

HAZARD MITIGATION PLAN

Village of Rye Brook, New York

June 2007

TABLE OF CONTENTS

INTRODUCTION4

PLANNING CONTEXT5

 Location.....5

 Land Use Pattern5

 Topographic Conditions5

 Demographic Characteristics6

 Planning Process.....6

 Meeting schedule.....6

RISK ASSESSMENT.....13

 Identifying and Prioritizing Hazards13

 Hazard Scope and Impact Area.....13

 Frequency of Occurrence14

 Warning14

 Length of Hazard Event and Recovery14

 Hazard Profile.....14

 Table 1: Hazard Profile and Analysis Reference Table14

 Fire and Explosions16

 Airport/Airplane Crash17

 Transportation Accident/Hazardous Materials.....17

 Severe Summer Storm18

 Severe Winter Storm.....19

 Extreme Heat.....19

 Hurricane.....20

 Hurricane Event Track Map.....21

 Wind Zone Map.....22

 Flooding.....22

 Rivers and Streams.....24

 100 Year Flood Zones.....25

 500 Year Flood Zones.....26

 Eliminated Natural Hazards.....27

 Terrorism28

 Utility Failure28

 At-Risk Facilities and Areas.....29

 Table 2: At-Risk or Sensitive Facilities.....29

 Asset Inventory.....30

 Table 3: Inventory of Property and Structural Assets*30

 Future Building Assessment.....30

 Capability Assessment32

 Port Chester and Rye Brook Fire Departments32

 Police Department33

 Port Chester/Rye/Rye Brook Ambulance Corp.....33

 Village of Rye Brook Department of Public Works.....33

HAZARD POLICIES33

 Mission of Hazard Mitigation Plan33

Goals of Hazard Mitigation Plan 34

Existing Policies, Reports and Regulations 34

MITIGATION OBJECTIVES AND STRATEGIES..... 39

Developing Mitigation Strategies 39

Mitigation Strategies 40

 Fire and Explosions..... 39

 Airport and Airplane Crash..... 42

 Transportation Accident, Hazardous Materials (in transit)..... 41

 Severe Storms: Winter and Summer. 45

 Extreme Heat..... 47

 Hurricane..... 47

 Terrorism 48

 Utility Failure..... 43

 Stormwater Mitigation/Flooding..... 49

Potential Project List..... 50

PLAN IMPLEMENTATION AND MONITORING 55

 Hazard Plan Preparation 56

 Hazard Plan Adoption 57

 Implementation through Existing Programs 57

 Plan Monitoring and Evaluation..... 58

Appendix A 60

 Village of Rye Brook Hazard Analysis report..... 60

Appendix B 61

 HAZNY Evaluation Factors 61

Appendix C 62

 HAZNY List of Hazards..... 62

Appendix D 63

 Westchester County Airport Emergency Response Plan 63

Appendix E 64

 Rye Brook Community Disaster Preparedness plan 64

Appendix F 65

 Village of Rye Brook Vision Plan 65

Appendix G 66

 Stormwater Analysis: East Branch Blind Brook (Summary) 66

Appendix H 67

 Blind Brook-Rye School District Wide Safety Plan 67

Appendix I 68

 Port Chester Rye union Free School District wide Safety Plan 68

Appendix J 69

 Public Notices & Opportunities to Participate in Planning Process..... 69

I. INTRODUCTION

Disaster can strike quickly and without warning. The Village of Rye Brook has suffered losses associated with a variety of hazards occurring within and outside its borders. It is impossible to prevent all disaster situations, but it is increasingly apparent that taking steps to mitigate (i.e. minimize) the impact of disasters before they occur will reduce loss of life and cost of damages.

Improving a community's response and recovery from natural and man-made disasters is only the first step to alleviating the disruption they impose on daily life. Developing strategies that will increase preparedness in case disaster strikes and in some situations, actually preventing a hazard situation from developing in the village could mean saving lives and property. Strategies can be either long- or short-term goals for changes to emergency response plans. Mitigation is actually a cost-effective approach to saving a community from loss of life and property associated with vulnerability to hazards. It means taking preemptive action so that the village can have a realistic view of what might actually happen, and most importantly, supply emergency response teams with the supplies they need to act faster and prepare citizens for the worst-case scenario.

