



# Gowanus and Flushing Watershed Initiative Grant Program

## Workshop

January 19, 2010



# Workshop Agenda

## ➤ Introductions

NYCDEP, John McLaughlin and Ashley Ryan

NYSDEC, Sue McCormick

## ➤ Workshop Purpose and Process

## ➤ Sources of Funds

## ➤ Size of Grants and Timeline

## ➤ Eligibility

## ➤ Watershed Boundaries and Priority Locations

## ➤ Types of Projects

## ➤ Application Form

## ➤ Project Scoring

## ➤ Grantee Information

## ➤ Project Exclusion Criterion

## ➤ Group Feedback and Questions



# Purpose of Workshop

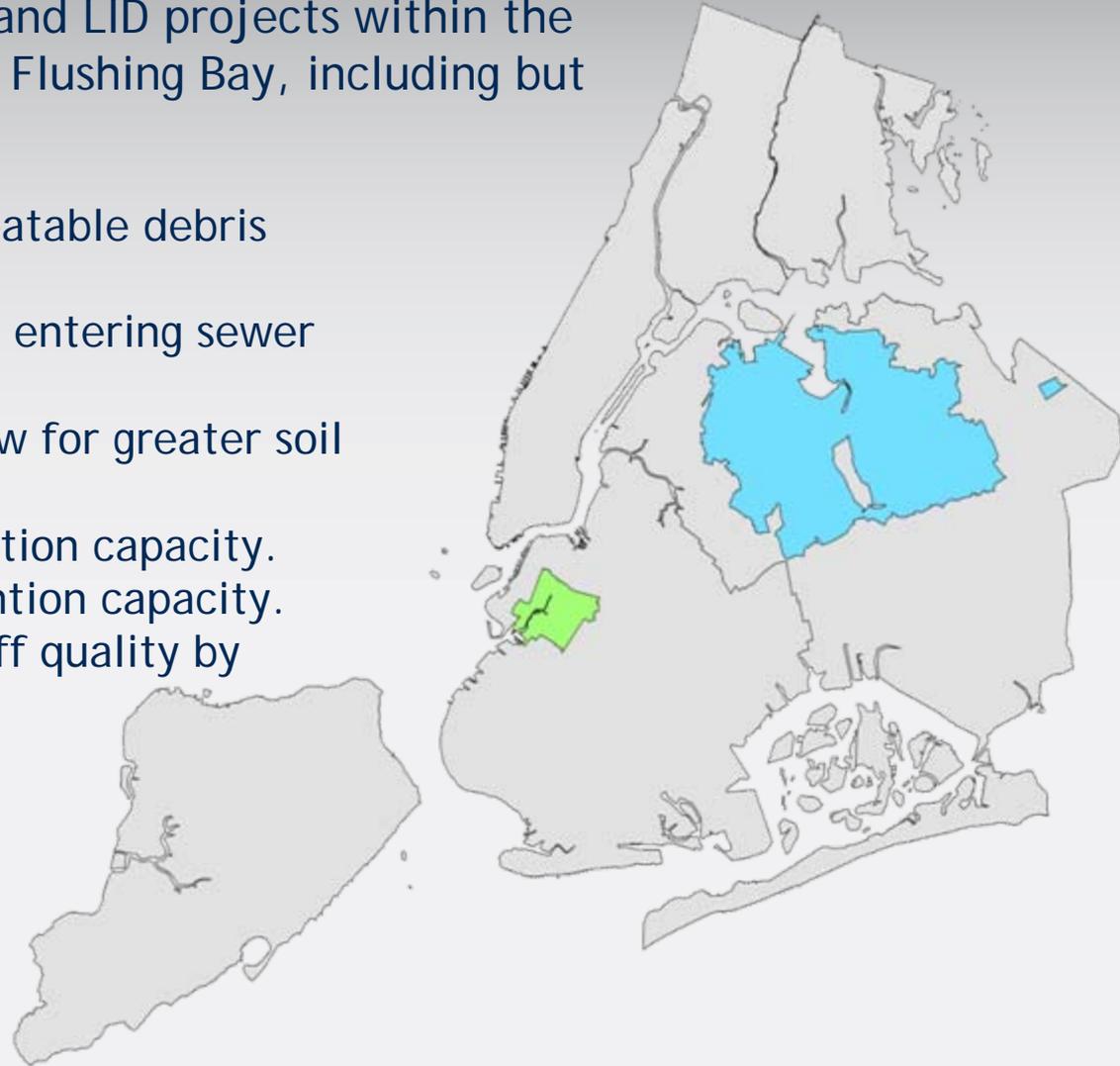
- Provide specific information about types of eligible projects, geographic reach of the GFWI and respond to questions about the elements of a successful proposal.
- Increase the number and quality of grant applications received.
- Engage environmental stakeholder groups.
- Provide a forum for various groups to meet and possibly form partnerships.



