Financing Sustainable Clean Water Infrastructure

Local Government Planning & Zoning Workshop

Bulmer Telecommunications Center
Hudson Valley Community College
Troy, NY April 8, 2010

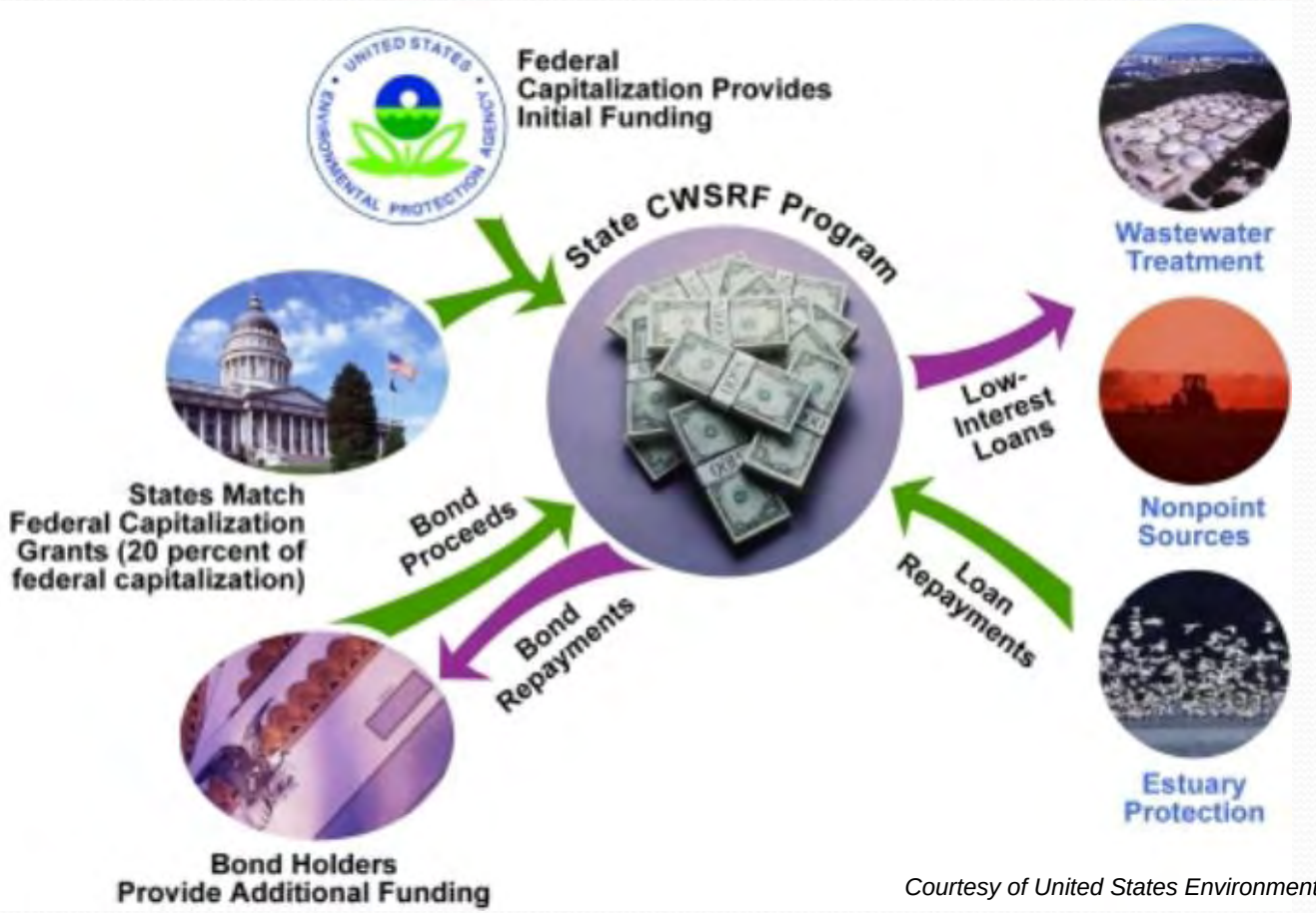
The New York State Environmental Facilities Corporation

- *Our Mission is to Provide Low-cost Financing and Technical Assistance to Municipalities, Businesses, and New York State Agencies for Environmental Projects*
  - Clean Water State Revolving Fund (CWSRF)
  - Drinking Water State Revolving Fund (DWSRF)

Major CWSRF Accomplishments

- CWSRF was established in 1990 to finance projects that protect or improve water quality.
- Received $2.9 Billion
- Provided over $10.9 Billion
  - 1,400 Projects with ~500 Recipients
- $1.3 Billion in Subsidy
- Recognized Nationally as Financial Innovator

How SRF Programs Work



Courtesy of United States Environmental Protection Agency

The American Recovery and Reinvestment Act (ARRA)

- $787 billion federal economic recovery bill
- New York State Received:
  - $432 million for Clean Water Projects
  - $86 million for Drinking Water Projects
- Green Project Reserve (GPR):
  A minimum of 20% percent of the funds must address green infrastructure, water or energy efficiency improvements or other innovative activities.
- First Clean Water Grants in 20 years!

Green Project Reserve

A minimum of 20% percent of the funds must address green infrastructure, water or energy efficiency improvements or other innovative activities.

