Green Infrastructure Grant Program Workshop

DEP Green Infrastructure Grant Program:
Website – www.nyc.gov/dep/gigrantprogram
Email – gigrantprogram@dep.nyc.gov
First Half: Introduction
• Why Green Infrastructure?
• Green Infrastructure in NYC
• Green Infrastructure Grant Program
• Things to Note
• Submitting an Application
• Questions on the Program?

Second Half: Grant Application
• Application Templates
• Questions on the Application?
Why Green Infrastructure?
The Problem

Combined Sewer System

Separate Sewer System
Green Infrastructure Opportunities

- Permeable Pavements
- Green Roofs
- Rainwater Harvesting
- Rain Gardens
Green Infrastructure in NYC
Green Infrastructure in NYC

- City Sidewalks
- City Streets
- Grant Program for Private Property
- Public Property Retrofits
Green Infrastructure Grant Program
Grant Program Guidelines

• DEP will fund the **design** and **construction** costs for green infrastructure projects on private property in New York City.

• Applicants must be able to execute the Program **Funding Agreement** and **Restrictive Covenant** as-is.

• Online application is available at: [www.nyc.gov/dep/grantprogram](http://www.nyc.gov/dep/grantprogram)
Green Roof Projects

- Green roofs are vegetated systems built on roof tops, designed to capture and manage stormwater runoff before it enters the storm sewer system. All green roofs should contain a root barrier, drainage layer, filter layer, growing media, and vegetation.

- Funding for green roof grants is determined based on green roof area and soil depth. A structural analysis is required with each application.

### Maximum Reimbursement Rates ($/SF) for Green Roof Projects

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<tr>
<th>Soil Depth (in)</th>
<th>3,500-20,000 (SF)</th>
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<tbody>
<tr>
<td>1.5 - 1.99</td>
<td>$10</td>
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<tr>
<td>2.0 - 2.99</td>
<td>$15</td>
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<tr>
<td>3.0 - 3.99</td>
<td>$25</td>
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<tr>
<td>4.0 +</td>
<td>$30</td>
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* The reimbursement rate for SF of planted area over 20,000 SF is calculated using 50% of the rate shown above.
Infiltration Projects

Green infrastructure projects that promote infiltration such as rain gardens, pervious pavements, and subsurface retention are eligible for grant funding. A geotechnical analysis is required after conditional award.

All infiltration projects must:

• Manage 1" of rainfall from the contributing impervious surface
• Be cost-effective and greater than $35,000
Brooklyn Navy Yard
Green Roof / Roof Top Farm
The Bronx Zoo
Rain Garden, Porous Paving
New York Botanical Garden
Permeable Pavers
Things to Note
Ineligible Projects, Costs, and Restrictions

- Maintenance and operations (may be existing facilities staff)
- Non-green infrastructure project components (new roof, fences, benches etc.)
- Research not related to the proposed grant project construction
- Legal fees for contract execution
- Also...
  - Grant projects must be in compliance with all local, state and federal laws
  - Grant funding cannot be used to meet any regulatory requirements a property is subject to.
  - The City of New York will have unrestricted rights to use the designs selected for any future project at no additional costs
Encouraged…but not required!

- Matching funds/in-kind contributions
- Letters of support from community stakeholders
- Education programming and/or public access
- Supports workforce development
- Advances the ultimate sustainability goals of the Green Infrastructure Plan and OneNYC
Submitting an Application
Step 1: Determining Eligibility

Property Eligibility

- Be privately-owned and within NYC
- Have an owner willing to sign the Funding Agreement and Declaration of Restrictive Covenant as-is
- Manage at least 1.0” (1.25” recommended) of rainfall from the surrounding impervious tributary area (Infiltration Projects)
- Be completed within one year from the construction start date unless otherwise agreed upon
- Provide 20 years of maintenance
- Be a minimum cost of $35,000.00

Site Connection

- Documentation indicating existing sewer connections or detention systems
Site Analysis

Structural Analysis
Green Roofs

- P.E. stamped structural analysis that verifies that the loading capacity of the roof is sufficient for the proposed design. This document must be submitted with the grant application.

Geotechnical Report
Infiltration Projects

- Any historic boring/permeability tests that have already been completed for the project should be submitted with the application.

- Boring/permeability test results, signed and stamped by a New York State licensed professional engineer are due within 60 days from the Conditional Award Letter.

- In the event that borings and permeability test results are unfavorable, DEP will work with the Grantee on a solution. However, if the project needs to be removed from the program, DEP cannot reimburse the Grantee for the geotechnical analysis.
Step 2: Review Legal Documents and Process

- The Green Infrastructure Grant Program is a reimbursement program.

