VILLAGE OF RIDGEWOOD

FLOODPLAIN MANAGEMENT PLAN

For

National Flood Insurance Program
Community Rating System

Date: November 3, 2008

Prepared By:

_____
Christopher J. Rutishauser, P.E. No. 36373, CPWM
Director of Public Works/Village Engineer

Revision Dates: December 1, 2008,

File No. 2008 CRS/CRS 500/CRS 510/FMP2008 W_O AW501.doc

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INTRODUCTION

This plan was developed from the Disaster Mitigation Act Planning Regulations (44 CFR 201.6) (http://edocket.access.gpo.gov/cfr_2002/octqtr/pdf/44cfr201.6.pdf) and the National Flood Insurance Program, Community Rating System "Coordinator's Manual" dated FIA/2007 which expires August 31, 2010.

The Village of Ridgewood has been identified by the Federal Emergency Management Agency (FEMA) as having a repetitive flooding problem, specifically along the Ho-Ho-Kus Brook and Saddle River. FEMA has reported 10 properties that have made multiple claims. These properties have been identified as repetitive loss properties. A repetitive loss property is a property that has two or more claims of at least $1,000.00 against the National Insurance Program (NFIP) within any given ten year period since 1978. The NFIP Repetitive Loss Update Worksheets are available for review by qualified individuals in the offices of the Engineering Division.

The Village participates in the National Flood Insurance Program's (NFIP) Community Rating System (CRS), which is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

1. Reduce flood losses;
2. Facilitate accurate insurance rating; and
3. Promote the awareness of flood insurance.

Currently, The Village of Ridgewood has a CRS rating of a 7, which benefits residents an additional flood insurance discount of 15%. The Class 7 rating was recently renewed on November 4, 2008.

PHASE I: Planning Process

1.1 Organize

In the 2007 bi-annual review, the Village was required to address the properties associated with repetitive loss claims by developing a Floodplain Management Plan. This plan is only in its first draft and will evolve as future maps and studies are posted by FEMA. This plan will be developed and implemented by the Village Engineer,/Director of Public Works, Village Planner, Building Department / Code Enforcement, Office of Emergency Management, Health Department, the Village Clerk, with input from the governing body.

1.2 Involve the Public

The Floodplain Management Plan was noticed to the public for review and approved by the Village Council on November 12, 2008. The plan will be forwarded to County, State and Federal agencies for additional comments.

Since the plan is continuously being revised and updated, the public will be reminded to express their comments and suggestions during the yearly outreach newsletter sent out under the CRS 330 activity. The Engineering Division staff are well versed and available daily for the community to access information. Additional information is available at: (http://www.ridgewoodnj.net/pdf/engineering/fpm/activitiesresources/floodplainresources/2008OutreachLetterCRS330.pdf)

1.3 Coordinate

The population of the Village has remained fairly stable prior to the inception of the NFIP in 1978 from 25,391 in 1960 to 24,152 in 1990, to 24,936 in 2000. The number of dwelling units in the Village has slowly increased from 8,470 in 1980, to 8,666 in 1998, to 8,802 in 2000. The Village of Ridgewood was fully developed prior to 1978 and these increases in population and dwellings are due to minor home development, increases in condominium construction, infill subdivisions, and senior housing units. The Village, under the current zoning regulations, is 98.39% developed.

Any properties subdivided or rebuilt since 1978 have had to conform to FEMA and the New Jersey Department of Environmental Protection (NJDEP) regulations. The NJDEP has revised their floodplain regulations, effective November 1, 2007, which increased restrictions for development in the floodplain. (http://www.state.nj.us/dep/landuse/7-13.pdf)

The Village also has a "STORMWATER MANAGEMENT PLAN" required by New Jersey Department of Environmental Protection and has adopted the design and performance standards for stormwater management measures as presented in N.J.A.C. 7:8-5 to minimize the adverse impact of stormwater runoff on water quality and water quantity. The design and performance standards also address the loss of groundwater recharge to receiving water bodies. The design and performance standards include the language for maintenance of stormwater management measures consistent with the stormwater management rules at N.J.A.C. 7:8-5.8 Maintenance Requirements, and language for safety standards consistent with N.J.A.C. 7:8-6 Safety Standards for Stormwater Management Basins. These requirements were codified in the Village Code by Ordinance No. 3035.

The Municipal Stormwater Management Plan is consistent with the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21. The Village utilizes the most current update of the RSIS in the stormwater management review of applications for development that are required to appear before the Planning Board or the Zoning Board of Adjustment.

