

DRAFT
Floodplain Management & Wetland Protection Plan

Governor's Office of Storm Recovery
U.S. Department of Housing and Urban Development
Community Development Block Grant – Disaster Recovery

Town of Union Patterson Creek Stream Bank Restoration Project
Town of Union, New York

Broome County, New York

Draft Date: May 20, 2016

**Executive Order 11988 – Floodplain Management
Executive Order 11990 – Protection of Wetlands**

Governor’s Office of Storm Recovery

Community Development Block Grant – Disaster Recovery

**Town of Union Patterson Creek Stream Bank Restoration Project
Town of Union, New York**

Broome County, New York Effective Date: May 20, 2016

This Floodplain Management and Wetlands Protection Plan meets the requirements of 24 CFR Part 55.20 and Executive Orders 11988—Floodplain Management and 11990—Protection of Wetlands - for the Town of Union Patterson Creek Stream Bank Restoration Project (Project) in the Town of Union, Broome County, New York. This Floodplain Management Plan documents the eight-step decision making for the Project and pertains to activities within the Special Flood Hazard Area (SFHA) as defined by the Federal Emergency Management Agency (FEMA), or its successors, pursuant to the National Flood Insurance Program (NFIP), or a successor program, whether advisory, preliminary, or final and wetlands as defined by 24 CFR 55.2(b)(11).

Description of Proposed Program Activities

The New York State (NYS) Governor’s Office of Storm Recovery (GOSR), an office of the New York State Housing Trust Fund Corporation, is the “responsible entity” in charge of administering New York State’s share of the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program pursuant to the Disaster Relief Appropriations Act of 2013. The CDBG-DR program is designed to address the needs of New York State (NYS) communities devastated by Superstorm Sandy. To date, this funding has been disbursed in three allocations. On March 5, 2013, HUD published Federal Register Notice 78 Fed. Reg. 14329, which established the requirements and processes for the first \$1.71 billion in federal CDBG-DR aid appropriated by the United States Congress and allocated to NYS for disaster relief. On November 18, 2013, HUD issued a second allocation of \$2.097 billion to NYS under Federal Register Notice 78 Fed. Reg. 69104. On October 16, 2014, HUD issued the third and final allocation of \$600 million to NYS under Federal Register Notice 79 Fed. Reg. 62194.

The Governor’s Office of Storm Recovery (GOSR) is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with HUD regulations under 24 CFR Part 55 - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that Project activity in the floodplain and wetlands would have on the human environment.

The Town of Union is requesting funding from GOSR for the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed

slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The project to be funded with up to approximately \$300,000 from the CDBG-DR program.

Executive Orders 11988 and 11990 & 24 CFR Part 55

Pursuant to 24 CFR §55.20, an 8-step process for floodplain management must be completed for proposed actions taking place in a floodplain or wetland. 24 CFR §55.20 implements Executive Order (EO) 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands). EO 11988 requires federal agencies (or a state agency implementing a federal funding program) to reduce the loss of life and property caused by floods, minimize impacts of floods on human safety, health, and welfare, and preserve the natural and beneficial functions of floodplains. EO 11990 requires federal agencies (or a state agency implementing a federal funding program) to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

In addition, federal agencies are required to demonstrate that consideration of all practicable alternatives has resulted in the reduction or elimination of long- and short-term adverse impacts associated with occupancy and modifications of the floodplain or wetlands. This 8-step process includes assessing all practicable alternatives and incorporating public review.

Projects located within a Special Flood Hazard Area (SFHA) are subject to Executive Order 11988. Information on where SFHAs are located is available on Flood Insurance Rate Maps (FIRMs) published by FEMA. FEMA uses engineering studies to determine the delineation of these areas or zones subject to flooding. The relevant data source for the SFHA is the latest issued FEMA data or guidance, which includes advisory data, such as Advisory Base Flood Elevations (ABFEs) or preliminary and final FIRMs.

24 CFR Part 55.20 Eight-Step Process

Step One: Determine if a Proposed Action is potentially in a wetland or a floodplain

GOSR is proposing to fund the proposed action within the 100-year Floodplain, as indicated by Flood Insurance Rate Map 3600560025B (see **Exhibit 1**). Projects located within a Special Flood Hazard Area (SFHA) as defined by FEMA are subject to EO 11988. The proposed project is not located in a state or federal designated wetland. Although the project is not located in a designated mapped wetland, it will still adhere to and be in compliance with the guidelines and regulations of Executive Order 11990, in order to minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

Step Two: Notify public at the earliest possible time of intent to carry out Proposed Action in a floodplain or wetland, and involve the affected and interested public in the decision-making process

Since the Proposed Action would be located in the floodplain, GOSR must publish an early notice that allows the public an opportunity to provide input into the decision to provide funding for the project. Once the early public notice and comment period is complete, GOSR will assess, consider, and respond to the comments received individually and collectively for the project file.

