**Rochester GSI Planning Case Study: 1st Avenue and 3rd Street Pocket Park, Rochester, MN**

**Brief overview of project**

In 2019, the City of Rochester (the “City”) completed construction on a pocket park in downtown Rochester that includes green stormwater infrastructure (GSI) such as rain gardens, bioretention, and permeable pavers. These GSI capture and treat runoff from a nearby parking ramp and street corridor, and reduce the pollutant load contribution to the South Fork Zumbro River, which is impaired for bacteria and turbidity. This project, funded by an EPA 319 Grant, emphasizes environmental education with an informational placard and an interactive push-button water pump that allows visitors to “play” with the GSI by bubbling water through the infiltration basin. The park also boasts public art – a limestone bubbling fountain – from Rochester-native artist Jenna Didier and benches for visitors to enjoy the green space. This park and its many social, economic, environmental, and aesthetic co-benefits paved the way for future GSI projects in the City.

**Planning Process Highlights**

The City’s [Public Works Department](https://www.rochestermn.gov/government/departments/public-works/stormwater-management) led the planning for the 1st avenue and 3rd street pocket park, starting circa 2015 with the development of GIS tools to help site GSI in Rochester’s challenging environment that includes ultra-urban neighborhoods and an underlying karst geology. Around this time, EPA also announced their 319 Grant Solicitations to fund projects that will reduce nonpoint source (NPS) pollution. The City used the GIS tools to identify potential locations for GSI that could be funded under the [319 Grant Program](https://www.epa.gov/nps/319-grant-program-states-and-territories). Initially the City sought to partner with private developers on a new development project. Interest by private developers was limited however, because some of the grant requirements – such as including an educational component – went above and beyond what the developers were willing to invest in at the time. The City subsequently pivoted to identify public facilities that could be retrofitted to include GSI. In 2018, the City performed a feasibility analysis to create a pocket park with GSI to capture and treat the runoff from a parking ramp and adjacent roadway. With the entire project footprint on public right-of-way, there was no need to include private partners. The public works department largely led this effort on its own with some input and collaboration from the City’s parks department. The public works Department also leads the maintenance of the GSI system, primarily due to the specialty maintenance required by the water pumps in the park.

To qualify for the 319 grant, the City was required to develop a [Nine Element Watershed Based Plan](https://www.epa.gov/sites/default/files/2015-12/documents/watershed_mgmnt_quick_guide.pdf)[[1]](#footnote-1) (the “Nine Element Plan”), which is a detailed plan of how the proposed GSI will address (reduce) nonpoint source pollution. Quantifying the expected load reductions from the GSI was important to the Nine Element Plan as well as the City since these potential reductions have a direct beneficial impact to the South Fork Zumbro River, which is located downstream of the project and is impaired for turbidity and bacteria. In addition to estimating load reductions, the Nine Element Plan also requires an educational component. To address this requirement, the City designed the pocket park as an inviting place for public enjoyment, using benches, an informational placard, and an interactive water feature to draw in the public and provide educational information on stormwater. The interactive water feature is a central piece of the pocket park and includes a push-button water pump that bubbles water through the infiltration basin. While not required by the grant, the City also included public art as part of the pocket park – a limestone fountain that serves as a statement piece to highlight the connection between the local limestone geology and the waterways that flow through the City of Rochester.

There were no major roadblocks in the planning and development of the park. The City faced some public concern about the removal and conversion of 6 parking stalls to rain gardens. Neighboring businesses initially resisted the conversion of these parking stalls, concerned that removal of the stalls would negatively impact their business. The city actively engaged in discussions and outreach with the local businesses, making the case that the adjacent parking ramp provided enough parking stalls for customers and that the social, environmental, and aesthetic co-benefits of the project outweighed the loss in street parking. After these discussions, the neighboring businesses saw the value in having a pocket park in front of their businesses.

Funding the project was a big part of the planning process and presented some challenges. The 319 grant funding allowed the City to pursue this project, but the projected construction costs exceeded the grant funds. The Public Works Department had to go to the City Council to make the case for the project and request more money to complete the project. The Public Works Department highlighted the project’s many co-benefits, including the public space amenity and art installation by a local artist to obtain the additional funds from City Council.

Overall, the project timeline spanned approximately 5 years, starting with preliminary planning and tool development in 2015, grant application and feasibility analysis in 2016-2017, design in 2018, and construction starting in 2018 and finishing in 2019.

This project, along with recent stormwater ordinance changes driven by MS4 permit requirements, has paved the way for future implementation of GSI. The new ordinance serves as a catalyst for GSI implementation while the pocket park serves as a GSI demonstration site to show GSI can be done in the City of Rochester.

**Additional Information:**

* Location
  + [1st Avenue and 3rd Street, Rochester, MN](https://www.google.com/maps/@44.0201406,-92.4645342,3a,75y,219.39h,83.57t/data=!3m6!1e1!3m4!1sLfSFV6QMuDnCA_iOnDW_rg!2e0!7i16384!8i8192)
* Owner & Designer
  + The City of Rochester
* Year of completion
  + 2019
* Design features
  + Rain gardens
  + Bioretention
  + Permeable pavement
  + Water reuse
* Pretreatment Features
* Total Drainage Area
* Total Construction Cost
* Documented Maintenance Practices
* Pollutant Removal
  + Turbidity reduction
* Is the Site Publicly Accessible
  + Yes
* Notable Challenges
  + Public buy-in
  + Funding
* Co-Benefits
  + Added greenspace
  + Educational component
  + Elevated aesthetics

**References and external links**

1. EPA identifies nine elements to be included in 319-funded watershed plans for threatened or impaired waters: (1) Identify causes and sources of pollution; (2) estimate pollutant loading into the watershed and the expected load reductions; (3) describe management measures that will achieve load reductions and targeted critical areas; (4) estimate amounts of technical and financial assistance and the relevant authorities needed to implement the plan; (5) develop an information/education component; (6) develop a project schedule; (7) describe the interim, measurable milestones; (8) identify indicators to measure progress; and (9) develop a monitoring component. [↑](#footnote-ref-1)