The Hazard Analysis Report (Appendix A) conducted by the Westchester County Department of Emergency Services Office of Emergency Management on July 18, 2003 identified natural and man-made disasters that currently threaten the village. The Hazard Mitigation Plan prepared by the Village of Rye Brook focuses on methods of mitigation that will

reduce exposure and vulnerability to hazards. The plan is comprehensive in that it evaluates a broad range of natural and man-made hazards and evaluates cost-effective methods of minimizing risk to life and property. The strategies are intended to be realistic in their implementation and were developed with an understanding of the existing physical and financial limitations of the community.

The Village of Rye Brook has developed a community disaster preparedness plan that focuses on emergency situations to which it is particularly vulnerable. These plans help the Police, Fire, EMS and Public Works units to be prepared for emergencies and were utilized in the development of the Hazard Mitigation Plan.

The Hazard Mitigation Plan has a long-term outlook and anticipates that many of the strategies will take years or even decades to implement. The plan has been prepared in response to the Disaster Mitigation Act of 2000(P.L. 106-390), which requires that local governments have an approved Hazard Mitigation Plan to be eligible to participate in the Hazard Mitigation Grant Program (HMGP). In addition, the development of this plan fulfills other Federal Emergency Management Agency (FEMA) planning requirements making the village competitive for additional mitigation grants.

II. PLANNING CONTEXT

A. Location

The Village of Rye Brook is located within the Town of Rye in southeastern Westchester County, approximately 15 miles northeast of New York City. The 3.5 square mile village is bounded on the east by the Village of Port Chester and the Town of Greenwich, Connecticut; on the west by the Town of Harrison; on the south by the City of Rye and on the north by the Town of North Castle.

B. Land Use Pattern

Rye Brook is predominately a middle to upper class residential community. More than one-third of its approximately 2230 acres is designated in this category. Almost 80% of the residential dwellings are single-family detached.

Almost 200 acres of the Westchester County Airport is located in the village making it the largest single land use in Rye Brook. The village lies directly in the airport's flight path, which has approximately 500 airplane landings and departures per day.

There are 3 shopping centers, 2 hotels, 3 major office developments, and 3 assisted living/ nursing homes.

C. Topographic Conditions

The topography of the Village of Rye Brook varies from a low of approximately 60 feet above sea level immediately south of Bowman Avenue to a high of approximately 405 feet above sea level at the community center adjacent to the village green located in the BelleFair residential community off King Street and Lincoln Avenue. The village is generally level but does contain isolated pockets of steep slopes including areas along North and South Ridge Streets, Lincoln Avenue and within the BelleFair community.

D. Demographic Characteristics

The village has a population of approximately 9400 persons (2004 Census Update). It is one of the fastest growing communities in Westchester County. The median age of the population is approximately 41 years with 17.3% over 65 years old and 7.8% under 5 years of age. The village's population lives overwhelmingly in single-family owner-occupied homes (86.2%). The median household income (2000) was \$98,864 with only 1.8% of its families having incomes below the poverty level. The average price paid for a residence in 2004 was \$760,859.

E. Planning Process

The creation of this Hazard Mitigation plan was a process involving many different participants. The Village of Rye Brook used many different resources, from Westchester County officials to other Municipalities in Westchester for ideas, inspiration, guidance, direction and support in order to create the most complete mitigation report.

In order to get feed back on our mitigation plan, Westchester County officials provided guidance on issues they believed were important to the area as a whole, and specifically Rye Brook. These officials from the Westchester County Department of Emergency Services were an invaluable resource for many questions posed during the completion of this plan.

We also reviewed many other municipal Hazard Mitigation Plans while developing this one. We conferred with the City of Rye's plan, as well as Mt. Vernon's, Yonkers', Peekskill's and Yorktown's. These plans promoted ideas to improve our plan, as well as providing greater knowledge of many natural and technological hazards.

Cooperation also extended to both school districts within the Village of Rye Brook. The Blind Brook-Rye School District Wide Safety Plan, as well as the Port Chester Rye Union Free School District Wide Safety Plan are included in the appendix of this plan. Each school district plan was consulted in order to better understand and complement each their respective plans.

