

New York City Water Conservation and Reuse Grant Pilot Program Guide






For More Information:

Website: nyc.gov/dep/water-conservation-grant

Email: waterconservation@dep.nyc.gov

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Introduction to the Water Conservation and Reuse Grant Pilot Program

Purpose

This guide is for property owners and building managers to navigate New York City's Water Conservation and Reuse Grant Pilot Program. The goal of the grant program is to reimburse water efficiency projects on private property that consider all opportunities for water conservation within the building, for the purposes of conserving potable water and reducing flows to the sewer system and wastewater facilities. Property owners or managers interested in participating in the grant program should carefully read through this guide.

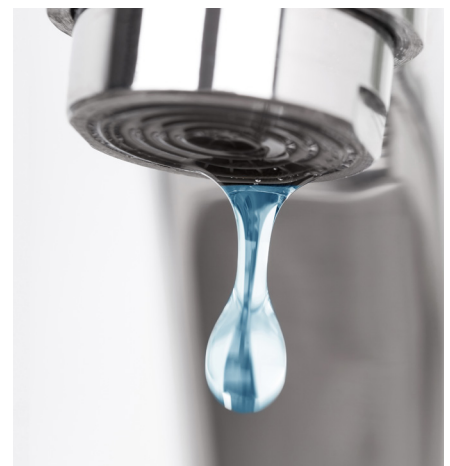
Background

Through a complex arrangement of dams, reservoirs, tunnels, and aqueducts, the New York City water supply system serves 9 million New York City residents, millions of commuters from the tri-state area, and more than one million residents in 55 upstate communities each day. DEP's ongoing sustainability strategy is to optimize the existing system while promoting water conservation and managing a decrease in demand. More needs to be done, however, particularly to ensure adequate supply for a growing population and to promote resiliency to drought and infrastructure impairment.

Since releasing the Water Demand Management Plan, DEP has made significant progress toward accomplishing this goal by piloting and implementing integrated water efficiency projects that help both decrease drinking water demand and reduce the amount of sewage entering New York City's sewer and wastewater systems. These water efficiency improvements also help achieve energy and greenhouse gas reduction goals.

DEP is expanding its grant program to reimburse water efficiency projects on private property that consider all capital eligible opportunities for water conservation. Projects must be located on a single property and cost greater than \$50,000. See page 7 for more information. The potential benefits of incentivizing water conservation and reuse include: deferred capital costs of large-scale water, wastewater, and stormwater infrastructure; eligibility for water and wastewater fee discounts; reduced loadings to sewers and waterbodies; improved environmental stewardship; and increased capability to manage water supply system demand.

Grants are available to DEP customers with accounts in good standing. Projects costing more than \$50,000 on individual properties with the same property owner may be grouped under a single application provided that the project on each single property costs over \$50,000. Reimbursement of equipment costs will be calculated two ways: a fixed maximum unit price for conventional WaterSense® certified fixture replacements, and for more innovative, custom water efficiency retrofits, funding is set at \$10 per gallon per day (gpd) water savings achieved up to 100% of documented equipment costs. Proposed projects may include a combination of conventional and custom water efficiency retrofits to maximize water savings. Costs for third-party Facility Water Use Surveys and Design Services are reimbursable under the grant program, up to 20% of equipment costs.



Program Overview

The Water Conservation and Reuse Grant Pilot Program allows multiple property types and water efficiency retrofits to be incorporated under the same grant application on the condition that the project can save a minimum of 1 million gallons per year and costs greater than \$50,000 on a single private property. The following sections provide examples of eligible water efficiency retrofits, but applicants are also encouraged to propose their own water efficiency retrofits.



