

**FISCAL NOTE FOR NON-CAPITAL PROJECTS**

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**Legislation Title:**

Green Stormwater Infrastructure: 2025 Goal and Implementation Strategy

**Summary of the Legislation:**

This legislation establishes a City policy that green stormwater infrastructure (GSI) is a critical aspect of a sustainable drainage system in Seattle and sets a citywide 2025 implementation goal for GSI. It acknowledges that City departments will define a coordinated and consistent approach to achieving the goal via a 2025 GSI Implementation Strategy under Executive Order 2013-01.

**Background:**

The purpose of the legislation is to:

- 1) Explicitly underscore the City’s policy commitment to relying on green stormwater infrastructure (GSI) for stormwater management wherever technically feasible and aligned with urban development priorities
- 2) Ensure GSI is fully integrated into the planning and design of other appropriate infrastructure investments in order to maximize community benefits and public value
- 3) Set a 2025 implementation goal for GSI in Seattle that drives coordination and innovation

The legislation is intended to articulate a clear City-wide policy stance and to support on-going City leadership in the arena of integrated urban green infrastructure.

For the purposes of this legislation, “GSI” is synonymous with “Natural Drainage Solutions” and is defined as the set of distributed stormwater best management practices that mimic natural hydrologic function by slowing and/or reducing stormwater runoff volume close to where it falls as rain. GSI practices include but are not limited to: tree planting and preservation, green/vegetated roofs, permeable pavement, stormwater cisterns, rainwater harvesting and reuse, rain gardens, and bioretention cells.

SPU has pioneered and led the City’s GSI work for over a decade, via a series of increasingly large and more complex projects. This work has proven GSI’s performance efficacy and has

provided substantial opportunity for honing both technical and community engagement protocols and procedures. GSI best management practices are now ripe for intentional integration into the urban fabric, more broadly. To be effective, this step requires a coordinated, City-wide, inter-departmental approach. This legislation is therefore also intended to backstop the transition of GSI implementation from a pilot project phase to a phase characterized by an integrated, City-wide approach.

**This legislation does not have any financial implications.**

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Appropriations Notes:

No new appropriations are proposed for 2013-2014, beyond current SPU & SDOT CIP budgets.

OSE is coordinating the development of a 2025 Implementation Plan for delivery in Q2 2014. The plan will:

- 1) Detail siting and design guidance for optimizing GSI installations in the public right-of-way (including GSI integration with Neighborhood Greenways)
- 2) Outline cutting edge leadership/innovation opportunities for GSI implementation (unique capital projects, important technical research/monitoring, financing mechanism/s, etc.)
- 3) Summarize the economic value of social and environmental benefits of GSI, above and beyond water quality benefits
- 4) Project achievable GSI implementation levels given *current* funding sources and adopted budgets
- 5) Detail implementation scenarios for achieving the 2025 goal and identify projected required funding levels/breakdown for each. Project types/funding sources will include: City appropriations, grant/foundation funding, public-private leveraging, King County partnerships, Federal and state funding sources, and innovative funding mechanisms such as fee-in-lieu.

Table 1 summarizes a starting point for this analysis, breaking out past, current and to-be-determined GSI implementation by project type/funding source. Implementation units are in millions of gallons managed annually.

Table 1:  
**Baseline for 2025 Implementation Plan // Scenario Development (gallons managed annually with GSI)**

Type of Project (Funding Source)	Past (2000-2013)	% of Past Project total (119.4 M gal.)	Present Trajectory (2013-2018 estimates based on current policy & adopted CIP budgets)		% of Present Trajectory total (105.8 M gal.)	To Be Determined (One potential scenario which will serve as a starting point for GSI Implementation Strategy development)		% of TBD total (488.3 M gal.)
SPU Capital Projects	SEA Streets, Carkeek, Cascade, Broadview & Pinehurst Green Grids, High Point, Thornton Creek Water Quality Channel, Ballard Pilot	96%	CSO program	59.2M	56%	RainWise (beyond CSO basins)	146M	30 %
			Creek/lake Watersheds <small>[i.e.: Swale on Yale; Venema]</small>			Integrated Planning Outcome		
	115M							
Stormwater Code (Public)	0.125M	0%	Standard Projects <small>[i.e.: SDOT code-triggered projects]</small>	2M	2%	Standard Projects	19M	4%
						Large-Scale/Unique Projects <small>i.e.: Central Waterfront, etc.</small>		
Stormwater Code (Private)	2.98M	2.5%	Standard Projects <small>[GSI to the Maximum Extent Feasible]</small>	7.3M	7%	Standard Projects	62.4M	13%
Strategic Partnerships (cost-sharing, beyond code)		0%	King County RainWise <small>Estimates in flux right now, per negotiations w/KC</small>	29.1M	27.5%	Large-Scale Redevelopment <small>i.e.: 2030 District, Light Rail Stations, etc.</small>	221.4M	45%
			King County Barton Basin Roadside Bioretention			Fee-in-Lieu of Code Req.		
						State-Funded ROW Retrofit Program		
						Grant-Funded Innovation Program		
Voluntary Action	[green roofs, non-code] 1.3M	1%	Green Factor <small>[beyond SW code]</small>	8.2M	7.8%	Stormwater Facility Credit (Update)	39.5M	8%
			12,000 Rain Gardens			TBD		
			SDOT <small>[Complete Streets, Street Fund, etc.]</small>					
<b>TOTAL</b>	<b>119.4M</b>			<b>105.8M</b>			<b>488.3</b>	
<b>SUM TOTAL</b>				<b>225.2M</b>			<b>700M</b>	