F. Public Involvement

The Public was provided the opportunity at several times during the creation of this plan to provide input. The plan's creation was mentioned in the Mayor's Newsletter to elicit public involvement as well as the creation on June of 2005 of a special 'Blogging' section on the website for comments and suggestions to the plan. The plan was available at Village Hall and over the internet for residents to read and submit comments. The local newspaper was aware of the plan and had a small blurb pointing residents to the website to comment on its creation.

G. Neighboring Communities and Involved Agencies

The following communities and agencies were made aware of the creation of the mitigation plan, and received copies of draft plans.

Agencies

- New York State Emergency Management Office
- Westchester County Office of Emergency Management
- Westchester County Red Cross

Neighboring Communities

- City of Rye
- Town/Village of Harrison
- Town of Greenwich, Connecticut
- Village of Port Chester

Academia

- Blind Brook Union Free School District
- Port Chester Rye Union Free School District

Other Interested Parties

- Westchester County Airport
- RPW/Reckson group
- Doral Arrowwood
- Rye Town Hilton

All these agencies were invited by letter. Each one received a copy of the plan with an opportunity to comment. They were also invited to attend the Planning Team meetings and provide comment through the Internet. None of these parties chose to participate in the process.

H. Other plans

The Planning Team referenced the information from the following plans as they developed the Hazard Mitigation Plan. The personnel reviewed all the documents before this plan began and was able to integrate various information into this document.

Village of Rye Brook and Westchester County Policies

Rye Brook Disaster Preparedness Plan

The Disaster Preparedness Plan is a guide for action during a major emergency. These operating procedures were last updated in February 2004 and include response systems for many of the hazards addressed in the report. Additionally, Chapter 243 of the Village of Rye Brook Code (Water Supply Emergency) provides guidelines for response and action in the event of a large-scale disruption of water services. The village and Nextel Wireless Network have been working to develop an agreement to erect a multi-carrier facility to enhance cellular phone communications so that emergency personnel will be able to communicate more easily. See Appendix E.

HAZNY

The Hazard New York program, sponsored by NYSEMO, produced a Hazard Analysis Report of the community. HAZNY is an automated interactive spreadsheet that asks specific questions on potential hazards in a community. The program also records and evaluates the responses to these questions. HAZNY also includes historical and expert data on selected hazards. See Appendixes A-C.

Rye Brook Vision Plan

In early 1999, the village embarked on a citizen based community-visioning process as an outgrowth of a series of town meetings organized by the Mayor and Trustees. Under the leadership of the Rye Brook Planning Board, it was determined to undertake a vision plan process that went beyond traditional master land-use planning.

The Rye Brook Vision Plan was completed in 2000. It is a policy statement that established a vision and specific action strategies for the future of the village across a broad range of issue areas. The plan emphasizes maintaining, enhancing and protecting Rye Brook's unique features to the greatest extent possible. See Appendix F.

Fire Prevention

Chapter 91 of the Village of Rye Brook Code establishes regulations, consistent with nationally recognized good practice, for the safeguarding, to a reasonable degree, of life and property from the hazards of fire and explosion arising from the storage, handling, and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises.

Chapter 212 of the Code, adopted in 1997, requires that all new buildings be equipped with sprinkler systems. All pre-existing commercial buildings were required to be sprinklered by June 30, 2004. Pre-existing attached residential units must install sprinklers upon substantial (50%) alteration.

Storm Water Management Plan

In 2002, Rye Brook engaged Dolph Rotfeld Engineering, P.C. to study the drainage in the East Branch Blind Brook Watershed. The study identified opportunities to improve drainage and reduce localized flooding at several locations in the village. See Appendix

School District Wide Safety Plans

The Blind Brook-Rye School District and the Port Chester Rye Union Free School District have both developed district wide safety plans to guide their response to emergencies and violent incidents within the schools. See Appendixes H & I.

Westchester County CEMP Exercise and Incident Command System Overview

The Comprehensive Emergency Management Plan (CEMP) provides general, all-hazard management guidance, using existing organizations, to allow the County to meet its responsibilities before, during and after emergencies and disasters.