- EFC will add “green” upgrades to existing projects - $51 million
- EFC has also created the Green Innovation Grant Program (GIGP)
  - $35 million allocated for CW

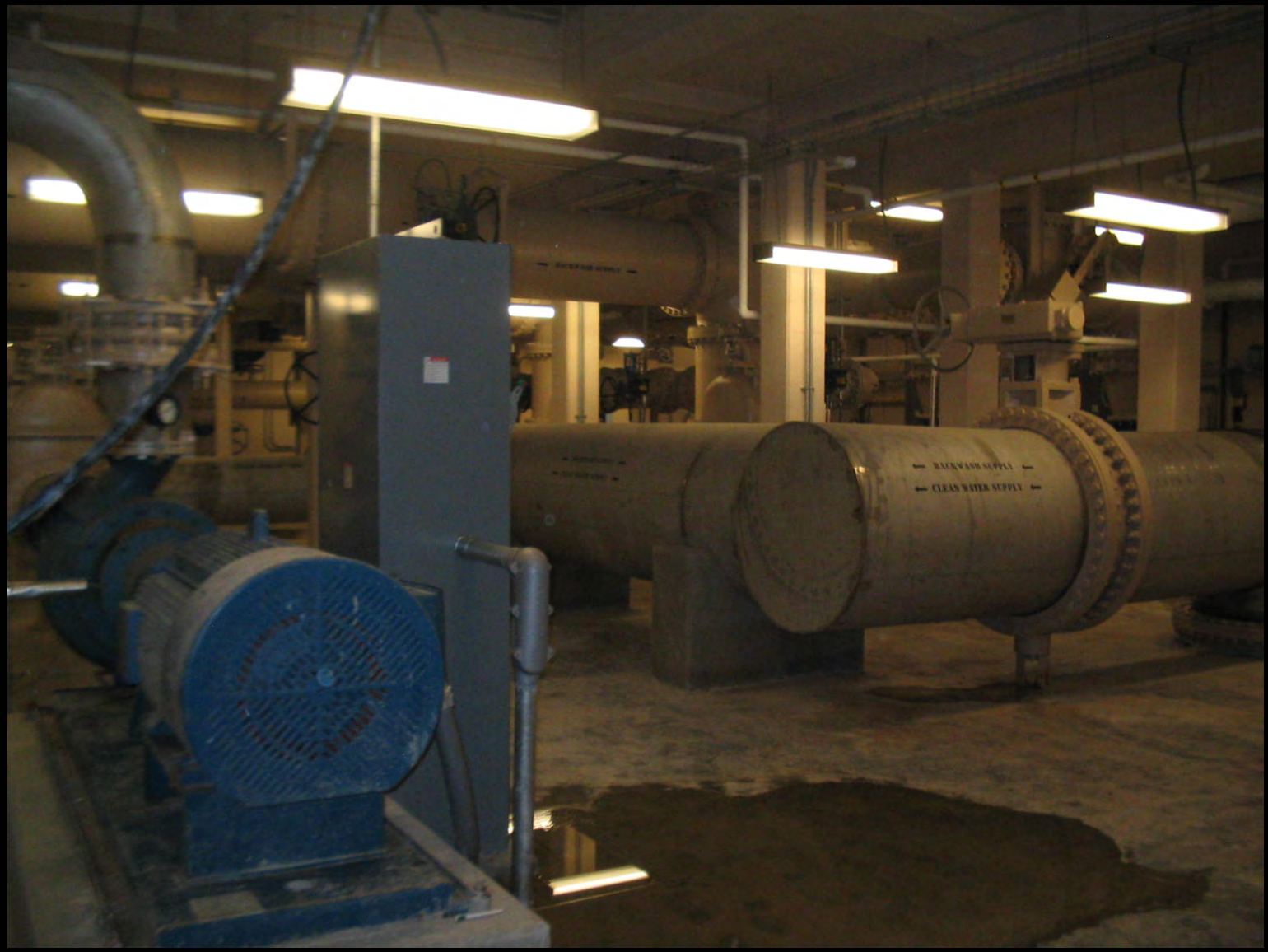
Allocated $157 million

What is a “Green” Project?

- Water Efficiency:
  - Reuse, Conserve or Improve Water Efficiency
- Energy Efficiency:
  - Reduce Energy Consumption or Produce Clean Energy
- Green Wet Weather Infrastructure:
  - Maintain, Restore, or Mimic Natural Systems to Infiltrate, Evaporate or Recycle Stormwater
- Environmental Innovation:
  - Manage Water Resources to Prevent or Remove Pollution in an Economically Sustainable Way

