges, or system development charges.

2. Policy Statement

In a restatement of the County’s policy, it shall be the general policy of WES to fully recover costs to the extent legally possible for all services or programs provided whether from fees, fines, revenue agreements, or other revenue generating arrangements for which fees may be charged.

WES shall set fees for designated goods or services according to financial objectives, equity, efficiency, and administrative feasibility. Miscellaneous fees and charges shall be set based on the full cost of providing the related services. In determining full cost, WES shall develop and apply a cost-recovery model to ensure a consistent and rational application of overhead and indirect costs.

A periodic review of fees will be conducted by line of business (e.g, Business Services, Capital Planning and Management, Environmental Services, and Operations), with staff focusing on one or two lines of business each budget cycle.

For fees subject to variability in levels of demand and the timing of revenue collection, cost recovery may be analyzed on a multi-year, programmatic level.

If the review and analysis of fees indicates an adjustment is needed to meet the cost recovery objectives of this policy, a recommendation will be made to the Board of County Commissioners (BCC) as the governing body of WES for changes to the fee. Recommended fee adjustments may be phased in over one or more years to reduce the impact of increases on customers. If the review and analysis indicates no significant changes are needed to the fee structure, a recommendation to adjust by an inflationary index may be made.



Fee increases will be approved prior to or at the time of the adoption of the budget. A notification of any increases will be published on WES' website.

3. Contacts

Primary: Chris Storey, WES Assistant Director

Alternate: Erin Blue, WES Finance Manager

Document Control: Reviewed by	<i>Signatures indicate review approval of the entire document, including attachments</i>		
	Title	Initial	Date



Department: WES Finance	Version: 001
Written By: Chris Storey and Erin Blue	Reviewed and Approved By:
Policy Title: Water Environment Services Operating Reserves Policy	Title:
Effective Date: TBD	Signature:
Suggested Review Timeline: Annually	
Next Review Date: January 2023	

Water Environment Services Operating Reserves Policy

1. Purpose

A properly designed reserve policy is a financial best practice and communicates Clackamas Water Environment Services' (WES) commitment to maintaining long-term financial health. Reserves mitigate risks and are a key component of a financial strategy to ensure WES can respond quickly and decisively to extreme events or unforeseen economic conditions. Reserves also serve as a financial tool to ensure stable, predictable rate increases and are an important factor in determining bond ratings and the costs of borrowing. This policy outlines the reserve types and target levels WES will use in budgeting and long-range financial planning to maintain a strong financial position and mitigate risk. This policy also describes the funding strategy and the conditions under which reserves may be used. This policy reflects financial planning best practices as recommended by the Government Finance Officers Association (GFOA).

2. Policy Statement

WES shall establish and maintain reasonable reserves in order to cover the financial needs of its sewer and surface water operations and mitigate impacts to ratepayers. The amount of money held in reserves shall be stated as a number of days of annual budgeted operating expenses so that WES' reserve will stay consistent with total operating costs over time.

Operating / Working Capital Reserve – WES shall maintain an operating / working capital reserve to provide cash flow for ongoing financial needs, counter revenue instability, and provide funding for unanticipated expenses. The reserve target will be a minimum of 60 days' of operating expense. This target may be met through a budgeted contingency and/or a designated operating reserve line item. WES' long-range financial plan will include the 60 days' reserve as a component of reserves/ending fund balance and this requirement will be included in any rate projections.

Rate Stabilization Reserve – If long-range financial planning indicates variability in net revenues within the next 5 budget cycles, WES may establish a rate stabilization reserve to smooth rate adjustments over that time. If such a reserve is established, the target balance for this reserve will be 10% of the annual debt service for senior lien obligations. This reserve is distinct from ending fund balances in the Operating fund or the Capital Construction fund.



Funding Reserves

Reserves will generally be funded with excess revenues over expenses (surplus revenues) or one-time revenues.

Conditions for Use of Reserves

WES' intent is to limit use of reserves to address unanticipated, non-recurring, extraordinary or emergency needs. Reserves should not be used for recurring annual operating costs unless unforeseen poor economic conditions or events disrupt WES' revenues. In such cases, reserves may be used to provide short-term relief so that WES can restructure its operations in a deliberate manner.

Authority to Use Reserves

WES' governing body, the Board of County Commissioners (BCC), may approve the use of reserves as part of the normal annual budget process or through a supplemental budget or contingency transfer.

Evaluation of Reserve Target Levels

Reserve minimum and target levels shall be analyzed annually in conjunction with the annual budget and long-range financial planning process. Reserve targets may be adjusted as needed in response to changing economic conditions, new risk factors, and long-term financial planning goals.

Excess Reserves

To the extent that operating reserves are above the target levels, excess funds will be utilized as a resource for capital projects.

3. Definitions / Acronyms

Annual budgeted operating expenses – amounts budgeted as expenses in WES' Sanitary Sewer and Surface Water Operating Funds in the categories of materials and services, personnel services, and special payments.

Annual debt service – the amount of principal and interest on outstanding bonds required to be paid in a fiscal year.

Contingency – a budgetary category of funds available for unforeseen expenses not otherwise budgeted. Oregon Local Budget Law allows transfers of appropriations from contingency to a spendable category when approved by a BCC resolution.

Fund Balance – an accounting term that refers to the cumulative excess of revenues over expenses since the beginning of a fund's existence.

Rate Stabilization Reserve - A rate stabilization reserve is a cash reserve that can be used to help smooth revenue variability to ensure stable rate increases and help meet debt service coverage requirements in times of revenue shortfalls.

Reserve - Reserves are funds set aside for a specific cash flow requirement, financial need, project, task, or legal covenant.



Senior lien obligations – obligations that are secured by a senior lien on WES’ net revenues; generally, WES’ outstanding revenue obligation debt, does not include debt related to State Revolving Fund loans.

4. Contacts

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Document Control: Reviewed by	<i>Signatures indicate review approval of the entire document, including attachments</i>		
	Title	Initial	Date

CLACKAMAS
WATER ENVIRONMENT SERVICES

EXECUTIVE BRIEFING

WILLAMETTE FACILITIES PLAN

JANUARY 2022



Introduction

Scope and Purpose

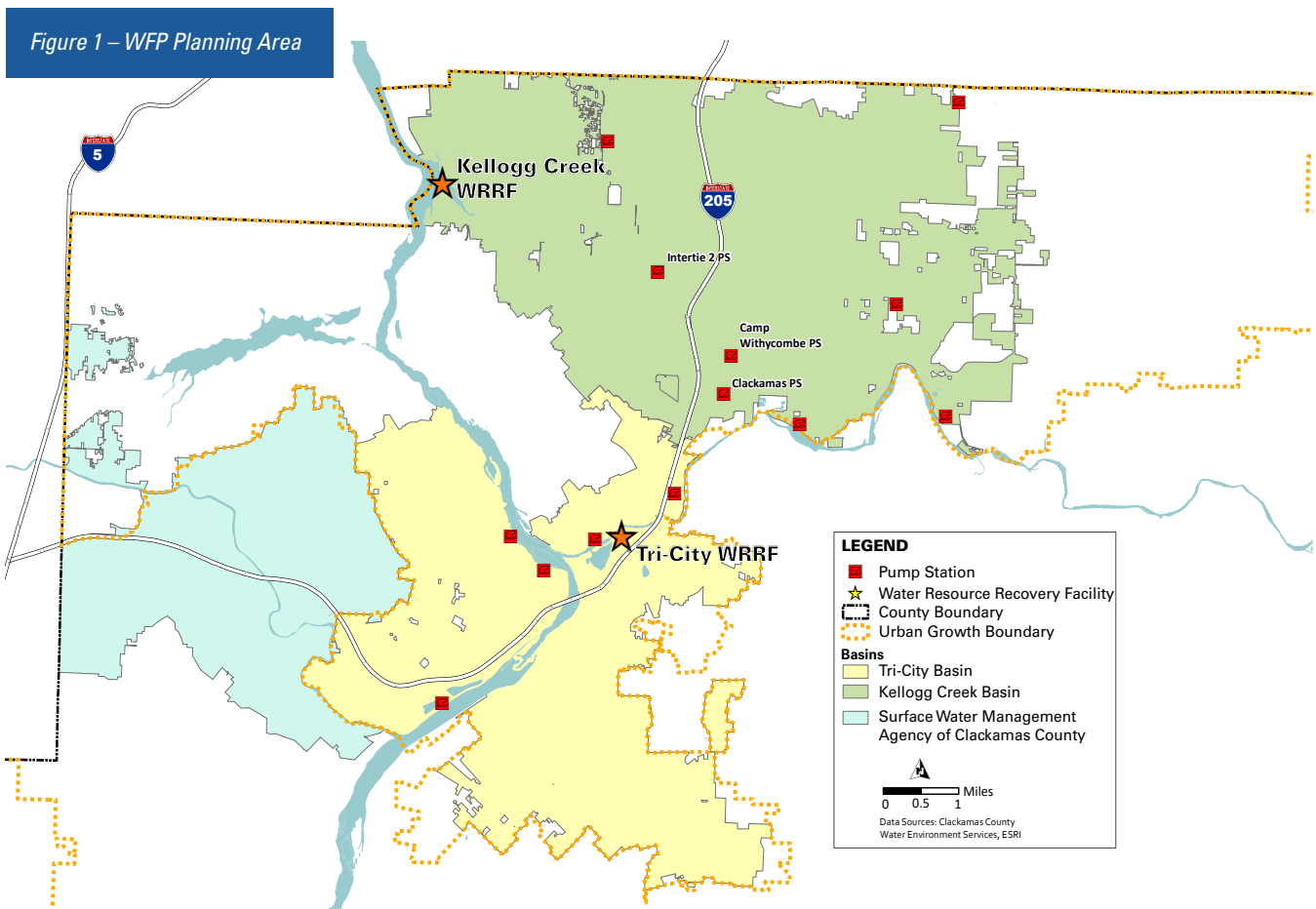
Clackamas Water Environment Services (WES, District) has completed a 20-year planning process for its wastewater treatment facilities that discharge to the Willamette River. This Willamette Facilities Plan (WFP, Plan) identifies improvements needed to provide capacity for growth, address aging infrastructure, and protect human health and the environment by meeting regulatory requirements through the year 2040. The Plan complies with the Oregon Administrative Rule (OAR) and guidance issued by the State of Oregon Department of Environmental Quality (DEQ). Such compliance facilitates agency approval of the Plan and allows the District to fund necessary projects with low-interest construction loans and/or grants administered through the Clean Water State Revolving Fund (SRF) program.

Recommended improvements presented in the Plan are based on an evaluation of regional alternatives that consider the District's Kellogg Creek and Tri-City Water Resource Recovery Facilities (WRRF), as well as wastewater collection and conveyance facilities located throughout the District's service area. This comprehensive, regional approach allows the District to:

- Identify the best use of its wastewater collection, conveyance, and treatment infrastructure;
- Develop a prioritized Capital Improvement Program (CIP) to address current needs while preparing for potential future requirements;
- Implement sustainable, affordable solutions that support economic development; and
- Continue to protect Willamette River water quality now and into the future.

Planning Area Definition

The planning area for the WFP is shown in Figure 1. Wastewater from two different basins within the planning area is conveyed to District-owned facilities for treatment. The planning approach taken by WES collectively considers both the Kellogg Creek basin, which conveys wastewater to the Kellogg Creek WRRF, and the Tri-City basin, which conveys wastewater to the Tri-City WRRF. This approach is supported by the fact that the two basins are interconnected at key locations, allowing the District to route wastewater from the Kellogg Creek basin to the Tri-City basin to optimize the capacity and performance of the entire system.



Wastewater Flows And Loads

Planning Area Population

Determining current and future population numbers within the District is a key initial step in the planning process. Consistent with OAR and DEQ guidance, the WFP is based on 2016 population estimates (Population Forecasts for Clackamas County Service Districts, August 2016), in conjunction with Portland State University’s Population Research Center certified population estimates and the 2018 Oregon Metro Regional Transportation Plan.

Table 1 summarizes the planning area population projections through the year 2040. Overall, the population served by WES expected to increase by approximately 33 percent, with 64 percent of the growth occurring in the Kellogg Creek WRRF basin, and 36 percent of the growth in the Tri-City WRRF basin. Figures 2 and 3 illustrate more specifically where growth is expected to occur.

Table 1 – Planning Area Population Projection

Jurisdiction	2015	2020	2025	2030	2035	2040
Tri-City Basin ⁽¹⁾	69,406	76,565	80,621	84,185	86,308	88,766
Kellogg Creek Basin ⁽²⁾	93,364	103,791	109,754	117,730	124,227	129,670
Planning Area Total⁽³⁾	164,770	180,356	190,015	201,915	210,535	218,436

Notes:

- (1) EcoNorthwest growth estimate refers to the Tri-City Basin as TCSD.
- (2) EcoNorthwest growth estimate refers to the Kellogg Creek Basin as CCSD No. 1.
- (3) Sum of Tri-City Basin Total and Kellogg Creek Basin Total.

