



2021-2026 Strategic Business Plan

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Contents

Your Invitation to Join Us	3
About Seattle Public Utilities.....	4
Guiding Principles	5
The Challenges Ahead.....	6
Strategic Business Plan Overview.....	7
Your Utility, Your Voice	8
Seattle Public Utilities Customer Review Panel.....	9
Our Mission and Vision	10
Focus On: Delivering Equitable Essential Services.....	12
Focus On: Stewarding Environment and Health.....	15
Focus On: Empowering Our Customers, Community, and Employees	19
Focus On: Strengthening Our Utility’s Business Practices	23
Keeping Rates Predictable and Affordable.....	27
Three-Year Rate Path and Additional Three-Year Projection	29
Supporting Documents and Appendices	32

Your Invitation to Join Us

Thank you for making a difference in our community. Your water stewardship, recycling, and waste reduction helps keep Seattle Public Utilities' (SPU) rates affordable and reflects your commitment to our region's environmental ethic.

This utility, with our community, is a national leader in protecting and sustaining community health and the environment. At SPU, we have long recognized that how we manage water and waste has the power to drive transformative change for people and the planet. Today, this is more important than ever, as new and continuing challenges test our resiliency and resolve.

The challenges of coronavirus have been difficult. There has been tremendous suffering, but also hope—people supporting others, opportunities for greater connection with the outdoors, and emerging innovations and adaptation. Together, we have the power to confront challenges such as climate change, water and waste pollution, affordability, racial and social justice, and the impacts of the coronavirus crisis. It is time to rethink how we live and manage our resources, including water and materials that become waste. Imagine a future where together we:

- Transform how we capture and use water and protect our waterways;
- Reconsider what we produce, consume, and waste;
- Reimagine and restore our connections with nature, with each other, and with the most vulnerable in our community;
- Refocus how we invest our resources to be strategic, equitable, and affordable; and
- Stimulate jobs and a green economy.

These imperatives shape our aspirational vision to be your Community Centered, One Water, Zero Waste utility.

We understand this vision can only be achieved through community-wide partnerships with residents, businesses, environmental leaders, and others. By advancing our part of Seattle's Green New Deal, we can collaboratively prevent waste; prioritize sustainable resource management; facilitate greener and more efficient building; invest in and maintain our aging utility infrastructure; and partner to create new, green jobs that will benefit traditionally underserved communities and restore our environment.

We will work tirelessly to deliver essential utility services that match your values and exceed your expectations. We are creating a strong community inside and outside our organization. We want to be a place where equity, affordability, and sustainability guide our daily actions. We encourage continuous learning and improvement. We aim to always understand and respect customer and employee rights and responsibilities.

We ask you to help us achieve this shared vision. Please lend your imagination, your voice, and your actions to conserve our water resources, reduce waste, restore our environment, and build a stronger Seattle.

Let's work together,
Mami Hara
GM and CEO, Seattle Public Utilities

About Seattle Public Utilities

We provide essential drinking water, drainage and wastewater, and solid waste services to more than 1.5 million people in the greater Seattle area. About 1,400 SPU employees work with our community to provide affordable and equitable stewardship of our water and waste resources for future generations.

Our staff and our community work together on essential resource management, including:

- Protecting our mountain drinking water sources;
- Keeping our tap water safe and enjoyable;
- Educating residents, businesses, and youth about our protected watersheds, urban forest, waterways, and resource management stewardship;
- Increasing waste prevention, recycling, and composting;
- Keeping neighborhoods clean, healthy, and beautiful;
- Turning kitchen waste into healthy soil;
- Maintaining our sewer and drainage systems and reducing urban flooding;
- Preventing water pollution and supporting raingardens;
- Safely removing pollutants from streets, sidewalks, and open spaces; and
- Ensuring that investments benefit our customer-owners.

Guiding Principles

Our shared values guide all we do. To be community-centered and act in service to our customer-owners, we collaborate to uphold SPU CARES principles:

Customers and Community	<i>We strive to understand and respond to customer and community needs—inside and outside our organization.</i>
Affordability and Accountability	<i>We do our best to ensure that utility services are available to everyone regardless of ability to pay and we responsibly manage and leverage every ratepayer dollar.</i>
Risk and Resilience	<i>We seek to minimize utility risks, reduce our environmental footprint, and improve our community’s capacity to adapt to change and persevere in the face of hardship.</i>
Equity and Empowerment	<i>We work to dismantle institutional racism by building trusting relationships, prioritizing equity and inclusion in decision-making, and creating opportunities for all. This includes listening to and investing in our people—the valued employees of Seattle Public Utilities.</i>
Service and Safety	<i>We focus on delivering high quality, reliable, and sustainable services and infrastructure that prioritize the health and safety of our employees and our community.</i>

The Challenges Ahead

The profound impact of the coronavirus pandemic revealed, in new ways, our local community's compassion, hardiness, and strength. Most of all, it has shown that working together is a requirement for success. We must apply this sense of partnership, resilience, and resourcefulness to address the challenges that lie ahead.

How will we:

- Ensure the resilience and robustness of our infrastructure through all types of threats?
- Contribute to affordability in the face of increasing wage inequity and the challenges of a post-coronavirus economic recovery?
- Address climate changes, such as extreme storms, rising sea levels, and dry periods?
- Dismantle systemic racism and achieve social justice?
- Change the way we work, behave, and incentivize opportunities so prosperity is enjoyed by all?
- Stop millions of gallons of stormwater pollution and sewer spills that threaten our streams and waterways?
- Save our oceans and earth from overwhelming volumes of plastic and other waste?
- Eliminate toxic substances from what we use and consume to lead healthier lives and to prevent land and water pollution and expensive post-remediation efforts?
- Maintain our aging water and sewer infrastructure in ways that support environmental and resiliency goals?
- Find creative ways to reduce food waste and increase food security?

Strategic Business Plan Overview

This plan builds on our strength and focuses and guides essential service delivery and comprehensive business strategy for SPU's drinking water, drainage and wastewater, and solid waste responsibilities. It reflects and responds to values consistently expressed by customers and community: service, sustainability, equity, and affordability.

In the pages that follow, we identify SPU's focus areas and describe our long-term goals, near-term strategies, and highlighted initiatives and investments.

This plan looks forward to the next six years (2021-2026) and provides our customers with a predictable three-year rate path to be adopted by City Council and projections for the subsequent three years. We will update our plan and adopted rate path on a three-year cycle to allow for future uncertainties and adjustments.

Our Comprehensive Strategic Approach

As a public utility, SPU affects the community in ways that go beyond our delivery of service, collection, and billing. We have a responsibility to maximize our investments and long-term outlook for our customers. Our long-term sustainability and well-being depend on our entire community collaborating to drive down costs and reduce risks. Every home, office, and organization between the mountain watersheds to Puget Sound is in the water and waste business together.

Our approach maximizes:

- **Environmental and public health benefits** to build long-term restoration and resilience, while ensuring environmental justice in water and waste resource management.
- **Community benefits** to create equity and empowerment for residents and employees, recognizing the impact SPU work can have on economic opportunities, social cohesion, and cultural identity.
- **Economic benefits** to ensure that accountability, affordability, efficiency, and risk management drive how we manage the public's investments and infrastructure.

Your Utility, Your Voice

We work in partnership with you, our customers, to keep your water safe, your garbage sorted, and waste disposed of in ways that are good for the environment and our community. Customer voices helped shape this plan and will be vital to our success.

We conducted broad research and public engagement:

Voice of the Customer Research Review: To better understand residential and business customer experiences, opinions, and preferences, as well as employee perspectives, we conducted a comprehensive review of 28 research studies commissioned by SPU and others from 2010-2019. These studies captured feedback on a wide range of topics and included input from different types of SPU customers.

Community Outreach: We engaged diverse communities (including low-income and other hard-to-reach populations) through interviews with community leaders and outreach by Seattle Department of Neighborhoods community liaisons. These conversations took place in multiple languages and within neighborhoods. A five-question (translated) survey was promoted through community events, social media, bill inserts, our website, and other communications.

Employee Engagement: SPU employees shared their ideas through an online survey and group discussions. A series of workshops, focus groups, and online engagement tools refined our mission, vision, and values.

Business Interviews: In-depth interviews were held with a diverse cross-section of large, medium, and small business customers.

Customer Review Panel and Community Advisory Committees: Advisory groups provided feedback on the Strategic Business Plan, community outreach questionnaire, and SPU's progress in implementing the current plan.

Outreach Highlights:

- 944 survey responses
- 52 in-depth interviews with community and business leaders
- 82,378 reached via Facebook

What we learned:

1. SPU services are essential and highly valued. We are known for providing safe, high-quality drinking water; reliable drainage and sewer service; and effective garbage disposal and waste prevention.
2. People appreciate SPU's thinking about the future. Issues associated with growth, affordability, and climate change are recognized challenges for the utility.
3. Many recognize that SPU is doing more to create authentic partnerships in communities that have long been underserved—and there is more to be done.

Seattle Public Utilities Customer Review Panel

SPU's Customer Review Panel¹ provides advice and recommendations to the Mayor and City Council on the utility's strategic plan and rates. The panel includes representatives from private, public, and nonprofit sectors, utility experts, business leaders, and community representatives. The panel regularly met with SPU leaders and provided valuable input that shaped this effort.

Panel:

Noel Miller, Chair

Suzanne M. Burke

Bobby Coleman

Dave Layton

Laura Lippman

Maria McDaniel

Thy Pham

Rodney Schauf

Puja Shaw

¹ The Seattle Public Utilities Customer Review Panel was created July 2018 through City Council Resolution 31825.

Our Mission and Vision

Our Mission:

Seattle Public Utilities fosters healthy people, environment, and economy by partnering with our community to equitably manage water and waste resources for today and for future generations.

Our Vision:

COMMUNITY Centered, ONE Water, ZERO Waste

Our bold vision reflects SPU's goals for the next 50 years of service, infrastructure investment, and management of water and waste. We will lead with equity and work in partnership with communities and employees to create a just and sustainable future. We understand that the actions we take today have the power to transform our employees, community, environment, and economy for generations to come.

My wish is that one day my great, great grandchildren stand on the shoreline and tell their children about how their great, great grandfather and his colleagues had the vision to restore it more than 100 years ago.

—Jerry Waldron, SPU Employee

Our Mission and Vision

Community Centered

- We put people at the heart of our work and work with them to understand and address their priorities. We seek to better understand and address employee, customer, and community needs, and build the long-lasting, equitable, and inclusive relationships necessary to address these needs.
- Together, we will identify community needs and co-create solutions that protect water, reduce waste, restore our environment, and build a stronger Seattle.
- SPU strives to live by this inclusive principle and embed it in all we do.

One Water

- Water is essential for life. Our health, wealth, and livelihoods depend on it, and we must protect it for future generations.
- One Water means we value and carefully manage water in all its forms: through conservation, capture, restoration, and reuse. Whether it is fresh water or wastewater, all water is protected and managed in an integrated and sustainable way, and all people and species have access to healthy waters.
- *Examples of our evolving work include pipe system maintenance and investments, water conservation and RainWise programs, source control and spill response, combined sewer overflow control, and green infrastructure and watershed restoration.*

Zero Waste

- All resources have value, and we strive to waste nothing. We must look at the whole life cycle of materials so we can eliminate waste, prevent pollution, encourage product durability and reusability, conserve natural resources, and ultimately build a circular and inclusive economy.
- Zero Waste protects health and the environment through the conservation of all resources from production through consumption without burning or pollution to land, water, or air.
- *Examples of our evolving work include waste prevention, recycling and composting programs, food rescue, materials salvage, producer responsibility legislation, and sharps, litter, and household hazardous waste collection. This also reflects our commitment to finding efficiencies in our work and wisely using our resources.*

Focus On: Delivering Equitable Essential Services

Essential service delivery represents the day-to-day services our customers and community need to live healthy lives. Our staff work year-round to deliver reliable water, drainage and wastewater, solid waste services, and Clean City services to homes, businesses, schools, nonprofits, and other organizations and places across our entire community.

Our Essential Workforce Includes:

Drinking Water Workforce

Manages and delivers safe and pure drinking water to Seattle and the King County region.

The drinking water supply system includes:

- Two pristine watersheds, supporting reservoir and transmission infrastructure and operations staff that bring water from the mountains to the City of Seattle and SPU's wholesale contract customers;
- Two water quality treatment facilities treat water and a regional water quality lab continuously tests and monitors drinking water purity; and
- Water distribution reservoirs, distribution infrastructure, and metering system operations and maintenance within Seattle.

Drainage and Wastewater Workforce

Manages wastewater and stormwater systems, compliance monitoring, pollution source control, waterway restoration, and spill response within Seattle.

- The wastewater system collects and conveys sewage and a portion of the city's stormwater to King County's regional wastewater treatment system.
- The stormwater system is a network of storm drains, ditches, culverts, outfalls, green stormwater infrastructure, and structures that control how rainwater moves through our urban area. The system works to prevent flooding and clean the water that feeds into our creeks, our lakes, and Puget Sound.
- Systems operations, maintenance, and source and pollution control crews help keep the water clean and flowing to the right places.

Solid Waste and Clean City Program Workforce

Manages garbage, recycling, and organic waste for residents and businesses, helping to keep Seattle clean and welcoming for all.

- The solid waste system includes overseeing waste collection, processing, and landfill disposal contracts and inspections; operation of transfer stations; maintenance of former landfills; and, through regional collaboration, household hazardous waste management.
- Clean City services address litter, graffiti, and illegal dumping needs and assist with trash, needle collection, and hygiene services for Seattle's unsheltered population.

Focus On: Delivering Equitable Essential Services

Our Essential Workforce (Continued):

Customer Service Workforce

Builds strong customer relationships, listens to input from customers, helps customers navigate City services, and improves the customer experience.

- The Contact Center (which also supports Seattle City Light) and SPU billing teams resolves billing and service inquiries, reads customer water meters, and issues accurate and timely utility bills.
- The Operations Response Center dispatches staff to respond to infrastructure breaks, hazards, spills, and emergency conditions.
- The Development Services Office helps developers and homeowners obtain new water utility services and supports staff working within Seattle Department of Construction and Inspection on side sewer permitting.

Utility-Wide Workforce

Provides critical support to frontline staff and utility asset infrastructure.

- SPU project delivery, engineering, construction management, survey, materials lab, and asset and facilities maintenance staff who directly support the front line and lines of business, ensuring infrastructure safety and effectiveness.
- Shared services, facilities, fleets, warehouse, and logistics staff reduce SPU carbon emissions, keep assets painted, repaired and functioning, and equip SPU's frontline crews with the facilities, vehicles, supplies and support they need to do their work.
- Emergency management, safety, security, risk, quality assurance and environmental management staff who manage system risks, preparedness, and response and keep our staff safe and prepared.

Focus On: Delivering Equitable Essential Services

Goal

Provide high-quality services: We're here 24/7, providing safe tap water, reducing waste and litter, managing wastewater and stormwater, and responding to all our customers.

Strategies

1. Strive for best-in-class

Stay knowledgeable and operate at the top of our field; demonstrate leadership in cost-effective, equitable, and cutting-edge service, engagement and partnership.

2. Provide reliable and rewarding experiences

Focus on improved and equitable customer service interactions and satisfaction with each individual experience using customer involvement, input, data, and analysis to improve performance.

3. Meet or exceed expectations, requirements, and commitments

Deliver excellent service and response to our customers, regulators, and community through every contact and in all areas of responsibility, whether it is installing water taps, responding to flooding, complying with environmental and public health regulations, or reporting on SPU performance.

2018-2020 Accomplishments and Learnings

- Continued essential service delivery during COVID-19.
- Met all regulatory permit requirements and negotiated improved approaches.
- Improved billing practices to keep estimated meter reading to low levels, ensure billing accuracy, eliminate billing backlogs, and reduce call volumes.
- Reduced peak period call waiting times at the Customer Contact Center by over 17 minutes since 2017, and used data and lessons learned to anticipate and respond to spikes in call volume.
- Implemented Utilities Customer Self Service Portal Phase 1 in collaboration with Seattle City Light and Seattle Information Technology Department.

Performance Targets

We strive to achieve quarterly essential service delivery performance targets, meet all regulatory and financial commitments, and report our progress regularly. This information helps us track and improve our performance.

Learn More!

Accountability and performance metrics are included in the appendix.

Focus On: Stewarding Environment and Health

Community well-being depends on a healthy environment fostered by good stewardship of water and waste resources. Without new strategies, we will continue to experience increasing costs and degradation created by pollution, disease, climate-change, over-consumption, and waste. Stresses on our region’s natural systems also threaten the sustainability and affordability of our utility services and our local economy.

As the local utility responsible for managing most forms of pollution, waste, wastewater, litter, illegal dumping, spills, and graffiti, our work is directly tied to our community’s actions and stewardship. Together, we can build regenerative, healthy ecosystems and circular economies that improve our quality of life.

We will work with our partners and community to embrace a nature-based, science-informed, and whole systems approach to the management of water and waste resources. We will incentivize green technology and innovations that ensure equity in human and environmental health outcomes regardless of race or neighborhood. We will restore and maintain a healthy community with clean and safe water, greater contact with nature, and efforts towards zero carbon and waste pollution—and we will do this work in beneficial, fair, and low-cost ways.

Goals

Develop One Water resilience: We protect water sources by cultivating healthy, adaptable watersheds and ecosystems and by using integrated and equitable water management strategies.

Advance Zero Waste circular economy: We support and promote policies and practices that create a circular economy and reduce Seattle waste and carbon pollution as rapidly as possible.

Seattle’s Green New Deal

City departments, including SPU, are working collaboratively to eliminate climate pollution, prioritize climate justice, and invest in an equitable transition to a clean energy economy.

2018-2020 Accomplishments and Learnings

- Completed a 10-year SPU Water System Plan and collaborated with the Saving Water Partnership to set an ambitious new regional water conservation goal during a period of anticipated population growth.
- Recognized as the U.S. solid waste industry’s greenest fleet—200 fossil-fuel free vehicles by 2020.
- Reduced residential per capita waste generation rate to approximately half the national average.
- Completed a watershed vulnerability assessment evaluating climate change impacts and restoration approaches to protect Cedar River Watershed ecosystem functions.
- Became the first U.S. city to widely promote a ban on plastic straws and partnered with the Lonely Whale Foundation to inspire others to do the same.

Focus On: Stewarding Environment and Health

Strategy 1: Invest in key water, stormwater, and wastewater projects and plans

Using more flexible, collaborative, and integrated water management approaches (e.g., water conservation, capture, restoration, and reuse) on substantial projects and plans will help maximize resilience benefits at lower costs.

Highlighted Initiatives and Investments²:

Shape Our Water: A Drainage and Wastewater Plan for a Water Resilient Future

Given uncertainty related to climate change, growth, and increasingly stringent regulations, SPU is developing an integrated system plan called 'Shape Our Water.' The plan includes a long-term vision and a short-term implementation plan and will guide investments, policies, programs, and projects that will improve the performance and resilience of our drainage and wastewater systems while optimizing social and environmental benefits for the city.

Key Commitments:

- Complete the Shape Our Water Integrated System Plan.

Ship Canal Water Quality Project

The Ship Canal Water Quality Project (SCWQP) will improve regional water quality by keeping more than 75 million gallons of polluted stormwater and sewage from flowing into the Lake Washington Ship Canal, Salmon Bay, and Lake Union on average each year.

Key Commitments:

- Deliver SCWQP on-time and within budget.
- Complete final design of the pump station and Wallingford and Ballard conveyance projects.
- Complete tunneling of the 2.7-mile storage tunnel for polluted stormwater and sewage.
- Start operation in 2025.

² **Initiatives and investments** are representative examples of how SPU will advance the strategies described in the Strategic Business Plan. Initiatives represent policy, planning, and program work and generally require less significant expenditures (under \$5M). Investments result in tangible infrastructure, asset, asset repair, or service and require more significant expenditures (over \$5M).

Focus On: Stewarding Environment and Health

Strategy 2: Advance climate-resilient, nature-based, community-led solutions

When communities lead, we see improved innovation and sustainability around environment and health issues that matter most. Working together, we will use science and best practices to retool our water and waste practices. This will help build climate resiliency and restore connections between people and nature to improve the health of our waterways, watersheds, and neighborhoods.

Highlighted Initiatives and Investments:

Climate Justice, Adaptation, and Mitigation for Water and Waste

Climate resilience work includes investing in the leadership and ingenuity of communities to accelerate a just climate transition, adapting our natural and built systems and operations to a changing climate, and reducing the greenhouse gas emissions that contribute to climate change.

Key Commitments:

- Adaptively manage water supply and stormwater operations and make strategic system investments to adapt to a changing climate.
- Work with City departments and the Duwamish River Clean Up Coalition (DRCC) to build Resilience District partnerships to inform drainage and wastewater investments in South Park and prevent displacement of residents and local businesses from rising sea levels.
- Develop a de-carbonization strategy for existing and new SPU-owned buildings.
- Partner with King County to establish a carbon emissions footprint related to Seattle-area consumption and solid waste generation.
- Complete a wildfire risk assessment and management strategy to mitigate risks to the municipal water supply.

Green Stormwater Infrastructure

SPU is investing in Green Stormwater Infrastructure (GSI) to improve water quality, manage flooding, reduce regulatory costs, and build resilient infrastructure while maximizing community benefits and value for our customers. We are growing innovative cross-sector and community-led partnerships, tools, and approaches to leverage these nature-based investments and impacts throughout the city.

Key Commitment:

- Manage 510 million gallons of stormwater runoff annually with GSI investments.

Focus On: Stewarding Environment and Health

Strategy 3: Reduce materials and carbon pollution

Pursuing changes that reduce the effects of waste and toxins and help transition Seattle to a more circular economy is a top SPU objective.

Highlighted Initiatives and Investments:

Waste Diversion

Waste diversion relies on improving the quality of recycling and composting streams, food rescue, and extended producer responsibility to reduce landfill volume and costs. SPU supports the statewide goal of cutting food waste by 50 percent by 2030. Our extended producer responsibility efforts engage product developers to create environmentally sound and socially responsible solutions for the end-of-life management of a wide variety of products.

Key Commitments:

- Work with state and regional partners to finalize a statewide framework for extended producer responsibility.
- Increase food rescue innovation partnership work.

Waste Prevention

Waste prevention work targets product consumption and consumer behavior, addressing the root cause of waste and toxins to reduce their impact. Product consumption accounts for about 42 percent of U.S. greenhouse gas emissions, making waste prevention an important climate change mitigation strategy. SPU will leverage partnerships to prevent waste, respond to changing recycling markets, and reduce the volume of single-use plastics.

Key Commitments:

- Develop and adopt a Waste Prevention Strategic Plan and metrics.
- Fund waste prevention innovation through SPU waste-free community grants.

Learn More!

Additional details about the investments and initiatives that advance this focus area are provided in the appendix.

Focus On: Empowering Our Customers, Community, and Employees

We work with our customers, community, and staff to identify and refine our utility’s priorities and approaches. Collaboration, both inside and outside the utility, will help us build a more just, livable, and resilient Seattle.

At the heart of this work is SPU’s commitment to equity and empowerment—giving voice and power to all our customers, community, and employees. This work begins with addressing the insidious effects of racism and race and social justice disparity and acting to uplift disadvantaged populations through our work in whatever ways we can. This demands intentional and focused efforts and needs to be incorporated into all we do.

Over the long term, this means investing to address service, infrastructure, and assistance inequity; deepening inclusive engagement and partnership efforts; and enhancing opportunities for economic advancement and job opportunities related to utility work.

Each day, that commitment means ensuring our customers are heard, have service, and are empowered and educated to value water and reduce waste. It means we are working alongside community-based organizations, governments, schools, and businesses to maximize the collective benefits we can provide. And, at our workplace, it means that with each hire and at each meeting we are cultivating a diverse workforce and creating engaging and inclusive leadership opportunities and facilities so that we can attract and retain the next generation of essential workers.

Goals

Remove barriers: We support and uplift residents and businesses by ensuring equitable services, information, and educational materials to help everyone steward our shared, precious resources.

Partner with community to maximize the benefits of SPU investments: We are improving our investment strategies in ways that help SPU contribute to economic opportunity, enhance livability, and build sustainability.

Invest in our employees: We are cultivating a compassionate and dynamic work culture that prioritizes racial equity and attracts, inspires, and invests in existing and future employees—our most valuable resource.

2018-2020 Accomplishments and Learnings

- Applied learnings from customer assistance pilot work and customer feedback to improve notification and assistance to low-income households and small businesses.
- Filled all 20 SPU water pipe apprenticeship positions from a pool of over 680 applicants.
- Sponsored more than 60 youth over three years for City summer youth employment programs.
- Leveraged SPU South Park investments by helping to secure \$22 million in outside grants and partnerships.
- Used the experience of COVID-19 to honor and continue to improve support and connection to our frontline employees who have ensured uninterrupted delivery of our essential water and waste services.

Focus On: Empowering Our Customers, Community, and Employees

Strategy 1: Provide utility assistance that makes a difference

Better understanding and responding to customer and community needs is good for business and the right thing to do. We are committed to continually improving financial and basic service assistance including support for unsheltered persons and those with low or fixed incomes; coordinating home, business, and industrial sustainability assistance and education; and enhancing customer self-service and smart utility and information technologies.

Highlighted Initiatives and Investments:

Customer Affordability Programs

We can make a meaningful difference in people's lives when we improve the effectiveness of financial assistance to customers in need. Our work in this area focuses on shut-off prevention, leak assistance, Utility Discount Program, Emergency Assistance Program, and payment plans.

Key Commitments:

- Expand outreach and participation in assistance programs (Utility Discount Program, Emergency Assistance).
- Expand leak adjustment policy for residential and commercial customers.

Side Sewer Assistance

To enhance affordability, SPU will implement a pilot program that eases the financial burden of repairing side sewers.

Key Commitments:

- Make pilot program incentives available to low-income customers in the form of grants, loans, rebates, or repairs.
- Use pilot results to potentially expand the program to serve a wider range of customers.

SPU Support Services for the Unsheltered

Relying primarily on non-ratepayer funding from the City of Seattle's Clean City program, SPU will work to provide cost-effective sanitation and disposal service solutions for unsheltered populations including trash, sharps, and RV services to address health, hygiene, and environmental needs.

Key Commitments:

- Pilot and evaluate cost-effective RV pump out service.
- Achieve 90 percent voluntary compliance rate for RV vehicles encountered by RV remediation pilot program.
- Pilot and evaluate alternative approaches to effectively deliver garbage and sharps collection services for the unsheltered population.

Focus On: Empowering Our Customers, Community, and Employees

Strategy 2: Give voice and power through meaningful partnerships

Building more inclusive, equitable, trusted, and mutually beneficial relationships with community, businesses, and our most vulnerable populations will diversify our perspective and guide how decisions are made. Our efforts are aligned with the City's Race and Social Justice goals and prioritize outreach to traditionally hard-to-reach communities, improve connections with and between employees (especially those on the front lines of service delivery), and enhance regional partnerships and collaboration. We will also work to incentivize the creation of job opportunities that support responsible water and waste utility innovations in building, industry, and nature-based technologies.

Highlighted Initiatives and Investments:

Seeds of Resilience Impact Investment Proposal

SPU seeks to build water resiliency, encourage a circular economy, and grow blue-green job opportunities with an emphasis on supporting Black, Indigenous and People of Color (BIPOC) communities through an innovative investment program. This project will assess viable approaches for designing, funding, managing, and evaluating a pilot program that fosters Community Centered, One Water, and Zero Waste entrepreneurship.

Key Commitments:

- Develop a proposal and enabling ordinance for Mayor's Office and City Council approval.
- If approved, launch pilot investment program.

Race and Social Justice (RSJ) Strategic Plan

When we build trust and strengthen partnerships with community organizations, we improve equity and social outcomes for the City of Seattle. SPU will update its existing RSJ plan to reflect current needs, assess the extent to which RSJ policies are supported across the utility, and recommend opportunities to improve our policies and practices.

Key Commitments:

- Revise Environmental Justice and Service Equity (EJSE) Division Race and Social Justice Strategic Plan.

Focus On: Empowering Our Customers, Community, and Employees

Strategy 3: Foster a more equitable workplace, work culture, and better work opportunities

Investing in changes that strengthen the diversity and appeal of working for SPU will reap rewards today and tomorrow. Our goal isn't just to be better—it's to be the best place our employees have ever worked. We cannot fully deliver on our service or policy priorities without investments in our people and the places they work. This includes investments in workforce attraction and recruitment, learning and development, and retention. It also means improving facilities and workspaces.

Highlighted Initiatives and Investments:

SPU Workforce Development

Workforce planning is an interconnected set of solutions to meet employment needs. It can include changes to culture, changes to employee engagement, and improvements to employee skills and knowledge that will help to positively influence SPU's future success. This is important to rebuild, retain, and recruit our workforce. We can stay ahead of changes by building on internal programs and creating opportunities for employees to stay within SPU and the City of Seattle. An equity, race, and social justice lens will be applied to all our work.

Key Commitments:

- Implement SPU's Workforce Development Plan.
- Model shared and inclusive leadership and what it means to be a community-entered utility in structuring the work of SPU's people, culture, and community branch.

Workforce Facilities Investments

The workforce facilities program includes efforts to improve working conditions for frontline employees at South Operations Center (SOC), North Operations Complex (NOC), Cedar Falls Phase 2, as well as improved space utilization efficiencies at the Seattle Municipal Tower and in the SPU Facilities Master Plan. Work that improves operational efficiencies will be prioritized and facility improvements will address maintenance issues.

Key Commitments:

- Complete planning and begin design and construction for NOC, SOC, and Cedar Falls Phase 2 projects.
- Develop recommendations for Seattle Municipal Tower renovations that consider a reduction of rented space, expanded use of telecommuting, and more collaborative and temporary workspaces that leverage learnings from the coronavirus pandemic.
- Complete Facilities Master Plan Strategy update.

Learn More!

Additional details about the investments and initiatives that advance this focus area are provided in the appendix.

Focus On: Strengthening Our Utility’s Business Practices

How we manage utility business practices matters. Our customers expect their faucets to flow, toilets to flush, and garbage to be picked up. These services are delivered under increasingly complex and costly regulations and via aging infrastructure that must be resilient in the face of challenges such as earthquakes and climate change. At the same time, we must be attuned to what the community can afford. The utility will examine its business practices and assess ways to improve service, be more efficient, and provide value. We will also use the best available science, data, and analysis to inform utility decision making and performance.

We are committed to providing utility pricing and assistance to customers that ensures everyone receives the services they need. The cost of our services is often constrained by the need to maintain infrastructure, encourage conservation, safeguard the environment, and protect public health. However, we recognize the importance of addressing affordability and we are taking actions to reduce costs, increase productivity and efficiency, invest in assets that have multiple benefits, and remove barriers to service access.

SPU’s commitment to affordability is comprehensive and extends beyond rates to include capital project delivery and implementation of utility business processes and practices. Our infrastructure asset management approach is systematic and balances short- and long-term risk with cost and public benefit. We will continuously evaluate and adjust our work to ensure our assets are in good condition.

Goals

Enhance ratepayer affordability: We are focused on financial sustainability and careful use of our resources to help us manage costs for our ratepayers.

Manage assets and risk optimally: We are investing in operations, infrastructure, and technologies that carefully manage SPU risks, resilience, and effectiveness.

Be an adaptive, learning organization: We are continuously improving and deepening our culture of safety, excellence, and innovation.

2018-2020 Accomplishments and Learnings

- Reduced SPU’s adopted rate path by 20 percent and paved the way for greater reductions in future years through adoption of our Accountability and Affordability Strategy Plan.
- Saved \$66 million by securing a \$192.2 million low-interest EPA Water Infrastructure Finance and Innovation Act loan for the Ship Canal Water Quality Project and broke ground on its delivery.
- Negotiated new solid waste collection contracts, lowering costs.
- Launched a Drainage and Wastewater pipe lining crew to increase the lifespan of our assets.
- Completed a water system assessment of seismic vulnerabilities and priority investments.

Focus On: Strengthening Our Utility's Business Practices

Strategy 1: Deliver on accountability and affordability commitments

Affordability and accountability are top priorities for our customers and for SPU. We will make changes that reduce our rate increases and holistically improve transparency and performance reporting. We will align and adapt our environmental regulatory work, improve the speed and efficiency of capital planning and delivery, streamline budget and financial planning practices, and build collaborative partnerships that refine our priorities, help manage our costs, and increase our impact.

Highlighted Initiatives and Investments:

Accountability and Affordability Strategic Plan

As Seattle residents contend with a tumultuous economy, high costs of living, and inequitable access to opportunity, SPU must help customers who are struggling to afford essential utility services. This strategy proposes a holistic approach to deliver our essential services, keep rate increases lower, focus corporate culture on continuous improvement, and make investments that deliver multiple benefits to the community. The implementation plan targets improvements in several areas including capital planning and delivery, process efficiency improvements, financial management, alternative funding and partnerships, and improved reporting about SPU performance and investments.

Key Commitment:

- Implement three-year actions and recommendations of the Accountability and Affordability Strategic Plan.

Focus On: Strengthening Our Utility's Business Practices

Strategy 2: Improve how we manage risk and invest in system assets and infrastructure

Upgrading how we manage, maintain, and invest will help us reduce risk, improve resilience, and take better advantage of opportunities. We will focus on strengthening overall strategic asset management investment and performance, addressing high risk infrastructure, and prioritizing work that yields multiple benefits.

Highlighted Initiatives and Investments:

Risk and Resilience Strategic Plan

To improve SPU's ability to respond to risks and unexpected events, SPU will seek organization-wide opportunities to encourage and facilitate experimentation and investment that maximizes benefits and reduces negative impacts. Our work in this area focuses on collaborative planning, capacity development, and vulnerability reduction.

Key Commitment:

- Create and implement tools and guidance for SPU work units to identify risk, take action, and increase resilience.

Water Seismic Resilience

A recent SPU-commissioned study found that a catastrophic earthquake in the region would result in total water pressure loss within approximately 20 hours and take 10 to 25 days to restore 50 percent of water service, but that seismic upgrades could significantly cut down service restoration time. This effort aims to improve the seismic resiliency of the water system to mitigate the impact of earthquakes.

Key Commitment:

- Implement short-term recommendations of the SPU Seismic Study, with the focus on emergency preparedness and response planning, as well as system isolation and control strategies.

Focus On: Strengthening Our Utility’s Business Practices

Highlighted Initiatives and Investments (Continued):

Water Asset Management and Opportunity Work

This program focuses on asset management and enhanced investment in SPU's aging drinking water infrastructure and deferred maintenance to reduce long term system costs. Efforts include infrastructure opportunity work that supports transportation projects and other City capital investments and leverages cost savings from reduction of paving restoration costs.

Key Commitments:

- Complete planned water main and service line replacements and install new corrosion control (cathodic protection) on transmission pipes.
- Complete priority planning, replacement, and rehabilitation work.
- Reduce backlog of maintenance work orders for hydrants and critical valves.
- Report on budget and schedule deviations larger than 25 percent for externally driven transportation opportunity projects.

Drainage and Wastewater Asset Management Work

The average age of SPU’s wastewater infrastructure is over 80 years old. SPU will invest in the rehabilitation of our sewer pipes, pump stations, combined sewer overflow outfalls, and force mains to address infrastructure needs. A renewal program will also be developed for making future investments in the City’s drainage system assets.

Key Commitments:

- Complete rehabilitation schedule for sewers, pump stations, force mains, and drainage assets.
- Clean, replace, and rehabilitate key Combined Sewer Overflow (CSO) outfalls.

Strategy 3: Support a continuous improvement culture

When all employees practice continuous improvement, we can improve services, create efficiencies, and learn from each other. Our objectives are to train for and build upon a culture of constant improvement focused on experimenting and streamlining processes, employ a ‘plan-do-check-adjust’ approach, streamline processes, and reduce waste. SPU will reflect this commitment in all aspects of our work and across all initiatives and investments.

Learn More!

Additional details about the investments and initiatives that advance this focus area are provided in the appendix.

Keeping Rates Predictable and Affordable

A key element of a utility Strategic Business Plan is to balance forward-looking improvements with the thoughtful use of ratepayer revenue.

Previous sections of the plan describe SPU's vision and long-term goals and highlight key initiatives and investments. This section explains how SPU's rates are structured to collect only the amount of revenue needed to support its business operations and financial obligations, while responding to regulatory requirements and preparing for future challenges.

Ratepayers pay for essential services, infrastructure, and day-to-day operations through their utility bills. This ensures our services are there when needed. These utility rates assume that the current level of operations will continue, and that SPU is responding to the needs of the future.

To deliver value, enhance affordability, and demonstrate accountability, SPU develops rates by evaluating a complex mix of factors. The analysis includes operating costs, capital investment needs, long-term risks, debt repayment, service demands, financial policies, and anticipated revenue associated with delivering services across three lines of business—water, drainage and wastewater, and solid waste.

Factors Impacting Rates

SPU's rates are driven by the cost of services. SPU has been working to reduce costs and flatten rate increases over time. While a consistent growth in rates is expected due to inflationary factors, SPU's projected rate path for the 2021-2026 period is projected to be lower than what was anticipated in previous rate paths (2018-2023 and 2015-2020).³

Factors lowering the growth in the cost of services include:

- Improving capital investment planning to better reflect probable investments,
- Using cash balances to smooth rate changes,
- Negotiating lower solid waste contract rates, and
- Reducing the cost of borrowing money.

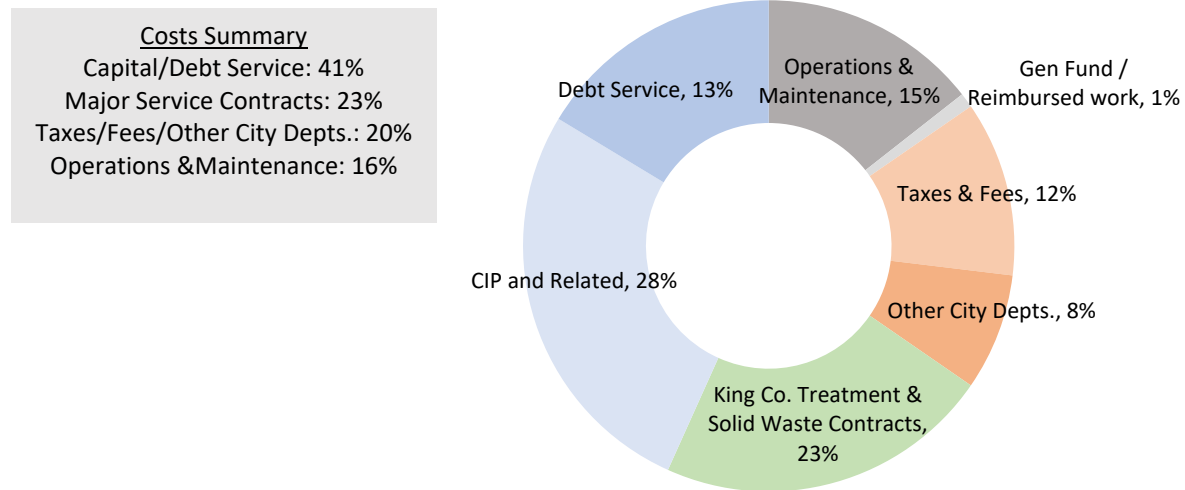
There are also factors that are increasing costs at a faster pace and offsetting cost savings. These include:

- Higher than expected increases in King County's wastewater treatment charges to Seattle,
- Funding for large capital projects required for state and federal regulatory compliance,
- Targeted funding increases to address deferred maintenance of aging capital assets, and
- Increased commitment and obligations to keep pollutants out of our water.

Chart 1 (see next page) further explains what drives the projected rate path by showing SPU's expenses by category.

³ The utility reviews and recommends 'rate paths' within its Strategic Business Plan, over six-year periods.

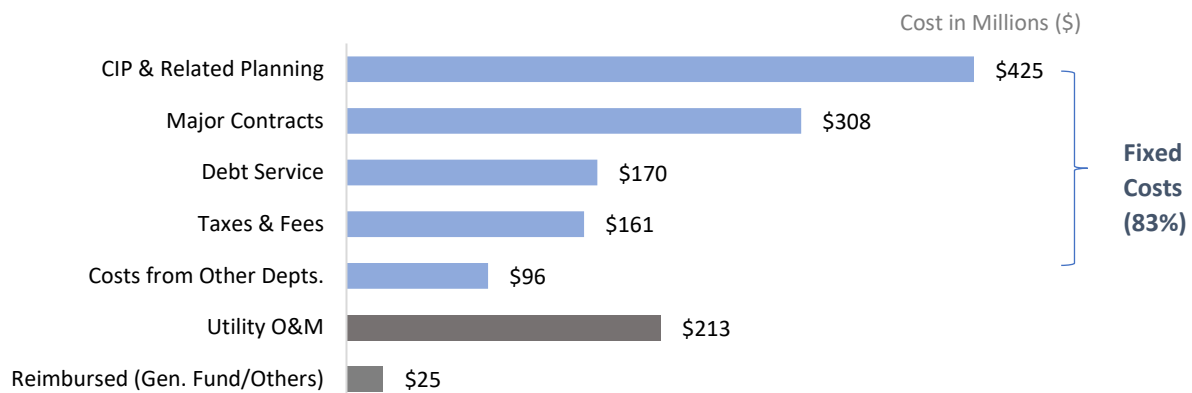
Chart 1: SPU Expenses by Category (2021-2026)



SPU’s largest cost area consists of capital costs and related debt service, accounting for 41 percent of the budget. Major service contracts, including King County wastewater treatment, account for 23 percent; and taxes, fees, and costs paid by SPU to other City departments make up 20 percent. Utility operations, which includes work required to deliver essential services and work on behalf of the City’s General Fund, and work that is reimbursed by other departments, makes up 16 percent.

Chart 2 further explains expenses by showing costs in dollars for 2021. The total 2021 annual budget is \$1.4 billion. Fixed (non-discretionary) costs and CIP costs make up 83 percent of the budget (or \$1.2 billion for 2021).

Chart 2: Expenses by Category (2021)



Three-Year Rate Path and Additional Three-Year Projection

SPU’s projected rate path is provided below. This six-year planning horizon is updated every three years.

The projected 2021-2026 average annual rate increase is projected to be lower than the adopted 2018-2023 rate increase. Chart 3 illustrates that updated growth rates are expected to average 4.2 percent (orange line) and 20 percent lower than the last adopted Strategic Business Plan, and nine percent lower than the 2015-2020 Strategic Business Plan.

Chart 3: Projected Rate Path

The Proposed 2021-2026 Plan Lowers the Average Rate Path by 20%

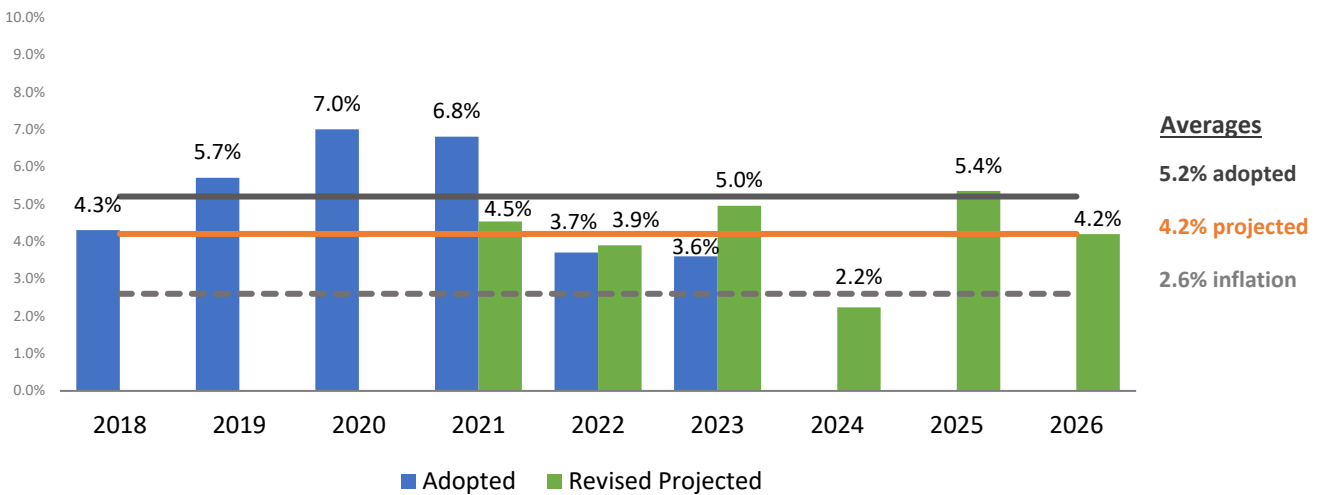


Table 1 describes the projected three-year rate path and projected three-year rate forecast for the six-year period, by line of business and combined.

Table 1: Projected 2021-2026 Average Rate Increases

	Rate Path			Rate Forecast			Average
	2021	2022	2023	2024	2025	2026	
Water	0.0%	2.7%	4.7%	3.6%	4.2%	5.5%	3.4%
Wastewater	7.3%	3.1%	5.9%	0.5%	7.8%	3.6%	4.7%
Drainage	7.4%	8.6%	7.2%	3.9%	6.5%	6.7%	6.7%
Solid Waste	2.9%	2.9%	2.2%	2.3%	2.1%	2.1%	2.4%
Combined	4.5%	3.9%	5.0%	2.2%	5.4%	4.2%	4.2%

Approved rate legislation currently in effect

Our Financial Position is Strong

SPU takes a fiscally balanced approach to its financial policies and reserves. By maintaining sufficient reserves, the utility is better able to weather fluctuations in revenues and expenses and navigate financial uncertainty. These prudent practices protect our asset investments and benefit customers through the avoidance of extraordinary rate increases and volatility.

Rate Impact to Customers

Table 2 below shows typical monthly bills for several different types of customers.

Customers who decrease their service consumption through conservation will experience smaller bill impacts. For instance, customers might reduce their cost by conserving water and switching to smaller garbage bins through recycling and composting more. We also offer incentives to divert and keep rainwater on private property through rain gardens and cisterns.

