



Village of Suffern NY Rising  
Community Reconstruction Plan  
Public Engagement Meeting #4

January 14, 2015 from 7:00 PM to 9:00 PM

Suffern Community Center



Welcome

# Suffern NYRCR Planning Committee

- Planning Committee Chair

- Beth Barone

- Planning Committee Members

- James Lyons, Bruce McClintock, Daniel McInerney, Dina Schmidt, Bruce Simon, Charles Sawicki

- Non-Voting Members

- Mayor Trish Abato

- Former Deputy Mayor Jo Corrigan



# Planning Team

- **State Representatives**
  - Suzanne Barclay – GOSR Regional Lead
  - Barbara Kendall – NYDOS Planner
- **Consultant Team**
  - Project Management: Chris Robbins, Flaam Hardy and Elizabeth Matamoros (AKRF)
  - Engineering: Jaclyn Hakes, Sarah Quandt, and Michael Pianka (MJE)
  - Senior Planners: Lisa Nagle and Susan Rivers (Elan)
  - Public Engagement Specialist: Allie Zammow (Arch Street Communications)



# Agenda

- Welcome
- Overview of NY Rising Community Reconstruction Program (NYRCCR)
- The NYRCCR Final Plan
- Next Steps and Implementation
- Overview of the Open House





Overview of  
NY Rising Community  
Reconstruction Program  
(NYRCR)

# Building Back Better

The NY Rising Community Reconstruction Program (NYRCR), developed by Governor Cuomo, is a community-driven initiative that will empower localities severely damaged by Superstorm Sandy, Hurricane Irene, and/or Tropical Storm Lee to develop comprehensive and innovative recovery plans.

Funding for NYRCR comes from the Community Development Block Grant–Disaster Recovery (CDBG-DR) Program at \$3 million per community.



# Opportunities for Community Involvement

- Ten (10) Planning Committee Meetings
- Four Public Meetings
  1. Community input on vision and goals, geographic scope, critical issues, storm damage and community assets (July 22, 2014)
  2. Community input on needs and opportunities, strategies, and projects and actions (September 18, 2014)
  3. Community input on proposed projects
    - On-line Survey –  
<https://www.surveymonkey.com/r/SuffernNYRCR>
  4. **Final NYRCR Plan Presentation (January 14, 2015)**



# What is Resiliency Planning?

- Considers current damage, future threats, and economic opportunities
- Establishes a **Vision and Goals**
- Defines Sufferer's **Needs** and the **Opportunities** to address those needs
- Identifies **Assets at Risk**
- Develops **Strategies** to take advantage of the Opportunities and protect Assets
- Formulates **Resilient** and **Innovative Projects** that address the **Strategies**



# Suffern's NYRCR Final Plan



**NYRCR SUFFERN**



## NY RISING COMMUNITY RECONSTRUCTION PLAN

December 2014

NY Rising Community  
Reconstruction Program

### Members of the Suffern NYRCR Planning Committee

Beth Barone, Chair  
Trish Abato\*  
Jo Corrigan\*  
James Lyons  
Bruce McClintlock  
Daniel McInerney  
Charles Sawicki  
Dina Schmidt  
Bruce Simon

*\*(non-voting member)*

### Prepared By

This document was developed by the Suffern NYRCR Planning Committee as part of the NY Rising Community Reconstruction (NYRCR) Program within the Governor's Office of Storm Recovery. The NYRCR Program is supported by NYS Homes and Community Renewal and NYS Department of State. The document was prepared by the following consulting firms: AKRF, Inc.; MJ Engineering and Land Surveying, P.C.; Nagle, Tatch, Cranston LLC d/b/a Elan.3 Consulting (E.3); Sasaki Associates; Arch Street Communications, Inc.; and CDM Smith.