# Purpose of GFWI Grant Program

The Gowanus and Flushing Watershed Initiative (GFWI) is a source of funding for stormwater and LID projects within the watersheds of Gowanus Canal and Flushing Bay, including but not limited to the following:

- Reduction of CSO volumes and floatable debris from stormwater runoff.
- Reduction of stormwater volumes entering sewer system through soil or other media.
- Increase of retention time to allow for greater soil infiltration.
- Improvement or addition of retention capacity.
- Improvement or addition of detention capacity.
- Improvement of stormwater runoff quality by directly removing pollutants.





# Funding



The GFWI has a total of *\$2,900,000* available for stormwater projects.\*

	Project Amount	# of Projects	Total Cost
Gowanus Watershed	\$450,000	3	\$1,350,000
	\$20,000	5	\$100,000
Flushing Watershed	\$450,000	3	\$1,350,000
	\$20,000	5	\$100,000

➤ *Start-up funds will be made available. Amount will be determined per project.*

\*This project was undertaken in connection with the settlement of an enforcement action taken by New York State and DEC for violations of New York State law and DEC regulations. Pursuant to this action, an Environmental Benefit Projects (EBP) Fund was established with the New York State Environmental Facilities Corporation (EFC) to be held in escrow to fund EBPs completed in accordance with the approved EBP plan.



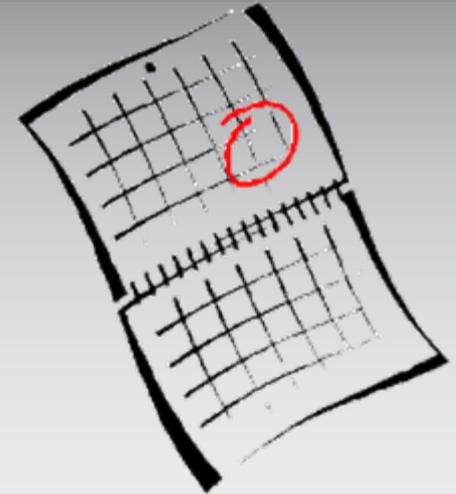
# Timeline

Grant Open Date: December 14, 2009

Full Proposal Date: February 26, 2010

Notification Date: June 2010

Period for Completion: Projects must begin within 45 days of award and construction completed within 12 months.



