# King County Regional Wastewater Governance Study 

## Project Report 6: Final Report and Recommendations

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## Contents

Executive Summary and Report Introduction ..... 1
Summary of Recommendations ..... 5
Governance of the Regional System ..... 9
Recommendations ..... 14
Implementation Steps ..... 23
Background Information ..... 26
Project Report 1: Summary of Survey Results ..... 26
Project Report 3: Focus Group Summary ..... 27
Project Report 2: Description of the Existing System ..... 28
Project Report 4: Evaluation of Governance Options ..... 36
Project Report 5: Regional Models ..... 40
Conclusion and Acknowledgements ..... 45
Abbreviations and Acronyms

| CSO | Combined Sewer Overflow (combined sanitary and storm sewers) |
| :--- | :--- |
| MWPAAC | Metropolitan Water Pollution Advisory Committee |
| PSU-CPS | The Center for Public Service at Portland State University |
| RCE | Residential Customer Equivalent |
| RWQC | Regional Water Quality Committee |
| SPU | City of Seattle, Seattle Public Utilities |
| WTD | King County Wastewater Treatment Division |

## Executive Summary and Report Introduction

Seattle Public Utilities (SPU) has commissioned the Center for Public Service at Portland State University (PSU-CPS) to research possible changes in the governance of wastewater treatment services in the Seattle/King County metropolitan region. This executive summary explains how the PSU-CPS team came to understand the issues and concerns facing Seattle, King County, and local government regional system members; provides key background context for understanding the issues; summarizes PSU-CPS recommendations; and lists the governance options developed and evaluated for the study.

## Issues and Concerns that Motivated this Project

From the early proposal stage of this project, PSU-CPS recognized reform opportunities in wastewater system governance. During the first half of the project, we developed a more nuanced understanding of issues and concerns with system governance through surveys, focus groups, and interviews with the numerous contract agencies representatives, stakeholders, and agency leaders. Governance issues and concerns with the regional wastewater system are summarized as follows.

Administrative and political governance of the regional wastewater conveyance system and treatment plants is centralized in the King County government. Policy and program implementation is provided by King County Water Treatment Division (WTD), which provides all strategic and operational planning, system and facilities operations, capital construction services, and administrative services for the system.

The King County Council and County Executive provide legislative and executive governance through policy adoption, program and organizational oversight, budgetary preparation and adoption, and control over debt issuance. The City of Seattle and 33 other governments contract with the County for conveyance and treatment services. This regional, centralized governance structure is a remnant of the dissolution of Metropolitan Municipal Corporation (Metro), and the service contracts first developed and adopted by Metro and its member customer agencies.

The centralization of the regional wastewater system under the King County government brings benefits and efficiencies of regulatory centralization, operational scale, service quality and consistency, coordination of capital investment, and regional cost sharing. However, through surveys and interviews of 34 contract agencies representatives, PSU-CPS identified a number of governance issues which demand attention. These concerns and issues helped to structure our research, option development, and recommendations for this project.

In an oft-repeated concern, the roles, purposes and inter-relationships of the two contract agency committees (RWQC and MWPAAC) are unclear and under-developed. By County code, the RWQC is defined as advisory to the County Council. A holdover from the Metro structures,

MWPAAC is left without a specified role beyond its statutory charge to advise the Metropolitan King County Council and the King County Executive on matters related to water pollution abatement. The 34 local government contract agencies, with extensive technical and political knowledge of wastewater systems and their local customers' expectations, are left without any level of governing authority over the regional system. Without some level of effective decision authority and control, local contract agencies are forced to use negotiations and contract provisions in their service contracts with the County as the primary vehicle for policy decisions and service levels.

The absence of meaningful influence on the part of the advisory committees can be discouraging to the committee members. In the survey and focus group work, individuals commented that it is sometimes difficult to recruit officials to serve on the two advisory committees because they feel their time and effort will not make much difference.

Contract agencies are left in a position of explaining and justifying the County decisions on base rate and capacity charges to their local retail customers, without any ability to control those charges. The County charges are typically rolled into the overall retail rate seen by customers. The contract agencies are given de facto responsibility for County decisions and charges, but no authority over those same financial decisions.

We believe that if in the early 1960s the local agencies had voluntarily turned over their wastewater treatment responsibility to King County rather than Metro, they would probably have ensured that the wholesale contracts included provisions that would give them some specific and clearly defined influence over the wholesale rate itself, or factors that influence rates, such as the comprehensive plan and capital improvement plan, and the scope of services and activities that would be funded through the wholesale charges.

The regional wastewater system is a huge infrastructure and organizational system; the financial and revenue scale is massive, and the investment time frames are decadal. King County and the WTD face the difficult challenge of explaining and justifying policy, rate setting, budget and funding, and capital investment decisions on this large scale to an extensive, diverse service area. Communication with each of the 34 contract agency members takes effort, and several stakeholders commented that communication is not as effective as it could be.

In addition, the consolidated packaging of the unified King County annual budget and the extensive technical detail of the WTD operational and capital budget make it difficult for the contract agency members to ascertain if there is equity or efficiency in spending across the regional system. The very extended investment and debt recovery period of multiple decades adds to the difficulty of visualizing the flow of capital investment burden and benefit across the region. Permit and regulatory pressure and compliance dates, and litigation also affects capital spending priorities, with ripple effects throughout the regional system. PSU-CPS detected suspicions by some local contract agencies that announced capital project prioritizations are being ignored, and that major capital investments are being made in distant parts of the system at the expense of their local ratepayers.

Ratepayers from the City of Seattle provide a substantial share of annual revenues to the regional wastewater system (about $40 \%$ of wholesale charge revenues). Seattle has, and continues to, coordinate and work effectively with the County on major capital projects to enlarge the combined sewer system and to control combined sewer overflows (CSO) across the city (e.g. Ship Canal CSO projects). Seattle operates a local collector and conveyance system, holds responsibility to control releases from numerous CSO points, and operates a full stormwater control program. The city, through SPU, also operates extensive water and solid waste municipal utilities, and the administrative and billing organization to support its utilities.

With its extensive utility program and financial capacity, Seattle asks a reasonable question if some form of West Point plant transfer and geographical consolidation of services would increase the efficiency and effectiveness of the city's utility programs. However, a consolidation move by Seattle would result in significant impacts-financial and operational-on the County and on the remaining contract members. PSU-CPS was asked to investigate this type of reconfiguration, and to identify the possible implications. We offer a recommendation on this issue below.

## Regional Wastewater System Context

For context we recite the system infrastructure and capacity features, revenue flows, and governance of the regional wastewater system. Through the WTD, King County operates-the regional wastewater system of large ("conveyance") pipes, pump stations, five treatment plants, and various other facilities. The regional system serves a population of about 1.9 million people within a 424-square-mile service area, which includes most urban areas of King County, and parts of south Snohomish County and northeast Pierce County. ${ }^{1}$ King County holds the regulatory permits, operates, maintains and makes capital investments in three large treatment plants: the West Point plant in Seattle, the South/ Renton plant, and the Brightwater/ North plant. The three plants together in the urban area treat on average some 180 million gallons of wastewater per day, or over 2,000 gallons every second.

King County acts as a "wholesale" wastewater service provider; it pipes and treats wastewater that is collected by 34 local sewer agencies. Those agencies (all government entities) include 18 cities, 15 special districts, and the Muckleshoot Indian Tribe. All local contract agencies have "Basic Agreement" contracts with King County to define, structure and implement their relationship and obligations to each other. Thus, we use the term "contract agency" to denote these agencies. Of the contract agencies, some are small, or only a portion of the wastewater collected by their agency flows to King County's system, and account for less than a thousand residential and residential equivalent business customers (RCE); at the other end of the spectrum, the Alderwood Water and Wastewater District and the City of Bellevue each account for over 50,000 RCE and the City of Seattle over 280,000 RCE.

[^0]Unlike the other local contract agencies, which operate separated wastewater and surface water collector and conveyance systems, Seattle operates a sanitary sewer and surface water system that uses a combination of combined and separated infrastructure. About one-third of the Seattle system is fully combined, a third partially combined, and a third separated. In Seattle, during intense and prolonged wet weather events, both wastewater and stormwater flood into the local system, and the connecting westside regional system. These combined flows have often overwhelmed the conveyance infrastructure and the West Point treatment plant capacity, resulting in uncontrolled combined sewer overflow (CSO) emissions from any number of vulnerable outflow points.

To manage and treat the surge of excessive combined waste and surface flow, King County operates five wet weather sewer overflow treatment plants (Carkeek, Elliot West, Alki, Henderson, and Georgetown). WTD is also responsible for the capital investments and operations to control overflows at 39 combined sewer outflow (CSO) discharge points, all in the Seattle westside area. The City of Seattle holds responsibility for CSO control on another 82 discharge points. Both agencies hold permit responsibility to separately and jointly move toward full control of CSO discharges. The County and Seattle are currently financing and jointly constructing major combined flow diversion facilities in the Ship Canal Water Quality Project, which will ultimately control overflows from two County and five Seattle outflow points. ${ }^{2}$

Revenue flows: The primary sources of funding for the King County Water Quality Enterprise Fund are the wholesale rate charged to the contract agencies and a "capacity charge" on new development, assessed by King County. The wholesale charge revenue exceeds $\$ 400$ million per year. The capacity charge revenue varies with the pace and scale of new development in the region, but is typically less than $\$ 100$ million per year.

Intergovernmental agreements between the local agencies and King County specify how the wholesale charge burden is allocated. The allocation method has been unchanged since the "Basic Agreements" were first adopted in the early 1960s. It provides for a single flat rate per single family residence, regardless of the size of the residence or the volume of wastewater generated by the residence. In addition, a "residential customer equivalent" (RCE) is used for multifamily and non-residential customers. It is based on the volume of wastewater generated (as measured by water usage), as well as the composition or "strength" of the wastewater for some industrial customers.

The basic agreements initially set a limit-\$2 per month (\$19 in today's dollars)--for the per-RCE charge, but amendments to the agreements removed this provision, and the charge is now at the sole discretion of King County. King County and WTD conduct an annual rate setting procedure, which allows for public comment and final adoption by the County Council.

Governance: The King County Executive and Council provide governance for the regional wastewater system under an elected strong executive model. The County Executive provides executive control and policy direction to the WTD through ratesetting for wastewater services,

[^1]budget development and implementation, performance measurement and oversight, business planning, and implementation of the county comprehensive plan. The County Council is the final legislative decision authority on policy, budget, capital program, and financial and debt decisions.

Three of the nine members of the County Council serve on the standing Regional Water Quality Committee (RWQC). By charter, one of them acts as the Chair. The remaining six members must be local elected officials appointed from the member contract cities and towns, and special districts. The RWQC membership categories and votes are allocated as: King County Council members ( 6 votes), City of Seattle (2 votes), four smaller cities ( 2 votes), and water and wastewater special districts (2 votes).

Plans and policies that must be assigned to the committee include, but are not limited to, water quality comprehensive and long-range capital improvement plans, service area and extension policies, rate policies, and the facility siting policy and major facilities siting process." (KCC 1.24.065). The Committee is advisory only, although if the County Council chooses to adopt a "policy or plan" that differs from one recommended by the Committee, it must do so with a six vote majority, rather than the normal five vote simple majority. The RWQC considers policies and plans related to water quality services formerly provided by the municipality of metropolitan Seattle.

The Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) is a holdover from the Metro era. Legislation passed in 1957 that enabled formation of the metropolitan municipal corporation also required that, if it performed the function of "metropolitan sewage disposal," a "metropolitan sewer advisory committee" be created. While portions of the law addressing the advisory committee have changed (including use of a more cumbersome name for it), the purpose of the Committee has remained unchanged: to advise the metropolitan council (now King County Council) in matters relating to the performance of the sewage disposal function (now referred to as water pollution abatement)."3

MWPAAC membership is made up of one individual each appointed by the local governments served by the regional system. Neither the county charter nor the county code appears to acknowledge the existence of MWPAAC or to distinguish its advisory role from that of RWQC.

## Summary of Recommendations

Following its engagement on this project in early February 2022, PSU-CPS spent the first half of the project focused on gathering information on the current regional wastewater system, including a survey of the 34 contract agencies and a focus group of key stakeholders. This work resulted in three reports: a summary of the survey results, a summary of the focus group comments and insights, and a 70-page description of the existing system. PSU-CPS then developed a detailed governance options document that developed and then compared a set of system reform and configuration options. These options are described below in this executive

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https://leg.wa.gov/CodeReviser/documents/sessionlaw/1957c213.pdf?cite=1957\ c\ 213\ \�\% A7\%2021
summary. From our background research, data analysis, and options evaluation, PSU-CPS makes the following prioritized governance recommendations:

1. Advisory Board with Delegated Decision-Making Authority. In a version of the "modified advisory boards" governance option, the Regional Water Quality Committee could hold delegated decision-making authority that would essentially create the benefits of an intergovernmental agency within the county government. The King County Council would retain veto power over decisions that create long term obligations for the County, such as issuance of debt, or that would impose burdens on other units or funds within the county. The King County Executive would retain decision-making authority over the organization and staffing of WTD, including appointment of the WTD Director. Within these constraints, the RWQC would be empowered, by ordinance, with decision-making authority over all other aspects of the wastewater system.

This option could be implemented on a test basis. If after a reasonable period (e.g., five years) it proves to be satisfactory to both King County and the contract agencies, it could be incorporated into the contracts prior to the 2036 termination date that applies to most of the agreements. If it is not deemed successful by either the King County Council, the County Executive, or the contract agencies, the two recommendations below could be viable alternatives.
2. West Point Separation. If the first recommendation cannot be implemented, or is found to be unsatisfactory to either King County or the contract agencies, the City of Seattle should seriously consider separation of the West Point system from the rest of the regional system. The Evaluation of Governance Options report identifies advantages and disadvantages of this option using available data, but as the report notes further analysis is needed to determine both the feasibility of the option and its effect on the affected agencies, especially the financial effect. If responsibility for the West Point plant and related conveyance system could be done at a cost that is reasonable to the City of Seattle, with no financial harm to King County and the remaining contract agencies, this could be a good long term option for the City of Seattle.
3. Creation of an Intergovernmental Authority. If the City of Seattle does withdraw from the regional system, creation of a joint municipal utility authority could be the best long term governance option for the remaining agencies.

The full final report contains more detail on these recommendations, including recommendations regarding the role of the MWPAAC.

## Governance Options Developed and Evaluated

The primary focus of this study was the governance of regional wastewater systems; i.e. how key policy decisions are made, and who makes them. It included both a description of the current governance system, and evaluation of the advantages and disadvantages of alternative governance systems. The PSU-CPS research team, with the help of feedback from regional stakeholders, developed and evaluated six governance options.

Option 1 Current System, Modified Advisory Board(s)
Under this option, the two current advisory bodies-the Regional Water Quality Committee (RWQC) and the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC)--would be modified or replaced by a new advisory board. There are several possible alternatives for advisory board composition and authority. The reforms contemplated under this option could be implemented within the existing system structure of centralized King County governance, operations, administration, permit and regulatory responsibilities. Some alternatives under this option could require changes to state law or the County Charter.

Option 2: Intergovernmental Agency-Governance Only
Under this option, a new regional, independent organization would be formed, relying on any one of three authorizing state statutes. ${ }^{4}$ This entity would be jointly owned by local wastewater agencies, which would appoint the members of the governing board. Under this option, the new agency would contract with King County for operation of the conveyance and treatment system.

## Option 3: Intergovernmental Agency-Full Replacement

This is a variation on the option above (Intergovernmental Agency-Governance Only) in which all of the services currently performed by WTD would be transferred to the intergovernmental agency.

## Option 4: West Point Separation

Under this option, responsibility for the large basins, and all directly related conveyance pipes, storage and facilities served by the West Point Treatment Plant would be transferred from King County to the City of Seattle. The remainder of the regional system would remain intact, with King County or the individual agencies contracting with SPU for treatment/conveyance service for the cities and districts served by West Point. Seattle would contract with King County for treatment and conveyance for the portions of Seattle served by the Renton/ South Treatment Plant.

## Option 5: Partial Separation-CSO Only

This is a variation on the option above (West Point Separation) in which full responsibility for the Combined Sewer Overflow (CSO) management program now split between King County and Seattle would be transferred to SPU, while King County would retain responsibility for the West Point plant and related conveyance system. All of the rest of the regional system, which uses separated waste and stormwater conveyance, would remain under County responsibility.

Option 6: Full Wastewater Responsibility Transferred to King County
Under this option, contract agencies would have the choice of turning over full wastewater service responsibility to WTD. This would include ownership and operation, maintenance, and capital development of all pipes and facilities now owned and operated by the city or district, and direct billing of residents and commercial/industrial customers.

[^2]A variation of this option is for local agencies to retain responsibility for the local wastewater collection system, but to have King County bill residential and non-residential customers (the generators of wastewater) directly for regional wastewater service.

The PSU-CPS team conducted a detailed evaluation and comparison of the six options. This analysis, prepared for Task 4 of this project, resulted in an extended white paper, which was distributed for comments and feedback to City of Seattle representatives, King County representatives, and to the project stakeholders group including numerous local contract agencies. Considering stakeholder feedback, and the evaluation analysis, the PSU-CPS team developed and proposes the three recommendations summarized above.

## Governance of the Regional System

The PSU-CPS research team believes that if King County had been chosen as the regional wastewater provider in the late 1950s, rather than a new "Metro" government, the wholesale contracts and governance structure would be significantly different than they are today. This is because in the transition from Metro to King County, the local governments (wholesale customers, or "contract agencies") lost a considerable amount of influence over the services and cost they faced for wastewater conveyance and treatment.

A primary purpose of the first half of this consulting project was to understand the current system governance situation, and where and how local contract agency influence was lost. The governance options and recommendations proposed by PSU-CPS attempt to restore key parts of this local control. To explain the reasoning behind our options and recommendations, this section of the report presents an analysis of system governance as it developed from the initial Metro founding, and then as it appears to apply to the different system governance options we developed.

## Governance Prior to and Under Metro

Prior to regionalization of the treatment system, the City of Seattle and other cities and districts were responsible for their own wastewater treatment. Seattle's West Point plant (the largest in the region) discharged to Puget Sound and ten smaller separate treatment plants discharged to Lake Washington. ${ }^{5}$ While this raised issues of efficiency and effectiveness that led to regionalization, under this decentralized system the cities and districts had control over costs, policy and permitting, and capital investment, and faced pressure from voters to keep costs reasonable (Figure 1). For natural monopolies like wastewater service, the fact that customers (ratepayers) also vote for the elected governing board of the service provider provides a built-in feedback loop that helps keep costs in check.


Figure 1: Single Agency Feedback Loop

[^3]When the creation of the "Municipality of Metropolitan Seattle" (Metro) was approved by regional voters in 1958, responsibility for the cost of wastewater treatment shifted to the new entity. The local governments were still accountable to their ratepayers and voters for the effectiveness and total cost of local wastewater service. But the same kind of feedback loop helped keep the wholesale rate in check: the members of the governing board were, by state law, "composed of elected officials of the component counties and component cities." ${ }^{6}$ The original Metro Council consisted of fifteen representatives of member agencies; by the 1990s it had grown to 42 members.

In this feedback loop, Metro billed agencies for the wholesale rate; the agencies in turn appointed their own elected officials as members of Metro's governing board (Figure 2). ${ }^{7}$


Figure 2: Interlocal Agency Feedback Loop

## Loss of Local Contract Agency Influence

When the regional wastewater service responsibility was transferred to King County in 1992-1993, the feedback loop was broken. Under the resulting centralized governance structure, the County bills the local agencies for the wholesale cost of the service, but those

[^4]agencies have neither collective authority over the rates they are charged nor over the composition of the governing board that sets the rates.


Figure 3: Disrupted Feedback Loop

One could argue that the King County Council and County Executive face political pressure from their voters to keep sewer costs down. But in practice, county voters never see a sewer bill from King County; the bills come instead from the cities and districts that operate the local wastewater collection systems. Those agencies may try to inform their ratepayers that a substantial amount of the cost they face is due to King County's wholesale charge, but that detail is probably lost on most residents. This is especially true in today's era of auto-pay and electronic billing: all the customer sees is a monthly bank statement with a large amount billed (often for water and sewer service combined) from the "City (or District) of X."

An exception to this is the capacity charge. But this charge is often paid up-front by the developer and disappears into the overall cost of construction. The County does assess the charge directly on property owners if the obligation isn't cleared by the developer, or by the buyer when property is sold. If anything, this puts added pressure on the wholesale rate: the County has an incentive to keep the capacity charge down to avoid annoying its voters, but has no similar incentive to keep the wholesale rate down.

One could also argue that the local agencies have some indirect influence over rates through the two advisory committees, the Regional Water Quality Committee (RWQC) and the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC). But these committees are advisory only, and that advice is limited to policies and plans that might affect rates and not
the rates themselves. The advisory committees have no decision-making authority whatsoever; neither the wholesale contracts nor state and county law give the local agencies authority over any aspect of planning, managing, operating, and financing the regional system. The majority of the local government contract agencies and stakeholders that responded to a PSU-CPS survey agreed with the statement, "we can provide input, but it has little influence."

## Designs to Enhance Influence in Governance

Returning to the premise stated at the beginning of this section, if in the early 1960s the local agencies had voluntarily turned over their wastewater treatment responsibility to King County rather than Metro, they would probably have ensured that the wholesale contracts included provisions that would give them some specific and clearly defined influence over the wholesale rate itself, or factors that influence rates, such as the comprehensive plan and capital improvement plan, and the scope of services and activities that would be funded through the wholesale charges (Figure 4).

These kinds of provisions are the focus of the governance option labeled "Current
System-Modified Advisory Board(s)." Both through contract provisions and through some delegation of decision-making authority to an advisory board, the contract agencies could gain some level of influence over the cost of the wholesale service. The degree of influence would depend on the range and type of decisions that would be delegated to an advisory or "operating" board.

The governance options labeled "Intergovernmental Agency-Governance Only" and "Intergovernmental Agency-Full Replacement" would restore the feedback mechanism the local agencies had through their appointment of Metro-type board members. The members of the governing board of the intergovernmental agency would bill member agencies for the cost of wastewater treatment, and those agencies would in turn appoint the members of the board.