# Final Plan Components

- Forward
- Executive Summary
- I. Community Overview
- II. Assessment of Risks and Needs
- III. Reconstruction and Resiliency Strategies
- IV. Implementation - Project Profiles
- V. Additional Materials



# I. Community Overview

- Introduction to Suffern
- Geographic Scope of NYRRCR Plan
- Description of Storm Damage
- Critical Issues
- Community Vision
- Relationship to Regional Plans



## II. Assessment of Risk and Needs

- Description of Community Assets and Assessment of Risk
  - Over 70 Critical Assets and Systems Identified, Categorized and Mapped
  - Conducted under current conditions and with projects implemented
- Identification of Needs and Opportunities
  - Over 20 Needs and associated Opportunities selected.
  - Organized by six State defined Recovery Support Functions



# III. Reconstruction and Resiliency Strategies

- Eight Strategies developed by the Committee with input from the Community
- Based on Vision and Goals, Critical Issues, and Needs and Opportunities
- Represent statements of action that
  - strengthen Suffern against future extreme weather events
  - capitalize on valuable reconstruction opportunities, and
  - meet NYRCR short-, medium-, and long-term goals



# Path from Issues to Projects

## Critical Issue

My street floods during typical rain events due to the lack of sewers

## Need

Better drainage

## Opportunity

Use existing natural resources to manage storm water

## Strategy

Utilize green infrastructure to manage storm water on flood prone streets

## Project

Install bio-swales along road edge

# IV. Project Profiles

- The Suffern NYRCR Planning Committee developed resiliency projects, programs, and actions based on known areas of vulnerability, flooding, and damage.
- In defining resiliency projects, the Planning Committee evaluated:
  - Capacity to increase resiliency and reduce risk
  - Project feasibility including time to implement
  - Project costs and benefits
  - Community support



# IV. Project Categories

- Proposed Projects (10) are proposed for funding through a community's allotment of NYRCR CDBG-DR funding. Not all will be selected for funding under the NYRCR Program.
- Featured Projects (2) are projects and actions that the Planning Committee has identified as important resiliency recommendations and has analyzed in depth, but has not proposed for funding through the NYRCR program.
- Additional Resiliency Recommendations (11) are resiliency projects and actions that the Planning Committee would like to highlight, but are not categorized as Proposed or Featured Projects. These can be pursued under other funding sources.





# Proposed and Featured Projects

# Backup Power for Critical Community Facilities

## Proposed Project

# A

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

PROPOSED PROJECT

**Backup Power for Critical Community Facilities**



### KEY FACTS

#### PROJECT LOCATION

DPW Garage, South Street Wastewater Pump Station

#### ESTIMATED COST

\$125,000

#### RECOVERY SUPPORT FUNCTION

Infrastructure Systems

### PROJECT INFORMATION

Electric supply to critical community facilities has been lost during past storm events, including Superstorm Sandy and Hurricane Irene. Two facilities, the Department of Public Works (DPW) Garage and the South Street Pump Station are the focus of this project. Loss of power at the DPW Garage has rendered the fuel pumps for gasoline and diesel tanks inoperable. These fuel sources are critical to the operations of the Village's response and recovery vehicle fleet. The South Street Wastewater Pump Station, lost power, causing wastewater to back up. Had this condition persisted, the wastewater would eventually have flooded out of the pump station into the surrounding area including the wetlands behind. This condition could have also led to the backup of the effluent in the conveyance system forcing it out of manholes as well as into residents' basements. This project will (1) install an emergency generator at the DPW Garage to allow for continued operation of the fuel pumps during all interruptions in electrical service; and (2) replace and elevate the generator at the South Street Pump Station, a key component in the wastewater conveyance system, to prevent the impacts associated with the loss of power.