Table 2: Typical Monthly Bill Examples

Typical Monthly Bill for a Single-Family House						
	2021	2022	2023	2024	2025	2026
Water	\$46	\$47	\$49	\$51	\$53	\$56
Wastewater	\$72	\$75	\$79	\$79	\$85	\$89
Drainage	\$50	\$54	\$58	\$60	\$64	\$69
Solid Waste	\$55	\$56	\$58	\$59	\$60	\$61
Combined	\$223	\$232	\$244	\$250	\$263	\$275
Monthly Change	\$15	\$9	\$12	\$6	\$13	\$12

Typical Monthly Bill for a Multifamily Unit (Apartment Building)						
	2021	2022	2023	2024	2025	2026
Water	\$25	\$26	\$27	\$28	\$29	\$31
Wastewater	\$65	\$67	\$71	\$71	\$77	\$80
Drainage	\$9	\$10	\$11	\$11	\$12	\$13
Solid Waste	\$28	\$29	\$30	\$30	\$31	\$32
Combined	\$127	\$132	\$138	\$141	\$149	\$155
Monthly Change	\$4	\$4	\$7	\$2	\$8	\$6

Typical Monthly Bill for a Convenience Store						
	2021	2022	2023	2024	2025	2026
Water	\$107	\$110	\$115	\$120	\$125	\$131
Wastewater	\$325	\$335	\$355	\$357	\$385	\$399
Drainage	\$121	\$131	\$140	\$146	\$155	\$166
Solid Waste	\$556	\$573	\$585	\$599	\$611	\$623
Combined	\$1,109	\$1,149	\$1,196	\$1,221	\$1,275	\$1,319
Monthly Change	\$38	\$40	\$47	\$25	\$55	\$44

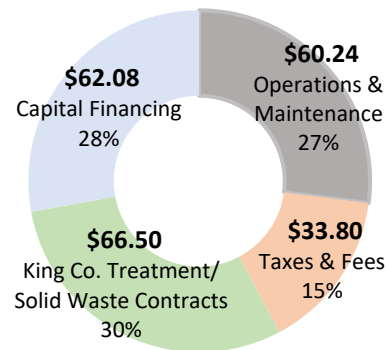
Information in this table is for illustrative purposes. SPU bills water, wastewater and solid waste charges to property owners who may pass these costs to renters or tenants. Drainage charges are billed to customers on their King County property tax statements. Totals may vary due to rounding.

Residential and commercial customers each account for approximately 45 percent of the rate revenue across all three utility funds. The remaining 10 percent comes from wholesale customers, including other cities and districts.

Chart 4 shows how a typical residential customer’s bill is spent across utility expense areas.

Chart 4: Where the Money Goes

Typical Customer Bill Breakout
Single Family Home Monthly Bill:
\$222.62



Customer Financial Assistance

SPU’s affordability and accountability work aims to keep rate increases to the lowest possible level, reducing potential hardship for our customers. But if customers need financial assistance, we can help them in a few ways:

- **Conservation and education programs** which help people understand their usage and bills and identify ways to potentially reduce them;
- The **Utility Discount Program** which provides ongoing bill assistance to the lowest income families and uses customer data to target marketing, signup, and assistance to those in need;
- The **Emergency Assistance Program** which provides credits toward one bill per year for lower-income households or two bills per year for households with children;
- **Payment plans** which provide customers with flexibility in payment arrangements that fit their needs; and
- The **Community Donation Fund** which allows for voluntary contributions to help those who are in need.

SPU has been actively promoting these programs to ensure people know help is available when they need it. We have also improved these programs to make rates more affordable for low-income customers, and we plan to continue this work in the years ahead. To date, we have:

- Worked proactively with low-income customers and small businesses,
- Increased Utility Discount Program enrollment through a self-certification pilot,
- Improved the Emergency Assistance Program and shut-off prevention and notification,
- Created more flexible payment arrangements,
- Eliminated interest charges on late bills, and
- Started to use customer data and predictive analytics to target our efforts.

We are pleased to present this plan for further consideration by the Seattle City Council. We look forward to additional engagement on this plan with the Council as we use it to guide our success in the years ahead.

Supporting Documents and Appendices

The 2021-2026 Strategic Business Plan and supporting materials are available at:

<https://www.seattle.gov/utilities/about/plans/strategic-business-plan>

Appendices:

- A. Customer Review Panel Letter
- B. Executive Summary
- C. Accountability and Performance Reporting
- D. Highlighted Initiative and Investment Detail
- E. Community Research and Outreach Summary
- F. Financial Forecast
- G. Seattle Public Utilities Accountability and Affordability Strategic Plan
- H. Seattle Public Utilities Risk and Resiliency Strategic Plan

Seattle Public Utilities Customer Review Panel

c/o Danielle.Purnell@seattle.gov
P.O. Box 34018, Seattle WA 98124-4018

February 18, 2021

Councilmember Alex Pedersen, Chair, Transportation and Utilities Committee
Members, Transportation and Utilities Committee
The City of Seattle
600 Fourth Avenue
P.O. Box 94749
Seattle, WA 98124-4749

**RE: Seattle Public Utilities Customer Review Panel Comments on the Proposed SPU
Strategic Business Plan for 2021-2026**

Dear Chair Pedersen and Members of the Transportation and Utilities Committee:

This letter presents our comments on the Proposed Seattle Public Utilities (SPU) Strategic Business Plan for 2021-2026 (Plan) in fulfillment of our duties as members of the Seattle Public Utilities Customer Review Panel (Panel) set forth in Resolution 31800.

We endorse the Plan and support its adoption as presented. This letter includes a number of detailed comments regarding the Plan. Our primary messages regarding the Plan are as follows:

Rates: We are pleased that the projected 6-year rate path is lower than that in the previous strategic plan: the 6-year weighted average annual rate increase across all SPU's lines of business in the 2021-2026 period is projected to be 4.2%, down from 5.2% in the 2018-2023 SPU Strategic Business Plan.

SPU's commitment to drive rates down is admirable and should continue to be a priority. SPU provides essential basic services – water, sewer, drainage, solid waste collection and disposal. Ensuring the affordability of these services, particularly for lower income customers and smaller businesses, is a priority for the Panel.

That said, the reduction in rates compared to the last plan has largely been accomplished by spending of cash reserves built up over the last three years because SPU's capital project accomplishment rate was far less than anticipated. These delays were due to a variety of causes, including but not limited to SDOT deferring work on several of the Move Seattle projects. This raises two concerns: first, a lower rate path derived from spending of cash reserves is not likely to be sustainable, and second, the under-accomplishment rate of some capital projects and deferral of others may be creating additional rate pressure as asset maintenance and rehabilitation needs are going to increase in future years, and several planned capital projects were not accomplished or delayed over the last three years.

In the long-term, SPU has growing needs for asset repair and replacement funding which will continue to put upward pressure on rates. Federal and state regulations will add to this pressure. SPU's ability to bring its capital projects in on time and on budget is an area for continued focus and emphasis. Overall,

SPU and the City face an important balancing act between the desires to keep rates low and, at the same time, maintain and replace aging infrastructure, increase water quality protections, adapt to the impacts of climate change and address the seismic risk to its infrastructure.

Seeking a Recommitment to Ongoing Dialogue with City Leaders: SPU's budget is over \$1.3 billion a year; the utility employs over 1430 people. In 2017, the Council determined that the Panel should not disband at the end of its initial planning task but instead be converted to a permanent standing body whose role is "to provide ongoing stakeholder oversight" as SPU develops and implements its strategic business plans. We are charged in part to "work closely with staff designated by the City Council and the Mayor to understand the issues and concerns of the City Council and the Mayor." If the development of SPU strategic business plans remains important to City leaders, the challenges ahead can be better met with active engagement between the Mayors' office, Council, SPU and the Panel. We would like to strengthen our communication with you and the Council moving forward, to have an ongoing dialogue on SPU's work and its path forward. We ask for your support of this goal.

The Strategic Planning Process and the Panel

Per Council directive, SPU is required to develop a 6-year strategic business plan, and to update that plan every three years. Particularly noteworthy in the process leading up to submittal of this current Plan has been the internal work SPU did to update its vision, mission and values, and the more detailed guidance for improving operations included in two new plans: *Affordability & Accountability* and *Risk & Resiliency*. We commend SPU's focus on these initiatives. Other important work, around equity and empowerment in the form of a Race & Social Justice (RSJ) plan for SPU, is also underway. We look forward to hearing more about the RSJ work in the future.

The Panel works to provide SPU, the Mayor and Council advice in the development and implementation of the Plan. As noted, the Panel was made a permanent body in 2017. The Panel met 21 times over the last three years leading up to the completion of the Plan. It has been an intensive and time-consuming effort on the part of customer volunteers. While we started with quarterly meetings, that pace had to accelerate in the last several months to two meetings per month each lasting two to three hours, in order to complete our review of the Plan and the various initiatives and investments included in it. Frankly, this is not a sustainable schedule for some of us with full-time jobs, and it has been very helpful in this work to have the knowledge base of several of our members who have been long involved with SPU. We will be working with SPU to develop a revised approach to accomplish our oversight responsibilities. Hopefully, that may include some in-person meetings again when the pandemic is behind us.

SPU took a new approach to public outreach process as part of this Plan. That approach included: compiling data from 28 other surveys and studies recently completed across the City; completing several dozen interviews of businesses and members of under-represented communities; deploying a concise five-question poll of internal and external partners. In light of the COVID-19 pandemic, this was a creative and cost-effective approach. We note that it continues to be a challenge to engage those in our community lacking adequate online access: this is a larger challenge for the City that is more urgent as COVID-19 has reduced the City's ability to interact in more traditional ways with ratepayers and

taxpayers. We also anticipate that in future years, SPU will need to gather new customer data, particularly in order to understand the post-COVID world in which we will be operating.

In terms of customer engagement, SPU has historically benefitted from the input of three Community Advisory Committees (“CACs”)—one focused on solid waste, one on water, and one on wastewater and drainage. While the Solid Waste Advisory Committee continues as part of Interlocal agreement commitments, SPU has chosen to disband the “Creek Drainage and Wastewater Advisory Committee” and the “Water System Advisory Committee” effective December 2020. The CACs have a unique diversity of membership (several of the Panel members have served on them) and have been able to provide the needed in-depth analysis of SPU’s many specific programs, services and initiatives that the CRP does not have the time to do. It is important for a new community engagement strategy to be in place soon; we encourage SPU to utilize members of the disbanded CACs during the transition to the new engagement strategy.

Progress by SPU since last Strategic Plan, and Assessment of Current Challenges

SPU has made important progress in several areas since the 2018-2023 Strategic Business Plan was adopted. The reduction in the rate path, noted above, is one of them. We are also seeing progress in SPU’s asset management programs; implementation of the Combined Sewer Overflow Consent Decree; and completion of the seismic vulnerability assessment of the water system. The critical Ship Canal CSO Control project has also made good progress in the last three years and all indications are that it is will be delivered within the Consent Decree timeframe and within the allotted budget. As noted above, we think the work and stated goals on *Affordability & Accountability*, and *Risk & Resiliency* are extremely important; we plan to carefully track the utility’s progress in implementing both these plans.

SPU also faces some daunting challenges. Federal and State Regulatory mandates continue to increase capital and operating costs; climate change adaptation response remains a critical and expensive long-term effort; about a quarter of the SPU workforce is currently eligible to retire. In the near-term, significant departure of long-serving staff could result in major loss of institutional knowledge if not managed correctly. Other important challenges we are identifying include:

- Aging water and sewer system infrastructure needs replacement at an ever-increasing rate, according to updated asset management plans. SPU continues to have a backlog of repair and replacement work on hydrants, pumps and valves. That backlog remains much as it was three years ago. The 50-year projections on what will be required *annually* to replace the utility’s infrastructure dwarfs current spending on assets: this is a long-term affordability challenge that must be grappled with sooner rather than later.
- Essential and sub-standard operational facilities identified for major rehabilitation three years ago remain uncompleted: the North Operations Center, South Operations Center, and Cedar Falls Maintenance facility and Seattle Municipal Tower office space renovations were all funded and programed in the last Strategic Business Plan (2018-2023). All of these projects were subsequently re-scoped and remain uncompleted. The Utility has wisely, in our view, reduced its budget assumptions around the completion rate on capital projects, but it will still take

tremendous focus and management effort to improve SPU's delivery of capital projects over time.

- King County released a proposal that would have increased its rates nearly 10% in each of the next three biennia. While the County's adopted 2021 wastewater pass-through rate was reduced to 4.5% after regional outcry, we may be facing steep increases here in future years. This situation highlights the need for better communication with the County and its partners, as well as stepped up rate controls in the County wastewater contract.
- COVID-19 has introduced new uncertainty into consumption patterns and set us backward on some of our environmental goals (e.g., plastic bags are again widely used in Seattle). This increased uncertainty may impact SPU's ability to deliver as promised in the Plan. That said, SPU services are without doubt essential. The Utility has demonstrated great resilience through the COVID pandemic, seamlessly maintaining services and developing new responses to address emergent needs in the community. The Panel commends SPU and staff for their excellent performance over the course of the pandemic.

Looking forward to opportunities on the horizon, SPU has a placeholder initiative in the Plan called "Seeds of Resilience;" this presents a creative approach to use SPU's market leverage to advance community economic development opportunities in BIPOC communities. It also seems to align with some goals of the City's Green New Deal. We believe that this initiative will be a challenge for SPU to implement given the workload on their plate. It is important to us that this initiative not increase rates. We will be interested to see how this concept develops into a specific set of recommended actions for the Mayor and Council's consideration.

The 2021-2026 Strategic Plan

The Panel endorses the Plan and supports its adoption in the form submitted to the Mayor. We have a number of observations about activities within each of SPU's three lines of business (Water, Drainage and Wastewater, and Solid Waste) we share below, after first identifying our **overall priority issues**, which align closely with the Accountability & Affordability and Risk & Resiliency plans:

➤ **Affordability and Accountability (A&A):**

- Asset management programs must continue to evolve and strengthen.
- A strategic assessment of *long-term* infrastructure funding needs is required.
- Improving capital project delivery process oversight must remain a major priority for SPU. A number of strategies to improve capital project delivery are outlined in the *Affordability and Accountability* plan. We will be tracking these with interest.
- We applaud SPU's work in developing metrics in the last two years. SPU is also preparing to launch a new capital projects overview report, which we think will be extremely helpful to management and the Panel.

- SPU must continue to focus on ways to be more efficient in its operations and capital programs delivery, in order to slow growth in rates in the face of other cost pressures.

➤ **Risk and Resiliency (R&R):**

- The Climate Change adaptation strategy is important and needs additional refinement.
- Completion of upgrades at the North and South Operations Centers which serve as essential facilities should be a priority for SPU to become more resilient.
- Seismic upgrade planning and implementation is underway for the regional water system. Further planning for SPU's other lines of business, with additional implementation details, is needed.

Turning now to each line of business, we offer the following additional comments:

➤ **Water**

- We applaud the Division's continued efforts on watershed protection, restoration, and sustainability in face of climate change.
- A key part of Risk and Resiliency planning is seismic retrofitting of the regional water transmission and local distribution systems. This is a critical investment that we are glad to see prioritized in the Plan.

➤ **Drainage and Wastewater**

- Progress on the Ship Canal CSO project is a major accomplishment thus far; this is the largest CIP project in the utility's history and remains largely on schedule and on budget. Close oversight of this project must continue.
- The "Shape Our Water" plan will inventory and integrate all drainage and wastewater system infrastructure needs. We anticipate very sizeable investment needs may be identified for stream culvert replacement. Making all of Seattle's streams passable by fish is a potentially enormous unfunded mandate. State and federal funding here should be aggressively pursued. The Panel believes strongly that all these costs should not fall entirely on SPU: road culvert replacements should be the financial responsibility of the City and State Departments of Transportation (SDOT and WSDOT).
- Seismic upgrades are planned for water; drainage and wastewater operations will need them as well, and these needs are not yet identified or prioritized. This work will take place in the context of the "Shape our Water" planning. Needed seismic upgrades will put continued pressure on drainage and wastewater rates.
- Rate pressure will also be continuing in the form of pass-through costs from King County's Wastewater Treatment Division, as mentioned above. It will be important for SPU and the City to

engage with King County to review how these additional revenues are being spent and to minimize future surprise rate increases.

- Another area where we see SDOT having important financial responsibility relates to the new system of bike lanes many of which have physical barriers of various types between the bike lanes and general-purpose lanes. Street sweeping has proven to be one of the lowest cost, most effective means of keeping pollutants out of local waters. Regular street sweepers cannot clean physically segregated bike lanes. SDOT must ensure that bike lanes are regularly cleaned of sediment. As SDOT has created the need for specialized response equipment, we believe SDOT should be financially responsible for those additional costs. Perhaps where it may be feasible, some of the bikeways could be modified so that they can be cleaned by the existing sweeper fleet.
- Green Stormwater Infrastructure (GSI) is a significant area for proposed additional investment in the Plan. We are pleased that SPU has developed more meaningful metrics around GSI, and the extent to which partnerships are a focus of future GSI plans. As a note of caution, there is incomplete data on the life-cycle cost of GSI. The specific concern from our layperson standpoint is how the accumulation of toxins in soils can be cost-effectively removed or mitigated over time. We look forward to future presentations on this topic.
- SPU is proposing to expand or launch two important pilot projects in the Plan, both of which we strongly endorse:
 - The RV wastewater collection project pilot has been ongoing for a couple of years now. This is a basic service, financed by the City's General Fund, which is otherwise not provided inside the City limits. Increasing access to this service is important to reduce illegal dumping and respond to homelessness. We encourage continued exploration of the most cost-effective options for providing this service.
 - A side sewer replacement financial assistance pilot is proposed in the Plan. As many houses in the City are over 80 years old and tree roots are becoming increasingly prevalent, the rates of side sewer failures can be expected to increase. The cost of these repairs can exceed the financial capacity of many households. The high cost of sidewalk and street restoration is a major cost driver in these projects. This is an important partnership opportunity for SPU, SDOT and its customers. We strongly support this pilot project and hope it can move beyond "pilot" status in the near future.
- The South Park Resilience District effort has evolved out of an initial focus on reducing the frequency of flooding identified in the first SPU Strategic Plan back in 2015. Most projects identified in 2015 are underway: the pump station is now under construction and the roadway and drainage system is in design. The planned stormwater treatment facility is still in a phase of siting and sizing analysis. We hope all projects identified will be completed within the timeframe specified in the Plan. We will monitor with interest the other projects now being discussed in the District.

- The Panel continues to be interested in hearing updates on the ongoing Consent Decree renegotiations; these could reduce the cost of complying with federal regulatory requirements while still protecting the natural waters throughout our City.

➤ **Solid Waste**

- SPU is pursuing creative and potentially very impactful work in the areas of reuse, packaging reduction and food waste. We commend SPU staff for these efforts.
- The South Recycling Center project (now called the “South Transfer Station 2” (STS2)) is an SPU capital investment that the CRP has asked to learn more about. As originally scoped, this is expected to be a \$50M investment in the Duwamish area. The project is complicated by the fact that it is being built over a closed landfill. The project is being postponed and re-scoped to prioritize landfill clean-up and consider options for design of the solid waste facility.

➤ **Corporate**

Comments in this section relate to Department-wide oversight and management items.

- Oversight of capital projects remains one of SPU’s largest challenges. As noted, the Ship Canal project is a notable success thus far. There are several critical capital projects moving ahead currently that require careful management oversight: the water seismic upgrade projects; South Park Resiliency District Investments, and operations facilities (North Operations Center, South Operations Center, Cedar Falls). COVID-19 has created new work patterns that warrant review of SPU’s Seattle Municipal Tower space renovation project.
- There has been extensive change in SPU’s leadership staffing in the last three years. This highlights the ongoing need to support workforce development. Focus on these issues was lost after publication of the 2015 SPU Strategic Business Plan, as the City shortly thereafter centralized human resources and several SPU initiatives had to be set aside. The COVID-19 pandemic increases the likelihood that retirements will increase, which makes succession planning and other workforce development initiatives ever more important. We will be seeking regular updates on progress in this area.
- Climate change raises the importance of planning long-term for critical facilities. As SPU considers new investments, acquiring rare large parcels for new in-city facilities, or redeveloping existing facilities, it is important to consider the long-term viability of those sites. We have some concern in this regard for ongoing facilities planning and construction in the Duwamish area.
- SPU has improved its performance metrics system in the last few years. There has been good progress especially in tracking, measuring and reporting on essential services. We commend SPU for its work here and will continue reviewing metrics reports and updates.
- We support the Utility’s restraint in deploying new software programs; we agree that investing in upgrades is generally a more cost-effective approach.

- We reiterate our concern that many SPU customers are ill-prepared to interface with complex software programs rather than more traditional means of customer engagement.
- We see good opportunities for the apprenticeship programs across SPU, as the workforce ages and the utility has had trouble attracting workers in several areas in recent years.
- Affordability remains a priority concern for the Panel. There has been work underway for several years now in a cross-departmental effort to explore ways to update the Utility Discount Program (UDP). We remain interested in potentially “tiering” of the subsidy levels based on household income.

➤ **The Rate Path**

As noted at the outset of this letter, we are pleased to see the overall annual average rate increase lower in this Plan than in the 2018-2023 Plan preceding it. We remain concerned that this may be largely the result of capital projects not being delivered or delayed, which will further increase rate pressure going forward as the need for those projects has not changed. It is important that SPU keep up the work to lower its cost curve where possible, particularly in light of ongoing significant cost pressures, including growing maintenance, repair and replacement backlogs in SPU’s infrastructure; similar challenges at King County leading to potential major pass-through cost increases in the next several years; unfunded mandates to make culverts passable by fish; and other ongoing regulatory requirements. It is important that the Mayor and Council carefully consider the need for any additional unfunded initiatives on the Utility which would further exacerbate this rate pressure. One such potential area is in the Green New Deal: we support the goals of this initiative but have seen little in the way of analysis as to what it means for utility rates.

Conclusion

Multi-year planning across multiple lines of business is a tremendous challenge, but one that SPU continues to navigate in a way that we think has made the utility stronger and has provided welcome rate transparency and stability for its customers. COVID-19 has increased uncertainty for all of us, and SPU is no exception, despite the Utility’s excellent performance in this past year of challenges. In particular, the rate of capital project completion may be further challenged.

Despite the complexity of the planning effort and the uncertainty ahead, the Plan before you for approval is a strong one. Its focus on *Affordability & Accountability*, and *Risk & Resiliency* is important. The initiatives and investments outlined in the Plan should strengthen utility operations and customer service moving forward.

In the longer-term, the affordability challenges facing SPU are very daunting. We urge the City to begin to grapple with these challenges sooner rather than later.

Our ability to offer these observations and recommendations would not be possible without the support of SPU’s dedicated management team and staff. We thank them for their diligent attention to our concerns, and for their continued excellence in delivery of essential services to our community.

Chair Pedersen and Members, Utilities and Transportation Committee
February 18, 2021

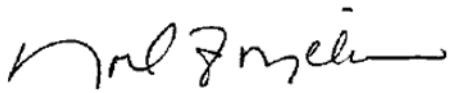
We hope our comments may assist your consideration of this Plan. We further hope that, despite the press of other essential City business and community concerns, you can find time to share your priorities

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for SPU with us now, and in the future, so that we may best fulfill the role with which we have been charged.

Sincerely,

Members of the Seattle Public Utilities Customer Review Panel¹



Noel Miller, Chair
Retired Public Works Director



Laura C. Lippman, M.D.,
Vice-Chair
Family Physician



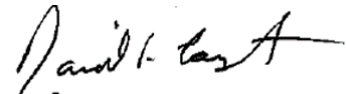
Rodney Schauf, Vice Chair
Director of Engineering
Seattle Sheraton Hotel



Suzie Burke
Business Owner, Fremont



Bobby Coleman
Administrator, Environmental
Stewardship & Sustainability
Seattle Housing Authority



David Layton
Professor & Associate Dean
Evans School of Public
Policy and Governance
University of Washington



Maria McDaniel
Community Advocate



Thy Pham
Senior Program Officer
Global Health Strategy
Planning & Management
Bill & Melinda Gates Foundation



Puja Shaw
Associate
KPF Consulting Engineering

cc: Seattle City Council Members
Mayor Jenny Durkan
Mami Hara, General Manager and CEO Seattle Public Utilities
Brian Goodnight, Council Central Staff

¹ Please note that we are signing this letter in our individual capacity and not as representatives of our employers.



2021-2026 Strategic Business Plan Executive Summary

February 19, 2021 DRAFT

Delivering the Essentials

Every day, Seattle Public Utilities delivers essential water and waste management services to 1.5 million people in the greater Seattle area. People, community, and the environment depend on us and we are honored to do this work.

The challenges we face—coronavirus, climate change, pollution, racial injustice, and economic disparity—remind us that as a community, we must care for each other and work together to shape our future.

While we deliver high-quality drinking water, drainage and wastewater, and solid waste services, we are also looking for opportunities to build on our legacy as a public utility. Maintaining our focus on innovation, leadership, and strong partnerships will help us shape our Community Centered, One Water, Zero Waste future.

The 2021-2026 Strategic Business Plan focuses our priorities, guides essential service delivery, and maximizes the benefit of every dollar. Our strategies around pollution and climate change are designed to contribute to a more just economy and sustainable future.

The plan reflects guiding principles that are at the center of our work ethic: understanding and responding to customers and community, ensuring affordability and accountability, addressing risk and resilience, enhancing equity and empowerment, and delivering service and safety.

Seattle Public Utilities employees are proud to serve our region.

Our Mission:

Seattle Public Utilities fosters healthy people, environment, and economy by partnering with our community to equitably manage water and waste resources for today and for future generations.

Our Vision:

COMMUNITY Centered, ONE Water, ZERO Waste

CARES Principles:

Customers and Community
Affordability and Accountability
Risk and Resilience
Equity and Empowerment
Service and Safety

Our Focus Areas and Goals

Delivering equitable essential services

- **Provide high-quality services:** We're here 24/7, providing safe tap water, reducing waste and litter, managing wastewater and stormwater, and responding to all our customers.

Stewarding environment and health

- **Develop One Water resilience:** We protect water sources by cultivating healthy, adaptable watersheds and ecosystems and by using integrated and equitable water management strategies.
- **Advance Zero Waste circular economy:** We support and promote policies and practices that create a circular economy and reduce Seattle waste and carbon pollution as rapidly as possible.

Highlighted Initiatives & Investments

- Shape Our Water Drainage and Wastewater Integrated System Plan
- Ship Canal Water Quality Project
- Climate Justice, Adaptation, and Mitigation for Water and Waste
- Green Stormwater Infrastructure
- Waste Diversion
- Waste Prevention

Empowering our customers, community, and employees

- **Remove barriers:** We support and uplift residents and businesses by ensuring equitable services, information, and educational materials to help everyone steward our shared, precious resources.
- **Partner with community to maximize the benefits of SPU investments:** We are improving our investment strategies to help SPU contribute to economic opportunity, enhance livability, and build sustainability.
- **Invest in our employees:** We are cultivating a compassionate and dynamic work culture that prioritizes racial equity and attracts, inspires, and invests in existing and future employees—our most valuable resource.

Highlighted Initiatives & Investments

- Customer Affordability Programs
- Side Sewer Assistance
- SPU Support Services for the Unsheltered
- Seeds of Resilience Impact Investment Proposal
- Race and Social Justice Strategic Plan
- SPU Workforce Development
- Workforce Facilities Investments

Strengthening our utility's business practices

- **Enhance ratepayer affordability:** We are focused on financial sustainability and careful use of our resources to help manage costs for our ratepayers.
- **Manage assets and risk optimally:** We are investing in operations, infrastructure, and technologies that carefully manage SPU risks, resilience, and effectiveness.
- **Be an adaptive, learning organization:** We are continuously improving and deepening our culture of safety, excellence, and innovation.

Highlighted Initiatives & Investments

- Accountability and Affordability Strategic Plan
- Risk and Resilience Strategic Plan
- Water Seismic Resilience
- Water Asset Management and Opportunity Work
- Drainage and Wastewater Asset Management Work

The plan will guide our actions and help prioritize our investments over the next six years within a predictable rate path that allows SPU to continue to provide residents with reliable, quality service and deepen commitments to community and the environment.

Rate Path Update

SPU has been working to reduce costs and flatten rate increases over time. The growth in the cost to provide services for the 2021-2026 period is projected to be lower than what was anticipated in previous rate paths. This is due in part to:

- Improving capital investment planning to better reflect probable investments,
- Using cash balances to smooth rate changes,
- Negotiating lower solid waste contract rates, and
- Reducing the cost of borrowing money.

At the same time, several factors are increasing costs and offsetting cost savings, including:

- Higher than expected increases in King County wastewater treatment charges,
- Funding for large capital projects required for state and federal regulatory compliance,
- Targeted funding increases to address deferred maintenance of aging capital assets, and
- Increased commitments to keep pollutants out of our water.

The following table describes the projected three-year rate path and projected three-year rate forecast for a six-year period, by line of business and combined:

Projected 2021-2026 Average Rate Increases

	Rate Path			Rate Forecast			Average
	2021	2022	2023	2024	2025	2026	
Water	0.0%	2.7%	4.7%	3.6%	4.2%	5.5%	3.4%
Wastewater	7.3%	3.1%	5.9%	0.5%	7.8%	3.6%	4.7%
Drainage	7.4%	8.6%	7.2%	3.9%	6.5%	6.7%	6.7%
Solid Waste	2.9%	2.9%	2.2%	2.3%	2.1%	2.1%	2.4%
Combined	4.5%	3.9%	5.0%	2.2%	5.4%	4.2%	4.2%

■ Approved rate legislation currently in effect

Customer Financial Assistance

There are several ways customers can find help with their SPU bill:

- Conservation and education programs which help people understand, and potentially reduce, their usage and bills;
- The Utility Discount Program which provides ongoing bill assistance to the lowest income families and uses customer data to target marketing, signup, and assistance to those in need;
- The Emergency Assistance Program which provides credits toward one bill per year for lower-income households or two bills per year for households with children;
- Payment plans which provide customers with flexibility in payment arrangements; and
- The Community Donation Fund which allows voluntary contributions to help those who are in need.

Rate Impact to Customers

The full 2021-2026 Strategic Business Plan provides tables to explain the projected rate path by showing typical monthly bills for several different types of customers. They will also be available on SPU’s website.

Learn more about the 2021-2026 Strategic Business Plan:
<https://www.seattle.gov/utilities/about/plans/strategic-business-plan>

Accountability and Performance Reporting

Overview

Seattle Public Utilities (SPU) is committed to principles of accountability and transparency through its Strategic Business Plan (SBP) performance reporting. This reporting is comprised of six key elements:

1. [Essential Service Metrics](#)
2. [Initiative and Investment Milestones](#)
3. [Focus Area Progress](#)
4. [Capital Investment Portfolio](#)
5. [Financial Performance and Affordability Metrics](#)
6. [Annual Utility Report Card](#)

Each reporting element is briefly described. The frequency and format of reporting for each of these key elements varies based on the nature of the information and audience. SPU will continue to fine-tune and adjust reporting over the coming years.

1. Essential Service Metrics

Description	SPU’s essential service metrics measure utility performance in meeting the SBP’s delivering equitable essential services goal to provide high-quality service through three strategies: 1) Strive for best-in-class; 2) Provide reliable and rewarding experiences; and 3) Meet or exceed expectations, requirements, and commitments.
Reporting Frequency	Quarterly
Audience	Utility managers, elected officials, Customer Review Panel

2021-2023 Reporting Detail

Strategy	Metric	Target
Strive for best-in-class	Limit distribution system leakage as a percent of total supply, as defined by WA Department of Health	<=10%
	Minimize residential garbage tonnage transported to landfill for disposal	<1 lb./person/day
	Increase number of households enrolled into Utility Discount Program	Not quantified
	Meet targets set for SPU Clean City sharps collection, illegal dumping, and graffiti abatement programs	>=95% of the time
	Limit sewer overflows to no more than four annually per 100 miles of pipe, on a two-year average	<=4 per 100 miles
Provide reliable and rewarding experiences	Priority drinking water, drainage, and wastewater problems responded to within sixty minutes	>=90%
	Less than one missed waste pick-up per 1K service stops	<=1 per 1K stops
	80% of customer calls responded to within three minutes	>=80%
	90% overall customer satisfaction score (based on SPU contact center post-call survey)	>=90%
Meet or exceed expectations, requirements, and commitments	Meet WA Department of Health drinking water quality regulations	Regulations met
	Meet National Pollutant Discharge Elimination System (NPDES) permit requirements for Seattle’s drainage and wastewater systems	Requirements met
	Limit combined sewer overflows to one per outfall per year over a 20-year moving average – annual reporting (target achieved by 2030)	<=1 by 2030
	Reduce garbage, recyclables, and organics generated per resident per day	<2.5 lbs./person/day
	Ensure 80% of customers strongly agree that SPU made it easy for them to handle their issue (based on SPU contact center post call survey)	>=80%
	Meet % of WMBE purchasing and consultant work (target is set annually by the Mayor’s Office)	Determined annually by Mayor’s Office

2. Initiative and Investment Milestones

Description	<p>Initiatives and investments are representative examples of how SPU will advance the strategies described in three SBP focus areas: stewarding environment and health; empowering our customers, community, and employees; and strengthening our utility’s business practices.</p> <p>SPU performance reporting of initiatives and investments will monitor utility progress towards commitment milestones and will provide visibility to SPU’s efforts on an annual basis for initiatives and quarterly basis for investments. Initiatives are defined as policy, planning, and program work and generally require less significant expenditures (under \$5M). Investments result in tangible infrastructure, asset, asset repair, or service and require more significant expenditures (over \$5M). See the table that follows for the SBP’s 18 highlighted initiatives and investments.</p> <p>SPU’s initiatives and investments represent a mix of continued base rate funding as well as new funding or increased investments as noted in the table. All initiatives and investments are funded through SPU rates with the exception of SPU’s support services for the unsheltered investment which is primarily funded by City of Seattle general fund dollars as part of the Clean City program. SPU’s workforce facilities improvements, drainage and wastewater asset management and opportunity work, and water asset management and opportunity work reflect multi-part investments that will be reported on individually within the context of a broader program. Greater detail on the SBP’s highlighted initiatives and investments, can be found in Appendix B.</p>
Reporting Frequency	Initiatives-annual; investments-quarterly
Audience	Utility managers, elected officials, Customer Review Panel

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan
Appendix C

2021-2023 Reporting Detail

Focus Area and Goals	Name	Description	2021- 2023 Commitment Milestones	Initiative/ Investment (reporting)
Stewarding Environment and Health ➤ Develop One Water resilience ➤ Advance Zero Waste circular economy	Strategy: Invest in key water, stormwater, and wastewater projects and plans			
	1. Shape Our Water: A Drainage and Wastewater (DWW) Plan for a Water Resilient Future	Given uncertainty related to climate change, growth, and increasingly stringent regulations, SPU is developing an integrated system plan called 'Shape Our Water.' The plan includes a long-term vision and a short-term implementation plan and will guide investments, policies, programs, and projects that will improve the performance and resilience of our drainage and wastewater systems while optimizing social and environmental benefits for the City of Seattle.	<ul style="list-style-type: none"> Complete the Shape Our Water Integrated System Plan. 	Initiative (Annual)
	2. Ship Canal Water Quality Project (SCWQP)	The SCWQP will improve regional water quality by keeping more than 75 million gallons of polluted stormwater and sewage from flowing into the Lake Washington Ship Canal, Salmon Bay, and Lake Union on average each year.	<ul style="list-style-type: none"> Deliver SCWQP on-time and within budget. Complete final design of the pump station and Wallingford and Ballard conveyance projects. Complete tunneling of the 2.7-mile storage tunnel for polluted stormwater and sewage. Complete construction and start system operation in 2025. 	Investment (Quarterly)
	Strategy: Advance climate-resilient, nature-based, community-led solutions			
3. Climate Justice, Adaptation, Mitigation	Climate resilience work includes investing in the leadership and ingenuity of communities to accelerate a just climate transition, adapting our natural and built systems and operations to a changing climate, and reducing greenhouse gas emissions that contribute to climate change.	<ul style="list-style-type: none"> Adaptively manage water supply and stormwater operations and make strategic system investments to a changing climate. Work with City of Seattle Departments and the Duwamish River Clean Up Coalition to build Resilience District partnerships to inform drainage and wastewater investments in South Park and prevent displacement of residents and local businesses. Develop decarbonization strategy for existing and new SPU-owned buildings. Partner with King County to establish a carbon emissions footprint related to Seattle-area consumption and solid waste generation. Complete a wildfire risk assessment and management strategy to mitigate risks to municipal water supply. 	Initiative (Annual)	

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan
Appendix C

Focus Area and Goals	Name	Description	2021- 2023 Commitment Milestones	Initiative/ Investment <i>(reporting)</i>	
	4. Green Stormwater Infrastructure	SPU is investing in Green Stormwater Infrastructure (GSI) to improve water quality, manage flooding, reduce regulatory costs, and build resilient infrastructure while maximizing community benefits and value for our customers. We are growing innovative cross-sector and GSI partnerships, leveraging our investments to support a broader set of community outcomes, expanding the GSI toolbox to mainstream new and innovative green approaches to stormwater management, and removing barriers to GSI implementation throughout the City of Seattle.	<ul style="list-style-type: none"> • Manage 510 million gallons of stormwater runoff annually with GSI investments. 	Investment <i>(Quarterly)</i>	
	Strategy: Reduce materials and carbon pollution				
	5. Waste Diversion	Waste diversion relies on improving the quality of recycling and composting streams, food rescue, and extended producer responsibility to reduce landfill volumes and costs. SPU supports the statewide goal of cutting food waste by 50% by 2030. Our extended producer responsibility efforts engage product developers to create environmentally sound and socially responsible solutions for the end-of-life management of a wide variety of products.	<ul style="list-style-type: none"> • Work with state and regional partners to finalize a statewide framework for extended producer responsibility. • Increase food rescue innovation partnership work. 	Initiative <i>(Annual)</i>	
6. Waste Prevention	Waste prevention work targets product consumption and consumer behavior, addressing the root cause of waste and toxins to reduce their impact. Product consumption accounts for about 42% of U.S. greenhouse gas emissions, making waste prevention an important climate change mitigation strategy. SPU will leverage partnerships to prevent waste, respond to changing recycling markets, and reduce the volume of single-use plastics.	<ul style="list-style-type: none"> • Develop and adopt a Waste Prevention Strategic Plan and metrics. • Fund waste prevention innovation through SPU waste-free community grants. 	Initiative <i>(Annual)</i>		

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan
Appendix C

Focus Area and Goals	Name	Description	2021- 2023 Commitment Milestones	Initiative/ Investment (reporting)
Empowering Our Customers, Community, and Employees ➤ Remove barriers ➤ Partner with our community to maximize the benefits of SPU investments ➤ Invest in our employees	Strategy: Provide utility assistance that makes a difference			
	7. Customer Affordability Programs	SPU can make a meaningful difference in people’s lives when we improve effectiveness of financial assistance to customers in need. Our work in this area focuses on shut-off prevention, leak assistance, Utility Discount Program, Emergency Assistance Program, and payment plans.	<ul style="list-style-type: none"> Expand outreach and participation in assistance programs (Utility Discount Program, Emergency Assistance). Expand leak adjustment policies for residential and commercial customers. 	Initiative (Annual)
	8. Side Sewer Assistance	To enhance affordability, SPU will implement a pilot program that eases the financial burden of repairing side sewers.	<ul style="list-style-type: none"> Make pilot program incentives available to low-income customers in the form of grants, loans, rebates, or repairs. Use pilot results to potentially expand the program to serve a wide range of customers. 	Investment (Quarterly)
	9. SPU Support Services for the Unsheltered	Relying primarily on non-ratepayer funding, the City of Seattle’s Clean City program will provide cost-effective sanitation and disposal service solutions for unsheltered populations including trash, sharps, and RV services to address health, hygiene, and environmental needs.	<ul style="list-style-type: none"> Pilot and evaluate cost-effective RV pump out service. Achieve 90% voluntary compliance rate for RV vehicles encountered by RV remediation pilot program. Pilot and evaluate alternative approaches to effectively deliver garbage and sharps collection services for the unsheltered population. 	Investment (Quarterly)
	Strategy: Give voice and power through meaningful partnerships			
	10. Seeds of Resilience Impact Investment Proposal	SPU seeks to build water resiliency, encourage circular economy, and grow blue-green job opportunities through an innovative investment program. This project will assess viable approaches for designing, funding, managing, and evaluating a pilot program that fosters community-led One Water and Zero Waste entrepreneurship.	<ul style="list-style-type: none"> Develop a proposal and enabling ordinance for Mayor’s Office and City Council consideration. If approved, launch pilot investment program. 	Initiative (Annual) Possible future investment
	11. Race and Social Justice (RSJ) Strategic Plan	When SPU builds trust and strengthens partnerships with community organizations, we improve equity and social outcomes for Seattle. SPU will update its existing RSJ plan to reflect current needs, assess the extent to which RSJ policies are supported across the utility, and recommend opportunities to improve our policies and practices.	<ul style="list-style-type: none"> Revise SPU’s Environmental Justice and Service Equity (EJSE) Division Race and Social Justice Strategic Plan. 	Initiative (Annual)

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan
Appendix C

Focus Area and Goals	Name	Description	2021- 2023 Commitment Milestones	Initiative/ Investment (reporting)
Strategy: Foster a more equitable workplace, work culture, and better work opportunities				
13. Workforce Facilities Investments	<p>The workforce facilities program includes efforts to improve working conditions for frontline employees at South Operations Center (SOC), North Operations Complex (NOC), Cedar Falls Phase 2, as well as improved space utilization efficiencies at the Seattle Municipal Tower and in the SPU Facilities Master Plan. Work that improves operational efficiencies will be prioritized and facility improvements will address maintenance issues.</p>	<ul style="list-style-type: none"> • Complete options analysis and begin design and/or construction of NOC, SOC, and Cedar Falls Phase 2 projects. • Develop a recommendations for Seattle Municipal Tower renovations that consider a reduction of rented space, expanded use of telecommuting, and more collaborative and temporary workspaces based on learnings from the coronavirus pandemic. • Complete SPU’s Facilities Master Plan strategy update. 	Investment (Quarterly)	
Strategy: Deliver on accountability and affordability commitments				
Strengthening Our Utility's Business Practices <ul style="list-style-type: none"> ➤ Enhance ratepayer affordability ➤ Manage assets and risks optimally ➤ Be an adaptive, learning organization 	Strategy: Deliver on accountability and affordability commitments			
	14. Accountability and Affordability Strategic Plan	<p>As Seattle residents contend with a tumultuous economy, high costs of living, and inequitable access to opportunity, SPU must help customers who are struggling to afford essential utility services. This strategy proposes a holistic approach to deliver our essential utility services, keep rate increases lower, focus corporate culture on continuous improvement, and make investments that deliver multiple benefits to the community. The implementation plan targets improvements in several areas including: capital planning and delivery, process efficiency improvements, financial management, alternative funding and partnerships, and improved reporting about SPU performance and investments.</p>	<ul style="list-style-type: none"> • Implement three-year actions and recommendations of the Accountability and Affordability Strategic Plan. 	Initiative (Annual)

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan
Appendix C

Focus Area and Goals	Name	Description	2021- 2023 Commitment Milestones	Initiative/ Investment (reporting)
	Strategy: Improve how we manage risk and invest in systems assets and infrastructure			
	15. Risk and Resilience Strategy Plan	To improve Seattle’s ability to respond to risks and uncertain events, SPU will seek organization-wide opportunities to encourage and facilitate experimentation and investment that maximizes benefits and reduces negative impact. Our work in this area focuses on collaborative planning, capacity development, and vulnerability reduction.	<ul style="list-style-type: none"> • Create and implement tools and guidance for SPU work units to identify risk, take action, and increase resilience. 	Initiative (Annual)
	16. Water Seismic Resilience	A recent SPU-commissioned study found that a catastrophic earthquake in the region would result in total water pressure loss within approximately 20 hours and take 10 to 25 days to restore 50% of water service, but that seismic upgrades could significantly cut service restoration time. This effort aims to improve the seismic resiliency of the water system to mitigate the impact of earthquakes.	<ul style="list-style-type: none"> • Implement short-term recommendations of the SPU Seismic Study, with the focus on emergency preparedness and response planning, as well as system isolation and control strategies. 	Investment (Quarterly)
	17. Water Asset Management and Opportunity Work	This program focuses on asset management and enhanced investment in SPU's aging infrastructure and deferred maintenance to reduce long term system costs. Efforts include infrastructure opportunity work that supports transportation projects and other City of Seattle capital investments and leverages cost savings from reduction of paving restoration costs.	<ul style="list-style-type: none"> • Complete planned water main replacement, and service line replacements, and install new corrosion control (cathodic protection) on transmission pipes. • Complete priority planning, replacement, and rehabilitation work. • Reduce backlog of maintenance work orders for hydrants and critical valves. • Report on budget and schedule deviations larger than 25% for externally driven transportation opportunity projects. 	Investment (Quarterly)
	18. Drainage and Wastewater (DWW) Asset Management Work	The average age of our wastewater infrastructure is over 80 years old. SPU will invest in the rehabilitation of our sewer pipes, pump stations, combined sewer overflow outfalls, and force mains to address infrastructure needs. A renewal program will also be developed for making future investments in the City of Seattle’s drainage system.	<ul style="list-style-type: none"> • Complete rehabilitation schedule for sewers, pump stations, force mains, and drainage assets. • Clean, replace, and rehabilitate key combined sewer overflows outfalls. 	Investment (Quarterly)

3. Focus Area Progress

Description	SPU plans to conduct quarterly, ‘Shaping the Future of SPU’ forums that provide an opportunity for employee leaders at all levels of SPU (formal and informal) to engage in conversation about key focus areas relevant to SPU’s business: essential service delivery, environment and public health, community and employee empowerment, and internal business practices. Each session will be designed to focus on one of these specific areas and provide a mix of inspiration, employee presentation, issue exploration, frank discussion, and dialogue about how SPU plans to collectively focus and prioritize its work, chart progress, and assess learnings at the end of a year. SPU will share quarterly forum report-outs to its Customer Review Panel and will experiment with annual reporting of composite progress indicators for SBP focus areas. These progress indicators will assess initiatives and investments that are on track with milestones and will explore the value of additional subjective reporting. An example is provided below.
Reporting Frequency	One focus area per quarter
Audience	All SPU, Customer Review Panel

2021-2023 Reporting Detail
Example

Progress will be demonstrated through a rolled up composite indicator:

<div style="background-color: #4CAF50; color: white; padding: 5px; border-radius: 10px; margin-bottom: 5px;">Delivering Essential Services</div> <p>90% of performance indicators meeting targets</p>	<div style="background-color: #2196F3; color: white; padding: 5px; border-radius: 10px; margin-bottom: 5px;">Stewarding Environment and Health</div> <p>95% of initiatives and investments on track</p>
<div style="background-color: #FF9800; color: white; padding: 5px; border-radius: 10px; margin-bottom: 5px;">Empowering Our Community and Employees</div> <p>92% of initiatives and investments on track</p>	<div style="background-color: #A1887F; color: white; padding: 5px; border-radius: 10px; margin-bottom: 5px;">Strengthening Business Excellence</div> <p>91% of initiatives and investment on track</p>

Additional visibility can be provided through quarterly presentations highlighting each focus area along with other work aligned with objectives and goals of SBP.