The remaining options take advantage of the single-agency feedback loop. The option labeled "West Point Separation" does this by having responsibility for the West Point treatment plant and associated conveyance system returned to the City of Seattle. The City would still incur


Figure 4: Partially Restored Feedback Loop


Figure 5: Single Agency Feedback Loop-Seattle
wholesale costs for treatment for the relatively small portion of the city that flows to the South/ Renton treatment plant. But this would be offset by credits for flows from other parts of the region to the West Point plant.

This scenario, however, applies only to the City of Seattle. For the other agencies, further analysis would be needed to ascertain whether the economies of scale of the regional system would make separation financially infeasible. Further, most of the remaining agencies are served by only two plants-South/Renton and Brightwood-and the interconnection of the system could make it difficult to split off a single agency.

This problem leads to another possible governance option: the one labeled "Full Wastewater Responsibility Transferred to King County." Local agencies could be granted the option of turning the collection and billing function over to King County, again taking advantage of the single agency feedback loop.

A variation on this alternative is to have King County simply bill users (residential and nonresidential) directly for the cost of conveyance and treatment, with the local


Figure 6: Single Agency Feedback Loop-King County agencies continuing to provide, and bill for, local sewage collection service (Figure 6).

## Recommendations

## Recommendation 1: Test the "Modified Advisory Board(s)" option by creating the advantages of an intergovernmental agency within the King County government.

The PSU-CPS research team believes the West Point separation and creation of an intergovernmental authority by the remaining agencies might be the best long term solution to the current disconnect between financial accountability and management responsibility. It would also give the City of Seattle control over policies, planning and investments in the wastewater system.

But at least in the short term, these options would require a great deal of time and effort to implement. Furthermore, they would be difficult to reverse; if the results of a feasibility analysis of the options turned out to be overly optimistic, there would be no turning back once the options were implemented.

Several members of the Regional Stakeholders Committee expressed hope that, if an appropriate advisory board was able to exercise meaningful decision-making authority, it would not be necessary to pursue more extensive changes to the current governance structure. They also challenged the PSU-CPS research team to provide more detailed recommendations on the composition and authority of an advisory


Figure 7: Advisory Board with Delegated Decision-Making Authority board.

Three principles have guided our thinking on this option. The first is recognition that the process for deciding to adopt a different governance option depends on how reversible the decision is. Amazon founder Jeff Bezos classifies as "Type 1" decisions those that are irreversible (or nearly so); so-called "one way doors." Those decisions must be made methodically, carefully, slowly and with great deliberation. The West Point Separation and Intergovernmental Agency options fall under this "Type 1" decision category.

Type 2 decisions are changeable and reversible; "two-way doors." Those decisions can be made more quickly and easily. A "Modified Advisory Board" option that does not require changes in state law, county charter, or wholesale contracts, falls under this category.

The second principle is the concept of "prototyping" that is used in agile project management. Given that the "Modified Advisory Boards" option is a Type 2 decision, actions by the King County Council to delegate decision-making authority to an advisory (or "operating") board are
relatively easy to reverse. In other words, King County could test alternate decision-making processes, and if it (and/or the contract agencies) found those processes to be unsatisfactory for any reason, it could modify or end the test.

The third principle is one used by engineers in testing the design of new products or materials. Rather than making small incremental changes and measuring the results, it is more efficient to test the extremes. For example, in testing prototypes, the engineer would want to find out how small and lightweight an engine part could be without failing. To do so, it is most efficient to first discover the failure point. ${ }^{8}$ Simply put, it is best to be bold in testing prototypes.

As noted in the Evaluation of Options report, as the government ultimately responsible for the regional wastewater system, there are some decisions that the governing board (the County Council) cannot or should not delegate. But in the interests of testing a prototype of collaborative decision-making, we suggest that, at least initially, the sphere of decisions that are off-limits for delegation should be as small as possible.

We suggest these four constraints that would be set by the King County government:

1. The regional wastewater system should be fully self-supporting. The county will not provide general fund support for the system, or subsidize it through other utilities the county might operate.
2. WTD should pay its fair share of county support service costs. The cost allocation method should be subject to review and approval of an independent auditor, but operation of the regional wastewater system should not impose a financial burden on other agencies or operations of the county.
3. The King County Council should have veto power over decisions that would impose long term obligations on the County government, especially the issuance of debt. That is, the Council would retain the power to deny the issuance of revenue bonds for the wastewater system, but would not unilaterally impose increased debt on the system.
4. The County Executive should retain decision-making authority over the organization and staffing of WTD, including appointment of the WTD Director, who would in turn retain responsibility for day-to-day management of the system.

Within these limits, an appropriately-constituted advisory board (or operating board) could be granted broad decision-making authority over the key policy issues that affect the regional wastewater service and its cost, including:

- Setting rates for both the RCE charge and the capacity charge
- Adopting the comprehensive plan (the "Clean Water Plan")
- Adopting the capital improvement plan

[^5]- Deciding on the timing and amount of bond sales, subject to the County Council's veto authority over new debt
- Making decisions on all issues that have a significant financial impact (exception: decisions subject to the constraints above, such as county collective bargaining agreements and support service charges)

Legally, the King County Council must adopt the budget for the government, including the WTD budget. For a standalone fund such as the Water Quality Enterprise Fund, the budget would be heavily influenced-but not determined-by the policy decisions listed above.

## Advisory Board

We further recommend that the existing Regional Water Quality Committee continue to serve as the primary advisory board, with decision-making authority as described above. Reasons for this recommendation include:

1. It would require no change in the county charter.
2. It is made up of elected officials representing stakeholder governments.
3. King County Council members make up half the voting membership of the committee, allowing the county to-if it feels necessary-veto decisions of the committee. ${ }^{9}$
4. The contract agency representatives also account for half the voting membership, requiring some degree of collaboration for any successful vote.
5. An 11-member committee is a good size for effective discussion and decision-making. A smaller committee would allow for less representation for contract agencies; a larger committee would make decision-making more cumbersome and would place a greater demand on the time of elected officials.

The RWQC is similar to the 10 -member "Operating Board" proposed by MWPAAC in 2016. ${ }^{10} \mathrm{~A}$ comparison of the distribution of voting power between the two committees is as follows:

|  | RWQC | "Operating Board" |
| :--- | ---: | ---: |
| King County | $50 \%$ | $30 \%$ |
| Seattle | $17 \%$ | $28 \%$ |
| Other Cities | $17 \%$ | $25 \%$ |
| Districts | $17 \%$ | $17 \%$ |

The most significant difference is that King County has greater ( $50 \%$ ) voting power on RWQC. But that seems to be a reasonable trade-off if the King County Council were to grant significant decision-making authority to the Committee. Another difference is that under this

[^6]recommendation, RWQC would be a true operating board. The MWPAAC proposal envisioned decision-making authority that would be delegated to the operating board, but the discussions did not lead to contract amendments that would have specified that decision-making authority.

## Technical Advisory Committee

While high level policy decisions should be made by elected officials on RWQC, planning for and operating a wastewater treatment system is a highly complex and technical endeavor. Policy boards governing transportation and other public utilities often are supported by technical committees made up of professional staff. Such a group would not have final say in policy decisions, but would, at the direction of and in collaboration with the RWQC, analyze issues and provide recommendations to the Regional Water Quality Committee.

The Technical Advisory Committee would also take a proactive role in identifying and framing policy decisions that should be made by the elected officials of the RWQC, and assist the RWQC in developing its annual work plan.

Since it is already provided for by state law, the Metropolitan Water Pollution Abatement Advisory Committee could serve this role. It would mean that the appointed representatives of what is now MWPAAC would be professional staff rather than the current mix of elected officials and staff (state law is silent on the issue).

Technical support and advice to RWQC is consistent with the purpose of MWPAAC as provided by RCW 35.58.210, which states simply that "The function of such advisory committee shall be to advise the metropolitan council in matters relating to the performance of the water pollution abatement function."

To avoid conflict of interest, an independent organization such as Sound Cities, Cascade Water Alliance, or a private firm or nonprofit should be contracted with to provide staff support for both committees.

## Pros and Cons of The Modified Advisory Board Recommendation

King County might be concerned that this recommendation shifts too much decision-making authority to its advisory committee. This could be a legitimate concern. But the recommendation carries with it several built-in mechanisms that could address concerns on the part of the King County Council and County Executive, especially if the delegation of authority is done on a trial basis. These include:

1. Given the reality that they (and their constituents through the capacity charge) will ultimately pay $100 \%$ of the cost of the regional wastewater system, the contract agencies have a strong incentive to ensure that the system is operated successfully. This includes financial sustainability, compliance with regulatory requirements, effective fixed asset management, and responsible stewardship of the environment.
2. The County Council members of RWQC would collectively hold veto power over decisions of the Committee; by charter a County Council member serves as Chair.
3. As an ultimate circuit breaker, the County Council could repeal or amend the ordinance delegating decision-making authority to RWQC.
4. The Water Quality Enterprise Fund is self-supporting, meaning that whatever decisions RWQC might make, they will not be a financial burden on other programs or services of the County.
5. As noted in Project Report 4, Evaluation of Governance Options, this recommendation has a parallel with the State of Oregon's requirement for the use of "budget committees" on the part of local governments. These committees have decision-making authority over the total budget to be adopted by the local government. The committees are made up of an equal number of elected officials of the governing board and other appointed lay members; the city councils or board of commissioners collectively retain veto power over decisions of the committee

On the other hand, some of the provisions of this recommendation that might be reassuring to King County might be seen as a disadvantage by the contract agencies. For example, the 50\% County voting membership on RWQC could be perceived as giving King County too much influence, especially if the County members too frequently exercised their veto power. If that turns out to be the case, rather than abandoning this option, the RWQC could be replaced by an operating board with membership and voting authority as proposed by MWPAAC. ${ }^{11}$

If the County could at any time rescind the delegation of decision-making authority, the contract agencies might question that this would be a long-term solution to their desire for more influence over decisions that affect the regional system. One way to address this would be to test, and possibly refine, modified boards for a period of three to five years. If the new role for RWQC seems to be working well-and we are optimistic that it will-its decision-making authority could be spelled out in the contracts as they are renegotiated prior to their 2036 termination date.

There appears to be a current window of opportunity to pursue this recommendation, for these reasons:

1. The Clean Water Plan is still in development, providing an opportunity for more active, substantive involvement by the contract agencies, and to test the effectiveness of that involvement.
2. The majority of wholesale contracts have a 2036 termination date, providing time to implement and test this option, and still give the local wastewater service providers the opportunity to consider further modifications or other options.

[^7]3. The top managers of the SPU and King County systems-SPU General Manager Andrew Lee, WTD Director Kamuron Gurol, and Department of Natural Resources \& Parks Director Christie True-have established a positive professional working relationship.
4. Other elected and appointed officials on both RWQC and MWPAAC have extensive knowledge of the system and its history, and are committed to the success of the system.
5. A successful resolution of the contract agencies' concerns with governance of the wastewater system could remove this as a contentious issue, allowing the local governments to focus on other pressing issues in the region and to work collaboratively to address them.

The King County Executive's Office has noted that the primary drivers of management and policy decisions and costs are external factors beyond the control of the regional service provider (for example, federal and state regulatory requirements, rapid increases in the cost of construction, and the need to replace or rehabilitate aging infrastructure). It could therefore be the case that the decisions of RWQC would not be significantly different from the decisions the King County Council or Executive would have made.