A 15-day “Early Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain and Wetland” was published in the Binghamton Press & Sun-Bulletin on April 27, 2016. The 15-day period expired on May 13, 2016. (see **EXHIBIT 2**)

Step Three: Identify and evaluate practicable alternatives to locating Proposed Action in a floodplain or wetland

There was a hydraulic analysis performed for Patterson Creek. The study analyzed the hydraulic capacity and identified deficiencies of the existing drainage system and the existing stream channel. The study investigated conceptual approaches and recommendations regarding projects to be undertaken. If the proposed action is not followed and an alternative for doing nothing is selected, then erosion will continue to destroy the stream banks. When selecting the proposed action, possible activities and locations were limited due to constraints from the locations of private property lines as well as the slopes present along the edges of the stream. The proposed action was selected as the best means of preventing continued erosion.

Addressing the streambed sedimentation requires work within the floodplain and in the adjacent wetlands along the stream corridor. There are no federal or state mapped wetlands in the project area, however, unmapped riparian buffer is presumed to exist along the Patterson Creek corridor. There are no alternatives that do not involve work in this area.

Step Four: Identify and evaluate the direct and indirect impacts of the Proposed Action

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream. The temporary disturbance to the stream is not expected to have any significant negative affect on this riparian buffer area.

Step Five: Where practicable, design or modify the Proposed Action to minimize the potential adverse impacts to and from the 100-year and to restore and preserve its natural and beneficial functions and values

Proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project will help to strengthen the existing drainage system and resolve existing problems. As revealed by the hydrologic and hydraulic study, the construction of the proposed project would not impact the 100-year floodplain adversely, but rather, would reduce problems associated with sedimentation. The natural and beneficial functions and values will be undisturbed and preserved. Benefits will be achieved without the creation of impacts or disturbance.

Step Six: Re-evaluate the Proposed Action

The proposed action has been examined and analyzed, and it has been determined that it is the most beneficial action with the least amount of impact to the environment.

Step Seven: Prepare and provide the public with a finding and explanation of final decision that the floodplain or wetland is the only practicable alternative

The project involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit.

A 7-day "Final Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain and Wetland" was published in the Binghamton Press & Sun-Bulletin on May 18, 2016. The 7-day period expired on May 25, 2016. (see **EXHIBIT 3**)

Step Eight: Implement the Action

GOSR has determined that the proposed project will have no direct or indirect adverse impacts to the floodplain and has evaluated and eliminated project alternatives in favor of proceeding with the proposed project. Prior to construction, the Town of Union must apply for and receive a Floodplain Development Permit from the appropriate local floodplain administrator(s).