4. Capital Investment Portfolio

Description	Capital Investment Projects (CIP) comprise almost a fifth of SPU’s annual budget with projects in various phases of delivery: options analysis, design, construction, and closeout. SPU is working to improve reporting on both portfolio accomplishments and neighborhood construction project impact. Portfolio reporting will focus on quarterly reporting of CIP portfolio spending and schedules by delivery phase along with key updates including project RFPs, bids and status. Neighborhood construction reporting is available online and provides updates on current and recently completed projects, repairs, and outages and include linkages to a CIP research tool showing SPU project information throughout the City of Seattle and broader region.
Reporting Frequency	Portfolio–quarterly; Construction reporting–ongoing
Audience	Utility managers, Customer Review Panel, neighborhoods

2021-2023 Reporting Detail

Examples

a. Capital Investment Portfolio Reporting

YTD Q3 PDEB CIP Spending

Closed Expenses \$5,924K (87 Projects)
 Design Expenses \$17,490K (144 Projects)
 Construction Expenses \$65,629K (137 Projects)

Total Q3 Expenses: \$89,043K (368 Projects)

Percent Achieved: **33.9%**

Q3 YTD Expenses: \$89,798K
 Remaining Budget: \$117,400K

Upcoming Consultant RFPs:

- NDS (Natural Drainage Systems) Thornton
- Longfellow Floodplain Reconnect

Upcoming Construction Bids:

- LFP Floating Cover Replacement
- South Park Roadway and Drainage Conveyance
- 430 Pipeline Sewer Rehab Contract #3
- NDS (Natural Drainage Systems) Longfellow
- Sewer Rehab Contract #3
- Pump Station (17 & 118) Improvements

Key Updates

Lake Forest Park Reservoir Covering, SG4 and Request to Award (routed for signature 10/23/20). Low Bidder Layfield @ \$8.3M. Award contract in Dec 2020.

North Transfer Station Rebuild. Project is complete. Waiting for State approval to close contract.

STS2 Solid Waste Facilities. Need to get new project approved by E-Team to meet the June 2021 deadline for reporting back to Ecology.

South Park Pump Station. Currently in construction. The Contractor mobilized to the site in September. Construction is expected to take one year.

Henderson North CSO Reduction. Closeout is complete. Awaiting LOB review and buyoff on SG5 so it can be circulated to close project.

Ballard Conveyance. Project working towards 90% design. SCWQP has decided to merge this project with the Tuned Effluent Pump Station for a single construction contract.

TEPS. Project working towards 90% design. 90% milestone in May 2021. Underspending in 2020 due to work stop for cost reduction process.

Program Mgt. ongoing program mgt for SCWQP, no milestones or phases associated with this project. Underspending 2020 largely due to ETC update exercise in 2020 and removal of reserves planned in 2020 (transferred to other projects).

Storage Tunnel. In construction, tracking on schedule. Underspending 2020 as SPN was created before we had contractor cash flow.

Taylor Creek Culvert Replacement. Team is currently working 30% design of distributed sediment management structures in Dead Horse Canyon. The 2020 year end performance is expected to be 98% of planned expenditures set in January of this year.

SPU Capital Investment Projects - PDEB Portfolio

PDEB Capital Project Schedules

Project Name	2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Water								
Taft Slide Improvements								
Broodstock Collection Facility Retrofit								
Spokane St Pump Station Improvement								
Beverly Park Tank Improvements								
WM Rehab Package #2								
WM Rehab Package #3								
WM Rehab Package #4								
WM Rehab Multiple Package #5								
S Park Flood Control Pump Sta								
Puget Way SW Culvert Replace								
Pearl Street DWW Imp								
12th Ave SSO & Drainage Imp								
Ship Canal WQ Project								
South Park Drainage Conveyance								
PS 22 Retrofit FM Replacement								
SCWQ Pump Station								
SCWQ Storage (Tunnel)								
SCWQ Ballard Conveyance								
SCWQ Wallingford Conveyance								
Storm								
NDS Longfellow								
PS 2, 72, 73, & 9 Improvements								
NDS Thornton								
2017 Spot Sewer Repair Contract 2								
Portage Bay 138 Gate Retrofit								
East Montlake PS and FM Upgrade								
2017 Spot Sewer 1								
40th Ave Fall Line Replacement								
Taylor Creek Culvert Replacement								
PS 62, 63, 71, 76 Improvements								
Letitia Ave S Emp Sewer Repair								
NE 80th St Emergency Sewer Repair								
Waterfront								
AWW & Waterfront CSO Control								
SR 520 Corridor Project-WF								
Waterfront Seattle WM Work								
Other								
SDOT S Lander St Grade Sep-Wtr								
SDOT Delridge Multimodal-DWW								
SDOT E Marginal Way HHC - Wtr								
SDOT Delridge Way MMC-Wtr								
SWM SDOT SRTS Lowell-Meaney Wtr								
Waste								
STS2 - Solid Waste Facilities								


Legend: Options Analysis (Green), Design (Blue), Construction (Dark Blue), Closeout (Grey)

b. Neighborhood Construction Project Reporting

Reporting is available here: <https://www.seattle.gov/utilities/neighborhood-projects>

Neighborhood Projects

Seattle Public Utilities is investing in our infrastructure to protect public health and the environment and to continue providing essential services to customers.



▲

Current Projects

Learn about current projects in your neighborhood, across the city, and at our drinking water facilities in the region.

☑

Completed Projects

Explore information about some of Seattle Public Utilities' completed construction projects.

⚠

Construction Impacts

We aim to minimize the impact of our construction on your neighborhood and take measures to inform and involve you.

🔧

Sewer Repair

Learn about our ongoing maintenance of 1,200 miles of sewer pipes and how this work can impact your neighborhood.

🚰

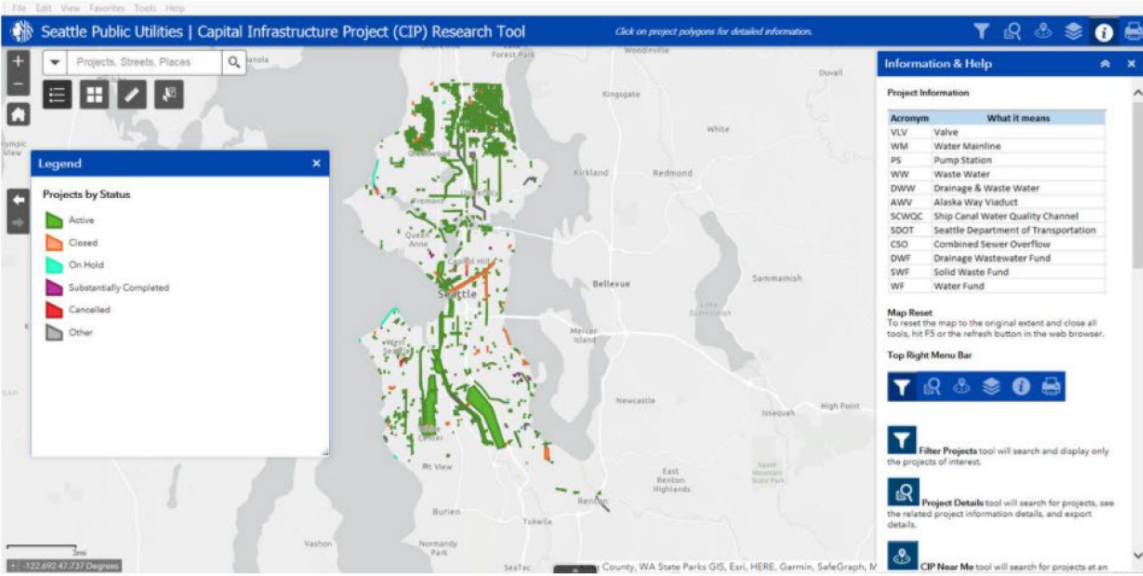
Water Repair

We operate 1,800 miles of water pipes from the source to your tap. See how we maintain them.

🚰

Water Outages

View our current water outage map and read about how you can prepare for planned water outages.



Acronym	What it means
VLV	Valve
WM	Water Mainline
PS	Pump Station
WW	Waste Water
DWW	Drainage & Waste Water
AWV	Alaska Way Viaduct
SCWQC	Ship Canal Water Quality Channel
SDOT	Seattle Department of Transportation
CSO	Combined Sewer Overflow
DWF	Drainage Wastewater Fund
SWF	Solid Waste Fund
WF	Water Fund

11

5. Financial Performance and Affordability Metrics

Description Financial performance reporting tracks the utility’s planned budget and consumption and revenue forecasts alongside operating and capital program expenditures, accomplishments, and received revenue for each utility fund – water, drainage and wastewater, and solid waste.

Over the next few years, SPU will work to supplement its financial performance reporting with more robust affordability metric evaluation to guide policy work related to financial capability assessments for federal regulatory and consent decree requirements, federal funding advocacy initiatives, customer assistance programs, and utility rate setting. Current affordability metrics track customer delinquency, utility discount program enrollment, as well as emergency assistance program and payment plans usage. This is supplemented by Citywide statistics related to income, cost of living, income disparity, poverty indicators, and household self-sufficiency standards.

Reporting Frequency Financial performance and CIP spending accomplishment–quarterly; Affordability metrics/household burden–annually

Audience Utility managers, Customer Review Panel

2021-2023 Reporting Detail
Examples

1a. Financial performance reporting by line of business								
Water Fund 2020 Q2 Financial Results								
Water <i>(\$ in millions)</i>	2020 Annual				2020 Through June			
	Annual Plan to Spend	Annual Spent to Date	Annual Remaining to Spend	% Annual Remaining to Spend	YTD Planned to Spend	YTD Spent	YTD Variance	% YTD Under Spend
Expenditures								
Operating	\$274	\$118	\$156	57%	\$128	\$118	\$10	8%
Capital	\$116	\$25	\$91	78%	\$37	\$25	\$12	32%
Total Expenditures	\$390	\$143	\$247	63%	\$165	\$143	\$22	13%
	Annual Planned Revenue	Annual Received to Date	Annual Remaining to Receive	% Annual Remaining to Receive	YTD Planned Revenue	YTD Received	YTD Variance	% YTD Revenue Under Recovery
Operating Revenue								
Retail Customer Rev.	\$215	\$90	\$125	58%	\$95	\$90	\$5	5%
Wholesale Customer Rev.	\$59	\$22	\$37	63%	\$23	\$22	\$1	4%
Other Revenue	\$10	\$7	\$3	30%	\$5	\$7	(\$2)	(40%)
Total Operating Revenues	\$284	\$119	\$165	58%	\$123	\$119	\$4	3%

<p>1b. CIP spending accomplishment reporting</p> <p>The Q3 2020 CIP accomplishment for all funds was 62%—actual expenditures of \$147.4 million against the \$236.6 million Q3 budget. Accomplishment was mixed by fund—excluding shared projects and technology projects—which are split across all funds:</p> <ul style="list-style-type: none"> • The Water Fund accomplished 72% of its Q3 budget with \$26.4 million in actual expenditures against \$36.8 million in Q3 budget. • The Drainage and Wastewater Fund accomplished 60% of its CIP with \$80.5 million in actual expenditures against \$133.5 million in Q3 budget. • The Solid Waste Fund accomplished 22% of its CIP with \$1.3 million in actual expenditures against \$5.9 million in Q3 budget. <p>Shared CIP accomplished 56% of its \$52.1 million Q3 budget. Technology CIP accomplished 113% of its \$8.6 million Q3 budget.</p>

<p>2. Affordability metric (work in progress)</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;">HOUSEHOLD BURDEN 2020</p> <p style="text-align: center; font-size: 24pt;">6.4%</p> <p style="text-align: center;">↓ 7% ✓ ↑ 10% ✗</p> </div>	<p>This household burden snapshot depicts the combined water services bill (water, sewer, and drainage) which is equivalent to 6.4% of the income of a typical single-family household in the lower 20% income quartile (low-income). The remaining household burden indicators reflect that the costs should remain under 7% and should not exceed 10%.</p>
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6. SPU Annual Report Card

Description

The annual report card will provide a high-level snapshot of SPU’s key performance highlights, community investment impacts, and accomplishments for each year. It will be available on-line, accompany SPU billing, and be accessible in different language formats.

**Reporting Frequency
Audience**

Annual
Customers, community

**2021-2023 Reporting Detail
Example**



2019 HIGHLIGHTS

Making Services Affordable

In 2019 we took some major steps to make our services more affordable:

- We reduced our average annual rate increase from 5.2% to 5.0%.
- We completed an Affordability and Accountability plan and began work on more than half of the actions in the plan.
- We improved customer access to emergency bill assistance and increased enrollment in the Utility Discount Program.

The City of Seattle’s Utility Discount Program offers income-eligible customers 50% off their Seattle Public Utilities bill and 60% off their Seattle City Light bill.

Get help with your utility bills.

50-60% off for income-eligible customers.

seattle.gov/UDP

Customer Service Improvements

We’re always striving to improve your customer experience. In 2019:

- Our Contact Center exceeded most peak season performance targets with an average call wait time of just over 1 minute.
- We made bills easier to understand by eliminating “bill in advance” practices for solid waste collection.
- We made significant progress on a new and improved customer self-service web portal.

Your new utility services website is now live! This upgraded customer portal offers a suite of customer tools and benefits to enhance your customer experience.

Welcome to the City of Seattle Utility Services Website

myutilities.seattle.gov

Capital Project Delivery

Our 2019 capital improvement project highlights included:

- We partnered with community members and students from local community-based organizations and schools to develop artwork for capital projects in south Seattle.
- We replaced a 100-year-old water main in a utility tunnel under the Ship Canal between Fremont and Queen Anne
- We began construction on the Ship Canal Water Quality Project.

The Ship Canal Water Quality Project is a 2.7-mile long, 18-foot 10-inch diameter tunnel that will capture and hold stormwater and sewage during heavy rains.

seattle.gov/utl/shipcanalproject

2019 BY THE NUMBERS
Here’s a sample of the work we did in 2019.

Provided safe, clean drinking water to 1.5 million people in and around Seattle.

Recruited and/or partnered with 4,659 Adopt-a-Street Volunteers to collect 55,907 pounds of garbage.

Responded to 24,156 illegal dumping service requests and disposed of 2,464,620 pounds of illegally dumped material.

Our 23 meter readers read an average of 229 meters per day, walking an average of 1,680 miles over the course of a year.

Trained 1,812 landscape professionals in sustainable landscaping.

Diversed 25 million gallons of roof runoff through the RainWise program.

Completed 2.23 miles of sewer rehabilitation repairs.

Brought water conservation, water quality, and stormwater education to 12,524 students.

Tested 20,000+ drinking water samples.

Awarded \$100,000 in waste-free community grants to community-led waste prevention projects.

2019 PERFORMANCE MEASUREMENTS

Services	Measure	2019 Performance
Effective customer service	Respond to 90% priority reports of drinking water, drainage, and wastewater problems within one hour.	Responded to 84% of priority reports within one hour.
Mountain-fresh drinking water	Maintain 100% compliance with Department of Health regulations; maintain regulatory compliance and provide sufficient supply to meet customers’ water needs.	Met goal. (100% compliance)
Safe sewage transport to King County treatment plants	No more than four sewer overflows per 100 miles of pipe in the current biennium.	Exceeded goal. (1.3 sewer backups per 100 miles of pipe.)
Dependable garbage, food and yard waste, and recycling pickup	Provide reliable solid waste pickup with only one missed pickup for each 1,000 stops.	1.1 missed pickups per 1,000 stops
Effective recycling and composting	Recycle 70% of all solid waste citywide by 2022.	In progress. (56.5% recycling rate.)
Drainage that reduces flooding and pollution	Remove 140 tons of pollutants from roads in 2019.	Exceeded goal. (Removed 173 tons of pollutants.)
Planning for the future	Manage 270 million gallons of stormwater runoff using Green Stormwater Infrastructure.	Managed 263 million gallons of stormwater.
Efficient illegal dumping pickup	Complete requests for illegal dumping cleanup within 10 business days at least 95% of the time.	Exceeded goal. (Cleanup within 10 business days 99.7% of the time.)
Efficient graffiti removal	Clean up graffiti on SPU property and SDOT structures within targeted times at least 90% of the time (10 business days for SDOT structures; six business days for SPU)	Exceeded goal. (Met target cleanup times 99% of the time.)

For interpretation services please call 206-684-3000.
 如需口譯服務請電 206-684-3000。
 如需手語服務請電 206-684-3000 或使用 206-684-3000 的傳真服務。
 Para servicios de traducción, por favor, llame al 206-684-3000.
 Para sa serbisyong ng itagapagalinganang, tumawag sa 206-684-3000.
 Mula sa mga itagapagalinganang ng gobyerno ng Seattle, 206-684-3000.
 Untuk adequata turjubaanka fadon was: 206-684-3000.

seattle.gov/utilities

Highlighted Initiatives and Investments Detail

Focus Area	Effort	Type	Line of Business				Rate Impact		
			Water	Drainage & Wastewater	Solid Waste	All	Continued Base Funding	Increased Funding	New Investment
Stewarding Environment and Public Health	1. Shape Our Water: A DWW Plan for A Water Resilient Future	Initiative		✓			◆		
	2. Ship Canal Water Quality Project	Investment		✓			◆		
	3. Climate Justice, Adaptation and Mitigation for Water and Waste	Initiative	✓	✓	✓	✓	◆		
	4. Green Stormwater Infrastructure	Investment		✓			◆		
	5. Waste Diversion	Initiative			✓		◆		
	6. Waste Prevention	Initiative			✓		◆	◆ after 2022	
Empowering Customers, Community, and Employees	7. Customer Affordability Programs	Initiative	✓	✓	✓	✓	◆		
	8. Side Sewer Assistance	Investment		✓					◆
	9. SPU Support Services for the Unsheltered	Investment		✓	✓		◆		◆
	10. Seeds of Resilience Impact Investment Proposal	Investment	✓	✓	✓	✓	◆		TBD
	11. Race and Social Justice Strategic Plan	Initiative	✓	✓	✓	✓	◆		
	12. SPU Workforce Development	Initiative	✓	✓	✓	✓	◆		
	13. Workforce Facilities Investments	Investment	✓	✓		✓	◆		
Strengthening Our Utility's Business Practices	14. Accountability and Affordability Strategy Plan	Initiative	✓	✓	✓	✓	◆		
	15. Risk and Resilience Strategic Plan	Initiative	✓	✓	✓	✓	◆		
	16. Water System Seismic Resilience	Investment	✓				◆	◆	
	17. Water Asset Management and Opportunity Work	Investment	✓				◆		
	18. DWW Asset Management Work	Investment		✓			◆	◆	◆

‘Highlighted Initiatives and Investments’ are representative examples of how SPU will advance the strategies described in the Strategic Business Plan. Initiatives represent policy, planning, and program work and generally require less significant expenditures (under \$5M). Investments result in tangible infrastructure, asset, asset repair, or service and require more significant investment (over \$5M).

Initiatives and investments represent a mix of continued base rate funding as well as new funding or increased investments. All initiatives and investments are funded through SPU rates except for SPU’s support services for the unsheltered investment which is primarily funded by City of Seattle general fund dollars as part of the Clean City program. SPU’s workforce facilities improvements, drainage and wastewater asset management and opportunity work, and water asset management and opportunity work reflect multi-part investments that will be reported on individually within the context of a broader program.

The following initiative and Investment templates will be reviewed and updated at least annually to reflect current conditions and adjust and fine-tune SPU’s approaches and commitments as appropriate.

1. Shape Our Water: A Drainage and Wastewater Plan for A Water Resilient Future

Focus Area	Stewarding Environment and Public Health
Goals	Develop One Water resilience
Strategy	Invest in key water, stormwater, and wastewater projects
Type	Initiative template
SPU Branch/Line of Business	Drainage and Wastewater
Executive Sponsor	Andrew Lee
Project Manager/Lead	Leslie Webster
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Initiative

Given uncertainty related to climate change, growth, and increasingly stringent regulations, SPU is developing an integrated system plan called ‘Shape Our Water.’ The plan includes a long-term vision and a short-term implementation plan and will guide investments, policies, programs, and projects that will improve the performance and resilience of our drainage and wastewater systems while optimizing social and environmental benefits for the city.

Part 2. 2021-2023 Commitment

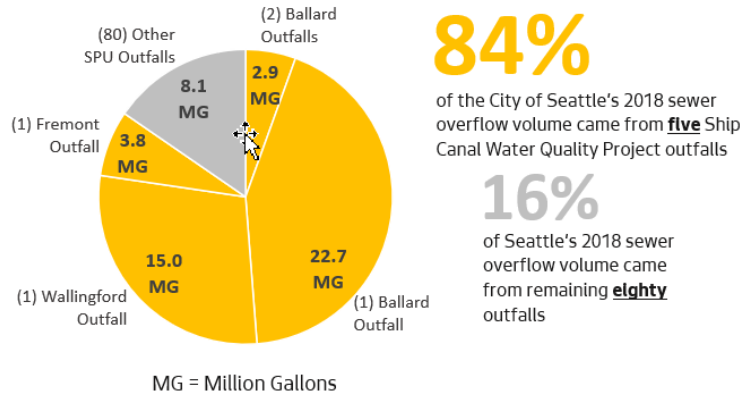
Major Milestones	Timing
Engage community, SPU staff, City departments, community-based organizations, and environmental organizations in the effort	Ongoing
Collaboratively develop a vision for Drainage and Wastewater (DWW) that will guide near and long-term investments	Q2 2021
Identify and prioritize drainage and wastewater challenges and opportunities	Q2 2021
Develop a toolbox of innovative solutions to drainage and wastewater challenges	Q4 2021
Develop and evaluate alternatives to address drainage and wastewater challenges and select preferred alternative	Q4 2022
Complete the Shape Our Water Integrated System Plan	2023

2. Ship Canal Water Quality Project (SCWQP)

Focus Area	Stewarding Environment and Public Health
Goals	Develop One Water resilience
Strategy	Invest in key water, stormwater, and wastewater projects and plans
Type	Investment template
SPU Branch/Line of Business	Drainage and Wastewater, Project Delivery and Engineering
Executive Sponsor	Keri Burchard-Juarez
Project Manager/Lead	Keith Ward
Reporting	Quarterly
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Investment

SPU is on track to deliver the Ship Canal Water Quality Project (SCWQP), the largest capital project SPU has implemented, on time and within budget. The SCWQP will improve regional water quality by keeping more than 75 million gallons of polluted stormwater (from rain) and sewage from flowing into the Lake Washington Ship Canal, Salmon Bay, and Lake Union on average each year. Below is a graph showing total combined sewage overflows in 2018 where 84 percent of those volumes came from the five outfalls in the project. The project is under a Federal consent decree and must be operational by the end of 2025. It is also a joint project between SPU and King County’s Wastewater Treatment Division (WTD) with a cost share of approximately 65 percent for SPU and 35 percent for WTD.



Part 2. Targeted Commitments and Performance Measures

Major Milestones	Anticipated Outcomes	Timing
Complete final design of the pump station and Wallingford and Ballard conveyance projects	Designs ready for construction	2023
Complete tunneling of the 2.7-mile storage tunnel	Complete substantial construction element and remove project risk	2023
Complete construction and start system operation	Achieve regulatory milestone and utilize system to improve water quality	2025

Part 3. Financial Summary

Between 2021 and 2026, the four remaining subprojects will be constructed, and the project will be operational by the end of 2025. There will then be one year of operation to validate that the system is operating. The project has secured about \$283M in federal and state loans which will save ratepayers \$82M in financing for the project.

Program Title	Ship Canal Water Quality Project						
Project Name	Various						
(\$000's)							
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	—	—	—	—	—	—	—
Baseline Capital**	\$83,600	\$63,000	\$59,200	\$41,200	\$9,000	\$6,200	\$262,200
Total Baseline	\$83,600	\$63,000	\$59,200	\$41,200	\$9,000	\$6,200	\$262,200

**Total project budget from 2014 to 2027 is \$570 million. King County is contributing \$175 million to the project.

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

There is a large consultant team to perform engineering, construction management, and program management support services and all these contracts are in place through 2026. The entire SPU team is in place and working on the project. There are seven sunset positions, and an extension of one to three years is in process due to changes in the project implementation. The cost for these positions is in the baseline budget.

Part 5. Alternatives Considered

Due to the location of existing infrastructure and the extent of the problem, the only other alternative than a shared storage tunnel were independent underground storage tanks along the ship canal. This alternative was not selected since it would have greater community impacts (i.e., property condemnation and construction impacts).

The SCWQP will achieve the same regulatory compliance standards as other combined sewer overflow projects in the city so there is no service inequity.

3. Climate Justice, Adaptation, and Mitigation for Water and Waste

Focus Area	Stewarding Environment and Public Health
Goals	Develop One Water resilience; advance Zero Waste circular economy
Strategy	Advance climate-resilient, nature-based, community-led solutions
Type	Initiative template
SPU Branch/Line of Business	Corporate Policy, All SPU
Executive Sponsor	Mami Hara
Project Manager/Lead	Ann Grodnik-Nagle, Francine Johnson, SPU Climate Community of Practice
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Initiative

SPU contributes to climate change (via greenhouse gas emissions from fleets, facilities, and buildings) and is affected by climate change (via additional risk and uncertainty associated with water supply and drainage and wastewater). Climate change will bring rising sea levels, more extreme precipitation, and more extreme heat to Seattle. These shifts will mean warmer, wetter winters with smaller snowpack and hotter, drier summers which will lead to changing forests, stressful and variable environmental conditions for salmon, and increased wildfire risks in the watersheds, plus stormwater management challenges, flood risk and heat island effects in the city. In addition to ecosystem and infrastructure pressure, climate impacts will put additional pressure on people, particularly within communities that have been most impacted by systemic racism and economic injustice. SPU’s climate work includes a holistic approach to action that includes reducing the greenhouse gas emissions that contribute to climate change, adapting our natural and built systems and operations to a changing climate, and investing in the leadership and ingenuity of frontline communities to accelerate a just climate transition for all Seattle residents.

Part 2. 2021-2023 Commitment

Major Milestones	Timing
Engage community, SPU staff, City departments, community-based organizations, and environmental organizations in the effort	Ongoing
Manage water supply reservoirs using dynamic reservoir rule curves and other system improvements to adapt to a changing climate	Ongoing
Adaptively manage stormwater operations and make strategic investments to adapt to a changing climate	Ongoing
Work with City departments and the Duwamish River Clean Up Coalition (DRCC) to build Resilience District partnerships to inform drainage and wastewater investments in South Park and prevent displacement of residents and local businesses from rising sea levels	Ongoing
Develop electrification strategy for new SPU-owned buildings	Q4 2020*
Develop electrification strategy for all existing SPU-owned buildings	Q2 2021*
Complete a consumption based GHG inventory baseline	Q2 2021
Complete GHG inventory analysis	TBD**
Complete wildfire risk assessment and management strategy to mitigate risks to water supply	Q4 2021

*Timing of electrification strategy is contingent upon Green New Deal Executive Order implementation timeline, which will be determined by OSE and the Mayor’s Office. **Timing of inventory analysis will be detailed in Solid Waste’s Waste Prevention Plan.

4. Green Stormwater Infrastructure

Focus Area	Stewarding Environment and Public Health
Goals	Develop One Water resilience
Strategy	Advance climate-resilient, nature-based, community-led solutions
Type	Investment template
SPU Branch/Line of Business	Drainage and Wastewater
Executive Sponsor	Andrew Lee
Project Manager/Lead	Tracy Tackett
Reporting	Quarterly
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Investment

Polluted stormwater runoff from roads and other polluting surfaces are recognized as the leading source of pollution in Puget Sound. While SPU and other municipalities have made great progress toward reducing combined sewer overflows, much of Seattle’s stormwater runoff continues to flow, untreated, into receiving creeks, lakes, and Puget Sound. Seattle’s drainage and combined sewer system also have areas of known capacity problems, where system size does not allow all the flow downstream creating backups and/or flooding.

Green Stormwater Infrastructure (GSI) manages urban runoff by using nature-based processes. The goals of our green infrastructure work are to:

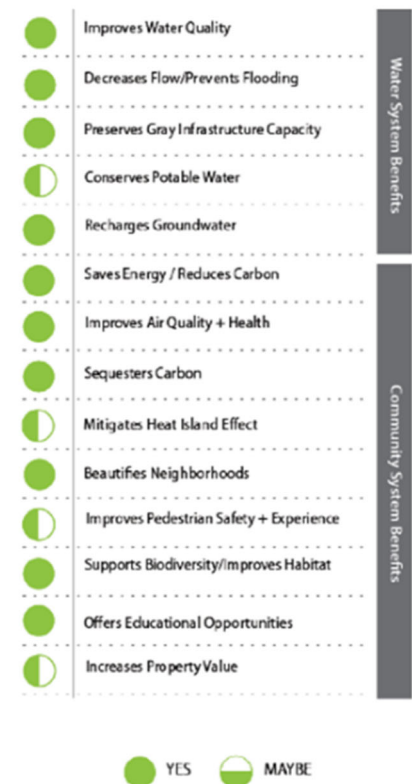
- Decrease impact of polluted runoff to water quality in our creeks, lakes, the Duwamish River, and Puget Sound;
- Reduce combined sewer overflows, flooding, and sanitary sewer overflows/back-up risk and incidence by preserving or improving system capacity; and
- Deliver a range of risk reduction plus community co-benefits with drainage and wastewater (DWW) system investments, optimizing overall value per cost, prioritizing community capacity building/co-creation, and inspiring innovation and creative partnerships.

See Figure 1: GSI Benefits Summary.

This work is aligned with the guiding principles of the SBP, with added emphasis on using current CIP projects and program development efforts to test innovations, grow staff skills, and inform approaches for informing our 50-year DWW integrated system plan, Shape Our Waters.

Over the past 20 years, SPU has established three discrete paths for GSI in Seattle: stormwater code promotes the use of GSI as part of new and redevelopment; incentive programs provide GSI encouragements for retrofitting existing buildings on private parcels; and SPU capital programs advance GSI to manage public runoff, often in collaboration with other City departments.

Figure 1: GSI Benefits Summary



Each year specific program priorities are established for delivery within the three paths above, based on current projects and partnership opportunities, to optimize outcomes delivered by the initiative. In the 2021-2026 timeframe, we will deepen our focus on expanding green infrastructure in Seattle in these four areas:

1. **Expanding the toolbox.** Mainstream new and innovative technologies and design approaches and delivery models.
2. **Growing partnerships.** Build innovative cross-sector GSI partnerships, including “beyond code” innovations with real estate developers, co-purchasing and developing land with the Seattle Parks Department, and/or growing regional knowledge and relationships to help drive private investment. In addition to allowing for more holistic approaches, partnerships can help lower installation costs as well as provide long-term operation and maintenance cost savings.
3. **Supporting community.** Explore leveraging our investments to support a broader set of community outcomes including public health and wellness, workforce development and green jobs, safe and walkable neighborhoods, internships and career pathways for youth, clean air and water, and access to healthy food.
4. **Removing barriers.** Resolve policy barriers and grow knowledge base to clear the way for cost-sharing partnerships, new delivery models, and an expanded compliance toolbox.

Through this work we will continue to improve for faster, broader implementation of GSI.

Additional web-based program information sources:

- www.700milliongallons.org
- www.seattle.gov/utilities/environment-and-conservation/projects/green-stormwater-infrastructure

Part 2. Targeted Commitments and Performance Measures

Targeted Commitments	Performance Metrics	Performance Measure
Lead Seattle in achieving community-wide goal to grow GSI implementation	Gallons of runoff managed annually with GSI	By 2023 manage 510 million gallons of runoff annually with GSI*

*Note: this target is based on SPU’s incremental step towards meeting the 700 million gallons goal set by the Mayor’s Office several years ago. The target is the same as SPU’s current target and no changes are proposed to this metric. The target is purposefully a combined metric that highlights how SPU leverages development requirements and other external partnerships to increase overall capital investment.

Part 3. Financial Summary

Funding for this program is anticipated to continue at previous levels.

Current CIP efforts implementing priorities within this investment area are summarized below.

- **Natural Drainage System (NDS) partnering program.** This capital program achieves the water quality goals in creek basins identified in the Strategic Business Plan to Protect Seattle’s Waterways (requirement within our consent decree). The program plans, designs and builds bioretention within the rights-of-way of the Thornton, Longfellow, and Piper’s Creek watersheds to manage flow and provide water quality treatment for urban runoff. The program will achieve goals through a portfolio of projects that includes SPU-led capital projects, and SPU funding contributions to partner-led projects.
- **Green Infrastructure in Urban Villages program.** This capital program was developed at City Council’s request and funded by a budget increase in the 2018-2023 SBP. The program will provide drainage and wastewater system improvements in urban villages and urban centers. These dense neighborhoods present greater challenges for building green infrastructure, but they also present greater opportunities for partnering and co-benefits. The program will achieve goals through a

portfolio of projects that includes SPU-led capital projects, SPU funding contributions to partner-led projects, and city-wide programmatic approaches.

- **Incentives programs.** These programs incentivize voluntary GSI retrofits on private property in high priority areas. They include the existing RainWise program, and a new, performance-based contract approach intended to launch in 2021. In addition to resource efficient delivery or stormwater management priorities, incentive programs strive to cultivate new sector-based partnerships, integrate racial equity outcomes, and leverage SPU investment to attract more complete project funding.
- **Future GSI partnering (primarily 2024-2026 CIP work).** Continue project implementation, in alignment with initiative goals and the Shape Our Water Plan through a portfolio of projects that includes SPU-led capital projects, SPU funding contributions to partner-led projects, and city-wide programmatic approaches. This work will focus on areas with partnership alignment.

Operating budget reflects the GSI asset management budget. GSI operations and maintenance is implemented to support career pathways for our at-risk communities into long term maintenance jobs. SPU’s approach includes contracting with Seattle Parks and Recreation’s Seattle Conservation Corps (SCC), a state-recognized pre-apprenticeship program. The SCC equips members of residents experiencing homelessness with paid apprenticeships in construction fields, from bricklaying to carpentry to plumbing.

Program Title	Green Stormwater Infrastructure						
(\$000's)							
	DRAINAGE & WASTEWATER						
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	\$1,100	\$1,200	\$1,200	\$1,200	\$1,300	\$1,300	\$7,300
Baseline Capital**	\$18,100	\$30,700	\$27,700	\$21,300	\$17,100	\$18,600	\$133,500
Total Baseline	\$19,200	\$31,900	\$28,900	\$22,500	\$18,400	\$19,900	\$140,800
O&M Increase	—	—	—	—	—	—	—
Capital Increase	—	—	—	—	—	—	—
Total	\$19,200	\$31,900	\$28,900	\$22,500	\$18,400	\$19,900	\$140,800
FTEs Added/Changed	—	—	—	—	—	—	—

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

SPU strives to implement a large portion of our GSI portfolio through partner-led projects, including community-initiated projects, private development, and park improvements. Partnership projects are desired because they achieve stormwater goals more cost effectively in the long term. When the GSI in Urban Villages Program was funded through the 2018 Strategic Business Plan, our geographic boundary for potential partnerships expanded, increasing our ability to partner in GSI implementation. However, it is often challenging to align opportunities with external partners. Program outreach and policy barriers to funding partnership projects resulted in slower than anticipated project partnerships through the GSI in Urban Villages Program.

Primary risks and risk reduction strategies for the next three to six years include:

- **Partner project identification.** For SPU to partner on projects led by others, the project must be in an SPU drainage/wastewater priority basin, have room to build GSI, and have a schedule that aligns with SPU. SPU will increase partnership projects through a new performance-based contract approach launching in 2021. This program will expand our partnerships to more community-based organizations and increase partnership on private property in many areas of the city.
- **Resources.** Exploration of partnership opportunities and development of policy guidance that removes barriers to partnership is staff intensive. Internal resource needs will be met through existing SPU staff, supplemented with external support. The GSI program is increasing internal staff capacity by growing the knowledge of existing staff who are new to the GSI concepts but who can allocate increased time to these efforts. External support has also been secured in 2020 via a GSI program support services contract.

Part 5. Alternatives Considered

All capital programs within this investment have undertaken their own Race and Social Justice Toolkit processes to inform their goals and objectives. Each has incorporated strategies to prioritize SPU investments in racial equity priority areas, and to promote partnerships and capacity with organizations that represent communities of color, support equitable job growth, and/or address environmental justice priorities.

The GSI initiative strives to embed the following environmental justice and service equity considerations into all the work we do by:

- Utilizing current population and place data to design programs for and with those most impacted;
- Maximizing community ownership of decision-making and center community leadership, narrative, perspective, and priorities;
- Taking steps to transform racially unjust economic structures at our unique points of leverage, such as: delivering our investments in ways communities of color can leverage additional outcomes or resources, addressing unequal community capacity/readiness to engage, elevating projects and programs that are responsive to Black, Indigenous, and People of Color (BIPOC) community priorities, and designing investment approaches that do not exacerbate displacement;
- Integrating program elements that explicitly prioritize youth development opportunities, job opportunities, contracting opportunities, and/or entrepreneur/business development opportunities in BIPOC communities; and
- Partnering with existing BIPOC-led decision-making body/bodies to ensure programs and projects remain relevant and responsive to community priorities.

5. Waste Diversion

Focus Area	Stewarding Environment and Public Health
Goals	Advance Zero Waste circular economy
Strategy	Reduce materials and carbon pollution
Type	Initiative template
SPU Branch/Line of Business	Solid Waste
Executive Sponsor	Jeff Fowler
Project Manager/Lead	Susan Fife-Ferris
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026 ** **Continued Base Funding thru 2022. For 2023 and beyond, SPU cannot fully predict staff and funding needs. Depending on extended producer responsibility (EPR) systems legislated and put in place over the next few years, ratepayers will have increased access to environmentally and socially improved options but minimal or no rate decrease, or, if EPR for printed paper and packaging is enacted, the rate payer costs of collecting and processing those materials will be significantly reduced, which may ultimately be able to be passed onto the rate payers. One main reason is that SPU would no longer be subject to market risk with commodity values fluctuation.
Last Update	January 2021

Part 1. Summary of the Initiative

SPU is an internationally recognized leader in recycling and composting, having worked for decades to build a strong diversion ethic for recyclables and organics in Seattle. It is critical to continue our focus on waste diversion to maintain and grow that ethic and associated behaviors. SPU waste diversion work aims to reduce the amount of food waste created and support statewide food waste reduction goal of cutting food waste by 50 percent by 2030. Our extended producer responsibility efforts engage producers in developing environmentally sound and socially responsible solutions for the end-of-life management of their products. In addition to these efforts, SPU will focus on targeting contamination, improving the quality of recyclables and the quality of composting waste diversion streams, and expanding opportunities for self-haul and construction waste salvage.

Part 2. 2021-2023 Commitment

Major Milestones	Timing
Work with state and regional partners to finalize a state-wide framework for extended producer responsibility	2022
Increase food rescue innovation partnership work	2021-2023

6. Waste Prevention

Focus Area	Stewarding Environment and Public Health
Goals	Advance Zero Waste circular economy
Strategy	Reduce materials and carbon pollution
Type	Initiative template
SPU Branch/Line of Business	Solid Waste
Executive Sponsor	Jeff Fowler
Project Manager/Lead	Susan Fife-Ferris
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026 ** **Continued, base thru 2022. For 2023 and beyond, SPU cannot fully predict staff and funding needs until the Waste Prevention Strategic Plan is completed. SPU's intent is to use existing resources more efficiently based on strategic plan recommendations. SPU anticipates additional funding will be necessary to fully fund the recommendations; however, we anticipate we will be able to accomplish this without a rate impact given the overall solid waste budget.
Last Update	January 2021

Part 1. Summary of the Initiative

As work continues to maintain and grow Seattle’s waste diversion ethic and associated behaviors, SPU is looking to a similar leadership role with significant benefits by building a comparable ethic of waste prevention in Seattle. Waste prevention addresses the root cause of waste to reduce its impact. Consumption accounts for a large proportion (~42 percent) of U.S. greenhouse gas emissions. Waste prevention works by directly targeting consumption and consumer behavior. SPU will lead waste prevention planning and programs that leverage partnerships, respond to changing recycling markets, and reduce the volume of single-use plastics. Examples of waste prevention actions residents and businesses can take include: buying and using less; designing products to last longer; reducing packaging; buying used; and repairing, reusing, sharing, donating, or re-selling items so others can use them.

Waste prevention is widely recognized as the cornerstone to addressing waste and its impacts, yet there have been relatively few resources invested in cohesive planning and programs by Seattle or other governments. Waste prevention as a key strategy for SPU is particularly important as we face challenges with changing recycling markets and issues around the proliferation of single-use plastics.

Waste prevention benefits SPU customers through:

- Reducing negative environmental impacts, such as marine debris, litter, water and air pollution, and exposure to toxic chemicals;
- Increasing health benefits;
- Conserving natural resources such as water, land, energy, and fuel;
- Combating climate change impacts;
- Reducing solid waste (i.e., garbage, recycling, and compost) transportation and end-of-life management costs;
- Helping SPU customers save money by buying less, buying used, repairing items, and sharing resources within the community; and
- Leveraging partnerships.

Part 2. 2021-2023 Commitment

Major Milestone	Timing
Develop and adopt a Waste Prevention Strategic Plan and metrics	2022
Fund waste prevention innovation through SPU waste-free community grants	2021-2023

7. Customer Affordability Programs

Focus Area	Empowering Our Customers, Community, and Employees
Goals	Remove barriers
Strategy	Provide utility assistance that makes a difference
Type	Initiative template
SPU Branch/Line of Business	Corporate Policy; People, Culture, and Community
Executive Sponsor	Mami Hara
Project Manager/Lead	Kahreen Tebeau, Debra Reed SPU Customer Affordability Community of Practice
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Initiative

Over the past three years and into the next three, SPU has and will continue to take concrete action to improve our suite of programs that help keep our services affordable for lower-income customers. Our customer assistance rests on three key pillars:

- Conservation programs which help customers reduce their water consumption and bills through more efficient water fixtures and appliances;
- The Utility Discount Program which provides ongoing bill assistance to the lowest income households; and
- The Emergency Assistance Program which provides a credit of up to \$448 dollars toward one bill per year for lower-income households (or two bills per year for households with children).

These core programs are supplemented by more targeted policy tools tailored to address specific customer needs such as payment arrangements, which help customers with high bills spread payment over a longer period, and a leak adjustment policy, which helps customers who experience an unforeseen leak. Our work to improve customer assistance has included increasing Utility Discount Program enrollment through a self-certification pilot, expansion of the Emergency Assistance Program, proactive outreach to prevent shut offs, and multi-family building notification improvements. We will continue to build on these improvements in 2021-23.

Part 2. 2021-2023 Commitment

Major Milestones	Timing
Increase enrollment in the Utility Discount Program by 6,000 net new enrollees (i.e., 2000/year)	End of 2023
Increase utilization of the Emergency Assistance Program by issuing 2,400 emergency assistance credits to eligible households (i.e., 800/year)	End of 2023
Expanded financial benefit of the new SPU leak adjustment policy to 1,500 customers	End of 2021

8. Side Sewer Assistance Pilot and Implementation

Focus Area	Empowering Our Customers, Community, and Employees
Goals	Remove barriers
Strategy	Provide utility assistance that makes a difference
Type	Investment template
SPU Branch/Line of Business	Drainage & Wastewater
Executive Sponsor	Andrew Lee
Project Manager/Lead	Kevin Burrell
Reporting	Quarterly
Funding	New Investment
Last Update	January 2021

Part 1. Summary of the Investment

Side sewers are an important component of Seattle’s collective sewerage system. SPU maintains approximately 1,400 miles of sewer mainlines whereas customers are responsible for roughly 4,100 miles of pipe. Poorly maintained side sewers can lead to problems for our customers and for SPU. Unfortunately, many side sewers in Seattle are coming to the end of their useful life and most customers are unaware that they own and need to maintain them.

Each year more than 3,000 side sewer permits (those not associated with development) are issued to customers to make repairs on private property and in the right-of-way. Costs can range from several thousand dollars to many tens of thousands of dollars, especially when street and sidewalk restoration is required. Our research suggests that customers will ignore their side sewer until they experience a backup, or it completely fails. In addition, they will likely only fix what is needed instead of repairing or replacing the entire pipe. We also know that some customers do not have the resources to pay up front or finance the costs to maintain, repair or replace their side sewers.

The status quo is neither a benefit to the customer in terms of total life-cycle costs nor is it a benefit to the long-term capacity and operation of SPU’s systems. SPU uses staff time and resources responding to hundreds of emergency calls from customers each year only to find that nearly nine out of 10 times the issue stems from the side sewer. Emergency repair situations also put SPU customers at a disadvantage. Our research indicates that most customers do not understand the permitting and repair process and they are left to make significant financial decisions under duress. They most likely will opt for the least expensive fix, as opposed to the solution that will cost less over the full life of the asset.

Part 2. Targeted Commitments and Performance Measures

SPU is developing a business case with several programmatic options that will help alleviate side sewer repair costs for customers. We will also use human-centered design to test and prototype program designs and collect feedback through outreach, focus groups, and customer interviews. Using the preferred alternative(s), we will develop an implementation plan with strategies and tactics to pilot the program starting in 2021. In 2022, program design adjustments will be made based on customer surveys or interviews. The initiative would be complete with a full-scale program moving forward by the end of 2023. The program would continue in 2024 and beyond.

Major Milestones	Anticipated Outcomes	Year
Draft implementation & outreach plan Outreach materials & customer engagement Pilot test & implementation	Pilot implementation plan Program awareness Program enrollment	2021
Feedback & evaluation Refine program design, continue enrollment	Survey or interview data Program participation	2022
Full-scale program implementation	Program incentives are available to customers in the form of grants, loans, rebates, or repairs	2023 - 2026

The short-term goal is to identify and test program approaches that are of value to customers that help reduce the costs of owning and maintaining side sewers. Early and ongoing program enrollment will indicate whether the design and outreach plan were effective. Customer surveys and interviews will describe if we are meeting customer expectations and overall program design and delivery methods. Geographic and demographic information we may be able to collect will also indicate if the program design is equitable, and if further adjustments need to be made.

The long-term goal (beyond the SBP planning horizon) is to reduce customers’ full life cycle costs of owning and maintaining side sewers while also reducing the level of effort required by SPU to respond to or mitigate customer-related side sewer issues. If successful, we would expect to see changes in customer behaviors and attitudes towards maintaining side sewers, and an orientation towards being more proactive, rather than reactive. We would also look for a reduction in side-sewer related emergency calls to SPU and a downward trend in annual side sewer repair permits (not associated with development) over time.

Part 3. Financial Summary

Pilot initiation, including customer outreach, is expected to use existing staff with supplementation of consultant resources. Pilot implementation and evaluation will be resourced with a combination of existing staff, consultant contracts, and new or redeployed positions. The configuration of staffing will depend on the alternative chosen. Most of the expenditures for this program are expected to be in the form of rebates, grants and loans, or direct assistance (see alternatives in Section 5).

The financial summary below illustrates the anticipated expenditures from 2021 through 2023 which includes an initial pilot and ramping up of the program. The current plan for the pilot program is to move to baseline in 2024 with \$1M annual expenditures.

Program Title	Side Sewer Assistance Pilot and Implementation						
(\$000's)	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	—	—	—	—	—	—	—
O&M Increase	\$200	\$600	\$1,200	\$1,200	\$1,300	\$1,400	\$5,800
FTEs Added/Changed*	—	—	—	—	—	—	—

*Anticipated to redeploy from existing positions/vacancies.

