



Metropolitan Water Reclamation District of Greater Chicago

Press Release

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MWRD flood solutions plan for Chicago's South Side claims Innovation Award from IL Assoc. for Floodplain and Stormwater Management

New technology has the ability to generate millions of solutions to address flooding, but assessing the viability of these options and producing a corresponding plan can be a daunting challenge in a small window of time. The Metropolitan Water Reclamation District of Greater Chicago (MWRD) and Geosyntec Consultants' ability to produce such a plan has earned them the Illinois Association for Floodplain and Stormwater Management (IAFSM) 2017 Innovation Project of the Year award.

The award was presented recently for work on a pilot stormwater management study that focused on urban flooding in a 17-square-mile residential area covering portions of eight city of Chicago wards on the South Side. The study objectives were to evaluate how best to scale up green infrastructure (GI) within the ultra-urban landscape of Chicago to eliminate basement backups and alleviate street flooding.

"We know we can't build our way out of flooding. That's why innovative solutions that take natural factors like green infrastructure into consideration are important. Working together with the community, we can combat flooding through a variety of accessible resources," said MWRD President Mariyana Spyropoulos. "We thank the Illinois Association for Floodplain and Stormwater Management for this recognition and for highlighting our work."

The study was one of five the MWRD conducted across Cook County to investigate urban flooding issues and to evaluate potential green infrastructure solutions. The pilot study covered wards 7, 8, 9, 10, 21 and small portions of 6, 19 and 34. It employed an innovative application of a cloud-based optimizing software to evaluate GI over a large area for storms up to



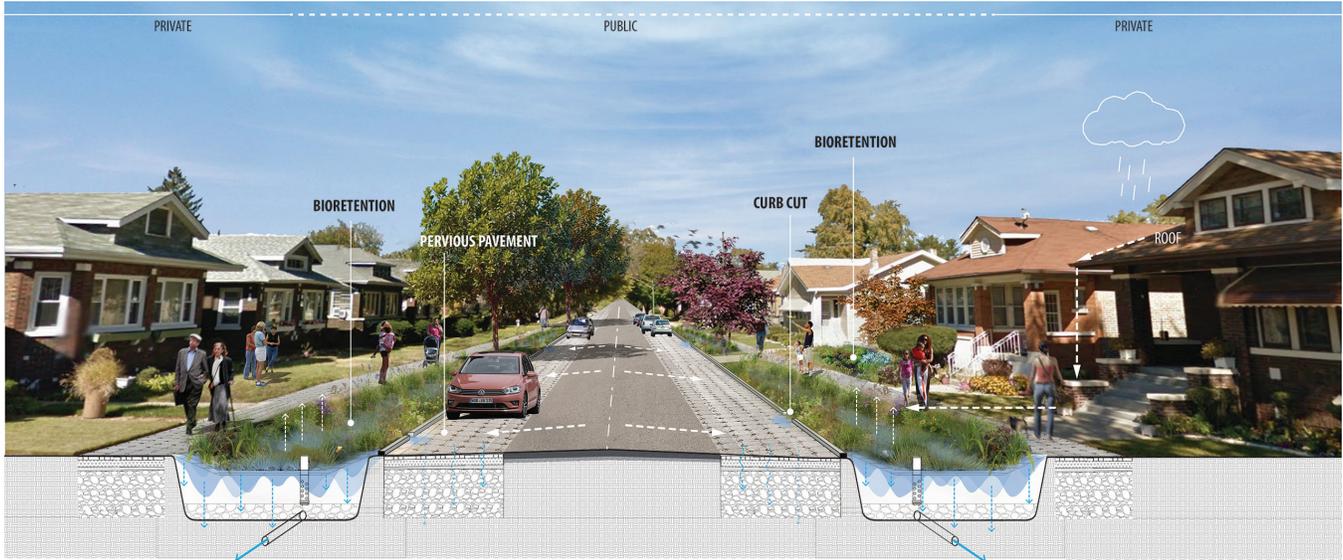
(From L to R): Illinois Association for Floodplain and Stormwater Management (IAFSM) Awards Chair Shauna Urlacher, IAFSM Chair E. Stuart Richter, MWRD Associate Civil Engineer John Watson, and Water Resources Engineer and modeling expert Craig Clarkson of Geosyntec Consultants celebrated the IAFSM Innovation Project of the Year award.

the 100-year rainfall event. The software was coupled with a proven GI modeling approach that presented 70,000 scenarios and analyzed 315 million options in just a few weeks.

Currently, stormwater is primarily conveyed through pipes, referred to as gray infrastructure because of the concrete that is typically used to construct the pipes. GI, on the other hand, mimics the natural environment by handling precipitation where it falls by detaining and infiltrating runoff through rain gardens, permeable pavement, cisterns and other practices.

Results from the study validated the need for minimum traditional gray infrastructure. It also showed that optimal placement of GI provides a similar level-of-service and cost savings of around 40 percent compared to a policy of implementing GI wherever it is feasible. *(continued)*

MWRD flood solutions plan for Chicago’s South Side claims Innovation Award *(continued)*



Community input allowed the MWRD and Geosyntec project team to conceptualize and optimize implementation of GI on the ground that could prevent flooding while meeting community goals.

Projects submitted for the award were evaluated using a scoring matrix. Judges said the MWRD and Geosyntec stood out from the competition for their ability to embrace this new software and show how this technology could automatically evaluate the various alternatives to mitigate flooding.

“We are always searching for new solutions to flooding,” said MWRD Commissioner Debra Shore. “This project taught us how to use cutting-edge technology to identify solutions that could be both effective and economical. Hopefully, we can now apply the lessons we have learned across the rest of Cook County.”

The project team also engaged local community leaders and advocates in an education and outreach effort.

Tailored fact sheets and a project website (www.mychicagogreen.org/) were developed. Stakeholders learned about the local conditions, the project, and tools and resources that they can use to better understand and help solve the urban flooding problem and were also offered the opportunity provide input.

The project team then identified GI solutions based on land use and site conditions; finalized evaluation criteria to prioritize solutions; outlined an implementation strategy to overcome the challenge of scaling up GI; and created a comprehensive plan to help establish a long-term vision for managing stormwater with a combination of green and gray infrastructure to minimize urban flooding.

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Recovering Resources, Transforming Water

Established in 1889, the MWRD (www.mwrld.org) is an award-winning, special purpose government agency responsible for wastewater treatment and stormwater management in Cook County, Illinois.