Figure 2 – Kellogg Creek Basin Population Projection

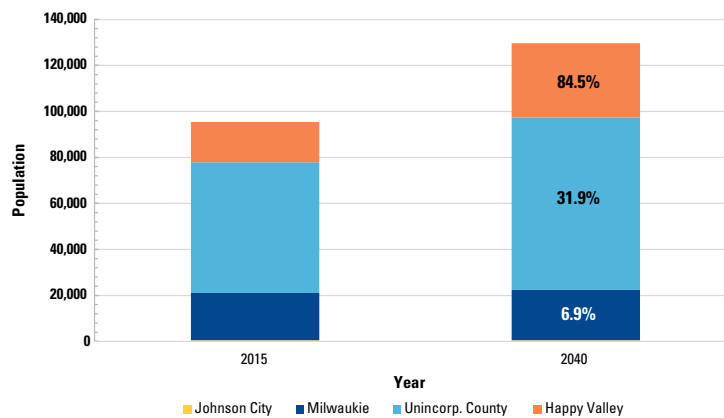
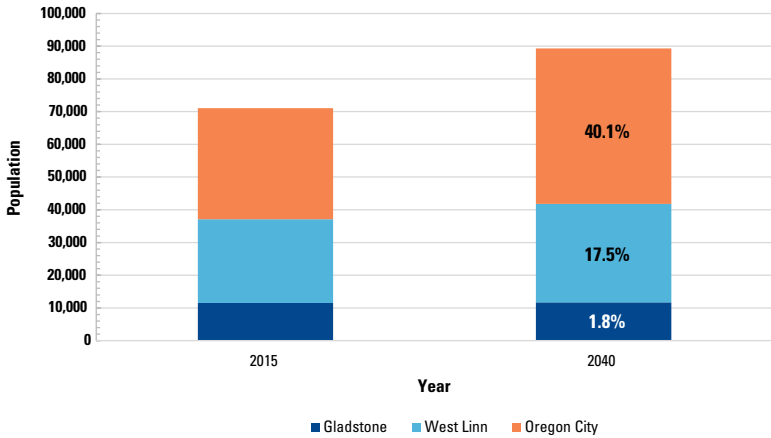


Figure 3 – Tri-City Basin Population Projection



Flow and Load Projections

Estimating the quantity of wastewater that will be generated as population grows is also an essential planning step. Daily wastewater flow (the volume of wastewater generated per day, represented in millions of gallons per day, or mgd) and load (the pounds of organic and solid matter contained within that wastewater volume, represented in pounds per day, or ppd) are each important. With respect to loads, biochemical oxygen demand (BOD) and carbonaceous BOD (cBOD) – which measure organic matter – and total suspended solids (TSS) – which measures solid matter – are two key parameters.

Seasonal Flow Considerations

In rainy climates such as the Pacific Northwest, a strong relationship exists between precipitation and wastewater flow. This is due to rainwater entering the sewer system, either through direct connections (known as “inflow”) or as groundwater flowing through leaky pipes (known as “infiltration”). As a result, the amount of flow from a given service area can vary substantially throughout the year. To capture this variation, the Plan includes flow

and load estimates for both “dry weather” (May through October) and “wet weather” (November through April) seasons. Through a separate but related planning effort (Collection System Master Plan, Jacobs, 2019) WES has evaluated ways to reduce infiltration and inflow (I/I). The Collection System Master Plan recommendation to reduce I/I by 65 percent in 19 key basins is the basis for the maximum and peak flow values presented in this Plan.

Key Design Criteria

The ability to provide reliable, effective conveyance and treatment of wastewater is determined by flow and/or load criteria, depending on the type of process being evaluated. Facility capacities documented in this Plan are based on industry-standard design criteria and are briefly summarized in Table 2 below.

Current and Projected Values

Flow and load projections for the areas serving the Kellogg Creek and Tri-City WRRFs are combined and shown in Figures 4 and 5, respectively.

Table 2 – Key WFP Flow and Load Criteria

Type of Wastewater Process	Applicable Criteria
Wastewater Conveyance (e.g., pipelines, pumping stations)	Peak Hour Flow (mgd)
Liquid Stream Wastewater Treatment (e.g., screening, settling, biological process)	Avg, Max Month, and Peak Hour Flow (mgd) Avg, Max Month, and Max Week Load (ppd)
Solid Stream Wastewater Treatment (e.g., thickening, digestion, dewatering)	Avg, Max Month, and Max Week Load (ppd)

Figure 4 – Current and Future Flow Projections

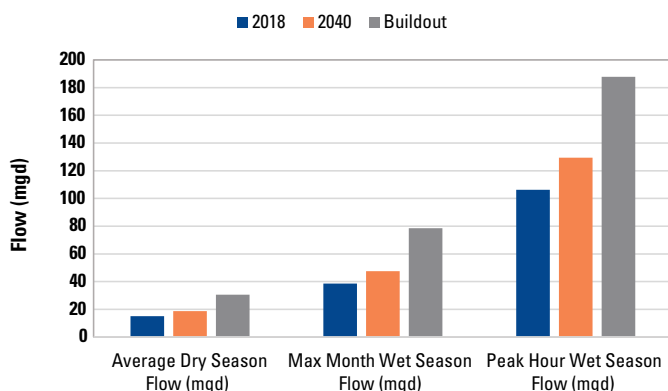
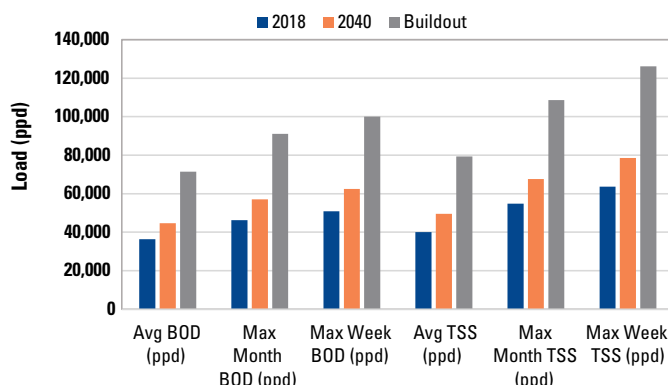


Figure 5 – Current and Future Load Projections



Regulatory Considerations

Existing Permit Limits

The WFP evaluates WES's ability to meet current and potential future water quality permit requirements. Current requirements are included in the Kellogg Creek and Tri-City WRRF National Pollution Discharge Elimination System (NPDES) Permits, summarized in Tables 3, 4, and 5. Both permits include two distinct seasons to determine regulatory compliance:

- **Dry Weather Season:** During the regulatory dry weather season effluent limits are established at more stringent levels, protecting water quality when

low streamflow and high temperature conditions exist in the Willamette River.

- **Wet Weather Season:** Conversely, during the regulatory wet weather season, Willamette River streamflow increases and temperatures cool. Less stringent effluent limits are needed to protect water quality during these times.

Such a seasonal approach protects water quality in an affordable, sustainable manner. This Plan assumes the seasonal approach to permitting will continue in the future.

Table 3 – Kellogg Creek WRRF Effluent Permit Limits

Parameter	Average Effluent Concentrations		Monthly Average, lbs/day	Weekly Average, lbs/day	Daily Maximum, lbs
	Monthly	Weekly			
May 1 – October 31					
CBOD ₅	15 mg/L	25 mg/L	1300	2000	2600
TSS	20 mg/L	30 mg/L	1700	2600	3400
November 1 – April 30					
BOD ₅	25 mg/L	40 mg/L	2100	3200	4200
TSS	30 mg/L	45 mg/L	2500	3800	5000
Other Parameters Limitations					
Total Chlorine Residual	Shall not exceed a monthly average concentration of 0.03 mg/L and a daily maximum concentration of 0.07 mg/L.				
Ammonia - May 1 to October 31	Shall not exceed a maximum daily limit of 60.1 mg/L or an average monthly limit of 33.9 mg/L.				
Ammonia - November 1 to April 30	Shall not exceed a maximum daily limit of 41.9 mg/L or an average monthly limit of 25.4 mg/L.				

Table 4 – Tri-City WRRF Effluent Permit Limits

Parameter	Average Effluent Concentrations		Monthly Average, lbs/day	Weekly Average, lbs/day	Daily Maximum, lbs ⁽¹⁾
	Monthly	Weekly			
May 1 – October 31					
CBOD ₅	10 mg/L	15 mg/L	1050	1750	2100
TSS	10 mg/L	15 mg/L	1400	2100	2800
November 1 – April 30					
BOD ₅	25 mg/L	40 mg/L	2800	4500	5600
TSS	30 mg/L	45 mg/L	3400	5100	6800
Other Parameters Limitations					
Total Chlorine Residual	Shall not exceed a monthly average concentration of 0.02 mg/L and a daily maximum concentration of 0.04 mg/L.				
Ammonia - May 1 to October 31	The interim limit no longer applies as WES fulfilled the MAO requirements.				

Notes:

(1) The daily mass load limit is suspended on any day that the flow exceeds 23.8 mgd (twice the design average dry weather flow).

Table 5 – Effluent Permit Limits Common to Both WRRFs

Parameter	Limitation
E.coli Bacteria	Shall not exceed 126 organisms per 100 ml monthly geometric mean. No single sample shall exceed 406 organisms per 100 ml.
pH	Shall be within the range of 6.0-9.0.
BOD ₅ Removal Efficiency	Shall not be less than 85 percent monthly average.
TSS Removal Efficiency	Shall not be less than 85 percent monthly average.

Future Permit Considerations

Throughout the planning process, WES maintained a high degree of communication and close coordination with Oregon DEQ. This allowed the planning team to make reasonable assumptions with respect to potential regulatory limits that may be included in future NPDES Permits for the Kellogg Creek and Tri-City WRRFs. A summary of the regulatory assumptions that were used to guide the analysis of alternatives in the WFP is presented in Table 6:

Table 6 – Regulatory Assumptions

Kellogg Creek NPDES Permit Assumptions	Tri-City Permit Assumptions
BOD/TSS Concentration Limits	
<p>The current permit is not based on the basin standard for technology-based limits for BOD and TSS; however, since the recommended improvements will not change the liquid-stream capacity, no change should be made.</p>	<p>The current permit is based on the basin standard for technology-based limits for BOD and TSS, and no change to this standard should be made.</p>
BOD/TSS Mass Load Limits	
<p>The requirement to meet daily BOD and TSS mass load limits is not currently suspended during peak flow conditions. In the future, WES believes these mass load limits should be suspended on any day that flow exceeds the hydraulic capacity of the secondary treatment process, or 18 mgd.</p>	<p>The requirement to meet daily BOD and TSS mass load limits is currently suspended during peak flow conditions. In the future, WES believes these mass load limits should continue to be suspended on any day that flow exceeds two times the average daily flow.</p>
<p>An alternative approach to suspending the mass load limits would be to establish new daily load limits according to OAR 240-041-0061 (9)(b), which requires the highest and best practical treatment to minimize the discharge of pollutants.</p>	<p>An alternative approach to suspending the mass load limits would be to establish new daily load limits according to OAR 240-041-0061 (9)(b), which requires the highest and best practical treatment to minimize the discharge of pollutants.</p>
<p></p>	<p>As growth occurs over time, additional flow must be transferred from Kellogg Creek to Tri-City. Accordingly, wet weather BOD and TSS mass loads will also increase. WES completed extensive modeling during the planning process to demonstrate that this transfer of load will not impact water quality.</p>
Ammonia Limits	
<p>An interim ammonia limit was included in the existing NPDES permit. However, with improved mixing at the Kellogg Creek outfall, the ammonia limit is no longer warranted; therefore it is assumed to be removed from future permits.</p>	<p>There is no ammonia limit in the existing permit, and no ammonia limit is required/warranted in future permits. Additionally, a new outfall and diffuser are planned that will improve mixing.</p>
Effluent Toxicity	
<p>Modeling was completed to demonstrate no reasonable potential to violate water quality standards at the edge of the outfall mixing zones.</p>	<p>Modeling was completed to demonstrate no reasonable potential to violate water quality standards at the edge of the outfall mixing zones.</p>
Temperature	
<p>A mass balance shows there is room for approximately 50 percent growth within the existing thermal load allocation.</p>	<p>A mass balance shows there is room for approximately 30 percent growth within the existing thermal load allocation.</p>

Existing WRRF Condition and Capacity

Kellogg Creek and Tri-City WRRF Condition

The condition of existing treatment facilities must be well understood in order to develop a 20-year CIP. This allows for the inclusion and scheduling of projects to rehabilitate or replace components of the existing WRRF that naturally wear out over time. Such projects are known as “R&R Projects.” As part of the WFP, an extensive condition assessment was conducted by a team of mechanical, structural, and electrical/instrumentation engineers. This team identified the need for R&R Projects based on comprehensive assessment of virtually every structural, mechanical, electrical, and instrumentation component (or “asset”) comprising WES’s wastewater pumping and treatment and infrastructure. Table 7 summarizes the scoring system developed by WES’s team.