- Documents critical to review prior to application:
  1) Funding Agreement
  2) Declaration of Restrictive Covenant

- Design review occurs simultaneously with the budget review.

- DEP will reimburse costs once designs/budget are finalized and a Funding Agreement is registered.
Once the team is assembled, the project scope can be decided and concept plan can be advanced.

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Role</th>
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</table>
| Private Property Owner | • Owns the property  
• Signs all legal documents  
• Ultimately responsible for the design, construction, and maintenance of the project |
| Project Manager (can be owner or design professional) | • Coordinates project with property owner and DEP |
| Professional Engineer  
Registered Architect  
Registered Landscape Architect | • Prepares construction documents for the design submittals  
• Stamps final plans |
| Contractors | • Constructs and installs the project |
| Maintenance Team | • Maintains the project for its 20 year useful life  
• May be existing facilities staff |
Design Concept

- Clearly labeled
- Direction of flow
- Location of GI Practices
- Important features of the property (i.e. property line, building line)
- Existing trees/drains, etc.
Step 4: Begin the Online Application

Usernames & passwords from previous years are still active

Green Infrastructure Grant Program

Welcome to the Green Infrastructure Grant Program

Welcome to the online application for the New York City Department of Environmental Protection’s Green Infrastructure Grant Program!

Private property owners in New York City are eligible to apply for a minimum of $35,000 for the design and construction costs of green infrastructure practices such as rain gardens, green roofs, and porous pavement.

When are applications due? The grant application is now open! Applications can now be submitted at any time throughout the year. Please create a username and password to access. By accessing the online application you can also review eligibility requirements and download important materials.

For more information on the Green Infrastructure Grant Program visit the Green Infrastructure Grant Program page of the DEP website.

Hard Copy Submittals

Applications may be submitted by mail, but must include an electronic copy on compact disc(s). The due date for mailed applications is the same as on-line submissions.

Use the following address to request a hardcopy application and to submit by mail:

Green Infrastructure Grant Program
Bureau Of Environmental Planning and Analysis, 11th Floor
NYC Department of Environmental Protection
59-17 Junction Blvd, 11th Floor
Flushing, NY 11373
GIGrantProgram@dep.nyc.gov

Grant Workshops

DEP hosts workshops to explain the eligibility requirements of the program and guide users through the online application. For more information on the grant program workshops and to download the presentations please visit the Green Infrastructure Grant Program page of the DEP website.

For more help or information please email gigrantprogram@dep.nyc.gov, including to:
- Be added to the listserve to receive updated workshop information
- Schedule a pre-application meeting with DEP engineers to discuss project proposal specifics
- Discuss hosting a workshop for a group of 10 or more people.

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# Tips for a Stronger Application

<table>
<thead>
<tr>
<th>Issue</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Effectiveness</td>
<td>Is my project cost-effective? Do my proposed costs make sense for the amount of stormwater gallons managed?</td>
</tr>
<tr>
<td>Overall Design</td>
<td>Is the design sized correctly? Is the project overbuilt or underbuilt?</td>
</tr>
<tr>
<td>Feasibility</td>
<td>Is the proposed project feasible? Will it be accepted by DEP, DOB, or the Fire Department?</td>
</tr>
<tr>
<td>Replicability</td>
<td>Is the project overly complex? Can it be widely replicated?</td>
</tr>
<tr>
<td>Community Development</td>
<td>Does the project have community partners or is it publicly accessible? Is there a workforce development or educational component?</td>
</tr>
</tbody>
</table>
Questions?

- Visit [www.nyc.gov/dep/gigrantprogram](http://www.nyc.gov/dep/gigrantprogram) to
  - access the online application
  - review eligibility criteria
  - review grantee requirements
  - download workshop presentation
  - review press releases with previous winner information
  - find out about upcoming workshops
- Email [gigrantprogram@dep.nyc.gov](mailto:gigrantprogram@dep.nyc.gov) with questions
**Templates: Infiltration Projects Estimate**

<table>
<thead>
<tr>
<th>PROJECT NAME:</th>
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</thead>
<tbody>
<tr>
<td>Item No.</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Installation</td>
</tr>
<tr>
<td>Soft Costs</td>
</tr>
<tr>
<td>Design Fee</td>
</tr>
<tr>
<td>Site Investigations</td>
</tr>
<tr>
<td>Permitting</td>
</tr>
<tr>
<td>General Conditions</td>
</tr>
<tr>
<td>Subtotal</td>
</tr>
<tr>
<td>Project Subtotal</td>
</tr>
<tr>
<td>Allowance*</td>
</tr>
<tr>
<td>Total Project Costs</td>
</tr>
</tbody>
</table>

Enter these fields in the Project Proposal Summary of Online Application

Enter this number in Total Project Cost
Enter this number in Hard Costs
Enter this number in Soft Costs
Enter this number in Total Requested Funds from DEP
Enter this number in Matching Funds

*Allowance funds will be used to address the following construction items, depending upon the specific needs of the project and any unforeseen circumstances.