Water Meters

Digester Covers



Variable Speed Pumps

Newtown Creek Digesters – New York City

Courtesy of New York City Department of Environmental Protection

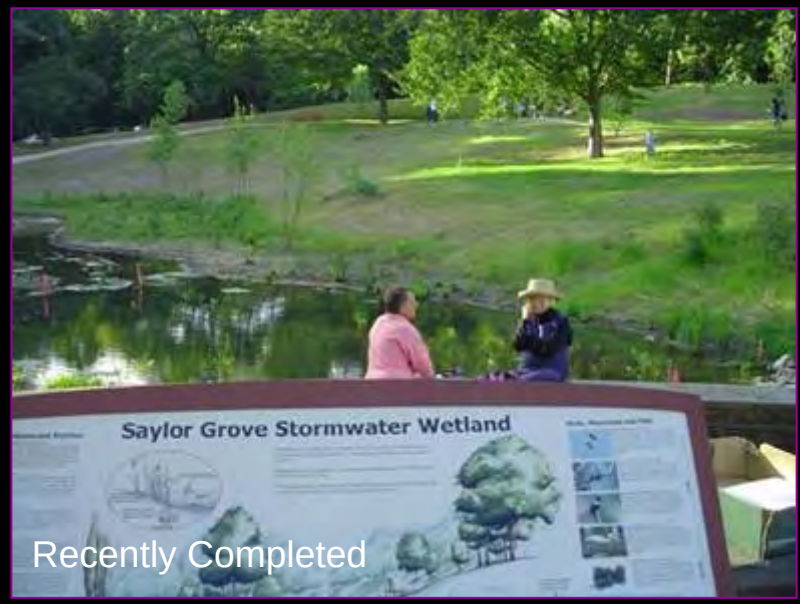
Green Roofs

Bioswales

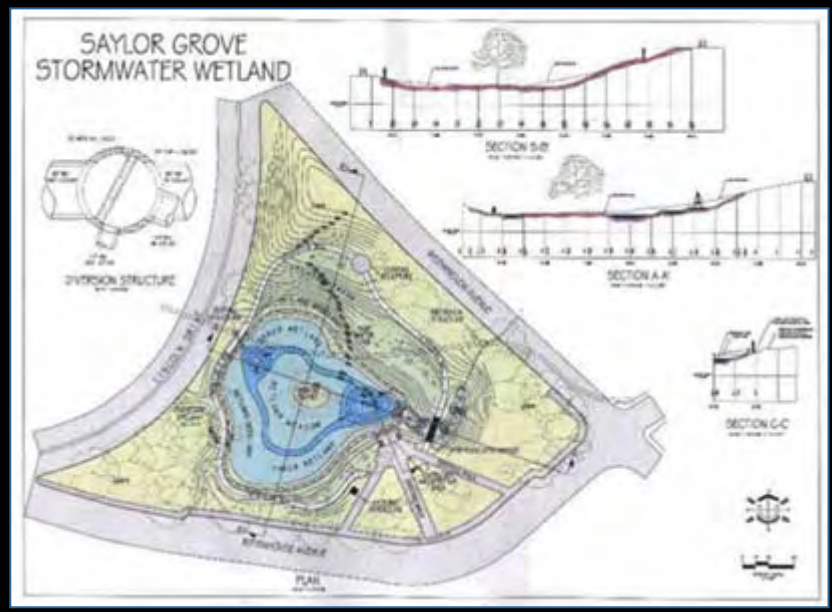
Stormwater Wetland

Saylor Grove, Philadelphia PA

Under Construction



Recently Completed



Stormwater Project

Cliveden Park, Philadelphia PA

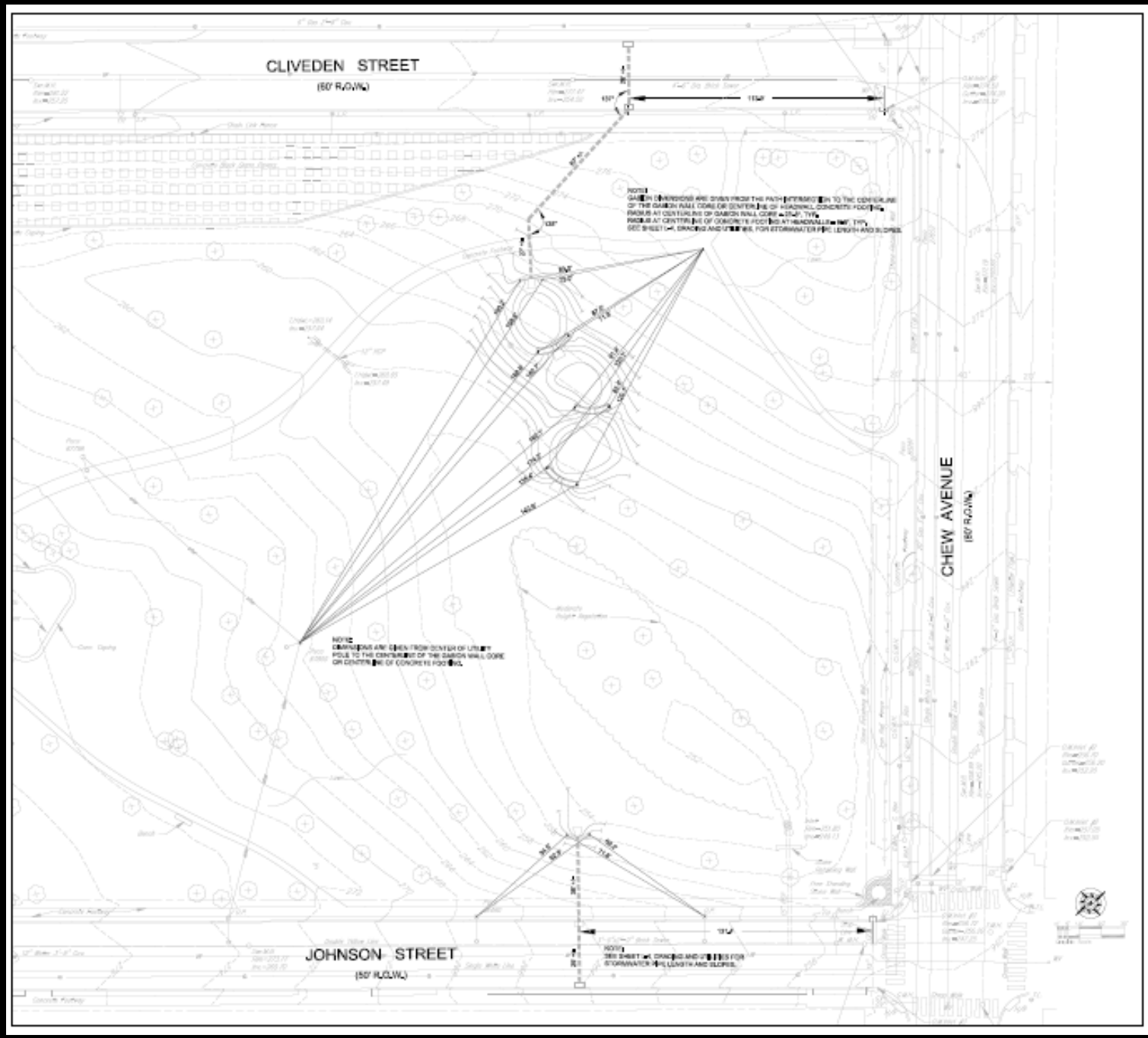
Garden Walls Under Construction

Area for Bioretention

New Inlets to Divert Street Runoff

BMPs:

Bioretention Gardens, Disconnected Inlets


CLIVEDEN STREET
(60' R/O/W)
CHEW AVENUE
(60' R/O/W)
JOHNSON STREET
(50' R/O/W)
NOTE:
GABION DIMENSIONS ARE GIVEN FROM THE PATH INTERSECTION TO THE CENTERLINE OF THE GABION WALL CORE OR CENTERLINE OF HEADWALL CONCRETE FOOTING.
RADIUS AT CENTERLINE OF GABION WALL CORE = 15'-0", TYP.
RADIUS AT CENTERLINE OF CONCRETE FOOTING AT HEADWALLS = 5'-0", TYP.
SEE SHEET 4, GRADING AND UTILITIES, FOR STORMWATER PIPE LENGTH AND SLOPES.
NOTE:
DIMENSIONS ARE GIVEN FROM CENTER OF UTILITY POLE TO THE CENTERLINE OF THE GABION WALL CORE OR CENTERLINE OF CONCRETE FOOTING.
NOTE:
SEE SHEET 4, GRADING AND UTILITIES FOR STORMWATER PIPE LENGTH AND SLOPES.

Porous Pavement

Lindenhurst Library - Suffolk County

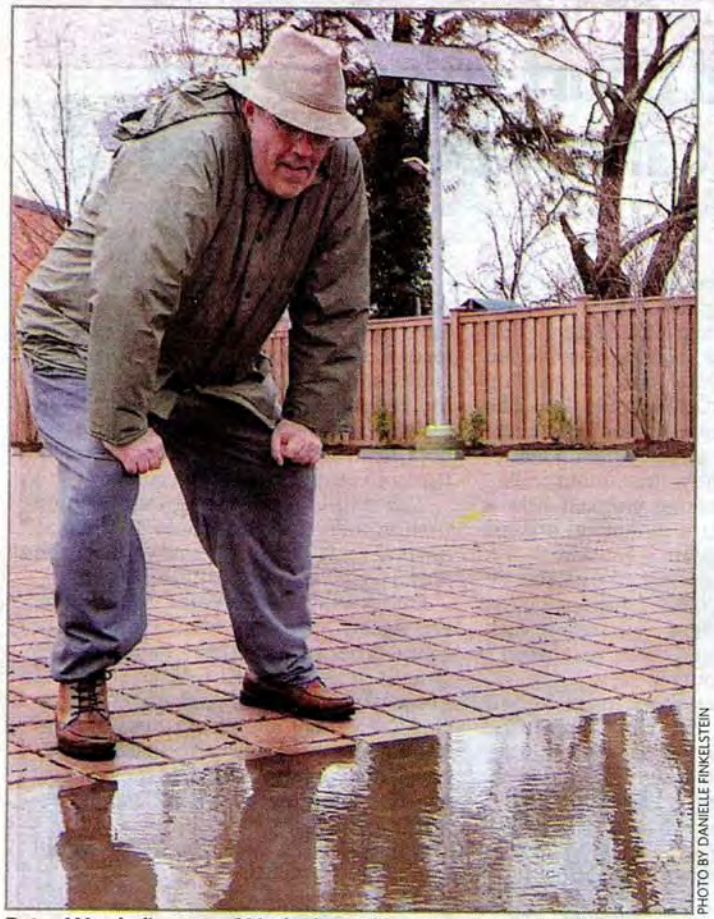


PHOTO BY DANIELLE FINKELSTEIN

Peter Ward, director of Lindenhurst library, calls new lot "amazing."

Despite rain, library's parking lot flood-free

BY JENNIFER SMITH
jennifer.smith@newsday.com

NOW ONLINE
Watch director of Lindenhurst library talk about the library's sustainable parking lot.
newsday.com/li

The rain sloshing down on Long Island yesterday flooded roads and turned driveways into lakes.

But no water pooled in the new lot at Lindenhurst Memorial Library — even during the worst of the storm.

The parking lot is made of permeable paving stones atop a bed of absorbent gravel that soaks up excess water that would otherwise eventually end up in the Great South Bay. The lot was built last summer with the help of $200,000 in federal stimulus money.