Overall, the condition of the Kellogg Creek and Tri-City WRRFs is sound, with the majority of assets scoring 3 or better. However, several assets at both facilities will require substantial refurbishment or replacement over the next decade.

Table 7 – Condition Assessment Scoring System

Condition Score	Description
1 (Best)	Excellent: Very little wear. Fully operable, well maintained, and consistent with current standards. No further action required.
2	Good: Sound and well maintained but showing slight signs of wear. Able to deliver full efficiency with little or no performance deterioration. Minor rehabilitation may be needed.
3	Moderate: Functionally sound but showing normal wear. Minor failures or diminished efficiency/ performance causing increased maintenance. Moderate rehabilitation needed.
4	Poor: Functional but requiring a high level of maintenance to remain operational. Likely to cause reduce performance in the near term. Major rehabilitation or replacement needed.
5 (Worst)	Very Poor: Useful life has been exceeded and/or excessive maintenance cost are needed to remain in operation and reduce risk of breakdown. Immediate replacement required.

Kellogg Creek and Tri-City WRRF Capacity

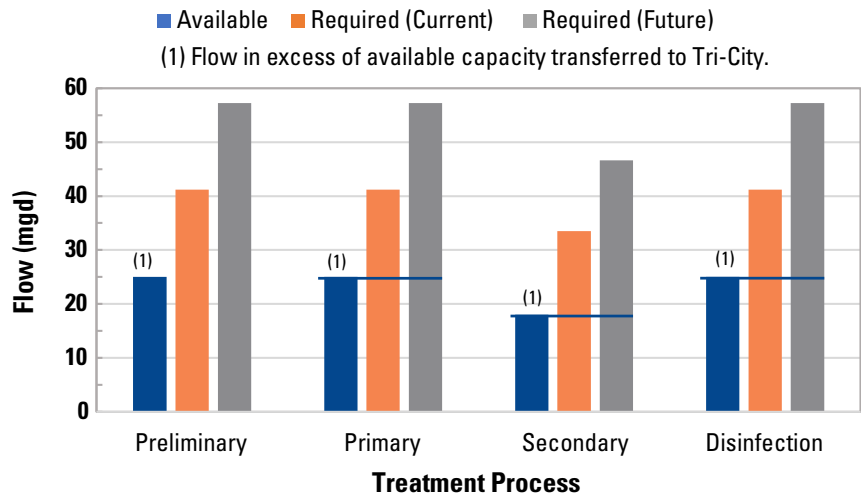
The capacity of existing wastewater conveyance and treatment infrastructure must also be defined to identify projects needed to accommodate future growth. Expansion projects for WES’s conveyance infrastructure were identified previously (Collection System Master Plan, Jacobs, 2019). This Plan focuses on identifying expansion projects needed to address capacity deficiencies at the Kellogg Creek and Tri-City WRRFs. Projects to address both liquid stream capacity (i.e., the ability of facilities to treat wastewater flow), and solid stream capacity (i.e., the ability of the facilities to process the solids contained in the wastewater) are identified.

Kellogg Creek WRRF Capacity

Liquid Stream Capacity

Under existing NPDES permit limits, the existing Kellogg Creek WRRF has sufficient capacity to treat current and projected flows during most of the year. However, WRRF treatment capacity is capped at 25 mgd. Because peak flows in the Kellogg Creek basin currently exceed 25 mgd during large storm events, excess flow is transferred to the Tri-City WRRF. This practice will continue and will become more frequent due to growth in the Kellogg Creek basin. Figure 6 summarizes the liquid stream capacity analysis at the Kellogg Creek WRRF, with the capacity of major unit processes represented in units of flow.

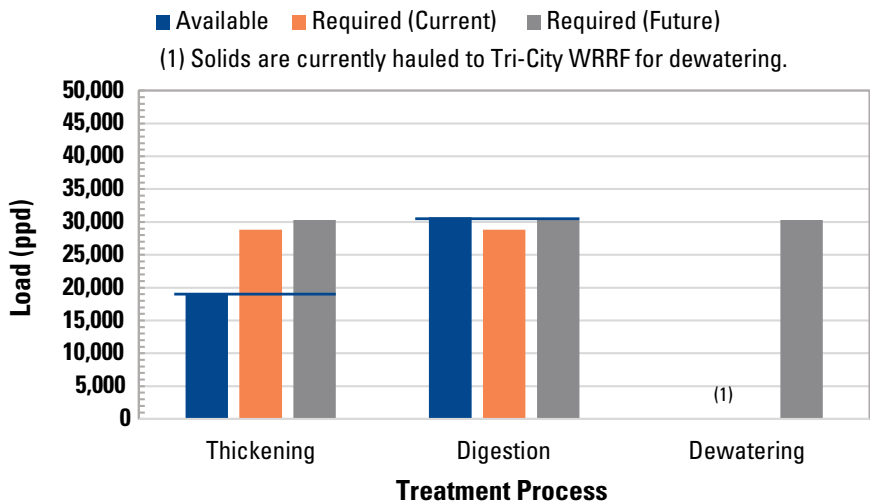
Figure 6 – Kellogg Creek WRRF Liquid Stream Capacity



Solid Stream Capacity

The capacity of the major Kellogg Creek solids stream treatment processes is shown in Figure 7, with the capacity of major unit processes represented in units of pounds. As shown, improvements to increase the capacity of solids thickening and digestion are required within the planning period. Dewatering, improvements are also needed to eliminate the current practice of hauling solids from Kellogg Creek to Tri-City for dewatering.

Figure 7 – Kellogg Creek WRRF Solid Stream Capacity



Tri-City WRRF Capacity

Liquid Stream Capacity

Figure 8 summarizes the liquid stream capacity analysis at the Tri-City WRRF under existing NPDES permit limits. As shown in the figure, multiple liquid stream processes have reached their capacity to treat peak flow. To address this limitation, the WFP focuses on alternatives that would increase the peak flow hydraulic capacity of the Tri-City WRRF from 72 mgd to 105 mgd within the next several years.

Solid Stream Capacity

The capacity of the major Tri-City solids stream treatment processes is shown in Figure 9. As shown in the figure, the existing solids handling processes at Tri-City each have adequate capacity; therefore, solids capacity expansion is not required in the near-term. Depending on several factors, the available capacity of the existing solids thickening process may be exceeded near the end of the 20-year planning period. To be conservative, a project to increase thickening capacity around the year 2040 is therefore included in the WFP.

Figure 8 – Tri-City WRRF Liquid Stream Capacity

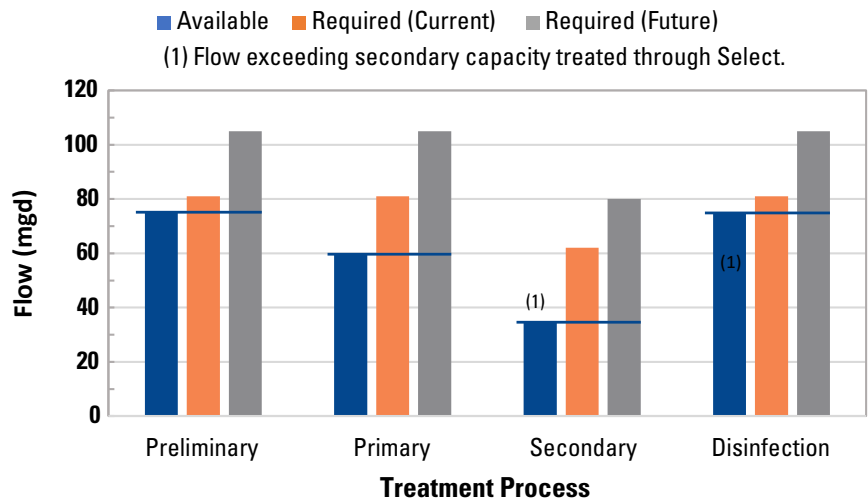
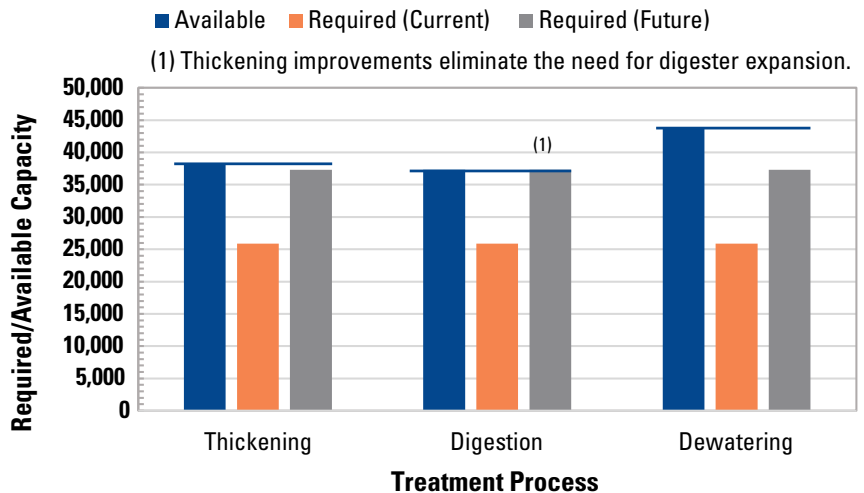


Figure 9 – Tri-City WRRF Solid Stream Capacity



Basin-Wide Scenario Analysis

With the foundational elements of the Plan established, the planning team evaluated a number of basin-wide scenarios to answer several questions, including:

1. **During the wet weather season:** Should peak flows be treated and discharged at a remote facility located at the Blue Heron property on the West side of the Willamette River, or conveyed to the Tri-City WRRF for treatment and discharge?
2. **During the dry weather season:** If regulatory requirements become more stringent in the future, what combination of Kellogg Creek and Tri-City WRRF capacity provides the most cost-effective means of protecting Willamette River water quality?

Basin-Wide Scenario Recommendations

An extensive analysis was completed to compare different basin-wide scenarios based on their capital and life cycle costs as well as non-cost factors that are consistent with WES's mission and objectives, including:

- Operational Complexity
- Water Quality
- NPDES Permitting Challenges
- Environmental/Land Use Challenges
- Community Benefit/Impact

Providing Peak Flow Treatment During the Wet Weather Season

Conveying peak wet weather flows to the Tri-City WRRF for treatment and discharge is the recommended approach. The estimated capital and life cycle costs of this approach are very close to the costs of other approaches and expanding the Tri-City WRRF offers several non-cost advantages, including reduced operational complexity and fewer permitting challenges.

Meeting Potential Future Permit Requirements During the Dry Weather Season

If future NPDES permits include nutrient limits, modifying the existing Tri-City WRRF to achieve permit compliance is the recommended approach. This means that liquid stream biological treatment improvements will not likely be needed at the Kellogg Creek WRRF. However, space to modify the treatment process at the Kellogg Creek site should be retained in case this ever changes.

Taking a basin-wide approach makes the best use of available land for process expansion at Tri-City while preserving the BOD and TSS treatment capacity at Kellogg Creek. Regulatory compliance may require a basin-wide NPDES permit that is based on water quality modeling. Similar permits have been developed used before to measure compliance at other treatment facilities in Oregon, and WES has initiated water quality modeling to support this approach as part of the WFP.



WES's basin-wide planning approach makes the best use of wastewater infrastructure in both WRRF basins.

Recommended Plan – Kellogg Creek WRRF

The planning team completed a detailed facilities plan for the Kellogg Creek WRRF, based on the evaluation of basin-wide scenarios as well as prior analyses of flows, loads, capacity, condition, and water quality regulations. Table 8 summarizes projects that are recommended to be completed within the planning period.