Additionally, extensive data has been collected since the inception of the NFIP. The Digital Flood Insurance Rate Map has a latest revision date of September 30, 2005. Last year, the Village reviewed a complete re-study of the Ho-Ho-Kus Brook and Saddle River which was funded by FEMA and new FIRM maps are expected to be released in a 2009. The Village also has a comprehensive collection of flood elevation certificates and a corresponding GIS map to clearly designate whether each property is located in the flood plain (http://www.ridgewoodnj.net/pdf/engineering/wsu/ActivitiesResources/MapsResources/FEMAMarch232006.pdf).

PHASE II: Risk Assessment

2.1 Assess the Hazard

The Village Of Ridgewood is affected by riverine flooding from a number of streams and has a subsequent flood plain designation associated with it;

Zone AE	**Available Flood Gage and Flow History**
Ho-Ho-Kus Brook,	(http://waterdata.usgs.gov/nj/nwis/uv?01391000)
Saddle River,	(http://waterdata.usgs.gov/usa/nwis/uv?site_no=01390500)
Goffle Brook,	
Diamond Brook	

Zone A (non-delineated stream)
Sprout Brook, a non-delineated stream behind Gateway Road.

FEMA's, DFIRM maps are available in the Engineering Division office. The maps are mounted on a wall along with a GIS map specifically locating properties within the floodplain.

The Village encompasses approximately 5.8 square miles of which 0.1 square miles or 0.86% is water by rivers, streams and ponds.

These streams are limited in capacity and tend to exceed there banks during heavy rainfall events similar to Tropical Storm Floyd on September 16, 1999 (which can be considered a 100 year flood event) and more recently during the Nor'easter on April 15, 2007 (which can be considered a 20 year storm event). Similar occurrences happened on April 05, 1984 and November 08, 1977, averaging every ten years.

As each storm event varies in duration, intensity, and inches of rainfall, runoff flow varies through each section of the stream dependant on flow restrictions i.e., bridges, culverts, dams and weirs. Preventative maintenance to keep these areas clear is the Village's primary goal in keeping flooding impact to a minimum.

The Village is subject to severe water quantity problems, including flooding, stream bank erosion, and diminished flow in the Saddle River, Ho-Ho-Kus Brook, Goffle Brook, and Diamond Brook. As a result of the impervious cover increase from upstream communities, plus minor increases from the Village, the peak volume and flows of stream flows have increased. The higher peaks and flows has resulted in some stream bank erosion, home flooding, and degraded stream corridor habitats. Lower summer base flows can have a negative impact on in-stream habitat during the summer months and dry weather periods.

2.2 Assess the Problem

7 of the 10 repetitive loss properties are located immediately on the stream bank of the water ways. These homes were developed from subdivisions prior to the 1978 NFIP inception and were not regulated and therefore are not designed to withstand a 100 year storm event of a stream surging. The three remaining locations are located in low lying areas where the stream water levels are directly related to the failure of local drainage systems. Additionally, the later three properties will be further evaluated, to ensure the insurance claim is directly related to Floodplain. (10 NFIP Repetitive Loss Update Worksheets are available for inspection by qualified individuals in the Engineering Office).

Most lands directly adjacent to major streams have been acquired by the Village as recommended in previous versions of the Village's Master Plan and any remaining undesirable or undeveloped lands have been earmarked for future purchase consideration.

Currently, there are approximately 500 homes in the floodplain of which approximately 332 homes are located on the flood fringe and have Letter of Map Amendments (LOMA) certifying their structure elevations above the 100 year floodplain elevation. Approximately 50 homes are located directly within the floodway.

PHASE III: Mitigation Strategy

3.1 Set Goals

The goal of this plan is to reduce the chance of repetitive loss to dwellings located in "high flood risk" areas of the Village.

3.2 Review Possible Activities

It is important that the Village considers all possible ways to reduce flood losses and protect the natural areas. Six categories will be used as a guideline.

a) **Preventive**
b) **Property Protection**
c) **Natural Resource Protection**
d) **Emergency Services**
e) **Structural Projects**
f) **Public Information**

3.3 Draft an Action Plan

In order to meet the Village's needs and goals to reduce the chance of repetitive loss to a dwelling, the following actions will be initiated and/or are currently being performed as part of the above activities.