"It's amazing the way this thing sucks up water," said Peter Ward, the library's director. "Every time it rains like this I always check the parking lot."

It may be the first parking lot of its kind on Long Island. Nassau and Suffolk plan to build similar test sites this spring at county facilities.

It's one of the newer approaches to dealing with storm water runoff, which environmental officials say is one of the biggest pollution problems facing U.S. waters today.

Storm water is a particular problem along densely populated stretches of the South Shore, where pavement has replaced open space and storm sewers funnel rainwater to creeks and estuaries. Excess water that would normally be soaked up by Long Island's sandy soils washes off roads and construction sites, picking up contaminants along the way that can lead to beach closures and prevent safe shellfish harvesting.

At the Lindenhurst library lot, the permeable paving stones themselves absorb some water; more is drained through the gravel that surrounds them. Precipitation trickles down through three progressively finer grades of gravel that help filter out pollutants before the rainwater reaches the soil, according to Bob Retnauer of RDA Landscape Architects in St. James, which designed the lot.

"We already have a great natural resource that has been severely compromised by storm water," Ward said. "This parking lot shows an alternative that is, in some part, an answer to a long-standing problem."

Lindenhurst Library - Suffolk County

Porous Pavements – Alleys

Chicago, IL

Porous Pavements – Recreation


26 4:01PM


22 5:22 PM

Porous Concrete

Philadelphia PA

Bioretention and Urban Streetscape

(NYC, NY)

QUEENS:

Furmanville Ave at East 80th St & Dry Harbor Rd

Subsurface Treatments

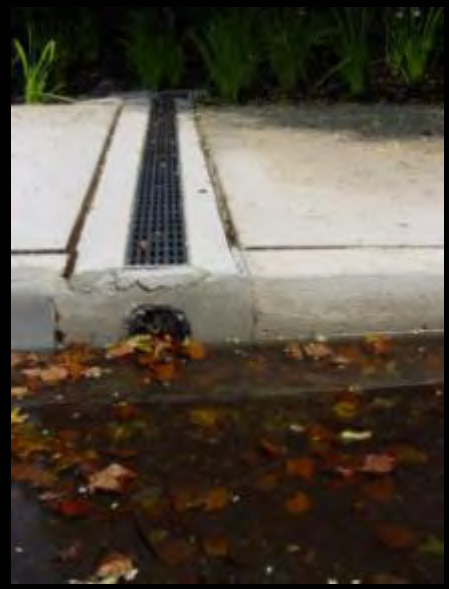
Deep Excavation

Multiple Sites

Amsterdam Ave between W 151st St and W 152nd St –

Furmanville Ave at East 80th St & Dry Harbor Rd – Hunts Point Blvd at Randall Ave

BROOKLYN



BROOKLYN: Gregory Saucedo Triangle

Ave T, Fillmore Ave & East 57th Street

Surface Treatments

Bioswale With Permeable Edge

BRONX: Pelham Parkway

Pelham Pkwy & Stillwell Ave

Green Streets

Green Streets

Green Streets

Green Streets

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Green Streets

Green Streets

Overwhelming Response

295 GIGP Applications Requesting over $460 million

- Energy efficiency initiatives
- Micro-turbines to generate renewable power
- Permeable pavement
- Restore natural systems of stormwater management
- Green roofs
- Cisterns
- Rain barrels
- Rain gardens

GIGP Projects

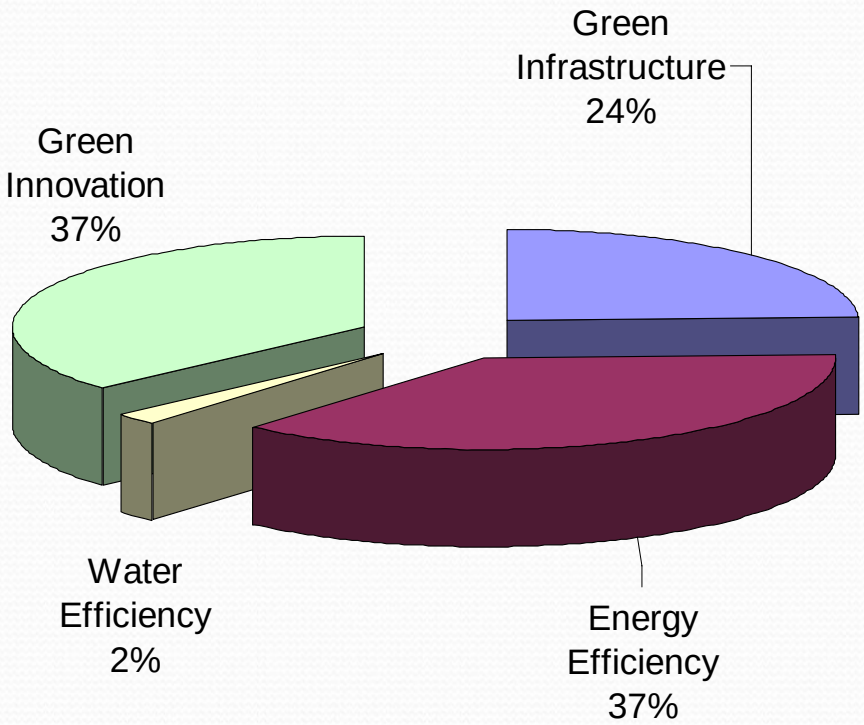
- Energy Efficiency
  - Combined heat & power systems
  - High efficiency pumps
  - Solar & wind units
  - Reed beds
- Water Efficiency
  - Water meters
  - Rainwater harvesting
  - Low-flow fixtures
  - Leak detection technologies
- Green Wet Weather Infrastructure
  - Restored wetlands
  - Green roofs
  - Rainwater harvesting
  - Bioretention
  - Porous pavement
- Environmental Innovation
  - Effluent-based heat pumps
  - Anaerobic digesters
  - Micro turbines
  - Eco-industrial waste utilization