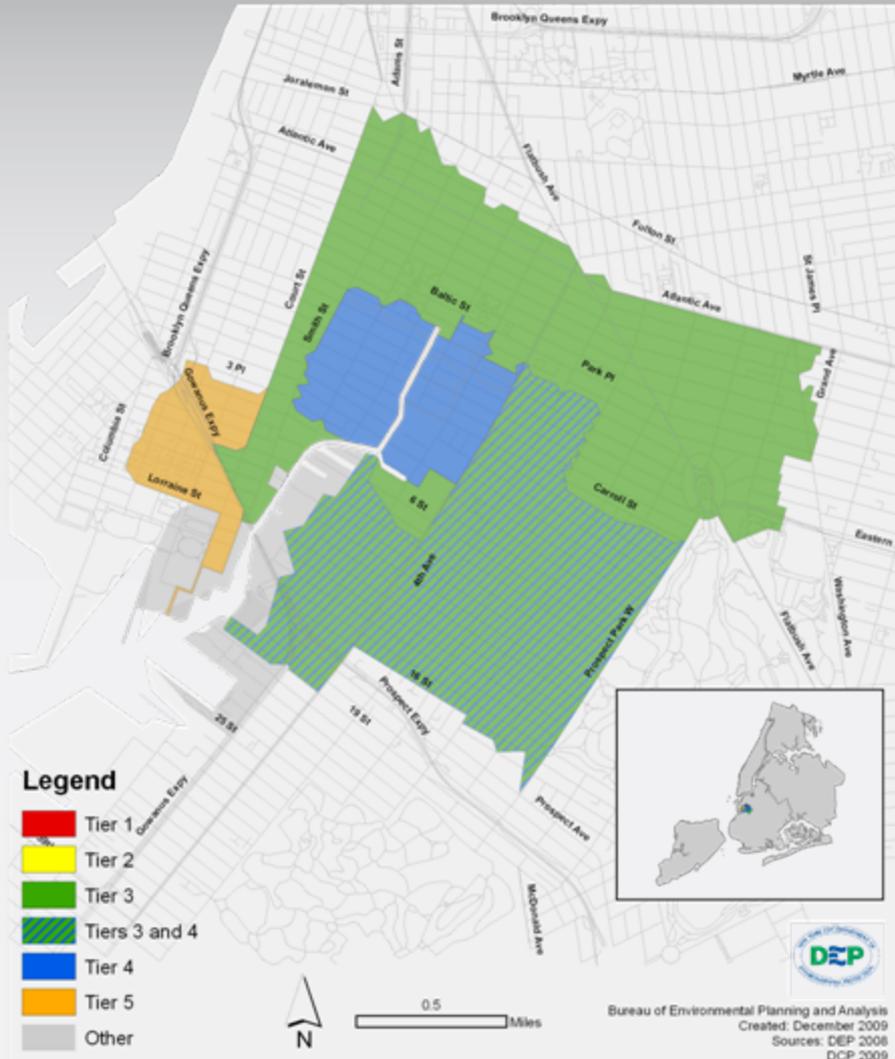


# Eligibility

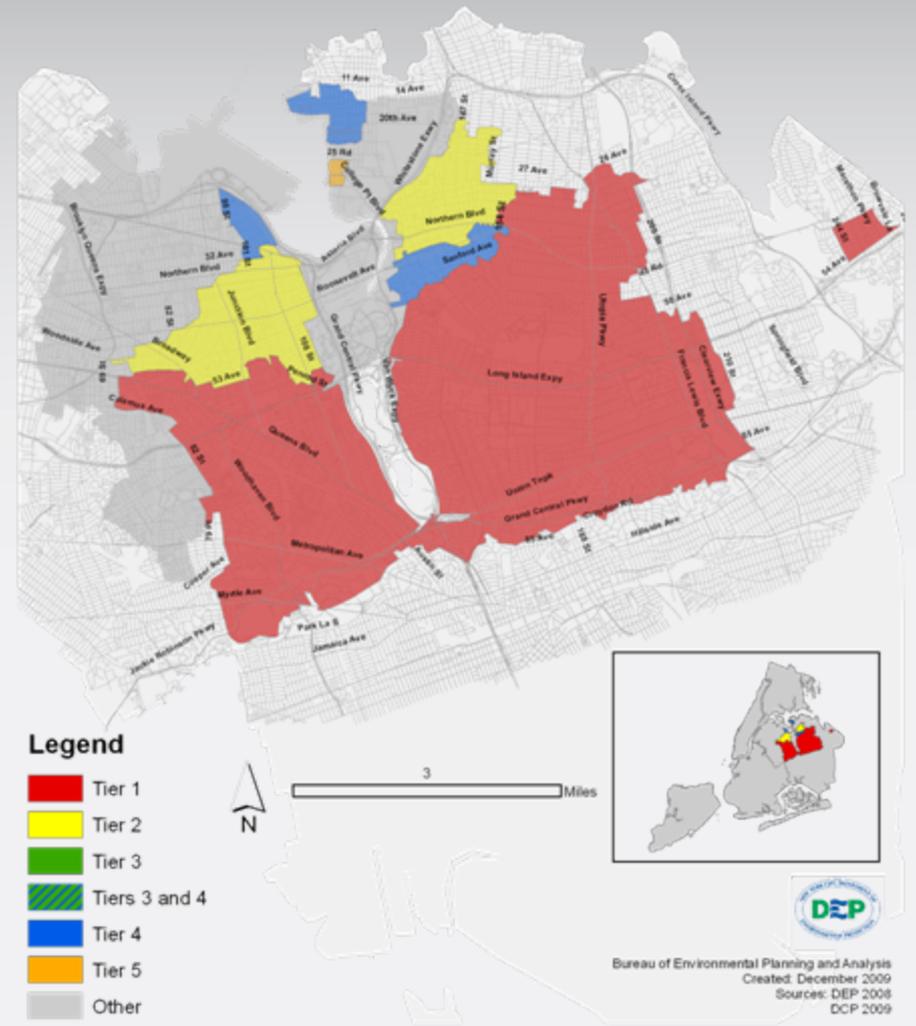
- Only non-profit organizations and educational institutions are eligible for funding.
- Before applying you must confirm that your project is fully located within the Gowanus watershed/sewershed or Flushing watershed/sewershed. Only proposed projects fully located within these boundaries will be accepted and eligible for funding.
- Preference will be given to those projects that include (1) reducing the quantity of stormwater entering the sewer system and measurable outcomes linked to project activities that reduce pollutants, improve the quality of stormwater, (2) detailed provisions for long-term maintenance, monitoring, management and protection as appropriate, (3) promoting and facilitating educational components; and (4) activities consistent with the GFWI.