a) Preventive – the Village regulates land use and development thoroughly. The review process includes a zoning review with certification of flood plain status via tax assessor's data base. If they are in the flood plain, Engineering Division requires sign-off on the building folder. Engineering provides elevation certificates from a flood plain study circa 1980. If the improvements exceed 300 square feet, the property owners are referred to NJDEP. The Building department follows the International Building Code (New Jersey Edition) 2006. The Engineering Division requires impervious surface improvements greater than 200 square feet to install a subsurface drainage system. *All of these actions are currently implemented.*

b) Property Protection – the Village is fully developed and does not have any undeveloped lands out of the floodplain for a dwelling relocation. Property acquisition is not desirable due to the loss of a ratable lot. *Elevating and retrofitting a dwelling will be addressed in future outreach newsletters as a possible mitigation solution through the Engineering Division (CRS 330).* The Village adopted an ordinance, Ord. No. 3092 on January 2008, stating that no insurance claims will be accepted by possible sewer back-ups if the dwelling does not have a functional backflow preventer system installed.

c) **Natural Resource Protection –** the Village has an extensive inventory of Green Acres / Parkland acquired through a well developed master plan that was initially prepared nearly a half a century ago. There are still properties listed to be acquired by the Village. The Village has an approved Storm Water Management Plan that is required by NJDEP and the Bergen County Planning Department. This plan includes Best Management Practices (BMP) and soil erosion and sediment control practices. An example is that the village requires that every street is to have curbs and drainage to control erosion. Larger developments that cannot meet the Village's requirements are required to improve listed problem areas other than there development as compliance. *All of these actions are currently implemented.*

d) **Emergency Services –** As part of the CRS 540 requirement, Ridgewood's Street Division checks typical drainage problem areas, "hot spots", upon notice of a pending weather event. Additionally, Ridgewood's Office of Emergency Management (OEM) is expecting to have the Hazard Mitigation Plan approved by November 2008. Additionally, Ridgewood OEM has a pre-storm meeting to prepare and organize Village personnel. *All of these actions are currently implemented.*

e) **Structural Projects –** the Village is persistently improving and extending the drainage system to control and retain "localized" flooding. There are approximately seven ponds with in the Village that are dredged on a 15 to 20 year cycle. This helps reduce flooding and enhances the health of the ponds ecosystem. After Hurricane Floyd (1999), the three major streams were dredged of their sand bars to increase the volume of the immediate channel limits and reduce bank erosion and the "ox bow" effect. A 25-year flood barrier was installed in the early 1990's to reduce the flood risk to a neighborhood of approximately 70 homes. *All of these actions are currently implemented.*

f) **Public Information –** the Village is progressive about flood awareness. There is a dedicated web page (http://www.ridgewoodnj.net/find/fpm) that has important information including the yearly outreach letter, yearly letter to realtors, a GIS map specifically locating each property that has a LOMA or is completely in the flood plain, links to local USGS flood gauges and FEMA related web links. Available elevation certificates are not yet available on the web site due to technical issues but are available via paper copy or email. All the information is duplicated in the library as part of the CRS 330 outreach program. *All of these actions are currently implemented.*

PHASE IV: Plan Maintenance

4.1 Adopt the Plan

The inaugural adoption of this plan will be on or about November 2008. This plan should be considered a working document, to be improved as conditions, information or circumstances warrant.

4.2 Implement, Evaluate, Revise

An evaluation report will be created to report the progress of the Floodplain Management Plan. The plan will evaluate the implementation, progress and any revisions that are required to keep the plan current.

The report will be updated yearly, presented to the Village Council, local media and made available to the Village residents via the website and the Engineering Division's FEMA library. At a minimum, this plan must be updated every five years.

This Floodplain Management Plan will be maintained by the Village of Ridgewood Department of Public Works, Engineering Division and is to be approved by the Community Rating System Coordinator, currently Christopher J. Rutishauser, PE #36373, CPWM, Village Engineer/Director of Public Works.

END OF PLAN

APPENDIX:

Appendix A: NFIP Repetitive Loss Update Worksheet (AW-501)

{Actual repetitive loss worksheets are available for inspection by qualified individuals only in the offices of the Engineering Division in accordance with the Privacy Act of 1974}

Appendix B: Resolution No. 08-290, Floodplain Management Plan Title 59

Appendix C: Verification Report, Class 7, November 4, 2008

APPENDIX A

APPENDIX B

Res. No. 08-290

RESOLUTION NO. 08-290

WHEREAS, The Village of Ridgewood is currently participating in the National Flood Insurance Program Community Rating System (CRS) program, having achieved a Class Rating of 7 on October 1, 2002, which entitles residents of properties in the Flood Hazard Area to a 15 percent discount on their Flood Insurance; and