1. Utility coordination
2. Excavation and/or disposal needs
3. Additional material and/or equipment needs
4. Addressing unforeseen hazardous materials
## Templates: Green Roof Projects Estimate

<table>
<thead>
<tr>
<th>Green Roof Area (SF)</th>
<th>3,500</th>
<th>DEP Soft Costs Not to Exceed</th>
<th>$5,833</th>
<th>DEP Total Costs Not to Exceed</th>
<th>$35,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Depth (Inches)</td>
<td>1.5</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Hard Costs</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Total Unit Cost</th>
<th>DEP</th>
<th>Matching Funds</th>
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</tbody>
</table>

**Subtotal**

**Soft Costs**

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Total Unit Cost</th>
<th>DEP</th>
<th>Matching Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Fee</td>
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<td>Site Investigations</td>
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<tr>
<td>Permitting</td>
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<td></td>
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<tr>
<td>General Conditions</td>
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</tr>
</tbody>
</table>

**Subtotal**

**Project Subtotal**

**Allowance**

<table>
<thead>
<tr>
<th>Allowance*</th>
<th>15%</th>
</tr>
</thead>
</table>

**Total Project Costs**

$0 $0 $0

*Allowance funds will be used to address the following construction items, depending upon the specific needs of the project and any unforeseen circumstances:

1. Utility coordination
2. Excavation and/or disposal needs
3. Additional material and/or equipment needs
4. Addressing unforeseen hazardous materials
### Infiltration Projects Stormwater Calculations

**Step 2 1-INCH STORMWATER VOLUME**: Determine the minimum volume of stormwater to be managed by the system

<table>
<thead>
<tr>
<th>Impervious Tributary Area (SF)</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Inch Stormwater depth (in feet)</td>
<td>0.08</td>
</tr>
<tr>
<td>1-Inch Stormwater Volume (CF)</td>
<td>0</td>
</tr>
<tr>
<td>1-Inch Stormwater Volume (Gal)</td>
<td>0</td>
</tr>
</tbody>
</table>

*From Step 1

**Step 3 STORMWATER VOLUME MANAGED**: Estimate the total volume managed for the proposed installation. Calculate the void space volume in soils, gravel, or other storage media

### Installation Geometry

| Installation Volume (CF) | Enter the total volume of all media in the proposed system in cubic feet
|--------------------------|------------------------------------------------------------------|
| Installation Footprint Area (SF) | Enter the area of the bottom of installation in square feet

### Infiltration Data

| Infiltration Design Rate (m/hr) | Enter infiltration rate of existing soil (use 0.2 m/hr if unknown)
| Infiltration Period (hr) | 8 |
| Estimate Infiltration Volume (CF) | 0 |

**Stormwater volume managed by infiltration**

### Soil Layer

| Volume of Soil (CF) | Enter the volume of the planting soils
| Porosity of Soil (%) | Enter the porosity as the ratio of void space volume to total volume. *If using DEP specification for soil, the porosity is 25% *
| Storage Volume of Planting Soil (CF) | 0 |

**Available void space of planting soil**

### Storage Layer

| Volume of Storage Layer (CF) | Enter the volume of the drainage layers
| Porosity of Storage Layer (%) | Enter the porosity from selected drainage layer specification
| Storage Volume of Drainage Layer (CF) | Enter available void space of drainage layer

### Additional Layer(s) (if necessary)

| Volume of Additional Layer(s) (CF) | Enter the volume of the additional layer
| Porosity of Additional Layer(s) (%) | Enter the void space as a percentage of the additional layer volume
| Storage volume of Additional Layer(s) (CF) | Enter available void space of additional layer

**Available void space of additional layer**

### Additional Storage Volume

| All Other Additional Storage or Void Space (CF) | Enter description of storage units and/or void spaces

### Stormwater Volume Managed

| Estimated Volume Managed (CF) | 0 |
| Estimated Volume Managed (Gal) | 0 |

*Sum of infiltration volume and all storage volumes. Must be greater than or equal to 1-inch volume from Step 2. *Amount carried to Summary Table on the 'Instructions' tab
Green Roof Projects Stormwater Calculations