# Proposed Project

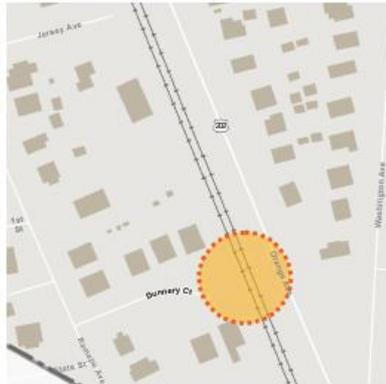
# Construct an Emergency Railroad Crossing into the West Ward

## B

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

PROPOSED PROJECT

**Construct an Emergency Railroad Crossing into the West Ward**



### KEY FACTS

#### PROJECT LOCATION

Emergency Railroad Crossing, Orange Avenue (US Route 202) and Dunnyer Court in Suffern

#### ESTIMATED COST

\$250,000

#### RECOVERY SUPPORT FUNCTION

Infrastructure Systems

### PROJECT INFORMATION

In past storm events, including Hurricane Irene, access to the West Ward neighborhood was severed completely by flooding of the surrounding road network. The project will provide emergency service providers access to the West Ward, which includes upwards of 150 residences by constructing a minimum 20-foot wide and approximately 100-foot long Emergency Railroad Crossing over the New Jersey Transit (NJT) Commuter Rail Line right of way from Orange Avenue to Ramapo Avenue by way of Dunnyer Court. This at-grade railroad crossing will be gated with one restricted to emergency service vehicles during times when flooding or other disasters prevent access to the West Ward neighborhood over the existing roadway network.



# Drainage Improvements to Transportation Assets

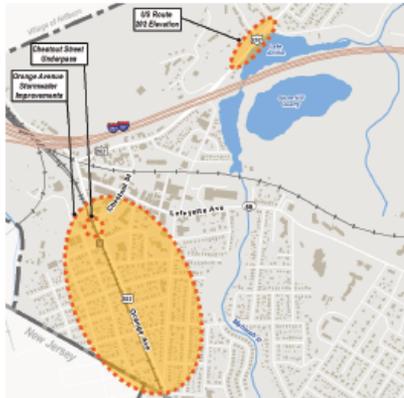
## Proposed Project



SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

PROPOSED PROJECT

**Drainage Improvements to Transportation Assets**



### KEY FACTS

#### PROJECT LOCATION

Chestnut Street Underpass,  
Orange Avenue, US Route 202

#### ESTIMATED COST

- (1) \$700,000
- (2) \$750,000
- (3) \$50,000

PROJECT TOTAL = \$1.5 M

#### RECOVERY SUPPORT FUNCTION

Infrastructure Systems

### PROJECT INFORMATION

This project will include three components to better protect transportation assets within the Village and ensure that residents do not get cut off from emergency service response during flood events:

- (1) Chestnut Street underpass — install a larger storm sewer directed to a new underground concrete vault detention system in Parking Lot “F,” which will also service Ramapo Avenue and various side streets;
- (2) Orange Avenue stormwater, including all side streets from Chestnut Street to the New Jersey line — direct storm sewer flow by utilizing a series of new catch basins and a new storm sewer conveyance system to an underground concrete vault detention system in Parking Lot “F”; and
- (3) US Route 202 elevation — produce an engineering feasibility study raising US Route 202 and/or upgrading/replacing the stormwater drainage system along the roadway near Lake Antrim and along Memorial Drive.



# Proposed Project

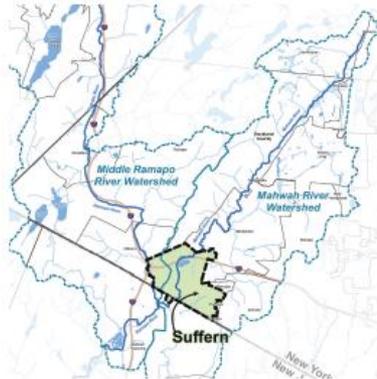
# Flood Mitigation Assessment – Mahwah and Ramapo River Watersheds

# D

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

PROPOSED PROJECT

**Flood Mitigation Assessment—Mahwah and Ramapo River Watersheds**



## KEY FACTS

### PROJECT LOCATION

Mahwah River and Ramapo River Watersheds, including their confluence (specific project boundaries will be determined as part of the initial scoping of the assessment)

### ESTIMATED COST

\$1M

### RECOVERY SUPPORT FUNCTION

Natural and Cultural Resources

## PROJECT INFORMATION

This flood mitigation assessment will result in a comprehensive evaluation of the Mahwah River Watershed in conjunction with the Ramapo River Watershed and its confluence in Suffern, NY. The assessment will identify project goals and establish performance metrics, assess existing conditions with respect to erosion and sedimentation, identify areas and watershed areas, assess watershed potential for erosion prevention, and identify and diagnose root causes of observed problems. The assessment will also identify existing and potential erosion mitigation measures, and identify and evaluate specific projects and activities that will be implemented to improve conditions and the health of the watershed. Other entities such as the New York State Office of General Services (OGS) and the New York State Department of Environmental Conservation (DEC) will be consulted.