Part 4. Capacity Plan to Deliver (Existing/Expanding Capital Only)

N/A

Part 5. Alternatives Considered

There are several alternatives (table below) that have been analyzed. The alternatives range from small financial incentives (rebates, grants) to side sewer repair programs which would cover customer costs for repairs in the right-of-way.

Program Alternatives	Customers Served	Annual Costs
Customer Rebates	100's	\$100,000
SPU Grants & Loans	10's	\$1,000,000
Customer Utility Insurance	100's	\$10,000,000
SPU Direct Replacement of Side Sewers	1000's	\$100,000,000

Over time, we expect that each option will reduce SPU costs related to investigating customer side sewer emergencies. One alternative proposes to use crew or crew-led contractor work which would reduce crew capacity for planning and scheduling and field work for existing core work. One option houses the program outside of SPU, so little or no change in services levels is expected. Each program design will require some level of contracted outreach support for equitable service delivery.

This program prioritizes low- and fixed-income customers. Based on preliminary analysis, potential customers for this program are likely to be historically underserved communities including communities of color and non-English speaking populations. The program options that have been identified would support all customers. However, with limited resources available, the effort would prioritize low- or fixed-income customers.

The program will also rely on consultant support to engage customers and community-based organizations to eliminate unnecessary barriers to participate.

Part 4. Capacity Plan to Deliver (Existing/Expanding Capital Only)

N/A

Part 5. Alternatives Considered

There are several alternatives (table below) that are being analyzed. The alternatives range from small financial incentives (rebates, grants) to side sewer repair programs which would cover customer costs for repairs in the right-of-way.

Program Alternatives	Customers Served	Annual Costs
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The program will also rely on consultant support to engage customers and community-based organizations to eliminate unnecessary barriers to participate.

9. SPU Support Services for the Unsheltered

Focus Area	Empowering Our Customers, Community, and Employees
Goals	Remove barriers
Strategy	Provide utility assistance that makes a difference
Type	Investment template
SPU Branch/Line of Business	People, Culture, and Community; Drainage and Wastewater
Executive Sponsor	Idris Beauregard, Andrew Lee
Project Manager/Lead	Dave Hare, Chris Wilkerson
Reporting	Quarterly
Funding	Currently funded with continued funding for 2021-2026** **Primarily City General Fund, Clean City Program with exception of RV Pump Out which is Drainage and Wastewater Funded.
Last Update	January 2021

Description:

SPU is increasing its support services for the unsheltered through the provision of cost-effective sanitation and disposal service solutions for Seattle’s unsheltered populations including trash, sharps, (i.e., used needle collection) and recreational vehicle services. This investment includes two separate investment programs as follows:

- a. Clean City–Unsheltered Solid Waste Services
- b. Drainage and Wastewater Recreational Vehicle (RV) Mobile Pump Out Program

Separate templates for each investment area are provided below.

9a. Clean City – Unsheltered Solid Waste Services

Part 1. Summary of the Investment

SPU’s Solid Waste Division delivers two unsheltered services: The Encampment Trash Program and the Recreational Vehicle (RV) Remediation Pilot.

Encampment Trash Program

The program provides both scheduled and on-call trash pick-up services to unsanctioned homeless encampments identified in partnership with Finance and Administrative Services (FAS) and Human Services Department (HSD). Sites are selected based on: safe access for vendors, safe conditions for encampment residents, ability for outreach staff to engage encampment residents, trash clearly identified as garbage and separated from any personal possessions, trash for collection located away from the encampment and on a public right-of-way, and site not immediately scheduled for HSD to remove the encampment. For both scheduled and on-call pick-ups, a contracted outreach provider works directly with the site occupants on the logistics of the pick-up site.

Currently, 12-17 unsanctioned homeless encampments are being serviced weekly, and numerous sites are serviced as needed through on-call trash pick-up service. Bulky items (e.g., couches, etc.) are picked up as part of these services.

Solid Waste RV Remediation Pilot

Starting in 2018 and continuing into 2019 and 2020, SPU conducted a pilot program to address community concerns and associated public health and safety risk associated with RVs. The City initiated the RV Remediation Pilot to remove problematic RVs and associated vehicles from the City right-of-way (ROW) and allow for safe clean-up of litter and debris.

Implementation of these efforts is led by SPU and performed by an interdepartmental team composed of Seattle Police Department, Seattle Parks and Recreation, Seattle Department of Transportation, and Seattle Finance and Administrative Services.

A series of protocols were developed to clarify the roles and responsibilities of each participating City department and guide how field staff from each should engage, provide notice, and remove RVs and vehicles that have been identified in priority areas. This includes site ranking criteria to identify six monthly priority RV locations, defined as having five or more RVs and vehicles with the highest health and safety risks. A monthly RV engagement schedule is also created and shared with internal and external stakeholders to facilitate coordination among participating departments.

Part 2. Targeted Commitments and Performance Measures

Encampment Trash Program

Target: Service 30 different unsanctioned homeless encampments annually.

As of January 1, 2020, SPU has serviced 26 different unsanctioned homeless encampments and collected 1,053,966 pounds of litter, engaged with 7,565 people, distributed 72,330 trash bags, collected 30 percent of distributed bags, and disposed of 44,948 sharps since January 2017.

Note: The program actively services between 12-17 locations weekly. Many of the locations are in place for an extended amount of time. Once the encampment moves or is cleared a new encampment is identified for weekly services.

Solid Waste RV Remediation Pilot

Target: By December 2021, service 50 RV hotspot locations. Ninety percent voluntary compliance for vehicles, towing unnecessary.

Note: This target assumes the pilot receives continuing and increased funding.

As of January 1, 2020, the RV remediation team completed 131 RV remediations in 41 neighborhoods. During the cleans 717,786 pounds of garbage were collected and 113 contaminated catchment basins were cleaned of sewage, garbage, and oil along with 102 spills. Ninety-one percent of all RVs/vehicles encountered left voluntarily. Only nine percent of all RVs/vehicles did not move and were towed or junked.

Part 3. Financial Summary

Both programs are expected to continue beyond 2020 but may be revised or expanded by the Mayor and City Council during budget deliberations.

Program Title	Clean City – Unsheltered Services						
Project Name	Encampment Trash, RV Remediation Pilot						
(\$000's)							
	SOLID WASTE						
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	\$1,800	\$1,900	\$2,000	\$2,100	\$2,200	\$2,300	\$14,000
O&M Increase	--	--	--	--	--	--	--
Total Baseline	\$1,800	\$1,900	\$2,000	\$2,100	\$2,200	\$2,300	\$14,000

Note: Programs are funded through General Fund and are not funded through utility rate.

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

Current resources are sufficient to deliver the current program and pilot. No changes in capacity are anticipated.

Part 5. Alternatives Considered

These programs are exploring several options for improved delivery.

Encampment Trash Program

- Exploring paying homeless individuals to collect and dispose garbage.
- Expand existing consultant contracts with non-profit outreach providers.
- Expand garbage collection to service 10-20 sites at any given time.
- Continue exploring options for improved sharps collection.

Solid Waste RV Remediation Pilot

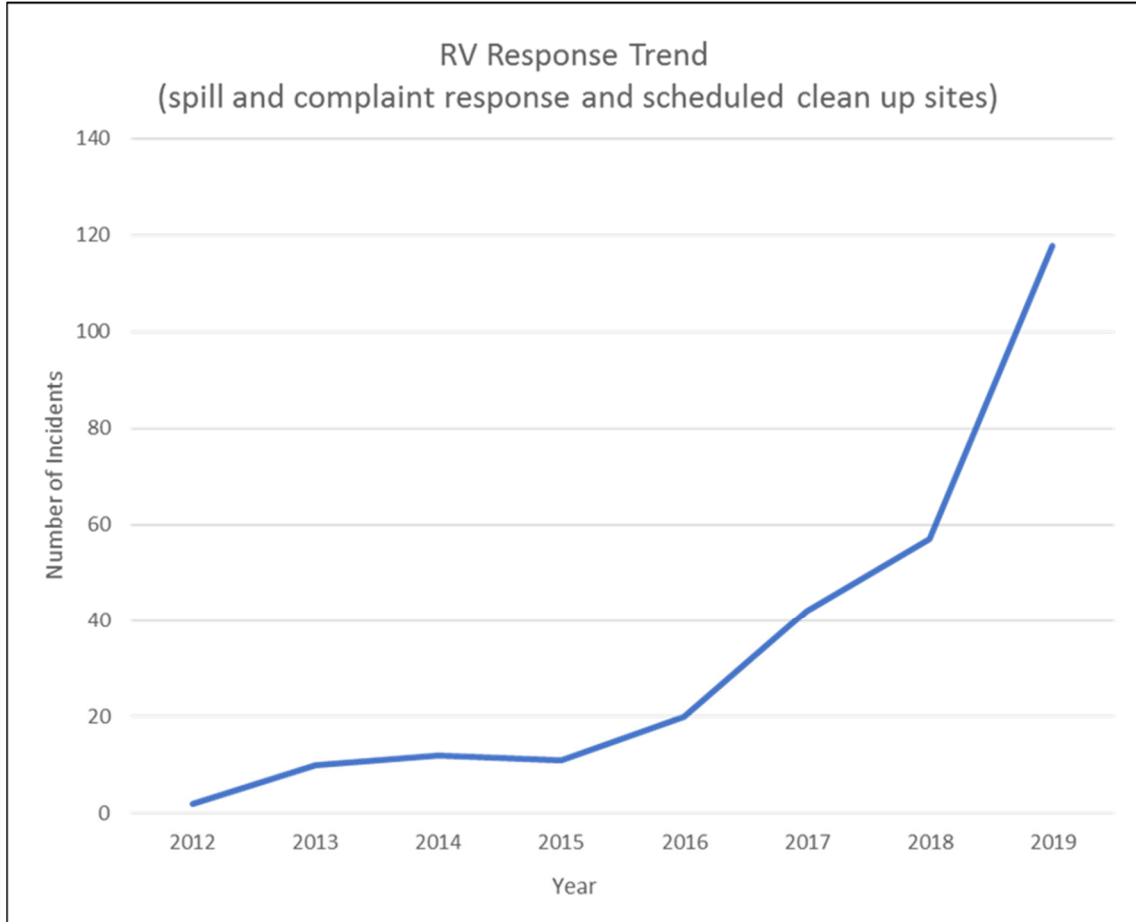
- Integrate non-profit outreach providers into the RV protocol.
- Expand (potentially) the number of pilot sites serviced.
- Explore pressure washing in clean-up activities.
- Continue collaboration with SPU's RV pump out pilot.

These programs have several race and social justice considerations including geographic distribution and very-low-income populations served. Work in these programs is done in coordination with community organizations and partner City departments including the Human Services Department. Continuous application of SPU's Race and Social Justice Initiative measures lead to refined selection criteria that help achieve service equity goals by identifying new neighborhoods in need of encampment trash and RV remediation abatement services.

9b. Drainage and Wastewater Recreational Vehicle (RV) Mobile Pump Out Program

Part 1. Summary of the Investment

Nearly half of Seattle's unhoused population live in vehicles, many in RVs. These RVs are often concentrated in encampments with minimal access to sanitary sewer or pump out removal (the nearest pump out station is 25 miles outside of Seattle city limits). Many of these RVs have broken plumbing or are unable to be moved, compounding the challenge of removing wastewater with traditional methods. RVs occupying encampments often dump waste in drainage basins, streets, or adjacent properties. Over the past several years incidents and complaints associated with this type of dumping have increased substantially (see graph that follows).



In addition to cleaning up garbage and debris at encampments, SPU’s spill response team responds with the interdepartmental clean up team and assesses whether there is evidence of contamination from sewage or other materials. If there is, the team cleans out drainage catch basins to prevent materials from entering local waterways.

SPU is also operating a pilot RV pump out program to address dumping of sewage and other contaminants that can enter the drainage system and travel to local waterways. This pilot provides wastewater pump out services to RVs and will pilot an RV dump station. Mobile pumping is averaging \$150 per vehicle per pump out which includes attempted pump outs of RVs with clogged or broken plumbing (19 percent of service attempts).

Initial estimates for this pilot program assumed funding could provide eight pump-out events per month, with each event consisting of a four-hour period during which five to eight RVs could be serviced. In total, the pilot program services between 40 and 64 RVs per month. This estimate assumes that SPU can partner with the RV remediation interdepartmental team or separately with the Seattle Police Department to guarantee SPU employee safety and to help coordinate the response. In addition, SPU is assessing the viability of a temporary and potentially permanent RV dump station in Seattle.

Part 2. Targeted Commitments and Performance Measures

For this investment, SPU commits to pilot and evaluate cost-effective RV service approaches in 2021. Upon completion of the 2020 pilot and option analysis, targeted commitments will be established.

Part 3. Financial Summary

As a part of SPU’s proposed 2021-2022 budget, the RV mobile pump out pilot is budgeted until 2022, at which time the program would be fully evaluated for continuation, including position allocation and needed services. Funding for the proposed continuation of the pilot will come from rate revenue.

Program Title (\$000's)*	RV Mobile Pump Out						
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	\$200	\$200	\$200	\$200	\$200	\$200	\$1,200
Baseline Capital	—	—	—	—	—	—	—
Total Baseline	\$200	\$200	\$200	\$200	\$200	\$200	\$1,200
O&M Increase	—	—	—	—	—	—	—
Capital Increase	—	—	—	—	—	—	—
Total	\$200	\$200	\$200	\$200	\$200	\$200	\$1,200
FTEs Added/Changed	—	—	—	—	—	—	—

*Dollars are rounded to the nearest \$100,000.

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

The pilot is being delivered with an ‘out of class’ temporary position and through contractual services. Services are delivered in conjunction with the Seattle Police Department, the City navigation team and partner non-profit organizations, including St. Vincent De Paul and REACH.

Part 5. Alternatives Considered

This pilot is exploring several options with varying ranges of cost and benefit including:

- Providing RV mobile pump out services, and
- Installing a temporary or permanent RV pump out station in Seattle.

This pilot focuses on the technical feasibility of providing alternatives to RV dumping in a limited geographic area. Individuals served by this program are very low income; however, the pilot analysis does not include collection of income, race, or household data.

10. Seeds of Resilience Impact Investment Proposal

Focus Area	Empowering Our Customers, Community, and Employees
Goals	Partner with community to maximize the benefits of SPU investments
Strategy	Give voice and power through meaningful partnerships
Type	Initiative template. If approved, Investment.
SPU Branch/Line of Business	Corporate Policy; All SPU
Executive Sponsor	Mami Hara, Paula Laschober
Project Manager/Lead	Dani Purnell, Karl Stickel SPU Seeds of Resilience Community of Practice
Reporting	Annual, until an investment proposal is approved.
Funding	TBD
Last Update	January 2021

Part 1. Summary of the Initiative

Assess viable approaches for designing, funding, managing, and evaluating a three-year pilot program that fosters community-centered, One Water and Zero Waste entrepreneurship. Investments will build water resiliency, encourage a circular economy, and grow jobs with an emphasis on supporting Black, Indigenous and People of Color (BIPOC) communities. As initially contemplated, SPU’s “seeds of resilience” impact investment program would propose to invest some of SPU’s annual operating revenue to incentivize and incubate locally led water and waste service entrepreneurship. SPU would seek to leverage and grow this investment through community partnerships eventually up to 100+ percent. To streamline program delivery, SPU would seek to administer its program through a community partner with skill in community granting and impact evaluation. The program’s investment portfolio and annual investment strategy would be established by SPU and funding partners in consultation with a stakeholder steering committee. Annual investments would be made via competitive grant processes. Applicants would also be offered coaching and support both during and after application (as appropriate). SPU impact investment would target three primary outcomes: advancement of local One Water and Zero Waste circular economy and climate adaptation, long-term water and waste service affordability, and provision of new, inclusive job opportunities for the BIPOC community.

Part 2. 2021-2023 Commitment

Major Milestones	Timing
Develop a proposal and enabling ordinance for Mayor’s Office and City Council approval.	2021
If approved, launch pilot investment program.	2022

11. Race and Social Justice (RSJ) Strategic Plan

Focus Area	Empowering Our Customers, Community, and Employees
Goals	Remove barriers; partner with community to maximize the benefits of SPU investments; invest in our employees
Strategy	Give voice and power through meaningful partnerships
Type	Initiative template
SPU Branch/Line of Business	People, Culture, and Community
Executive Sponsor	Mami Hara
Project Manager/Lead	Kathleen Baca
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Initiative

SPU’s RSJ Strategic Plan outlines a comprehensive approach to support the utility’s internal and external RSJ work. The plan is comprised of a series of actions that include updating the Race and Social Justice Toolkit, deepening staff engagement in RSJ work, increasing community engagement to advance RSJ policies and service equity, and strengthening relationships with underserved communities by building on current engagement strategies. Increased employee engagement in RSJ work will result in a more equitable work culture; increased community engagement will provide a deeper understanding of the needs of our customers and help inform policy.

The scope of the RSJ Strategic Plan also includes:

- Increase SPU’s community footprint through strategic community engagement;
- Design and facilitate SPU RSJ trainings, including train-the-trainer to build capacity of staff across the utility to facilitate discussions of race and social justice;
- Build partnerships with City departments to maximize resources for supporting and developing programs to advance racial equity across the utility;
- Support the change team, affinity groups and Seattle Silence Breakers to advance a unified vision and goals for achieving a truly equitable workforce;
- Develop a plan to increase membership in branch equity teams to increase staff engagement in RSJ and culture work; develop a companion program to engage staff not affiliated with any of SPU’s standing groups;
- Host learnings, guest speakers, and town halls to build understanding of SPU’s RSJ work among staff and community members; and
- Develop a communication plan to support the work.

Part 2. 2021-2023 Commitments

Major Milestones	Timing
Broader engagement of staff in RSJ work, increased community partnerships	End of 2023
Update and revisions of SPU’s RSJ strategic plan	Q2 2021

12. SPU Workforce Development

Focus Area	Empowering Our Customers, Community, and Employees
Goals	Invest in our employees
Strategy	Foster a more equitable workplace, work culture, and better work opportunities
Type	Initiative template
SPU Branch/Line of Business	People, Culture, and Community
Executive Sponsor	Mami Hara, Andrew Lee
Project Manager/Lead	Mary Cornelius
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Initiative

Workforce planning is an interconnected set of solutions to meet employment needs. It can include changes to culture, changes to employee engagement, and improvements to employee skills and knowledge that will help to positively influence SPU’s future success. This is important to “rebuild, retain, and recruit” the SPU workforce. Data shows that our workforce is changing and the way to stay ahead of this change is to proactively prepare, creating space for employees to stay within the SPU/ City of Seattle by growing and developing using internal programs. Equally important is using an equity and Race and Social Justice (RSJ) lens to ensure any development plan will align with the City of Seattle’s Race and Social Justice Initiative (RSJI) expectations and to provide an equity component to all aspects of the SPU development planning. The following are the areas of focus for the SPU workforce planning strategy between 2021-2023:

- Internal trainings
- Recruitment
- Mentorship
- Performance management
- Succession planning
- RSJI
- Tuition Assistance Program (TAP)

Part 2. 2021-2023 Commitments

Major Milestones	Timing
Internal trainings: develop resume building, mock interviews, and leadership excellence series	2021- 2022
Recruitment: create a diverse interview panel roster, identify, and develop community partners, conventional and non-conventional to locate top diverse applicants	2021 -2022
Mentorships: build upon existing program, establish mentor roster, and build a “shadowing” system	2021-2023
Performance management: enhance existing programming to include non-APEX/ SAM employees and incorporate an Individual Career Action Plan (ICAP) for interested employees	2021-2022
Succession planning: roll out for leaders as preparation for successors to E-Team level	2021
Tuition Assistance Program (TAP): expand program to include payments for employees with existing student loans	2021
RSJI: continued work with internal groups (Seattle Silence Breakers/ Change Team/ Environmental Justice and Service Equity) to update work products associated with maintaining equity in the workplace	2021-2022

13. Workforce Facilities Investments

Focus Area	Empowering Our Customers, Community, and Employees
Goals	Invest in our employees
Strategy	Foster a more equitable workplace, work culture, and better work opportunities
Type	Investment template
SPU Branch/Line of Business	Logistics, Drainage and Wastewater, Water
Executive Sponsor	Andrew Lee, Alex Chen, Keri Burchard-Juarez
Project Manager/Lead	Gina Galando, Leslie Webster, Alexander Mockos, Wylie Harper, Amy LaBarge, Frank Coulter
Reporting	Quarterly
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Investment

This action plan update continues but revises the funding for improvements to SPU workforce facilities to improve working conditions for frontline employees at South Operations Complex, North Operations Complex, Cedar Falls Phase 2 as well as improved space utilization efficiencies at the Seattle Municipal Tower (SMT). These four facilities projects were previously funded as part of the 2018-2023 SBP.

Reevaluating SPU’s Facility Needs

The 2018 original project estimates were based on preliminary estimates. After further analysis, the scope, schedule, and budget of the facility projects have been revised with three refined objectives for this work:

1. Update the facility master plan to provide a revised delivery strategy for overall utility facility needs based on current conditions.
2. Study and reevaluate SMT space utilization, post coronavirus. Based on our recent experience with large portions of our workforce telecommuting, we will develop a business case for reducing SMT floor utilization and implementing space reconfiguration projects to reduce maintenance and operating costs.
3. Create a capital and funding phased plan that achieves the lowest possible rate impact while delivering necessary facility assets.

Project Summaries

North Operations Complex: Includes the planning, design and renovation of the current facility including seismic and functional improvements to support the water line of business operations. The project is currently in options analysis.

South Operations Complex: Includes facility improvements that address maintenance issues and support operational efficiencies. Specifically, the project will address steel beam corrosion and roof leaks as well as failing utilities in the building and provide sewer grit and stormwater wet spoils dewatering, dry spoils and materials storage, and equipment decontamination and maintenance areas at the facility.

Cedar Falls Phase 2: Includes planning, design, and construction to replace shop space, fleet maintenance bays, equipment storage, materials, and tool storage buildings to support water line of business operations. The project is currently in scoping and does not include upgrades to the 100-year-old power grid, which is being done in coordination with Seattle City Light.

SMT reconfigurations: This project will seek to consolidate several floors of SMT occupied by SPU with the goal of reducing SPU’s overall footprint and facility costs. The project will include the development of a business case that

considers expanded use of telecommuting and SMT renovations that facilitate more collaborative and temporary workspaces.

Facilities Master Plan. Update the current facility master plan to provide a revised delivery strategy for overall utility facility needs based on current conditions.

Part 2. Targeted Commitments and Performance Measures

Major Milestone	Targeted Commitment
Facility Master Plan Strategy Update	Complete by 2023
Planning and design <ul style="list-style-type: none"> • North Operations Complex • South Operations Complex • Cedar Falls Phase 2 • SMT Reconfiguration 	Complete by 2023 Complete by 2021
Construction <ul style="list-style-type: none"> • North Operations Complex • South Operations Complex • Cedar Falls Phase 2 • SMT Reconfiguration <ul style="list-style-type: none"> ○ Phase 1 Floor Consolidation/Improvements ○ Phase 2 Floor Consolidation/Improvements 	Complete 2026 Complete 2024 Complete 2025 Complete by 2024 Complete by 2022 Complete by 2024

Part 3. Financial Summary

Continue program investments with revised funding. After master planning, options analysis, and business cases are developed, project budgets will be updated with refined estimates. The following financial plan provides the current revised estimate for facilities projects.

Program Title (\$000's)*	SPU Workforce Facility Investments						
	2021	2022	2023	2024	2025	2026	TOTAL
North Operations Complex	\$500	\$500	\$3,000	\$5,000	\$5,000	—	\$14,000
South Operations Complex	\$3,700	\$13,900	\$9,100	—	—	—	\$26,700
Cedar Falls Phase 2	\$200	\$500	\$1,800	\$15,000	\$8,000	\$4,000	\$29,500
SMT Reconfiguration	—	—	\$1,500	\$1,500	—	—	\$3,000
Facilities Master Plan*	\$200	\$300	—	—	—	—	\$500
Total Baseline Capital**	\$4,600	\$15,200	\$15,400	\$21,500	\$13,000	\$4,000	\$73,700

*The Facilities Master Plan is a new project with funding reallocated from existing facility projects.

**Total planned capital spending decreased compared to the prior plan.

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

The delivery model for major above ground facility construction and associated SPU resource plan will be a primary outcome of the facility master plan. Current projects in flight are fully staffed and will be using a combination of SPU and contracted resources to complete each phase.

Part 5. Alternatives Considered

Several options were considered and vary by project:

- Continue to scope projects at higher levels of investment than the lower revised estimate; SPU has opted to pursue least cost options to reduce customer rate impact.
- Continue to use current facilities without major investment; this option does not support operations adequately and would like impact safety, productivity, site resilience, morale, and environmental impacts.

14. Accountability and Affordability Strategy Plan

Focus Area	Strengthening Our Utility’s Business Practices
Goals	Enhance ratepayer affordability
Strategy	Deliver on accountability and affordability commitments
Type	Initiative template
SPU Branch/Line of Business	Corporate Policy, Corporate Performance, Finance & Administration, Project Delivery and Engineering, All SPU
Executive Sponsor	Mami Hara, Paula Laschober, Keri Burchard-Juarez, Andrew Lee
Project Manager/Lead	Dani Purnell, Natasha Papsoueva, Karl Stickel, Tanya Treat, Ellen Stewart SPU Accountability and Affordability Community of Practice
Reporting	Annual
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Initiative

Improving rate affordability and accountability to our customers is paramount. While SPU is making progress in managing rates, the affordability of drinking water, wastewater, and stormwater is a challenge in Seattle and for utilities nationwide. As we confront increasing costs of living in housing and other sectors and the increase in economic inequality among our residents, the affordability of SPU’s services becomes even more critical.

Our strategy outlines a holistic approach to deliver essential utility services, keep rate increases lower, focus corporate culture on continuous improvement, and make investments that deliver multiple benefits to the community. The initiative includes a series of actions that improve how SPU delivers service including the following:

- **Capital project planning and delivery.** Increase the speed and efficiency of planning and delivering of capital improvement projects while maximizing community value.
- **Process efficiency improvements.** Develop a culture of continuous improvement to enhance value to our customers and improve efficiency and performance.
- **Financial management.** Streamline and integrate budget and financial planning practices and align investments with the long-range strategic goals of SPU and the community.
- **Regulatory alignment.** Reduce the cost and risk of meeting regulatory demands while ensuring public health and safety, environmental protection, a vibrant local economy, and social equity outcomes.
- **Alternative funding and partnerships.** Improve SPU’s ability to partner with organizations, institutions, and companies to leverage broader benefits, reduce costs, share risks, and improve outcomes for the communities we serve.
- **Customer assistance.** See separate Customer Assistance Programs Initiative.

Part 2. 2021-2023 Commitments

Major Milestones	Timing
Implementation of actions across six practice areas	End of 2023
Update and revisions of actions by practice area	Q1 2021 Q1 2022 Q1 2023

15. Risk and Resilience Strategic Plan

Focus Area	Strengthening Our Utility’s Business Practices
Goals	Manage assets and risks optimally
Strategy	Improve how we manage risk and invest in system assets and infrastructure
Type	Initiative template
SPU Branch/Line of Business	Finance and Administration, All SPU
Executive Sponsor	Mami Hara, Paula Laschober
Project Manager/Lead	Ned Worcester, Dan Ward
Reporting	Annual
Funding	<input checked="" type="checkbox"/> Currently funded with continued funding for 2021-2026 <input type="checkbox"/> Currently funded with increased funding for 2021-2026 <input type="checkbox"/> New Investment
Last Update	January 2021

Part 1. Summary of the Initiative

SPU’s ability to provide customers with safe, reliable, and affordable services requires a forward-looking risk and resilience strategy to maximize opportunities, mitigate negative risk, and plan for both sudden and gradual impacts that affect our ability to serve our community. As we plan for future resource use, and affordability concerns shape daily discourse, a forward-looking risk and resilience strategy is essential to providing maximum benefit to our customers, the environment, and our region. Sound risk management allows SPU to handle uncertainty and identify associated opportunities, enabling us to realize operational efficiencies, maximize financial gain, and achieve maximum benefit for customers.

This strategy focuses on working with business units to assess risk and resilience; identify opportunities and reduce negative impacts; and develop tools to support maximum benefit to SPU in areas such as equity, finance, legal, security, and asset management. How to approach risk, how to make decisions involving uncertainty, and how to address, adapt to, and recover from factors that might disrupt our ability to provide critical utility services will be a key emphasis. The work will also center around building partnerships within and outside SPU, mapping interdependencies, and developing action items supporting increased resilience. Major utility outcomes include:

- **Maximize opportunities.** Encourage and facilitate measured risk-taking that encourages innovation, equity, and creativity.
- **Invest in resilience.** Reduce vulnerabilities, increase capabilities, and improve SPU’s ability to adapt to expected and unexpected disruptions, changes, and opportunities.
- **Provide legal and regulatory leadership.** Position SPU to stay ahead of changing regulatory requirements, identify future legal issues, and enhance our ability to respond to legal challenges.
- **Focus on community.** Emphasize collaborative planning and relationships across SPU, other City departments, and the public.
- **Foster risk & resilience culture.** Guide organization-wide risk and resilience decisions and culture, such as helping work groups identify and chart a course of action.

Part 2. 2021-2023 Commitments

Major Milestones	Timing
Create and support use of risk and resilience tools to help decision-making, maximize opportunities, and reduce negative risk.	Q4 2021
Work with each SPU line of business and branch to complete ongoing risk assessments, map interdependencies, and develop action plans to increase resilience to identified and future hazards.	Q4 2021, Ongoing
Develop and continuously update (at least quarterly) a risk register highlighting major cross-cutting risks across SPU.	N/A-Ongoing

16. Water System Seismic Resilience

Focus Area	Strengthening Our Utility’s Business Practices
Goals	Manage assets and risks optimally
Strategy	Improve how we manage risk and invest in system assets and infrastructure
Type	Investment template
SPU Branch/Line of Business	Water, Project Delivery and Engineering
Executive Sponsor	Alex Chen, Keri Burchard-Juarez
Project Manager/Lead	Bill Wells
Reporting	Quarterly
Funding	Currently funded with increased funding for 2021-2026
Last Update	January 2021

Part 1. Summary of the Investment

Earthquakes pose a risk to our water system and therefore seismic resilience planning is essential. SPU recently completed a water system seismic study aimed at increasing SPU’s resilience against earthquakes. The study estimated that during a catastrophic earthquake, SPU would completely lose water pressure within 16 to 24 hours and it would take between 10 to 25 days to restore 50 percent of service. The study also found it is likely to take more than two months to reach the 99 percent plus service restoration level. Seismic upgrades could significantly cut down the time needed for service restoration. By 2045, 10 to 30 percent of SPU’s customers would not even lose service after a catastrophic earthquake. By 2075, the percentage of customers that do not lose water service would rise to 40 to 50 percent. In a hundred years or more, only isolated pockets of water service outages would occur. SPU is beginning to implement the study recommendations.

The short-term strategy is to implement short-term measures, such as improving emergency preparedness and response planning, and adopting isolation and control strategies, that can be used to mitigate the effects of seismic damage until expensive long-term infrastructure improvements can be made. The cost of these short-term measures would be on the order of \$40 million over the next 15 to 20 years.

The long-term strategy is to use proven technologies and strategies that water utilities in the United States and Japan are implementing to mitigate and/or prevent water system damage. They include installing earthquake-resistant pipe, upgrading existing facilities to meet current seismic requirements, and ensuring there is adequate water storage to provide emergency water after a major earthquake. Implementing these technologies is expensive and could take decades. Long-term infrastructure improvements will cost over \$800 million over approximately the next 50 years, followed by further investment for decades.

Part 2. Targeted Commitments and Performance Measures

Milestones	Anticipated Outcomes	Year
Implement many of the short-term recommendations of the seismic study, such as procuring additional emergency repair materials for pipes that may fail after an earthquake and installing additional valving to reduce water outages after an earthquake.	Improved seismic resiliency	2021-2023

Part 3. Financial Summary

The current six-year combined Capital Improvement Plan (CIP) forecast includes short-term and long-term strategies.

Seismic upgrades were recommended over the course of 50 years, with the highest risk and consequence items coming first. The seismic study Executive Summary shows the 50-year projections in a table on the last page. The 50-year projections are intended to be a starting point for budgetary planning, understanding that there may be changes made over the years. Since seismic upgrades are considered part of the overall CIP / asset management planning process, ongoing and continuous analysis of upcoming projects and programs may result in shifts in project prioritization – consistent with all CIP planning for SPU’s water line of business.

Six-year CIP projections are shown below. The numbers shown represent planning-level estimates that will be refined heavily after a detailed options analysis is completed for each project, which is typical of our CIP process.

Higher risk and consequence upgrades will generally go through options analysis tending towards higher cost, lower risk solutions. Lower risk and consequence upgrades will generally go through options analysis tending towards lower cost, higher risk solutions. Balancing system reliability as well as rate affordability is a key consideration, as it is for all CIP projects and planning.

Program Title (\$000's)*	Water Seismic Resilience Capital Improvements						
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline Capital	—	—	—	—	—	—	—
Distribution System Seismic Improvements	\$1,500	\$2,250	\$4,000	\$2,000	\$4,500	\$4,500	\$18,750
Transmission System Seismic Improvements	\$1,600	\$2,400	\$3,800	\$14,700	\$13,000	\$18,500	\$54,000
Total Baseline Capital	\$3,100	\$4,650	\$7,800	\$16,700	\$17,500	\$23,000	\$72,750

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

Delivery of these investments will be done through existing staff and contractual resources. Between these two resources, sufficient capacity exists to deliver this investment.

Part 5. Alternatives Considered

We considered alternatives that accelerated the seismic funding to less than 50 years. However, given the prioritization of various projects and the potential rate impacts, the recommended alternative was to spread the costs over a longer duration, with higher priority projects going first.

The projects are spread out throughout the city limits (and beyond), focused on areas of potential seismic hazard. Each upcoming capital project will complete a Race and Social Justice Toolkit to assess any potential race and social justice implications.

17. Water Asset Management and Opportunity Work

Focus Area	Strengthening Our Utility’s Business Practices
Goals	Manage assets and risks optimally
Strategy	Improve how we manage risk and invest in system assets and infrastructure
Type	Investment template
SPU Branch/Line of Business	Water, Project Delivery and Engineering
Executive Sponsor	Alex Chen, Keri Burchard-Juarez
Project Manager/Lead	Bill Wells
Reporting	Quarterly
Funding	Currently funded with continued funding for 2021-2026
Last Update	January 2021

Description: This program focuses on asset management and enhanced investment in SPU’s gaining drinking water infrastructure and deferred maintenance to reduce long term system costs. This investment includes the following separate investment programs:

- a. Water System Overall Asset Management
- b. Hydrant and Valve Maintenance
- c. Water Asset Transportation Opportunity Projects

Separate templates for each investment area are provided below.

17a. Water System Overall Asset Management

Part 1. Summary of the Investment

SPU owns and operates a regional water system comprised of a vast array of assets ranging from dams, treatment plants, pipes, storage tanks, pump stations, hydrants, and more. The original water system was put into service in 1901 and has been continually expanded and improved. Many assets are aging; the average age of distribution pipes is approximately 70 years old. Investment in the repair, rehabilitation, and replacement of Seattle’s aging water system is critical.

Asset management is a systematic framework for determining those repair, rehabilitation, and replacement investments. Asset management is performed from two perspectives. The first is to look at each asset class and to catalog all assets and their condition, establish what levels of service the assets are providing, rank assets by criticality, assess the optimal blend of O&M and CIP for the assets to result in lowest life-cycle cost, and plan for O&M and CIP funding to support the management of the assets. The second perspective is to take a high-level, strategic approach to managing all asset classes together, since together they comprise the entire drinking water system. SPU has completed asset management plans for all water system asset classes.

Part 2. Targeted Commitments and Performance Measures

Major Milestones	Anticipated Outcomes	Year
Complete 1 mile per year of planned water main replacement	Improved water distribution system	2021-2023
Complete 650 replacements per year of water service line replacements	Improved water distribution system	2021-2023
Complete planning and evaluation for rehabilitation for 2 water tanks	Improved water distribution system	2021-2023
Complete 2,500 feet per year of new cathodic protection on transmission pipes	Improved water transmission system	2021-2023
Complete the Tolt water supply valve 15 replacement project	Improved water supply system	2023

Part 3. Financial Summary

The six-year combined CIP forecast already includes a balanced prioritized program for which assets should be replaced in the next six years. In the next three years, SPU will continue to monitor asset condition and criticality, and will adjust the next six-year CIP.

Part 4. Capacity plan to Deliver (Existing/Capital Only)

Resource capacity planning and delivery for managing and maintaining water assets is performed at the program level and adjusted annually based on need.

Part 5. Alternatives Considered

The asset management approach considers many alternatives for each different type of asset and for the system. SPU typically uses the lowest life cycle cost approach that is also sustainable is the approach taken.

Future capital projects that are recommended from the asset management approach will complete a Race and Social Justice Toolkit to assess any potential race and social justice implications.

17b. Hydrant and Valve Maintenance

Part 1. Summary of the Investment

This investment dedicates two crews (four positions total) to perform essential maintenance of the water system and is a continuation of an existing program. Work includes hydrant and valve maintenance. Over time, SPU has had to scale back this work and reallocated staff to competing priorities, including meeting the needs of new development (new water service taps) and other capital programs leaving a backlog of system maintenance work.

Hydrant maintenance can be divided into minor work orders for hydrants that still function and major work orders for hydrants that are out of services. For minor work orders, there is a current backlog of approximately 7,000 which continues to grow. For major work orders, there are about 30 out-of-service hydrants in any given month, with new hydrants reported out of service approximately equaling the number of hydrants being put back in service.

Valves can be divided into less critical and critical valves. Less-critical valves include approximately 20,500 valves for large water service lines, 19,000 valves for fire hydrant branch lines, and 16,000 valves for distribution piping isolation. Critical valves, which number approximately 2,000, are typically larger diameter valves

and those most critical to performance of the water system. SPU is not performing any valve maintenance currently, except for reactive maintenance in response to failed valves. For critical valves, the goal for preventive maintenance is a five-year inspection interval.

Part 2. Targeted Commitments and Performance Measures

Major Milestones	Anticipated Outcomes	Year
Reduction in backlog of minor maintenance work orders for hydrants	Improved water distribution system	2021-2023
Reduction in backlog of major maintenance work orders for hydrants	Improved water distribution system	2021-2023
Reduction in backlog of maintenance work orders for critical valves	Improved water distribution system	2021-2023

Part 3. Financial Summary

This is a continuation of the existing program; funding is expected to continue at current levels, adjusted for inflation.

Program Title (\$000's)*	Maintenance of the Water Distribution System						
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	\$550	\$560	\$580	\$590	\$600	\$610	\$3,490
O&M Increase	—	—	—	—	—	—	—
Total O&M	\$550	\$560	\$580	\$590	\$600	\$610	\$3,490

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

Delivering this work requires hiring for currently vacant positions. Over the past few years, hiring for these vacancies has been difficult and SPU has not been able to attract qualified water pipe workers in the last several hiring processes. To address this issue SPU plans to:

- Broaden the recruitment process to expand the number of applicants.
- Consider use of private contractors to help catch up on deferred maintenance, as a short-term fix.
- Our goal is to hire the four FTEs in 2020, with their major focus on reducing the maintenance backlog through 2020-2023. After hiring these FTEs, the plan is to have them reduce the maintenance backlog and track their efforts over time so that we can better understand the staffing needs over a longer term.
- Hire an apprentice class in 2020 to develop more qualified water pipe worker candidates.

Part 5. Alternatives Considered

SPU considered an alternative of hiring more FTEs to catch up with the backlog faster. However, given the hiring difficulties, this alternative was not seen as feasible.

The water distribution system is evenly distributed throughout the city. Therefore repairs, and any race and social justice impacts, are evenly distributed geographically.

17c. Water Asset Transportation Opportunity Projects

Part 1. Summary of the Investment

Transportation projects create impacts to SPU infrastructure through unavoidable conflicts, damage from construction, and impaired/more costly access. They also provide opportunities for SPU to improve service and replace failing infrastructure at reduced costs through shared pavement restoration, mobilization, and traffic control costs. SPU has identified three categories of transportation project investments: 1) asset protection and rehabilitation, 2) impact-based replacements, and 3) opportunity replacements. For each transportation project, SPU evaluates existing asset conditions, project impacts, and opportunities to determine the appropriate level of investment.

This item focuses on CIP funding for “opportunity projects,” which are projects for water system improvements that take advantage of the street being opened for roadway projects to save cost and impact of opening the street again later. SPU has planned for all opportunity projects with SDOT since 2017.

Part 2. Targeted Commitments and Performance Measures

SPU’s commitment for opportunity projects reflects that SPU is not in control of project schedules because they are effectively Seattle Department of Transportation (SDOT) projects. In recent years, several large opportunity projects were delayed by SDOT.

Major Milestones	Anticipated Outcomes	Year
Review every SDOT project for opportunities for water distribution system improvements and report on actual opportunities that arose, which will inform the anticipated projects and budget	Improved water distribution system	2021-2023
Report on significant budget and schedule deviations larger than 25 percent, which will help determine if we have sufficient resources to take advantage of potential future opportunities	Improved water distribution system	2021-2023

Part 3. Financial Summary

The table below summarizes future opportunity projects with SDOT over the next six years, including Madison Bus Rapid Transit and East Marginal Way Heavy Haul Corridor which were previously delayed. As noted above, SPU is not in control of the schedule of opportunity projects.

Program Title	Water Asset Transportation Opportunity Projects						
(\$000's)*							
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline Capital	—	—	—	—	—	—	—
Total Baseline Capital	\$9,200	\$16,400	\$9,400	\$2,700	\$2,600	\$2,600	\$42,900

Part 4. Capacity Plan to Deliver (Existing/Capital Only)

SPU plans to continue to plan projects in coordination with SDOT, and to follow the schedules established by SDOT.

Part 5. Alternatives Considered

We are still recommending the path forward from the last Strategic Business Plan. We did not consider the alternative of discontinuing potential opportunity projects, given the potential cost benefits, and reduced public disturbance of working on water main projects with SDOT when streets are already open for construction.

SPU relies on SDOT to evaluate the race and social justice considerations for their projects. In general, transportation projects occur throughout the city and therefore the impacts, both short-term construction impacts and long-term transportation benefits, occur throughout the city.

18. DWW Asset Management Work

Focus Area	Strengthening Our Utility’s Business Practices
Goals	Manage assets and risks optimally
Strategy	Improve how we manage risk and invest in system assets and infrastructure
Type	Investment template
SPU Branch/Line of Business	Drainage and Wastewater, Project Delivery and Engineering
Executive Sponsor	Andrew Lee, Keri Burchard-Juarez
Project Manager/Lead	Tara Wong-Esteban
Reporting	Quarterly
Funding	Currently funded with increased funding for 2021-2026 New Investment
Last Update	January 2021

Description: The average age of our drainage and wastewater infrastructure is over 80 years old. Under the current investment levels, we are likely to experience more asset and facility failures which lead to overflows, impacts to public health and safety, and risk SPU’s ability to meet regulatory requirements. Increased investment in the rehabilitation of our sewer pipe, pump stations, combined sewer overflow outfalls, and force mains is needed, as well as developing a renewal program for the City’s drainage system.

This investment includes three separate investment programs as follows:

- a. Expansion of Sewer Rehabilitation Work
- b. Expansion of Drainage Rehabilitation Work
- c. Wastewater Pump Stations, Force Mains, and CSO Outfall Rehabilitation

Separate templates for each investment area follow.

18a. Expansion of Sewer Rehabilitation Work

Part 1. Summary of the Investment

The average age of our wastewater infrastructure is over 80 years old. Increased investment in the repair, rehabilitation and replacement of Seattle’s aging sewer pipes is needed. This activity helps prevent sewer overflows, minimizes public health and safety risks, and meet regulatory requirements. The additional funding will be used to complete more contractor-constructed full-dig replacement, open-cut spot repair, and full-pipe lining projects. This funding will also be used to increase in-house crew capabilities to perform full-pipe lining and open-cut spot repair projects.

The recommendation for increased investment in sewer rehabilitation is based on the results of a capital investment analysis completed in 2019. The analysis modeled future system need given current pipe condition, pipe degradation, and rehabilitation funding and evaluated investment scenarios on their ability to mitigate the current backlog of pipes at high risk of failure and move towards more proactive renewal.

Part 2. Targeted Commitments and Performance Measures (Next Three Years)

From 2018-2019, SPU averaged rehabilitation on 6.7 miles of pipe annually. The goal to rehabilitate 23.5 miles of pipe from 2021-2023 equates to an average of 7.8 miles of rehab per year, which is an increase of about 16 percent over current achievement rates. It does not match the funding increase of 33 percent because some projects, like a full sewer pipe replacement, rehabilitate less pipe and are more expensive. Funding also covers the cost of additional resources to manage, assess and deliver additional work, and includes the addition of our lining crew.

Targeted Commitments	Performance Metrics	Definition of Success
Reduce and eliminate backlog of high-risk pipes	Miles of pipe rehabilitated, total	Complete 23.5 miles of sewer rehab by 2023

Part 3. Financial Summary

This investment gradually increases the program budget to \$32.1M by 2026 (and sustain funding of \$30-35M from 2027-2040). This adds \$45M to the 2021-2026 CIP budget, which represents a 33 percent increase over the baseline total of \$134.6M. The proposed funding will allow SPU to improve the system overall and decrease our backlog of high-risk pipe. The “high risk backlog” is defined as pipes that need to be rehabilitated in less than a five-year rehabilitation window. At this investment rate, we should be able to reduce the number of pipes that are past their rehabilitation window and start reducing the overall backlog of high-risk pipe over the next six years. However, we do not expect to have the backlog managed (the rate of pipe rehabilitation is equal to the number of pipes needing rehabilitation) until about 2050.

This recommendation is summarized in the following table:

Program Title (\$000's)*	Expansion of Sewer Rehabilitation Work						
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	—	—	—	—	—	—	—
Baseline Capital	\$20,700	\$20,100	\$20,100	\$24,100	\$24,800	\$24,900	\$134,700
O&M Increase	—	—	—	—	—	—	—
Capital Increase	7,600	8,900	9,500	\$6,100	\$5,700	\$7,200	\$45,000
Total*	\$28,300	\$29,000	\$29,600	\$30,200	\$30,500	\$32,100	\$179,700
FTEs Added/Changed**	3		1				

*This is the proposed pipe rehabilitation capital budget, including the lining crew.

**Positions will be largely capital funded.

Part 4. Capacity Plan to Deliver (Existing/Expanding Capital Only)

This investment includes staffing resources to deliver the work. To address the increased workload DWW will:

- **Add three positions in 2021.** The 2021 positions are for pipe assessment and contracting. The assessor positions assess pipe condition, identify rehabilitation work, develop work scopes, create work orders, assess backlog, and identify/initiate new projects. This is the work that feeds the rehabilitation project conveyor belt and will need to increase soon to support the increased spending that is coming. This staffing need was identified in the capital investment analysis. A third position would be in the Project Delivery and Engineering Branch and support project contracting. An analysis of staff hours spent per

project, when forecasted for future work in the 2021-2026 timeframe, shows that this critical team will need one person to ensure rehabilitation work can move through the bid process efficiently.