On the other hand, there could be a range of choices in how to respond to external factors or to internal challenges such as aging infrastructure. Decades of research has shown that empowering individuals or groups with decision-making authority can lead to better decisions. But the primary benefit of empowerment is to create a stronger sense of ownership and buy-in to these decisions; in this case on the part of the local governments that provide wastewater utility service. The benefit to King County is political capital that could be helpful as the county government works with its local government partners on other pressing issues in the region.

The primary advantage of this recommendation is that it provides many of the benefits of an intergovernmental authority (in terms of governance) while retaining the resources and experience that King County has gained in the past three decades of operating the regional system. It avoids creating a new layer of government. And it capitalizes on the deep experience of the cities and districts in operating public utilities.

## Recommendation 2: Continue to analyze the "West Point Separation" option.

If the delegation of decision-making authority to RWQC as described above proves to be unsatisfactory to either King County or the contract agencies, there are viable options that may be good long term approaches for the local wastewater service providers. For the City of Seattle, separation of the West Point plant and associated facilities from the regional system could offer several benefits.

The agreement between the City of Seattle and King County for wholesale wastewater service has a termination date of 2036. This provides enough time for a thorough analysis of this option while still providing sufficient notice to King County of a possible decision to withdraw from the regional system.

This option could, if found to be financially feasible, provide multiple advantages to Seattle Public Utilities and the City of Seattle:

1. Seattle would gain the ability to control (subject to state and federal regulations) all aspects of wastewater service and associated costs. SPU now exercises this kind of control over the drinking water system, including management of raw water sources, treatment, storage and distribution.

On the wastewater side, the City would have opportunities to maximize efficiencies in the operation of the treatment plant. It could weigh in-house operations against contracting with a private operator or with King County. Operation and maintenance of the conveyance system, including pump stations, could be consolidated with its current maintenance and operation of the collection system.
2. Economies of scope in having a single agency manage CSO operations and capital improvements. CSOs in drainage (collection system) basins larger than 1,000 acres are a regional responsibility, managed by King County. Combined sewer outfalls in collection basins smaller than 1,000 acres are SPU's responsibility. In the map at right, the small black dots are CSO outfalls under Seattle's responsibility and the larger blue dots are outfalls under King County's responsibility. The 1,000-acre basin split produces a fair amount of overlap in the CSO-related activities undertaken by the two governments.

In addition to eliminating the current duplication of staff and equipment in CSO-related activities, the City of Seattle
 might be in a better position than King County to take advantage of long-term strategies in addressing uncontrolled CSO outfalls.

For example, green stormwater infrastructure (GSI) "functions to manage stormwater through groundwater infiltration and evapotranspiration before it enters the combined
sewer systems." ${ }^{12}$ Building green infrastructure after the fact of development is difficult in a built-out city, but the City of Seattle could encourage it as an element of redevelopment plans as the city evolves.
3. Opportunities for pursuing a "One Water" management philosophy. One Water is a coordinated approach to managing all aspects of urban water: stormwater, residential water, commercial water, industrial water, municipal water, wastewater, and drinking water. Many elements of the urban water system are already housed within one department of the City of Seattle (SPU), and adding the CSO and reclaimed (treated) water elements could turn current liabilities into future assets. This could be especially important as climate change affects future patterns of rainfall and weather.
4. Integration of financial policies and outcomes. The City of Seattle-as with all the local wastewater agencies in the region-sets its own policies for allocation of wastewater between and within customer classes. The City charges for service on the basis of volume alone; for homes, volume is calculated based on winter water use to exclude water that is used in the summer for lawn and garden irrigation (and that does not enter the sewer system). ${ }^{13}$

This practice is relatively unusual-many agencies have a fairly large fixed cost component in their rates, or assess a flat rate regardless of the size of the household-but it can be argued that it is more fair: a home that generates twice as much wastewater as another home pays twice as much for the service. ${ }^{14}$ It eases the burden on low-income small households (e.g., retirees on a fixed income). And the City of Seattle also offers a $50 \%$ discount program for low income customers, which can ease the burden on larger families that might not have much control over the volume of sewage they generate.

A volumetric rate policy also provides an incentive for conservation. Over the long run, households and businesses that can reduce wastewater generation through more water-efficient appliances and fixtures and other conservation measures can reduce their cost of service. But currently, the primary beneficiary of a reduction in wastewater generation is the region as a whole, not the City of Seattle. The City of Seattle does see some benefit, since it accounts for $40 \%$ of the total wholesale revenue paid to King County, but the benefit is diluted.

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https://kingcounty.gov/~/media/services/environment/wastewater/cso/docs/program-updates/2018 CSO-c ontrol-program-update-secure.ashx?la=en, page 2-5
${ }^{13} \mathrm{https}: / / w w w . s e a t t l e . g o v / u t i l i t i e s / y o u r-s e r v i c e s / a c c o u n t s-a n d-p a y m e n t s / r a t e s / s e w e r ~$
${ }^{14}$ SPU does have a minimum monthly charge equivalent to one CCF of usage, in 2022 amounting to $\$ 17.01$. But this is different from a fixed rate component, which in other jurisdictions can dominate the bill for many households, regardless of differing volumes of sewage generated. As a practical matter, a home that is occupied will generate more than 1 CCF of wastewater in a month (the national average is 4 CCF per month for a single person) and the minimum charge is moot.

The benefits of internalizing the results of financial and other incentives for conservation could also apply to practices such as incentives to disconnect downspouts, rebates for water saving fixtures and appliances, on-site graywater disposal systems, and a variety of other policies that might reduce the cost of wastewater treatment.

Separation of the West Point plant and related conveyance system could also benefit the other agencies in the regional system, primarily by relieving them of the capital and operating costs associated with the combined sewer system, and fixed asset liabilities associated with the West Point plant and older westside conveyance facilities.

## Recommendation 3: Continue to explore the "Intergovernmental Agency" option.

If on further analysis the City of Seattle finds that separation of the westside system is to its advantage, the remaining 33 agencies should seriously consider formation of a joint utility authority as provided through RCW 39.106, the statute under which the Cascade Water Alliance operates. With the removal of Seattle's population, and the large number of customers in Snohomish County, the King County government would no longer be providing wastewater treatment service for a majority of its own residents.

The primary advantage of creating an intergovernmental agency is the restoration of the feedback loop that the member agencies benefitted from under the previous Metro government. The local wastewater service providers would collectively own the regional agency. They would appoint the members of the governing board, who would be empowered to balance the operating and capital investments in the system against the cost to their ratepayers.

Such an agency would continue to provide the economy-of-scale benefits of a regional system. The four treatment plants would handle an average volume of around 100 MGD, and this number would increase with continued growth of the Seattle suburbs. (Note: because the Vashon and Carnation plants are standalone systems, the Vashon Sewer District and the City of Carnation could decide independently whether to remain part of the regional system or to operate their own plants).

The primary disadvantage of this option is the time and effort it would take to create the agency and transition ownership and operations from King County. But this is a short-term disadvantage.

The majority (73\%) of the 33 non-Seattle contract agencies are under wholesale agreements that expire in 2036. As with the West Point separation option, this gives the agencies sufficient time to explore the intergovernmental agency option.

## Implementation Steps

As the flow chart (Figure 8) indicates, implementation of the recommended governance options would depend on a series of "if-then" decisions. Following one path, the contract agencies and King County would collaboratively build and test a governance system that would give the local utility providers substantial decision-making authority through representation on RWQC or an alternative operating board. If the test is successful, that system can be incorporated into the wholesale contracts as they are renewed and extended beyond 2036.

There are several off-ramps from this path depending upon whether King County is open to the idea of delegation of decision-making authority, whether the type and degree of delegation is satisfactory to the contract agencies, and whether a test period for the new governance system is satisfactory to both King County and the contract agencies. All the off-ramps lead to the separation of the West Point system and creation of an intergovernmental utility agency for the remaining local agencies.

## Implementation of Delegated Decision-Making

 AuthorityThe recommendation to grant specific decision-making authority to RWQC is designed to avoid the need for changes
 in the King County Charter or state law.

Figure 8: Implementation Path believe that this delegation could be done by ordinance, greatly simplifying implementation.

The specific language of such an ordinance would be developed and adopted by the King County Council with the assistance of its legal counsel. The recommendation here includes suggestions for the decisions that would be retained by the County Council and County Executive and those that would be delegated to RWQC. A collaborative process between King County and its two advisory committees (RWQC and MWPAAC) in drafting the specific language of the ordinance would be a show of good faith in addressing the contract agencies' concerns over governance of the system.

Drafting and adoption of the ordinance should not be overly time-consuming, and could be done by the end of 2023.

Both RWQC and its Technical Advisory Committee (MWPAAC) would then need to establish rules of procedure and work plans consistent with their new roles. This could be done over time, with fine-tuning as necessary.

Finally, after a reasonable test period, the decision-making authority of the RWQC should be incorporated into the wholesale contracts.

## Feasibility Analysis for Separation of the Westside System

In parallel with the implementation and testing of delegated decision-making authority on the part of RWQC, SPU could take steps to analyze the feasibility of separation of the West Point plant and its associated conveyance and CSO systems, at least at the level of rough estimates. There are several aspects of this analysis.

Long Term Obligations King County would need to be kept whole with regard to long term obligations, especially debt. The assumption here is that King County would continue to hold the debt and make debt service payments, and the City of Seattle would pay its share of the annual debt service cost until the bonds mature.

To determine what that share should be, SPU could provide or hire an accountant to analyze relevant King County financial records. For each outstanding bond issue, the use of the bond proceeds would be tied to the capital improvements that were financed with those proceeds. Many projects can be classified as a westside or eastside capital improvement, allowing the related debt service cost to be allocated accordingly. The cost of system-wide improvements could be prorated with the help of staff familiar with the projects.

Other long term obligations would need to be identified. These could include equipment lease-purchase agreements and long term service contracts. The terms of these kinds of obligations are typically much shorter than that of 20- or 30-year revenue bonds, and could be taken into account in a phasing plan for implementing the separation.

Accounts Receivable Property owners in Seattle had, as of March 2022, a balance owing of some $\$ 306$ million in capacity charge obligations. Using a GIS system, this could be fairly easily broken down into properties served by the West Point plant and those Seattle properties typically served by the South plant. King County could continue to assess and collect all payments and, after separation, forward to Seattle the payments associated with the West Point
system. Or it could transfer the accounts receivable function to SPU. For future development, we assume that conveyance and treatment capacity improvements would be reflected in SPU's overall Systems Development Charge program. (Note: capacity and systems development charges would be revenues to the capital improvement, not operating budget.)

Direct Operating Costs King County's annual budget estimate for westside operations of \$41.6 million could be used as a starting point for estimating operating costs of the West Point plant and related systems. King County has provided line item budget detail, and SPU finance staff should review the objects of expenditure and associated budget to verify that they would be applicable under operation by SPU.

Overhead and Central Service Costs For most support service costs, SPU could take a zero base budget approach and independently estimate costs for (internal) equipment rental, IT, insurance, and other overhead and support service costs. In some cases, it may be necessary to analyze WTD costs to make sure nothing is left out. For example, the 2022 budget includes a large interfund transfer (over $\$ 14$ million) for "surface water management services." It would be necessary to estimate how much of this cost would be applicable if the City of Seattle regained responsibility for the westside system.