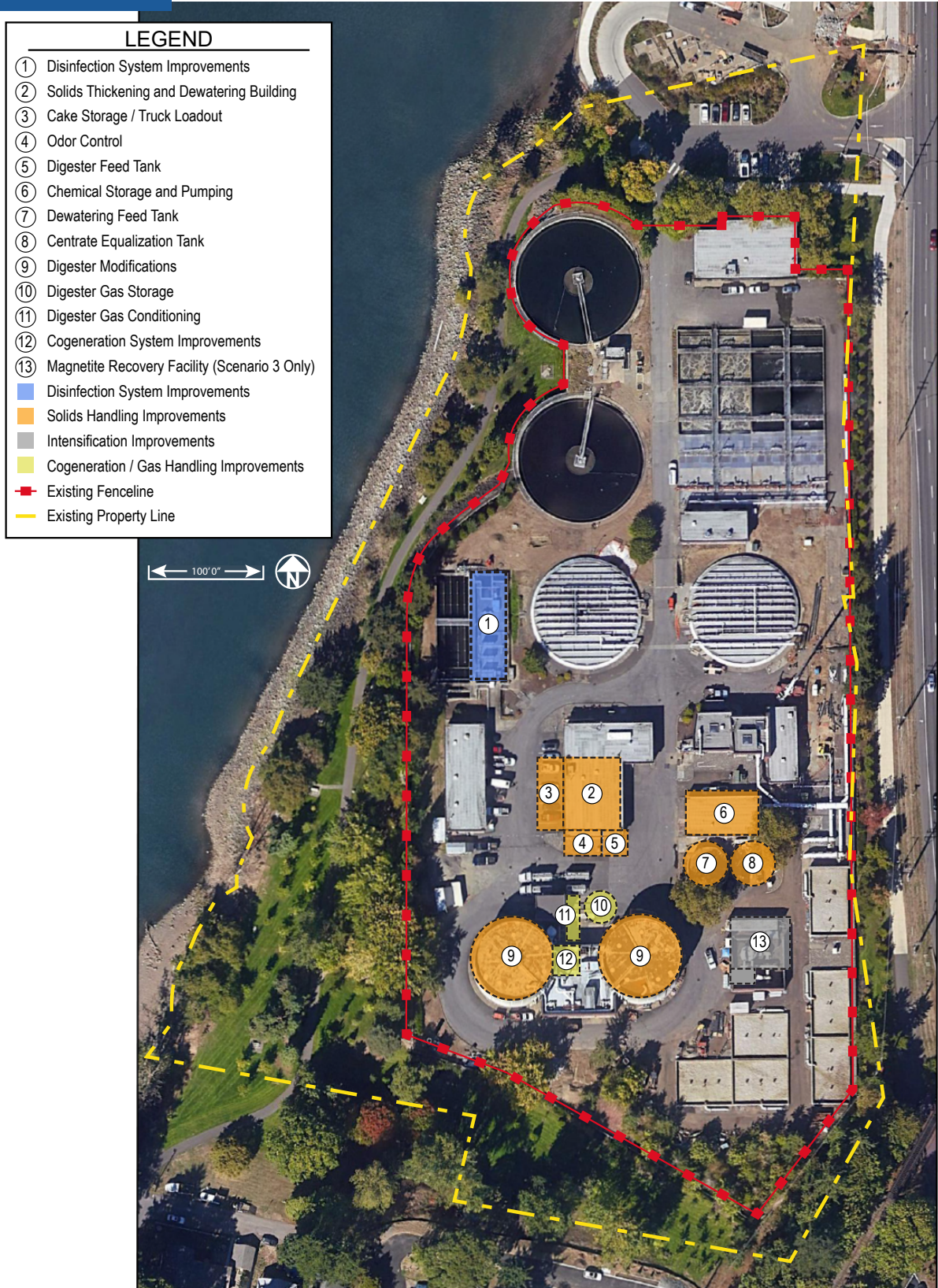
Table 8 – Kellogg Creek WRRF Recommended Projects

Project	Description	Estimated Capital Cost
Disinfection	<ul style="list-style-type: none"> Replace existing disinfection equipment that has reached the end of its useful life with new, reliable disinfection equipment. 	\$2.8M
Solids Handling	<ul style="list-style-type: none"> Replace existing thickening equipment that has reached the end of its useful life and is undersized with properly sized, reliable thickening equipment. Improve the existing digestion process to increase total and reliable capacity to treat current and future loads. Add new equipment to eliminate the need to haul digested sludge to the Tri-City WRRF for dewatering. 	\$24.3M
Digester Gas Utilization	<ul style="list-style-type: none"> Install new gas storage, treatment, and cogeneration systems to increase the beneficial use of fuel produced as a by-product of anaerobic digestion. 	\$5.9M
R&R Projects	<ul style="list-style-type: none"> Complete near-term, mid-term, and long-term R&R projects as recommended by the condition assessment. 	\$7.9M
Total 20-year Investment in the Kellogg Creek WRRF		\$40.9M



The proposed site plan for the Kellogg Creek WRRF is shown in Figure 10. This site plan addresses the priority improvements through the planning period and retains space for future process improvements to meet more restrictive NPDES permit limits, if needed.

Figure 10 – Kellogg Creek WRRF Site Plan



Recommended Plan – Tri-City WRRF

The planning team also completed a detailed facilities plan for the Tri-City WRRF. Table 9 summarizes projects that are recommended to be completed within the planning period.

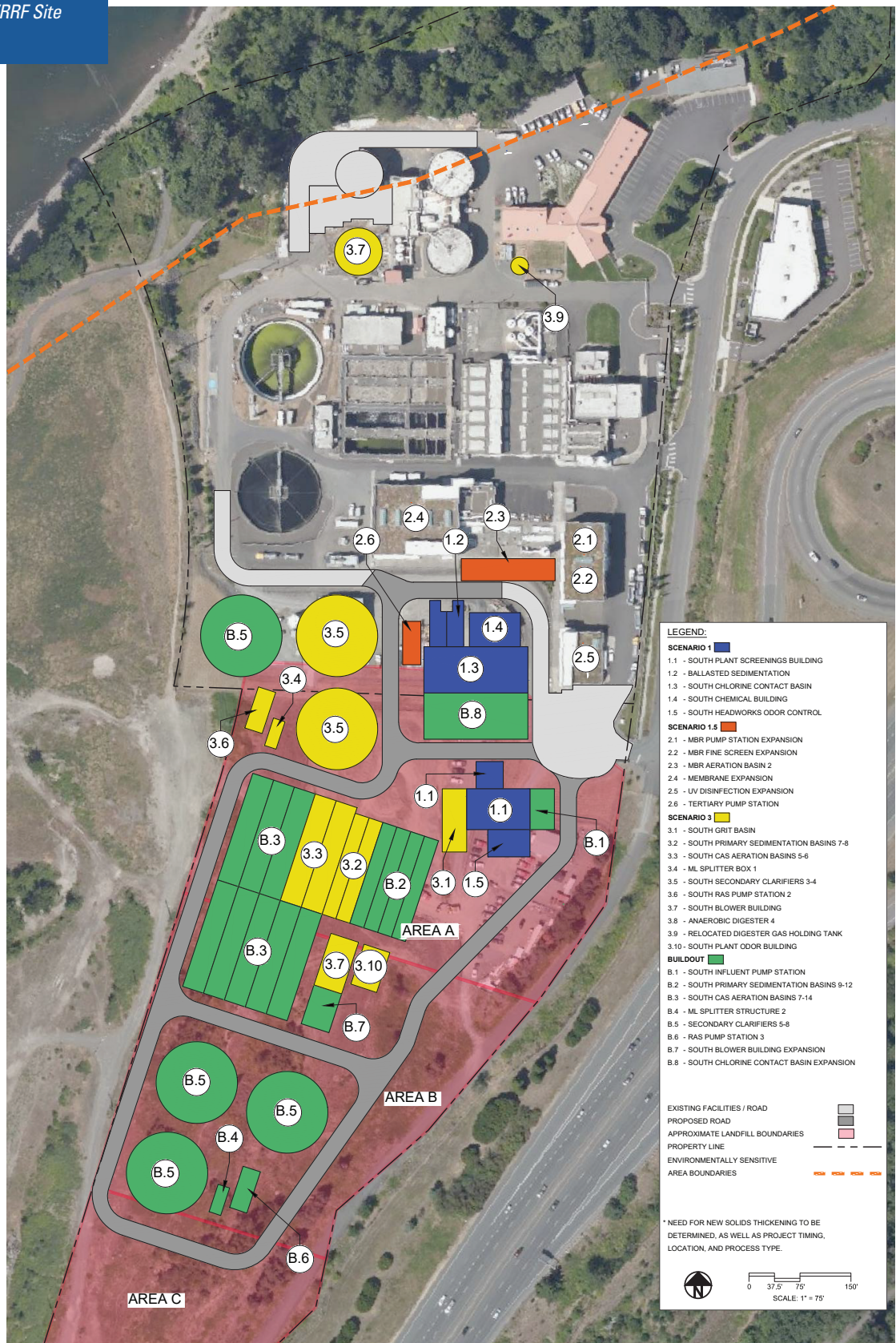
Table 9 – Tri-City WRRF Recommended Projects

Project	Description	Estimated Capital Cost
Peak Flow Hydraulic Improvements	<ul style="list-style-type: none"> ▪ Install a new peak flow treatment process (ballasted sedimentation) south of the existing WRRF to increase peak flow hydraulic capacity to 105 mgd. » NOTE: The ballasted sedimentation process has been used to effectively treat peak wet weather flows at numerous wastewater facilities in Oregon and throughout the US. In the event that this approach does not meet regulatory approval at the Tri-City WRRF, a similar process involving biological treatment may be required. This is expected to cost an additional \$30 million; however, the planning team does not believe this additional investment is needed to meet NPDES permit limits and protect Willamette River water quality. 	\$53.7M
Thickening Improvements	<ul style="list-style-type: none"> ▪ Install new facilities to thicken primary sludge from existing and new primary sedimentation basins. 	\$7.6M
R&R Projects	<ul style="list-style-type: none"> ▪ Complete near-term, mid-term, and long-term R&R projects as recommended by the condition assessment. 	\$16.9M
Total 20-year Investment in the Tri-City WRRF		\$78.2M



The proposed site plan for the Tri-City WRRF is shown in Figure 11. For space planning purposes, this site plan includes buildout facilities for wet weather treatment and is consistent with the basin-wide recommendation to meet potential future NPDES limits by expanding the secondary treatment process at Tri-City.

Figure 11 – Tri-City WRRF Site Plan

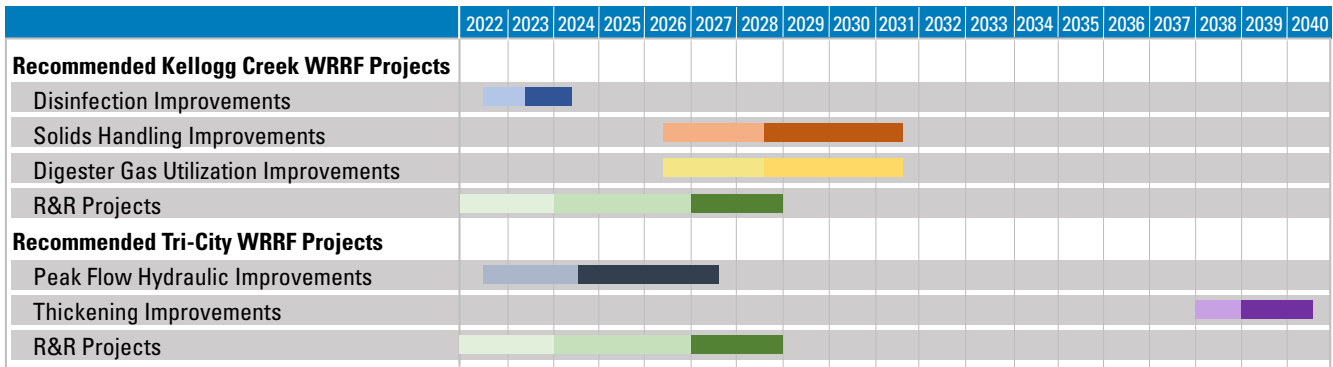


Schedule and 20-Year CIP

Developing a schedule and 20-year CIP for the recommended projects is the final step in the planning process. The schedule must consider numerous factors including the criticality, magnitude, and duration of each project. The availability of funding and overall affordability is also a substantial factor in determining the CIP. For the WFP, the District attempted to uniformly distribute the total cash expenditure over the planning period to mitigate sewer rate impacts.

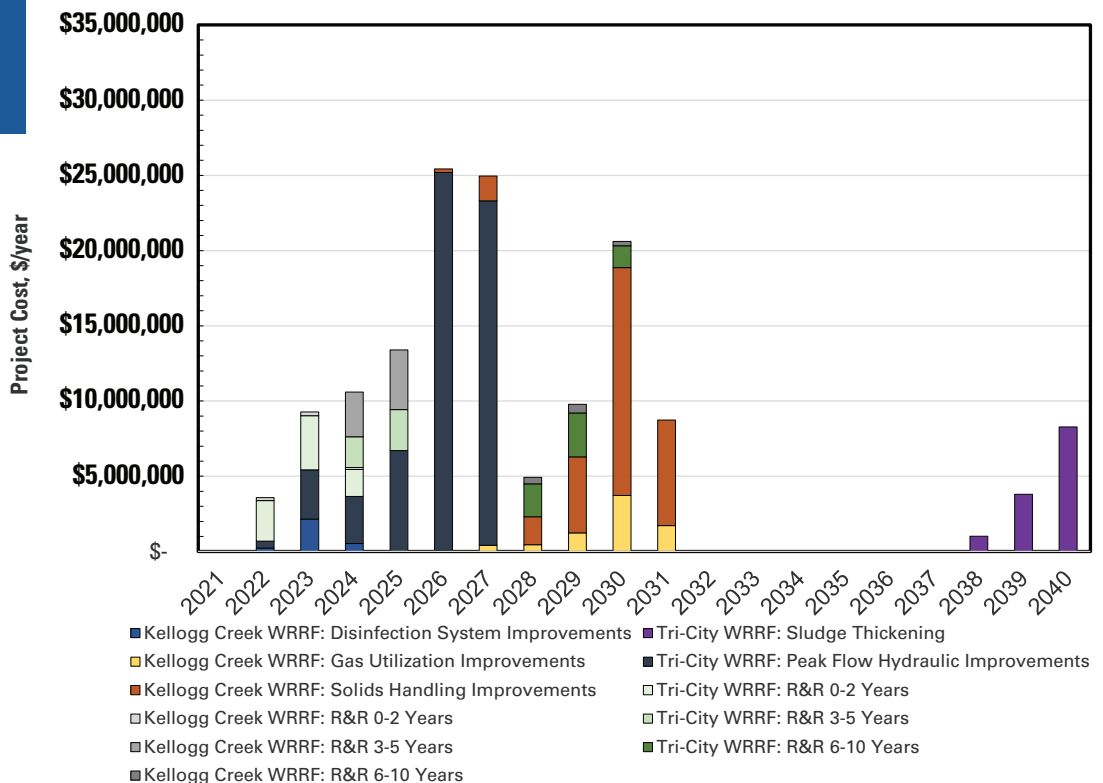
The proposed schedule for the recommended projects at the Kellogg Creek and Tri-City WRRFs is shown in Figure 12. Major projects at each facility include both design and construction phases. R&R projects are distributed uniformly across the time period associated with their priority (i.e., 0 to 2 years, 3 to 5 years, 6 to 10 years). In actuality, these projects may be performed separately through maintenance contracts, grouped together, or included in one of the larger capital projects occurring within the same time period.