# Geographic Focus and Priority Locations

## Gowanus Watershed/Sewershed Boundaries and Combined Sewer Overflow Tier Ranking



## Flushing Watershed/Sewershed Boundaries and Combined Sewer Overflow Tier Ranking





# Project Types

- **Bioretention swales**: Create one or series of engineered and vegetated swales, practices designed to treat and attenuate stormwater runoff for a specific water quality volume.
- **Infiltration Trenches**: Create chambers to receive stormwater runoff. Stormwater runoff passes through some combination of pretreatment measures, such as a swale or sediment basin before entering the trench where it infiltrates into the soil.
- **Blue Roofs**: Rooftop detention using special roof drain devices that regulate flow from roof and allow water to drain over time.
- **Green Roofs**: Rooftop that is partially or completely covered with plants and soil, or a growing medium, planted over a waterproofing membrane.





# Project Types

- **Rain Barrels:** Connection of downspout to a rain barrel for watering gardens and other green spaces.
- **Permeable Pavers:** Permeable pavement that allows water to seep into underlying soils through regularly interspersed gaps.
- **Porous concrete:** A pervious concrete mixture contains little or no sand, creating a substantial void content. Using sufficient paste to coat and bind the aggregate particles together creates a system of highly permeable, interconnected voids that drains quickly.
- **Porous asphalt:** Structural properties of regular asphalt, but a gravel aggregate mixture has been substituted for the fine particles, which allows water to easily pass through.
- **Constructed Wetlands:** Constructed Wetlands use soil and drainage materials (such as pipes and gravel), water, and plant material to treat stormwater from adjacent impervious surfaces.





# Application Form

- A. Describe the current stormwater problem.
- B. Describe and quantify the stormwater flow reduction to existing sewer systems and water quality improvement goals of the project.
- C. Describe how your project will reduce or eliminate the problem.
- D. Overall Context: Describe how this project specifically relates to the eligible activities described in the GFWI
- E. Continuing Projects: Indicate whether this project is a continuation or expansion of an existing project.
- F. Describe in written form and include an aerial photo or map with the project site location and boundaries marked on the photo or map. Include a description of the project site in terms of its relationship to the Gowanus Canal or Flushing Bay and Creek.
- G. Estimate the extent of the area to be retrofitted or restored (linear feet, square feet, acres, etc.).
- H. Identify specific site ownership (e.g., Ms. Stormwater BMP, 12 LID Way, Estuary, NY).