ARRA Selection Criteria

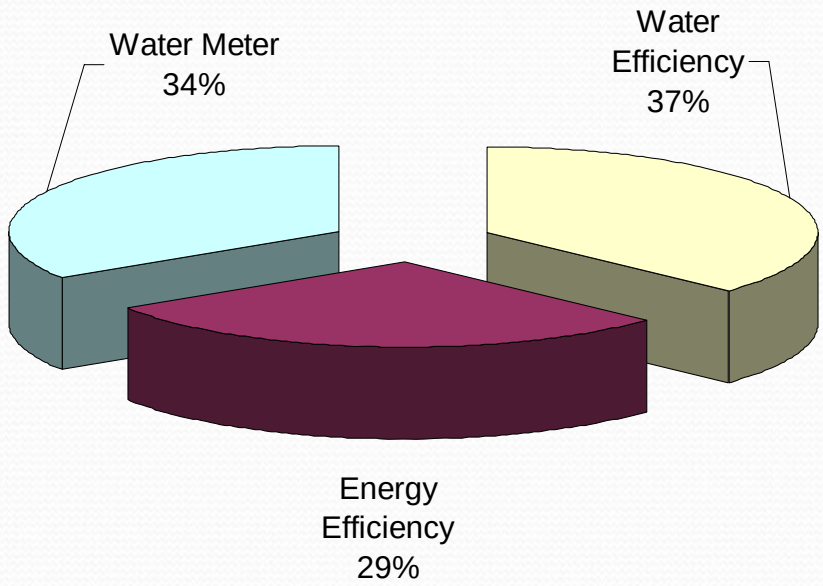
- "Shovel-Ready" Projects
  - Necessary permits/approvals
  - Project budget and engineering report complete
- Risk of Construction Delays
  - ARRA funds will re-allocated to other ready-to-go projects
- Geographical and Regional Diversification
  - Distribution throughout New York
- Water Quality Benefits

GIGP Projects

35 Clean Water



14 Drinking Water



2010 GIGP Highlights

- Separate Application process
- Call for applications in Fall 2010
- $15 Million program
- Innovation and Sustainability
- EPA Guidance on Green Project Reserve
- Davis Bacon Act and Federal DBE Program apply

2010 SRF Highlights

- $225 Million Federal appropriation for up to $900 million in subsidized financings.
- Highest level of CWSRF funding EVER!
- Principal Forgiveness (PF) – up to a total of $112 million available for projects above subsidy line. PF policy and qualification criteria will be published in an Amendment to the 2010 IUP.
- Energy Evaluations – Partnership with NYSERDA to fund Flex Tech Program to evaluate energy efficiency opportunities at planning/ design stage.
- New projects must comply with requirements of the Davis Bacon Act and Federal DBE Program.

CWSRF Intended Use Plan (IUP)

The Intended Use Plan (IUP), published on an annual basis, identifies funds available to the CWSRF and uses of those funds.

- Effective October 1 through September 30 (Federal Fiscal Year)
- Project Priority Lists of potentially eligible projects
  - Annual List (Projects expecting financing in current year)
  - Multi-Year List (Projects to be financed in future years
  - Project Categories
    - Category A – Population up to 3,500
    - Category B – Population between 3,501 to 1,000,000
    - Category C – Population over 1,000,000
    - Category D – Hardship
    - Category E – Not-for-Profits / Privates
    - Category F – Linked Deposit Program
    - Category G – Green Innovations Grants Program (GIGP)

Eligibility: Who Can Apply?

Recipients can be:

- Municipality
- School district
- Soil and water conservation district
- Not-for-profit corporation
- Partnership
- Association
- Firm
- Or any other corporation which is organized and existing under the laws of the State of New York which is empowered to develop a project

What Kind of Projects?
212 Projects – Point Source

I Secondary Treatment
II Advanced Treatment
III-A Infiltration/Inflow
III-B Sewer System Rehabilitation
IV-A New Collector Sewers
IV-B New Interceptors
V CSO Correction
VI Storm Sewers (In Phase I and II MS4 areas)
X Recycled Water Distribution

319 Projects – Non Point Source

- VII-A Agricultural Cropland
- VII-B Agricultural Animals
- VII-C Silviculture
- VII-D Urban, excluding decentralized systems
- VII-E Ground Water, unknown source
- VII-F Marinas
- VII-G Resource Extraction
- VII-H Brownfields
- VII-I Storage Tanks
- VII-J Sanitary Landfills
- VII-K Hydromodification
- VII-L Individual/Decentralized Systems

Estuary Assistance – 320 Projects

- Fisheries/oyster bed/shellfish restocking/restoration
- Fish ladders
- Rejuvenation of submerged aquatic vegetation

Financial Products

- Long Term Leveraged
  - Up to 30 Years with subsidy
- Hardship – As low as 0%
  - DWSRF Hardship Grants
- Short Term 3 year loans at 0%
- Bond Guarantee Financing
  - (projects below the subsidy line)
- Short Term Market Rate Financing
  - (projects below the subsidy line)

Understand the SRF Scoring Criteria

A. Existing Source Criteria

B. Water Quality Improvement Criterion (WQIC)

C. Consistency with Management Plan Criterion

D. Intergovernmental needs Criterion

E. Financial Need Criterion (municipal projects only)

F. Economic Needs Criterion

Co-funding Opportunities

- USDA Rural Development loan/grant program
- New York State DEC Water Quality Improvement Program
- Office of Community Renewal CDBG Program
- NYSERDA Water/Wastewater programs

New York State Co-funding Initiative

Provides one central source for information on and assistance with all funding program application procedures.