- **Add one position in 2023 in project delivery.** Our staffing analysis shows that project design and construction management will need additional resources to keep pace with the investment level. While our analysis shows needing more than 1 person, we are expecting that the on-call consultant or construction management contracts to be executed in 2020 will be able to assist with the workload.

In the past, there has been some difficulty in delivering projects due to a shortage of project managers. Specifically, the project management group went through a staffing shortage in 2018-2019 that slowed down work. That has now been remedied and the project management staffing approach is working well.

Part 5. Alternatives Considered

Six scenarios were evaluated through the capital investment analysis of the pipe rehabilitation program. The scenarios changed the amount of funding available and the types of rehabilitation used and compared how soon the backlog of high-risk pipes (those needing renewal within five years) would be addressed and how soon proactive work could begin (pipes with more than five years until renewal is needed). Having a better balance of reactive and proactive work would allow SPU to reduce the risk of sewer overflows due to pipe failure and better leverage the work and needs of others (e.g., SDOT projects, capacity needs). The recommended scenario balanced the need for increased work with the ability to increase capital funding and in consideration of other capital portfolio needs.

There are no implications associated with this program to equity, race, and social justice. These improvements will be spread throughout the City of Seattle and are driven by asset deterioration and criticality. Race and Social Justice Toolkits will be implemented at the planning level of projects.

18b. Expansion of Drainage Rehabilitation Work

Part 1. Summary of the Investment

This work will increase the rate of rehabilitation of our aging drainage infrastructure assets helping to prevent flooding, improve water quality, and reduce impacts to our customers. This capital work will be guided by a drainage program review, asset management planning, and program strategy development that is part of SPU's baseline work for 2020-2021.

SPU owns and operates approximately 480 miles of storm drain pipelines, 295 storm drain outfalls, 23 large surface water facilities, 1 million gallons of underground stormwater detention, 11.6 miles of creek culverts, 129 miles of non-stream bearing culverts, 62 green stormwater facilities, over 20,000 catch basins, and 400 water quality structures in the city limits. The primary purposes of these assets are to convey, store, and/or treat stormwater.

In the last five years, SPU has completed asset management plans (AMPs) for all major drainage asset classes. The AMPs highlight the need to increase spending and resource allocation on the cleaning, maintenance, condition assessment, and rehabilitation of these assets. The drainage rehabilitation program's current spending levels for the rehabilitation of existing drainage infrastructure is less than \$3M per year. This increase in spending is to address system deficiencies and prevent the high-cost, reactive activities related to deferred capital rehabilitation work.

Part 2. Targeted Commitments and Performance Measures (Next Three Years)

For drainage assets, under this proposal, we expect to prioritize critical infrastructure improvements to drainage assets and continue to collect additional asset condition information, helping SPU’s drainage rehabilitation program mature.

SPU has identified an immediate need to address drainage system deficiencies and begin addressing aging infrastructure to maintain the function of our system. In 2020-2021, SPU will perform a drainage program review. This work will include an audit of the existing program, prioritization of asset management plan recommendations, prioritization of condition assessment needs, and prioritization of programs gaps and needs.

The drainage program will deliver projects based on risk and criticality; however, the program prioritization will evolve based on new condition data or other identified operational concerns. Specific projects will be identified as part of the planning process.

Targeted Commitments	Performance Metrics	Performance Measure
Increase investments in degraded drainage assets	Dollars spent Additional metrics TBD*	Meet spending shown in Part 3

**Note: SPU will perform a drainage program review in 2021-2022 that will determine the short- and long-term capital improvement plan for this asset class. Once the review is complete, SPU will commit to specific performance metrics.*

Part 3. Financial Summary

This investment will increase the rehabilitation budget by \$2M annually between 2024-2026 to increase rehabilitation of drainage assets. Roughly \$250K in baseline O&M funds have been re-allocated starting in 2020 to assist with the planning of this work. Funding includes increase in staffing of 1.5 FTEs.

Baseline activities for drainage rehabilitation include the following:

- Program planning 2020-2021 \$250K/year (\$ vary)
- Stream culvert replacement program - \$2-13M per year (\$ vary)
- Drainage rehabilitation - \$1M per year (\$ vary)

Program Title	Drainage Rehabilitation						
(\$000's)	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	\$300	—	—	—	—	—	\$300
Baseline Capital	\$3,100	\$3,900	\$12,100	\$10,000	\$13,200	\$12,100	\$54,100
Total Baseline	\$3,400	\$3,900	\$12,100	\$10,000	\$13,200	\$12,100	\$54,400
O&M Increase	—	—	—	—	—	—	—
Capital Increase	—	\$500	\$1,000	\$2,000	\$2,000	\$2,000	\$7,500
Total	\$3,400	\$4,400	\$13,100	\$12,000	\$15,200	\$14,100	\$61,900
FTEs Added/Changed	1.5*						1.5*

*May be reallocated from internal open positions

Baseline includes existing drainage rehabilitation, creek culvert projects, sand boxes, and facility rehabilitation.

Part 4. Capacity Plan to Deliver (Existing/Expanding Capital Only)

Increasing drainage rehabilitation activity will require the addition of 1.5 positions to support the work. 1 FTE provides provide program management and implementation and an additional 0.5 FTE for an assessor. (These positions may be reallocated within existing open positions.)

Part 5. Alternatives Considered

Each project proposed as part of the drainage rehabilitation program will evaluate options and perform a collaborative scoping process in accordance with SPU policy to evaluate the appropriate project scope while ensuring that the improvement accommodates future capacity and operational needs. As we learn more about drainage assets, the program will adjust, and future Strategic Business Plan action plans will be changed accordingly. Generally, these projects are based on rehabilitating failing or substandard assets so that they will perform effectively. Drainage rehabilitation work will be prioritized based on risk and criticality. Lower priority work will not be funded until high priority work is completed.

There are no implications associated with this program to equity, race, and social justice. These improvements will be spread throughout the City of Seattle and are driven by asset deterioration and criticality. Race and Social Justice Toolkits will be implemented at the planning level of projects.

18c. Wastewater Pump Stations, Force Mains, and CSO Outfall Rehabilitation

Part 1. Summary of the investment

This investment update increases funding for the pump station, force main, and rehabilitation capital programs and maintains current funding for the combine sewer outfalls (CSO) rehabilitation program 2021-2026.

SPU's historically low investment in asset rehabilitation has resulted in a significant number of facilities and pipes that are at risk of failure and need to be addressed. Facility evaluations indicate that the current investment level is not enough to support the long-term health and sustainability of the pump station and force mains in service. Under the current plan, we are likely to experience more facility failures or force main failures which lead to overflows, impacts to public health and safety, and risk SPU's ability to meet regulatory requirements.

Sewer Pump Stations and Force Mains:

This program includes all spending to rehabilitate and replace assets at SPU's sewer pump stations and their associated force mains. Force mains are pipes that convey flow under pressure from the discharge side of a pump to the gravity system downstream. The current funding levels reflected in the 2018-2023 Strategic Business Plan have allowed SPU to make significant improvements to the pump station and force main assets. This funding level will allow for all non-airlift pump stations to be rehabilitated (replacing assets in kind) by 2040-2050. However, this funding level is not enough to replace airlifts on a desirable replacement rate. In addition, some larger more complex force main replacements will need additional funding in the later years (2023-2026). In addition to the six-year CIP discussed in the Strategic Business Plan, SPU has performed long term investment projections for this asset class which shows we are making sustainable levels of investment to prevent a bow wave of deferred maintenance activities in the future.

Outfall Program:

This program includes all capital spending to rehabilitate and replace SPU's CSO outfalls, which are the relief pipes where stormwater and sewage discharge to receiving waters during heavy rain. Funding levels will need to

increase for outfalls to replace or repair two outfalls a year, which is anticipated to address deficient outfalls moving forward.

Part 2. Targeted Commitments and Performance Measures (Next Three Years)

Sewer Pump Stations and Force Mains

Targeted Commitments	Performance Metrics	Definition of Success
Reduce and eliminate backlog of high-risk degraded assets by 2040	Number of pump stations retrofitted	6 pump stations by 2023
	Force mains replaced	3 force mains by 2023

Outfall Program

Targeted Commitments	Performance Metrics	Definition of Success
Reduce and eliminate increased risk of SSO's due to degraded outfalls	Number of CSO outfall cleaned or rehabilitated	Clean 4 outfalls and replace/rehab 1 outfall by 2023

Part 3. Financial Summary

Program Title	Expansion of rehabilitation of pump stations, CSO outfalls						
Project Name	Pump Station, Force Main and CSO Outfall Capital Programs						
(\$000's)	PUMP STATIONS AND FORCE MAINS						
	2021	2022	2023	2024	2025	2026	TOTAL
Baseline O&M	—	—	—	—	—	—	—
Baseline Capital	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$18,000
Total Baseline	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$18,000
O&M Increase	—	—	—	—	—	—	—
Capital Increase	\$4,200	\$7,200	\$4,400	\$4,200	\$4,400	\$5,600	\$30,000
Total	\$7,200	\$10,200	\$7,400	\$7,200	\$7,400	\$8,600	\$48,000
FTEs Added/Changed	—	—	—	—	—	—	—
	CSO OUTFALLS						
Baseline O&M	\$500	\$500	\$500	\$500	\$500	\$500	\$3,000
O&M Increase	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$6,000
Total	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$9,000
FTEs Added/Changed	—	—	—	—	—	—	—

Part 4. Capacity Plan to Deliver (Existing/Expanding Capital Only)

Use existing internal staff and supplement staff resource limitations through on-call consultant support.

Part 5. Alternatives Considered

Each project proposed as part of the sewer pump station and force main program goes through an option analysis and collaborative scoping process to evaluate the appropriate project scope while “future proofing” the facilities to accommodate future capacity and operational needs. Generally, these projects are based on bringing the facilities up to code and replacing failing or substandard assets so that the facilities will perform effectively throughout an industry standard asset management lifecycle.

- Pump station and force main rehabilitation program work is prioritized based on risk and criticality. Lower priority work is not funded until high priority work is completed.
- Prioritization of and impacts to other programs and projects were not considered in the development of this SBP initiative.

There are no implications associated with this program to equity, race, and social justice. These improvements will be spread throughout the City of Seattle and are driven by asset deterioration and criticality. Race and Social Justice Toolkits will be implemented at the planning level of projects.

Community Research and Outreach Summary

Purpose

Seattle Public Utilities (SPU) conducted research and community outreach to engage and learn from customers and community members as part of the 2021-2026 Strategic Business Plan (plan) process.

Insights gleaned will help the utility better understand customer and community perspectives and plan for the future. More specifically, this work will inform content and language in the plan, ongoing SPU service delivery, and engagement with customers and the community.

The research and outreach process had several important, defining characteristics:

- **Purposeful and respectful of people’s time and opinions:** Community members and customers are often asked to share their opinions, but rarely know how their feedback is used (if at all). To demonstrate respect for people’s time and input, research and outreach tools were kept brief and made accessible.
- **Inclusive:** Recognizing that typical research and public input tools often underrepresent segments of the population, SPU made a deliberate effort to be inclusive in its outreach. The Environmental Justice and Service Equity Division, with the help of Department of Neighborhoods community liaisons, took purposeful steps to better reach historically underserved and non-English speaking communities.
- **Multi-pronged:** Customers, community members, businesses, and SPU employees had multiple opportunities to provide input: through the careful ‘mining’ of existing research, business interviews, an online survey, hard copy/translated surveys, the SPU website, social media, meetings with community leaders, and interaction at events.
- **Efficient and adaptive:** The research and engagement teams were mindful of utility and community investments (time, resources, and focus) and made sure outreach was strategic, concise, convenient, and valuable. Due to the ongoing COVID-19 pandemic, outreach efforts had to adapt to changing circumstances.

About this Summary

This is a high-level summary of the research and outreach effort. Detailed reports are available describing each component in more detail.

Overview

Research and outreach included four distinct efforts: background research (Voice of the Customer research), interviews with businesses, an online survey, and community outreach¹.



Voice of the Customer Research

Voice of the Customer research (VOC) is a comprehensive review of 28 research studies commissioned by SPU and others to better understand residential and business customer experiences, opinions, and preferences as well as employee perspectives. Source material included Seattle and regional surveys, interviews, and focus groups. The VOC research ‘mined’ the voluminous body of existing research to extract strategic information that would benefit the strategic planning process. A priority was placed on understanding customer satisfaction and examining whether the utility’s goals and values align with that of SPU customers.

The VOC work was foundational and led to the utility identifying five key questions for further study:

1. How satisfied are you with SPU services (drinking water; garbage; recycling and composting; sewer; and drainage and flood prevention)?
2. How satisfied are you with the overall cost and value of SPU services?
3. What improvements would you like SPU to focus on in the next five years?
4. What are the biggest water and waste management challenges facing Seattle in the next 20 years?
5. How can we work together to address these challenges?

These key questions were explored through business interviews, an online survey of employees and the public, and community outreach.

¹ In addition to these components, extensive employee engagement also took place. While employee perspectives were captured through Voice of the Customer (VOC) and survey research efforts, additional details about engagement efforts (e.g., workshops) are reported separately.

Business Interviews

SPU commissioned a strategic communications and research firm (Cocker Fennessy) to conduct confidential interviews with business leaders representing a range of industries, and business sizes and sectors. Cocker Fennessy worked closely with SPU to develop the qualitative research approach and identify and refine the interviewee list and discussion guide. Cocker Fennessy's research staff conducted the confidential interviews from November 15 to December 12, 2019. The interviews revealed business perspectives and experiences, filled knowledge gaps, and identified potential areas for partnership and improvement. Interviews were 45 to 60 minutes long and were conducted over the phone or in-person, depending on respondents' preferences. A total of 34 businesses were invited to participate in the research and 19 interviews were completed.

Survey

SPU also partnered with Cocker Fennessy to develop, implement, and analyze a brief online survey to better understand customer and employee opinions regarding SPU services, areas of improvement, challenges, and partnership opportunities. The survey was programmed and hosted via SurveyMonkey and fielded December 3, 2019 to April 15, 2020. People were invited to answer the survey through a variety of channels (SPU website; emails; e-news; social media including Facebook and Next Door²; and through partnerships with community groups and Department of Neighborhoods liaisons). The primary mode of data collection was an online survey (in English). Translated copies of the survey were made available in Spanish, Chinese, Vietnamese, and Somali. In person and paper responses to the survey are captured in the 'community outreach' report. In total, 944 people responded to the online survey.

Community Outreach

SPU prioritizes and values hearing all community voices. Building lasting relationships and creating authentic, quality opportunities for communication with communities is critical to our shared success.

The community engagement conducted in support of the plan gathered public input and engaged historically underrepresented and often underserved populations. SPU's Environmental Justice and Service Equity Division (EJSE) led the community engagement work and partnered with Department of Neighborhoods liaisons for implementation. Community outreach was inclusive and conducted through the promotion of the online (and hard copy) survey; administration of surveys in Spanish, Chinese, Vietnamese, and Somali; connecting with people through trusted community liaisons; interviews with community leaders; and meeting people where they are by visiting community centers, events, markets, social media, etc.

Through this outreach, SPU achieved: 40 community interviews with diverse communities, 82,378 Facebook impressions, and more than 944 completed surveys.

² Promoted the survey in 213 neighborhoods on NextDoor with 206,722 verified residents.

Key Themes and Findings

Component	Description	Key Themes/Findings
Voice of the Customer Research	Comprehensive review of research studies commissioned by SPU and others to better understand residential and business customer experiences, opinions, and preferences as well as employee perspectives	<ul style="list-style-type: none"> • High satisfaction with SPU services and desire for continued investment in services and infrastructure. • Affordability of rates, rate predictability, cutting costs, and finding efficiencies are concerns. • Finding technologies to improve service, costs, and safety are highly important. • Environmental leadership is a regional value and source of pride. • Addressing climate change is strongly supported but customers don't know SPU's role. • People need help understanding how to recycle and compost. Addressing the root causes of waste is also desired. • Economic opportunity and environmental health are not universal experiences. Reaching traditionally underserved communities will require intention, in-language communication, cultural relevancy, and authentic partnerships. • Residents and city employees believe ending racial inequity is a government responsibility that must be prioritized. • Businesses appreciate opportunities to save money and desire streamlined processes and communication. • Developers/businesses need to receive tangible benefits from green approaches and desire partnerships over enforcement. • There's an opportunity to reach people by focusing on how we can work together to sustain this special place.
Business Interviews	Conducted 19 confidential interviews with business leaders representing a range of industries, and business sizes and sectors to gather input on issues pertinent to the plan	<ul style="list-style-type: none"> • Interview recruitment was challenging—many lacked a relationship with SPU or belief that engagement would benefit them. • SPU is primarily seen as a service provider. Some also see the utility as a policy-setter and enforcer. • SPU is credited with providing safe, high quality, and reliable drinking water. Feelings about drainage and sewer were more mixed. • Feedback on garbage/waste was more critical. Issues with contractors were mentioned. • Illegal dumping and graffiti are problematic in some neighborhoods and mentioned frequently by Business Improvement Area interviewees. • Many feel SPU is easier to work with once you have a personal relationship with a staff person. • Business and community engagement could be improved through regular and early communication, particularly on policy issues. • Effective partnerships require understanding, relationship building, and flexibility.
Community Outreach	Gathered public input and engaged historically underrepresented and often underserved populations on SPU's 5 key questions	<ul style="list-style-type: none"> • High awareness/appreciation of water service. • Concerns about drainage and flooding and waste services. • Identified barriers to effective engagement (trust, language, awareness/knowledge). • Strong concerns about affordability. • Recognition of significant future challenges (growth, climate, infrastructure). • Need for improvements around community engagement and communications.
Online Survey	Fielded a broad-based online survey of customers and employees to inform the plan, ongoing service delivery, and customer engagement	<ul style="list-style-type: none"> • SPU services (water, drainage and wastewater, and solid waste) are viewed as essential and are valued. • All SPU services are favorably rated; but water receives the highest ratings. • Significant 'neutral' responses to questions about the utility and its services are areas for additional exploration. • Respondents would most like to see SPU focus on aging infrastructure, affordability, service equity, and waste/plastics/toxics. • The top challenges for the utility are sustainable waste practices, aging infrastructure, climate change, and population growth. • Outreach could be improved through better/simple communications, education, equity, translations, and more community engagement.

Considerations and Opportunities

The insights gleaned from plan research and outreach raise some issues for further consideration and potential opportunity areas. Specifically:

1. How can we ensure that insights from outreach and research are shared effectively within the utility and used to inform service delivery and future outreach?
2. How can we close the feedback loop with the community, sharing results of this and other research and outreach?
3. Are there opportunities to receive more focused input (e.g., COVID-19 recovery opportunities) during the extended planning period?
4. How can research and outreach be coordinated across SPU's lines of business to minimize fatigue/lack of participation? Should we create community or consumer opt-in lists to regularly check in with our customer-owners? Are there internal SPU processes that could be developed to ensure better coordination?
5. What are SPU's goals for building relationships with different customer types? What is SPU willing/able to do to build truly effective relationships and partnerships?
6. What will future SPU research and outreach look like as we recover from the pandemic? Even with vaccinations, recurrences are likely and ongoing physical distancing practices may be required. How can we adapt to the new normal?

Additional Resources

The following detailed research and outreach summaries are available:

- Voice of the Customer Research Report (November 2019)
 - VOC Themes Presentation/Summary (November 2019)
- Business Interview Report (January 2020)
- Community Outreach Report (May 2020)
 - Facebook Ad Recap Review
- Online Survey Report (May 2020)
 - Survey Data File with Verbatim Responses
 - Facebook Ad Recap Review
- Employee/workshop material/summaries

Financial Forecast

Key Rate Drivers

The rate paths for each fund contain key assumptions regarding debt issuances, capital accomplishment, consumption, and the Utility Discount Program. Below is a summary matrix of the primary assumptions. Each fund has additional assumptions that are unique to its structure, which are explored in the following sections.

Overall, the utility is anticipating continued declines in all services - residential-, commercial-, and developer-related - into 2021 as the area and economy weather the impacts of COVID-19. Simultaneously, increases in the Utility Discount Program are anticipated and have already materialized in 2020. The following table highlights key assumptions over the six-year period.

Proposed Strategic Business Plan Rate Path

	Rate Path			Rate Forecast			Average
	2021	2022	2023	2024	2025	2026	
Water	0.0%	2.7%	4.7%	3.6%	4.2%	5.5%	3.4%
Wastewater	7.3%	3.1%	5.9%	0.5%	7.8%	3.6%	4.7%
Drainage	7.4%	8.6%	7.2%	3.9%	6.5%	6.7%	6.7%
Solid Waste	2.9%	2.9%	2.2%	2.3%	2.1%	2.1%	2.4%
Combined	4.5%	3.9%	5.0%	2.2%	5.4%	4.2%	4.2%

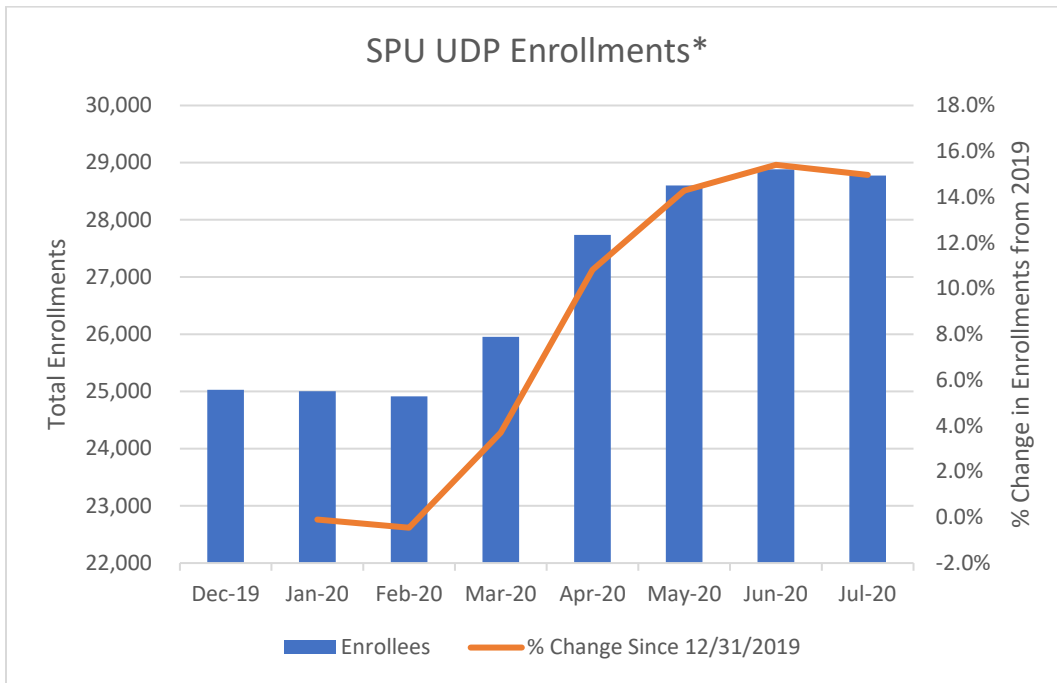
■ Approved rate legislation currently in effect

	Water	Drainage & Wastewater	Solid Waste
Average Interest Rate on Bonds	2021: 4.5% 2022: 5.0% 2023-2026: 5.0%	2021: 4.5% 2022: 5.0% 2023-2026: 5.0%	No planned debt issuances
Capital Accomplishment Rate	85%	85%*	90%
Consumption	Residential: -5.3% Commercial: -0.1%	Residential: -5% Commercial: -7%	Residential: -1% Commercial: -15% Transfer Stations: -5%
Utility Discount Program Accounts	2021: +3,000	2021: +3,000	2021: +3,000

*Drainage & Wastewater fund accomplishment rate is 85% for all projects except for the Ship Canal project, which is at a 95% accomplishment rate.

Utility Discount Program

The City of Seattle has one of the most robust Utility Discount Programs (UDP) in the country. SPU provides a 50 percent credit on all qualifying customer bills. Recent modifications have expanded outreach to include an auto-enroll program, which was extended to the end of 2020. The utility also supports an Emergency Assistance Program (EAP) that has been modified to provide relief for up to 50 percent of the bill two times per year instead of one, for qualifying individuals. For more information about the UDP and EAP programs, please visit our website. The chart that follows provides monthly enrollment year-to-date for 2020.



Seattle Public Utilities Funds

The following sections go into detail for each individual fund. All three funds entered 2020 in a healthy financial position, which is anticipated to allow them to weather the economic impacts over the course of the SBP period.

Water Fund

Water Fund rate projections are anticipated to increase an average of 3.4 percent per year during the period of 2021-2026. The projected average rate increase for the first three years of the SBP is 2.4 percent (including zero percent in 2021); the average increase over the second half of the SBP is 4.4 percent.

During the six-year plan, operational expenses are projected to increase between four and six percent per year. Non-rate revenues and cash reserves help offset the above-inflation cost increases. In addition, in 2023 the last payments related to the 1993 bond issue will be made. As a result, currently scheduled debt payments will be lower by \$9M in 2024.

Key Rate Drivers

The key rate driver for the Water Fund is increasing operational expense (O&M). Debt service coverage is the binding constraint, or the financial policy that is just met, for the rate period. Debt service coverage is a calculation that estimates the utility’s ability to cover debt payments. The Water Fund’s policy target is 1.7x debt service coverage. While debt service coverage is the binding constraint, debt service payments are projected to be relatively flat until 2026. Currently scheduled debt payments are scheduled to decline as debt originated in the early 1990s is fully retired. New debt payments are projected to be roughly equal to retired debt payments until 2026. As a result, rate increases are driven by increases in O&M, not debt service.

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan
Appendix F

Revenue and Expenditure Assumptions

2021-2026 SBP	2021	2022	2023	2024	2025	2026
Total Retail Rate Revenue (\$M)	215.4	225.1	235.5	243.2	252.7	265.7
Annual Change	1.5%	4.5%	4.6%	3.3%	3.9%	5.2%
Retail Consumption (M CCF)	26.4	26.4	26.3	26.2	26.0	25.9
Annual Change	-0.3%	-0.2%	-0.3%	-0.5%	-0.5%	-0.5%
Annual Rate Increase	0.0%	2.7%	4.7%	3.6%	4.2%	5.5%
Retail Rate Revenue (\$M)	215.4	225.1	235.5	243.2	252.7	265.7
Debt Service (\$M)	85.7	88.5	92.3	88.2	93.8	99.3
O&M incl. Taxes (\$M)	185.8	195.1	202.9	212.3	224.4	235.5
Cash-to-CIP (\$M)	39.1	39.9	25.5	35.6	25.9	25.5
Less: Wholesale Revenue (\$M)	(52.2)	(52.4)	(54.3)	(63.1)	(61.4)	(62.7)
Other Net Expense / (Revenue)	(43.0)	(46.0)	(31.0)	(29.8)	(30.1)	(31.9)

*Other Net Expense/Revenue include taps and capital contributions, other non-operating income, miscellaneous charges, and changes in cash balance.

Risks and Watch Areas for Rate Path

For the Water Fund, the most likely risks are poor summer weather and a prolonged recession. Long-term risks include climate change and seismic events.

A new risk to utility rates is the continued shift towards working-at-home. Many workers in Seattle do not live in Seattle. As fewer people commute into the city each day, water use in the retail area will decline. The size of this risk is difficult to estimate as the work from home trend only recently began, and current economic conditions are also depressing consumption.

Financial Indicators

The Water Fund is expected to meet or exceed all financial policy targets during the SBP period.

(\$ in millions)	2021	2022	2023	2024	2025	2026
Debt Service Coverage	1.73	1.70	1.70	1.89	1.75	1.70
Net Income	33.5	33.1	35.4	40.4	32.9	34.1
Cash-to-CIP	38.1%	39.9%	24.6%	28.2%	24.3%	26.8%
Cash Balance	90.0	75.0	75.0	75.0	75.0	75.0
RSF Withdrawals/(Deposits)	0	0	0	0	0	0
Bond Issues	100.6	71.5	91.2	98.6	151.9	0
Debt Service	85.7	88.5	92.3	88.2	93.8	99.3
Consumption (ccf, millions)	26.4	26.4	26.3	26.2	26.0	25.9

Drainage & Wastewater Fund (DWF)

DWF receives revenue from two separate sets of rates. Wastewater rates are projected to increase an average of 4.7 percent per year during the period of 2021-2026. The projected average rate increase for the first 3 years of the SBP is 5.4 percent; the average increase over the second half of the SBP is 4.0 percent. Drainage rates are projected to increase an average of 6.7 percent per year during the period of 2021-2026. The projected average rate increase for the first 3 years of the SBP is 7.7 percent; the average increase over the second half of the SBP is 5.7 percent.

Cash is being used to reduce the rate path over the next few years. This cash is the product of unspent capital funds, lower than projected O&M expenditures, and surplus revenues generated by higher-than-expected demand. The specific use of this cash is to offset the consent-decree driven spike in the DWF capital program, keeping the fund's periodic debt issuance related rate increases closer to a steady, long-term baseline. Because the cash is being used to offset the investment spike, as opposed to offset baseline investment or to pay for current O&M expenses, there is no bow-wave effect on rates, which would be the case when, for example, expenses increase annually and steadily but rate increases are held flat.

Key Rate Drivers

The key rate driver for the DWF is increasing capital investment necessitated by consent decree programs. To offset the investment cost spike these programs are creating, the DWF will spend down operating cash to 80 days of operating cash on hand, a level that, through consultation with SPU's financial advisors, was deemed adequate to defend the fund's bond ratings and inexpensive access to capital. Through 2026, 80 days of operating cash is roughly \$100 million, and this becomes the binding constraint, or the financial policy that is just met, for the SBP period.

Revenue and Expenditure Assumptions

2021-2026 SBP	2021	2022	2023	2024	2025	2026
Wastewater Rate Revenue (\$M)	345.4	357.0	377.7	379.7	408.9	423.3
Annual Change	10.1%	3.4%	5.8%	0.6%	7.7%	3.5%
Consumption (M CCF)	21.2	21.2	21.2	21.2	21.2	21.2
Annual Change	2.6%	0.3%	-0.1%	0.1%	-0.1%	0.0%
Annual Rate Increase	7.3%	3.1%	5.9%	0.5%	7.8%	3.6%
Drainage Rate Revenue (\$M)	164.9	178.2	192.1	199.6	212.6	225.7
Annual Rate Increase	7.4%	8.6%	7.2%	3.9%	6.5%	6.7%
Retail Rate Revenue (\$M)	510.3	536.2	569.7	579.4	621.5	649.0
Debt Service (\$M)	70.7	73.9	77.9	84.8	92.4	104.0
O&M incl. Taxes (\$M)	217.5	227.2	239.7	250.2	270.4	281.4
Treatment (\$M)	178.6	188.2	208.4	209.7	232.2	233.7
Cash-to-CIP (\$M)	111.4	105.3	75.8	66.5	38.6	42.6
King County Treatment Rate ¹	4.5%	4.5%	10.3%	0%	10.3%	0%

¹ King County Treatment Rate: 2021 is adopted; 2022 – 2026 are based on County projections.

Risks and Watch Areas for Rate Path

For the DWF, the most likely risks are capital project cost overruns, increased interest rates, and increases in King County treatment rates. The DWF has entered a period of intense capital investment, requiring the Fund to access capital markets frequently over the SBP period. As the economy recovers, interest rates are expected to rise, placing pressure on rates. Both wastewater and drainage rates have a treatment and system component. Treatment expense is the Fund’s largest expenditure obligation. King County wastewater treatment rates are projected to have double digit rate increases during the SBP period as the County continues an intense capital program driven by asset management and regulatory requirements. Long-term risks include climate change and seismic events.

As discussed in the water section, a new risk to utility rates is the continued shift towards working-at-home. Sewer consumption is driven by metered water consumption and construction activity. Like the Water Fund, DWF is projecting reduced consumption and development in the city. The size of this risk is difficult to estimate as the work-from-home trend only recently began, and current economic conditions are also depressing consumption.

Financial Indicators

The DWF is expected to meet or exceed all financial policy targets during the SBP period.

(\$ in millions)	2021	2022	2023	2024	2025	2026
Debt Service Coverage	2.00	2.01	1.91	1.72	1.56	1.55
Net Income	48.0	57.4	60.8	57.7	48.6	40.6
Cash-to-CIP	53%	51%	43%	39%	25%	25%
Cash Balance	140.4	97.7	98.7	101.6	110.3	112.9
Bond Issues	87.1	54.5	74.5	96.4	116.2	128.1
Debt Service	70.7	73.9	77.9	84.8	92.4	104.0
Consumption (ccf, millions)	21.2	21.2	21.2	21.2	21.2	21.2

Solid Waste

Solid Waste Fund rates are projected to increase an average of 2.4 percent per year during the period of 2021-2026. The projected average rate increase for the first three years of the SBP is 3.0 percent and the average increase over the second half of the SBP is 2.2 percent. These rate increases are at or just slightly above inflation and are consistent with the annual increases in operational expense.

The SBP rate path considers the latest capital projects plan and the Solid Waste Fund has sufficient balances to cash fund all capital projects. This eliminates the need for bond issues and helps to reduce the rate path. The Solid Waste Fund does not anticipate a bow wave of rate increases in the future.

Key Rate Drivers

The key rate driver for the Solid Waste Fund is increasing operational expense (O&M). Debt service coverage is the binding constraint, or the financial policy that is just met, for the rate period. Debt service coverage is a calculation that estimates the utility’s ability to cover debt payments. The Solid Waste Fund’s policy target is 1.5x debt service coverage. While debt service coverage is the binding constraint, debt service payments are projected to be flat throughout the SBP period. There are no new debt issues projected, so rate increases are driven by increases in O&M expenditures.

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan
Appendix F

Revenue and Expenditure Assumptions

2021-2026 SBP	2021	2022	2023	2024	2025	2026
Total Retail Rate Revenue (\$M)	214.0	221.5	230.8	237.3	249.6	259.0
Annual Change	3.5%	4.2%	2.8%	3.2%	1.9%	3.8%
Annual Rate Increase²	2.9%	2.9%	2.2%	2.3%	2.1%	2.1%
Retail Rate Revenue (\$M)	214.0	221.5	230.8	237.3	249.6	259.0
Debt Service (\$M)	15.4	15.4	15.4	15.4	15.4	15.4
O&M incl. Taxes (\$M)	202.7	214.1	219.9	224.9	233.0	243.8
Cash-to-CIP (\$M)	24.0	30.0	13.8	4.2	3.4	2.2
Other Net Expense / (Revenue)	(20.7)	(28.9)	(11.9)	0.2	(2.4)	(2.6)

*Other Net Expense/(Revenue) non-operating income, miscellaneous charges, and changes in cash balance.

Risks and Watch Areas for Rate Path

For the Solid Waste Fund, potential risks include recession, market forces, and contract risk. Solid waste collections, processing, and transfer rely on contractors. There is risk during contract renewals and negotiations, as well as risk if contractors run into any issues that could impede their ability to provide services.

Market forces could drive risk for the Solid Waste Fund. Recycling markets and commodity revenues are subject to external economic forces. Creation of new services could require new solid waste facilities or additional contracting cost.

A new risk to utility rates is the continued shift towards working-at-home. Current conditions in 2020 have shown this translates to a decrease in commercial tonnage and revenues. The size of this risk is difficult to estimate as the work-from-home trend only recently began and the duration of this trend continuing is unknown.

Financial Indicators

The Solid Waste Fund is expected to meet or exceed all financial policy targets during the SBP period.

(\$ in millions)	2021	2022	2023	2024	2025	2026
Debt Service Coverage	1.72	1.65	1.68	1.59	1.70	1.51
Net Income	3.4	1.6	1.2	0	1.7	0
Cash-to-CIP	100%	100%	100%	100%	100%	100%
Cash Balance	58.5	40.2	40.0	48.1	58.6	67.4
RSF Withdrawals/(Deposits)	\$0	\$0	\$0	\$0	\$0	1.1
Debt Service	15.4	15.4	15.4	15.4	15.4	15.4

² Weighted annual rate increase to account for Solid Waste rates updating on April 1 of every year compared with January 1.

Fund Financial Policies

Metric	WF	DWF	SWF
Debt service coverage - Adopted	1.7x	1.8x	1.7X; 1.5X (less taxes)
- Internal	NA	2.0X; 1.5X (less taxes)	na
Debt-to-Asset Ratio	NA	<=70 percent	NA
Cash-financed CIP	20 percent over rate period; 15 percent minimum in a given year	25 percent minimum 4-yr rolling average	Greater of \$3.7 million or 10 percent of CIP
Net Income	Generally positive	Generally positive	Generally positive
Year-end cash balance - Adopted	One-month current year operating expense (\$12M)	One-month treatment expense (\$15M)	20 days contract expense (\$6M)
- Internal	\$34M in 2021, increasing \$1M per year	80 days operating cash (\$100M)	45 days operating cash (\$23M)
Variable Rate Debt	<=15 percent	<=15 percent	<=15 percent

Seattle Public Utilities
2021-2026 SPU Strategic Business Plan

Appendix F

Bill Tables

The following tables project the typical monthly bill for the following average customers.

Typical Monthly Bill for a Single-Family House						
	2021	2022	2023	2024	2025	2026
Water	\$46	\$47	\$49	\$51	\$53	\$56
Wastewater	\$72	\$75	\$79	\$79	\$85	\$89
Drainage	\$50	\$54	\$58	\$60	\$64	\$69
Solid Waste	\$55	\$56	\$58	\$59	\$60	\$61
Combined	\$223	\$232	\$244	\$250	\$263	\$275
Monthly Change	\$15	\$9	\$12	\$6	\$13	\$12

Typical Monthly Bill for a Multifamily Unit (Apartment Building)						
	2021	2022	2023	2024	2025	2026
Water	\$25	\$26	\$27	\$28	\$29	\$31
Wastewater	\$65	\$67	\$71	\$71	\$77	\$80
Drainage	\$9	\$10	\$11	\$11	\$12	\$13
Solid Waste	\$28	\$29	\$30	\$30	\$31	\$32
Combined	\$127	\$132	\$138	\$141	\$149	\$155
Monthly Change	\$4	\$4	\$7	\$2	\$8	\$6

Typical Monthly Bill for a Convenience Store						
	2021	2022	2023	2024	2025	2026
Water	\$107	\$110	\$115	\$120	\$125	\$131
Wastewater	\$325	\$335	\$355	\$357	\$385	\$399
Drainage	\$121	\$131	\$140	\$146	\$155	\$166
Solid Waste	\$556	\$573	\$585	\$599	\$611	\$623
Combined	\$1,109	\$1,149	\$1,196	\$1,221	\$1,275	\$1,319
Monthly Change	\$38	\$40	\$47	\$25	\$55	\$44

Information in this table is for illustrative purposes. SPU bills water, wastewater and solid waste charges to property owners who may pass these costs to renters or tenants. Drainage charges are billed to customers on their King County property tax statements. Totals may vary due to rounding.

SPU's ACCOUNTABILITY AND AFFORDABILITY STRATEGIC PLAN

FINAL REPORT – June 2019



**Seattle
Public
Utilities**

Table of Contents

Page	Section
3	Introduction
5	At a Glance: Strategies and Actions
10	Capital Planning and Delivery
18	Efficiency and Improvement
22	Customer Assistance
28	Partnership Opportunities
32	Regulatory Alignment
38	Budgeting and Financial Management
42	Attachments

Introduction

Seattle residents and businesses depend on essential utility services. Safe drinking water, effective sewer and drainage systems and reliable solid waste collection are critical to the health of the city and its people. Seattle Public Utilities (SPU) is responsible for providing these life-sustaining services and must do so affordably by being accountable, efficient and community-centered. This Accountability and Affordability plan (Plan) focuses on achieving these goals. Doing so aligns with SPU’s adopted strategy of “Operational Excellence” by providing “reliable, affordable, efficient, and high-quality services to all customers.”

Seattle is becoming increasingly unaffordable for many residents and businesses. Higher costs of services affect SPU’s customers directly, particularly customers with the least ability to pay. In addition, the value that SPU provides to customers is not always clear which makes it important for SPU to demonstrate results for the dollars spent. Enhancing accountability and affordability is critical to SPU’s long-term success and this Plan includes specific strategies and actions for improving both.

Affordability focuses on “ability to pay.” For SPU, this means providing essential services and providing pricing and assistance to customers that ensure everyone has the service they need. This pricing is often constrained by the need to maintain infrastructure, encourage conservation, protect the environment, and protect public health. Ensuring affordability includes strategies for reducing costs, increasing productivity and efficiency, investing in assets that have multiple benefits, removing barriers to service access, and fully using systems and organizational capacity, both in the short and long-term.

SPU’s commitment to affordability extends beyond rates and includes planning and implementation of utility policies, services, projects and programs. SPU explicitly plans and responds to the ways in which lower income customers might access and be impacted by all SPU business. This requires dialogue and understanding of how utility practices are neutral, help or hinder affordability. Understanding and taking actionable steps is critical in realizing SPU’s goals to be affordable and community centered.

Accountability focuses on how SPU demonstrates results. For a utility with many stakeholders and customers, this means people and organizations understand how resources are being spent, the value for investments is clearly demonstrated and transparent, and the utility takes action and makes progress on the long-range goals of the community. Ensuring accountability includes strategies for measuring and demonstrating results, engaging customers and stakeholders in identifying and implementing investments, being fair and equitable, and being responsive to the day to day essential needs of the community.

How we work matters. This Plan focuses on how SPU delivers capital projects, ensures access to services, partners with organizations, and conducts other business practices. The utility must continuously take a hard look at how it operates and assess ways to improve service, provide better value, and focus in a sustained and disciplined way on accountability and affordability. This Plan builds on strong practices within SPU and emphasizes work to be done through six practice areas of strategies and actions:

1. **Capital Planning and Delivery.** Increase the speed and efficiency of planning and delivering of capital improvement projects while maximizing community value.

2. **Efficiency and Improvement.** Develop a culture of continuous improvement to enhance value to our customers and improve efficiency and performance.
3. **Customer Assistance.** Focus on the affordability of SPU’s services, with a special (but not sole) focus on the needs of low-income customers, and the portfolio of assistance programs and tools that can be strategically deployed to meet the needs of diverse customers.
4. **Partnership Opportunities.** Improve SPU’s ability to partner with organizations, institutions, and companies to leverage broader benefits, reduce costs, share risks, and improve outcomes for the communities that we serve.
5. **Regulatory Alignment.** Reduce the cost and risk of meeting regulatory demands while ensuring public health and safety, environmental protection, a vibrant local economy and social equity outcomes.
6. **Budgeting and Financial Management.** Streamline and integrate budget and financial planning practices and align investments with the long-range strategic goals of SPU and the community.

Responsive to Council’s Direction. City Council initiated this Plan in 2017. Resolution 31760, which approved SPU’s 2018-2023 Strategic Business Plan Update calls for SPU to prepare an accountability and affordability strategic plan focused on managing future rate increases and corporate performance for inclusion in the 2021-2026 Plan Update.

An Immediately Actionable Plan. The strategies and actions included in the Plan are based on the work of a cross functional SPU core team and more than 150 participants and subject matter experts. Work was conducted over an eight-month period through more than 20 work sessions and in concert with SPU Executive leadership. SPU’s customer review panel provided review and feedback on the recommendations of the report. Building the plan collaboratively with people doing the work helps ensure buy-in, understanding, and commitment to move forward on the recommendations which improves SPU’s chances of success.

The strategies and actions set forth are both ambitious and pragmatic. For example, SPU plans to substantially improve the speed and effectiveness of the capital planning and delivery program. This is a significant undertaking impacting a \$1.5 billion, six-year capital program and the work of hundreds of SPU team members. The gain for the community has greater significance – by engaging in this important work SPU will deliver more value more quickly and the impact will be tangible.

“Go First Actions” and moving forward. Each practice area and strategy identify one or more actions that will advance efforts over the next one to two years. Overall, the strategies and actions will be implemented over the next five years and the plan will be updated in conjunction with future Strategic Business Plan updates every three years.

The Plan includes 12 strategies and 47 tangible actions for moving forward. Work has already begun on eight of the actions and implementation of an additional 25 actions will occur in 2019 and 2020. In addition, SPU will report on the progress of the Plan every six months in conjunction with updates on the 2018-2023 Strategic Business Plan implementation progress.

AT A GLANCE: Accountability and Affordability Strategies and Actions

This “At a Glance” section provides all strategies and actions contained in the plan in this report. More detailed information on each strategy and action, along with background and purpose, can be found starting on page 9.



Go First Action: SPU identified these actions as the immediate next step that will be accomplished in the next 1-2 years.

Capital Planning and Delivery

Why is this practice area important? Capital projects and financial policies account for approximately 25% of the total 2018-2023 SPU utility rate. Improvement and changes to the planning, speed and delivery of this large capital program can have significant effects on the affordability of SPU’s rate to customers and the beneficial impact of SPU projects.

Strategy 1: Capital Planning. Coordinate capital planning across LOBs and across other City departments to maximize potential for community value.



Action 1A. Improve capital planning coordination by regularly convening SPU branches to identify planned capital improvements within common geographic locations.



Action 1B. Integrate planning across the Drainage and Wastewater LOB to identify future investments that provide the greatest community and environmental benefits.



Action 1C. Develop Drainage and Wastewater capital planning guidance to consistently value multiple community and environmental benefits in CIP options analysis.

Action 1D. Apply guidance and lessons learned from the drainage and wastewater LOB work in B and C to all lines of business.

Action 1E. Integrate standard portfolio project management practices into the development and monitoring of the CIP such as strategic prioritization across LOBs and portfolio performance and risk analysis.

Action 1F. Partner with SDOT to identify opportunities for improved coordination and delivery of capital projects.

Strategy 2: Capital Delivery. Improve capital project delivery by reducing project costs, accelerating project delivery, and providing multiple community benefits. Focus the stage gate process to provide customer value through streamlined and cost-effective decision making that requires the minimally optimal analysis to supports life cycle cost evaluation and strategic priorities.







Action 2A. Streamline the project approval process to reduce decision cycle times and better align delegation of approval authority (decisions made at the right level).





Action 2B. Incorporate reprioritization and elimination of stalled or lower priority projects into capital monitoring practices.



Action 2C. Improve the efficiency of capital project management by eliminating duplication of project management systems and activities.

-  Action 2D. Review and streamline capital project options analyses leading to stage gate 2 to reduce cycle times and project costs.
-  Action 2E. Revamp the Asset Management Committee (AMC) review process.
-  Action 2F. Transition to the use of portfolio reserves and/or pooled risk reserves to reduce the total dollar amount of management reserves.
-  Action 2G. Reduce total cycle time in the procurement full solicitation process.
- Action 2H. Better incorporate operational considerations into capital project development and review.