# Application Form *(cont.)*

\*Applicant must submit a letter from the property owner *documenting permission* to work on private, federal or state land or waters which are the subject of this project.\*

- I. Identify current uses of the proposed retrofit/restoration area and the expected impacts of the project upon those uses.
- J. Discuss any feasibility studies or assessments prepared to address the site restoration/retrofit and the major results of those studies.
- K. Describe the methods to be used to complete the stormwater retrofit or low impact development project and submit conceptual plans and drawings. Please note that all projects require *final engineering drawings* if they are approved for funding. Projects should be “engineering design ready” and not experimental.
- L. Provide work plan activities and anticipated implementation timetable.
- M. Maintenance, Monitoring and Management: Describe short and long-term monitoring plan, detailed maintenance plan and equipment needs, management and protection, (e.g., maintenance of debris-catching devices, removing blockages, etc.). A detailed 3-year monitoring plan shall be developed for review and approval using the protocols outlined in the Reporting and Monitoring section.



# Application Form *(cont.)*

- N. A detailed cost breakdown is required for each of the project elements.
- O. Describe in detail how you will measure the specific water quality benefits of the project.
- P. Experience and Expertise: Describe the special skills and experience possessed by your organization, staff and subcontractors in association with the type of project you are proposing.
- Q. Partners: Describe the strength, qualifications and nature of the contribution of other organizations with whom you contemplate collaborating.
- R. Evaluation Logic Framework: Use the blank Evaluation Logic Framework table provided.
- S. Support Letters (minimum of 3 and maximum of 5 letters): Support letters should not be from persons affiliated with the applicant's organization (e.g., Board of Directors) or partners or direct participants in the project i.e., federal or state employee providing long-term technical assistance. Letters will not be accepted after the close of the application period.



# Project Scoring

## A. CSO Tier Classification:

Gowanus CSO Tier	Points	Flushing CSO Tier	Points
Tier 3	15	Tier 1	15
Tiers 3 and 4	12.5	Tier 2	10
Tier 4	10	Tier 4	5
Tier 5	5	Tier 5	3
Other	5	Other	3

## B. Project Scope:

Project Scope	Points
Application contains comprehensive information on project intent, drawings, schematics, maps and plans to reduce CSO volume and attenuate stormwater runoff. All components are included to determine project effectiveness. Package is clear and legible.	25
Most components are included to determine project effectiveness. Package is clear and legible but may not be organized well.	20
Some components are included to determine project effectiveness. Package is less than clear and legible.	15
Few components are included to determine project effectiveness. Package is difficult to determine overall effectiveness and is less than clear and legible.	5
Application contains insufficient information on project intent, drawings, schematics, maps and plans to reduce CSO volume and attenuate stormwater runoff to determine project effectiveness.	0



# Project Scoring *(cont.)*

## C. Future Contribution:

Future Contribution	Points
Develops and Implements a citywide replicable LID or "green solutions" project.	20
Project will provide ecological benefits.	15
Project will scientifically inform the widespread application of these technologies.	10
Project implements goals of related City best management practices, watershed and stormwater planning documents.	10
Produces comprehensive and scientifically reliable data and/or conclusions to implement or otherwise advance CSO or stormwater abatement.	10
Implementation not likely to positively impact development of future projects or abatement strategies.	0

## D. Other Factors

Other Factors	Points
Conceived, designed, or implemented with strong and multiple partners, or university class, department, or student group.	25
Can obtain matching funds	15
Provides complete monitoring metrics	15
Project is visible and accessible to the public	10



# Secondary Considerations

- Extent to which the proposed project contributes to a comprehensive approach to water quality improvement.
- Usefulness of the proposed project as a pilot study to inform future water quality management decisions.
- Innovativeness of the project: Original and inventive solutions to the problem of wet-weather pollution are greatly encouraged. However, projects must offer a reasonable and/or demonstrated prospect for success and replicability.
- Applicant's performance on previous projects; reasonable and/or demonstrated prospect for a successful implementation.
- Feasibility of construction and/or implementation.
- Favorable comparison to projects competing for funding that propose a similar or overlapping scope of work.
- Involvement of a college or university engineering department or student group.
- Project cost-effectiveness: Projects must offer benefits that are reasonable in comparison to the project costs, in terms of meeting the Department's priorities and other stated goals.