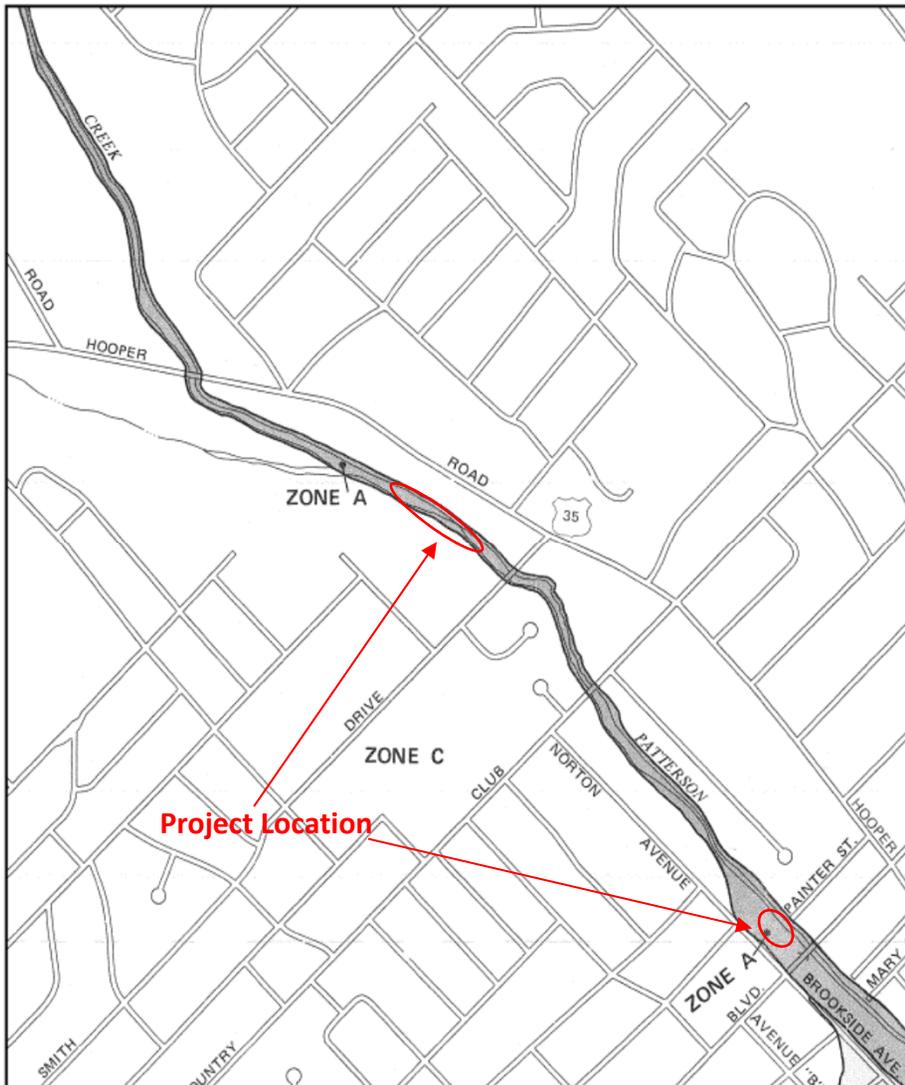
EXHIBITS

EXHIBIT 1 Floodplain Map

EXHIBIT 2 Copy of Early Notice

EXHIBIT 3 Copy of Final Notice

EXHIBIT 1
FLOODPLAIN MAP



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
TOWN OF UNION,
NEW YORK
BROOME COUNTY

PANEL 25 OF 35
 (SEE MAP INDEX FOR PANELS NOT PRINTED)

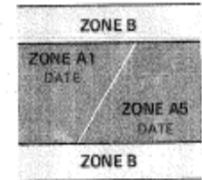
COMMUNITY-PANEL NUMBER
 360056-0025-B
 MAP REVISED
 NOVEMBER 21, 1980



federal emergency management agency
 federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

KEY TO SYMBOLS



ZONE DESIGNATIONS* WITH DATE OF IDENTIFICATION
 i.e., 12/2/74

- Base Flood Elevation Line with elevation in feet: 513
- Base Flood Elevation where uniform within zone: (E.L. 087' MSL)
- Elevation Reference Mark: RM7 x
- River Mile: M1.5

***EXPLANATION OF ZONE DESIGNATIONS**

A flood insurance map displays the zone designations for a community according to areas of designated flood hazards. The zone designations used by FIA are:

Zone	Explanation
A	Area of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Area of 100-year shallow flooding; flood depth 1 to 3 feet; product of flood depth (feet) and velocity (feet per second) less than 15.
A1-A30	Area of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Area of 100-year flood to be protected by a flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Area between limits of 100-year flood and 500-year flood; areas of 100-year shallow flooding where depth less than 1 foot.
C	Area outside 500-year flood.
D	Area of undetermined, but possible, flood hazards.
V	Area of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V0	Area of 100-year shallow flooding with velocity; flood depth 1 to 3 feet; product of depth (feet) and velocity (feet per second) more than 15.
V1-V30	Area of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

**Patterson Creek Stream Bank
 Restoration Project**
 Union, New York



Flood Insurance
 Rate Map

EXHIBIT 2 – COPY OF EARLY NOTICE

EARLY NOTICE AND PUBLIC EXPLANATION OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND

TOWN OF UNION BRIXIUS CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY

TOWN OF UNION PATTERSON CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY

Thomas King, Assistant General Counsel and Certifying Officer
Governor's Office of Storm Recovery
99 Washington Avenue, Suite 1224
Albany, NY 12260

NOTIFICATION OF ACTIVITY IN A FLOODPLAIN

To: All interested Agencies, Groups, and Individuals

This is to give notice that the Governor's Office of Storm Recovery (GOSR) is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that its activities in the floodplain and wetland would have on the human environment.

Brixius Creek Stream Bank Restoration

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Brixius Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project involves the placement of heavy stacked stone to mitigate soil erosion along approximately 790 feet of Brixius Creek beginning east of Christopher Street and ending at the western edge of N. McKinley Avenue. Three specific sections have been selected as areas where restoration efforts will be made. Improvements to the stream banks include the placement of stone fill, the construction of earth berms, and the construction of stone check dams. Work includes the construction of a 900 cubic foot debris basin with stone weirs. Also work is to include cleaning the invert of two road crossing culverts (approximately 250 lineal feet). The project involves 0.06 acres located in the floodplain, within the Village of Endicott.