Figure 12 – Kellogg Creek and Tri-City WRRF Recommended Projects Schedule



The proposed cash expenditure schedule associated with the recommended plan is shown in Figure 13. The estimated cost of completing each expansion and R&R project is shown for each year of the planning period. The District’s other investments for projects in the wastewater collection and conveyance system, the Tri-City WRRF Outfall, and/or projects associated with non-process facilities (e.g., lab and administrative buildings that are needed to support treatment process functions) are not shown in Figure 13.

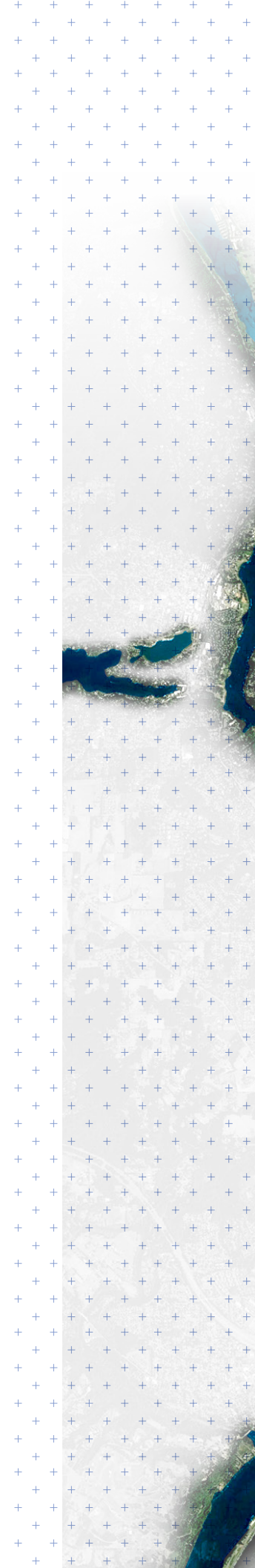
Figure 13 – Kellogg Creek and Tri-City WRRF Proposed Cash Expenditure Schedule





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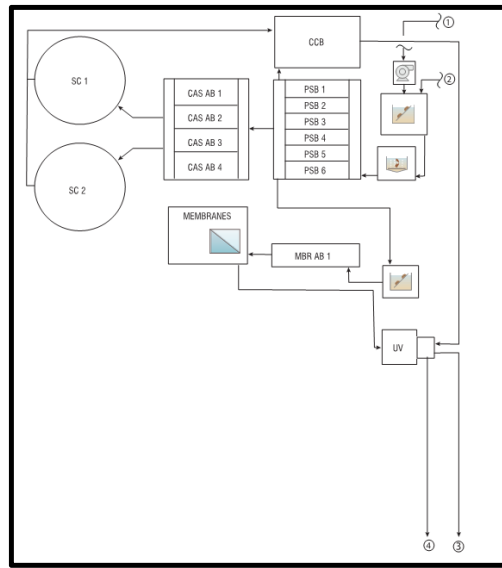
January 19, 2022



Willamette Facilities Plan

Lynne Chicoine, PE, BCEE
Capital Program Manger

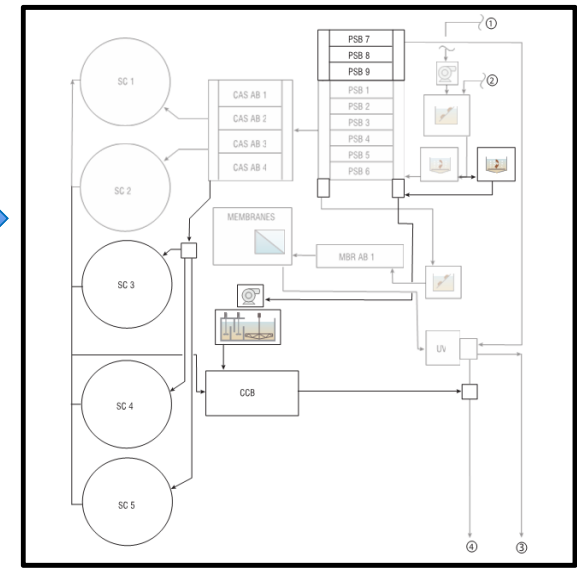
What is a Facilities Planning Process



Existing Facilities - 2020



- Regulatory
- Capacity
- Condition



Required Facilities - 2040

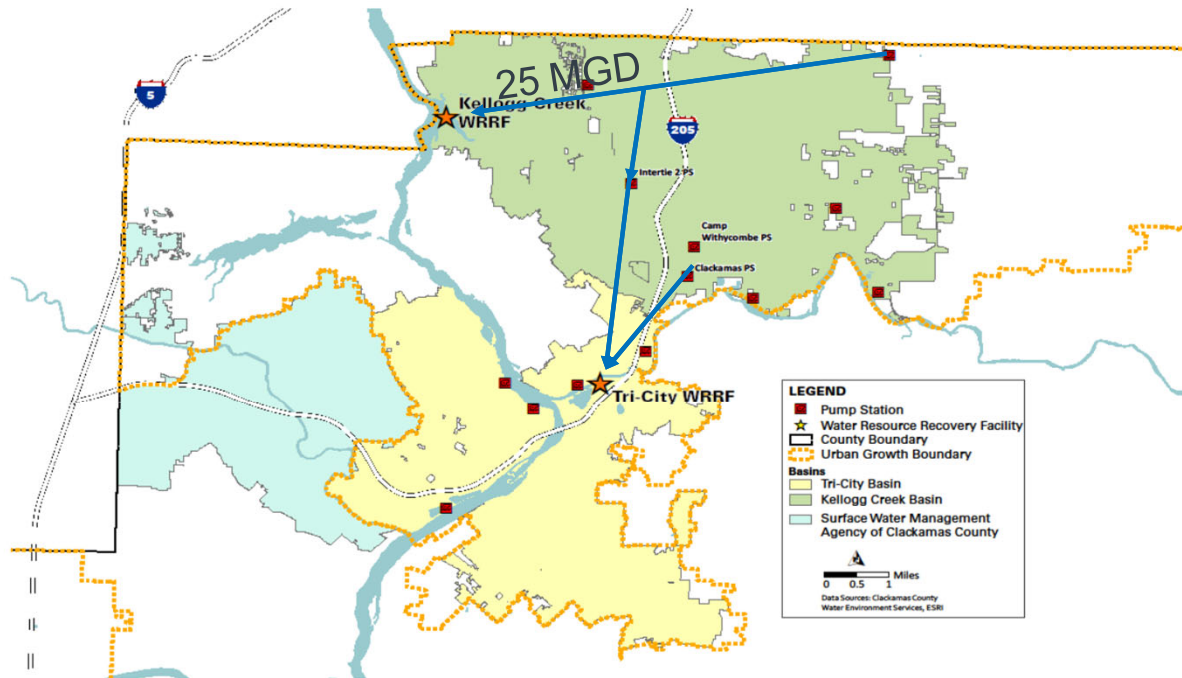
WRF Condition Assessment

Score	Description
1 (Best)	Excellent: No action required
2	Good: Minor rehab may be needed
3	Moderate: Moderate Rehab needed
4	Poor: Needs Major Rehab or Replacement
5 (Worst)	Very Poor: Needs Immediate Replacement

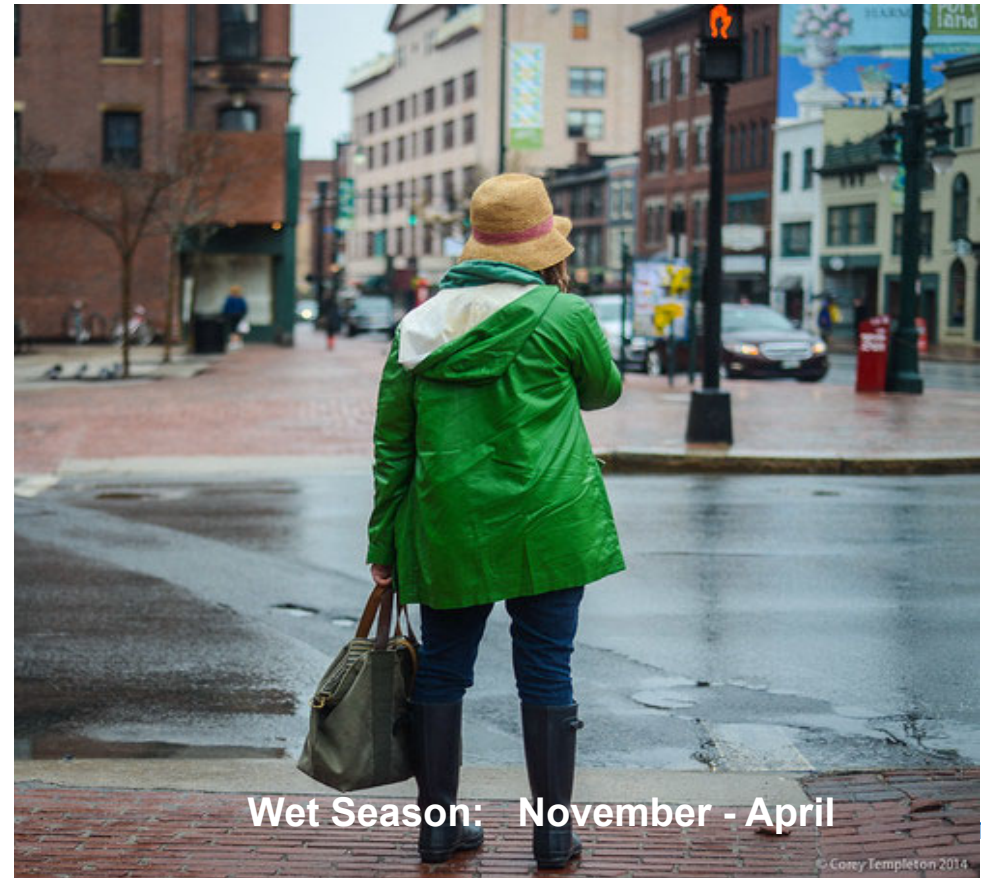
Capacity



WFP Looked at Best Way to Integrate Treatment Across Service Areas



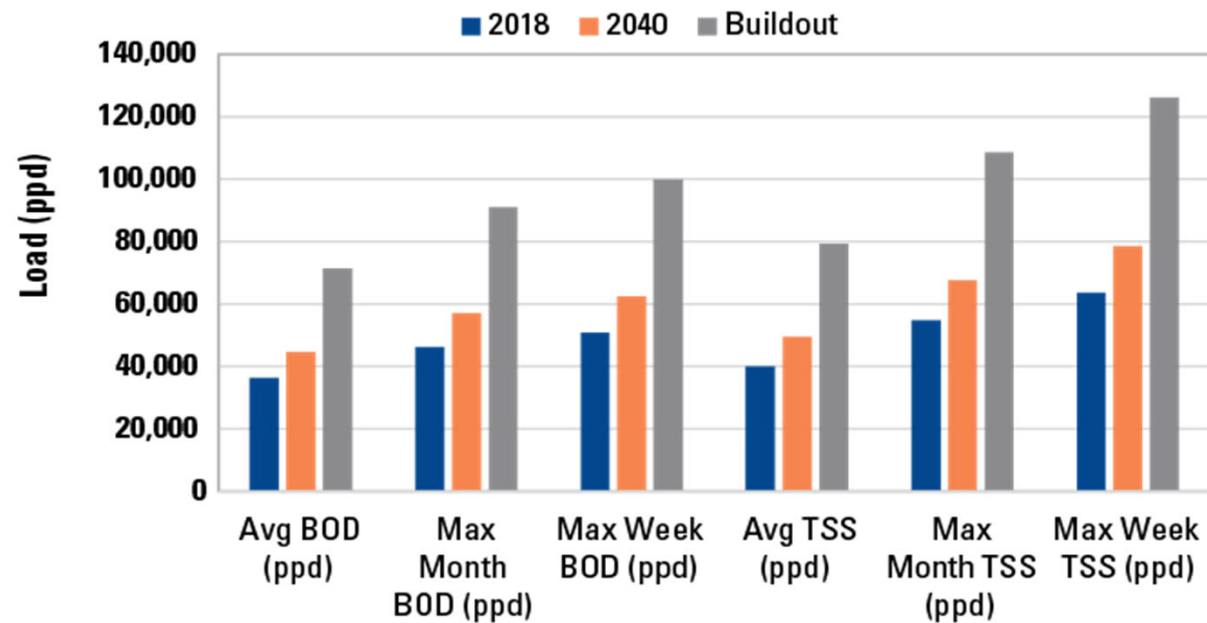
Wastewater Treatment Has Two Regulatory Seasons



