

**2018-2023 SBP Update  
Gap Action Plan Template**

<b>Action Plan Title:</b> Area-based Green Infrastructure in Urban Villages	<b>Action Plan Owner:</b> Pam Emerson
<b>Focus Area:</b> Public Health and the Environment	<b>Action Plan Sponsor:</b> 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 will result in accelerated implementation of green infrastructure in the most rapidly densifying areas of our city. The proposed investments will position SPU to partner more effectively and creatively with sister agencies (Seattle Department of Transportation (SDOT), Parks, King Co.), community-based organizations, communities of color, and private land developers. These partnerships will allow us to deliver stormwater system and water quality improvements that also advance community goals such as streetscape beautification, increased tree canopy cover, heat island relief, improved pedestrian safety and experience, and green career development. They will also potentially result in innovative new open spaces, educational spaces, and/or regional-scale facilities.



This project will analyze, prioritize, develop, and execute strategic area-based green (or green-gray) stormwater infrastructure investments to address the drainage system impacts of increasing density in urban villages. This will be accomplished using best-available data to anticipate and adaptively manage these impacts. Anticipated drainage system needs include: flow control to help prevent combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs); flow control to protect creeks; water quality treatment to prevent pollution in surface water; conveyance and localized flooding abatement, particularly in areas with unimproved rights-of-way; and preserving (or improving) local pipe capacity for anticipated future flows.

In order to be successful, this work must also be supported by and aligned with other public realm and public-private-partnership planning and coordinated investments across City capital and planning departments and within SPU Drainage and Wastewater.

The project consists of two phases:

- 1) Analysis, prioritization, partnership development, conceptual design, and high-level cost-estimating for green (and green-gray) drainage system improvements in 3-6 urban villages starting in late 2017; and 2) Design and construction of improvements in up to 4 urban villages initiated in the 2020-2023 timeframe, funded with this new capital investment, and in coordination with other capital investments such as sidewalks, conveyance improvements, and private parcel-side development.

System improvement approaches will build on current project types and programs, and include:

- Right-of-way (ROW) retrofits to address flooding, flow control, water quality, conveyance and streetscape improvement
- ROW retrofits using green-gray hybrid technologies (i.e. combination of green infrastructure and piped underground connections to existing storm system)
- Parcel-side retrofits of unmitigated impervious surfaces for flow control via bundled rebates or other public-private partnerships to install on-site best management practices (BMPs) such as bioretention and stormwater cisterns;

Possible additional investment types/innovations/partnerships include:

- Green schoolyard retrofits with stormwater management and outdoor classroom/ecological literacy value
- Joint acquisition and development of property for stormwater management and community open space
- Strategic partnerships to manage unmitigated right-of-way (ROW) runoff on adjacent public (or private) land
- Strategic partnerships to develop district-scale stormwater facilities that can serve as 'receiving projects' for alternative Stormwater Code compliance
- Innovative financing and alternative project delivery approaches

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

This action will expand SPU's ability to use the green stormwater infrastructure to manage drainage system needs in the most rapidly growing areas of Seattle. Current SPU green infrastructure investments are limited to areas governed by regulatory requirements: uncontrolled CSO basins and creek watersheds under the Utility's (Integrated) Plan to Protect Seattle's Waterways. Based on known costs from recent/current projects and programs, a \$5M capital investment annually will allow for new system improvements on the following scale:

Approximately 7-8 blocks of ROW managed (assuming block length of 330-feet)

OR

Approximately 105 commercial-scale parcel retrofits (3600-5000 sq. ft impervious surface managed/parcel)

OR

Approximately 350 single-family-scale retrofits (1200-1500 sq. ft. impervious surface managed /parcel)

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

Natural Drainage Systems (NDS) Partnering Program (\$35M 2016-2025, \$\$ vary per year)

This program designs and constructs roadside green infrastructure in the public right-of-way to remove pollutants, improve conveyance, and address localized flooding in Seattle's three major creek watersheds: Thornton, Pipers, and Longfellow. Co-benefits include traffic calming and enhanced pedestrian experience, improved street tree canopy, and decreased localized flooding. This work is a regulatory requirement included in the Plan to Protect Seattle's Waterways.

RainWise Program (\$1M in 2017, \$2M/ yr 2018-2020, \$1.5/yr 2021-2023)

This program provides rebates to property owners in eligible areas who retrofit existing conditions to manage impervious surfaces with rain gardens, stormwater cisterns, or bioretention. The program is a partnership between SPU and King County Wastewater Treatment Division (WTD), and the combined resources of both utilities make this program currently available to over 50,000 households in Seattle's uncontrolled CSO basins. Since its inception in 2010, the RainWise program has funded over 1200 green infrastructure retrofits on private property, and these collectively managed approximately 18M gallons of stormwater annually.

