



City of Boise

Green Stormwater Strategy and  
Incentives

September 2015

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# Introduction

The Boise/Garden City MS4 permit requires the development of a Green Infrastructure Incentive Strategy (GSI) (II.B.2.c) by September 30, 2015.

Water Environment Federation (WEF) identifies five types of GSI Incentive Programs<sup>1</sup>, including:

- Development Incentives (e.g. expedited permitting, decreased fees, zoning upgrades, or reduced design requirements when GSI is implemented);
- Grants (e.g. grants to private property owners or non-profits to install GSI);
- Rebates and Installation Financing (e.g. funding, tax credits, or reimbursements to property owners who install GSI, for example downspout disconnection, rain gardens, rain barrel for low/no cost);
- Award and Recognition Programs (e.g. reward innovative and increase awareness of green infrastructure for homeowners, industry and commercial businesses); and
- Stormwater Fee Discount (e.g. property owners who send less stormwater to the public system get a discount on stormwater fees).

Stormwater incentives have been developed and generally are funded by cities with significant financial obligations to implement Combined Sewer Overflow<sup>2</sup> (CSO) consent agreements over 20-40 year long term control plans or stringent Total Maximum Daily Load (TMDL) requirements (e.g. Chesapeake Bay TMDL, all new growth must be offset). Monthly stormwater fees to meet CSO obligations range from \$8.00 to \$13.50 per single family residence/month fees for four CSO cities (Seattle, Portland, Chicago and Philadelphia) with incentive and grant programs for GSI.

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<sup>1</sup> Water Environment Federation, January 2013, Five Types of Green Infrastructure Incentive Programs, <http://stormwater.wef.org/2013/01/five-types-of-green-infrastructure-incentive-programs/>

<sup>2</sup> EPA estimates there are approximately 772 cities in the US with combined sewer systems. <http://water.epa.gov/polwaste/npdes/cso/index.cfm>

GSI is a new tool that is anticipated to result in savings associated with CSO Long Term Control Plan implementation (e.g. GSI + gray infrastructure allows for downsizing high capital cost items like deep tunnel projects)<sup>3</sup>. Seattle, Portland, Chicago and Philadelphia have CSO driven (multi-billion consent decree costs) incentive, grant, rebate, and fee discount programs to incentivize GSI and reduce CSO obligations that are funded by monthly fees or anticipated savings in gray stormwater infrastructure that result from the implementation of GSI.

## Local Environment

Boise City and Ada County Highway District (ACHD) have a fundamentally different situation because the storm sewer system is separate (e.g. no CSO obligation or funding source driven by EPA consent decree), development standards currently and historically require high levels of stormwater to be retained on site which is often attained through infiltration, one of the three primary GSI methods, and most local programs have no stormwater utility fee income.

A key factor contributing to the lack of a stormwater utility in the Boise metropolitan area is that the Boise urban area stormwater program has a long history of implementing retain on site requirements for new and redevelopment. Technical assessments of retain on site capabilities and target were completed in 1977 and implementation began shortly thereafter. For nearly 40 years, the new and redevelopment practice for stormwater has been that development should retain on site volumes of water that avoid flooding of the public right-of-way and, as a practical matter, eliminate or significantly minimize the discharge of stormwater to surface waters.

Currently, Boise stormwater design criteria for retain on site requirements for new development is retention of the 50-or 100-year 24-hour peak and total volume. Many CSO cities (e.g. Chicago and Philadelphia) have recently adopted “retain on site” requirements (2 and 5-year storm for Chicago and Philadelphia respectively), in tandem with their GSI efforts to minimize the cost of implementing their CSO long term control plans.

Boise does have a significant geographic area (pre-1980 Boise, including the Downtown Core, North End, Bench) that are served by “traditional” stormwater management methods, or collection and

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<sup>3</sup> Seattle Draft GSI Implementation Strategy, 2015,  
<http://www.seattle.gov/environment/water/green-stormwater-infrastructure>

discharge to surface waters, including drains and ditches, that would benefit from implementation of GSI associated with redevelopment or retrofitting of the stormwater system to reduce stormwater discharge to surface waters.