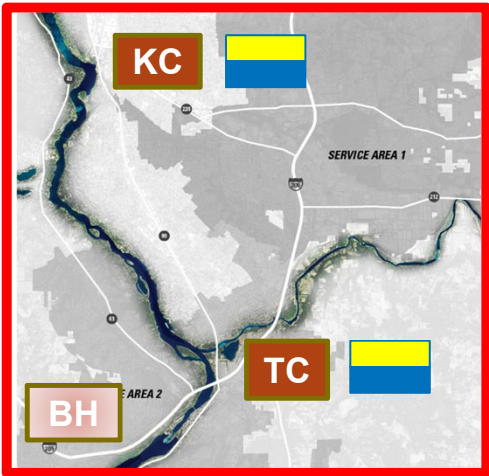
Dry Season



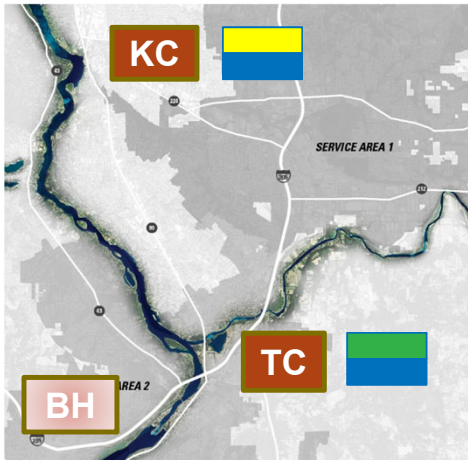
Dry Weather: Population (=Load) Projection



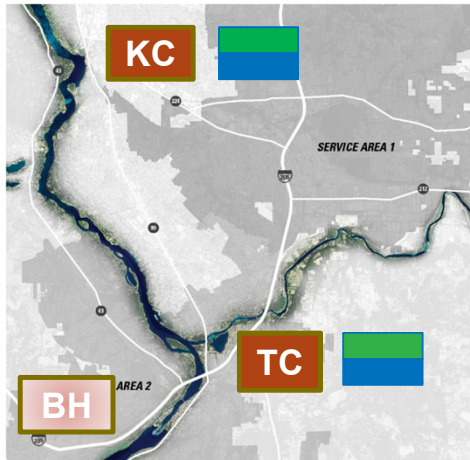
Dry Weather Scenarios



Scenario 1
Current Permit Limits



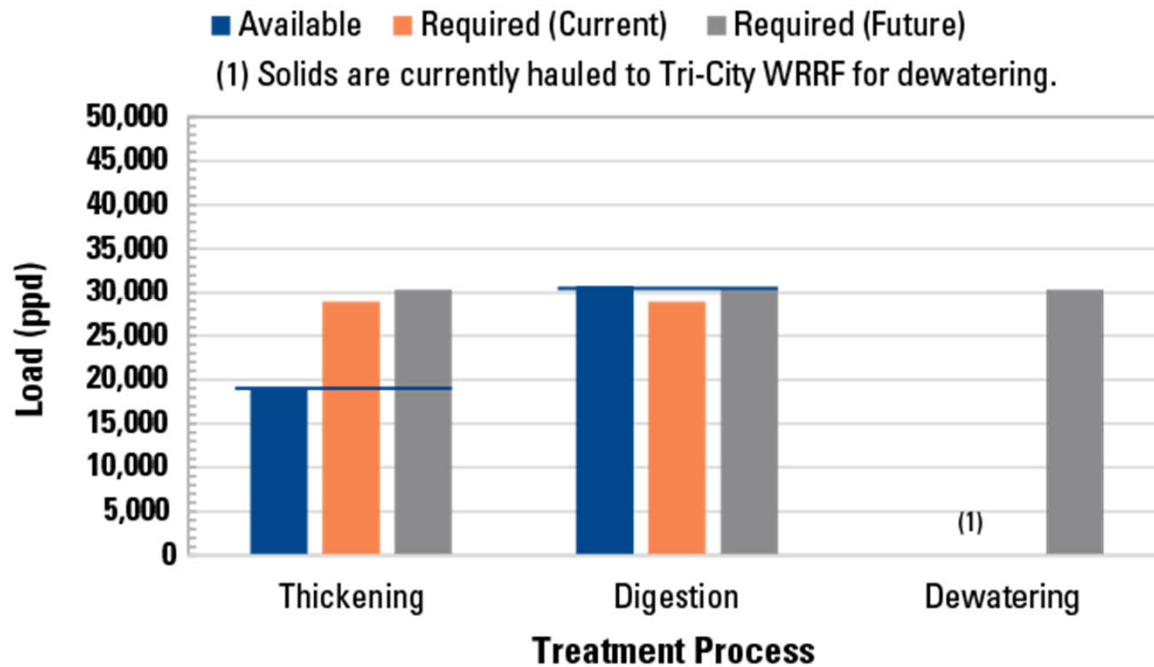
Scenario 1.5
Nutrient Removal
Combined Permit



Scenario 3
Nutrient Removal
Individual Permits



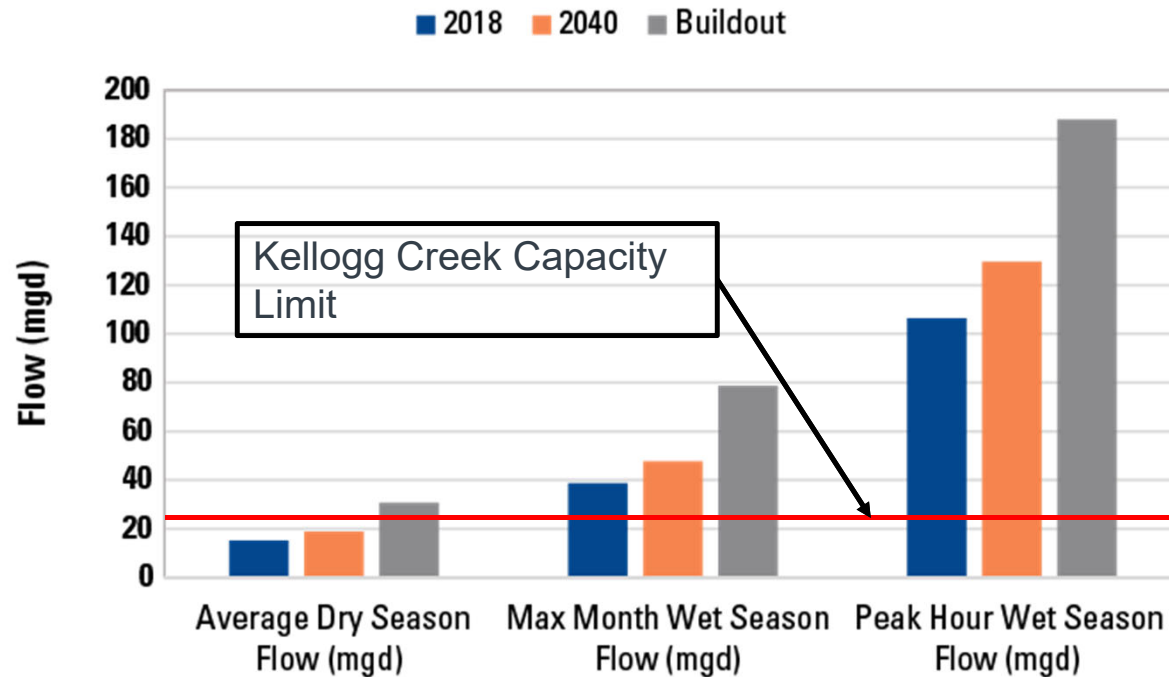
Kellogg Creek WRRF Dry Weather Capacity Needs



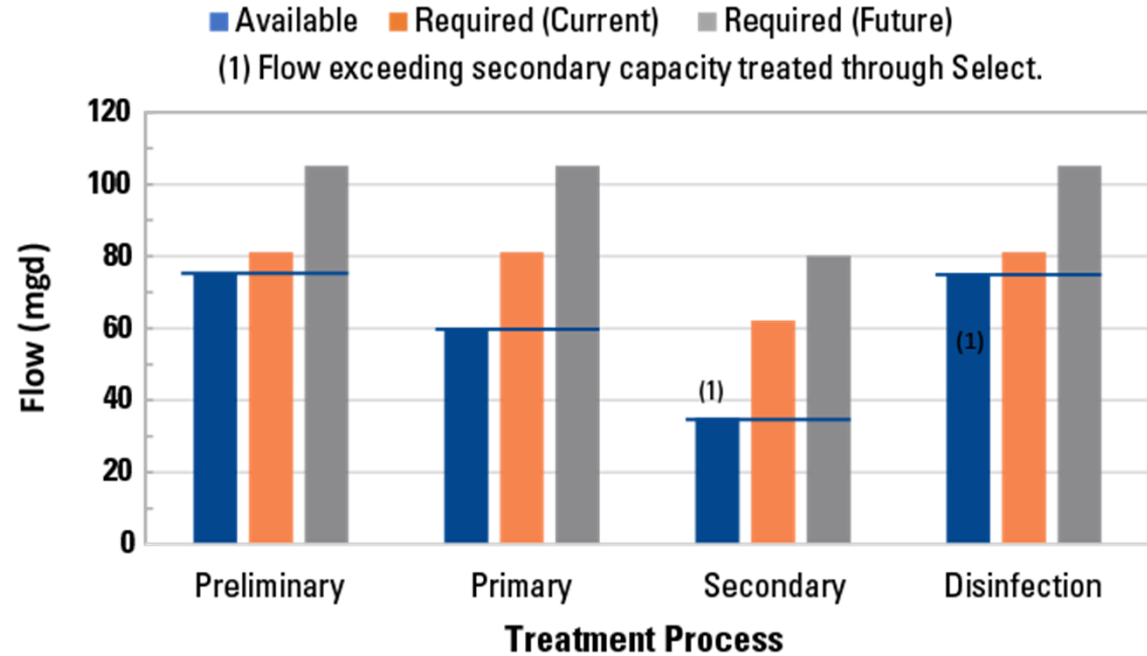
Wet Season



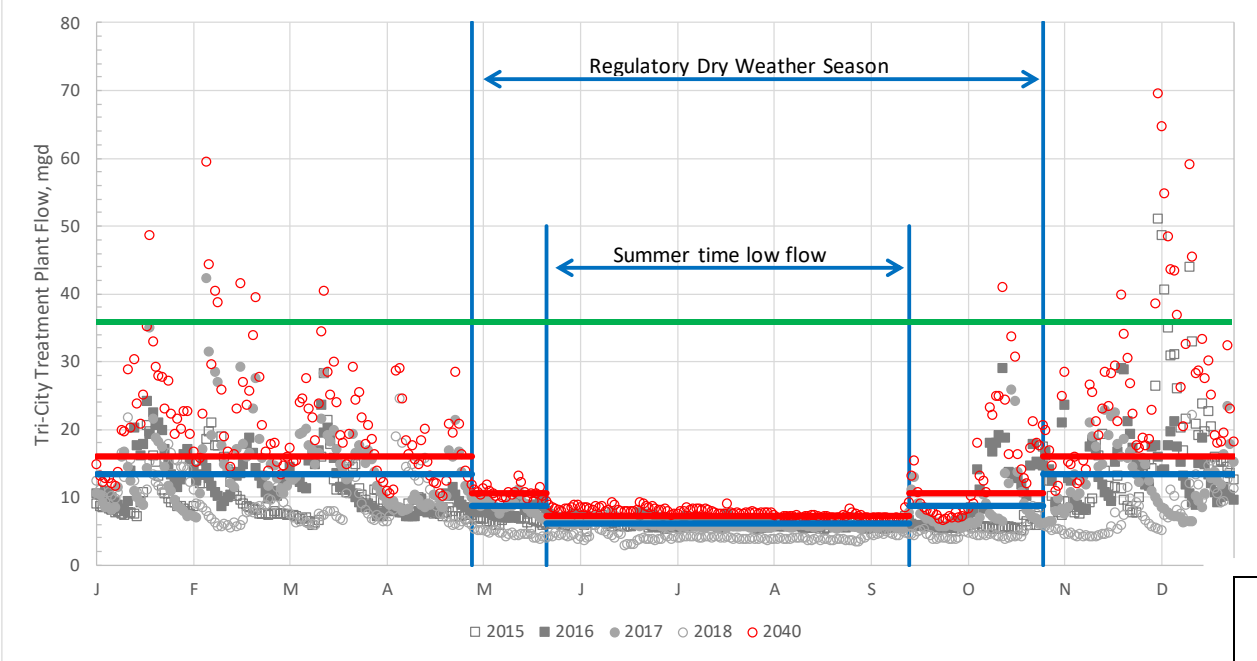
Wet Weather: Flow Projection (with I/I Reduction)