# For the Grantee

➤ Grantee shall submit a *Stormwater Best Management Practice Location Plan* to NYCDEP for review and approval 30 days prior to the start of any work on any project:

- Proposed locations for project
- Engineering design, plans and specifications for project
- Detailed three year Monitoring (including measurement of stormwater flow inputs and outputs through the BMP/LID system) and Maintenance Plan for project.
- All permissions, approvals and any federal, state, or local permits required to build project

➤ Engineering Design of Projects

- Design and specifications must be certified and stamped by a currently licensed Professional Engineer of New York State.
- Locations and designs for all projects must be reviewed and approved by NYCDEP's Bureau of Water and Sewer Operation (BWSO) and must have a NYCDEP approved fail safe connection returning stormwater back to the municipal sewer system in the event of BMP failure or heavy rainfall.

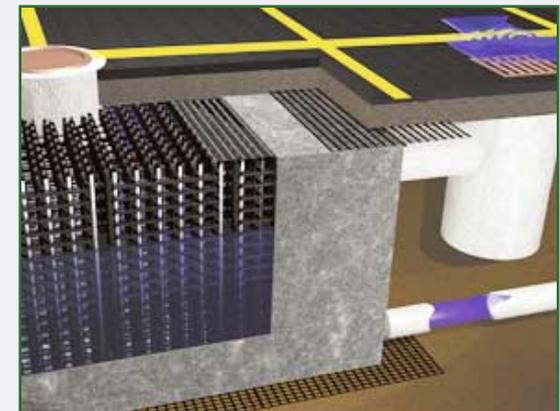




# For the Grantee *(cont.)*

## ➤ Equipment

- Pressure Transducers
- PVC wells
- Stormwater Quality sampling (approximately 4x - 6x a year)
- Gypsum block resistors
- ECHO or analogous tensiometric probes
- To test the performance of the monitoring array, quantities of water can be delivered at measured rates to the BMP or LID systems during days with no precipitation.
- RainStore<sup>3</sup>, StormChambers™, and/or similar storage media.
- Geoprobes
- Rain gauges
- Weather Stations
- Predictive green roof modeling





# For the Grantee *(cont.)*

## ➤ Reporting and Monitoring

### Monitoring Forms

Grantee shall record all project monitoring data on monitoring forms that will be developed in consultation with NYCDEP. However, the scope and methods of the monitoring plan shall be sufficiently developed (with estimated cost) with the grant application submission.

### Monitoring Plan

The grantee shall submit to NYCDEP a detailed Monitoring plan and frequency of testing for all projects for review and approval that provides for the following (minimum parameters to be established by NYCDEP):

- Data Collection
- General Data Requirements for Monitoring Plan for 3 years
- Testing to Capacity/Testing to Failure
- Reporting
  - Quarterly
  - Annually
  - Final





# Project Exclusion Criterion

- Projects required to achieve or maintain compliance with the law or a permit
- Pure Research or Education
- Monitoring Only
- Projects not in the Gowanus or Flushing watershed or storm sewer shed
- *Three* applications per organization will be accepted for review. Universities are excluded from this limit if different departments or investigators are involved.



# Helpful Sites

plANYC, Sustainable Stormwater Management Plan 2008

plANYC, A Greener, Greater New York

Design Trust for Public Space

New York City Department of Transportation, Street Design Manual

New York City Department of Environmental Protection, Jamaica Bay Watershed Protection Plan

United States Department of Defense, Low Impact Development, Chapters 7-10

New York State Stormwater Design Manual

The Stormwater Manger's Resource Center

Center for Watershed Protection

International Stormwater BMP Database

The Low Impact Development Center, Inc.

United States Environmental Protection Agency, Urban Stormwater BMP Performance Monitoring



# Questions???

