

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

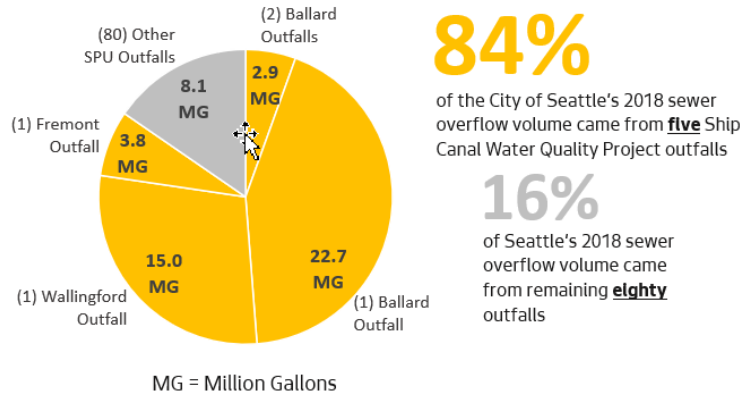
Major Milestones	Timing
Engage community, SPU staff, City departments, community-based organizations, and environmental organizations in the effort	Ongoing
Collaboratively develop a vision for Drainage and Wastewater (DWW) that will guide near and long-term investments	Q2 2021
Identify and prioritize 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:

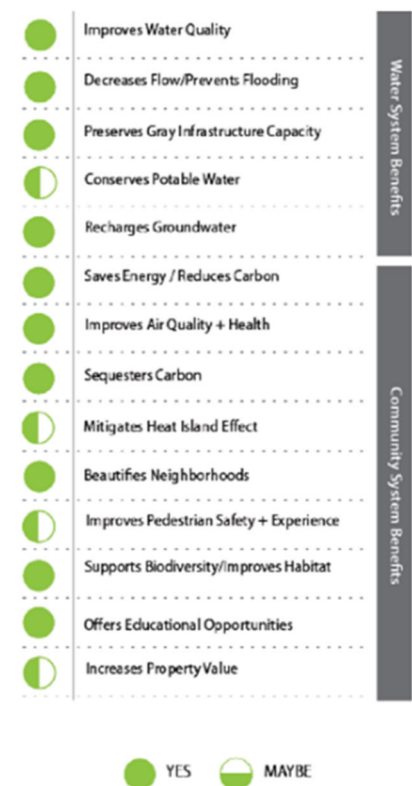
- Decrease impact of polluted runoff to water quality in our creeks, lakes, the Duwamish River, and Puget Sound;
- Reduce combined sewer overflows, flooding, and sanitary sewer overflows/back-up risk and incidence by preserving or improving system capacity; and
- Deliver a range of risk reduction plus 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 ** <small>**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.</small>
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

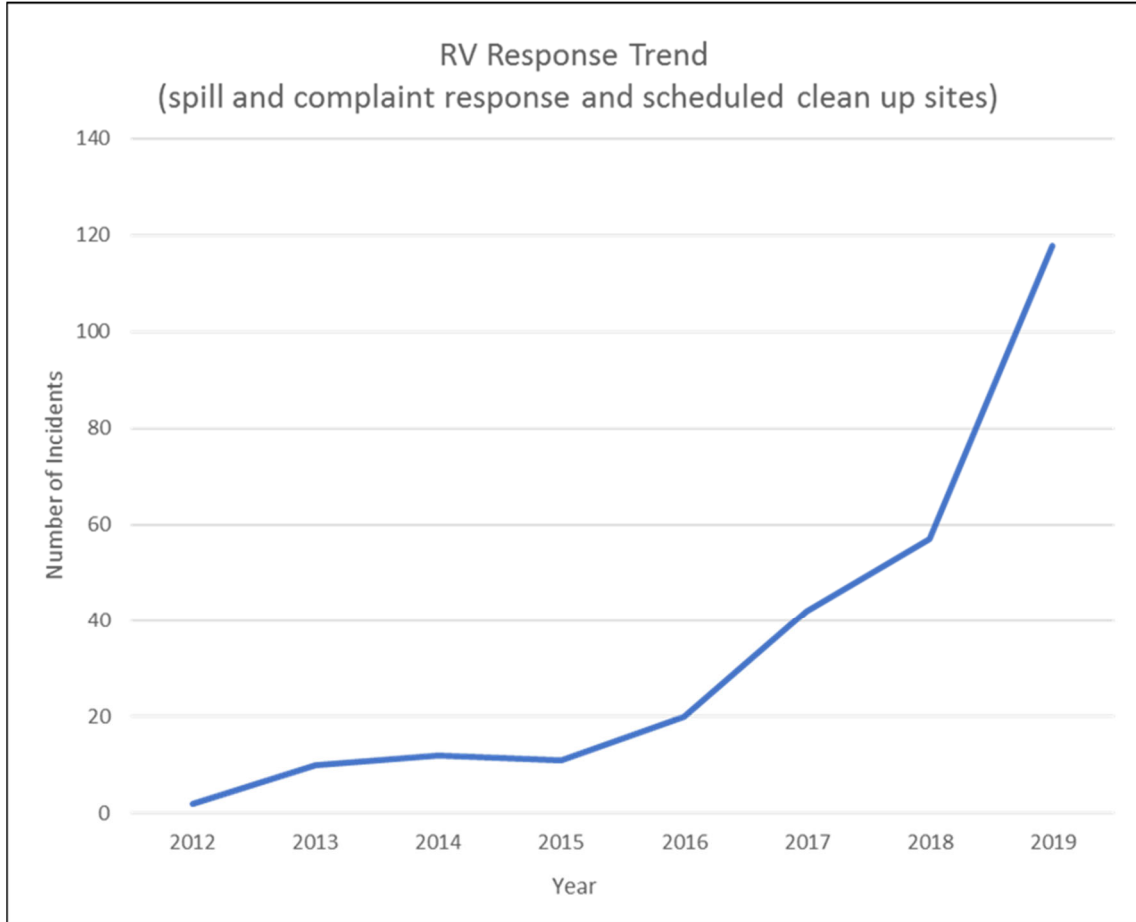
- Integrate non-profit outreach providers into the RV protocol.
- Expand (potentially) the number of pilot sites serviced.
- Explore pressure washing in clean-up activities.
- Continue collaboration with SPU's RV pump out pilot.

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 (\$000's)	Drainage Rehabilitation						
	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.