A list of potential solutions to flood-related problems will be developed. Structures and non-structural alternatives as well as combinations of both measures will be defined and evaluated. Funding for the project will be provided by the New York State Office of General Services (OGS) and the New York State Department of Environmental Conservation (DEC).

The assessment will recommend measures that are effective, economical, and environmentally appropriate for substantially reducing or preventing flooding and the assessment design to provide for future projects. A detailed implementation strategy for the assessment mitigation measures will also be developed, including preliminary design and cost benefit analysis.



# Hardening of Wastewater Treatment Plant and Facilities through Physical Protective Measures

## Proposed Project

E

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

PROPOSED PROJECT

**Hardening of Wastewater Treatment Plant and Facilities through Physical Protective Measures**



### KEY FACTS

#### PROJECT LOCATION

Wastewater Treatment Plant, at the end (north) of Ridge Avenue

#### ESTIMATED COST

\$450,000

#### RECOVERY SUPPORT FUNCTION

Infrastructure Systems

### PROJECT INFORMATION

The Village's wastewater treatment plant flooded during Hurricane Irene and other large meteorological events. This project proposes to protect the wastewater treatment plant and related facilities through appropriate physical protective measures such as installing flood doors and other floodproofing to help prevent water intrusion. The project will include two phases:

- (1) Conduct an engineering assessment of the facilities to assess the opportunities to harden against future flooding and recommend protective measures; and
- (2) Implement recommendations from the engineering assessment, as well as the following previously identified improvements:
  - a) The design and installation of electrical modifications; and
  - b) The design and installation of six flood doors, including a garage door, three windows and three vents.

Electrical equipment in the Village's wastewater treatment plant has been damaged or destroyed during past flood events including Hurricane Irene, an electrical control gear and a breaker for the plant will be replaced with new equipment that will be relocated/retired to safe height above finished floor in the process building.





# Proposed Project

# Homeowner Buyout Program Support and Economic Development Plan

# G

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

PROPOSED PROJECT

**Homeowner Buyout Program Support and Economic Development Plan**



## KEY FACTS

**PROJECT LOCATION**  
Village-wide

**ESTIMATED COST**  
\$94,000

**RECOVERY SUPPORT FUNCTION**  
Housing

## PROJECT INFORMATION

Identify homeowners who have experienced losses and damage due to flooding have expressed interest in participating in a homeowner buyout program. In support of the Village as the potential applicant for buyout funding and the residents who might choose to participate in such a program, the project will include hiring a consultant to (i) research various buyout and relocation program opportunities available at the State, and Federal level applicable to Suffern residents and identify eligible properties, and (ii) administer the buyout program including coordination of document submissions from interested property owners to the grantor and assist the Village with the preparation of materials needed to support a grant application(s).

This project also includes conducting an economic development study to explore economic development opportunities and generating an economic development plan following the homeowner buyout program. This economic development plan will identify potential development opportunities within the Village to offset the loss of tax revenues resulting from home acquisitions in the Village of Suffern.