Tri-City WRRF Wet Weather Capacity Needs

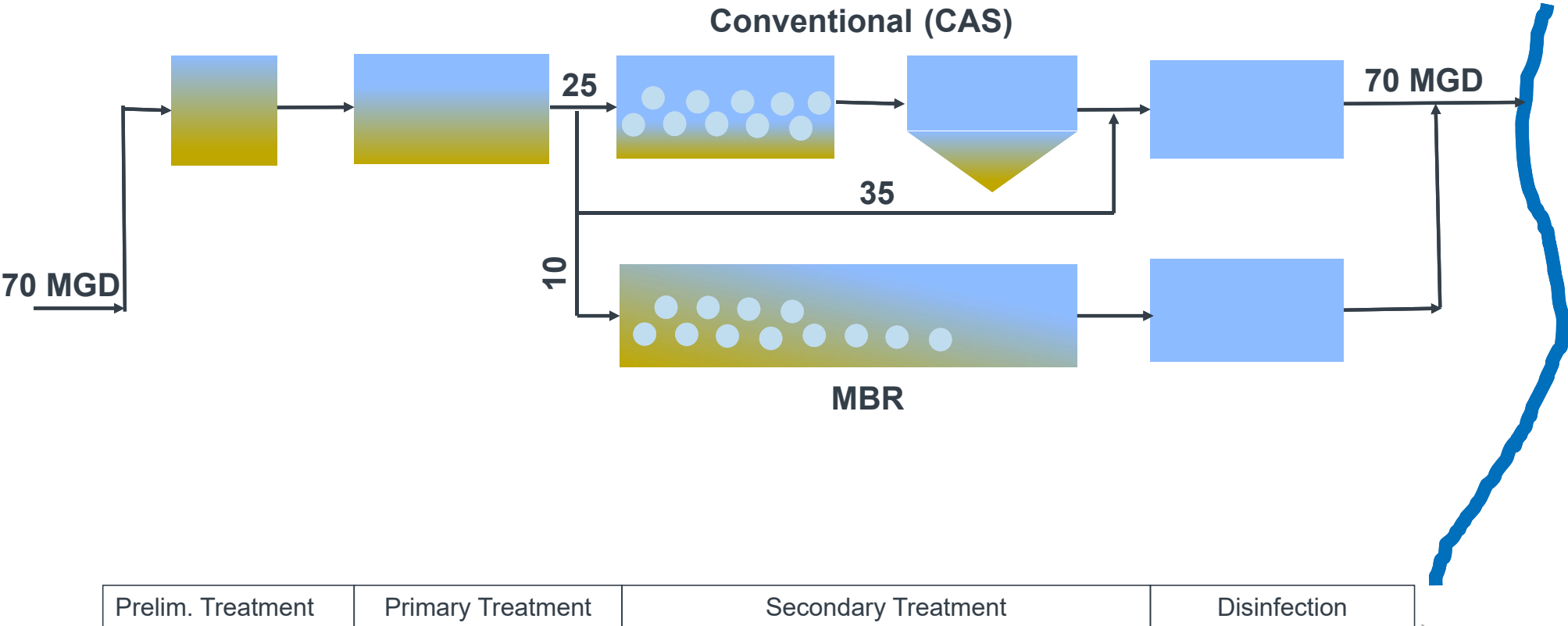


Infrequent Peak Flow at Tri-City Presents Challenges

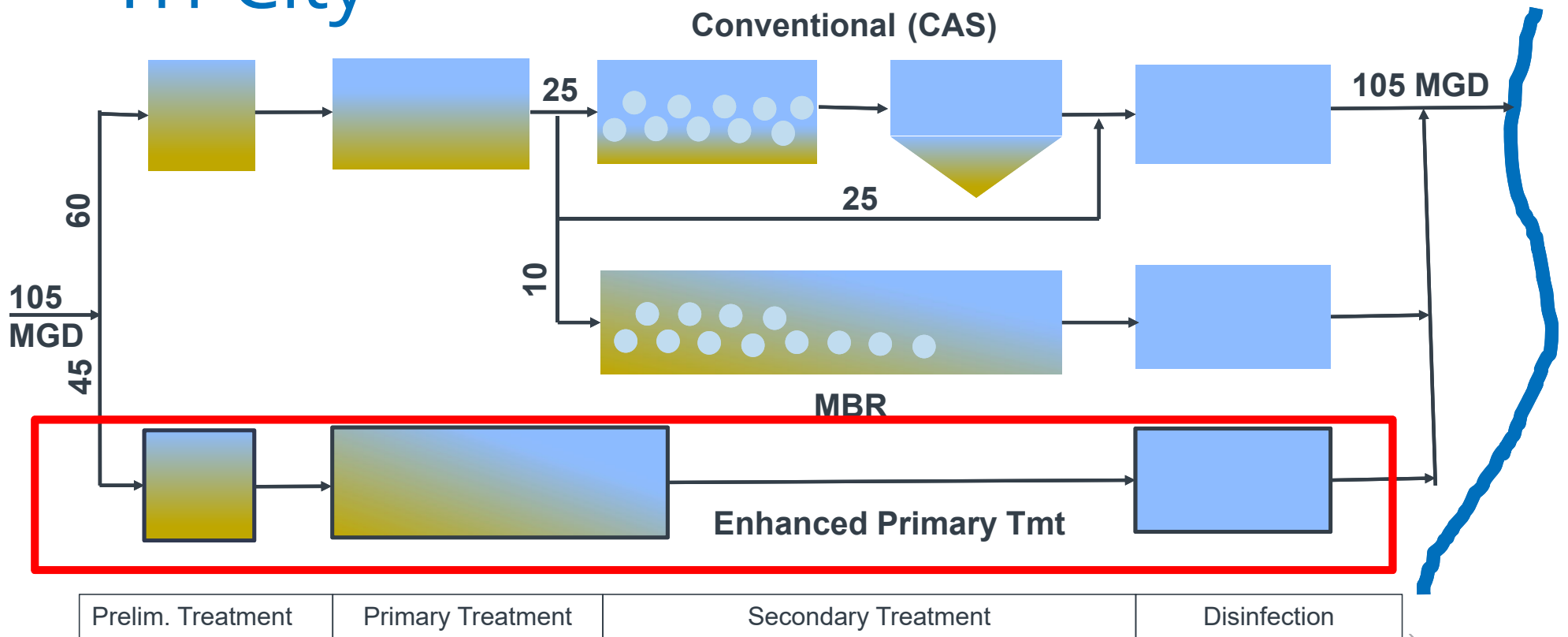


Estimated Value	Current ⁽¹⁾	Projected (2040)
% of Time Q ≤ 35 mgd	99%	98%
No. of ST Events per Year	3	9
Average Annual ST Duration (hrs)	50	180
% of Annual Flow Discharged as ST	1%	3%
(1) Average of 2015 - 2018 data		

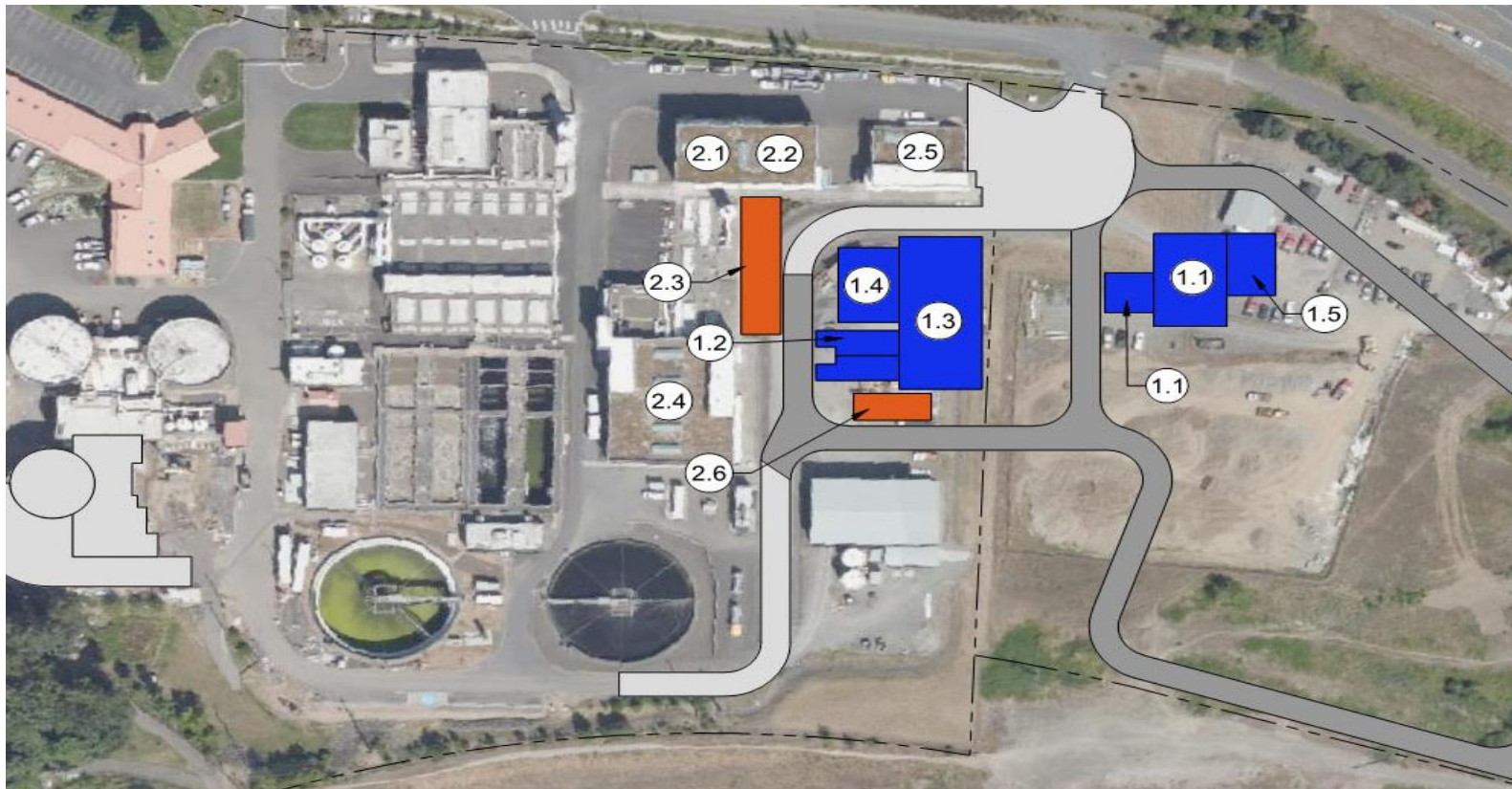
Wet Weather Treatment – Existing Irri-City