WHEREAS, for the Village of Ridgewood to maintain the Class Rating of 7, the Department of Public Works Engineering Division, must recertify bi-annually to the Insurance Services Office CRS program the Village's floodplain management efforts which include, but are not limited to, outreach programs, mitigation efforts, public information activities, and drainage system maintenance; and

WHEREAS, the Engineering Division, as part of the 2007 recertification program, was required to prepare a "Floodplain Management Plan", in accordance with the requirements of CRS and the Disaster Mitigation Act Planning Regulations (44 CFR 201.6) due to having been identified by the Federal Emergency Management Agency (FEMA) as having a repetitive flooding problem along the Ho-Ho-Kus Brook and Saddle River, and

NOW, THEREFORE BE RESOLVED, by the Village Council of the Village of Ridgewood that the Floodplain Management Plan, required as part of the Village of Ridgewood's obligations under the National Flood Insurance Program (CRS), prepared by the Village's Department of Public Works, Engineering Division, be and is hereby approved by the Village Council of the Village of Ridgewood.

This resolution is adopted pursuant to the authority of N.J.S.A 59:4-6

I hereby certify that this resolution, consisting of 1 page(s), was adopted at a meeting of the Village Council of the Village of Ridgewood, held this 12th day of November, 2008.

	Moved	Second	Ayes	Nays	Absent	Abstain
Aronsohn			X			
Killion		X	X			
Mancuso	X		X			
Kusy			X			
Pfund			X			

David T. Pfund,
Mayor

Heather A. Mailander
Village Clerk

APPENDIX C

U.S. Department of Homeland Security
500 C Street, SW
Washington, DC 20472

NOV 4 2008

FEMA

RECEIVED
NOV 12 2008
VILLAGE OF RIDGEWOOD
DEPT. OF PUBLIC WORKS

James M. Ten Hoeve
Manager, Village of Ridgewood
131 North Maple Avenue
Ridgewood, New Jersey 07450

Dear Mr. Hoeve:

The purpose of this letter is to provide you with the results of the National Flood Insurance Program (NFIP) Community Rating System (CRS) field verification findings based on your five-year cycle application. I am pleased to inform you the Department of Homeland Security, Federal Emergency Management Agency (FEMA), has determined that your community will retain its current rating as a CRS Class 7 community in the National Flood Insurance Program (NFIP) Community Rating System (CRS). The floodplain management activities implemented by your community will continue to qualify flood insurance policy holders in your community for a 15 percent discount in the premium costs for NFIP policies issued or renewed in Special Flood Hazard Areas. I am enclosing the field verification report based on your five-year cycle application for your records. This savings is a tangible result of the flood mitigation activities your community implements to protect lives and reduce property damage.

Please note Preferred Risk Policies, applicable in Zones B, C, and X, are not eligible for the CRS discount. Standard rated flood Insurance policies in Zones B, C, X, D, AR, and A99 are limited to a CRS discount of ten percent in Class 1-6 communities and five percent in Class 7-9 communities. The Standard Flood Insurance Policy rates for these zones already reflect significant premium reductions. The CRS discount is applied before the addition of the Federal Policy Fee.

If there are no NFIP noncompliance actions, the CRS rating for your community will automatically be renewed annually and a notification letter will not be sent to your community. This renewal will occur as long as your community continues to implement the CRS activities you certify each October. If no additional modifications or new CRS activities are added, the next verification visit for your community will be in accordance with its established five-year cycle or three-year cycle for CRS Class 3 or better communities. In the interim, FEMA will periodically send the "*NFIP/CRS Update*" newsletter and other notices to your CRS Coordinator to keep your community informed.

I commend you on your community actions and your determination to lead your community to be more disaster resistant. This commitment enhances public safety and property protection and protects the natural functions of floodplains as well as reduces flood insurance premiums.

If you have any questions or need additional information, please contact the FEMA Region II Office, CRS Coordinator, Richard Einhorn, by telephone at (732) 427-1543.

Sincerely,

Michael K. Buckley

Michael K. Buckley
Acting Assistant Administrator
Mitigation Directorate

Enclosure

cc: Christopher J. Rutishauser, P.E., CRS Coordinator

www.fema.gov

NFIP/CRS

COMMUNITY RATING SYSTEM

VERIFICATION REPORT

Village of Ridgewood, NJ

NFIP Number: 340067

Date of Verification Visit: October 11, 2007

Verified Class 7

Cycle

This Verification Report is provided to explain the recommendations of Insurance Services Office, Inc. (ISO) to DHS/FEMA concerning credits under the Community Rating System (CRS) for the above named community.