## Boise GSI Incentive Strategy

Each city has different stormwater history, regulatory obligation, funding source(s) and approaches to stormwater management. Chicago, for example, has a simple six part GSI strategy<sup>4</sup>, including: GSI in capital projects; permeable pavers in appropriate streetscapes; increased use of bioswales in streetscapes; study costs and benefits of GSI; review rainfall frequency and intensity data including climate change effects; and development of a citywide stormwater management plan (gray + green infrastructure) to meet CSO obligations. Boise City contracted with HDR who provided a review of GSI Incentive and Strategy options appropriate for the City<sup>5</sup>.

The Boise City GSI Strategy is based on review of multiple municipal GSI Strategies, the HDR report, and local conditions, including, historical and current development requirements, funding sources, and other factors (e.g. City LIV, Central Addition, and other sustainability goals). The strategy is intended to be reviewed and updated as new information, science, and policy developments occur.

### GSI Initiatives

The strategy has four main components and twelve specific action items:

#### 1. Incorporate and Encourage GSI in Public New and Redevelopment as appropriate

- a. Incorporate GSI into City capital projects as appropriate (e.g. Fire Training Center; Fire Stations; Bown Library!)
- b. Encourage public sector partners (CCDC, BSU, Idaho Transportation Department, ACHD, Garden City, Ada County) to incorporate GSI into capital projects as

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<sup>4</sup> *City of Chicago Green Stormwater Infrastructure Strategy*, April 2014; <http://www.cityofchicago.org/city/en/progs/env/water.html>

<sup>5</sup> *Boise MS4 Program Development and Implementation Services, Green Stormwater Infrastructure and Offset Mitigation Program Strategy and Framework*, Draft Report, July 2015, 26 p.

appropriate (e.g. CCDC Silva cells in downtown sidewalk projects; Idaho Department of Transportation projects; ACHD projects)

- c. Develop plan to eliminate as many city-owned outfalls to waters of the US as possible (e.g. use GSI to eliminate surface water discharge from Discovery Center and Parks locations)

## **2. Encourage GSI in Private New and Redevelopment as appropriate**

Encourage private development to incorporate GSI into new and redevelopment as appropriate (e.g. design review process; developer/architect education, LIV District)

## **3. Develop Incentives and Recognition Programs**

- a. Incorporate GSI into roadway and streetscape template for the Central Addition LIV District (e.g. use streetscape GSI as incentive for private investment in Central Addition redevelopment)
- b. Explore use of the stormwater offset program as a potential source of funding for GSI projects as appropriate in key locations, (e.g. use offset revenues for GSI projects in ecologically important areas (riparian corridor GSI/wetlands; day lighting/restoration of Cottonwood Creek)) or for demonstration purposes (neighborhood rain gardens)
- c. Work with development community to explore if incentives might increase the use of GSI for private development
- d. Develop an Award/Recognition program for GSI (e.g. Best GSI project of the year; Stormwater Smart Residential Recognition program)

## **4. Conduct GSI Science and Policy Updates**

- a. Review rainfall frequency and intensity data and update design criteria as appropriate
- b. Assess the impact of climate change on rainfall frequency, intensity, and seasonality

Incorporate findings as appropriate into design criteria and GSI elements of the program (e.g. if

storm intensity is increasing or decreasing, incorporate into design criteria; if seasonality of precipitation is changing, determine if design criteria need to change)

- c. Review and update GSI methods that are appropriate for our climate and geographic region (e.g. continuous review of new GSI methods; update GSI methods as appropriate).
- d. Monitor and report GSI pilot and other GSI (e.g. Hyatt Hidden Lakes; Bown Library!) short and long term performance and incorporate information into the stormwater management program as appropriate.