Strategy 3: Capital Reporting and Transparency. Improve the transparency and accountability of project delivery through improved financial data and reporting, and responsive customer service (LOBs as customers).

-  Action 3A. Make available and use actionable data on a quarterly basis to identify project risks and issues early on so that adjustments can be made in a timely fashion.
-  Action 3B. Improve PPM (SPU's enterprise project management system) so that LOBs and management can easily find the information they need.

Efficiency & Improvement

Why is this practice area important? The strategies and actions of this practice area are intended to slow the growth in SPU's rate path by identifying and taking action on hundreds of small and large opportunities for improving service to the customer and reducing non-value-added activities and cost in SPU's work. Examples of non-value-added activities include "waste in process" such as having large inventories of parts, equipment downtime or being unavailable when teams are ready to work, and fixing the same problem twice. Focusing on work in this way not only improves efficiency and productivity; when done well, and in an engaged and respectful way with team members, it can improve employee engagement and job satisfaction.

Strategy 1: Improvement and Efficiencies. Develop a culture of continuous improvement to enhance value to our customers and improve efficiency and performance.





-  Action 1A. Practice and Learn Lean Problem Solving. Pilot lean problem solving within the Drainage and Wastewater (DWW) Branch.
-  Action 1B. Identify and resource stalled or incomplete improvements.
-  Action 1C. Plan for and sustain improvement across SPU. Integrate improvement planning and measurement into strategic and business planning.
- Action 1D. Systematically identify and take action on improvements across SPU.

Customer Assistance





Why is this practice area important? The Customer Assistance Practice Area is focused on the affordability of SPU's services, with a special (but not sole) focus on the needs of low-income customers. This area targets

programs and tools SPU has or could develop to more effectively meet affordability needs of our diverse customers.

Strategy 1: Align Efforts to Community Need. Prioritize and align Customer Assistance efforts and resources towards meeting the needs of the community and improving impact.

-  Action 1A. Perform rigorous affordability analysis when affordability metrics are finalized.
-  Action 1B. Conduct Pilot Program to Prevent Service Shut-offs for UDP Customers.
-  Action 1C. Explore income eligibility alignment with other City of Seattle and King County assistance programs.
- Action 1D. Explore ways to support the affordability of side-sewer and other costly private infrastructure repair costs for homeowners.
-  Action 1E. Provide greater benefit to the customer in cases of unforeseen leaks.



Strategy 2: Increase access to and participation in existing affordability programs.

-  Action 2A. Identify legal and operational barriers and options for transferring SPU UDP credits at SCL to SPU to prevent a water shut-off action.
-  Action 2B. Launch Web-Based Application Form for UDP and EAP
-  Action 2C. Targeted enrollment and cross-enrollment efforts for UDP, including a self-certification pilot program.
-  Action 2D. Expand Access to Emergency Assistance

Partnership Opportunities

Why is this practice area important? Partnerships are a primary vehicle for centering SPU’s work on the needs of the communities the utility serves and for driving innovation, building capacity in the community and leveraging a broader set of benefits than what the Utility can provide on its own.

Strategy 1: Develop an SPU culture that nurtures innovation, extending existing and developing new partnerships across all branches to expand the value and reach of SPU investments for the communities we serve.

-  Action 1A. Create a community of practice to share and learn from each other and build capacity within SPU.
- Action 1B. Identify, prioritize, and remove organizational barriers to partnering.
- Action 1C. Focus partnerships on demonstrating qualitative and/or quantitative impacts and provide routine opportunity to capture and communicate their stories, value and outcomes.
-  Action 1D. Build partnership capacity in the communities SPU serves and identify and expand opportunities for partnerships with private and community organizations to improve health and environmental outcomes.

Regulatory Alignment

Why is this practice area important? SPU’s regulatory costs are significant and are ultimately paid for by customers. For example, SPU’s 2018-2023 Capital Improvement Program (CIP) is \$1.5 billion and \$0.7 billion (45%) is dedicated to regulatory compliance projects such as the Ship Canal Water Quality project.

Strategy 1: Regulatory Alignment. Align to Community Need and Impact. Prioritize and align SPU regulatory resources towards meeting the needs of the community, improving impact and “least cost” regulatory action.



Action 1A. Develop a unified federal and state legislative agenda that focuses efforts on proactively improving the environment, public health, social equity, and the local economy.

Action 1B. Develop a utility agenda for external engagement and influence that benefits the entire enterprise.

Action 1C. Develop risk and cost reduction measures for select areas of regulatory influence.

Strategy 2: Regulatory Alignment Move from Prescriptive to Performance. Move from prescriptive to performance-based regulations to reduce or avoid costs, share or reduce risk, and/or enhance community outcomes.



Action 2A. Seek to build performance based regulatory practices that adjust to meet the intended outcome into the combined sewer overflow (CSO) consent decree.

Action 2B. Take action on promising areas where SPU is regulated or the regulator that might be influenced to move from a prescriptive to a performance-based approach.



Action 2C. Collaborate with other city and local agencies to develop a list of regulations where there are potential efficiencies.

Budget and Financial Management

Why is this practice area important? Seattle Public Utilities is financially and operationally complex, spending over \$1 billion annually to deliver drinking water, sewage transport, stormwater conveyance and treatment and garbage and recycling services across Seattle and parts of the region. The size and complexity of the organization requires strong financial management to maintain the lowest cost of service while providing value to customers.

Strategy 1: Review SPU financial policies; provide options focused on risk, affordability, and investment.



Action 1A. Perform a comprehensive update of SPU’s financial policies.



Action 1B. Assess and make recommendations on reserves/emergency reserves.

Strategy 2: Revamp the SPU budget process to be driven by strategy, priority, and customer needs.



Action 2A. Advocate with the City Budget Office to pilot biennial budgeting with Seattle Public Utilities.



Action 2B. Pilot the development of a flexible rate model that integrates affordability criteria into rate development.

Action 2C. Develop a standard integrated enterprise approach to prioritization, improvements and efficiencies.

Strategy 3: Enhance financial and performance monitoring to better inform budgeting and financial planning.



Action 3A. Pilot quarterly enhanced financial monitoring to increase transparency, integrate risk, and improve financial planning.



Action 3B. Provide core/simple financial information on capital and operations and maintenance more frequently and broadly, making the data useful, accessible and actionable for managers.

Action 3C. Pilot the use of organizational capacity analysis and staffing forecast tools.

Practice Area: Capital Planning and Delivery

Increase the speed and efficiency of planning and delivering of capital improvement projects while maximizing community value.

What is this practice area about and why is it important?

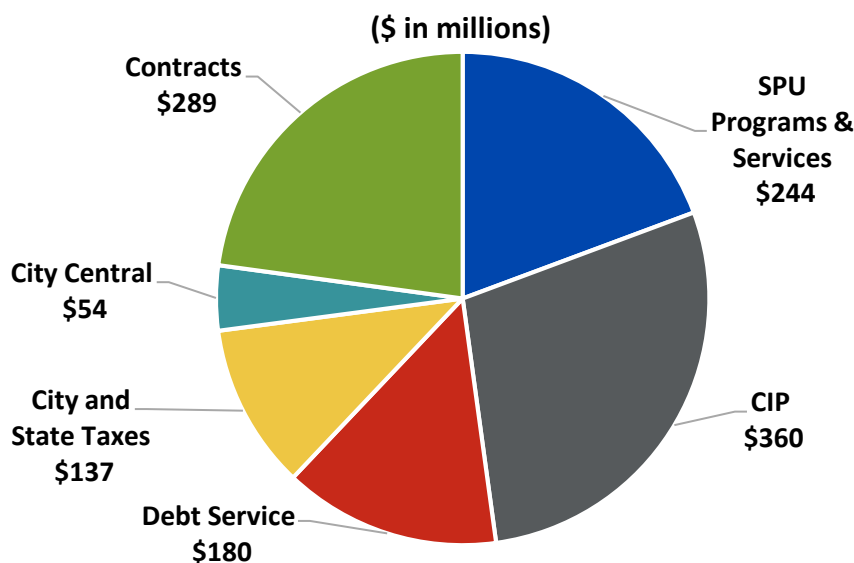
Seattle Public Utilities stewards a citywide and regional system of community capital assets which delivers essential drinking water, sewage transport, stormwater conveyance and treatment and garbage and recycling services. To support these services, SPU plans and delivers capital infrastructure projects to provide customers with reliable and enhanced delivery and protect human and environmental health.

Capital projects and financial policies account for approximately 25% of the total 2018-2023 SPU utility rate. Improvement and changes to the planning, speed and delivery of this large capital program can have significant effects on the affordability of SPU's rate to customers and the beneficial impact of SPU projects.

SPU engaged practitioners from across the utility to better understand how the utility might:

- improve the process of planning & delivering capital projects;
- better address capital project portfolio risk while minimizing costs;
- improve the transparency of capital project delivery for customers; and
- provide the most equitable benefits to communities and neighborhoods.

In 2019, 27% of annual spending for SPU was allocated to the CIP. Evaluating the area of capital delivery is an important part of finding ways to keep our services affordable to our ratepayers. Below is a chart showing SPU's adopted budget for 2019.



What is the current state of capital planning and delivery in SPU?

Improving upon a foundation of strong capital project management. SPU has a large capital portfolio and a structured system for planning, delivering, and managing capital assets. In general, each line of business (LOB) - Solid Waste, Drainage and Wastewater, and Water – manages its own capital assets and program. The Project Delivery and Engineering Branch (PDEB) is responsible for designing and constructing most new and replaced capital assets in collaboration with the LOBs. Each SPU LOB has a six-year capital improvement program informed by infrastructure assessment and analysis, regulatory requirements, and current and probable future needs, problems, risks and customer complaints.

Using strong management practices to deliver large capital projects. The Ship Canal Water Quality project will keep more than 75 million gallons of polluted stormwater and sewage out of the Lake Washington Ship Canal, Salmon Bay, and Lake Union on average each year. This \$570 million project is being completed in partnership with King County to decrease impacts on nearby communities and as part of a long-term comprehensive strategy to protect Seattle’s waterways and is responsive to the federal Clean Water Act and state regulations. The project is utilizing best management practices in program and project management including a schedule, cost, and risk management strategy that evaluates uncertainties and risks across the entire program. This results in a confidence-based schedule and cost estimate which is managed monthly. The management team emphasizes obtaining the best value in the project which has resulted in over \$77 million in scope and cost reductions by project staff.

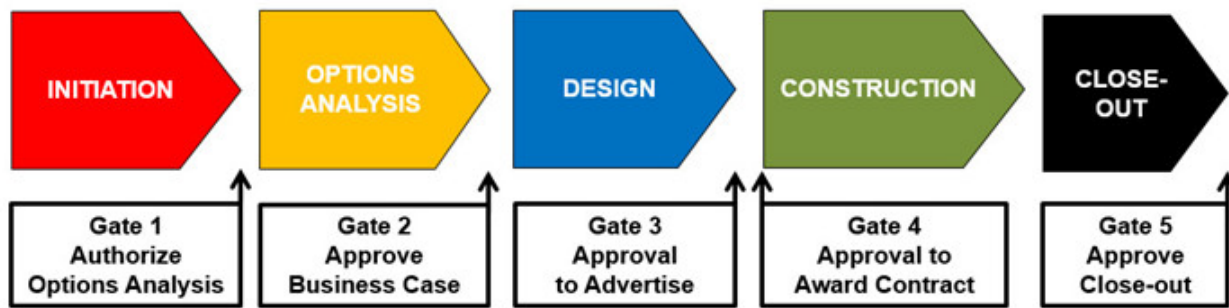
The approved 2018-2023 CIP for all LOBs totaled \$2 billion with the following breakout by year and LOB:

2018-2023 SBP CIP PROJECTIONS (\$ MILLIONS)

FUND	2018	2019	2020	2021	2022	2023	Grand Total
WATER	\$141.2	\$120.5	\$81.0	\$83.5	\$78.2	\$67.3	571.7
DWW	176.8	218.5	243.1	256.7	222.3	187.1	1,304.5
SW	9.0	20.2	24.7	7.7	4.0	3.8	69.4
TOTAL	\$327.0	\$359.2	\$348.8	\$347.9	\$304.5	\$258.2	\$1,945.6

Once the CIP is adopted, individual projects are then executed following the general workflow illustrated below, starting with the project Initiation Phase:

Stage Gate Process Flow for CIP Infrastructure Projects



The Stage Gate (SG) workflow shows a series of five distinct phases punctuated by five separate check points or gates. Each gate requires SPU executives to approve scope, schedule, and budget for capital projects with a life cycle cost over \$50,000. In 2009, SPU adopted the SG practice to ensure cost-effective, consistent, transparent, and customer orientation in executive decision-making through planning, selecting, and delivering capital projects.

During the initiation phase LOBs detail discrete problems to be solved and approximate schedule and budget. During the options analysis phase the LOBs develop and analyze options for solving those problems. The analysis includes triple bottom line economic analysis (social, environmental and financial considerations) as well as comparison of present value life cycle costs for each option. SPU began evaluating all projects using the triple bottom line in 2002. Selection and approval of the preferred project option is completed at Stage Gate 2.

After Stage Gate 2, projects are typically transitioned from the LOBs to PDEB. PDEB leads the design phase and develops formal plans and specifications necessary for public works contracting. PDEB also manages the construction and closeout phases of the project ending with final acceptance of the new or replaced asset by the LOB. PDEB is responsible for delivering between \$86 million to \$194 million in capital project spending annually or between what 40% to 54% of the overall capital budget (years 2016-2019).

There are several opportunities to enhance the efficiency of the capital planning and delivery process and focus on providing greater value to the customer. SPU's ultimate customer is always our rate payer. However, in the delivery of capital projects there are many intermediate customers. Adjusting our processes to provide value to these intermediate customers can help identify ways of eliminating waste (i.e. what those intermediate customers would not pay for) and streamline process.

As part of this initial assessment, the practice area work group identified a series of issues that create time delays in project delivery without adding significant value including:

- The consultant contracting and procurement process can be unnecessarily cumbersome. For example, signatures and contract review is required for small dollar limits.
- Decisions that should be made by the project team are often elevated to the highest levels of management, delaying project progress.
- Some projects proceed past initiation without appropriate definition or clarity in applicable policies often causing long pauses to obtain information and re-work based on new direction given.
- The project options analysis process that began in 2002 is time consuming, requires a lot of resources, and has not been re-evaluated since its inception.

Further, by reviewing current processes and identifying and better understanding what our internal customers value the work group also identified several overlapping opportunities for alignment and improvement including:

- Reducing the significant variation in the ways the LOBs plan for capital projects
- Spending and capital planning targets not being achieved which results in millions of dollars in idle capital each year
- Projects experiencing significant delays, sometimes for many years
- Substantive rework occurring in different phases and between stage gate checkpoints, resulting in delays and increased spending
- Data on project schedule and detailed cost performance not being readily available which limits the transparency and accountability of the capital planning and delivery process
- Uncertainty and risk aversion stalls movement or creates rework between gates
- Operation and maintenance needs are sometimes not well understood within capital planning and delivery which can create difficulty in managing assets once built
- Time and resources spent on options analysis is sometimes more than necessary to make the preferred option decision which is both costly and delays moving projects from planning to delivery.

STRATEGIES AND ACTIONS

Over the next five years, SPU plans to focus on improving the speed and efficiency of capital project planning and delivery while maximizing community value by:

- Improving and integrating capital planning across LOBs and other City departments.
- Reducing unnecessary project costs, accelerating project delivery, and providing multiple community benefits (such as improved water quality and passive recreation). Specifically, focus the stage gate process to provide customer value through streamlined and cost-effective decision making.
- Improving the transparency and accountability of project delivery through improved financial data and reporting, and responsive customer service.

Strategy 1: Capital Planning. Coordinate capital planning across LOBs and across other City departments to maximize potential for community value.

Strategy 1 Actions



Action 1A. Improve capital planning coordination by regularly convening SPU branches to identify planned capital improvements within common geographic locations.

Integrate project planning within those geographic areas to more efficiently meet multiple infrastructure and community needs. This action will allow the utility to be more strategic about finding opportunities to minimize construction disruption to the community, maximize the possibility of creating multiple community benefits (e.g.

improved drainage, stream quality, and passive recreation), and create efficiencies and cost savings by combining projects.



Action 1B. Integrate planning across the Drainage and Wastewater LOB to identify future investments that provide the greatest community and environmental benefits.

Finding the best investment solutions for Seattle’s drainage and wastewater systems begins by engaging with community. The Drainage and Wastewater integrated system plan will incorporate robust stakeholder engagement so that planning goals and objectives reflect community values and serve as a model and a guide to be incorporated into the capital planning of SPU’s other LOBs (see below).

Integrated planning for enhanced value. SPU is developing a 50-year plan for managing and improving Seattle’s drainage and wastewater systems while optimizing social and environmental benefits for the City. We are developing our plan through technical analysis, robust community engagement and an integrated approach to planning. By the end of 2022, SPU will have near- and long-term plans for drainage and wastewater programs, partnerships, and infrastructure investments that provide the greatest community value (e.g. improving environmental quality, public health, local economy, and social equity). This planning is part of building a better Seattle by providing drainage and wastewater services that are affordable, safe, green, and just in a climate uncertain future.



Action 1C. Develop Drainage and Wastewater capital planning guidance to consistently value multiple community and environmental benefits in CIP options analysis.

Once a set of problems have been identified in the integrated planning process, evaluation of solutions to solve that problem begins during the options analysis phase. This action will develop necessary guidance for how to maximize community benefits into the overall analysis of potential solutions. The Drainage and Wastewater LOB has begun this process and will lead the development of guidance to be used by the other SPU LOBs.

Action 1D. Apply guidance and lessons learned from the drainage and wastewater LOB work in B and C to all lines of business

Action 1E. Integrate standard portfolio project management practices into the development and monitoring of the CIP such as strategic prioritization across LOBs and portfolio performance and risk analysis.

While SPU has strong project management practices in place, the organization can further strengthen organizational alignment to business objectives, risk optimization, and resources allocation by treating the entire capital program as a series of capital project portfolios and adopting several industry-wide standards for portfolio management. This action will compare SPU practices at the utility against industry standards and recommend and implement changes to bring SPU into alignment with current best practices aimed at reducing overall portfolio risk, more efficient use of staffing capacity, and more timely delivery of capital projects.

Action 1F. Partner with SDOT to identify opportunities for improved coordination and delivery of capital projects.

SPU has the opportunity to better coordinate work with existing and upcoming SDOT capital projects. Currently, SPU does not consistently approach SDOT to plan for and integrate SDOT’s priorities and projects into SPU

projects that impact the right-of-way. This can provide efficiencies and minimize impacts to Seattle neighborhoods by finding joint opportunity projects.

Strategy 2: Capital Delivery. Improve capital project delivery by reducing project costs, accelerating project delivery, and providing multiple community benefits. Focus the stage gate process to provide customer value through streamlined and cost-effective decision making that requires the minimally optimal analysis to supports life cycle cost evaluation and strategic priorities.

Strategy 2 Actions



Action 2A. Streamline the project approval process to reduce decision cycle times and better align delegation of approval authority (decisions made at the right level).

Identifying the right level of approval authority will minimize time lost in moving projects forward. This action involves collaboratively working with executive management across SPU to evaluate current approval authority, eliminate and establish new rules, formalize new practices, and monitor and adjust for issues.



Action 2B. Incorporate reprioritization and elimination of stalled or lower priority projects into capital monitoring practices.

Projects can stall for many reasons, but these delays always result in higher costs and longer schedules. This action would set up check points and thresholds for projects to identify when stalls have occurred and a process for re-evaluating their place in the portfolio.



Action 2C. Improve the efficiency of capital project management by eliminating duplication of project management systems and activities.

SPU uses two formal enterprise project management software systems and a variety of informal solutions to meet project management needs. This results in process inefficiencies and the lack of consistent and readily available data for tracking and reporting on projects. This action is focused on consolidating existing information into one management system and expanding that system to add functionality currently being managed in an ad-hoc fashion.



Action 2D. Review and streamline capital project options analyses leading to stage gate 2 to reduce cycle times and project costs.

Reduce the number of projects using options analysis and focus analysis on the high risk, high complexity, politically/community sensitive, and high cost projects. The options analysis phase is used to identify and evaluate alternatives to solve the identified problem. SPU treats most projects the same during this process, which can lead to unnecessary cost and more time to complete analysis. This action will evaluate the current process to look for streamlining opportunities, recommend modifications to process and implement changes.



Action 2E. Revamp the Asset Management Committee (AMC) review process.

The AMC review process is intended to ensure that SPU has selected the right investment but often results in unnecessary delay, re-work, over-processing through redundant briefings, and over-analysis while not necessarily ensuring the right investment is being made. This action will evaluate the current process, look for streamlining opportunities, apply appropriate thresholds for which projects use this process, identify changes that will ensure that investment decisions are happening at the correct time and in an efficient manner and revisit dollar thresholds for what should constitute stage gate changes.



Action 2F. Transition to the use of portfolio reserves and/or pooled risk reserves to reduce the total dollar amount of management reserves.

Each capital project holds a percentage of the overall project budget in reserve to address contingencies for what is termed the “unknown-unknowns”. There is significant uncertainty in whether the money will be more than needed or not enough. Moving these reserve funds to a program portfolio level will lower the total dollars being held in reserve potentially resulting in lower budget needs. New processes to access the management reserve pool will provide greater oversight and accountability around reserve usage and align spending with the budget.



Action 2G. Reduce total cycle time in the procurement full solicitation process.

Consultant contracting is a significant and integrated part of the capital planning and delivery process and has multiple opportunities for reduction of cycle times which will help increase the speed of capital project delivery. Initial improvements will focus on development of scopes for solicitation and contract negotiations.

Action 2H. Better incorporate operational considerations into capital project development and review.

New and replaced infrastructure must meet the operational needs and maintainability requirements of our crews. Any additional funds and staffing resources associated with this infrastructure must also be identified and obtained. This action will identify gaps in the current practice and propose and implement solutions.

Strategy 3: Capital Reporting and Transparency. Improve the transparency and accountability of project delivery through improved financial data and reporting, and responsive customer service (LOBs as customers).

Strategy 3 Actions



Action 3A. Make available and use actionable data on a quarterly basis to identify project risks and issues early on so that adjustments can be made in a timely fashion.

Successful project management requires identification and active management of risks and mitigation strategies. This action will enhance SPU’s current enterprise portfolio project management system (PPM) to include modules that will house collected data and allow for proactive project management. The action also includes deployment of an earned value management system to improve project performance and forecasting and an integrated change control program to manage project scope changes.



Action 3B. Improve PPM (SPU's enterprise project management system) so that LOBs and management can easily find the information they need.

Currently, SPU holds project data in a variety of data management systems. There is no control process to gather and store this information in a single database nor is there a control process that compiles the data into reporting that leads to efficient and effective portfolio and project management. This action will enhance the current system of record (PPM) to allow for effective project management use, data storage, information control and project reporting.

Practice Area: Efficiency and Improvement

Develop a culture of continuous improvement to enhance value to our customers and improve efficiency and performance.

What is this practice area and why is it important?

The efficiency and improvement practice area focuses on how SPU, as an enterprise, identifies and sustains improvement to drive efficiency and provide increased value to rate payers. This practice area supports SPU's strategic business plan focus area of "Operational Excellence" by providing actionable steps for enhancing and building continuous improvement skills and practices across the utility.

Operational Excellence in SPU's 2018-2023 Strategic Business Plan. "We provide reliable, affordable, efficient, and high-quality services to all customers."

This practice area is essential to improving accountability and affordability. The strategies and actions of this practice area are intended to slow the growth in SPU's rate path by identifying and taking action on hundreds of small and large opportunities for improving service to the customer and reducing non-value-added activities and cost in SPU's work. Examples of non-value-added activities include "waste in process" such as having large inventories of parts, equipment downtime or being unavailable when teams are ready to work, and fixing the same problem twice. Focusing on work in this way not only improves efficiency and productivity; when done well, and in an engaged and respectful way with team members, it can improve employee engagement and job satisfaction.

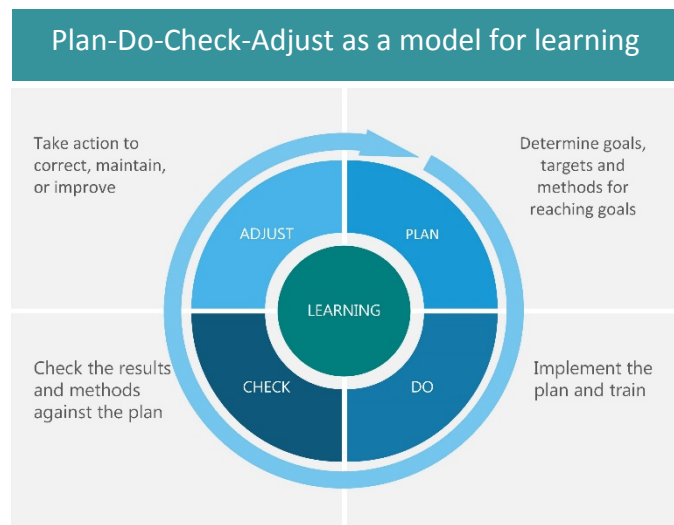
What is meant by continuous improvement?

Continuous improvement and lean involve simple systematic methods for focusing on what the customer values and eliminating from process what the customer does not value (and would not pay for). The core of the method, a plan-do-check-adjust (PDCA) improvement cycle, is based on the scientific method of proposing a change in a process, implementing the change, measuring the results, and taking appropriate action (see plan-do-check-adjust illustration).

The PDCA cycle is the foundation for continuous improvement. Continuous improvement can be focused on many small, medium, and large improvements ranging from reducing the number of steps it takes to fill out a report to streamlining an organization's process for capital planning and delivery.

Continuous improvement includes:

- Involving employees and external stakeholders in problem identification and problem-solving activities;



- Reducing the complexity of processes;
- Using performance metrics and simple visual controls to provide rapid feedback to improve real-time decision-making and problem-solving; and
- Approaching improvement activities using systems thinking.

What is the current state of continuous improvement in SPU?

SPU has engaged in a variety of continuous improvement efforts over the past decade. These process improvement efforts use varying methods including process mapping, special consultant studies, rapid improvement events, staffing analysis, and other techniques. The methods and skill in using these tools vary heavily by manager and line of business.

Workshop discussions and interviews on this topic revealed four themes:

1. process improvement is occurring in some lines of business;
2. while there is often initial improvement, improvement is sometimes not sustained due to turn over or conflicting priorities;

Reducing unnecessary inspections and costs through data analysis and lean methods. As part of the City’s Stormwater Permit, SPU’s Drainage and Wastewater (DWW) Branch was directed to perform inspections of privately-owned stormwater facilities every two years, which would have substantively increased program costs. Through process improvement and data review, DWW demonstrated that less frequent inspections would provide the intended environmental benefits and were able to avoid adding 2 FTE staff and reduced process time by 17%.

Improving service delivery through process improvement. SPU’s Water division received complaints from developers that the installation of water taps to new facilities was taking 3 months or more. By conducting a lean workshop and consistently checking and acting on process data, Water was able to reduce the time per inspection by 30%. While this shaved days and weeks off the process, additional work is needed to meet customer expectations.

3. data on process and costs is often difficult to gather or does not exist; and
4. there is a strong interest in process improvement, but the skills and support are not always available.

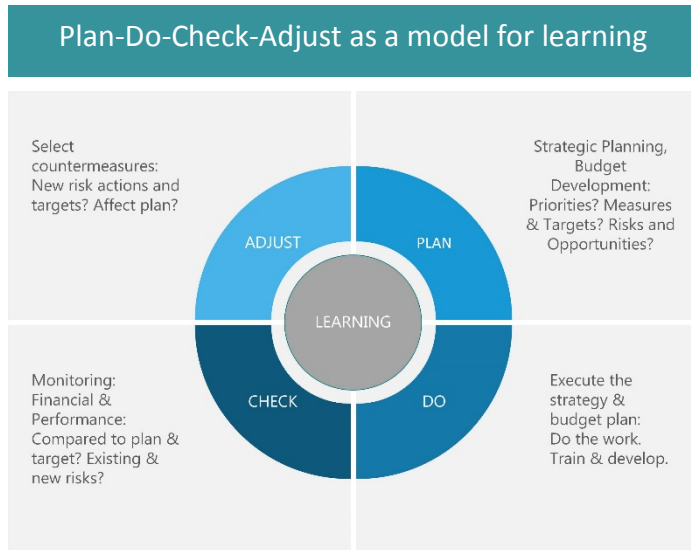
STRATEGIES AND ACTIONS

Strategy 1: Develop a culture of continuous improvement to enhance value to our customers and improve efficiency and performance.

Moving from “pockets of excellence” and improvement to “sustained operational excellence.”

SPU will build capability across the organization through applied problem solving and improvement, learn from that experience, and then, over time, apply the learning to more of the organization. At the same time, the utility will integrate the “plan-do-check-adjust” model into key management practices at SPU (see illustration). This

dual focus on both applied learning and integration with key management practices of the organization can provide a greater probability that progress and results from improvements are sustained over time through cycles of checking and adjusting and engaging greater numbers of employees in identifying and solving problems upstream at the source in more systemic ways. The essence of continuous improvement is to engage staff members responsible for the work in redesigning it, keeping in mind the need to provide the best possible product or service to the customer (external or internal).



Plan-do-check-adjust as a management system.
 SPU has several key organization processes (e.g. budget development and financial & performance monitoring) which can be better woven together into an integrated system for learning. For example, during the development of the strategic business plan and budget, opportunities for improvement might be identified (plan) and executed (do). During monitoring, progress might be checked on (check) to see if the action is in progress and having the intended impact and if not, an alternative method might be put in place (adjust). The cycle would then start again and the strategy (plan) is adjusted to reflect what was learned.

Continuous improvement strategies and actions are embedded into multiple Accountability and Affordability practice areas, strategies and actions.

For example, the capital planning and delivery practice area (page 9) includes several actions to improve capital planning. Actions include streamlining the process and improving data to reduce project costs and delays and to provide multiple community benefits. Similarly, the budget and financial management practice area includes several strategies and actions (page 37) which will help improve SPU’s budget management by better integrating budget development, business planning, and financial monitoring. Actions include streamlining the budget process and improving financial monitoring transparency.

Strategy 1 Actions



Action 1A. Practice and Learn Lean Problem Solving. Pilot lean problem solving within the Drainage and Wastewater (DWW) Branch.

SPU has experience using improvement methods such as lean problem solving to address single issues or programs. Many of these improvements are typically not sustained for several reasons: they rely on an individual manager’s effort without the reinforcing management support, checking, and necessary coaching; efforts face many competing priorities; improvements focus on one portion of a process versus focus on root cause;

improvements are overly ambitious or don't start small and gain momentum; or staff are not ready or energized to do improvement work.

During the next two years, DWW will pilot lean problem-solving methods across the LOB. Learning from this pilot will be applied to other areas.



Action 1B. Identify and resource stalled or incomplete improvements.

Several improvement efforts have begun but some are currently stalled or not sustained due to resource, data or other constraints. SPU will give priority and focus to diagnosing, resuming, completing and learning from efforts underway. This might include efforts with water taps, stormwater inspections, and other work.



Action 1C. Plan for and sustain improvement across SPU. Integrate improvement planning and measurement into strategic and business planning.

Improvement and efficiency identification are ad hoc exercises typically performed within the budget process and in response to reduction or cost cutting targets. These budget process reductions are often not strategic and sometimes focus on cutting service or deferring maintenance which may not be sustainable or are symptoms not causes of the issue needing improvement.

During the development of the strategic business plan, SPU will develop a portfolio of potential areas for improvement focus such as areas with customer dissatisfaction (internal and external), long wait times, higher than anticipated cost, or other opportunities.

Action 1D. Systematically identify and take action on improvements across SPU.

A number of issues have been identified by work groups in several areas of SPU (e.g. poor customer experience, high cost, time delays) that will be prioritized, resourced, and acted on. SPU expects this work to reveal valuable and essential process/practice fixes and some areas where anticipated results are not sufficient to warrant investment in overhaul or other changes. Two examples of potential areas for improvement include:

- Performing effective utility system maintenance and upgrade work in the downtown core. SPU would address how best to plan and align crew work so that it is as efficient and effective as possible in a critical system area to limit failures and service calls.
- Organizing and scheduling infrastructure inspections touched by multiple city departments. SPU would identify overlap and skill crossover in those departments that could reduce duplicate work. SPU could also evaluate whether the inspection process could be streamlined to save valuable field time.

Practice Area: Customer Assistance

Focus on the affordability of SPU’s services, with a special (but not sole) focus on the needs of low-income customers, and the portfolio of assistance programs and tools that can be strategically deployed to meet the needs of diverse customers.

What is this practice area about and why is it important?

The Customer Assistance Practice Area is focused on the affordability of SPU’s services, with a special (but not sole) focus on the needs of low-income customers. This area targets programs and tools SPU has or could develop to more effectively meet affordability needs of our diverse customers.

Given that SPU utility rates are a financial burden for many households and that Seattle is becoming increasingly unaffordable for other reasons, the key policy question that drives the work in this practice area is: *What can SPU do to help customers struggling with affordability, without placing undue burden on all rate-payers?*

Seattle is not alone in examining and facing the challenges of utility affordability. At a national level, industry organizations such as the American Water Works Association (AWWA), the National Association of Clean Water Agencies (NACWA), and the Federal Environmental Protection Agency are engaged with utilities and other stakeholders to revamp how utility affordability is measured. Previous Federal guidance looked only at utility bills as a percent of median household income comparisons and did not take into account the ability of the poorest households to pay, nor did it account for local costs of living and growing income disparities.

While SPU is engaged in the national effort to revamp utility affordability metrics, there is no agreement on a precise way to measure whether a utility service is affordable.

The Customer Assistance Practice Area work group members came together to identify all existing or potential programs, policies, and tools that intersect with customers and have affordability implications, displayed in the “Customer Assistance Tool Kit” in Table 1:

Customer Assistance Toolkit (Table 1)

Financial	Informational	Technical/Operational
<ul style="list-style-type: none"> • Bill adjustments • Bill credits • Bill discount programs (UDP) • Bill waivers • Billing cycles • Conservation programs • Customer help network • Customer support donations 	<ul style="list-style-type: none"> • Access • Availability • Classes • Contact Centers • How To’s • Language Translations • Notifications • Response Programs 	<ul style="list-style-type: none"> • Claims • Dispute Resolution • Forms • Installation Assistance • Program Enrollments • Service Portals • Service Signups • Service Turn On/Turn Off

- Emergency assistance (EAP)
- Infrastructure insurance programs
- Loans
- Payment arrearage programs
- Payment plans
- Percentage of income payment plans (PIPPs)
- Rate design/structures
- Rate size
- Rebates
- Service level choices
- Severance policy
- Shut off policy
- Tiered assistance

Although the Utility Discount Program (UDP) is SPU's largest customer assistance program, both in terms of cost (\$16 million cost to SPU in 2018) and in terms of customers served (24,000 SPU customers), it is one part of a much larger tool kit that provides different kinds of assistance for different customers with different needs.

For example, the UDP provides long-term assistance in the form of a 50% discount on all bills, while the Emergency Assistance Program (EAP) provides a one-time (or two-time, if there are children in the household) 50% discount to avoid a water shut-off action. The EAP served 884 customers last year, at a cost of \$225,500 to SPU. SPU policies and practices related to how water shut-offs are managed are also important tools in the larger affordability portfolio.

Select Affordability Tools: Impact and Cost for 2018 (Table 2)

Tool	Number of Customers Impacted	Cost to SPU
Utility Discount Program (UDP)	24,000	\$16 million
Emergency Assistance Program (EAP)	884	\$225,500
Leak adjustment policies	916	\$1,330,269
Water shut-off policies and practices for UDP customers	237 UDP customers experienced a water shut-off	N/A

Some of the other customer assistance related affordability efforts that SPU has completed in the last year or has underway include:

- Excluding Medicare Part B from the gross income eligibility requirements to help fixed-income seniors qualify for the UDP and EAP.
- Offered extended payment plans to customers experiencing financial hardship due to the partial federal government shut down that took place in late 2018.

- Improving the bill complaint/dispute process.
- Re-examining and updating customer account management and billing policies.

The Customer Assistance Practice Area work group also developed the following six principles to guide affordability efforts:

Six guiding principles:

1. Empower customers (and employees) by providing effective tools.
2. Proactively solve problems as early as possible.
3. Help particularly vulnerable households with long-term need.
4. Help people in short-term financial crisis.
5. Help customers avoid catastrophic bills.
6. Hold ourselves accountable through measurement and reporting.

SPU aims to look comprehensively across the different tools in its affordability toolbox, take a strategic approach, and make targeted improvements for better results.

STRATEGIES AND ACTIONS

Strategy 1: Align Efforts to Community Need. Prioritize and align Customer Assistance efforts and resources towards meeting the needs of the community and improving impact.

As Seattle and SPU's customer base evolve and change, so do the needs relating to affordability. Rather than guesswork or reactionary piece-meal responses, SPU proposes to develop an organization-wide approach that is data-driven, comprehensive, and strategic, to provide the best possible outcomes with the least burden on ratepayers.

Strategy 1 Actions



Action 1A. Perform rigorous affordability analysis when affordability metrics are finalized.

SPU has contracted with consultants to develop affordability measures that make sense for the utility and the local community. The federal Environmental Protection Agency is revising its measures soon as well. When these measures are ready in the next year, SPU will apply them to inform longer-term objectives to strengthen customer assistance efforts.



Action 1B. Conduct Pilot Program to Prevent Service Shut-offs for UDP Customers.

SPU proposes to conduct a water shut-off prevention pilot program to proactively identify and reach out to low income UDP customers experiencing financial distress, using new modes of communication, messaging, and assistance. The goal is to reduce the UDP shut-off rate from the approximately 1% shut-off rate today, and to gather data on who is struggling to pay their utility bill even with the UDP discount.

SPU will use this pilot data to inform longer-term programmatic changes targeting income level(s) at which an additional, more deeply discounted tier might make sense for UDP assistance, as well as how to proactively identify customers experiencing financial difficulty, do effective outreach, and provide improved assistance to all customers.



Action 1C. Explore income eligibility alignment with other City of Seattle and King County assistance programs.

To align as much as possible with other city and county benefit and assistance programs, SPU will work with Seattle City Light (SCL) to analyze alternative income eligibility requirements and what income metric and/or thresholds might make sense for alignment of the UDP.

Action 1D. Explore ways to support the affordability of side-sewer and other costly private infrastructure repair costs for homeowners.

Side-sewer and water service leak repair costs can range from \$5,000 - \$50,000 and financing can be difficult to obtain for some homeowners. An estimated 30,000 Seattle homeowners could at some point be faced with these repair costs and may not have resources to finance such an expense.

SPU will explore low or zero-interest financing options and subsidized insurance for homeowners in need, to address high-cost infrastructure repair needs, potentially through the Office of Housing's Home Repair Program.



Action 1E. Provide greater benefit to the customer in cases of unforeseen leaks.

SPU is amending internal policies with respect to billing adjustments in cases where a leak occurs, to provide greater benefit to the customer.

Strategy 2: Increase access to and participation in existing affordability programs.

While looking to comprehensively assess affordability and the effectiveness of SPU’s portfolio to address those needs (Strategy 1), there is a need in the near term to increase access to those in need to the programs and resources already in place (Strategy 2).

Strategy 1 Actions



Action 2A. Identify legal and operational barriers and options for transferring SPU UDP credits at SCL to SPU to prevent a water shut-off action.

For a small subset of customers enrolled in the UDP who are renters in single-family homes, their UDP credit for SPU goes onto their Seattle City Light account because they do not have customer accounts with SPU directly. The UDP credits that accrue on the Seattle City Light account are not available to the customer for their SPU payments, even in the case of imminent water shut-off action.

SPU will work with SCL to obtain conclusive analysis of the legal barriers and options available for addressing this issue and pursue a fix with Seattle City Light if legally possible.

Case Study: Access to UDP Credits

“Chris” is a disabled UDP customer renting a house near University Village. In September 2017, Chris owed SPU \$533.69 for his total SPU bill and faced the threat of water shut-off.

Although he had \$870 in UDP credit with Seattle City Light, he struggled to get this transferred to cover his SPU balance because: 1) as a tenant, the account was not in his name so he could not have the SCL credit transferred to an SPU account, and 2) he could not obtain a refund check from SCL before the scheduled shut-off.

He had already used EAP earlier in the year, and so wasn’t eligible for it now. His water was shut-off on October 25, 2017.



Action 2B. Launch Web-based Application Form for UDP and EAP.

Customers who wish to apply to the UDP or EAP (SPU and SCL made recent improvements to allow the same application to qualify a household for both programs), the customer can obtain an application online, but cannot complete or submit the application online. It is a PDF document that must be printed and either scanned or sent as an attachment via email.

To increase access to these affordability programs, SCL and SPU are launching an online self-service portal for utility customers, which will include a web-based UDP and emergency assistance application form. This is anticipated to go live in the third quarter of 2020.



Action 2C. Targeted enrollment and cross-enrollment efforts for UDP.

The steering committee that oversees UDP administration will pursue cross-enrollment opportunities with the following means-tested programs. This action may provide enrollment increases and administrative efficiencies similar to those gained through the successful Seattle Housing Authority (SHA) cross-enrollment partnership:

- National School Lunch Program
- Women, Infants and Children (WIC)
- Medicaid
- Tribal TANF
- Supplemental Security Income (SSI)
- Bureau of Indian Affairs General Assistance

The steering committee is also developing a multi-year, strategic outreach and marketing plan for the UDP to increase enrollment. The plan will be completed this summer.

In addition, SCL and SPU will conduct a UDP Self-Certification Pilot Program to boost enrollment in low-income areas of the city, as well as test the effectiveness of new marketing strategies, a new fast-track application form, and new auditing techniques.

Case Study: UDP Cross-Enrollment

In 2015, SPU worked with Seattle City Light to remove a longstanding barrier in the Seattle Municipal Code that prevented customers living in facilities operated by Seattle Housing Authority from participating in the UDP. By removing that barrier and establishing cross-enrollment with SHA, the UDP enrolled 7000 new households in 2016.



Action 2D. Expanding Access to Emergency Assistance.

SPU will expand access to emergency assistance in three important ways, by:

1. increasing the income eligibility ceiling from 70% to 80% of State Median Income to help households experiencing short-term financial crisis.
2. proactively reaching out to UDP customers facing a potential water-shut off with information about the Emergency Assistance Program;
3. pursuing changes to the Seattle Municipal Code to allow application of emergency assistance up to 100% of the customer's bill (up from the 50% limit in place today); and
4. exploring the creation of a donation-based emergency assistance fund, akin to Seattle City Light's "Project Share."

Practice Area: Partnership Opportunities

Improve SPU's ability to partner with organizations, institutions, and companies to leverage broader benefits, reduce costs, share risks, and improve outcomes for the communities that we serve.

What is this practice area about and why is it important?

Partnerships are the network of suppliers, vendors, firms, funders, collaborators, advocates, service providers, and peer organizations that make a business model work and provide value to the customer. SPU engages in three types of partnerships:

1. traditional buyer and supplier relationships;
2. strategic alliances where organizations bring different capabilities together to deliver a product or serve a customer; and
3. joint ventures where organizations enter a new business to provide a different service or asset for a new customer segment.

SPU engages in hundreds of partnerships worth hundreds of millions of dollars (see examples below).

Partnership Examples Across Lines of Business

- Water treatment plant contracts
 - Relationships with ethnically based community organizations to meet service goals
 - Solid waste contracts
 - Wholesale water sales to other utilities
 - Shared customer call center with City Light
 - Ship Canal project with King County
 - Agreements with sewer districts for sewage treatment
 - Recycling and conservation partnerships with our customers
 - Relationships with business coalitions and City departments to build WMBE capacity and usage
 - Co-implementation of water conservation projects at the Ballard Locks with U.S. Army Corps of Engineers
 - Foundation and philanthropy relationships to amplify, align and supplement health equity, environmental justice, and climate adaptation
 - Joint property purchase and land swaps with other agencies such as Seattle Parks and Recreation and the Army Corp of Engineers to conserve and protect parcels
-

The Utility enters into partnerships to reduce costs, share risks, and to gain a resource or the ability to engage in an activity that is outside of existing capabilities. Most SPU partnerships provide multiple benefits to SPU and to the partner organizations and communities. Often benefits are quantifiable in financial and performance output

terms such as reduced cost. Many benefits are also qualitative, such as better relationships with stakeholders or increased community organization capacity to engage.

Partnerships are a primary vehicle for centering SPU's work on the needs of the communities the utility serves and for driving innovation, building capacity in the community and leveraging a broader set of benefits than what the Utility can provide on its own.

Partnerships are also critical to delivering SPU's core services. SPU is not able to meet operational goals and regulatory requirements alone, especially in the face of growing environmental threats and affordability concerns. During the development of the "Building Partnership Opportunities" strategies and actions, SPU identified a set of principles to guide its continued work (see "Five Partnership Principles").

The following are specific highlights of SPU's partnership principles in action along with the value and variation of partnership efforts in SPU:

SPU's Five Partnership Principles:

1. To have a good partner, be a good partner and help create mutual purpose.
2. Get out of transactional mindset, move into a transformational mindset.
3. Balance risk with the potential for new or expanded opportunities.
4. Focus on long-term relationships and building trust.
5. Build capacity in the community and with the organization.

Leveraging supplier/provider partnerships to improve service and customer value. SPU's Solid Waste division negotiated new contracts worth approximately \$1 billion over 10 years for solid waste services. The new contracts were negotiated to cost the utility \$25 million less than what was assumed in adopted rates while continuing to deliver reliable services, positive environmental outcomes, and enhanced services. These lower than anticipated costs were carefully negotiated with the vendor to also ensure the long-term viability of the contractor and risk sharing. This example illustrates principle 1 and 5.

Engaging in a strategic alliance with a private developer for clean water. A private developer approached SPU with a proposal to voluntarily divert dirty stormwater runoff from WSDOT's Aurora bridge into a park like green space constructed by the developer in the City right-of-way to improve water quality in Lake Union. SPU entered into an agreement with the developer and the project will effectively divert and clean 160,000 gallons of stormwater per year. This agreement enabled improved water quality in the region beyond what can be done by Agencies and created a community green space asset for the future. Partnerships to add bioretention at the time of redevelopment is far less costly than if the entities did the work on their own. It also spurred SPU to develop a better internal system to establish similar partnerships in the future. This example illustrates all five principles.

Entering into a joint venture to bring more partners to the table. In 2018, SPU partnered with Mary's Place, a nonprofit organization serving families experiencing homelessness, to explore new opportunities around food rescue and improving community health. Approximately 95,000 tons of food are wasted each year locally at a cost to SPU customers to compost or landfill. At the same time, more than 250,000 King County residents are experiencing food insecurity. Working together, the Food Rescue Innovation Lab was convened, which brought together stakeholders from a range of agencies, departments, and sectors to better understand the issue, surface new opportunities for collaboration, and create buy-in for long term engagement and solutions. By engaging with a community connected and passionate partner, SPU is now partnering with many private, community, and philanthropic organizations to meet the dual objective of reducing the amount of high-quality food going into the waste stream and feeding residents in need. This example illustrates principles 1, 3, 4, and 5.