Revenues SPU already knows how much it pays in wholesale rates. Some analysis would need to be done to identify the net RCE count for Seattle customers served by the South Plant and non-Seattle customers served by the West Point plant, and to adjust the available rate revenue accordingly.

Once operating costs and revenues are estimated, an estimate can be made for annual net operating revenue available for either debt service or pay-as-you-go capital improvements. Along with capacity/systems development charge revenue, this can provide a rough estimate of the amount of funding available for capital improvements.

A large part of a feasibility analysis is financial feasibility. But there are non-quantifiable factors that need to be considered. Does SPU have management capacity to take on an expansion of the scope of services in its existing wastewater utility? Many, but not all, of the required operating staff will be based at the West Point plant. Is there space available (or that could be made available) for those required to maintain and operate the conveyance/CSO systems? Are there legal barriers to the transfer of regulatory permits as well as King County's obligations as part of its CSO Consent Decree?

This preliminary feasibility analysis is just that. It would be approximate only, with the primary goal to identify any fatal flaws that would make separation of the westside system infeasible or impractical. If separation of the system appears feasible, it would remain a viable option to the "modified advisory board" recommendation.

## Background Information

The PSU-CPS research team used many sources of quantitative and qualitative data in completing this study. The results of this data-gathering have been summarized in five Project Reports. A searchable database of over 100 source documents and data files was also constructed.

## Project Report 1: Summary of Survey Results

A survey on regional wastewater governance issues was sent to 33 contract agencies on March $31,2022 .{ }^{15}$ When the survey closed on May 10, 24 agencies had responded; the City of Bellevue provided written feedback after the survey had closed.

A detailed summary of the survey results, along with a copy of the survey instrument itself, is included in Project Report 1: Summary of Survey Results. In the context of a study of governance systems, some of the most notable survey results include:

- In rating their agency's ability to influence regional wastewater system decisions, a majority ( $73 \%$ ) of the respondents indicated their agency has little or no influence over decisions. None of the respondents agreed with the statement, "Our input has strong influence." These results held for all four of the policy areas that were included in the question: capital improvement program decisions, rates and budget decisions, the long range comprehensive plan, and general policy decisions.
- The cost for regional conveyance and treatment service amounts to, on average, an estimated $56 \%$ of the local agency's total wastewater cost (median response).
- While $74 \%$ of the respondents felt that regional costs were allocated fairly, or could be with some minor tweaking, $26 \%$ felt that some agencies were subsidizing costs incurred in other parts of the region.
- $60 \%$ of the respondents felt that system costs were "a bit higher" than they should be, or they could be significantly reduced through increased efficiency.

In open-ended responses, agencies provided a range of opinions on various aspects of the regional system. One common theme is summarized in this statement from one of the respondents:
"Small contract agencies like ours have very little say, but decisions made by KCWTD [King County Wastewater Treatment Division] can have a *significant* impact on our ratepayers and our district."

[^8]
## Project Report 3: Focus Group Summary

As part of this study, Seattle Public Utilities invited a group of regional stakeholders to serve as a source of information and a sounding board for issues and questions raised during the research. The members of this Regional Stakeholders Committee included:

- Lloyd Warren, Commissioner for Sammamish Plateau Water and Sewer District, and Vice Chair of the Regional Water Quality Committee (RWQC)
- Jack Broyles, Commissioner of the Alderwood Water and Wastewater District and Chair, Rates and Finance Subcommittee of the Municipal Water Pollution Abatement Advisory Committee (MWPAAC)
- Suzi O'Byrne, Commissioner for Coal Creek Utilities
- Allen Ekberg, Mayor of the City of Tukwila
- Leanne Guier, Mayor, City of Pacific
- Penny Sweet, Mayor, City of Kirkland and member of RWQC
- Kamuron Gural, Director of King County's Wastewater Treatment Division
- Andrew Lee, General Manager of Seattle Public Utilities

John McLellan, Engineering and Development Director for Alderwood Water and Wastewater District and Chair of MWPAAC also joined the Committee for its discussions of governance options.

As of this writing, the RSC has met three times in 2022:
May 18 - Overview of the study; presentation of preliminary survey results; feedback on selection of governance options and other regional models to study.

June 15 - Focus group session on survey results; feedback on proposed list of governance options.

September 13 - Feedback on the evaluation of options
In the June 15 meeting, the RSC served as a focus group to explore and provide further context on issues raised in the survey of the local wastewater agencies; the results are summarized in Project Report 3: Focus Group.

A key question that arose from the survey was, "If member agencies had more influence over decisions, exactly what kind of decisions would those be?"

There was a wide range of answers to this question, including rates, the WTD budget, the comprehensive plan, and capital improvement plans. One member stated, "I don't think there's an area outlined we wouldn't want to be involved in...we've been asking for years for a voice and a vote."

Another member noted that there is a balance between the contracts and decision-making. "If we don't have much influence in decision-making, then more detail needs to be spelled out in the contracts. We've been arguing about revising the contracts for years. But we would rather
have more say in a governance structure that is more collaborative and make decisions there rather than rely on the contract."

Another focus group question was, "In what ways are the current advisory committees and regional forums either working or not working?"

A general consensus was that the two committees-RWQC and MWPAAC-are advisory only, and contract agency members often feel their input doesn't have much effect. In this discussion and other conversations with contract agency members, several observed that it is difficult to recruit members to serve on these committees due to the general impression that their participation would not make much difference.

One RSC member noted, "There is a chasm between the two groups [RWQC and MWPAAC] about who is responsible for what and who fills the void when neither is responsible."

## Project Report 2: Description of the Existing System

While agencies were responding to the survey, the research team collected, curated, and analyzed information on the existing regional system. The source data included material and documents provided through WTD's website, documents available through other public sources, and files (documents and spreadsheets) provided directly by SPU and WTD.

Project Report 2: Description of the Existing System includes sections on:

- The history of the regional wastewater system
- The current physical system
- System boundaries and flow maps
- Organization and staffing of the Wastewater Treatment Division
- Governance of the regional system, including the King County government structure, the two advisory committees, and the agency wholesale contracts
- Regional system plans
- Regulatory compliance and future liabilities
- Other drivers of future costs (e.g., growth pressures and fixed asset replacement)
- Financial data (operating and capital budgets, debt service)

There is too much information in this 70-page report (itself a summary of 100+ source documents and data files) to adequately cover in this report. However, some key factual data is relevant to the observations and recommendations in this final report.

## History

1958 Voters approved creation of the Metropolitan Municipal Corporation that would assume responsibility for regional wastewater treatment.

Early 1960s The intergovernmental agreements between the "contract agencies" that transferred wastewater treatment service were first negotiated, and the "postage
stamp" uniform rate per Residential Customer Equivalent was established (with a limit of $\$ 2$ per month). Except for elimination of the cap, there has been little substantive change in the rate allocation method since then.

The Washington legislature passed a law, codified as RCW 35.58.570 enabling the metropolitan municipal corporation to assess a capacity charge for new users that connected to the system.

1992 Voters approved the assumption of Metro's powers and duties (now including mass transit and solid waste disposal) by the King County government. The Regional Water Quality Committee was created (advisory only).

Early 1990s The wholesale contracts were amended to provide for the capacity charge. The amendments made no mention of contract agency involvement in governance.

1998 A retreat of the Regional Water Quality Committee led to the "Robinswood Letter," affirming the policy of uniform regional rates, and also supporting the creation of a capacity charge based on the principle that "growth pays for growth."

Early 2000s Amendments to some of the basic agreements extended the termination date to 2056 (from 2036) and added a provision that the agency agreed to concur with any change to the "terms for sewage disposal and payment therefore" that had support of a $90 \%$ double majority of agencies.

The physical, governance and financial attributes of today's regional wastewater system strongly reflect the strategies and values of the 1958 Metropolitan Seattle Sewerage and Drainage Survey. ${ }^{16}$ This comprehensive document included a survey of then-existing treatment and conveyance facilities in the region, an assessment of regional needs, a system master plan (including the West Point and Renton treatment plants), and strategies for financing system development. The survey, in effect, implemented the provisions of the 1957 Washington state enabling legislation for the formation of metropolitan municipal corporations.

The Survey report recognized the unique position of the City of Seattle. Seattle is identified as a major producer of sewage and surface water, but also its unique geographic location across the major drainage outlets of the metropolitan watershed into Puget Sound. The report states that Seattle is affected by the "terminal or cumulative" effects of upstream and up-lake conditions. The establishment of Metro and subsequently King County as the unitary authority for regional wastewater shifted a major portion of the responsibility from Seattle for lower watershed water quality. The later completion of the Brightwater treatment plant with a separate discharge pipe to the Sound provided the physical infrastructure for non-Seattle contract agencies to share in the cumulative, regional water quality responsibility.

[^9]The Survey report explains the 1958 situation of fragmented water treatment and widespread use of septic systems, noting 25 treatment plants operating across the metropolitan area discharging into 60 outfalls, and that sewage from $53 \%$ of the metro population was discharged without treatment. In the post-World War II era, the Survey forecasted a sharp shift in population growth to the suburbs over the next 70 years, with an expected service area of over 500 square miles. The Survey projected that this growth would extend responsibility for sewage services to 41 separate jurisdictions in 19 cities and 22 sewerage districts. The report notes the limited ability of small, inland sewer districts to be able to finance long outflow lines to a larger waterbody. The City of Seattle was recognized as having the financial capacity to undertake construction of metropolitan facilities within its borders, but the report stresses that the financial resources of the metropolitan area must be used to correct problems that are "area-wide in scope." ${ }^{17}$ The report called for a cooperative and coordinated approach to the regional water quality issues.

The Survey report repeatedly stresses that sewage and drainage problems "are area-wide in scope and solutions must be formulated accordingly". ${ }^{18}$ Watershed boundaries, which define stormwater drainage areas and limit sewerage service areas are not confined by city, district, and county boundaries. The report notes that there was no legal way for the service area in Snohomish County to coordinate with partners in King County. The report advocates for the formation of a central agency encompassing the entire metropolitan area for the administration, financing, design, construction, maintenance, and operations of a regional system. Through an explicit statement and its focus on regional infrastructure, the Survey report reinforces the two-level separation of responsibilities for the regional system by a central agency, and local collector systems "delegated and retained" in each local political entity. ${ }^{19}$

The City of Seattle remains an important contributor of revenue to today's existing regional system (e.g. about 40\% of annual base charge revenues), but the intense suburban growth and economic development outside of Seattle has resulted in a vastly increased financial capacity for the non-Seattle contract agencies.

## The Current Physical System

Project Report 2 includes several maps and statistics on the current system. The system is large and complex, and in many ways, difficult for a lay person to relate to. The fact that the system treats some 70 billion gallons of sewage per year is impressive, but difficult to understand in the context of a normal household's use of water and generation of wastewater.

Probably the best visual representation of the system is the flow map, which shows the geographic scope of the system, and the portions of the system that flow (under normal conditions) to the three large treatment plants in the urban region: the West Point plant (indicated in pink), the South (Renton) plant (tan) and the Brightwater plant (green).

[^10]

Most of the wastewater generated in the City of Seattle flows to the West Point plant, although a portion in the southern end of the city flows to the South plant. For the other agencies, the system is more intertwined; wastewater flows to the South plant, Brightwater plant, or both. All or parts of some jurisdictions north and northeast of Seattle are served by the West Point plant.