Water Conservation Retrofits

In existing buildings, retrofits or replacement of existing fixtures and equipment is the most common method for improving water efficiency. Some examples of retrofit or replacement improvements eligible under the grant program include:

Existing Domestic Equipment		
Existing Equipment	Recommendation	
	Retrofit With	Replace With
Toilets		High-efficiency WaterSense®-labeled models (1.28 gallons per flush or less)
Urinals		High-efficiency WaterSense®-labeled models (0.5 gallons per flush or less)
Bathroom Faucets	Aerators or laminar flow devices (0.5 gallons per minute)	High-efficiency WaterSense®-labeled models (1.5 gallons per minute or less)
Showerheads		High-efficiency WaterSense®-labeled models (2.0 gallons per minute or less)

Introduction to the Water Conservation and Reuse Grant Pilot Program

Existing Commercial Equipment		
Existing Equipment	Recommendation	
	Retrofit With	Replace With
Faucets	Aerators or laminar flow devices (1.5 gallons per minute or less) or foot-operated valves	Models with flow rate of 0.5 gallons per minute
Wash Down Sprayers		Water-efficient sprayers and self-closing nozzles on heavy-duty hoses
Pre-Rinse Spray Valves		WaterSense®-labeled models (1.28 gallons per minute or less)

Existing Industrial Equipment		
Existing Equipment	Recommendation	
	Retrofit With	Replace With
Cooling Towers	Meters, control systems, and alternative water sources (reuse)	Newer cooling tower models with improved designs and materials

Alternative Water Sources for On-site Water Reuse

The NYC Construction Codes includes two types of on-site water reuse systems: wastewater and rainwater. The level of treatment depends upon the alternate water source and the end uses for the treated water.

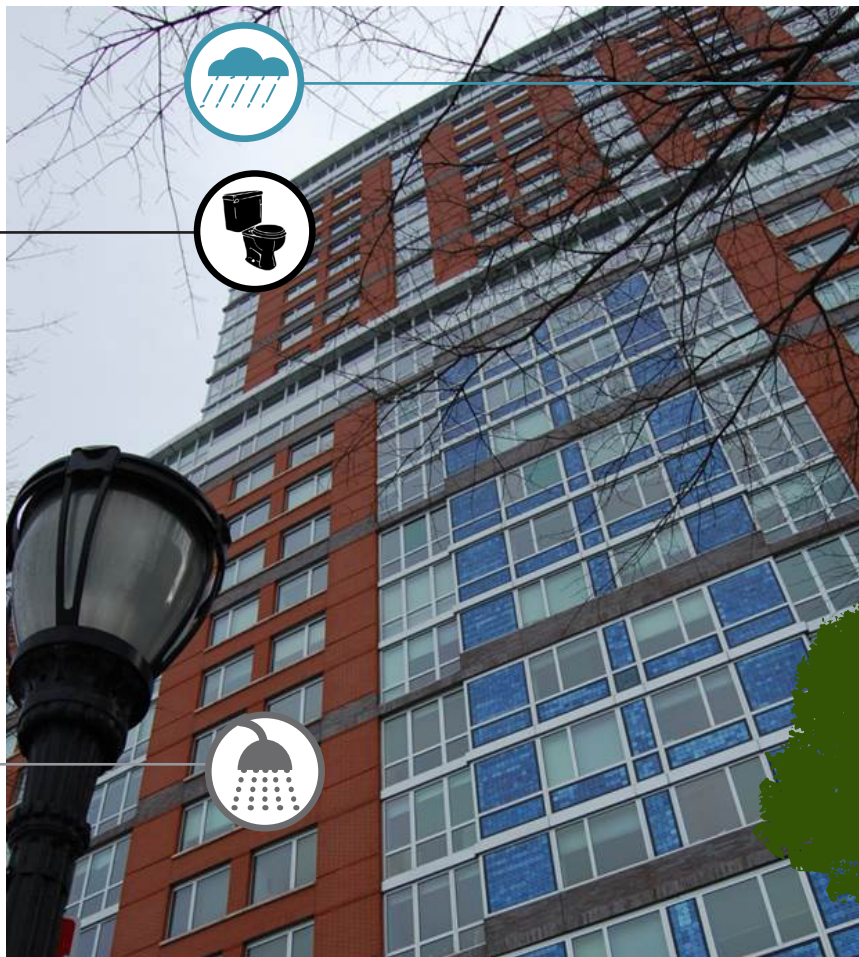
Black Water

Discharge from water closets, urinals, bathtubs, showers, clothes washers, and laundry trays, washdown water and blowdown water from cooling towers, and any other fixtures discharging animal or vegetable matter in suspension or solution.

Gray Water

Discharge from lavatories¹ and condensate water. Discharge does not include wastewater from toilets.