Creating strategic alliances and community trust with local non-profits. Community Connections is an SPU program which fosters long-term contracted partnerships with non-profit community-based agencies, with a goal to improve the quality of life for people of color, immigrant, and low-income communities through transformative

engagement and education on utility functions and services. The partnership explicitly focuses on overcoming a lack of trust through relationship building and is an example of using targeted approaches to reach the universal goal of engaging all SPU customers. This example illustrates all five principles.

STRATEGIES AND ACTIONS

Strategy 1: Develop an SPU culture that nurtures innovation, extending existing and developing new partnerships across all branches to expand the value and reach of SPU investments for the communities we serve.

This strategy builds on the collective experience of SPU to better leverage internal resources, grow a community of practice and organizational learning, and sustain and expand the number of partnerships. SPU's partnership efforts typically benefit individual programs or business areas, but staff expertise, data, and lessons learned from past efforts are not widely leveraged across the utility. As SPU's innovation culture continues to mature, the partnership strategy will evolve into an enterprise-wide, cross-functional approach where the Utility collaborates across the organization and with the community to improve affordable and accountable outcomes.

In addition, partnerships serve business purposes to reduce costs, spread risk, and improve service. Consistent with the accountability and affordability framework, partnerships should strive to develop and use evidence, and demonstrate results to ensure that both SPU and the communities served are benefiting from them.

SPU Employee Perspectives on the Culture of Partnership

"The opportunity to leverage what we do and what others do to create a greater collective whole is inspiring."

"We work together but we don't always view our relationships as partnerships. If you look at it as a partnership, it may create more value because you approach it differently."

Strategy 1 Actions



Action 1A. Create a community of practice to share and learn from each other and build capacity within SPU.

People come to work in the public sector with fresh ideas and energy to improve upon what's already been delivered. We are living through rapid technological advances and unprecedented connectivity, challenging us to take advantage of all there is to offer in a reasonable and affordable manner.

SPU can learn to better adapt to shifting demands and can provide innovative approaches. Creating a community of practice is one approach for strengthening and encouraging a culture of innovation within the utility by creating a sponsored forum for sharing knowledge and learning led by experts and practitioners in SPU.

Action 1B. Identify, prioritize, and remove organizational barriers to partnering.

Partnerships can create value but sometimes City and SPU processes are barriers to moving forward. For example, our contracting processes are not nimble and designed for transactional partnerships (supplier/provider) and less focused on strategic alliances or joint ventures which can provide broad benefits to the community. This can result in lost time and missed opportunities to build trust and better serve our

customers and community, and help meet utility goals while sharing the costs, risks, and rewards of sustaining a healthy environment.

Action 1C. Focus partnerships on demonstrating qualitative and/or quantitative impacts and provide routine opportunity to capture and communicate their stories, value and outcomes.

SPU's work requires an ability to engage and inform officials and the public about how rate payer dollars are spent, the benefits, and what was achieved. For SPU, there exists commonplace reporting on the performance of utility assets and achievement of broad utility goals. The stories of success reached through partnerships is often under-reported and may be lacking metrics in similar fashion to how performance is measured in other areas of the utility.



Action 1D. Build partnership capacity in the communities SPU serves and identify and expand opportunities for partnerships with private and community organizations to improve health and environmental outcomes.

SPU would like to build a reputation as “open for innovation” by the broader community, with clear private sector and community organization partnership opportunities. While SPU has organizational experience and capability in building partnerships, it does not have an enterprise-wide approach to marketing the potential for broader partnerships. SPU will build from successful experience through efforts such as WMBE, Green Stormwater Infrastructure and other the examples illustrated in this document to build an outreach and marketing plan based on strategic priorities and targeted outcomes.

For example, planning is currently underway to expand and build partnerships for Green Stormwater through co-location opportunities with other City Departments and potential community based organizations or developer partnerships to encourage greater private investment in water quality and other community goals.

Practice Area: Regulatory Alignment

Reduce the cost and risk of meeting regulatory demands while ensuring public health and safety, environmental protection, a vibrant local economy and social equity outcomes. Focusing on regulation in this way is expected to improve affordability for our customers by eliminating unnecessary process, selecting viable lower cost alternatives for the same or greater benefit, and moving from prescriptive requirements to performance-based approaches.

What is this practice area about and why is it important?

Seattle Public Utilities is both *regulated* by other governmental agencies and is a *regulator* of local governments, companies and individuals. Regulation of water, wastewater, drainage, and solid waste is essential to SPU's core mission of protecting public health and the natural environment. At the same time, regulatory activities must be done through an equity lens to protect the communities served while being careful to minimize negative economic impact that regulations might have.

SPU has a long record of regulatory compliance as well as innovative practices influencing regulation for more locally, sustainable health and environmental outcomes and reduced costs. Far from avoiding regulation, SPU has advocated for practices that move upstream to protect and restore ecosystem functions and proactively reduce regulatory response through voluntary compliance across many areas including increasing recycling rates, conserving water, and natural systems approaches to stormwater runoff in neighborhoods.

This regulatory alignment strategy builds on the experience and practices within SPU to better leverage resources, institutionalize enterprise learning, and improve the use of evidence to influence regulation and improve outcomes. By emphasizing a more adaptive approach, this strategy also better prepares SPU for the future impacts of climate change which will require greater regulatory flexibility to respond to a shifting and increasingly uncertain future. During the development of the Accountability and Affordability strategy, SPU identified a set of principles to guide continued work (see "Seven Regulatory Principles").

SPU's Seven Regulatory Principles:

1. Be Adaptive and shift from "regulate and forget" to a responsive, data driven, iterative approach.
2. Pilot and test new approaches on limited scale and learn from them
3. Move upstream and influence the issue early
4. Constantly reassess for the intended impact
5. Focus on outcomes over process
6. Engage allies to improve outcomes
7. Prioritize and focus on a few key areas

Laws and regulations impact SPU’s lines of business to different degrees. For example, the federal Clean Water Act primarily impacts the Drainage and Wastewater line of business (LOB) but to a lesser degree the Water LOB and Solid Waste LOB. Some laws and regulations impact only one LOB, such as the state Water Code regarding water rights. Others impact all SPU lines of business, such as the federal Fair Labor Standards Act. Attachment B provides examples of laws and regulations that impact SPU.

SPU’s regulatory costs are significant and are ultimately paid for by customers. For example, SPU’s 2018-2023 Capital Improvement Program (CIP) is \$1.5 billion and \$0.7 billion (45%) is dedicated to regulatory compliance projects such as the Ship Canal Water Quality project. SPU’s regulatory strategy seeks to improve outcomes in ways that also improve affordability and accountability for the customer.

STRATEGIES AND ACTIONS

Strategy 1: Align to Community Need and Impact. Prioritize and align SPU regulatory resources towards meeting the needs of the community, improving impact and “least cost” regulatory action.

As SPU continues to mature, its regulatory strategy will evolve into an enterprise wide, cross functional approach with collaboration across SPU, other City departments, jurisdictions, and regulators to improve outcomes for the community. Instead of just responding to emergent opportunities, SPU will work to develop an organization-wide approach that is coordinated and proactive, and intentional about providing the best possible outcomes with the least burden on ratepayers.

Strategy 1 Actions

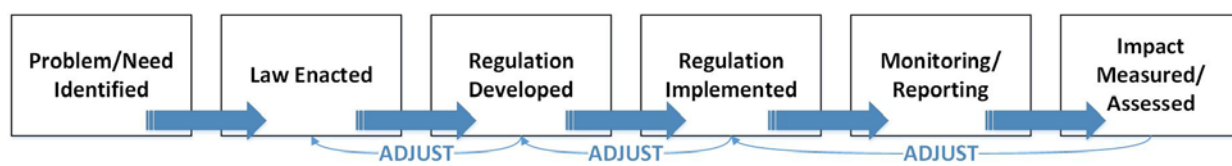


Action 1A. Develop a unified federal and state legislative agenda that focuses efforts on proactively improving the environment, public health, social equity, and the local economy.

Historically, SPU has used an ad hoc approach to state and federal legislative agendas, focusing on issues that arise out of LOB-identified legislative priorities or are responsive to external factors. This has sometimes resulted in focusing on issues that may not have the highest priority need for SPU, nor have they been fully grounded in improving the environment, public health, social equity and the local economy (“the four community outcomes”). Finally, it also means we miss proactive opportunities to make big operational improvements.

SPU will develop an agenda that focuses on legislation and existing regulation. It is essential to be proactive in supporting lawmakers and regulators in making decisions informed by good risk- and cost-data and a sound business case. This includes regulatory solutions that are more holistic and connected as opposed to siloed in approach.

The opportunity to improve regulation may arise anywhere in the regulatory lifecycle shown below, from the development of the original legislation to the measurement and assessment stage.



The objective for creating a common legislative agenda is seek out cross-LOB and enterprise-wide opportunities that have the greatest impact on SPU's costs and multiple benefits to the community. For example, laws and regulations that affect water quantity and quality have implications for all lines of business and can benefit the environment, public health and safety. Similarly, laws and regulations for public works contracting also impact the enterprise overall while helping the local economy and social equity. In some instances, the scope of proposed legislation can be expanded to create multiple benefits. By being strategic about its legislative priorities, SPU can focus its resources on proposals that would best serve the community.

Action 1B. Develop a utility agenda for external engagement and influence that benefits the entire enterprise.

SPU successfully responds to emergent opportunities to work with regulators, industries and the community to improve regulation. SPU is involved with national and local organizations that advocate for changes to regulations, such as the American Water Works Association, National Association of Clean Water Agencies, and the Solid Waste Association of North America.

However, these successes are often reactive rather than proactive, which limits the spread of ideas to individuals working on that problem. Other people in SPU, along with regulatory agencies and partner organizations, do not benefit from the improvement and learning. This can be a missed opportunity, because concerns in one LOB are often shared across other LOBs with potential multiple benefits for the community.

For example, PCB toxins are industrial chemicals which can show up in the solid waste stream, and then from there to wastewater and surface water. Although those are different LOBs, by coordinating people and resources systematically, SPU can jointly identify the problem and put resources where they will be most effective: eliminating PCBs from solid waste before they lead to harder and more costly work of removing them from streams and waterways.

Addressing waste and contamination at the source.

SPU's Solid Waste Division collaborates extensively with partners to extend manufacturer's responsibility for disposal of their products. This work has resulted in legislation and actions over the past 20 years that have diverted hundreds of thousands of tons of materials from the landfill. By working in partnership with the Northwest Product Stewardship Council, hazardous chemicals found in electronics, light bulbs, and pharmaceuticals have been repurposed for a second life or disposed of in ways that won't harm the environment.

Action 1C. Develop risk and cost reduction measures for select areas of regulatory influence.

While SPU works to affect and better manage regulation, we often do not have a baseline for measuring the effectiveness of those activities or for reducing or avoiding costs and impacting the intended outcome. Having credible baseline information as well as information demonstrating the impacts of emerging issues such as climate change increases the probability that we can advocate for more adaptive and effective interventions with regulators. In addition, targeted risk and cost reductions are not typically formally considered when assessing the potential benefits of changing or influencing regulations.

SPU has some success in influencing regulation when we provide regulators analysis of the efficacy of the regulation and, in some cases, modifications of process that can make the regulation more effective.

An example of this is SPU’s handling of the Stormwater NPDES Permit (see Case Study: Reducing the administrative burden of managing the stormwater permit).

Strategy 2: Move from Prescriptive to Performance. Move from prescriptive to performance-based regulations to reduce or avoid costs, share or reduce risk, and/or enhance community outcomes.

The landscape of regulation is large and complex, and because important community outcomes such as public health and safety, environmental protection, economic vitality, and social justice are at stake, it is important to be

Reducing the administrative burden of managing the stormwater permit.

SPU gives the National Pollutant Discharge Elimination System (NPDES) permit to people with private stormwater drains. As part of the permit, SPU does a manual inspection every year. Based on actual inspection and maintenance data, SPU has been able to demonstrate that the permit requirement of inspecting privately owned stormwater facilities every year is unnecessarily prescriptive and does not result in increased maintenance or environmental benefit, but instead uses inspector resources that could be used for greater benefit in other programs.

thoughtful and purposeful about this work. By changing both our mindset and our internal approaches, we can more easily identify and advocate for regulations that provide a better value with improved outcomes to residents.

Strategy 2 Actions



Action 2A. Seek to build performance based regulatory practices that adjust to meet the intended outcome into the combined sewer overflow (CSO) consent decree.

In July 2013, Seattle entered into a Consent Decree with the Environmental Protection Agency, Department of Justice, and the Washington State Department of Ecology to reduce sewer overflows (SSOs) and combined sewer overflows (CSOs). The cost of addressing the consent decree was estimated at \$600M in 2013. In the last five years, the capital costs of meeting Consent Decree requirements have increased significantly due to changing rainfall patterns, increasing costs of capital projects and overall growth in the City market conditions. However, the existing prescriptive requirements for CSOs limit how SPU can respond to these changes in an effective, cost-effective manner. Shifting to a more adaptive approach for CSOs through a Consent Decree modification would direct future capital investment towards the greatest public health and environmental outcomes, while providing the flexibility needed to partner with King County on more cost-effective projects and manage climate and affordability challenges.

Action 2B. Take action on promising areas where SPU is regulated or the regulator that might be influenced to move from a prescriptive to a performance-based approach.

Sometimes a prescriptive process or alternative is expensive and not as effective as enforcing performance standards. In other cases, the prescriptive measure might be more appropriate.

Prescriptive approaches to regulation describe how or what must be done such as “take water samples” or “report quarterly” but may not measure the intended impact or outcome or may have little evidence that they

impact the outcome they are trying to achieve such as no toxins in streams. Compliance has a cost but may not have an offsetting benefit. In contrast, a performance-based approach starts with the desired outcome and measures either the outcome (e.g. healthy salmon habitats) or conditions related to the outcomes (e.g. increasing salmon populations). Opportunities exist to shift more regulations to a performance-based approach.

The table below contrasts the difference between prescriptive approaches compared to regulation that uses a performance-based approach.

Cost effective ways to ensure “mountain fresh” drinking water.

SPU’s water division worked creatively with the Environmental Protection Agency, local environmental organizations, and local tribes to keep drinking water safe, avoid unnecessary costs, and protect the environment. By focusing on data and intended impact, SPU developed an acceptable alternative to the EPA’s prescribed approach to filter drinking water. This option helped avoid building a costly large capital facility and instead put resources into protecting natural areas.

Prescriptive vs. Performance-based Approaches to Regulation

Prescriptive	Performance
<ul style="list-style-type: none"> • Prescriptive-based regulation • Mandated technology, equipment, action/tasks • Specified behaviors or methods to comply • Demand specific solutions be implemented • Focus on inputs and activity 	<ul style="list-style-type: none"> • Impact-based regulation • Set results-oriented goals • Establish objectives or standards • Encourage flexibility and innovation • Focus on outputs and outcomes

SPU will be looking at all regulation through this lens: both its own proposed regulation of others and those proposed that would apply to SPU. An important part of this process is ensuring there is good data to inform these choices.



Action 2C. Collaborate with other city and local agencies to develop a list of regulations where there are potential efficiencies.

SPU directly regulates in a variety of areas, sometimes in concert with other City departments. Some of these regulations and processes have never been reviewed for process or outcome effectiveness and efficiency. In addition, layering separate regulations creates unnecessary complexity for City departments and parties that need to comply.

In recent years, SPU and other City and partner agencies have worked for better coordination but these early efforts might benefit from clearer understanding of the outcome-based needs for each entity and then a more focused effort on improving affordability and outcome.

For example, when a developer is building a new building, a permit and installation is required to access utility services from utility mainlines to the building. Permitting activity is done in conjunction with Seattle Department of Construction and Inspection (SDCI) and Seattle Department of Transportation (SDOT) and consists of permitting and installation of utility service lines and SDOT permits to work in the right of way and patch the pavement. This process takes many months and involves multiple inspections. While some amount of time is necessary for

permitting, the total permitting time can be reduced which would benefit developers without impacting utility integrity and the street.

More coordination within SPU and with other partners, especially City departments, will help add value to projects, reduce duplication of effort or at cross purposes, while improving outcomes and avoiding unnecessary costs.

Modify Midway Landfill Consent Decree. This modification would allow waste removal for I-5 expansion and Sound Transit south Link and allow development of the site as a Sound Transit maintenance facility.

The freeway expansion is to meet obligations under a Franchise Permit and the development of the site for rail and potential maintenance facility is a great opportunity for the region and may save SPU, WSDOT and Sound Transit significant capital cost.

Develop policy updates for Stormwater Code. These modifications would allow for public private partnerships to treat stormwater from City Right of Way on private property and vice versa.

Current policy and code restrict this type of arrangement, leading to inefficiencies and lost opportunities to leverage multiple funding sources to meet regulatory requirements and provide facilities that meet a community centered approach.

Practice Area: Budgeting and Financial Management

Streamline and integrate budget and financial planning practices and align investments with the long-range strategic goals of SPU and the community.

What is this practice area about and why is it important?

Seattle Public Utilities is financially and operationally complex, spending over \$1 billion annually to deliver drinking water, sewage transport, stormwater conveyance and treatment and garbage and recycling services across Seattle and parts of the region. The size and complexity of the organization requires strong financial management to maintain the lowest cost of service while providing value to customers.

SPU's six-year rate path, adopted in the 2018-2023 Strategic Business Plan, forecasts continually increasing rates for our customers. The rate path is expected to grow higher than the rate of inflation during the Plan's six-year window, putting pressure on customers' ability to pay for critical services. This trend mimics a trend over the past 30 years where SPU rates have an average growth at double the rate of inflation. Increases in costs are driven by a variety of factors including aging infrastructure, growing complexity in the regulatory environment, and increases in service demand. The current rate path trajectory and affordability challenges in the local economy create an opportunity to examine financial practices throughout the organization to ensure SPU is maximizing opportunities to lower costs to customers.

Through this effort, SPU engaged practitioners from across the utility to better understand how the utility might better:

- balance short and long-term financial health,
- prioritize and make financial decisions,
- control costs and manage risks, and
- align the budget with strategic objectives.

What is the current state of financial management and budgeting in SPU?

SPU is financially healthy. SPU's current and projected financial health across the Water, Drainage and Wastewater and Solid Waste funds is evidenced by high bond ratings across all funds. SPU has a history of maintaining high bond ratings that allow SPU access to lower the cost of capital project financing which, in turn, lowers long-term costs for rate payers. Additionally, SPU is on the higher end of bond ratings compared to cities with similar systems. *Attachment A* includes a comparison of SPU's bond ratings with similar systems.

There are also several opportunities to enhance the efficiency and effectiveness of financial management within SPU including:

SPU's financial policies need revision to align with current risks and needs. SPU's financial policies, adopted by Council, guide rate setting, financial decision making, and are designed to ensure the long-term and short-term health of each utility fund. Financial policies are also metrics that bond rating agencies use to compare SPU to peer agencies and validate that the Utility is consistently achieving the required reserve levels. Over the past few

years, rating agency criteria and the financial needs of the organization have changed; however, all three funds' financial policies have not undergone a formal review since 2012.

Streamlining and realigning the budget process. SPU's budget development, rate setting, and long-term strategic planning has become much more complex and time consuming over the past five years and not always providing the intended value.

- SPU is spending a great deal of time and resources in the various expenditure updates needed to create an annual budget, rate studies and the Strategic Business Plan updates. The drivers of the various efforts are not well understood across and between levels of leadership.
- Short and long-term risks at the fund level are sometimes not well understood or transparent to managers.
- SPU's approach to prioritization and efficiencies is not consistently applied across the enterprise or only in response to external requests for budget reductions.

Financial monitoring is challenging and not well understood across the organization. SPU has struggled over the past year to conduct financial monitoring consistently, simply, and in a timely manner due, in part, to implementation of the new PeopleSoft system. In addition, spending is consistently under budget, sometimes significantly.

- Financial information has become more complex with the new PeopleSoft implementation.
- Monthly monitoring needs to be simplified for greater understanding as well as potentially enhanced by adding or removing information.
- The tools and process for financial monitoring are not consistently available across the utility.
- Quarterly fund reporting is currently at the Executive leadership level, but not broader leadership levels. In addition, the reporting and monitoring is missing important information on fund risks and emerging issues.

STRATEGIES AND ACTIONS

Over the next five years, SPU will streamline and integrate budget planning, monitoring, and financial policies by focusing on:

- Reassessing and modernizing SPU financial policies and reserves;
- Streamlining and aligning the budget process; and
- Improving accountability through enhanced financial monitoring.

Strategy 1: Review SPU financial policies; provide options focused on risk, affordability, and investment.

Strategy 1 Actions



Action 1A. Perform a comprehensive update of SPU's financial policies.

SPU's financial management policies were last reviewed in 2012. Over the past seven years a variety of issues have been identified that are not explicitly considered in these policies including managing rate and reserve levels for economic downturns or during significant natural disasters such as earthquakes. In addition, rating agencies have adjusted criteria that are explicitly considered in SPU's bond ratings, but the utility's adopted financial policies may not reflect the changes. These changes, coupled with an interest in managing risk at an enterprise level and a focus on creating long-term affordability, provide an opportunity for SPU to assess current financial policies with long-term planning, policy objectives, and rating agency criteria. This analysis will include a review of reserve classifications, categories, and cash balances compared to industry standards and best practices.



Action 1B. Assess and make recommendations on reserves/emergency reserves.

Based on Action A, SPU will conduct a financial and alternative analysis for implementing financial policy and reserve changes. This alternative analysis will assess the financial impact of implementing changes on rate payers in both the short and long-term.

Strategy 2: Revamp the SPU budget process to be driven by strategy, priority, and customer needs.

Strategy 2 Actions



Action 2A. Advocate with the City Budget Office to pilot biennial budgeting with Seattle Public Utilities.

The City's biennial budget process remains largely an annual exercise. The annual budget process is very resource intense and does not currently allow for enough time for strategic prioritization and planning. Moving to a biennial process can allow for improvements that enhance accountability, efficiency and create space for deeper long-term planning, analysis, and prioritization in the off years.

Whether SPU formally moves to a biennial budget process or not, there are actionable opportunities to reduce time spent on the technical aspects of budget production including reducing the frequency of spending plan updates or limiting updates to only large projects or areas of major change. SPU also has the flexibility to internally design the process of mid-biennial updates where changes to the budget are severely limited and done on an exception basis. Changes in process should be done in tandem with improvements to financial monitoring which are expected to increase accountability and accuracy of projections. As a part of this action, SPU will reassess the process and timing of the three-year cycle of providing rate study updates.



Action 2B. Pilot the development of a flexible rate model that integrates affordability criteria into rate development.

The Drainage and Wastewater division (DWW) is developing a flexible rate model incorporating new methods for assessing affordability for both the utility and customers. The tool and methods are expected to help SPU quickly

assess alternative long-term rate and investment scenarios. The model will provide a 30-year rate projection incorporating SPU financial policies, sensitivity analysis, and multiple program and capital funding scenarios. Organizational learning from the pilot will be incorporated into rate models for the Water and Solid Waste rate models.

Action 2C. Develop a standard integrated enterprise approach to prioritization, improvements and efficiencies. SPU will develop explicit guidance for efficiencies and improvements and incorporate that guidance into the strategic business planning and budget development process. This action is intended to move SPU away from a reactionary budget cutting approach to a more long-term systemic and measured approach aligned with recommendations on continuous improvement in the Efficiencies and Improvement practice area.

Strategy 3: Enhance financial and performance monitoring to better inform budgeting and financial planning.

Strategy 3 Actions



Action 3A. Pilot quarterly enhanced financial monitoring to increase transparency, integrate risk, and improve financial planning.

Opportunities exist to incorporate risk, alternative analysis around topical issues, more accessible financial data and deeper understanding of spending and projections across the enterprise. Conceptually, frequent, active monitoring, integrated with clear accountability for control and action can help narrow variance in financial performance and increase affordability. There are additional opportunities to improve both accountability and the efficiency of the process including potentially moving to a rolling 24-month projection standard.



Action 3B. Provide core/simple financial information on capital and operations and maintenance more frequently and broadly, making the data useful, accessible and actionable for managers.

Over the past year, the instability of the City's financial system has exacerbated reporting issues. Financial data is more complex, including several overheads, paid time off, allocated costs and interdepartmental billing. This complexity has become a challenge in providing useful and timely reporting to budget managers. There is a need to report complex calculations in a meaningful and timely manner and allow for more self-service reporting. Additional opportunities exist to include new report formats that work for both Budget and Department clients, including a set of expectations on timing, review, and actions.

Action 3C. Pilot the use of organizational capacity analysis and staffing forecast tools.

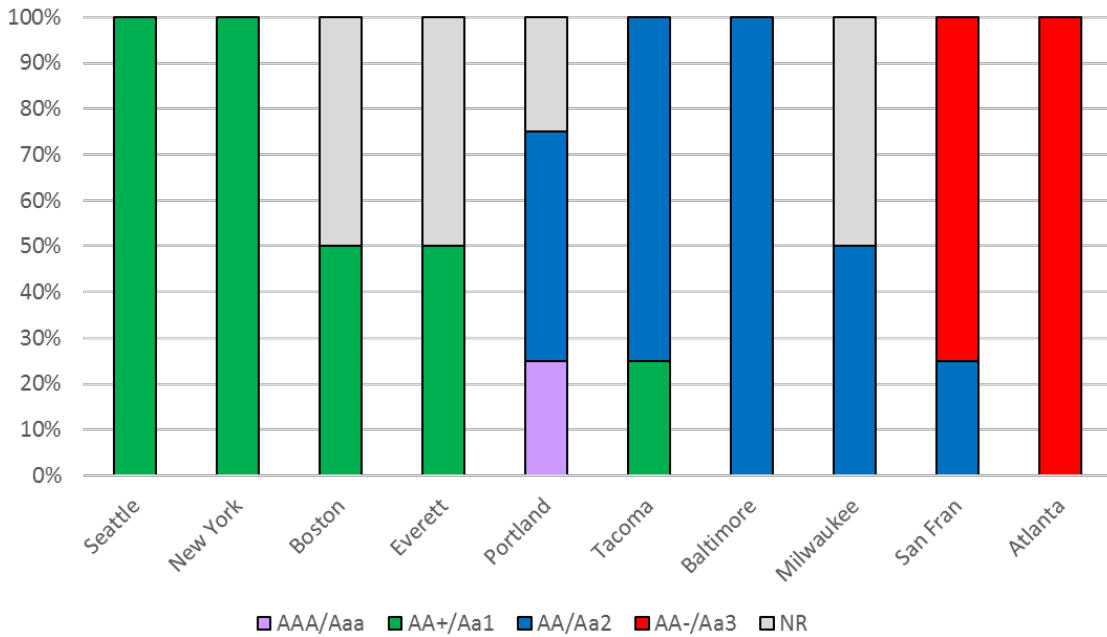
Capacity analysis, which includes forecasting demand and analyzing whether an organization has sufficient resources to meet the demand under different scenarios, is not widely used in SPU. This type of analysis can allow an organization to identify resource gaps or excesses, explore alternatives, and identify opportunities for either using excess capacity or filling projected gaps in capacity. SPU has some capability and tools for doing this work in some areas but the current work on capacity analysis and active use of staffing forecast tools focuses on the short-term monthly or annual planning. This pilot will focus on the development of both tools and skills to enhance long-term planning and manage operational risks.

Attachment A: SPU’s Bond Ratings and Comparisons

SPU Bond Ratings

Tool	Standard and Poor’s	Moody’s
Prime maximum safety	AAA	Aaa
High grade high quality	AA+ Water, Drainage & Wastewater and Solid Waste	Aa1 Water and Drainage & Wastewater
	AA	Aa2
	AA-	Aa3 Solid Waste
Upper medium grade	A+	A1
	A	A2
	A-	A3
Lower medium grade	BBB+	Bbb1
	BBB	Bbb2
	BBB-	Bbb3
Non-investment grade	BB+	Bb1

Water & Sewer/Stormwater Bond Ratings (% in each category by Jurisdiction)



Attachment B: Examples of Laws and Regulations Affecting SPU

Primary Goal of Law/Regulation

-Protect Human Health and Safety

-Protect or Enhance Environmental Quality

-Ensure Social Equity

-Support Local Economy

Level	Law/Regulation	Water LOB	DWW LOB	Solid Waste LOB
Federal	Safe Drinking Water Act	●	○	○
	National Environmental Policy Act	●	●	●
	Clean Water Act	○	●	○
	Clean Air Act	○	○	●
	Endangered Species Act	●	●	
	Resource Conservation and Recovery Act	○	○	●
	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/Superfund)		●	●
	Federal Water Power Act (FERC)	●		
	Homeland Security Act	●	●	●
	Flood Disaster Protection Act	●	●	
	Fair Labor Standards Act	●	●	●
	Americans with Disabilities Act (ADA)	●	●	●
	The Occupational Safety and Health Act (OSHA)	●	●	●
State	NPDES General Permits	○	●	○
	State Environmental Policy Act	●	●	●
	Water Code	●		
	State Accountancy Act	●	●	●
	Business and Occupation Tax	●	●	●
	Group A Public Water Supplies (WAC 246-290)	●		
	The Washington Industrial Safety and Health Act (WISHA)	●	●	●
Local (City/County)	Procurement of consultant services (SMC 20.50)	●	●	●
	Business Tax—Utilities (SMC 5.48)	●	●	●
	*Cross-connections (SMC 21.04.070)	●	○	
	*Solid Waste Handling (SMC 21.44)			●
	*Stormwater Code	○	●	○

*SPU is the regulator

SPU's RISK AND RESILIENCY STRATEGIC PLAN

2019 Final Report



**Seattle
Public
Utilities**

Table of Contents

Page	Section
3	Section 1: Introduction
7	Section 2: Climate Change
12	Section 3: Disasters
17	Section 4: Investment Priorities
21	Section 5: Economy
24	Section 6: Market Forces
26	Section 7: Technology
28	Section 8: Workforce
31	Section 9: Next Steps
32	Appendix A: Impact-Likelihood Matrix

Section 1: Introduction

Organizations today are faced with multiple risks and uncertainties as they work to fulfill their missions. Being resilient offers a powerful way of addressing risks comprehensively, managing uncertainty, and taking advantage of new opportunities. For Seattle Public Utilities (SPU), resiliency is the capacity to recover in the face of sudden or gradual stressors that impact utility services and the community.

SPU delivers essential water, drainage and wastewater, and solid waste services – all fundamental for public and environmental health. Seattle has been a leader in making utility investments that have multiple, long-term community benefits. After the Great Seattle Fire of 1889, the citizens of Seattle voted to create a public water system and develop the Cedar River water supply system. Seattle’s water, drainage, wastewater, and solid waste utilities have faced many challenges over the years and have evolved to improve services and reduce pollution impacts. As a community-centered utility, SPU seeks to proactively address community needs and risks to improve resiliency.

In 2017, Seattle City Council requested that SPU “prepare a risk and resiliency management assessment.” SPU delivered the status report to Council on August 1, 2018. This final report details risks to SPU and provides examples of ongoing efforts to be resilient, equitable, and affordable. Sections 2-8 provide descriptions of various risks and SPU’s progress in addressing those risks. Section 9 describes SPU’s next steps to advance this work throughout the utility to best serve the community.

SPU faces a variety of challenges: a changing climate, the threat of natural disaster, technological advances, inequity, economic variability, competition, and an aging workforce. In order to be resilient, SPU needs to look to the future and be positioned to adapt to risks and opportunities as they arise. SPU has developed a comprehensive risk and resiliency framework that includes the broad areas of operational and strategic risks. This framework helps SPU to assess vulnerabilities, identify new risks, and develop strategies and solutions that support utility and community resiliency. SPU’s goal is to optimize utility investments that address multiple risks at the same time.

In accordance with the City of Seattle’s Race and Social Justice Initiative, risk and resiliency strategies will strive to address systemic and institutional racism and will direct attention to disadvantaged communities. SPU recently conducted a series of Racial Equity Toolkit meetings with subject matter experts from across the utility. These meetings helped SPU to identify and develop responses to the disparate impacts these risks can have on vulnerable communities. The aim of this ongoing work is to embed the equity lens within the risk and resiliency framework and utility plans.

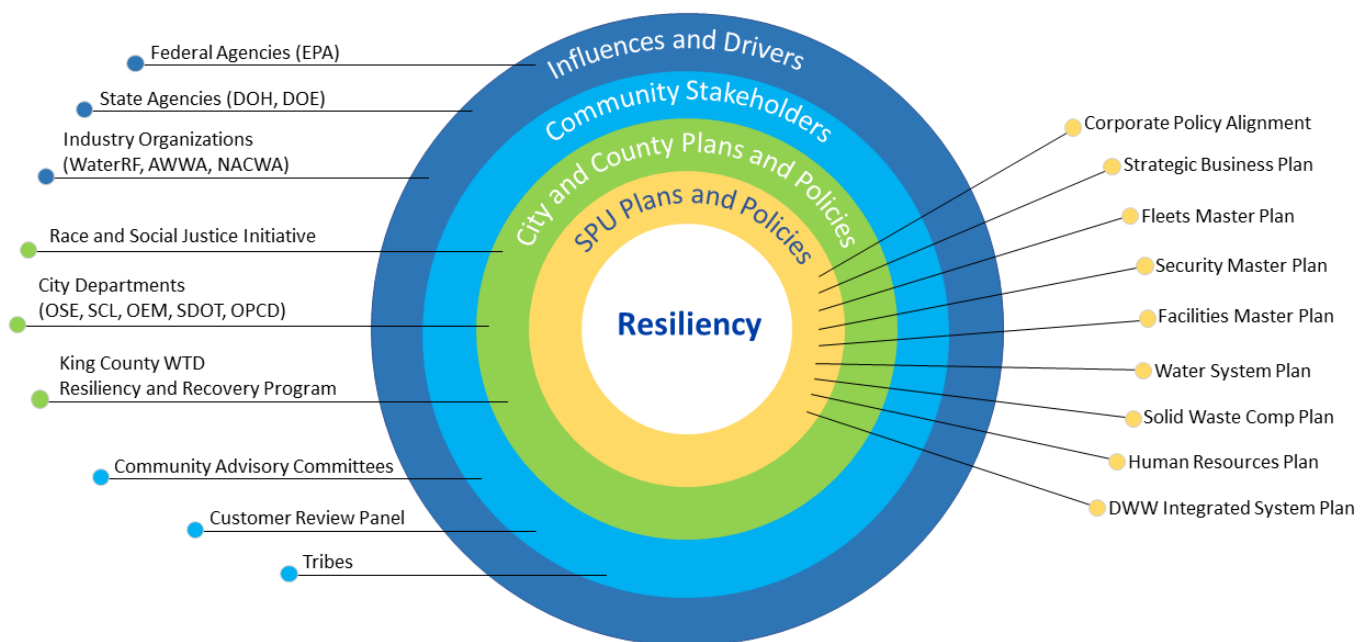


School visit to the watershed

Planning Integration

SPU is working directly with lines of business to connect this work to their policies, programs, projects, comprehensive and capital plans, and daily operations. The risk and resiliency framework is being incorporated into the Solid Waste Comprehensive Plan amendment and the Drainage & Wastewater Integrated System Plan. SPU’s Strategic Business Plan will also incorporate risk and resiliency as one of the main priorities for the utility.

SPU is working with a variety of federal and state agencies, community partners, and tribes, and has shared this work with the Community Advisory Committee and the Customer Review Panel. The risk and resiliency framework integrates with other efforts such as the City of Seattle’s Resilience Strategy and the All-Hazards Mitigation Plan as well as King County’s Wastewater Treatment Division’s Resiliency and Recovery Program. SPU is also working with the Environmental Protection Agency on the best way to develop resilient stormwater infrastructure in response to regulations. As the diagram below shows, partnerships are critical to fostering resilient utility services that support the whole community.



Goal Statement

The risk and resiliency goal statement serves to guide how SPU applies its risk and resiliency framework to policies, programs, plans, projects, and operations.

- *To make “no-regrets” investments in infrastructure, operations, and people that improve SPU’s ability to provide critical utility services in the face of future disruptions, changes, and opportunities.*

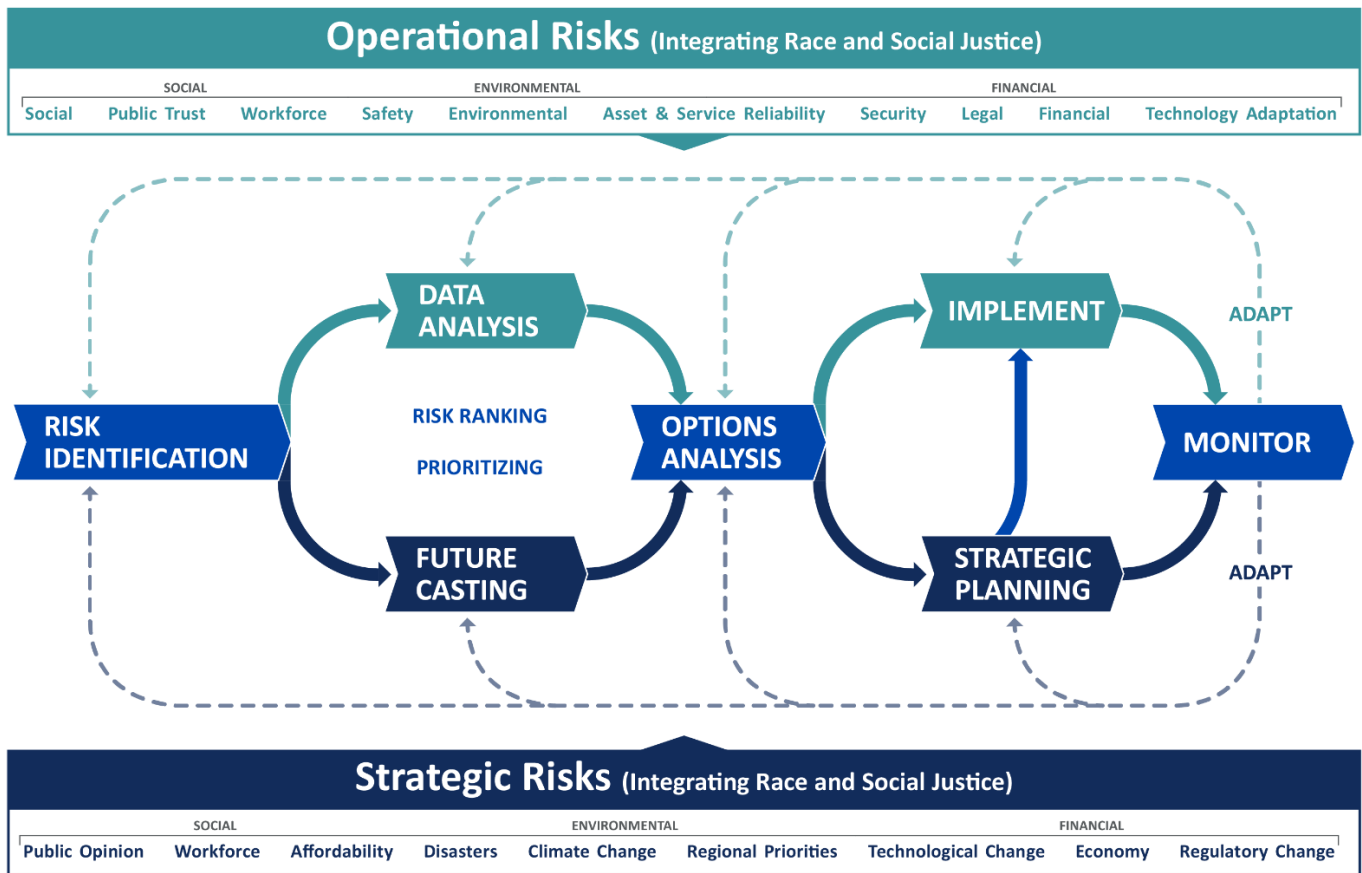
Risk Focus Areas

The table below shows the seven strategic risk areas SPU has identified. Sections 2-8 address these focus areas and provide a description of the risks as well as SPU's accomplishments in addressing these risks.

Climate Change	Disasters	Investment Priorities	Economy	Market Forces	Technology	Workforce
Drought	Earthquake	Regulatory-driven	Affordability	Ability to site facilities	Emerging and changing systems	Institutional knowledge loss
Extreme downpours	Terrorism	Projects and programs initiated by others	Population growth	Availability of raw materials	Independent systems	Skill availability and development
Sea level rise	Cyberattack	Aging, substandard infrastructure and facilities	Loss of customers and revenues	Recycling markets and revenues	New treatment techniques	Retention and turnover
Wildfires	Dam failure		Cost of debt			Marketplace competition
Air quality degradation	Volcanic eruption					
Temperature rise	Flooding					
	High winds					

Planning Process

SPU has developed a risk and resiliency planning process that brings together the assessment and management of both operational and strategic risks. SPU has had an operational risk framework since 2004. Programs, such as safety, security, and claims, are examples of ways that SPU manages operational risks. SPU also has been assessing and managing long-term, strategic risks, such as climate change and disasters. The following diagram shows SPU's planning process to comprehensively manage risk.

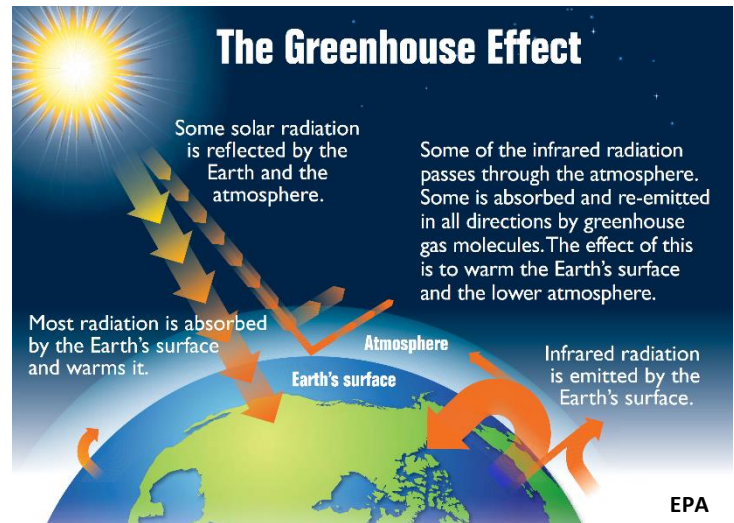


Brief Description for the Risk and Resiliency Planning Process:

1. *Risk Identification* – Identify risks within SPU and the industry.
2. *Future Casting and Data Analysis* – Develop and manage data, models, and scenarios that will assist in planning for a variety of possible futures.
3. *Risk Ranking and Prioritization* – Rank risks according to established measures and determine how this informs the prioritization of various bodies of work.
4. *Options Analysis* – Identify risk reduction options and assess cost-benefit, affordability, and impacts to vulnerable communities.
5. *Strategic Planning* – Determine how best to carry out and integrate selected options by exploring partnering, phasing, and additional planning.
6. *Implementation* – Plan how to initiate projects and programs, making sure they are incorporated into ongoing efforts.
7. *Monitoring* – Track the change in risk status and the effectiveness of strategies and controls.
8. *Adaptation* – Make changes as needed by returning to relevant steps in the planning process.

Section 2: Climate Change

Global warming puts more energy into the earth's atmosphere, which results in rising temperatures, changing weather patterns, more powerful storms, and melting ice caps and glaciers. The water cycle is particularly impacted. In the past, infrastructure engineers could assume, for the most part, that the future would conform to historical trends; now there is increasing uncertainty. Puget Sound climate patterns are changing and are expected to continue to do so in the coming decades. Climate change is impacting infrastructure systems, staff, and the communities SPU serves. SPU is a leader in assessing and working to adapt to a changing climate.



Drought

Description: SPU's water supply system historically relies on snowpack as a means of additional storage to meet demands during dry summer months. Snowmelt is more predictable than spring rains and releases water more slowly and over a longer period into the summer. Declining snowpack, rising temperatures, and more intense precipitation will result in an increase in the number and length of droughts.

Impacts: SPU's two water supply reservoirs, located in the mountains, are vulnerable to drought conditions. Drought years that produce little to no snow stress the system's capacity to provide sufficient water for people and fish.

Progress:

- *Climate Change Assessments:* SPU has completed three climate change assessments that focus on potential impacts to water supply availability, reliability, and streamflow. The 2002 assessment focused on reductions in snowpack and water supply. The 2007 assessment emphasized scenario planning and included some adaptation options. In 2015, the assessment shifted toward system vulnerabilities under multiple future scenarios. The assessments help SPU identify triggers for when to pursue more expensive adaptation options for water supply.
- *Water Demand Forecasting:* Uncertainty analysis is incorporated into SPU's long-term water demand forecast. This forecast is used to help make important long-term policy and investment decisions dependent on the future demand for water. Computer modeling factors in uncertainties around modal inputs and assumptions such as demographic growth, future water rates, conservation programs, and efficiency standards.

- *Morse Lake Pump Plant:* In 2015, SPU installed a new floating pump station and refurbished an existing pump plant for backup use on Chester Morse Lake, the largest of SPU's two water supply reservoirs. These pumps allow SPU to access high quality water when the lake level is low. This project improves SPU's resiliency during droughts while maintaining instream flows for aquatic habitat.
- *Water Shortage Contingency Plan:* This plan provides guidelines to manage water supply and demand in the event of water shortage, such as a drought or system failure. SPU has activated this plan six times in response to droughts over the last 20 years.
- *Climate Change Project Analysis:* SPU assesses potential climate change impacts for all proposed capital projects. An integral part of the economic analysis is considering how the project options might be affected by climate change in the form of altered precipitation patterns, warmer temperatures, reduced snowpack, and sea level rise. The analysis also considers the carbon footprint of these options.

Extreme downpours

Description: The city of Seattle is experiencing an increase in extreme rain events. Due to climate change, storms that were predicted to occur once a century now occur every 25 years.

Impacts: Extreme rain events pose capacity and water quality challenges for the drainage and wastewater system. With more inflow during peak rain events, the City's ability to remain in compliance with federal regulations for combined sewer overflows (CSOs) will grow more challenging. Extreme rain events can also increase sewer backups, localized urban flooding, and landslides, which have greater impacts on vulnerable communities (see 'Flooding' in the Disaster Section). In addition, extreme downpours can elevate turbidity in SPU's water supply systems, creating challenges for water treatment in the Cedar system.