Step 1 STORMWATER VOLUME MANAGED: Estimate the total volume managed for the proposed installation. Calculate the volume storage in the growing media and additional layers.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Proposed Green Roof Area (SF)</td>
<td>3,500</td>
<td>Enter area of green roof in square feet</td>
</tr>
<tr>
<td>Growing Media</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth of Growing Media (Inches)</td>
<td>1.5</td>
<td>Enter total depth of growing media in inches</td>
</tr>
<tr>
<td>Porosity of Growing Media (%)</td>
<td>50%</td>
<td>Enter the void space as a percentage of the growing media volume</td>
</tr>
<tr>
<td>Volume of Growing Media (CF)</td>
<td>437.5</td>
<td>Enter total volume of growing media in cubic feet</td>
</tr>
<tr>
<td>Storage Volume of Growing Media (CF)</td>
<td>218.75</td>
<td>Available void space of planting soil</td>
</tr>
<tr>
<td>Storage volume of additional layers (Enter '0' if not applicable or add additional layers if necessary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drainage Layer Storage Volume (max CF)</td>
<td></td>
<td>Void space available in drainage layer</td>
</tr>
<tr>
<td>Granular Layer Storage Volume (max CF)</td>
<td></td>
<td>Void space available in granular layer</td>
</tr>
<tr>
<td>Retention Layer Storage Volume (max CF)</td>
<td></td>
<td>Void space / storage capacity available in retention layer</td>
</tr>
<tr>
<td>Storage Volume of other detention devices (max CF)</td>
<td></td>
<td>Void space / storage capacity of other devices</td>
</tr>
<tr>
<td>Tributary Area</td>
<td>3,500</td>
<td>If you believe that Tributary Area for your project exceeds Green Roof Area s. Note that Tributary Area and Volume Managed do not effect reimbursement</td>
</tr>
<tr>
<td>Estimated Volume Managed (CF)</td>
<td>218.75</td>
<td></td>
</tr>
<tr>
<td>Estimated Volume Managed (Gal)*</td>
<td>1,636</td>
<td></td>
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Green Infrastructure Grant Application  
Construction Timeline Template

The Project Timeline must include a detailed task description for all work associated with the construction of the proposed project. This includes all work that must be completed on the property before construction begins (e.g. roof repair). Please note that project construction must be completed within one (1) year of the construction start date, unless otherwise agreed upon with DEP at the time of selection. Applicants are encouraged to submit projects that can be completed early. Enter the **Total Weeks** into the Project Proposal Summary of the online application.

<table>
<thead>
<tr>
<th>Detailed Task Description</th>
<th>Number of Weeks to Complete</th>
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**Total Number of Weeks for Construction**: 0
Green Infrastructure Grant Program
Maintenance Plan Template

Grantees are required to maintain their projects for twenty (20) years. Quarterly and Yearly maintenance summaries will be required beginning from the construction end date for three years. Answer the questions below in detail. When complete, upload the template into the Project Details section of the application.

1) Maintenance Tasks and Frequencies
Describe the maintenance activities required to maintain the green infrastructure installation. What specific tasks will be undertaken (e.g. irrigation, hand or chemical weeding, inspection for clogging, removing sediment, standard cleaning and upkeep). How often will these tasks be performed?

2) Maintenance Personnel
Describe the personnel who will be responsible for maintaining the project. How many staff members/hours will be assigned to maintenance? Describe the training process including manuals or protocols that will be used to prepare the responsible staff.

3) Equipment and Materials
Describe the equipment and materials that are required for maintaining the project. How often will the equipment need to be repaired or replaced? Who is responsible for maintaining the equipment and materials?

4) Warranties and Guarantees
Do any of the potential project contractors include warranties or guarantees on their work, materials, or equipment? If so, describe in detail and include terms.

5) Maintenance Costs
What are the anticipated costs for labor and material for the twenty (20) year life of the project? How will maintenance tasks and labor be funded?
STATEMENT OF AGREEMENT – SAMPLE

Instructions: Applicants must complete a Statement of Agreement, signed by the authorized signatory for the property, acknowledging that they have reviewed with their legal counsel both the Funding Agreement and Restrictive Covenant, and if awarded will execute both documents as provided and will comply with all of the eligibility requirements described in the Grant Application.

(On company letterhead)

Date:

New York City Department of Environmental Protection
59-17 Junction Blvd. 11th Floor
Flushing, NY 11373
Attn: Green Infrastructure Grant Program

I [enter name of authorized signatory for the property], have read and thoroughly reviewed both the Funding Agreement and the Declaration of Restrictive Covenant with my legal counsel and agree that, if awarded the grant, I will execute the Funding Agreement and record the Declaration of Restrictive Covenant as provided at the NYC Department of Finance in a timely manner.

Sincerely,

[Authorized Signatory]
[Enter Project Title]
[Enter Address and Borough Block and Lot number]
Questions?

- Visit [www.nyc.gov/dep/gigrantprogram](http://www.nyc.gov/dep/gigrantprogram) to
  - access the online application
  - review eligibility criteria
  - review grantee requirements
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