Of all potential future funding sources, there is greatest near-term certainty around SPU's projected investments (through 2018). Table 2 summarizes SPU's 2013-2018 CIP budget. A discussion of operations and maintenance (O&M) costs follows Table 2.

Table 2:  
**SPU Green Stormwater Infrastructure CIP Cost Summary Information: 2013-2018**  
 (millions of dollars, rounded)

Program Area	2013		2014	2015	2016	2017	2018	
	Adopted	Projected	Projected	Projected	Projected	Projected	Projected	
Combined Sewer Overflow Basins (TOTAL)	4.8	4.2	5.7	6.3	6.1	4.9	4.0	
Right-of-Way	3.4	2.1	3.0	4.2	3.6	3.2	4.0	
RainWise	1.4	2.1	2.7	2.1	2.5	1.7	0	
Venema Basin	0.50	0.59	2.43	1.22	0	0	0	
Swale on Yale	2.48	2.82	0.26	0.24	2.52	0.24	0.69	
<b>TOTAL</b>	<b>7.8</b>	<b>7.6</b>	<b>8.4</b>	<b>7.7</b>	<b>8.6</b>	<b>5.1</b>	<b>4.7</b>	
<b>SUM TOTAL</b>								<b>42.1</b>

### O&M costs

Current data for the O & M costs of City-owned roadside green stormwater infrastructure (rain gardens or natural drainage systems in the right-of-way) estimates \$2.00 - \$2.60 per square foot of GSI facility (annually), depending on the density of facilities to be managed, contracting structures, landscape maturity, and summer watering demand. This estimate includes the entire landscaped area, hardscape area, crew travel and labor, any needed replacement material, and program management costs.

A conservative estimate for a representative long block (660') where stormwater runoff is fully managed with roadside natural drainage systems will have approximately 4500 square feet of landscaped area, depending on variables such as the depth of the swale, soil infiltration rate, and the designed performance target. This equates to an estimated annual O&M cost of \$9000-\$11700, per fully managed block.

As a point of reference, the current budgeted scope for a potential “Phase II” set of roadside bioretention (GSI) facilities in Ballard for combined sewer overflow control is to site and design up to 10 long blocks (or 20 short – 330’ – blocks).

**Anticipated Revenue/Reimbursement Resulting from this Legislation:**

None

**Total Regular Positions Created, Modified, or Abrogated through this Legislation, Including FTE Impact:**

None

**Other Implications:**

**a) Does the legislation have indirect financial implications, or long-term implications?**

Yes. The primary (short term) indirect cost is the staff time required for inter-departmental coordination and formal review of the 2025 GSI Implementation Strategy under Executive Order 2013-01. This cost is estimated to be no more than 4 hours per week (.1 FTE) for 6 months, in these key departments: SPU, DPD, SDOT, SCL and Parks. OSE has existing staff capacity for leading inter-departmental coordination and strategy development, and it is expected that the coordination role within other affected departments will also be staffed with existing resources.

Possible long-term implications are discussed above.

**b) What is the financial cost of not implementing the legislation?**

One of the main purposes of the legislation is to gain efficiencies (such as avoided community engagement costs achieved via coordinated inter-departmental outreach processes and avoided capital costs achieved via coordinated and purposefully sequenced right-of-way improvement planning, design and construction). These efficiencies would be unlikely if the legislation were not implemented.

**c) Does this legislation affect any departments besides the originating department?**

Yes. The legislation has policy implications on OSE, SPU, FAS, DPD, SDOT, SCL and Parks, who are all required to pursue a coordinated approach to GSI planning and implementation to achieve the 2025 target. SPU and OSE have briefed the directors of impacted departments, and department staff will participate in the development of the GSI Implementation Strategy.

**d) What are the possible alternatives to the legislation that could achieve the same or similar objectives?**

The main alternative is the status quo: No established GSI policy and no goal for GSI implementation in Seattle. Leadership will continue to come from SPU and coordination will proceed on an ad-hoc basis, as a function of staff-level good will and volunteered time.

**e) Is a public hearing required for this legislation?**

No hearing is required.

**f) Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?**

No.

**g) Does this legislation affect a piece of property?**

No.

**h) Other Issues:**

No other issues are identified at this time.

**List attachments to the fiscal note below:**

None

# Green Stormwater Infrastructure

## 2025 Goal: Implementation Breakdown

gallons of stormwater managed annually by GSI