Progress:

- *Drainage & Wastewater Integrated System Plan:* This plan provides an overall system analysis that includes climate change, growth impacts, flooding, water quality, and asset age and criticality, as well as equity and environmental assessments. The plan is being developed through engagement with the community, City departments, and partner agencies and organizations.
- *Drainage & Wastewater Models:* These models investigate anticipated climate change impacts on the stormwater system. There is an already-evident trend of more intense rain events and flooding. Results of this work will be considered in selecting and prioritizing projects and programs in the forthcoming Integrated System Plan. The possible long-term impacts of increased intensity and volume of rainfall on CSOs are an important part of this work given federal and state regulations.
- *CSO Sizing Approach Implementation Guidance 2017:* This guidance provides sizing parameters for CSO infrastructure based on anticipated climate change impacts. Recently planned CSO projects have been up-sized to deal with known changes in rainfall and additional projected changes in order to avoid overtaxing the system in future decades. This approach is based on comprehensive modeling and the best available science with the intent of balancing costs and system longevity.

- *Green Stormwater Infrastructure (GSI) Expansion Initiative:* GSI uses nature-based processes to lower the impact of polluted runoff on the environment and reduce flooding while maximizing community benefits. GSI increases the resiliency of the drainage and wastewater system in the face of climate change and urban growth by providing system capacity, redundancy, and emergency water supply. This initiative will accelerate the use of GSI through partnerships, innovation, and removal of barriers to implementation.
- *Duwamish Valley Infrastructure Investment:* SPU is making significant investments in South Park's Lower Industrial Area to address drainage, flooding, and stormwater quality. SPU is also partnering with the City of Seattle's Duwamish Valley Program and the South Park community to ensure these investments align with community priorities. The Center for Community Investment has given SPU a grant to work with City departments, outside partners, and the community to leverage these investments while building community capacity.

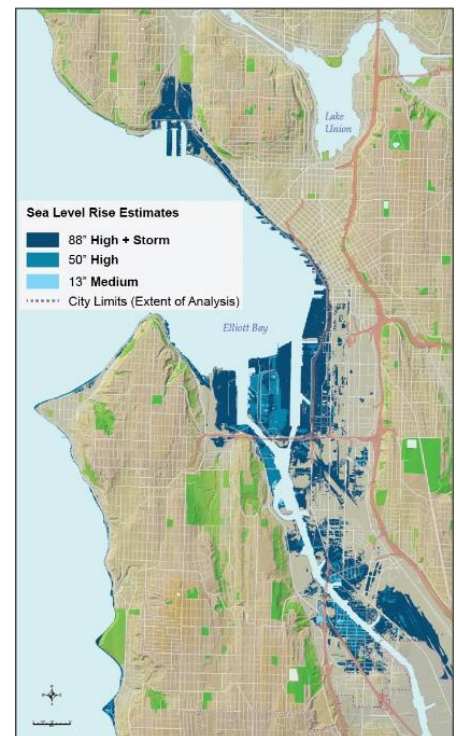
Sea level rise

Description: Seattle's Puget Sound shoreline has already risen more than six inches in the past century. By 2100, sea level rise (SLR) is projected to increase by another two to four feet. Water levels associated with storm surges and king tides that now occur annually will eventually become monthly, even daily events.

Impacts: SLR affects the extent and frequency of coastal flooding, particularly in areas such as the Duwamish, Interbay, and Alki. Impacts to these areas also include saltwater intrusion, corrosion, and loss of near-shore habitat and use. When high tides coincide with extreme rainfall, portions of the drainage system are briefly not able to discharge properly and back up, potentially flooding nearby areas.

Progress:

- *Sea Level Rise (SLR) Maps:* SPU has been mapping SLR for the last ten years to develop high resolution maps. SLR has been incorporated into the City's *Stormwater Manual*. The Drainage & Wastewater Line of Business developed and now applies their *Sea Level Rise Guidance* specifications to all new projects. All new infrastructure projects must be able to accommodate expected SLR within the project lifespan. As an example, the forthcoming South Park Pump Station will be raised by at least two feet to accommodate higher water levels.
- *Duwamish Valley Climate Change Adaptation Strategy:* SPU is partnering with the United States Army Corps of Engineers (USACE) on a sea level rise adaptation strategy in the Duwamish Valley. A 2017 USACE study found benefits to investing in infrastructure to protect the South Park industrial area. This study is the first step in joint work by the USACE and the City to fund and construct sea level rise infrastructure projects in this area. The next steps will include a detailed feasibility study and broader engagement with City departments and affected businesses.



Wildfire

Description: With a warming climate, the fire seasons are getting longer and there are more fires. Warmer temperatures and droughts increase the flammability of forest fuels and thereby increase fire intensity. Even the forests on the west side of the Cascade Mountains are now starting to be impacted. As a result, wildfire risk could be increasing in Seattle's two forested mountain watersheds. These watersheds provide Seattle's drinking water supply and serve as protected nature reserves.

Impacts: Wildfires in the watersheds could impact water quality and supply as well as habitat.

Progress:

- *Watershed Management:* SPU manages a closed watershed (no public access) and controls activities in the watershed during periods of high fire danger. SPU has a wildfire protection crew, equipment to respond to forest fires, and mutual-aid agreements with other agencies.
- *Watershed Wildfire Modeling:* SPU is working with partners including the City of Portland Water Bureau, Washington State University, University of Idaho, and the United States Forest Service to conduct wildfire modeling to assess potential impacts to municipal water quality and supply. This collaborative modeling effort will inform risk management strategies.
- *Cedar River Watershed Habitat Conservation Plan (HCP):* SPU has updated the watershed forest protection and restoration strategies in the HCP. These strategies resulted from a forest vulnerability assessment based on projected climate change, including the impacts of drought, snow loss, and forest insects and diseases. These strategies include forest thinning and planting different tree species that are better adapted to a changing climate. SPU is monitoring forest growth, disturbances, and mortality.



Air quality degradation

Description: Air quality is expected to worsen due to increased heat waves and wildfire smoke. For the past three summers, the city has been blanketed in smoke from wildfire events. Atmospheric warming is expected to intensify ground-level ozone and increase the prevalence of airborne allergens and air pollutants.

Impacts: Decreased air quality can negatively impact SPU employees, particularly operations and maintenance staff. Vulnerable populations, especially those with existing respiratory conditions, will be most impacted.

Progress:

- *Air Quality Safety Program:* SPU created a program to educate and train employees on safety measures during periods of degraded air quality. This program includes issuing protective respirator masks and monitoring air quality and the risks from smoke related to wildfire events. SPU is also partnering with other departments on a citywide effort to protect employees.

Temperature rise

Description: Seattle has averaged only a handful of extreme heat (90°+) days per year during the past few decades. By 2100, it is estimated that more than two weeks of extreme heat are projected each summer.

Impacts: Rising temperatures increase the likelihood of water quality incidents, including bacterial outbreaks and algal blooms. Warmer temperatures stress wildlife habitat and salmon recovery efforts. More frequent heat waves will also impact SPU staff and equipment, such as HVAC systems. Lower-income and minority communities will likely be most impacted by hotter summers.

Progress:

- *Heat Island Maps:* SPU is working with King County’s Department of Natural Resources and Parks to better understand and quantify the ways in which land cover affects heat. The first ever complete urban heat island mapping project will take place during the summer of 2019 and is expected to inform community and infrastructure planning.
- *Heat Stress Training:* Providing crews with heat stress training and warnings when higher temperatures are expected. SPU’s Safety Team provides cooling supplies and equipment to operations and maintenance staff when temperatures climb beyond 85°.
- *Fleet Reduction and Electrification:* SPU is working on fleet reduction and electrification to help mitigate climate change impacts and meet City goals. As the fleet is replaced, SPU is selecting cost-effective electric vehicle options. SPU is also installing electric vehicle charging stations, back-up generators, and exploring the use of solar powered charging stations so the fleet can function during an emergency when fuel and power is limited.

Section 3: Disasters

According to the City of Seattle Office of Emergency Management, Seattle faces the highest number of hazard types of any major American city. Disasters cause loss of life, public health issues, and property and environmental damage. Lower income and minority communities tend to suffer the most from disasters. For SPU, disasters damage infrastructure and facilities and disrupt the delivery of critical services. This can impact other downstream systems such as firefighting capability.

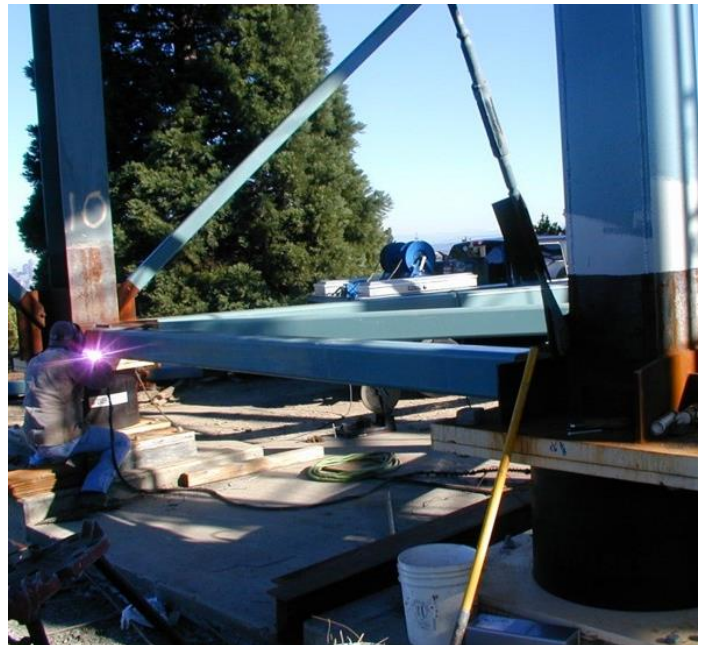
Earthquake

Description: Washington State has the second highest earthquake risk in the nation, following California. The Seattle area is prone to multiple earthquake types, ranging from Seattle Fault events to large scale Cascadia Subduction Zone events. In the last few decades, there has been new mapping of faults and cataloging of past seismic events. Impacts include ground movement, liquefaction, landslides, tsunamis, and seiches. Secondary impacts include fire, property damage, limited mobility, and loss of power.

Impacts: Damage to SPU's infrastructure will disrupt potable water provision, wastewater disposal, and solid waste collection and disposal. SPU will face more difficulty in responding to broken assets due to damaged roads, bridges, facilities, and other systems. Communities located in liquefaction zones, such as Georgetown and South Park, are even more vulnerable to earthquake impacts.

Progress:

- *Water System Seismic Study 2018:* This study modeled impacts of a magnitude 7.0 Seattle Fault Zone earthquake and a magnitude 9.0 Cascadia Subduction Zone earthquake. The study identifies over \$850 million of seismic investments over the next 50 years. Improvements include installing earthquake isolation valves on reservoirs and upgrading high-risk portions of the water system.
- *Seismic Investments:* Following the 1990 water system seismic study, SPU has spent more than \$100 million on seismic upgrades to transmission pipelines, pump stations, storage tanks, and other projects. Several reservoirs have been seismically upgraded with the goal of minimizing water losses after an earthquake.



- *Drainage and Wastewater System Seismic Study 2019:* A seismic study will be conducted to determine the impact of significant earthquake events on the drainage and wastewater system. The 2011 Tohoku earthquake, 2010 Christchurch earthquake, and the 1995 Kobe earthquake, all caused significant damage to drainage and wastewater systems, which prompted efforts to study impacts in Seattle.
- *Disaster Debris Management Plan:* This plan covers earthquakes, floods, and high winds. Only two jurisdictions in Washington State have Federal Emergency Management Agency-approved plans: SPU and Snohomish County. The plan designates staging areas within the City for debris and works in partnership with the Port of Seattle and the University of Washington.
- *Solid Waste Management Plan Amendment 2019-2020:* SPU is amending its 2011 Solid Waste Management Plan to integrate risk and resiliency objectives among other updates. The Plan details how SPU will manage the City's solid waste for the next twenty years and is required to be updated every five years. The Solid Waste Line of Business is also working to ensure the resiliency of their contractors that provide collection, hauling, processing, and landfill services.
- *All-Hazard Planning:* SPU plans for all hazards and the impacts those hazards have in common. The Continuity of Operations Plan (COOP) supports the continuation of SPU essential utility functions in an emergency. The Emergency Operations Plan (EOP) supports the restoration of core utility services in an emergency. The Comprehensive Emergency Management Plan (CEMP) and the SPU Hazard Identification and Vulnerability Assessment (HIVA) both serve as umbrella guiding documents.
- *Replacement Pipe/Materials Stockpiles:* Water system replacement pipe and other materials are being stockpiled at remote sites. An earthquake or other disruption could result in widely dispersed damage and impact transportation networks. Locating replacement parts near where they are needed will support repair work. Staff is also addressing the impact of power outages by providing back-up generators at all critical facilities.
- *Back-up Power:* SPU is developing a plan for back-up power units and extending the life of back-up power for security systems. The Security Team performs an annual assessment of facilities and tracks crime trends to better understand the measures needed to counteract vandalism, terrorism, and power outages.
- *Emergency Management Training and Exercise Program:* This program includes Incident Command System training and a quarterly exercise series. SPU also implements an After-Action Review process that identifies corrective actions and engages business units to make improvements. Additionally, SPU carried out a campaign to encourage staff to prepare their families for emergencies. To return to work after a disaster, staff must feel confident that their families are taken care of.
- *Water Supply Forum:* SPU is one of the co-founders of the Water Supply Forum that is comprised of water systems in King, Pierce, and Snohomish Counties. Staff have been involved in the development of the *Regional Water Supply Resiliency Project* to assess regional water systems for earthquake, climate change, drought, and water quality risks. The forum identified actions to be taken by water utilities including installing earthquake resistant piping and providing emergency potable water.

- *Mutual Aid Systems*: SPU is a member of a variety of mutual aid systems which provide equipment and personnel in the event of a disaster. SPU is part of the Washington Water/Wastewater Agency Response Network, the regional Pacific Northwest Emergency Management Arrangement, and the National Emergency Management Assistance Compact. These networks help SPU to be more resilient to disasters.

Terrorism

Description: SPU infrastructure and services, due to their critical and life-sustaining nature, are potential targets for terrorist attack.

Impacts: Terrorism can target SPU infrastructure and facilities such as pipelines, pump stations, treatment plants, and reservoirs. Contamination of the water supply is of particular concern. Impacts to the drainage and wastewater system could result in releases of untreated sewage into surface waters.

Progress:

- *EPA Water Infrastructure Act of 2018*: SPU is working on an Environmental Protection Agency (EPA) required risk assessment that will examine physical vulnerabilities in infrastructure, sites and facilities. This is a continuation of work that SPU has been performing for years to ensure the safety of the water system.
- *All-Hazards Planning*** (see progress item under Earthquake)
- *Emergency Management Training and Exercise Program*** (see progress item under Earthquake)
- *Mutual Aid Systems*** (see progress item under Earthquake)

Cyberattack

Description: A cyberattack involves a malicious, deliberate act that compromises data or critical infrastructure systems through disruption, theft of private information, fraud, or extortion.

Impacts: SPU can be impacted by cyberattacks on its operating systems for water, drainage and wastewater, and billing. Unauthorized access of personally identifiable or sensitive information could impact public trust and result in legal costs.

Progress:

- *Computer Systems Protection*: SPU is working with the Department of Homeland Security and other organizations testing and ensuring systems are protected by following industry best practices.
- *All-Hazards Planning*** (see progress item under Earthquake)
- *Emergency Management Training and Exercise Program*** (see progress item under Earthquake)

Dam Failure

Description: SPU operates fourteen dams of various sizes located mostly upstream of densely populated communities. All SPU dams are regulated by either the State Department of Ecology or the Federal Energy Regulatory Commission. Most of the dams are rated as High Hazard by the State or Federal regulators.

Impacts: A dam failure would impact people and property in downstream communities and SPU's water supply and storm detention systems.

Progress:

- *Tolt Dam Failure Exercise:* In May 2019, SPU partnered with Seattle City Light to lead a full-scale exercise that included regional response agencies. The Tolt Dam provides both power generation and roughly one third of SPU's drinking water supply. While the risk of dam failure is very small, the exercise allowed responders to practice, build relationships, test plans and procedures, and review lessons learned together.
- *Emergency Action Plans (EAP):* SPU developed EAPs for all high-hazard dams that could impact communities in the event of a dam failure. The EAPs clarify roles and notification responsibilities and are periodically exercised to test readiness of responders and stakeholders. EAPs were developed in collaboration with other City departments, affected communities, and emergency management agencies.
- *Dam Safety Program and Programmatic Plan:* SPU's utilizes this program and plan to actively monitor dam performance and to ensure safe operations.

Volcanic eruption

Description: Washington State is home to five active volcanoes located in the Cascade Range east of Seattle. Potential eruption impacts include blast, lahar, and ashfall.

Impacts: Ashfall can impact water quality, pipes and drains, vehicles, energy, and transportation systems.

Progress:

- *All-Hazards Planning*** (see progress item under Earthquake)
- *Emergency Management Training and Exercise Program*** (see progress item under Earthquake)
- *Mutual Aid Systems*** (see progress item under Earthquake)



Flooding

Description: SPU grapples with three flood types: major river flooding, coastal flooding, and urban and small stream flooding.

Impacts: In addition to safety impacts, floods can damage SPU infrastructure and private property. The increased frequency and severity of flooding due to climate change will lead to greater costs for claims, repair, and up-grading infrastructure.

Progress:

- *Wet Weather Readiness and Response Plan:* This plan identifies resources within SPU to prevent, prepare for, respond to, and recover from flood events to minimize adverse flooding impacts.
- *Sewer Backup Protection:* SPU developed a policy to provide guidance to SPU projects and programs to fund installation of backwater valves on customer property when the public sewer system can cause sewer backup on the property. In recent years, SPU has installed backwater valves in Broadview, South Park, and downtown.
- *Claims Process:* SPU developed a process to help customers impacted by events, including flooding, to quickly activate the claims process. SPU also helps place customers in emergency housing when these types of events are caused by SPU asset failure and when a customer's home is uninhabitable. SPU does this through direct placement into temporary housing or by partnering with non-profits and other City Departments.
- *All-Hazards Planning*** (see process item under Earthquake)

High winds

Description: SPU's systems can be impacted by winds over 60 mph and gusts over 90 mph. Winds of these intensities have become more frequent in the Puget Sound region.

Impacts: Power outages caused by high winds impact operations and systems. High wind events also frequently block roads with debris and make it more difficult to respond to emergencies. Impacts to SPU watershed operations include loss of power, communications, and road access.

Progress:

- *Disaster Debris Management Plan*** (see progress item under Earthquake)
- *All-Hazards Planning*** (see progress item under Earthquake)
- *Back-up Power*** (see progress item under Earthquake)

Section 4: Investment Priorities

SPU is one of many City of Seattle departments guided by the Mayor and City Council and is affected by citizen initiatives and other governmental agencies like King County, Washington State, Sound Transit, the Port of Seattle, and the Federal Government. Projects, programs, regulations, and citizen initiatives can result in new requirements for SPU and create added costs for regulatory compliance and maintaining public trust. In addition, up-grading and replacing aging infrastructure, adding new infrastructure, and adjusting for climate change and disaster impacts are costly but essential improvements to utility systems. All these initiatives can cause SPU to reprioritize projects and redirect programs, ultimately putting pressure on rates and impacting affordability.

Regulatory-Driven

Description: Regulations can result in new requirements with associated costs for compliance while also addressing important concerns and needs.

Impacts: SPU invests in new projects and programs to meet new and evolving regulations. This can lead to a reprioritizing of work and higher utility rates.

Progress:

- Ship Canal Water Quality Project:* SPU entered a consent decree with the Environmental Protection Agency, the Department of Justice, and Washington State Department of Ecology in 2013 to reduce sewer and combined sewer overflows into Seattle's local water bodies. The Ship Canal Water Quality Project, which will reduce these overflows, was built to maintain compliance with this decree. This is a joint project with King County that will cost \$570 million. Seattle's share is \$390 million.



- *Regulatory Review and Collaboration:* SPU is tracking, reviewing, and commenting on federal and state rules, policies, and permits that impose new requirements. The goal is to mitigate risks around regulatory compliance while maximizing the value of investments. SPU routinely provides written comments and in-person meetings to describe potential impacts to utility business. When possible, SPU provides alternative approaches that meet regulatory goals by reducing the impact to ratepayers.
- *Joint Operations and System Optimization Plan:* SPU is collaborating with King County Wastewater Treatment Division on the Joint Operations and System Optimization Plan approved in 2017. The goal is to improve drainage and wastewater system performance through collaboration and information sharing. The plan works to ensure compliance, maximize the capture and treatment of flows, and reduce operating costs.
- *Long Term Control Plan:* SPU is working on a financial capability assessment that informs the update to the Long Term Control Plan for combined sewer overflows. This analysis will incorporate new methods of evaluating the affordability of the plan that go beyond the Environmental Protection Agency guidelines. The outcome will also be used to negotiate with regulators about how best to maintain affordability, protect public and environmental health, and meet regulations.
- *Water Treatment Requirements:* SPU manages 100,000 acres of forested land that comprise the Cedar River and the South Tolt Watersheds. City ownership of watershed lands allows SPU to control access which safeguards water quality. Due to the high degree of protection of the Cedar River watershed, SPU is not subject to more costly federal and state treatment requirements from this source.

Projects and programs initiated by others

Description: Many agencies, including the City of Seattle, can adopt projects or programs that affect SPU's finances and operations and force a reprioritization of current work plans. Voters also can propose or repeal legislation through ballot measures.

Impacts: Future initiatives can force SPU to relocate or replace assets sooner than anticipated, resulting in new unplanned for, and unfunded costs. This work may also provide strategic opportunities to address infrastructure improvements and build partnerships.

Progress:

- *Right of Way Cooperation and Shared Cost Program:* SPU is working with a variety of transportation agencies on the Right of Way Cooperation and Shared Cost Program. Major initiatives, such as Move Seattle, have significant impacts on SPU infrastructure project selection and prioritization. SPU strives to improve right of way coordination to reduce impacts on the public during construction activity and to otherwise prioritized projects.

Aging, substandard infrastructure and facilities

Description: SPU manages extensive infrastructure systems that include reservoirs, treatment plants, piping networks, pump stations, transfer stations, landfills, and more. Growth generates the need for greater system capacity, adding more wear and tear to the system, and making it more complicated to work in the right-of-way.

Impacts: Portions of the system, particularly in the piping network, are approaching a century or more in age. The piping systems are below ground and costly to access, repair, and replace. The need to address seismic and climate change risks will require expensive system upgrades.

Progress:

- Asset Management Program:** SPU is managing infrastructure assets to achieve optimal value. SPU’s Asset Management Program develops plans for asset classes to guide their management through operational, maintenance, and investment recommendations. Each plan integrates risk criteria such as impacts to public and environmental health, regulatory compliance, and service interruptions. As an example, the Drainage & Wastewater Pipe Rehabilitation Program completed 12 miles of work in 2018, the highest annual amount in SPU history.
- Water Main Rehabilitation and Replacement Program:** SPU’s water system includes over 1,630 miles of water main pipes. The average age of these pipes is more than 70 years. SPU proactively rehabilitates and replaces water pipes based on a risk profile that includes the history of leaks and breaks. Rehabilitation includes lining the interior of the pipe and/or adding cathodic protection.
- Cathodic Protection Program:** Cathodic protection is a method used to minimize the rate of corrosion by shifting the corrosion process away from metal pipes and onto more easily corroded “sacrificial” pieces of metal. Cathodic protection systems have been shown to extend the life of pipes and reduce the risk of failures as the pipes age. SPU installs and maintains these systems on sections of water mains and transmission pipes where feasible and cost-effective.
- Solid Waste Transfer Stations:** SPU has completed two new Solid Waste transfer stations - the South Transfer Station in 2013, and the North Transfer Station in 2016. These facilities are built to withstand seismic events, process material more quickly, and hold more material during shipping delays.



- *Watershed Headquarters Building:* SPU completed the new Watershed Headquarters building in 2018. This facility supports field and office staff and can function as an incident management center outside of city limits, but will primarily serve watershed-related emergencies such as wildfire. This LEED Gold building uses on-site geothermal energy for HVAC and can support future solar power generation. In 2019, SPU will erect a radio tower to improve adverse weather communications.
- *Flood Control Projects:* SPU is being awarded over \$17 million dollars from the King County Flood Control District for projects that address significant flooding problems in three priority areas of the city. The projects are drainage improvements in South Park neighborhood, culvert replacement in West Duwamish, and addressing flooding in Broadview neighborhood.
- *In-City Facilities Master Plan 2016/2018*** (see progress item in Market Forces/Ability to site facilities)

Section 5: Economy

Changes in the economy affect the growth and vibrancy of the City and customers' ability to pay for their utilities. Economic conditions impact revenue streams, rates, labor costs, construction costs, debt costs, and SPU's ability to provide affordable services. SPU strives to balance the costs of maintaining utility systems and making needed upgrades while keeping rates affordable.



Affordability

Description: Seattle is becoming increasingly unaffordable and this puts pressure on SPU customers' ability to afford utility services.

Impacts: Increased costs make it more difficult to find the balance between maintaining and upgrading infrastructure systems and services while achieving affordability.

Progress:

- *Affordability and Accountability Initiative:* A central purpose of this initiative is to improve service, provide better value, and increase the utility's focus on accountability and affordability. A plan has been developed with the following focus areas: Capital Planning and Delivery, Efficiency and Improvement, Customer Assistance, Partnership Opportunities, Regulatory Alignment, Budgeting and Financial Management.
- *Utility Assistance Programs:* SPU's Utility Discount Program (UDP) provides eligible customers with a 50% discount on their SPU bills, and the Emergency Assistance Program (EAP) provides a 50% discount for customers at risk of shutoff. In 2018, approximately 32,000 households were enrolled in UDP and 884 households were provided emergency assistance.
- *Low-income Water Conservation Program:* Since 2001, this program has provided free fixtures and installation for qualified single-family and multi-family customers. By the end of 2016, the program had served over 6,000 single family households and nearly 20,000 multi-family households.
- *Water Supply Demand Management*** (see this progress item under Loss of customers and revenues)

Population growth

Description: The City of Seattle’s population continues to grow rapidly. Growth creates more demand for services, puts pressure on resources, drives up construction and land costs, and creates a burden on infrastructure. Future population growth could also result from people moving to Seattle to escape more pronounced climate change impacts elsewhere.

Impacts: Despite the growth in the customer base, overall consumption has continued to decline due to conservation practices and the shift toward multi-family housing. Growth has also significantly increased the cost of housing and worsened traffic congestion. Recent surveys found that 75% of SPU field staff and 60% of office staff now live outside the city. Increased traffic congestion makes it more difficult for staff to commute, get to job sites, and respond to emergencies.

Progress:

- *Budgeting and Forecasting:* SPU is tracking economic trends and factoring them into budgeting and forecasting. Seattle’s recent economic and population growth has increased the costs of construction, property, and labor. In the past, population growth would increase revenues through higher demand for water and wastewater services. As anticipated by SPU forecasters, water demand has been flat over the last decade as increased water use efficiency has offset the growth in the customer base.
- *Affordability and Accountability Initiative*** (see progress item under Affordability)

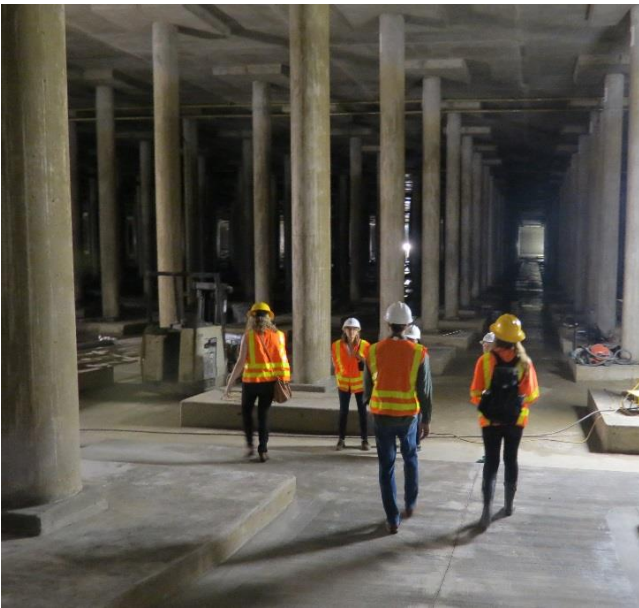
Loss of customers and revenues

Description: Relatively high costs for utility services and/or other factors can drive customers to seek other providers. An economic downturn can lead to a decrease in consumption/revenues of SPU services with little decrease in the cost of providing those services.

Impacts: Loss of major retail or wholesale customers can reduce associated revenues, which can result in increased rates for remaining customers. Loss of revenues due to an economic downturn can result in rate increases, staff reductions, or reduced services.

Progress:

- *Water Supply Demand Management:* Effective demand management has led to a large decrease in total water demand despite large population growth. Since 1990, water use per person has shrunk from 152 to fewer than 90 gallons per day. This has allowed SPU to avoid developing expensive new supply sources. This was achieved through conservation programs, rate structure changes, and efficiencies. Demand management supports resiliency and affordability while providing more water for in-stream flows.
- *Affordability and Accountability Initiative*** (see progress item under Affordability)
- *Budgeting and Forecasting*** (see progress item under Population boom)
- *Financial Policies*** (see progress item under Cost of debt)



Cost of debt

Description: When local governments and utilities pay high interest on debt, less money is available for providing services and this can impact rates and affordability. High levels of debt can impact bond ratings and the cost of borrowing. SPU and the City of Seattle have good financial health. This allows SPU to borrow at low interest rates, thereby reducing overall project costs.

Impacts: New regulatory requirements, City and County initiatives, and other factors can result in the need to take on higher levels of debt. SPU will likely incur significant expenditures to undertake seismic, climate change, and other system-wide improvements to be resilient. SPU will have to balance how to fund needed system upgrades while keeping rates affordable.

Progress:

- *Financial Policies:* SPU has adopted financial policies that provide for long-term financial health and contingency funding for disruptions. The City and Utility's strong financial health allows SPU to achieve low cost financing. SPU works to support a predictable rate path with gradual changes as households with limited means are hit hardest by rate spikes.
- *Affordability and Accountability Initiative*** (see progress item under Affordability)
- *Water Supply Demand Management*** (see progress item under Loss of customers and revenues)
- *Budgeting and Forecasting*** (see progress item under Population boom)

Section 6: Market Forces

SPU is impacted by market-based actions taken by other businesses, organizations, states, and countries. SPU's market connections include the ability to site facilities, obtain raw materials, and sell commodities like recyclables. Market forces can increase SPU's cost of doing business but also provide opportunities for bringing in more revenue to offset costs.

Ability to site facilities

Description: As the City becomes denser through infill and up-zoning, land acquisition costs increase. Siting industrial-type facilities in areas with a growing mix of residential development also becomes more challenging. In addition, site selection is restricted by flooding, climate change, and seismic considerations.

Impacts: SPU is faced with higher costs for siting and building facilities.

Progress:

- *In-City Facilities Master Plan 2016/2018:* SPU completed an In-City Facilities Master Plan in 2016 that was updated in 2018. This plan provides a facility condition and needs assessment with an investment plan for the next 30 years. Investing in resilient facilities will be essential to supporting emergency response and service restoration in a variety of disasters, particularly earthquakes.

Availability of raw materials

Description: The availability of raw materials changes with market conditions, foreign relations, government agreements, and wars.

Impacts: SPU's construction and maintenance projects are impacted by sudden changes in raw material prices such as the price of steel.

Progress:

- *Ship Canal Water Quality Project Analysis:* SPU is evaluating the impact of construction market conditions on the design and construction of the Ship Canal Water Quality Project. This analysis broke down costs between raw materials, property, and skilled labor for purposes of improved budget planning and transparency with customers, elected officials, and the public.

Recycling markets and revenue

Description: Revenue from recyclable materials is subject to market fluctuations and foreign government decisions. Many commodity markets exist offshore and are subject to trade agreements.

Impacts: These markets can change, having a negative or positive impact on SPU contractors' ability to sell recyclables. Revenues received from the sale of sorted recyclable commodities support on-going programs and keep customer rates down.

Progress:

- *Recyclable Processing Contract:* SPU developed a recyclable processing contract that provides protection against upward and downward market swings. The contractor is paid a set fee to process recyclables and the revenue from selling the recyclables is reimbursed to the City. This helps the contractor stay in business during periods of low prices and ensures that SPU recycling services are not disrupted. The benefits of recycling are further augmented by the avoided costs of landfill disposal.
- *Responsible Recycling Task Force:* SPU is working with regional partners to address changes in international recycling markets as part of the Responsible Recycling Task Force. This was prompted by China's Blue Skies Policy that significantly tightened the standards and costs for the import of specific materials, including mixed plastics and mixed waste paper. These restrictions have impacted costs to sort and process materials and caused a significant price drop in recyclable commodities. The Task Force explored how to improve and expand domestic markets for recyclables and published recommendations in January 2019.



Section 7: Technology

New and rapidly evolving technologies present opportunities and challenges for SPU. Advancements can eliminate jobs while creating new jobs that require training. The rate of change can create a burden on SPU's ability to stay current. New platforms usually require costly integration and employee training. New technologies can also increase efficiency and help to recruit and retain employees. Emerging technologies are often heralded with benefits that need to be tested before potential adoption. The internet provides new ways for customers to connect with SPU services, but economic, racial, and language barriers to access these services need to be considered.



Emerging and changing systems

Description: The increasing pace of technological change could require SPU to make system upgrades that drive up costs due to software licenses, training, and resourcing technology projects and initiatives. Emerging technologies can also alter the way work is done, rendering certain tasks or systems obsolete. Technology can also help to optimize existing systems. For example, an array of sensors throughout the piping network could assist in monitoring flows and detecting backups, leaks, and other issues.

Impacts: Technological changes have the potential of improving overall system efficiency, helping to focus investments, and improving safety. In addition, the increased speed and complexity of change can drive demand for tech-related equipment replacement and employees with new skills. All these changes have associated costs, which can impact efficiency, service quality, and rates.

Progress:

- *Data Management:* SPU staff in collaboration with Seattle IT are developing a data governance program and providing data management resources. SPU staff have been identified as Business Owners for over 150 technology applications that support SPU work. SPU will also create a guide to data access to give staff the information they need to leverage data resources.
- *Privacy Program:* SPU created a privacy team to embed the City's privacy policies into SPU computer applications, projects, and contracts. This effort to responsibly manage personal information helps maintain employee and customer privacy as SPU navigates technological change.

- *Robotics:* SPU is researching new ways to use robotics to investigate the condition of SPU infrastructure. Any use of robotics will include a partnership with the City and strict compliance with the City's Privacy Policy.

Independent systems

Description: There are ongoing advancements in decentralized systems for treating and collecting storm and wastewater and disposing of solid waste. Decentralized systems may also support resiliency after disasters and other disruptions.

Impacts: Loss of customer-base to decentralized water systems may reduce revenues. However, decentralized systems could assist SPU in delaying the need to develop costly new water supplies and help manage drainage flows.

Progress:

- *Decentralized Systems:* SPU is exploring the role of decentralized systems in providing a more distributed and resilient utility system. SPU is an active member on the National Blue-Ribbon Commission for Non-Potable Water Systems which is developing water quality criteria and operational guidelines, assisted in the City's two Living Building Pilot programs, and is working with agencies and non-profits to develop clear statewide rulemaking for design, permitting, and operation.

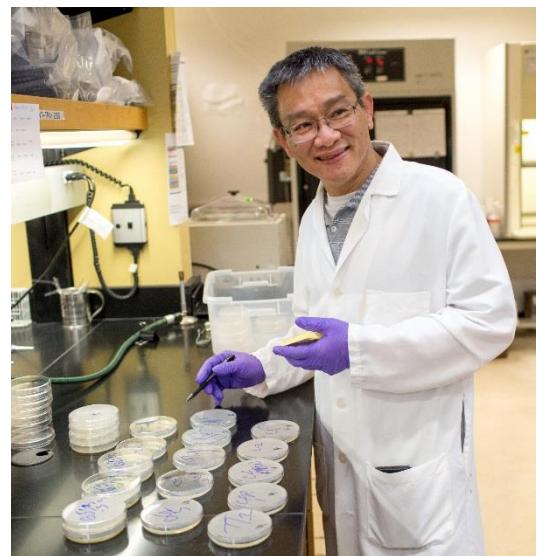
New treatment techniques

Description: Discovery of new contaminants, stricter water quality standards and regulations, and new treatment techniques may require new or enhanced treatment systems.

Impacts: SPU could be required to install costly new treatment equipment or even build new treatment facilities for its water, wastewater, and stormwater systems.

Progress:

- *Water Treatment:* SPU's water treatment plants use ultraviolet radiation and ozonation for treating micro-organisms like Giardia and Cryptosporidium. SPU's burying of in-city treated water reservoirs prevents contamination while allowing open space and park usage on the surface.



Section 8: Workforce

SPU employees are the organization's most important asset. Hiring and retaining employees with the right skills and protecting institutional knowledge is critical for executing SPU's Mission. Reduced skill availability in certain job categories, loss of institutional knowledge from retirement or departure, speed of turnover, and market competition all impact SPU's ability to deliver high quality services. Workforce challenges also provide opportunities to create a diverse and equitable utility that reflects the community SPU serves.

Institutional knowledge loss

Description: As workers retire or depart, SPU loses the knowledge and history they have. As the 'boomer' generation continues to retire, an increased institutional knowledge loss is expected.

Impacts: Recent estimates indicate 46 percent of SPU employees are eligible for retirement within five years. Without sufficient transfer programs or succession planning, this loss of knowledge has the potential to reduce the efficiency of operations and affect service quality.

Progress:

- Skills and Knowledge Transfer:* SPU is managing a series of programs that address workforce risks led by the Skills and Knowledge Transfer Team. There are two mentoring programs that pair new and longer-term employees. One is a traditional six-month program, and the other is a collaboration to identify solutions to workplace challenges. The Pathways to Leadership, Utility 101 lunch-time presentation series, and guided tours of the water and solid waste systems also facilitate knowledge transfer and training.
- Procedures and Manuals:* SPU is updating procedures and manuals and maintaining those documents on SPU's SharePoint site for easy reference. The Fleets and Warehouse Division is a leader in this effort. They pair newer employees with those nearing retirement to ensure knowledge transfer and use special projects as an opportunity to cross-train employees and further employee development.
- Apprenticeship Program*** (see progress item under Skills availability and development)



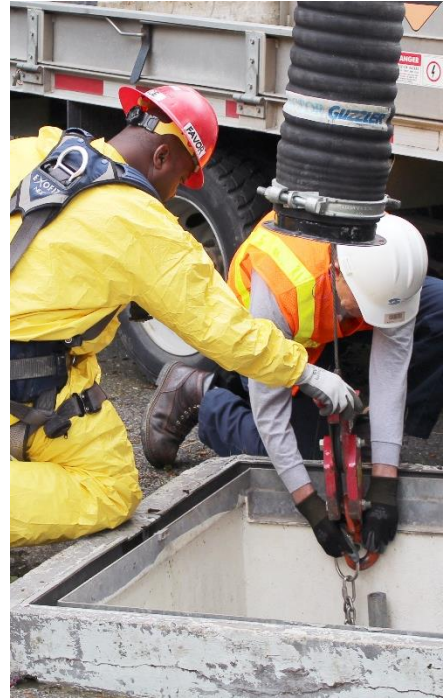
Skill availability and development

Description: SPU's positions are diverse, and many require highly technical skills or multiple years of experience. Skill gaps exist where there are not enough candidates in certain categories, both internally and externally.

Impacts: These issues can result in longer vacancies, a less skilled workforce, and decreased production. Competition can reduce the pool of eligible candidates, push wages up, and result in longer vacancy times.

Progress:

- *Apprenticeship Program:* SPU is restarting the registered apprenticeship programs for pipe workers in the Water and Drainage & Wastewater Lines of Business. Filling key operations and maintenance staff positions is becoming more challenging with retirements and competition from other employers. These programs address institutional knowledge loss by involving long-term operations and maintenance staff in curriculum design and teaching. Apprenticeship opportunities also serve the goal of supporting a more diverse workforce.
- *Skills and Knowledge Transfer*** (see progress item under Institutional knowledge loss)
- *Procedures and Manuals*** (see progress item under Institutional knowledge loss)



Retention and turnover

Description: High turnover increases the need for training and leads to decreased knowledge and experience. Employee retention is impacted by professional development opportunities, training and mentoring, workload, performance management, and market competition. As the economy booms, the turnover speed increases.

Impacts: SPU's service delivery and costs are impacted by rates of retention and turnover.

Progress:

- *New Employee Orientation Program:* This program includes three levels of orientation. On the first day, new employees receive a two-hour session that includes SPU and City of Seattle basic information. Within the first month of employment, employees will receive a four-hour session to increase their knowledge about working for SPU. Within the first quarter of employment, new supervisors will receive a four-hour session to prepare them for their roles of managing staff.
- *Apprenticeship Program*** (see progress item under Skills availability and development)
- *Skills and Knowledge Transfer*** (see progress item under Institutional knowledge loss)

Marketplace competition

Description: Private and non-profit sectors as well as other public organizations compete with SPU for skilled candidates. Governments face stiff competition from the private sector's higher wages. Competition may also drive up wages for positions requiring specialized and in-demand skills. While government jobs have certain advantages over other sectors, there are also tradeoffs.

Impacts: Seattle's rising cost of living and long commutes negatively impact employees' quality of life, creating competition with employers closer to workers' homes. Interest in the public sector fluctuates and impacts SPU's ability to hire a diverse and skilled workforce.

Progress:

- *Recruitment Strategy:* SPU is enhancing its recruitment strategy to increase the candidate pool for open positions. As the recruitment market shifts and demographics change, SPU is implementing more creative ways to attract talent. With the addition of a new Recruitment Manager and an additional recruitment staff position, SPU will move toward a community-centered outreach approach for filling vacancies.

Section 9: Next Steps



SPU recognizes that managing risk and resiliency is key to sustaining vital public services. This has been a central feature of how the Water, Drainage & Wastewater, and Solid Waste services have evolved to meet new challenges and opportunities. In recent decades, the diversity and magnitude of recognized risks has grown. As a community-centered utility, SPU has undertaken this recent effort to be more systematic and integrated about risk management.

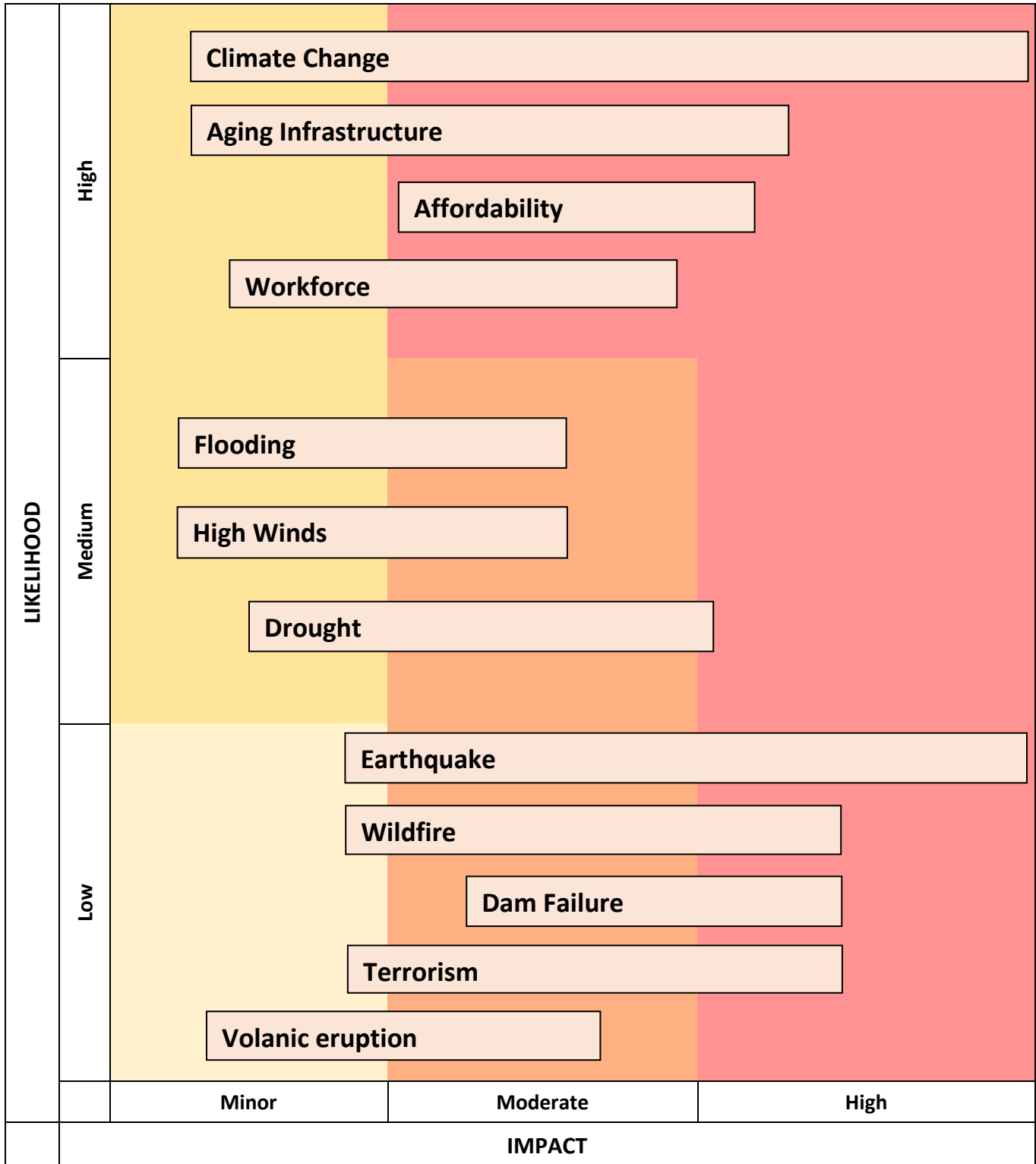
This report has described each of the strategic risk categories along with progress assessments. Some risk areas, such as climate change and disasters, have been on the radar for several decades and are being addressed by a variety of programs and projects. Other categories, such as technology, are developing rapidly and require increased focus. The framework assists SPU's business units to optimize investments that comprehensively address risk and improve resiliency.

Next steps include:

- A vulnerability matrix detailing the most significant risks for SPU
- A complete inventory and assessment of existing work for high priority risk areas
- Identification of critical interdependencies with other agencies and organizations
- Identification of disparate community impacts and opportunities to take equitable and corrective actions
- A prioritization of work that addresses high priority risk areas
- Cost benefit analyses of projects and programs that support risk reduction
- Efforts that address multiple risk areas while optimizing public benefits
- Further development of data sets, models, and scenarios
- A workshop to explore potential future impacts of technology on service delivery
- Communication and outreach with agency and community partners

SPU's risk and resiliency framework will continue to evolve. As this work develops, SPU will share progress and seek feedback from a variety of partners and stakeholders. SPU does not have a crystal ball to see the future, but risk and resiliency efforts improve the utility's ability to adapt to disruptions, changes, and opportunities. This all aligns with SPU's mission to provide vital services to the community that are affordable, equitable, and resilient.

Appendix A: Impact-Likelihood Matrix



❖ This chart is very high level and is provided for illustrative purposes only.