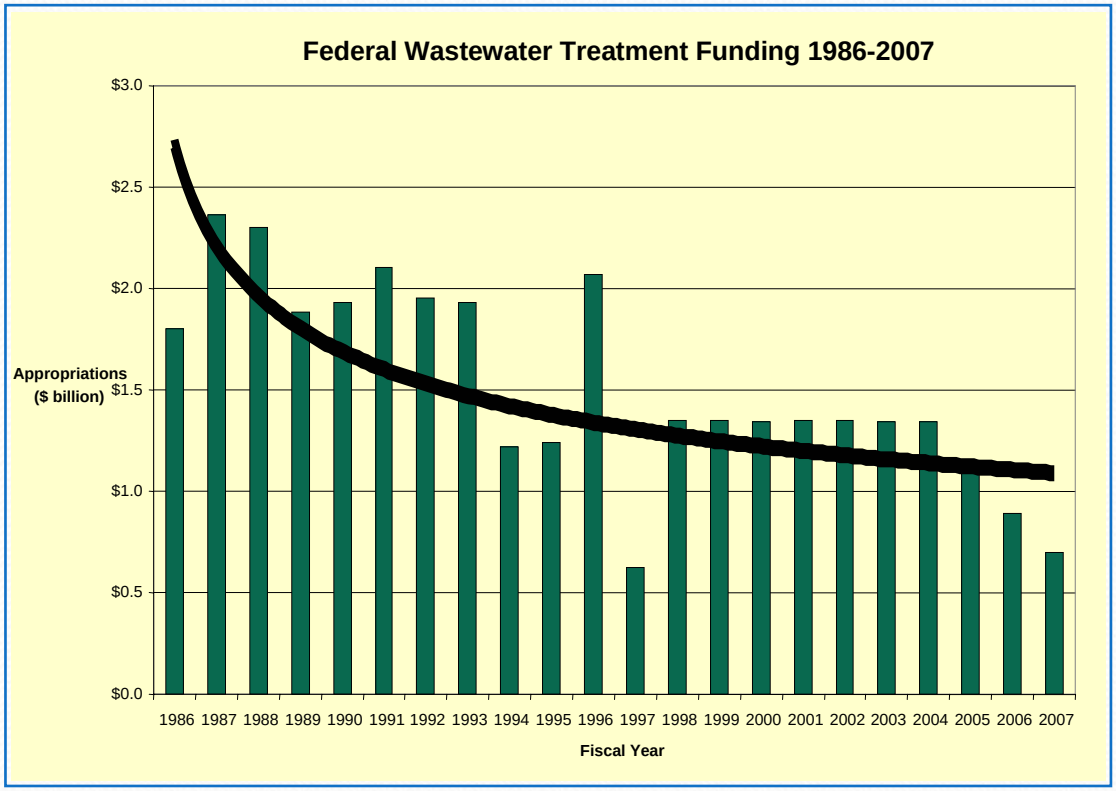
- Contact the Co-funding Coordinator, Dwight Brown at **1-800-882-9721**
  - Complete the telephone consultation with the Co-funding Coordinator.
  - Receive guidance on completing funding applications.
- Visit the Co-Funding website @ **www.nycofunding.org** and complete the:
  - Self assessment tool
  - Project questionnaire
  - Contact and program information