# Proposed Project

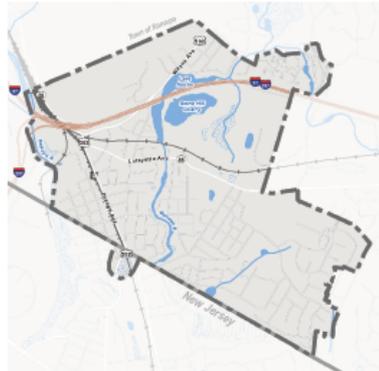
# Homeowner Support for Raising Utility Connections and Mechanicals

# H

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

PROPOSED PROJECT

**Homeowner Support for Raising Utility Connections and Mechanicals**



## KEY FACTS

### PROJECT LOCATION

Village-wide

### ESTIMATED COST

\$35,000

### RECOVERY SUPPORT FUNCTION

Housing

## PROJECT INFORMATION

During storm events such as Hurricane Irene, flooded basements cause the loss of utility connections and mechanical equipment (furnaces, hot water heaters, electrical panels, washers/dryers, etc.). To limit these types of losses in the future, the Village will encourage homeowners in areas susceptible to flooding (Suffern Cove, Lake Antonine area, etc.) to consider raising utility rooms and mechanicals out of the basement. It is anticipated that this project will be laid out in three steps:

- (1) Village hires an architect to provide various schematic plan options for raised utility rooms within structures or appended to main structure of a home;
- (2) Homeowners that use preapproved schematic plans can fast forward through the approvals process; and
- (3) Village helps identify funding sources for the retrofits of existing homes.



# Inventory of Existing Stormwater Management Infrastructure

## Proposed Project

### SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

#### PROPOSED PROJECT

#### Inventory of Existing Stormwater Management Infrastructure



#### KEY FACTS

##### PROJECT LOCATION

Village-wide

##### ESTIMATED COST

\$225,000

##### RECOVERY SUPPORT FUNCTION

Community Planning and Capacity Building

#### PROJECT INFORMATION

The Village of Suffern has no comprehensive database or map of stormwater related infrastructure. The Suffern Department of Public Works (DPW) currently uses the Rockland County Geographic Information Systems (GIS) database that maps only existing catch basins; no other information such as site date of installation, inspection, and maintenance schedules for replacement or upgrades has been documented. In addition, manhole cover, catchbasin and other connections with the conveyance system are not stored electronically or mapped. This project will provide funding to supplement the existing Village data within the County GIS database with information on condition and location of critical stormwater management infrastructure, such as manholes, culverts, detention basins, pipes and other storage, detention, retention and conveyance systems. A vendor will be hired to conduct the inventory and develop a monitoring system. The data will be provided to the County for incorporation into its database. The system will also be used to track the status of individual projects through fiscal design, permitting, construction, inspection, maintenance and performance monitoring, as well as used track various funding initiatives and grant programs to evaluate success. It is important to note that an assessment of existing conveyance ridges as they relate to flooding was suggested by the New York State Department of Environmental Conservation (NYS DEC) as a result of their review of this project.



# Village-wide Stormwater Management: Green Infrastructure and Storage Systems Feasibility Study

## Proposed Project

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

### PROPOSED PROJECT

**Village-wide Stormwater Management: Green Infrastructure and Storage Systems Feasibility Study**



### KEY FACTS

#### PROJECT LOCATION

Village-wide

#### ESTIMATED COST

\$900,000

#### RECOVERY SUPPORT FUNCTION

Natural and Cultural Resources

### PROJECT INFORMATION

The existing stormwater management and conveyance systems, and the lack thereof in certain areas, exacerbated flooding during Hurricane Irene along the shores of the Village by discharging large volumes of uncontrolled and untreated stormwater runoff directly into the already taxed surface waters. To minimize the flow of uncontrolled stormwater to the Village during future storm events, the project proposes to conduct a feasibility study to determine appropriate locations to implement green infrastructure practices and other stormwater management systems throughout the Village. The study will recommend specific measures such as infiltration beds, rain barrels, green roofs, green streets, vegetated swales, tree pits, tree boxes, tree retention curb extensions, stream buffer enhancements, and porous pavement to better manage stormwater. The focus will be on areas where stormwater runoff is not currently being managed adequately, to reduce runoff in the Village and to the adjacent rivers and lakes. This will include downtown area, public, public parking lots (other than Lots A and B), older and newly developed lots, and Village-owned properties. The goal of the project is to provide storage, infiltration, and treatment of stormwater, as well as to intercept and reduce the volume and velocity of stormwater discharge to the Ramapo and Ramapo Rivers. Once completed, the Village will look to implement the study's recommendations beginning with 25,000 SF of porous pavement, 1,000 SF of rain gardens and 500 SF of treeboxes.