## The Wastewater Treatment Division

WTD is part of the executive branch of the King County government, under the management authority of the elected County Executive. The Division is a component of the Parks and Natural Resources Department.

The majority ( 328 people, or $53 \%$ ) of the approximately 620 employees of the Division work in the Wastewater Operations section of the Division. Of those, the West Side Operations and West Point Plant account for 125 positions. The next largest unit is the Project Planning \& Delivery section ( 227 employees or $37 \%$ of staff). Other smaller units include Resource Recovery, Environment and Community Services, Safety \& Hazardous Materials, and various support services. Twelve employees are assigned to Revenue \& Accounts Receivable.

## Governance

The governing board of the regional wastewater system is the King County Council. Three of the nine members of the County Council serve on the Regional Water Quality Committee; by charter and code, one of them acts as the Chair. The current membership and voting power is as follows:

| Name | Representing | Vote <br> Allocation |
| :--- | :--- | :---: |
| Councilmember Reagan Dun, Chair | King County | 2 |
| Councilmember Saray Petty | King County | 2 |
| Councilmember Dave Upthegrove | King County | 2 |
| Councilmember Alex Pedersen | City of Seattle | 1 |
| Councilmember Kshama Sawant | City of Seattle | 1 |
| Councilmember Victoria Hunt | City of Issaquah/Sound Cities | $1 / 2$ |
| Councilmember Conrad Lee | City of Bellevue/Sound Cities | $1 / 2$ |
| Councilmember Laura Mork | City of Shoreline/Sound Cities | $1 / 2$ |
| Mayor Penny Sweet | City of Kirkland/Sound Cities | $1 / 2$ |
| Commissioner Lloyd Warren, Vice Chair | Sammamish Plateau Water District | 1 |
| Commissioner Chuck Clarke | Woodinville Water District | 1 |

The committee's charge is to "develop, review and recommend countywide policies and plans related to the water pollution control functions formerly provided by the municipality of
metropolitan Seattle. Plans and policies that must be assigned to the committee include, but are not limited to, water quality comprehensive and long-range capital improvement plans, service area and extension policies, rate policies, and the facility siting policy and major facilities siting process." (KCC 1.24.065). The Committee is advisory only, although if the County Council chooses to adopt a "policy or plan" that differs from one recommended by the Committee, it must do so with a six vote majority, rather than the normal five vote simple majority.

The Metropolitan Water Pollution Abatement Advisory Committee is a holdover from the Metro era. Legislation passed in 1957 that enabled formation of the metropolitan municipal corporation also required that, if it performed the function of "metropolitan sewage disposal," a "metropolitan sewer advisory committee" be created. While portions of the law addressing the advisory committee have changed (including use of a more cumbersome name for it), the purpose of the Committee has remained unchanged: to advise the metropolitan council (now King County Council) in matters relating to the performance of the sewage disposal function (now referred to as water pollution abatement)." ${ }^{20}$

Membership is made up of one individual each appointed by the local governments served by the regional system. Neither the county charter nor the county code appears to acknowledge the existence of MWPAAC or to distinguish its advisory role from that of RWQC.

## Planning

The Regional Wastewater Services Plan was adopted in 1999. King County began work on an updated comprehensive plan (the "Clean Water Plan:) for the system in 2019. Several technical reports and studies have been prepared as part of the planning work, dealing with issues such as future capacity needs, asset management, biosolids, CSO control, and nitrogen removal.

In December, 2021, WTD posted a message on the Clean Water Plan website stating that the planning process would be paused pending more clarity on the Department of Ecology's Puget Sound Nutrient General Permit and the outcome of negotiations underway regarding King County's Consent Decree for CSO control projects. As of this writing, that posting has not changed.

## Regulatory Compliance

The treatment plants operated by King County are subject to National Pollution Discharge Elimination System (NPDES) Waste Discharge Permit. The permits specify limits for pollutants such as Biological Oxygen Demand (BOD) and Total Suspended Solids.

As noted above, currently the two most challenging regulatory issues are CSO control and nitrogen removal. The current Consent Decrees for Seattle and King County require that all CSO outfalls be "controlled" (no more than one overflow per year, based on a 20-year rolling

20
https://leg.wa.gov/CodeReviser/documents/sessionlaw/1957c213.pdf?cite=1957\ c\ 213\ \�\% A7\%2021
average) by 2025 and 2030, respectively. While much progress has been made in controlling the outfalls, meeting those deadlines would be challenging.

Removal of nutrients, specifically nitrogen compounds, is a more recent environmental concern, and regulations have not been promulgated. The King County Nitrogen Removal Study found that strategies to remove nitrogen would be less costly for the South and Brightwater plants than for the West Point plant. The report notes that a possible strategy would be for "WTD to have a 'bubble' permit, where the Department of Ecology requires WTD to meet an overall nitrogen removal condition for all three regional treatment plants together. In a potential bubble permit approach, West Point would provide a more limited level of nitrogen removal under scenario 1, whereas South Plant and Brightwater would provide higher levels of nitrogen removal."

## Finances

The wholesale rates paid by contract agencies make up the majority of revenue of the regional wastewater system.

## 2021-22 WTD Estimated Revenues



On the expense side, debt service (principal and interest on outstanding bonds) accounts for more than half of the budget. Operating costs amount to just over a quarter of expenses. In the chart below, the capital transfer represents the amount allocated to pay-as-you-go capital (i.e., the amount transferred to the capital construction account net of bond proceeds).

## 2021-22 WTD Budgeted Expenditures



The Capital Improvement Plan calls for spending just over \$4 billion on capital improvements in the ten years from 2020 to 2030, as follows:

10-Year Capital Improvement Plan. All dollars in millions.

|  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| West | \$127 | \$153 | \$188 | \$195 | \$178 | \$160 | \$248 | \$312 | \$367 | \$303 | \$207 | \$2,438 |
| East | \$37 | \$69 | \$105 | \$127 | \$142 | \$138 | \$157 | \$119 | \$52 | \$20 | \$21 | \$987 |
| Systemwide | \$83 | \$100 | \$92 | \$95 | \$83 | \$87 | \$108 | \$19 | \$5 | \$4 | \$4 | \$680 |
| TOTAL | \$247 | \$323 | \$384 | \$417 | \$403 | \$385 | \$514 | \$450 | \$424 | \$327 | \$231 | \$4,105 |

Annual debt service on outstanding bonds will remain approximately $\$ 234$ million per year until around 2037, at which time costs would begin to decrease. This annual debt payment imposes about $\$ 319$ annually on each single family (SFR) and residential customer equivalent (RCE) unit in the system. New bond sales to support additional projects would of course add to the annual debt service cost. The 2017 Conveyance System Improvement (CSI) Program Update analysis prepared by King County WTD provides a prioritized listing of such future needs and projects in the 2020 to 2060 timeframe, with a preliminary estimated total cost of $\$ 1.75$ billion (2016\$). Less than 5 percent of the CSI projects are within Seattle.

## Project Report 4: Evaluation of Governance Options

As noted above, the PSU-CPS team identified several governance options that appeared to be feasible for the regional wastewater system. Based on feedback from the Regional Stakeholders Committee, we removed one option for consideration (a modified version of the current system, in which subregions within the larger system would be managed separately). Project Report 4 provides an evaluation of the advantages and disadvantages of six governance options. These are summarized below.

Option: Current System, Modified Advisory Board(s)
Under this option, the two current advisory bodies-the Regional Water Quality Committee (RWQC) and the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC)--would be modified or replaced by a new advisory board. The project report discusses several possible alternatives for advisory board composition and authority, and recommends increased decision-making authority for contract agencies in the areas of the total annual budget and major amendments to the comprehensive plan.

Under this option, contract agencies could have more influence in decisions affecting the regional system, depending on the willingness and ability of the King County Council to delegate decision-making authority to an advisory committee or operating board.

This option would be the easiest to implement. It would have no,or indeterminate, effect on rates, finance, future liabilities, environmental benefit, planning, regulatory compliance, equity, operations, and organization/staffing of WTD. There could be changes in the wholesale contracts specifying approval processes and the authority of advisory committees. This option could have the general support of the contract agency stakeholders; it may or may not have support of King County, but it would probably be more acceptable to the County government than some of the other options evaluated here. Some advisory board alternatives would require no change in state law or the county charter, but might require a change in the county code. Other alternatives, such as increased legal authority of MWPAAC, would require a change in state law.

## Option: Intergovernmental Agency-Governance Only

Under this option, a new organization would be formed. It could be a revised version of the previous Metropolitan Municipal Corporation (Metro), a governmental agency formed under RCW 39.34 through an intergovernmental ("joint powers") agreement or under RCW 39.106 (a joint municipal utility services agreement). Or it could be a nonprofit corporation (RCW 24.03A) with a board of directors representing the local wastewater agencies.

The assets and liabilities of the regional system would be transferred to this agency, which would then contract with King County for services. At a minimum, the contract with King County would include the operation of the system, but could also be for full turnkey provision of management, planning, and staffing the agency.

This option would increase the influence of contract agencies in decision-making because they would have some form of representation on the governing board. Larger agencies might have individual representation, and smaller agencies would share representation and voting power.

This is a good solution if the primary concern of contract agencies is the decisions that are made, and how they are made, rather than the operation and management of the system itself. It avoids the complications and potential disruption of service that occur in transitioning a long-established organization into a new entity.

This option would have a major effect on contracts and planning. It would have relatively little effect on WTD operations and organization/staffing, especially if the service contract with the regional authority was a turnkey contract. It would increase exposure of the contract agencies to risk relating to future liabilities. It would have an indeterminate effect on rates, finance, environmental benefit, regulatory compliance, and equity. It would not require a change in state law, but would require changes in the county code.

## Option: Intergovernmental Agency-Full Replacement

This is a variation on the option above (Intergovernmental Agency-Governance Only) in which all of the services currently performed by WTD would be transferred to the intergovernmental agency. As with the "governance only" option above, it would not completely solve the financial accountability/management responsibility disconnect because individual agencies would have only indirect and partial responsibility for the decisions and management of the service.

It would have a major effect on planning, operations, contracts, finance and WTD organization/staffing. It might result in some reduction in costs (overall wholesale rates) due to pressure on the governing board members to keep costs down, but there is no guarantee that this is likely or even possible. It would have an indeterminate effect on environmental benefit, equity, and regulatory compliance. It would not require a change in state law, unless the alternative chosen is a return to the previous Metro government. It could be supported by some contract agency stakeholders, but others might be concerned about the cost and effort involved in creating one more layer of local government.

## Option: West Point Separation

Under this option, responsibility for the basins served by the West Point Treatment Plant would be transferred from King County to the City of Seattle. The remainder of the regional system would remain intact, with King County contracting with SPU for treatment/conveyance service for the cities and districts served by West Point. Seattle would contract with King County for treatment/conveyance for the portions of Seattle served by the South Treatment Plant.

This option solves the financial accountability/management responsibility disconnect, but only for the City of Seattle. Combining the customer-facing retail service with the responsibility for treatment could provide some benefit in the overall cost of wastewater service because the City would have a stronger incentive to encourage reduction in the volume and strength of
wastewater generated by its residential and commercial/industrial customers. Having full responsibility for wastewater would also allow the City to pursue "One Water" strategies in the way it manages all aspects of water: drinking water, stormwater, gray water, and "reclaimed" (treated sewage) water.