1. Does not include wastewater from toilets.



Rainwater

Precipitation collected directly from the sky or from roof and balcony runoff.



Photo courtesy of Natural Systems Utilities

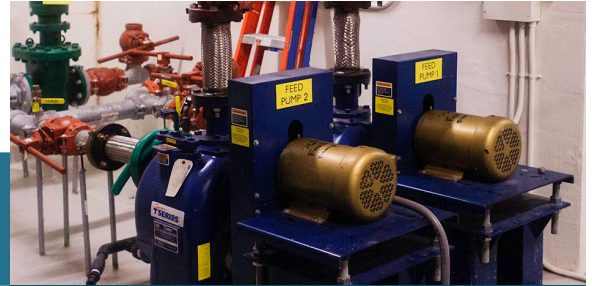
On-site Water Reuse Systems

Water Reuse Design and Construction Considerations



Alternate Water Source Collection System

This includes infrastructure such as rainwater gutters, or gray water piping systems that are installed to collect an alternate water source on-site. This may also include equalization storage to help level flow prior to treatment as supply and demand vary throughout the day.



On-Site Treatment and Disinfection System

Treatment is dependent on both the alternative water source and the end use. Rainwater is relatively clean and requires little treatment, while black water requires disinfection and biological treatment to remove organic contaminants.

Design Components

On-site water reuse systems typically have four major components that should be considered in the design phase. The NYC Plumbing Code should be consulted for specific requirements.



Treated Water Storage

Treated water storage is needed to meet the varying demands of the non-potable system. For example, in an office building that uses non-potable water for toilet flushing, most demand is during the day and water is usually stored at night when demand is low.



Non-potable Distribution System Piping and Plumbing Requirements

The distribution system and reservoirs need to be identified as containing non-potable water and are commonly known as purple piping or dual-plumbing. Non-potable piping is required to be colored or marked purple to distinguish it from a potable water system. This protects the fixtures that use potable water, including sinks, showers and the public drinking water supply.

2

Steps for Receiving a Grant



Applying to the Grant Pilot Program

1 Submit DEP Water Conservation and Reuse Grant Application

Includes a completed Application Form, Documentation of Current or Future Water Demand and Potential Savings, and Project Work Plan.

Outcome: If selected, DEP will send a Grant Acceptance Package to Grantee.

2 Grantee Submits Signed Grant Acceptance Package to DEP

The Grantee must complete all the paperwork within the Grant Acceptance Package and return to DEP within six months.

Outcome: Upon approval, DEP will issue a Notice to Proceed, after which construction can begin.



Project Construction and Reimbursement of Costs

3 Construction/Installation of Water Conservation Project

During construction, the Grantee is responsible for ensuring:

- » *construction begins within six months following the Notice to Proceed date,*
- » *all proposed water efficiency measures comply with applicable permit requirements,*
- » *progress reports are submitted to DEP on a quarterly and annual basis,*
- » *all expenditures are documented for invoicing purposes, and*
- » *construction must be completed within three years of the Notice to Proceed date.*

Outcomes:

- » Reimbursement of third-party Facility Water Use Survey, and third-party Design Services invoiced after the Notice to Proceed is issued.
- » Reimbursement of up to 50% of equipment costs invoiced at 50% construction completion.
- » The Grantee will contact DEP upon completion of the Project to schedule a final inspection by DEP staff.



Project Closeout and Maintenance Requirements

4 Final Inspection

DEP verification that the water conservation project was constructed in accordance with the Project Work Plan.

Outcome: Upon approval, DEP issues a Final Acceptance Letter.

5 Final Invoice for Water Conservation Project

Grantee to submit all required documentation as agreed upon in Funding Agreement.

Outcome: Reimbursement of remaining grant value.



Applying to the Program

This grant program promotes water efficiency projects that consider all capital eligible opportunities for water conservation within the building. Capital eligible opportunities may include, but are not limited to, water reuse systems, bathroom fixture retrofits, and other projects that upgrade the building's plumbing system to save water. Different types of water conservation projects may be bundled within individual properties or between a group of properties, as long as the total for each property is greater than or equal to \$50,000. Please contact DEP to discuss capital eligibility criteria.