### Porous Pavement Cross-Section

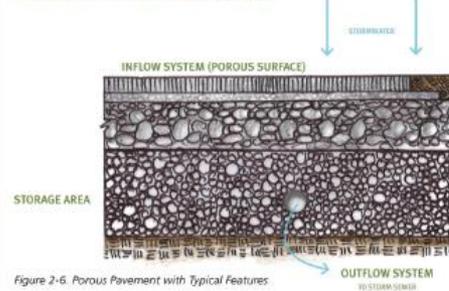


Figure 2-6. Porous Pavement with Typical Features



# Featured Project

# Stormwater Management Facilities in Village Parking Lots A and B

# K

SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM  
FEATURED PROJECT  
**Stormwater Management Facilities in Village Parking Lots A and B**



## KEY FACTS

**PROJECT LOCATION**  
Village Parking Lots A and B

**ESTIMATED COST**  
\$1,920,000

**RECOVERY SUPPORT FUNCTION**  
Infrastructure Systems

## PROJECT INFORMATION

This project will reduce stormwater runoff and associated flooding by assessing the feasibility of the installation of underground stormwater systems with controlled flow orifices and/or green infrastructure practices at Village parking lots A and B. Parking Lot A is on the west side of the intersection of Wayne Avenue and Orange Avenue and is approximately 60,000 square feet. Parking Lot B is located on the east side of Clamont Avenue, north of Lafayette Avenue (NY 89) and is approximately 60,000 square feet. Green infrastructure measures such as permeable pavement, vegetated curbs and rain gardens will be evaluated along with the potential for an underground storage system. This project will include two phases:

- (1) An engineering feasibility analysis; and
- (2) Design and implementation of recommended stormwater management facilities.



# VFW Building Emergency Power and Electrical Upgrades

## Featured Project



SUFFERN NY RISING COMMUNITY RECONSTRUCTION PROGRAM

FEATURED PROJECT

**VFW Building Emergency Power and Electrical Upgrades**



### KEY FACTS

#### PROJECT LOCATION

Veterans of Foreign Wars Building,  
16 Ramapo Ave., Suffern, NY

#### ESTIMATED COST

\$180,000

#### RECOVERY SUPPORT FUNCTION

Health and Social Services

### PROJECT INFORMATION

The Village is working to acquire the Veterans of Foreign Wars (VFW) facility located at 16 Ramapo Ave. in the West Ward neighborhood. The building will act as a storm response and short-term shelter, cooling center and reception area for Village residents. Residents in the West Ward neighborhood are vulnerable to isolation when access roads are inundated by floodwaters. During Hurricane Irene, residents were not able to access the existing shelter at the Suffern Community Center. Providing an accessible shelter and appropriate community services to West Ward residents during storms is critical due to the neighborhood's susceptibility to isolation from the rest of the Village during flood events. This project will fund the design services for and the installation of a permanent generator, associated fuel storage tank, and related upgrades to the electrical system.





# Implementation & Next Steps

# Transition from Planning to Implementation

- Project Implementation
  - Governor's Office of Storm Recovery will assume lead in implementation by:
    - Reviewing proposed projects against CDBG-DR eligibility criteria;
    - Selecting a "first mover" project;
    - Identifying local entity to become subrecipient, establish partnership and begin agreement process;
    - Further defining scoping of project; and,
    - Pursuing additional funding sources.





Questions



# Overview of the Open House

# Around the Room

- NYRCCR Suffern Final Plan Cover
- Vision Statement, Goals and Objectives
- Map of Community Assets and Systems
- Profiles of Proposed and Featured Projects
- Profiles of Additional Resiliency Recommendations
- Project Location Map





Thank You

<http://stormrecovery.ny.gov/nyrcr/final-plans>