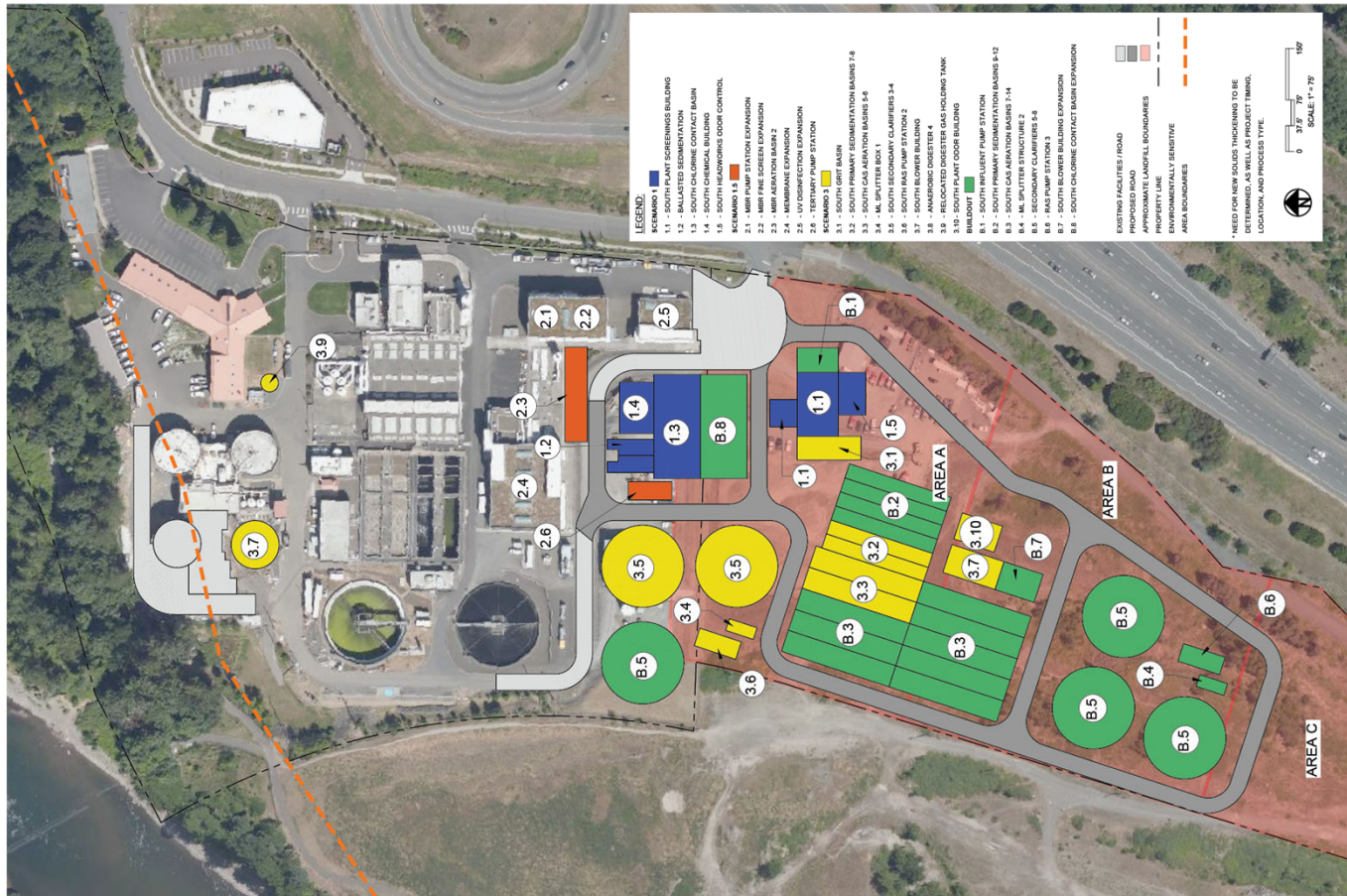
Wet Weather Scenario – Expanded Tri-City



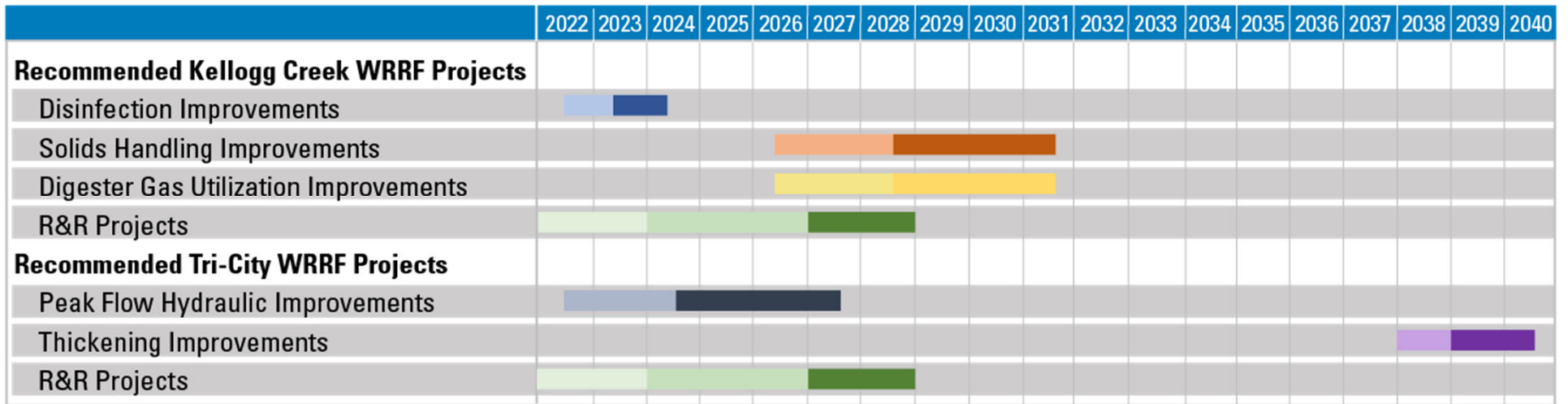
Recommended 2040 Tri-City Site Layout



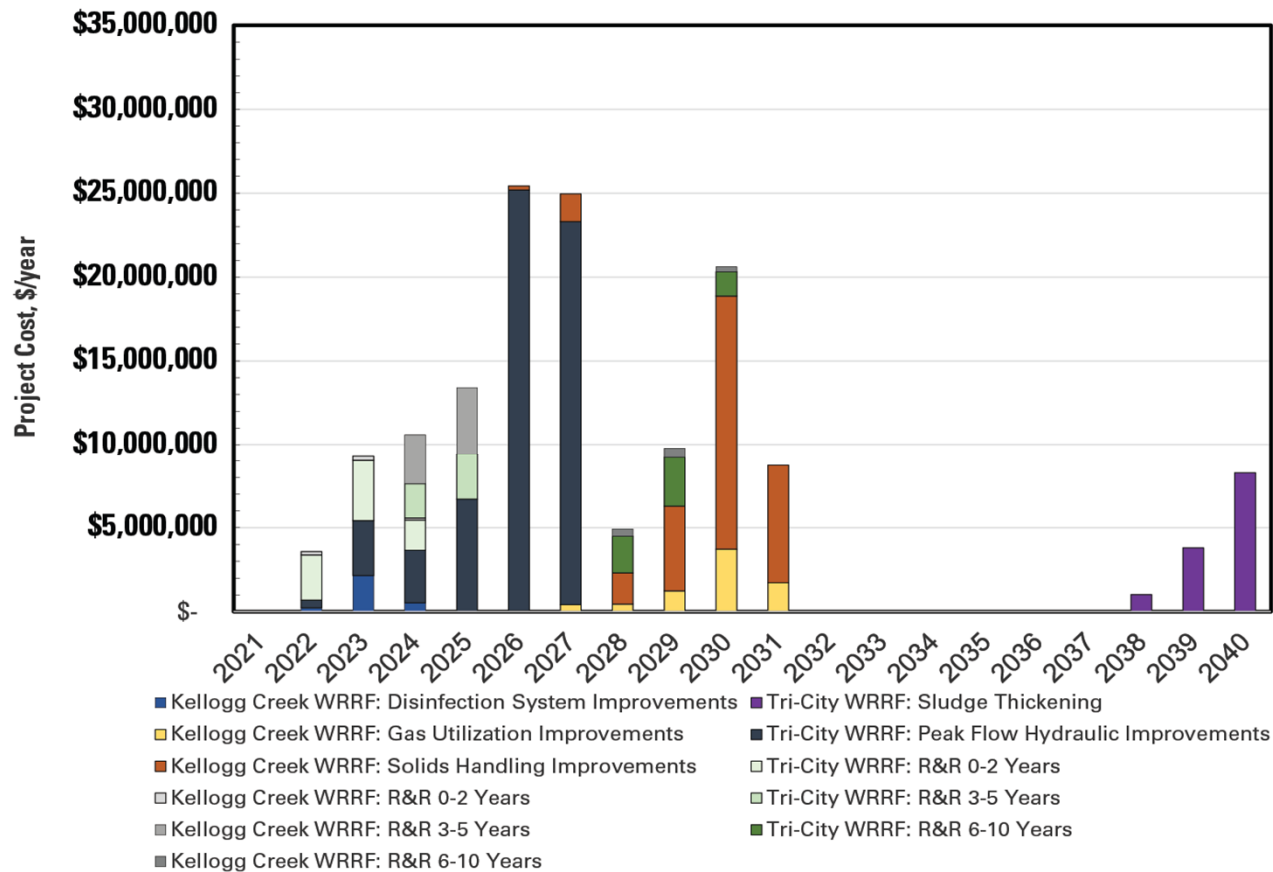
Recommended Conceptual Tri-City Site Plan at Buildout



WRF Capital Plan Recommended Implementation Schedule



WRF Capital Plan Proposed Cash Expenditure Schedule





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Questions?

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January 19, 2022

WES Long-Term Financial Strategy

Chris Storey, WES Special Projects

Erin Blue, Finance Manager



Presentation Outline

- WES Finances – Wastewater
- Strategic Goals
- Rate Making Overview
- Projections
 - Expenses (Operating & Capital)
 - Debt Issuances
- Comprehensive Recommendation



WES Finances – Wastewater

- Rate & Fee Revenue – \$41.8 million
- SDC Revenue – \$6.8 million
- Operating Budget – ~\$24 million
- Debt Service – \$13.1 million, \$8.7 million SDC eligible
- Capital Fund Transfers – \$15.5 million
- Capital Expenditures – \$23 million
- WES brings in ~\$48.6 million, and is expending \$60.1 million



Strategic Goals

- Provide all necessary services to protect public health and water quality
- Ensure sufficient capacity to support economic development
- Do so in the most cost-effective manner for ratepayers
- Honor foundational commitments regarding Legacy Debt payments
- Achieve WES Adv. Comm. directive of charging by service received, not by geographic location

Rate Making Overview

- Objectives in Cost-Based Rate-Making
 - Stable, predictable rates
 - Fair and equitable full cost recovery based on cost to provide the service
 - Revenue stability and predictability
- Incorporated into WES' long-range planning process; rates are forecast for a 10-year planning horizon

Rate Making Overview, con't

Revenue Requirement Analysis

- Determine all costs of operating, capital improvements, infrastructure maintenance and repair, debt service, and reserves
- Evaluate adequacy of existing revenues

Cost of Service Analysis

- Costs are assigned to rate components
- Current and anticipated system demands are calculated

Rate-Design Analysis

- Rate components are calculated based on the revenue requirements to provide the service and the related system demand
- Impact on customer bill and long-term financial stability are evaluated



WES Sanitary Sewer Rates

- **Wastewater Treatment** – Applies to all sewer ratepayers; covers costs of operating and maintaining WES' Water Resource Recovery Facilities and funds new asset construction and replacement for treatment plants and interceptors
- **Local Collection** – Applies to ratepayers in Happy Valley and unincorporated areas such as Oak Grove, Hoodland, Boring, etc.; covers costs of operating and maintaining WES' collection system feeding into the interceptors and funds asset replacements necessary to maintain aging infrastructure, especially inflow and infiltration reduction efforts
- **Legacy Debt Service Fee** – Applies to Rate Zone 2 only, including Johnson City and Milwaukie; covers annual debt service costs associated with debt transferred from CCSD No. 1 when WES was formed
- Billed based on Equivalent Dwelling Units (EDUs)



Projections

- Operating Expenses over 10 year time horizon:
 - 6-7% growth in labor costs; compromises ~51.5% of the Operating budget in FY21-22
 - Inflationary pressure on materials and services are significant; electrical expenses and chemical costs are growing faster than inflation right now
 - WES Management working to maintain current FTE count in spite of customer growth
 - Increases in Operating Expenses decrease amount that can be contributed to fund capital projects



Projections, con't

- Capital Improvement Plan over 10 year time horizon
 - ~\$330 million in planned expenditures through 2033-34
 - Targeting ~\$33 million/year in expenditures
 - Updated annually with best information
 - Represents compromises on funding and timing



Projections, con't

- WES has been building reserves to support the planned capital program and levelize rates. Currently have approximately \$80 million in capital construction fund and \$50 million in the SDC fund.
- Existing reserves plus annual contributions are estimated to be spent down over the next 5 years.
- WES assumes it will borrow to fund the remainder of the CIP beginning in 2026-27, with a new borrowing each year.
- Will be looking at SRF loans as well as the bond market. Are currently pursuing Federal dollars to support projects, which may impact timing and total need.



Comprehensive Recommendation

- WES Advisory Committee gave staff the direction to adjust rates by a minimum of inflation, a maximum of 10%.
- Committee approved revised financial approach that utilizes SDCs for eligible debt service payment, which has increased financial flexibility.
- This, plus other cost savings, generates a proposed rate path of **5% increases per year** for the next decade for the wholesale treatment rate to fund the CIP and operations.
- CIP expenditures are capped at ~\$33 million/year, with some variability for project timelines.




Recommendation, con't

- The 5% rate increase would be for wholesale wastewater service and be applied consistently to all who receive the service.
- There will be an offsetting rate adjustment relating to the Legacy Debt: as growth occurs, more are paying in and the amount per customer needed goes down, and the use of SDC payments for debt decreases pressure on rates. This will offset increases in Rate Zone 2 only.
- Coverage for borrowing will be constrained in later years, and WES likely will see a decrease in its credit rating from its' current AAA, which will lead to somewhat higher interest costs.



Recommendation, con't

- By 2031, when the Legacy Debt is retired, customers will be paying only for the services received, and will be paying the same irrespective of their geographic location.
- Some capital projects are related to the retail system and Rate Zone 2 customers alone will contribute towards those costs.
- Separate surface water financial integration plan is being developed as part of the Surface Water Master Planning process.
- This proposal represents our best effort to reflect the 5 strategic goals from the advisory committee



Thank you
Questions?



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