



Battery Park

New York City



BLACK | GREY | RAIN | STORM | DESIGN | BUILD | OPERATE | OWN

Natural Systems Utilities (NSU) designed, built, and currently operates the wastewater and rainwater recycling systems within six Battery Park City Buildings. These systems have consistently achieved greater than 50% water consumption reduction and a greater than 60% reduction in wastewater discharge (compared to similar residential buildings in NYC). These water and wastewater savings are the direct result of wastewater reuse and water conservation. Battery Park City has been developed as a model for scaling water conservation and reuse projects in urban redevelopment and campus-scale settings.

Challenge

Battery Park City (New York) is a 92-acre redevelopment under the Battery Park City Authority (BPCA) of New York City. To achieve sustainability goals, they required innovative water system solutions. BPCA's mission included advanced water reuse objectives, exceeding LEED requirements. Together, we sought creative solutions, updated regulations, and met groundbreaking environmental impact goals.

<input checked="" type="checkbox"/> POTABLE WATER CONSTRAINTS	<input checked="" type="checkbox"/> SEWAGE TREATMENT CONSTRAINTS
<input checked="" type="checkbox"/> REGULATORY MANDATES	<input checked="" type="checkbox"/> COMBINED SEWER OVERFLOW (CSO)



**1ST IN-BUILDING
RESIDENTIAL
HIGH-RISE WATER
REUSE SYSTEM IN US**

The Solution

NSU and BPCA worked together to develop six residential water reuse systems in Battery Park City which service eight buildings: The Solaire, Tribeca Green, Millennium Tower, The Visionaire, Riverhouse, Liberty Luxe, Liberty View, and The Verdesian.

Systems include treatment with hollow fiber micro-filtration membranes, ultraviolet light disinfection, and biological nitrogen removal to comply with New York City Department of Buildings' direct water reuse standards. The total design flow for these systems is 165,000 gallons per day.

The first project in NYC to incorporate wastewater reuse was the Solaire Building, which began operation in 2003. The treated water is reused for flushing toilets in the 293-unit apartment building, cooling tower make-up, and green roof irrigation.



Toilet Flushing



Laundry



Cooling Tower



Spray Irrigation



Drip Irrigation



Sidewalk Maintenance



55%

Potable Water Reduction



65%

Reduction in Wastewater Discharge



165,000

Gallons Per Day Produced

Battery Park

New York City

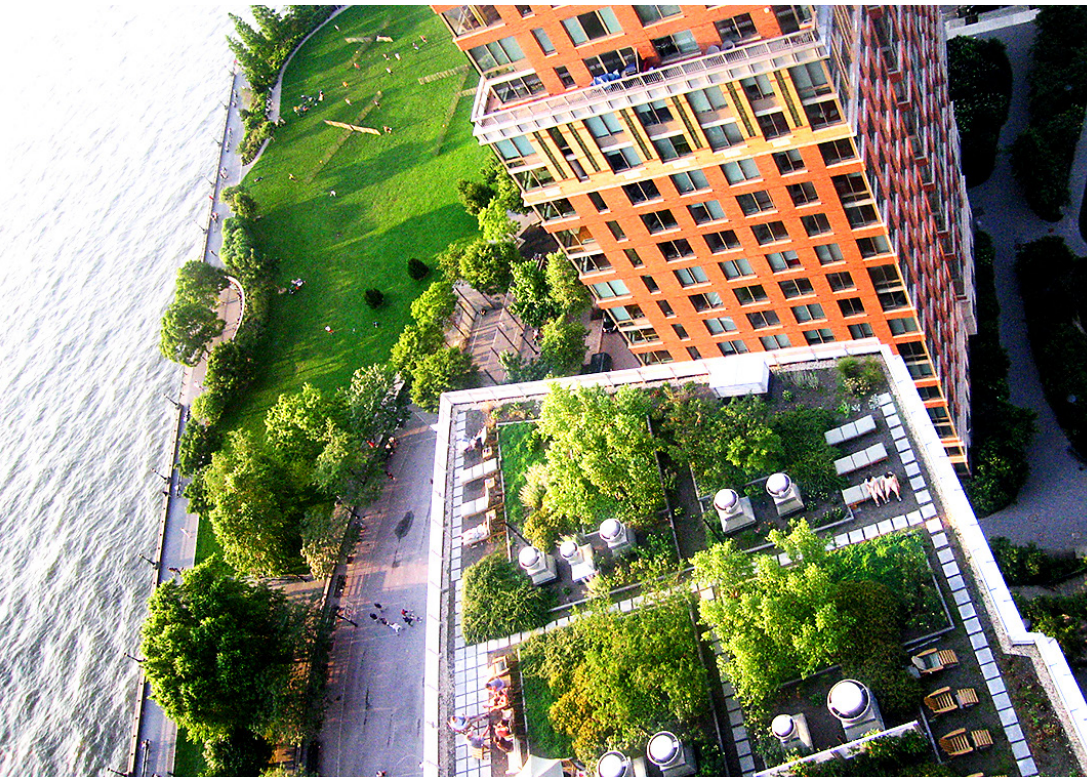
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natural systems utilities

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Highlights

- Combined Sewer Overflow Mitigation
- All buildings receive comprehensive water reuse program rates from NYCDEP
- Membrane Bioreactors
- Ultraviolet and Ozone Disinfection



Achievements

These systems have consistently achieved greater than 55% water consumption reduction and a greater than 65% reduction in wastewater discharge (compared to similar base residential buildings in NYC).

These water and wastewater savings are the direct result of wastewater reuse and water conservation. Battery Park City has been developed as a model for scaling water conservation and reuse projects in urban redevelopment and campus-scale settings.



scan for more

“This was a very important partnership for us. They not only implemented the plant for us but they maintained it, they monitored the water and made sure it was ran efficiently.”

— Miroslav Salon, Building Manager, Albanese Organization

#missionwater

www.nsuwater.com