There could be some net reduction in total system costs if SPU is able to integrate the conveyance/treatment function with its other utility functions, but this is speculative. More information and analysis are needed to ascertain whether SPU could take on the conveyance/treatment function on a break-even basis, and possible costs shifting between the City of Seattle to or from the remaining agencies in the regional system.

This option would have a major effect on planning, operations, and the organization and staffing of WTD. It would have a relatively minor effect on contracts. Responsibility for regulatory compliance would shift from King County to the City of Seattle, which would affect future liabilities in areas such as CSO control and nitrogen removal. There could be some environmental benefit if the City pursued a "One Water" strategy. There would be an indeterminate effect on equity. No change in state or county law would be needed for this option.

To the extent that other contract agencies believe their customers are subsidizing Seattle's CSO system, there could be support for this option from some of the contract agencies. Others might be concerned that WTD would not be able to reduce costs in proportion to the loss of SPU's wholesale payment. King County has indicated its opposition to this option.

## Option: Partial Separation-CSO Only

This is a variation on the option above (West Point Separation) in which full responsibility for the Combined Sewer Overflow (CSO) management program now split between King County and Seattle would be transferred to SPU, while King County would retain responsibility for the West Point plant and related conveyance system. Details to be worked out in this option would include credit for SPU's costs when calculating Seattle's wholesale service charge, and coordination between SPU and WTD on Combined Sewer Overflow projects with the operation and upgrading of the West Point plant.

This option solves a small part of the financial accountability/management responsibility disconnect, but only for the City of Seattle, and only for costs relating to CSO control. It could offer some operational and planning efficiency compared to the current split of responsibility between the City and County based on drainage basin size.

The City of Seattle would assume full, rather than the current partial, responsibility for regulatory compliance with Consent Decree requirements, and future liabilities relating to the CSO system.

The issue of allocating costs is the greatest challenge with this option. Responsibility for the CSO system in basins larger than 1,000 acres has been a regional responsibility since the creation of Metro. As such, SPU would want King County to reimburse, or credit, it for expenses incurred for CSO management in the larger basins. But in this case, King County would face the
financial accountability/management responsibility disconnect: it would have no direct control over the expenses that Seattle would incur.

Compared to the West Point Separation option, this option would have less impact on planning and on WTD operations and organization/staffing. If a single agency could more effectively control combined system overflows, it might have a benefit to the environment, but this is speculative. It would have a relatively minor impact on contracts and an indeterminate effect on equity. It would require no change in state law or the county code.

## Option: Full Wastewater Responsibility Transferred to King County

Under this option, contract agencies would have the choice of turning over full wastewater service responsibility to WTD. This would include ownership and operation of all pipes and facilities now owned and operated by the city or district, and direct billing of residents and commercial/industrial customers. In essence, if a city or district chose this option, they would cease to operate a wastewater utility or to be a member of the regional system.

This option solves the financial accountability/management responsibility disconnect by giving King County full accountability for the cost of the regional system.

The effect of this option on the overall cost of the system would vary. Small organizations can probably operate their collection systems at less cost than King County. But by integrating operations, King County might be able to offer some efficiencies in scope (i.e., a reduction in duplication of staff and equipment). Utility billing functions would be duplicated, but the cost of this could be minimized through automation and electronic billing and payment.

The effect on operations would also vary. For larger cities with multiple public works services (roads, water, stormwater, sewer), relinquishing operation of the collection system would have a relatively minor effect, as would assuming the function by WTD. For smaller agencies, especially sewer districts, there could be a significant impact on operations.

Assumption of a retail or customer billing function could have a measurable impact on the organization and staffing of WTD. It would have a relatively minor effect on regulatory compliance, future liabilities, and environmental benefit. It would have an indeterminate effect on equity at the retail customer level, but could improve equity in allocation of cost to contract agencies. While it would require changes in contracts and changes to the county code, it would require no change in state law.

A variation of this option is for local agencies to retain responsibility for the local wastewater collection system, but to have King County bill residential and non-residential customers (the generators of wastewater) directly for regional wastewater service. This variation would be a simple solution for the problem of local cities/districts serving as a pass-through of county costs without much input as to what those costs are.

The chart below summarizes the magnitude of the effect of each option on the thirteen evaluation criteria that were used for the evaluations.

|  | King County, <br> Modified <br> Advisory Board | Intergov. <br> Agency-Govern <br> ance Only | Intergov. <br> Agency-Full <br> Replacement | West Point <br> Separation | Partial WW <br> Separation-CSO | Responsibility <br> Transferred to <br> King County |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Decision Making Auth. |  |  |  |  |  |  |
| Finance |  |  |  |  |  |  |
| Rates |  |  |  |  |  |  |
| Contract |  |  |  |  |  |  |
| Future Liabilities |  |  |  |  |  |  |
| Planning |  |  |  |  |  |  |
| Stakeholder Support |  |  |  |  |  |  |
| Environmental Benefit |  |  |  |  |  |  |
| Regulatory Compliance |  |  |  |  |  |  |
| Equity |  |  |  |  |  |  |
| Operations |  |  |  |  |  |  |
| Legal |  |  |  |  |  |  |
| Organization/ Staffing |  |  |  |  |  |  |
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|  | Sittle Effect, or Indeterminate |  |  |  |  |  |
|  |  |  |  |  |  |  |

## Project Report 5: Regional Models

The PSU-CPS research team identified the wastewater treatment service providers in 22 regions (metropolitan statistical areas) ranging in population from 2.5 million to 7.6 million (the Seattle-Tacoma-Bellevue MSA has a population of 4 million). The central city provided its own treatment service in all regions except four: the Seattle/King County region, and the Twin Cities, Boston and San Antonio metropolitan areas.

San Antonio is a special case because the retail wastewater service provider, SAWS, is owned by the City of San Antonio, but operated as an independent authority with a separate Board of Trustees. The Twin Cities and Boston regions were selected as case studies for further analysis.

No county government provides wastewater treatment service to the central city in the 22 regions we reviewed. Clackamas County provides wholesale treatment service to cities and sewer districts in the southeast part of the Portland metropolitan area, and its Water Environment Services unit was also used as a case study.

Project Report 5 summarizes the results of these case studies.
The table below provides a statistical overview on the three regional models, along with data on King County's system.
$\left.\begin{array}{|l|l|l|l|l|}\hline & \text { Twin Cities } & \text { Boston Region } & \begin{array}{l}\text { Clackamas } \\ \text { County }\end{array} & \text { King County } \\ \hline \begin{array}{l}\text { Regional } \\ \text { (MSA) } \\ \text { Population }\end{array} & 3.7 \text { million } & 4.9 \text { million } & 2.5 \text { million } & 4 \text { million } \\ \hline \begin{array}{l}\text { Wastewater } \\ \text { Agency }\end{array} & \begin{array}{l}\text { The } \\ \text { Metropolitan } \\ \text { Council ("Met } \\ \text { Council") }\end{array} & \begin{array}{l}\text { Massachusetts } \\ \text { Water } \\ \text { Resources } \\ \text { Authority }\end{array} & \begin{array}{l}\text { Clackamas } \\ \text { County (Water } \\ \text { Environment } \\ \text { Services) }\end{array} & \begin{array}{l}\text { King County } \\ \text { (Wastewater } \\ \text { Treatment } \\ \text { Division) }\end{array} \\ \hline \begin{array}{l}\text { Number of } \\ \text { Treatment } \\ \text { Plants }\end{array} & 9 & 2 & 5 & 5 \\ \hline \begin{array}{l}\text { Average Daily } \\ \text { Volume } \\ \text { Treated } \\ \text { (Million } \\ \text { Gallons per } \\ \text { Day) }\end{array} & 250 \text { MGD } & 350 \text { MGD } & 19 \text { MGD } & \text { 180 MGD } \\ \hline \begin{array}{l}\text { Governing } \\ \text { Board }\end{array} & \begin{array}{l}17 \text { members } \\ \text { appointed by } \\ \text { the governor, } \\ \text { representing } \\ \text { geographic } \\ \text { districts }\end{array} & \begin{array}{l}11 \text { members; } 5 \\ \text { appointed by } \\ \text { Boston and two } \\ \text { other cities }\end{array} & \begin{array}{l}\text { 5-member Board } \\ \text { of County } \\ \text { Commissioners }\end{array} & \begin{array}{l}\text { 9-member } \\ \text { County Council }\end{array} \\ \hline \begin{array}{l}\text { Advisory } \\ \text { Committee }\end{array} & \begin{array}{l}\text { None for } \\ \text { wastewater }\end{array} & \begin{array}{l}\text { 67-member } \\ \text { MWRA Advisory } \\ \text { Board and } \\ 15-\text {-member } \\ \text { Wastewater } \\ \text { Advisory } \\ \text { Committee }\end{array} & \begin{array}{l}\text { 18-member } \\ \text { WES Advisory } \\ \text { Committee }\end{array} & \begin{array}{l}\text { Regional Water } \\ \text { Quality } \\ \text { Committee and }\end{array} \\ 34 \text {-member } \\ \text { Metropolitan } \\ \text { Water Pollution }\end{array}\right\}$

| Typical <br> Monthly Retail <br> WW Cost (4 CCF) | Minneapolis - <br> \$26.16 <br> St. Paul - <br> \$28.20 | Boston - \$32.79 <br> Lancaster <br> Sewer Authority <br> - \$44.16 <br> Brookline - <br> $\$ 47.26$ | Oregon City \$61.19 (\$34.19 for collection plus $\$ 27.00$ for WES treatment) Clackamas County Retail $\$ 40.75$ to $\$ 52.15$ Portland $\$ 49.40$ (*) | Seattle - <br> \$68.04 <br> Bellevue - <br> \$65.10 <br> Alderwood <br> District - <br> $\$ 55.53$ |
| :---: | :---: | :---: | :---: | :---: |

## Role and Influence of Advisory Committees

Clackamas County has an 18-member advisory committee that includes six elected officials from cities served by the wastewater treatment system. The Massachusetts Water Resources Authority has a large (67-member committee) that includes either elected officials or their designees from all cities served by the system. It also uses an 18-member Wastewater Advisory Committee, primarily made up of professional staff, that serves as a technical advisory committee.

The Metropolitan Council in the Minneapolis-St. Paul region has a number of advisory committees on issues and services such as land use planning, transportation, and drinking water, but none for wastewater. The 18-member water supply advisory committee includes elected officials from the counties and some of the cities (including Minneapolis) that are served by the water supply system along with a Technical Advisory Committee that "provides scientific and engineering expertise to inform the work of the Metropolitan Area Water Supply Advisory Committee. ${ }^{21}$

As part of the case study analysis, the research team interviewed officials from cities served by Minnesota's Metropolitan Council and Clackamas County's Water Environment Services department. None of them mentioned advisory committees as a significant source of influence in decision-making.

None of the ten officials contacted in the Boston region responded to repeated requests for an interview. On its website, the MWRA Advisory Board takes credit for its role as a "financial watchdog" in reducing the magnitude of wholesale rate increases and for "saving" over \$200 million in capital improvement costs.

In the case of the Twin Cities and Boston regions, the member agencies derive most of their influence in decision-making through the governing boards of the regional entities.