Grant reimbursement will be available to any institutional, residential, or commercial customer who receives a water bill directly from DEP for their own water use, and not for resale.

Eligibility

Applicants that do not meet one or more of the criteria listed below will be deemed ineligible:

- The project must cost greater than \$50,000 and be located on a single private property.
- The application must be complete.
- The Applicant must have an account in good standing with a functioning Automated Meter Reading (AMR) device and one year of water use data. Applicants applying for grant funding for new construction projects that do not have water use data would qualify for water reuse projects only.
- The project must be constructed within three years of the Notice to Proceed and must offset NYC potable water use six months following project completion
- The proposed water conservation project must be permanent and operational for a minimum of 20 years, beginning after the final disbursement of funds. If the project is not operational for a minimum of 20 years, the grantee must submit proof of equipment life, or the grantee may be required to reimburse DEP the entire grant funding amount received.
- The Applicant must comply with the New York City Department of Buildings Plumbing Code, all applicable rules and regulations required by the New York City Department of Health and Mental Hygiene, and other applicable rules and regulations.
- The Applicant must provide a complete application package, including:
 - » An application form,
 - » Completed Facility Water Use Survey for projects in an existing building, and/or DEP On-site Water Reuse Calculator workbook for onsite water reuse projects, and
 - » A project work plan containing detailed water savings potential, schedule, and budget breakdowns.
- The Project must offset potable water use by at least 50% of the savings for which the Project is designed within a year of construction, and at least 90% of savings within three years.
- The proposed project must conserve at least one million gallons of water per year.

Grant Funding

Items eligible for reimbursement under the Water Conservation and Reuse Grant Pilot Program include:

- Equipment costs, including materials and supplies;
- Third-party Facility Water Use Survey; and
- Third-party Design Services.

Labor will not be reimbursable. The funding conditions and amounts for each eligible item are presented in the tables below. A sample grant funding calculation is also presented to illustrate how funding requests should be calculated. Applicants are encouraged to submit any additional questions to waterconservation@dep.nyc.gov. Except for the third-party Facility Water Use Survey and Design Services, no other costs incurred prior to the Notice to Proceed date are reimbursable.

Water Conservation and Reuse Grant Pilot Program Eligible Funding		
Eligible Costs	Condition	Grant Funding Amount
Equipment	WaterSense®-certified fixture replacements	Fixed maximum unit price; see table below ¹
	Custom water efficiency retrofits	\$10 per gallon per day (gpd) water savings achieved, up to 100% of documented equipment costs
Third-party Facility Water Use Survey and Design Services	Third-party costs for Facility Water Use Survey and any associated Design Services required in development of the application	Up to 20% of total reimbursable equipment costs

Fixed Maximum Unit Prices for WaterSense® Certified Fixture Replacements ¹		
Fixture	WaterSense® Specification	Maximum DEP Rebate Rates (\$/fixture)
Residential Toilets (Tank or Flushometer)	≤ 1.6 gallons per flush	\$125
Showerheads	≤ 2.0 gallons per minute	\$45
Bathroom Sink Aerators	≤ 1.5 gallons per minute	\$3
Commercial Toilets (Flushometer)	≤ 1.28 gallons per flush	\$650
Urinals	≤ 0.5 gallons per flush	\$600

1. Funding for all other fixture replacements not listed should be calculated using the custom water efficiency retrofit funding rate.

Sample Grant Funding Calculation for a Hotel Project

Scope of Work:

- Replacement of toilets in guest rooms
- Cooling tower modifications to tower fill, drift eliminators, fans, and circulating water flow rates



Retrofit	Units	\$/unit	Water Savings (gpd/unit)	Total Water Savings (gpd)	Total Reimbursable Cost (\$)
Toilets	40	\$125	35	1,400	\$5,000
Cooling Tower	1	\$10/gpd	9,000	9,000	\$90,000

Total Water Savings: 10,400 gpd (3.8 MGY)

Total Reimbursable Equipment Costs: \$95,000

Maximum Reimbursable for Third-party Facility Water Use Survey and Design

Costs (20% Reimbursable Equipment Costs): \$19,000

Total Contracted Not to Exceed Amount: \$114,000

Grant Application

Interested private property owners must complete and submit an application to DEP for funding. A copy of the application form, including a list of all required attachments and instructions, can be found in the back of this guide in Appendix A.