A total of 1592 credit points are verified which results in a recommendation that the community be classified as a CRS Class 7. The community has met the Class 7 prerequisite with a Building Code Effectiveness Grading Schedule (BCEGS) Classification of 4/3. The following is a summary of our findings with the total CRS credit points for each activity listed in parenthesis:

Activity 310 – Elevation Certificates: The Building Department maintains elevation certificates for new and substantially improved buildings. Copies of elevation certificates are made available upon request. Elevation Certificates are also kept for some post and pre-FIRM buildings. (74 points)

Activity 320 – Map Information Service: Credit is provided for furnishing inquirers with flood zone information from the community's latest Flood Insurance Rate Map (FIRM), publicizing the service annually and maintaining records. (140 points)

Activity 330 – Outreach Projects: An outreach brochure is mailed annually to all properties in the community's Special Flood Hazard Area (SFHA). The community also provides flood information through displays at public buildings. (88 points)

Activity 350 – Flood Protection Information: Documents relating to floodplain management are available in the reference section of the Ridgewood Library. Credit is also provided for floodplain information displayed on the community's website. (82 points)

Activity 360 – Flood Protection Assistance: The community provides technical advice and assistance to interested property owners and annually publicizes the service. (62 points)

Activity 410 – Additional Flood Data: Credit is provided for the state of New Jersey's regulation that limits the increase in floodways to 0.2-foot surcharge. (154 points)

Activity 420 – Open Space Preservation: Credit is provided for preserving approximately 187 acres in the Special Flood Hazard Area (SFHA) as open space. (328 points)

Activity 430 – Higher Regulatory Standards: Credit is provided for a Building Code Effectiveness Grading Schedule (BCEGS) Classification of 4/3 and for the state mandated adoption of the International Building Codes. (156 points)

Activity 440 – Flood Data Maintenance: Credit is provided for maintaining and using digitized maps in the day to day management of the floodplain. Credit is also provided for establishing and maintaining a system of elevation reference marks and maintaining copies of all previous FIRMs. (79 points)

Activity 450 – Stormwater Management: The community enforces regulations for stormwater management, freeboard in non-SFHA zones and soil and erosion control. (82 points)

Activity 510 – Floodplain Management Planning: Based on the updates made to the NFIP Report of Repetitive Losses as of July 31, 2007, Ridgewood has 11 repetitive loss properties and is a Category C community for CRS purposes. All requirements for the 2007 cycle have been met. **An adopted Floodplain Management Plan and/or a repetitive loss area analyses (per current CRS criteria) is required to be submitted on or before October 1, 2008.** (No current credit points)

Activity 540 – Drainage System Maintenance: All of the community's drainage system is inspected regularly throughout the year and maintenance is performed as needed by the Ridgewood Public Works Department. Records are being maintained for both inspections and required maintenance. The community also enforces a regulation prohibiting dumping in the drainage system. (280 points)

Activity 630 – Dam Safety: All New Jersey communities currently receive CRS credit for the state's dam safety program. (67 points)

Attached is the Community Calculations Worksheet that lists the verified credit points for the Community Rating System.

CEO Name / Address:

James M. Ten Hoeve
Manager, Village of Ridgewood
131 North Maple Avenue
Ridgewood, New Jersey 07450-3287

CRS Coordinator Name / Address:

Christopher J. Rutishauser, P.E.
Director of Public Works
131 North Maple Avenue
Ridgewood, New Jersey 07450-3287
(201) 670-5500

Date Report Prepared: March 17, 2008

Community : Village of Ridgewood, NJ **NFIP Number :** 340067

720 COMMUNITY CREDIT CALCULATIONS (Cycle):

CALCULATION SECTION :

Verified Activity Calculations:

					Credit
c310	74				74
c320	140				140
c330	88				88
c340					
c350	82				82
c360	62				62
c410	147	x CGA	1.05	=	154
c420	312	x CGA	1.05	=	328
c430	149	x CGA	1.05	=	156
c440	75	x CGA	1.05	=	79
c450	78	x CGA	1.05	=	82
c510					
c520					
c530					
c540	280				280
c610					
c620					
c630	67				67

722 Community Classification Calculation:

cT = total of above cT = 1592

Community Classification (from Appendix C): Class = 7

CEO Name/Address:

James M. Ten Hoeve
Manager, Village of Ridgewood
131 North Maple Avenue
Ridgewood, New Jersey 07450-3287

CRS Coordinator Name/Address:

Christopher J. Rutishauser, P.E.
Director of Public Works
131 North Maple Avenue
Ridgewood, New Jersey 07450-3287
(201) 670-5500

Date Report Prepared: March 17, 2008

AW-720