Patterson Creek Stream Bank Restoration

During Hurricane Irene and Tropical Storm Lee, excessive rainfall led to flash flooding that caused the banks of the Patterson Creek to erode. The creek is in need of repair in order to increase resiliency in key areas of the creek. Bank stabilization and erosion control are required in order for the Town and residents living along the creek to recover. The proposed improvements will help mitigate damage caused by flooding in future storm events, while stabilizing stream banks, reducing erosion and decreasing sediment deposit downstream.

The project involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doweled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The project involves 0.9 acres located in the floodplain.

Funding for the projects will be provided by the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.

A floodplains map based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and New York State Department of Environmental Conservation (NYSDEC) data have been prepared for these projects and are available for review at <http://www.stormrecovery.ny.gov/environmental-docs>.

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains or wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances Federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk.

PUBLIC COMMENTS

Any individual, group, or agency may submit written comments on the proposed action or a request for further information to Thomas King, Assistant General Counsel and Certifying Officer, Governor's Office of Storm Recovery, 99 Washington Avenue, Suite 1224, Albany, NY

12260; email: NYSCDBG_DR_ER@nyshcr.org. All comments received by **May 13, 2016** will be considered.

Thomas King, Assistant General Counsel and Certifying Officer

April 27, 2016

EXHIBIT 3 – COPY OF FINAL NOTICE

FINAL NOTICE AND PUBLIC EXPLANATION OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND

TOWN OF UNION BRIXIUS CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY

TOWN OF UNION PATTERSON CREEK STREAM BANK RESTORATION PROJECT BROOME COUNTY, NY

The New York Governor's Office of Storm Recovery (GOSR), proposes to provide federal funding to the Town of Union, as Subrecipient, for stream bank restoration work to sections of Brixius Creek and Patterson Creek. GOSR, an office of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), is responsible for the direct administration of the United States Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program in New York State. GOSR proposes to provide CDBG-DR funding to the Town of Union, New York.

Brixius Creek Stream Bank Restoration

The project involves the placement of heavy stacked stone to mitigate soil erosion along approximately 790 feet of Brixius Creek beginning east of Christopher Street and ending at the western edge of N. McKinley Avenue. Three specific sections have been selected as areas where restoration efforts will be made. Improvements to the stream banks include the placement of stone fill, the construction of earth berms, and the construction of stone check dams. Work includes the construction of a 900 cubic foot debris basin with stone weirs. Also work is to include cleaning the invert of two road crossing culverts (approximately 250 lineal feet). The project involves 0.06 acres located in the floodplain, within the Village of Endicott.

Patterson Creek Stream Bank Restoration

The project involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that, within an approximate 205 foot long section of Patterson Creek, beginning 85 feet north of Watson Boulevard. Work in this section also includes the removal of three trees, removal of a low hanging branch which extends into the stream channel and acts as a debris catch, and the removal of un-vegetated gravel bars along the length of the new wall to 6 inches above the water's elevation at time of construction. The second section of Patterson Creek selected for improvements is approximately 650 feet in length, beginning 200 feet north of Smith Drive. Work in this section involves the construction of a doveled stacked stone wall to a height above the 100 year event or equal to the adjoining backyard and grassed slope above that. Work in this section also includes the removal of a failing retaining wall, as well as four trees and a piece of existing concrete sitting in the stream. The project involves 0.9 acres located in the floodplain.

Final Notification of Activities in a Floodplain: This is to give notice that the GOSR has conducted an evaluation as required by Executive Order 11988 and executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management, to determine the potential effects that its activity in the floodplain and wetland would have on the human environment.

A floodplains map based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and New York State Department of Environmental Conservation (NYSDEC) data have been prepared for this project and are available for review at <http://www.stormrecovery.ny.gov/environmental-docs>

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains or wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances Federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk.

Floodplain Management Plan: GOSR has reevaluated the alternatives to Project activities in the floodplain and wetlands and has determined that there is no practicable alternative. A full copy of the Floodplain/Wetlands Management Plan (8-step process) documenting compliance with Executive Order 11988 can be viewed online at <http://www.stormrecovery.ny.gov/environmental-docs>. Any individual, group, or agency may submit written comments on the Floodplain Management Plan to Thomas King, Assistant General Counsel and Certifying Officer, Governor's Office of Storm Recovery, 99 Washington Avenue, Suite 1224, Albany, NY 12260; email: NYSCDBG_DR_ER@nyshcr.org; or by telephone at (518) 473-0015, Monday through Friday, 9:00 a.m. to 5:00 p.m. All comments received by **May 31, 2016** will be considered.