Project Selection Process

The number of grants awarded may be limited based on available funding. Applications will be evaluated for:

- 1. Cost Effectiveness;** applicants with a lower unit cost per gallon potable water saved per day (\$/gpd) will rank higher.
- 2. Project Schedule;** applicants able to achieve savings on a shorter timeline will rank higher.
- 3. Feasibility;** particularly applicable to innovative water efficiency retrofits, applicants that can provide detailed calculations of water savings estimates as part of their detailed Project Work Plan, submitted as part of the application package, will rank higher.
- 4. Co-benefits;** for example, an applicant that reduces significant wastewater and/or stormwater flows to the sewer system and wastewater facilities will rank higher.

During the review period, DEP may request to conduct site visits, in coordination with the applicant, in advance of announcing grant recipients. A conditional notice of acceptance, pending funding approval, will be sent to selected recipients. DEP will send a Grant Acceptance Package to the Grantee which will include an: Award Letter, Funding Agreement, Restrictive Covenant, and other applicable contracting paperwork.

Grantee Agreement Terms & Restrictive Covenant

The Grantee must complete all the paperwork within the Grant Acceptance Package and return to DEP within six months of the Award Letter date. Before submission, the Grantee must record the Restrictive Covenant with the New York City Department of Finance and insert the cover page (provided by the Department of Finance) as an appendix into the Funding Agreement, upon successfully recording the Restrictive Covenant. A sample Grantee Agreement and Restrictive Covenant can be found on the program webpage at www.nyc.gov/dep/water-conservation-grant.

DEP's Agency Chief Contracting Office (ACCO) will review the complete Grant Acceptance Package and send the Funding Agreement to the New York City Office of Management and Budget (OMB) for registration. Upon acceptance of registration, DEP will issue a Notice to Proceed to the Grantee. After the Notice to Proceed has been issued, the third-party Facility Water Use Survey and Design Services may be invoiced. Additionally, DEP will only reimburse equipment purchased after the Notice to Proceed.





Project Construction and Reimbursement of Costs

Construction Timeline

The Grantee must commence construction within six months following the Notice to Proceed date. Construction and commissioning must be completed within three years of the Notice to Proceed date, unless in DEP's sole discretion, a written extension has been granted.

Reporting

During construction and commissioning, the Grantee will be required to provide the DEP Project Manager with detailed quarterly and annual status reports.

Reimbursement of Costs

The Grantee may invoice, with appropriate supporting documentation, for the following during the Construction Phase:

- After the Notice to Proceed has been issued, third-party Facility Water Use Survey and Design Services may be invoiced; note that the total of the Facility Water Use Survey and Design Services are not to exceed 20% of total equipment costs.
- At 50% completion, an additional invoice may be submitted for reimbursement of 50% of total equipment costs paid to date. If the Facility Water Use Survey and Design Services have not been previously invoiced, they can also be included in this invoice.

In all cases, DEP reserves the right to conduct site visits prior to any reimbursement of equipment costs.





Project Closeout and Maintenance Requirements

Project Final Inspection & Closeout

Upon completion of the Project, the Grantee will contact DEP for a final inspection. After the Project has been inspected, and punch-list items have been addressed, DEP shall issue a Final Acceptance Letter. Only after the Final Acceptance Letter has been issued will DEP process the final invoice for the remaining equipment costs that have not been previously invoiced. If the final costs of the Project are less than the Grant Award, the difference will not be disbursed to the Grantee.

If the Project is an on-site water reuse system, a Maintenance Plan shall be submitted before construction closeout, for DEP review and approval. The Maintenance Plan must include all maintenance requirements including labor, equipment, materials, and frequencies for the 20 year Maintenance Period.

Operation & Maintenance

The constructed water conservation project must be permanent and operational for a minimum of 20 years, beginning after the final disbursement of funds. DEP will monitor annual water use via the facility's AMR and if the submitted annual reports show that the system does not consistently conserve at least one million gallons of water per year for a minimum of 20 years, the Grantee is required to reimburse DEP the entire grant funding amount received.