Asset Management of Public Realm Green Infrastructure (\$750K annually)

SPU expenditures on green infrastructure operations and maintenance – for built GSI facilities in the public right-of-way – total approximately \$750K annually. SPU currently contracts with Seattle Conservation Corps – a job

training and fee-for-service program for homeless adults, administered by Seattle Parks and Recreation – for the landscape maintenance component of this work. The budget estimates for bioretention include the potential need to remove and replace the top 1-3” of bioretention soil within cells, as needed to address clogging or pollutant accumulation, every 15-20 years.

#### DWW Integrated Vision Plan

SPU is currently initiating a systematic effort to identify and plan for stormwater and wastewater system needs citywide to help prioritize future investments for the utility and its partners. This planning effort will continue concurrently with and directly inform the work proposed in this action plan.

#### **4. Implementation plan and timeline.**

2017-2019 – System needs analysis and prioritization in urban villages and expansion areas

2020-2023 – Rolling project design and construction

#### **5. Implications for budget and FTE (if any)**

##### **Changes (relative to baseline)**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
O&M Budget Change	\$95K	\$95K	\$33K	\$33K	\$78K	\$90K
CIP Budget Change	<i>\$600K in baseline</i>	<i>\$600K in baseline</i>	\$5M	\$5M	\$5M	\$5M
FTE Change	1.0 FTE	1.0 FTE	1.0 FTE	1.0 FTE	1.0 FTE	1.0 FTE

SPU plans to update this action plan as part of the 2021 strategic business plan update, based on the planning work conducted through this action plan from 2017-2020.

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

The primary alternative is that SPU only pursue evaluation of drainage system needs (and potential green infrastructure investments to meet those needs) citywide via the DWW Integrated planning effort. Under that process, detailed area-based GSI and drainage system evaluation and resultant project delivery will not be pursued before 2027. Given the nature of development cycles, this timing could prevent SPU and the City from capitalizing on the unique project and policy opportunities and economies of scale presented only during periods of redevelopment. Likewise, this timing could prevent SPU from being able to effectively co-develop joint public infrastructure with SDOT and Seattle Parks. The primary alternative will also delay our ability to develop innovative partnerships that leverage our own investment and help us lead Seattle in achieving our community-wide target of managing 700 million gallons of stormwater annually with green approaches by 2025.

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

No.

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

Financial Partnering Constraint

To most efficiently implement this plan, SPU proposes to partner with sister agencies (such as SDOT) and developers. However, current state laws (Revised Code of WA 39.04 to 39.10) prevent the City from reimbursing dollars to a developer in a way that would provide an incentive for them to partner with the City in building infrastructure, such as bioretention, beyond what they would be required to build for stormwater code compliance.

RainWise Program Constraints

The RainWise program is currently problem-solving around three delivery issues: 1) a limited contractor base and need to attract more contractors; 2) a national cistern shortage/delayed availability; and 3) the burdensome Federal/IRS requirement for our customers to report their RainWise rebate on their taxes. These issues are being worked on, but may not include simple fixes and may limit our ability to fully utilize the existing RainWise program to achieve the goals of this action plan.

Policy Gaps

An innovative idea SPU would like to test as part of this action plan is the installation of multi-value district-scale stormwater facilities (such as stormwater parks) that can serve as 'receiving projects' for alternative Stormwater Code compliance (fee-in-lieu) for urban village redevelopment. This could potentially free up the original funding to be subsequently reinvested. The rules and policy gaps around district-scale facilities and alternative compliance are still being refined, but we have an opportunity for this to be a win-win approach.

**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 conducted an initial GIS analysis of where current GSI programs and projects can make investments and how/where those investments can/do benefit communities of color, immigrants, refugees, and low income people. That analysis reveals substantial gaps between the geographic areas where SPU can currently make green infrastructure investments and the geographic areas that have been identified as City of Seattle's Environmental Equity focus areas. We expect the proposed action plan work will result not only in increased investment in Equity and Environment Initiative (EEI) communities but also improved program structures to serve and partner with EEI populations, irrespective of geography. However, as mentioned above, these outcomes require a coordinated and concerted inter-departmental approach. As a current step toward this goal, SPU is convening a racial equity toolkit analysis and strategic planning process to inform the currently planned expansion of the RainWise program into creek basins.

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

Phase I of this action plan will include creating a project prioritization and selection scheme as well as quantitative and qualitative performance metrics. Example/potential metrics include:

Quantitative Stormwater System Benefit Metrics:

Volume: gallons of stormwater managed annually with green approaches

Cost Efficiency: cost/gallon managed (or cost/sq. ft of impervious surface managed)

Quantitative Racial Equity Metrics:

Proportion of people-of-color, immigrants, refugees, low-income people directly served by (as a function of the urban village demographics)

Annual RainWise funding to person-of-color-owned RainWise contractor businesses (as a function of the total)

Qualitative Performance Metrics:

Mutually beneficial public-public or public-private partnerships are formed  
Community engagement and ownership/stewardship are evident  
Youth of color are engaged in project development and/or implementation

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