Next Steps…

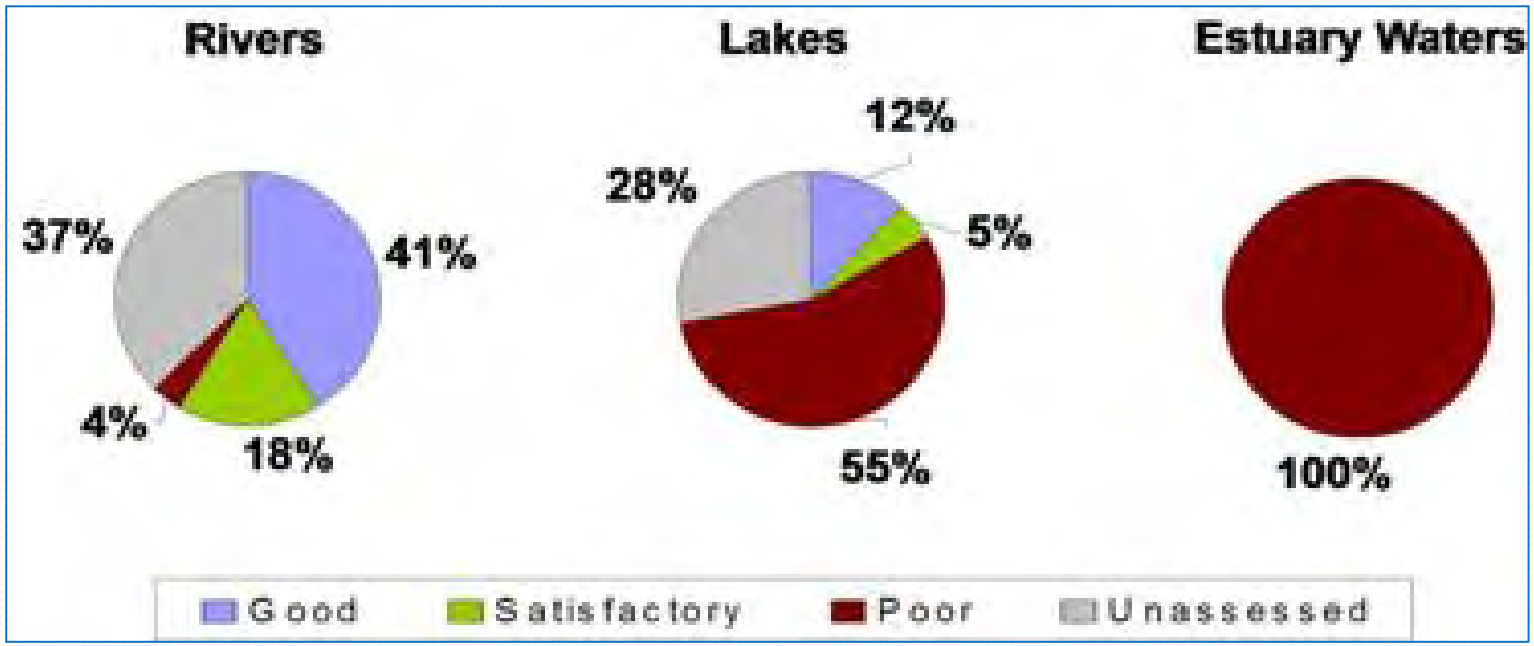
The Demand

- **Clean Water Needs > $36 Billion over next 20 Years**
  - $11 Billion in Urgent Need

- **How Did We Get Here?**
  - Increased Water Quality Standards
  - Deferred Maintenance
  - Insufficient Local Revenues



The Need


Rivers
37%
41%
4%
18%
Lakes
12%
28%
5%
55%
Estuary Waters
100%
Good
Satisfactory
Poor
Unassessed

The American Recovery and Reinvestment Act (ARRA)

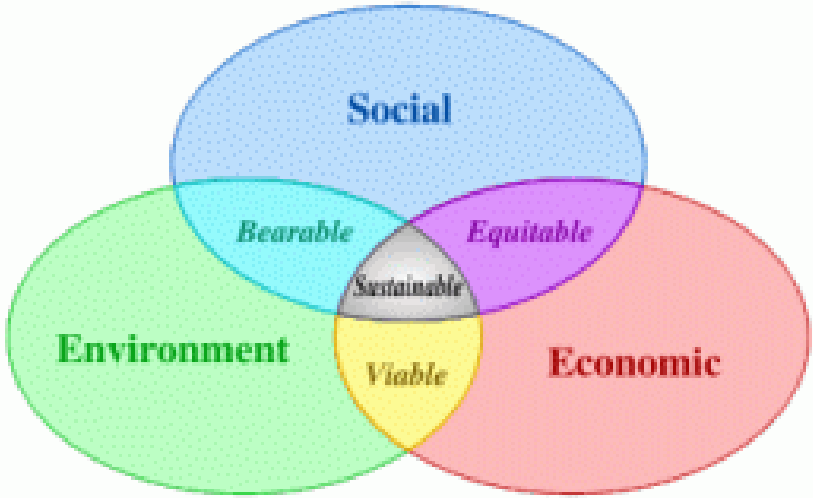
- **New York Received:**
  - $432 Million for Clean Water Projects
  - $86 Million for Drinking Water Projects
  - First Clean Water Grants in 20 years!

Future of American SRFs

- 2010 Federal Budget
  - $3.48 Billion for the SRFs.
    - $2.1 Billion CWSRF ($225 million NYS)
    - $1.38 Billion DWSRF ($88.6 million NYS)
- 2011 President's Proposal
    - $2.0 Billion CWSRF
    - $1.28 Billion DWSRF

EFC Beyond ARRA: SRF Sustainability Initiative

- Embrace “Green” Priorities/Energy Efficiency
- Asset Management
- Smart Growth



2010 Intended Use Plan

- EFC is encouraging the use of Smart Growth principals in project development
- EFC is promoting energy efficiency for all CWSF projects.
- EFC is working with NYSERDA to fund energy efficiency studies and modifications

Energy and Water Efficiency

- Providing safe and reliable water and wastewater services
- Reducing the footprint of water and wastewater services
- the second largest operating cost at wastewater treatment plants
- 25 to 40 percent of total operating budget
- nationally >$6.5 billion is spent by municipal wastewater treatment plants each year

Asset Management

- Manage capital assets to
  - Improve finances, management, infrastructure and operations; and
  - Provide reliable, consistent cost-effective services
- Opportunity for Public, Private, Partnerships

Smart Growth

- How can SRF's promote smart growth?
- Are there conflicts between promoting smart growth and prioritizing water quality improvement?
- How you do balance promoting infill and redevelopment with prioritizing funding for economically distressed communities?
  - For example urban infill vs small rural communities

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