If the Project is an on-site water reuse system, the Grantee will be required to submit reports per the Maintenance Plan stipulated in the Grantee Agreement.



Application



New York City Water Conservation and Reuse Grant Pilot Program

PROPERTY OWNER INFORMATION

Owner Name:
Business Address:
Phone:
E-mail:

PROPERTY MANAGER INFORMATION

Owner Name:
Business Address:
Phone:
E-mail:

PROPERTY INFORMATION

Please provide the following information for each property to be included in the grant application. If there is insufficient space in the table below, please append a complete list to the application package.

	Borough-Block-Lot Number	DEP Account Number	Service Address (number and street)
	1-12345-1234	1234567891234	125 Sample Ave.
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Application

WATER CONSERVATION AND REUSE PROJECT DESCRIPTION

Please provide a brief description of the water efficient measures being proposed, including:

- ✓ What is the estimated water savings of the project?
- ✓ What is the requested equipment funding amount?
- ✓ Are you applying for FWUS/Design reimbursement?
- ✓ What is the project's total budget?
- ✓ What is the anticipated start and end date of construction?
- ✓ Has the property owner reviewed the Funding Agreement and Restrictive Covenant?

CHECKLIST FOR THE APPLICATION PACKAGE

1. Application Form
2. Documentation of Current or Future Water Demand and Potential Savings
3. Project Work Plan

APPLICATION SUBMISSION

An original and electronic copy of the application must be submitted to:

Electronic Copy waterconservation@dep.nyc.gov

Application Instructions



New York City Water Conservation and Reuse Grant Pilot Program

For applications to be accepted and considered for funding, the following two documents must be included, in addition to the Application Form, in the Application Package.

DOCUMENTATION OF CURRENT OR FUTURE WATER DEMAND AND POTENTIAL SAVINGS

Quantifying water use is an important step in identifying potential savings opportunities. For each property to be included in the grant application, DEP requests that each property's current water use be documented in the following ways:

Equipment retrofits or replacements, <u>excluding onsite water reuse</u> , in an <u>existing building</u>	Must submit a Facility Water Use Survey for each building.
Equipment retrofits or replacements, <u>including onsite water reuse</u> , in an <u>existing building</u>	Must submit a Facility Water Use Survey for each building, and a completed DEP On-site Water Reuse Calculator for only those buildings with proposed onsite water reuse projects.
An <u>On-site water reuse</u> system in <u>new construction</u>	Must submit a Completed DEP On-site Water Reuse Calculator .

Facility Water Use Survey

The Facility Water Use Survey may be formatted however the applicant chooses, but the following information must be provided:

- **General Building Information** including: whether the building is residential/commercial/industrial/mixed use, what the part-time/full-time occupancy is, property square footage, building square footage, and year constructed.
- **Water Use Information** including: DEP account number, and Automated Meter Reading (AMR) data from the 12 preceding months (AMR data can be accessed via <https://a826-amr.nyc.gov/mydepaccount/>).
- **Interior Water Use** including: each type of water use, volumes per use, and number of each type.
- **Exterior Water Use** including: each type of water use, volumes per use, and number of each type.
- **Comprehensive List of Potential Water Saving Measures** including calculations for: preliminary water savings, costs, and optional return on investment (ROI).

Applicants may conduct the Facility Water Use Survey themselves, but if selected for a grant, DEP will only reimburse third-party Facility Water Use Survey costs.

On-site Water Reuse Calculator

A link to the On-site Water Reuse Calculator can be found on the program webpage at nyc.gov/dep/water-conservation-grant.

PROJECT WORK PLAN

The Project Work Plan must fully describe the scope of work, including:

- **Project Summary**, including a summary of the findings of the Facility Water Use Survey or On-site Water Reuse Calculator, and detailed descriptions of those recommendations to be implemented under the Water Conservation and Reuse Grant Pilot Program.
- **Estimated Water Savings Potential** for each proposed equipment retrofit or replacement. Savings potential should be calculated using the current water use documented in the Facility Water Use Survey and the manufacturer's water use estimates for the proposed equipment retrofit or replacement.
- **Budget**, per grant funding calculation example on page 9 of the Grant Pilot Program Guide.
- **Schedule**
- **Maintenance Plan (Onsite Water Reuse Systems Only)**



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