



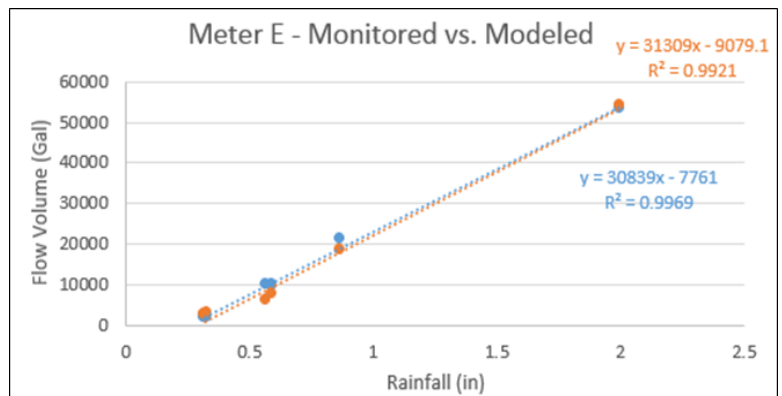
Client: Detroit Economic Growth Corporation

Location: Detroit, MI

- Service Areas:**
- Modeling
 - Green Infrastructure
 - Water Resources

- Techniques:**
- Bioretention Cells
 - Bioswales

- Services Provided:**
- Hydrologic Modeling
 - In-Pipe Monitoring



Project Activities

Drummond Carpenter staff led stormwater modeling and monitoring efforts for this project. The project was funded through a US Environmental Protection Agency (USEPA) Great Lakes Restoration Initiative (GLRI) Shoreline Cities Grant with matching funds through the Erb Family Foundation and the Kresge Foundation. The project included hydrologic monitoring and modeling of the site pre-construction and post-construction of bioswales and large bioretention cell implementation to capture and treat runoff from a commercial greenhouse facility (RecoveryPark) and nearby streets.

The project included completing Quality Assurance Project Plans (QAPPs) for USEPA, monitoring performance using flow meters at common collection points for both pre- and post- green infrastructure implementation, determining the volumetric performance for individual green infrastructure BMPs installed and assessing the cumulative effect of green infrastructure across the neighborhood, documenting the results in the final report, and providing recommendations for a specific hydrologic modeling tool for future urban green infrastructure implementation.

Outcomes

Monitoring on this project by Drummond Carpenter staff contributed to a larger urban water balance study in conjunction with US Geologic Survey and USEPA. The modeling quantified the benefits of the implementation and limitations of simplified models for capturing the nuances of green infrastructure design in the urban environment.