

Interim Pilot Program for Funding Rain Gardens on Private Property within the City of Madison/USGS Distributed Green Infrastructure (DGI) study area.

Background

In approximately 2005, the City of Madison Stormwater Utility began a program to install Rain Gardens in terraces of streets being reconstructed. This was done where topography allowed and the resident was willing to maintain the garden.

This program began as a pilot project cooperatively with the Friends of Lake Wingra. Over the course of the last fifteen years, what was originally a pilot program is now a fully mature program with approximately eighteen (18) rain gardens being constructed with street reconstruction projects annually. While the costs to residents to take advantage of this program have varied for the last five (5) years the cost to the residents for a garden has been \$100.00, with the cost to the Stormwater Utility being approximately \$2,500.00 per garden.

Current Actions

With the extreme rain events experienced in parts of Madison in 2016, 2017, 2018 and the flood levels experienced in Lake Monona in 2018 and 2019 the City and the Madison Stormwater Utility made the commitment to begin a watershed study process that would result in completion of citywide watershed studies by 2026. The watershed studies will identify flooding issues and propose potential solutions to the identified problems. Further, the identified solutions are required to solve the problem without adversely impacting other downstream properties.

To meet the goals identified by the watershed studies it is clear that non-traditional DGI solutions will be required. Included in the watershed studies is the requirement to identify the potential impacts of DGI and value the DGI provides by calculating the avoided public infrastructure cost through implementation of these solutions.

To allow a more accurate estimate of the impacts of DGI, in early 2020, the City committed to working with the USGS on a five (5) year study to measure the end of pipe impacts of watershed wide implementation of DGI.

A test watershed was identified on the near west side that had four (4) streets being reconstructed in 2020 where significant green infrastructure could be implemented with the street reconstruction project. With that project the City is constructing the first permeable pavement on residential streets.

Finally, in April of 2020, City Engineering has put out a Request for Proposals (RFP) to identify conflicts & disincentives in City Codes/Ordinances to the implementation of DGI. Further, this RFP will make recommendations regarding Madison's codes and the Stormwater Utility Rate Structure/Adjustment Policy to actively encourage DGI implementation. Almost as a pair to that RFP, the City Transportation Department has also issued an RFP to review the street typology/architecture and hierarchy that is used when streets are constructed and reconstructed. The goal of this study is to more completely identify the goals and targets that should be met on any street project. In other words is DGI, terrace trees or terrace treatments, bicycle and pedestrian, or vehicular traffic the primary goal on any one project or what mix should be pursued.

Pilot Study Area Considerations

The City and USGS have identified the watershed to be studied to measure the impact of watershed wide implementation of DGI on the end of pipe volume and peak flows associated with both routine storm events and high intensity storms, and are the hydrologic models used by Engineers able to accurately simulate the impacts of DGI at the watershed level

To allow a full testing of the potential impacts of implementing DGI at a watershed level, it is critical to install as much DGI within the watershed as possible during the 5 to 6 year study with the USGS.

While the results of the citywide watershed studies will identify potential cost savings associated with the implementation of DGI and the RFPs noted above will make recommendations on incentives for DGI and the importance of DGI on any specific street type. Implementation of DGI installation within the USGS study area on pilot level cannot wait for all the above work to be completed.

Reimbursement of Rain Gardens on Private Property within the USGS DGI study area

To allow for the immediate implementation of DGI on private property within the USGS study area, the City of Madison Stormwater Utility will share costs for the construction of DGI in accord with the following:

CRITERIA FOR REIMBURSEMENT:

- DGI shall be of a type approved by this policy which includes:
 - Raingardens - having a minimum of one downspout directed to them and a minimum of 600 Square feet of impervious as part of the contributing area
 - pervious pavement - constructed in accord with the WDNR Standards Oversight Council (SOC) standard
 - Green roofs
 - Infiltration trenches
 - Rain barrels or downspout rain garden
 - Other practices individually approved by the City Engineer
- DGI shall have a design approved by the City Engineer prior to commencement of construction to be eligible for this program. Planting plans will be approved by the City Engineer prior to the purchase of the materials.
- DGI shall have a deed restriction signed, submitted to, approved by the City Engineer and recorded with the Dane Co. Register of Deeds prior to reimbursement.
 - The deed restriction shall require that the DGI remain in place for a minimum of five (5) years and that the property owner maintain same in good condition during that time period. This deed restriction will 'run with the land' if the property sells.
- The DGI installation shall comply with all relevant City Building Inspection Codes.
- The resident shall submit time stamped before and after pictures of the installation area to City Engineering at time of the

reimbursement request.

- The property owner shall submit proof of payment or contractor bill within 90 days after completion of work. In instances where the property owner is unable to pay the contractor due to lack of available funds, the payment on behalf of property owner to the contractor can be coordinated by City Engineering with the City issuing a check to both the property owner and the contractor.
- If the property owner is doing the installation without hiring a contractor, all documented costs will be reimbursed as outlined below.

ITEMS NOT REIMBURSED BY THE CITY OF MADISON:

- The installation of landscaping including plants, trees, and shrubs outside of the DGI area identified on the approved plan.

REIMBURSEMENT RATES:

The City Stormwater Utility shall reimburse for DGI constructed meeting the above criteria in accord with the below schedule:

- 1) For approved DGI constructed by a Contractor, the Stormwater Utility shall reimburse 80% of expenditures up to a maximum of \$1,000.00.
- 2) For approved DGI constructed by the homeowner, the Stormwater Utility shall reimburse as follows:
 - a) Provided all work is completed by the property owner or by means other than a hired contractor, 110% of documentable expenses up to a maximum of \$1,000.00.
Labor provided by the property owner shall not be directly compensated.
 - b) If the property owner completes the preponderance of the work but excess material is hauled off by City Engineering staff, reimbursement shall be 90% of documentable expenses up to a maximum of \$1,000.00.