## 21

https://metrocouncil.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee/Water-Supply-Technical-Advisory-Committee.aspx

## Governing Boards

The Board of Directors of the Massachusetts Water Resources Authority has eleven members. Three members are appointed by the governor and three members are appointed by the MWRA Advisory Board. The remaining five members are appointed by member cities (three appointed by the mayor of Boston and two appointed by two other cities). Thus the member agencies either directly or indirectly (via the MWRA Advisory Board which is primarily made up of city representatives) appoint eight of the eleven board members.

The governor appoints all seventeen of the members of the Metropolitan Council in the Twin Cities region; all but the chair are appointed by geographic districts of roughly equal population. The City of Minneapolis covers three of the districts. While there is no formal local government role in the appointment process, one can assume that the cities-especially the larger ones-have some influence in it. One of the officials interviewed stated that, "when we have a problem with rates, we go to our Council rep."

As with WTD in King County, the governing board of WES is the governing board of the county: the five-member Board of Clackamas County Commissioners. Officials of the local sewer agencies that were interviewed do not feel they have much influence over decisions affecting the service provided by the county, and have concerns ranging from the fairness of cost allocation to duplication of services.

## General Observations

The degree of influence over decisions that affect the service may not matter as much in these three regions: the wholesale rates appear to be significantly lower than those for the King County system. The wholesale rates are difficult to compare (most take into account volume and strength of wastewater; King County does not, at least for residential customers). Oregon City passes on a cost of $\$ 27$ per month for the Clackamas County (WES) wholesale service. The wholesale charge to Vadnais Heights, Minnesota, equates to approximately $\$ 18$ per month per household, compared to King County's RCE charge of $\$ 49.27$ per month. Retail sewer costs for Twin Cities and Boston region cities are roughly half the amount of those for cities in the King County region.

Other observations:

- An advisory committee with no decision-making authority, as in Clackamas County, does not appear to satisfy wholesale customers' lack of influence over costs and other issues.
- On the surface Minnesota's Metropolitan Council seems similar to the previous Metropolitan Municipal Corporation in the Seattle region: it was created around the same time period, and it provides a range of regional services, including transit and planning. But in terms of governance, the Massachusetts Water Resources Authority is more similar, since many members of the governing board are appointed by component cities.
- Creating a new regional agency with a governing board appointed by the state governor (as in the Twin Cities model) was not one of the options selected for evaluation as a governance option for the King County region.
- One of the options that was selected for evaluation was the creation of an intergovernmental agency, owned collectively by the member agencies and governed by representatives appointed by the agencies. The MWRA model in the Boston region differs from this option in that it is an independent state agency, and the governing board is a mixture of representatives of the wholesale customers and members appointed by the governor and by the authority's own primary advisory committee (a large group that is separate from the Wastewater Advisory Committee).
- For large regions, the predominant model is for the central city to be the regional provider of wholesale wastewater service. No other county provides this service in the 25 largest metro areas in the nation.


## Conclusion and Acknowledgements

This research project, and the summary and recommendations in this report, focuses on how decisions on the regional wastewater treatment system are made, and who makes them. This is an important topic: from a systems perspective, a well-designed governance structure is instrumental in equitably reflecting the needs and priorities of the members of the public that are being served, while still addressing externalities (in this case, the non-economic cost to the ecosystem due to water pollution) and external requirements (e.g., regulations). Comparative studies of different systems, such as the governing of the nations of Haiti and the Dominican Republic on the island of Hispaniolo, or of Phoenix and Maricopa County, Arizona indicate that governance structures do make a difference. ${ }^{22}$

This report suggests some changes that could lead to a more collaborative process for decision-making on the part of King County and the local governments that contract with the County for wastewater treatment services, as well as some possible long term changes that would result in more extensive changes to the way the system is governed.

We must not, however, lose sight of the fact that the residents and businesses in the metropolitan area gain a lot of benefit from the sewer bill they pay. For a cost of less than \$70/month for the average household-less than many households' mobile phone, internet, or cable TV bills-residents don't have to worry about how their sewage is treated, or who does it. There may well be opportunities for increased efficiency and effectiveness (true for almost every system in our society); nevertheless, through the efforts of King County and the 34 local governments that provide wastewater service, the residents of the region are getting a pretty good deal.

## Acknowledgements

The PSU-CPS research team appreciates the help of many individuals and organizations that have made the study possible:

City of Seattle. Council Member Alex Pedersen's comments to the Regional Stakeholders Committee were especially helpful in setting the context of the study, and reassuring stakeholders that the City's first priority was gathering facts and information on governance, with no preconceptions on where that would lead.

Andrew Lee was promoted to SPU General Manager during the course of the study, and in spite of the demands of his job, was generous with his time when it was needed. Kevin Buckley developed a very well-designed scope of work for the project and served as project manager for the key initial stages. Alexander Mockos took over and provided helpful support and direction. He was succeeded by the two-person team of Kevin Burrell and Elizabeth Dent under a very smooth transition. They were both responsive to the PSU-CPS team's needs, providing helpful support and feedback in the midst of their other job duties.

[^11]Kathy Curry and Terri Gregg met with members of the research team and provided helpful information on the SPU water system's Operating Board, which helped inform the recommendation for a more active role for RWQC. Susan Saffery met several times with members of the team; her insights on public communications and governmental relationships were very helpful. She also provided editorial feedback on project reports, as did Maria Coe and Ben Marre.

John Gibson, economics consultant under contract with SPU, met several times with members of the research team over the course of the project and reviewed and commented on drafts of many of the project reports.

King County. WTD Director Kamuron Gurol was a key resource throughout the study. He was an active participant in every meeting of the Regional Stakeholders, providing helpful and constructive comments. He and Deputy Division Director Bruce Kessler guided WTD staff in assembling and providing key data files; the Existing System Description report would not have been possible without their help. Dwight Dively, King County's Director of the Office of Performance, Strategy and Budget met with members of the project team and also provided helpful perspective and background information.

WTD staff reviewed and provided corrections and comments on project reports, especially the reports on the Description of the Existing System and Evaluation of Governance Options. Their feedback focused on factual information that contributed significantly to the accuracy of these reports. We appreciate that this feedback was entirely constructive and non-defensive, even though some of the governance options under study would have significant effects on their organization.

Officials of Cities and Districts. In spite of the heavy demands on their time, the members of the "Regional Stakeholders Committee" attended all or most of the meetings, and provided extremely valuable input and feedback at various stages of the project. In addition to SPU General Manager Andrew Lee and WTD Director Kamuron Gurol, the members of the Regional Stakeholders Committee included:

- Lloyd Warren, Commissioner for Sammamish Plateau Water and Sewer District, and Vice Chair of the Regional Water Quality Committee (RWQC)
- Jack Broyles, Commissioner of the Alderwood Water and Wastewater District and Chair, Rates and Finance Subcommittee of the Municipal Water Pollution Abatement Advisory Committee (MWPAA) (Mr. Broyles also serves as President of the Washington Finance Officers Association and had calendar conflicts for most the meetings; he provided valuable insights in separate meetings)
- Suzi O'Byrne, Commissioner for Coal Creek Utilities
- Allen Ekberg, Mayor of the City of Tukwila
- Leanne Guier, Mayor, City of Pacific
- Penny Sweet, Mayor, City of Kirkland and member of RWQC
- John McLellan, Engineering and Development Director for Alderwood Water and Wastewater District and Chair of MWPAAC also joined the Committee for its discussions of governance options

Throughout the project we have been impressed with the quality and competence of the officials leading and managing their organizations. Elected officials, most of whom have "real" jobs outside their government leadership role, are very knowledgeable on the arcane topic of wastewater collection and treatment and devote significant time to a subject that most of their constituents would rather forget about. The professional staff we worked with seem highly competent; many of them have experience in a variety of governments within the region (including a fair amount of crossover between SPU and WTD), giving them a perspective that is broader than their own organization.

It has been an honor and a pleasure working with these leaders.
Many members of the Center for Public Service have contributed to this project.

- Dr. Scott Lazenby served as project manager and senior researcher.
- Dr. Kent Robinson joined the project team in late spring and was the co-author of the main analytical reports-the Evaluation of Options and this Final Report. He also served as backup project manager.
- Dr. Phillip Cooper and Dr. Douglas Morgan provided feedback and advice on the development of potential governance options.
- Sara Saltzberg, Executive Director of the Center for Public Service, monitored the progress of the project throughout the course of the study, and provided overall direction and support.
- Erica Fulton, Jennifer Everett, and Nicole Savara-Brown handled project logistics and support, including budget management, contract administration, and coordination of graduate students and support staff.
- Jason Wells (PhD student) served as a graduate research assistant in a variety of capacities, including initial development of a database of source documents, analysis and summary of survey results, and much of the background research on regional models.
- Emily Arnold (MPA student) served as a graduate research assistant in data analysis as part of the Existing System Description, note-taking and summaries of Regional Stakeholder Committee meetings, and drafting the Regional Models report.
- CPS Senior Fellows Erik Kvarsten and Sara Wilson served as CPS Senior Fellows, providing follow-up contacts during the survey phase, and interviewing officials in other regions as part of the Regional Models work.


[^0]:    ${ }^{1}$ https://kingcounty.gov/depts/dnrp/wtd/system.aspx

[^1]:    ${ }^{2}$ King CountyWTD. 2022, July. Combined Sewer Overflow Control Program, 2021 Annual CSO and Consent Decree Report. p. 39.

[^2]:    ${ }^{4}$ RCW 39.34, RCW 39.106, RCW 24.03A

[^3]:    ${ }^{5}$ https://historylink.org/File/7813

[^4]:    ${ }^{6}$ https://app.leg.wa.gov/RCW/default.aspx?cite=35.58.120
    ${ }^{7}$ While it is true that sewer districts were not directly included in this feedback loop, their ratepayers were also constituents and voters of the cities and counties that appointed the members of Metro's governing board, with at least indirect political pressure to keep their costs down.

[^5]:    ${ }^{8}$ Bason, Christian and Austin, Robert D., The Right Way to Lead Design Thinking. Harvard Business Review Mar/Apr 2019, Vol. 97 Issue 2, p82-91

[^6]:    ${ }^{9}$ If this veto authority is exercised too frequently, the County voting membership should be reduced as a percentage of the full committee voting membership. 10 https://kingcounty.gov/~/media/services/environment/wastewater/mwpaac/docs/2016/2016_12_14_Regio nal-Wastewater-Contract-Negotiations-Update.ashx?la=en

[^7]:    ${ }^{11}$ This would not necessarily require an amendment to the County Charter. The Charter and state law (RCW 35.58) refer generally to water quality and water pollution abatement, and not specifically to the operation of sewage treatment plants. RWQC could continue to advise on water quality issues in general. The wastewater treatment system operating board would be enabled through amendments to the wholesale contracts.

[^8]:    ${ }^{15}$ As the client agency, SPU did not participate in the survey

[^9]:    ${ }^{16}$ Brown and Caldwell. 1958, March. Metropolitan Seattle Sewerage and Drainage Survey. City of Seattle, WA. Accessed on Oct. 23-24, 2022 from
    https://kingcounty.gov/depts/dnrp/wtd/about/history/1958-plan.aspx

[^10]:    ${ }^{17}$ Ibid, p. 523 and chapter 19 "Financing of Recommended Facilities"
    ${ }^{18}$ lbid pp. 2, 443.
    ${ }^{19}$ lbid, p. 2.

[^11]:    ${ }^{22}$ Alan Ehrenhalt, "Good Government, Bad Government." Governing, April 1995, Vol. 8

