

**2018-2023 SBP Update
Gap Action Plan Template – REVISED april 3, 2017**

Action Plan Title: Increase Sewer Repairs (#5)	Action Plan Owner: John Holmes
Focus Area: Operational Excellence & Protecting Environmental & Public Health	Action Plan Sponsor: Madeline Goddard

1. Short summary of the project/program (suitable for using with Customer Review Panel and other members of the public, plus additional specifics required for clarity of action).

This action plan increases investment in a sewer repair by adding an additional repair crew of six positions and associated equipment focused on spot repairs, utilizing a trenchless technology procedure known as cured-in-place pipe (CIPP). SPU currently has two full-time construction crews dedicated to excavate mainline sewer pipes and perform repairs on high risk pipes, reducing the likelihood of structural failures and sewer back-ups. This supports our regulatory threshold of four sewer overflows per 100 miles. Failing to meet EPA Consent Decree requirements on sewer overflows could lead to enforced compliance which would drastically increase SPU's costs.

This Action Plan adds staff and internal expertise to complete crew-led sewer rehabilitation projects. This is in contrast to Action Plan #7 (Sewer Rehabilitation) that increases funding to used pay for contractor-led projects.

2. What outcome will this action achieve? What problem does it solve? What are the benefits?

This add is not intended to replace SPU's two full-time sewer repair crews that completed 160 repairs in 2016; rather, it gives SPU a "no-dig" solution to addressing issues in our systems. Our repair crews have increased productivity by 50% and as CCTV efforts have improved, we are discovering the need for more repairs to our sewer system. The goal is to expand the focus of our current program by shifting any new additional resources towards trenchless spot repairs. This technology does not require excavation in the right-of-way, and today street restoration is approximately 50-60% of the total cost of a sewer repair work order. Generally, a typical work order leads to the repair of 6-12' of pipe. Additionally, this is a difficult body of work to contract out due to limited contractors on the market. Other utilities, such as Portland, have a good success in bringing this technology in house.

A trenchless spot repair program would enable a crew to complete two (2) spot repairs per day of up to 10 lineal feet each, without excavation. Excavation can be disruptive to customers and can take multiple days to complete a standard sewer repair. With a trenchless approach, a job would be completed in approximately 4-5 hours.

Finally, having a crew in-house dedicated to trenchless spot repairs gives SPU the advantage of mobilizing quickly to address problems discovered through CCTV in our systems that may lead to a sewer overflow or backup. Currently, any trenchless type project must go through a contracting process which takes up to 18 months before a contractor begins the work. By having the ability to quickly utilize an in-house team, it avoids additional costs (i.e., change orders) if further deterioration of our mainline occurs from the time the problem is discovered via CCTV until it is repaired and/or re-lined by the contractor.

3. Short description of activities already in the baseline, incremental work.

The baseline includes two full-time sewer repair crews and associated costs for materials, street restoration, equipment and vehicles, and supplies.

4. Implementation plan and timeline.

The equipment could take up to 9-12 months to receive upon approval. This includes the jetter truck, mainline camera truck, robotic cutters, climate controlled unit for resins, and a wet-out trailer that is used to prepare the liner for installation. Hiring of new staff and required training could be timed based on the equipment delivery timeline. Training would also be required.

Beyond training with the vendor, we would recommend cross training with the City of Portland and Tacoma since both have had success in running lining programs similar to what SPU is seeking to do.

5. Implications for budget and FTE (if any)

Changes (relative to baseline)

	2018	2019	2020	2021	2022	2023
O&M Budget Change	247,235	247,788	254,233	265,117	267,710	274,753
CIP Budget Change	1,419,493	543,875	543,875	543,875	543,875	543,875
FTE Change	6	6	6	6	6	6

6. Alternatives considered for varying options/levels of effort.

An alternative is to add a third repair crew instead of a spot lining crew. A third repair crew would enable SPU to complete more repairs in our wastewater system which will continue to increase in time given the age and condition of our assets. In addition, because we added two full-time CCTV crews in 2016 we would expect to discover issues needing repair and/or lining following inspections and condition assessment.

7. Is there lower-priority work underway whose resources could be directed to this effort? Please describe.

None to our knowledge. Almost all of the work completed at this time by Drainage & Wastewater System Maintenance is driven by the Consent Decree and other regulatory requirements.

8. Identify and describe any significant external constraints affecting this action plan.

We are not aware of any significant external constraints.

9. Identify possible race and social justice implications for implementation of this plan. How will it impact service equity and how will you resolve this impact?

We have an opportunity to supplement SPU’s efforts around service equity by focusing spot lining projects on areas that have been adversely impacted historically. Drainage & Wastewater System Maintenance would factor in RSJ before performing a spot lining project to ensure service equity throughout the city.

10. Describe your plan for evaluating success or progress of this plan. Include any metrics you have.

- Number of spot sewer repairs per year
- Cost of spot lining per foot vs. cost of standard repair per foot
- Total footage lined per year
- Total cost per foot for spot lining