Westchester County Non-Point Source Management Plan

Westchester County Non-Point Source Management Plan (1998) was produced in accordance with the "Report and Recommendations (1993)" of the County Executive's Citizen's Committee on Non-Point Source Pollution in Long Island Sound. The document is divided into two sections. The first contains the recommended action plan for the Watershed Advisory Committee 3 (WAC-3) study area of the Long Island Sound watershed. The second assesses specific water quality protection techniques recommended in the first section. The principles of this plan have been endorsed by all of the municipalities that were in the WAC-3 study area. Some of the projects have been implemented including stream bank stabilization.

Westchester County Stream Control Law

Enacted by the County in 1956 to address flooding concerns, the Stream Control Law 17 allows the County Department of Public Works to establish channel lines and grades for streams by filing an order with the County Clerk after performing required studies and investigations, preparing a map showing channel lines and grades, and holding a public hearing. The effect of filing an order establishing channel lines and grades is that any person or municipality planning to do work within those lines, or 100 feet there from must apply to the County Commissioner of Public Works for a permit.

The purpose of the law is to prevent obstruction of channel flows and deterioration of stream channels, but its jurisdictional reach is limited. The law was not designed to comprehensively manage stormwater runoff from new development, or prevent increased flood flows or damage from excess runoff. However, for projects that require a permit, conditions may include requiring zero-increase in runoff, constructing structures above the FEMA 100- year base flood elevation, and erosion controls.

The Stream Control Law applies to 38 miles of stream segments throughout the county, the last of which was added to the program in 1965. Less than 25% of all eligible stream channel lines have been established, primarily due to the expense involved and local concerns. Four miles of Blind Brook are included under the law.

New York State Mitigation Plan
City of Rye Mitigation Plan
City of Mount Vernon Mitigation Plan
City of Peekskill Mitigation Plan
City of Yonkers Mitigation Plan
Village of Croton-on-Hudson Mitigation Plan
Westchester County Mitigation Plan

The following websites were consulted in the preparation of this plan

National Weather Service

weather.noaa.gov

Winter Storms

www.nws.noaa.gov/om/brochures/wntrstm.htm

Severe Summer Storm

www.weather.com/newscenter/stormwatch/?from-footer-139k

www.wunderground.com/severe.asp

Heat

www.bt.cdc.gov/disaster/extremeheat

www.bt.cdc.gov/disaster/extremeheat

1. Meeting Schedule and Discussions

June 18, 2003 – The Village of Rye Brook Hazard Analysis Report was created by the Westchester County Department of Emergency Services, Office of Emergency Management.

December 11, 2003 – The Village of Rye Brook’s grant application for an All-hazard Mitigation Plan was awarded by the New York State Emergency Management Office.

January 12, 2004 – The Village of Rye Brook was formally notified by a letter from the NYSEMO Director.

April 27, 2004 – The Village signed an agreement with SEMO; this agreement was signed by NYSEMO's Grants Manager on May 18, 2004.

July 21, 2004 – Meeting with Mary Ann Basile, Mark Ferrari, Nadine Macura and Thomas Abbati of NYSEMO to go over in detail what the project is, the timeline, and what needs to be accomplished in order to get NY State approval of the Mitigation Plan.

August 5, 2004 – Extension on the Mitigation Plan was granted from September 30, 2004 to September 30, 2005.

November 8, 2004 – Searched for possible consultants to assist in the development of this plan.

March 29, 2005 – Former City Manager of Rye, Frank Culross was contacted about doing the study for \$12,000.

April 11, 2005 – Frank Culross agreed to conduct the study for \$12, 000.

April 20, 2005 – Conference call with Radworth Anderson, Thomas Abbati, Mark Ferrari and Keith Rang, Asst. to Village Administrator notifying them of the decision to hire Frank Culross as the Village Consultant for the preparation of the Hazard Mitigation Plan.

April 26, 2005 – A resolution and contract was adopted by the Board of Trustees to retain Frank Culross for services to compile a Hazard Mitigation Plan/study for the Village of Rye Brook.

May 24, 2005 – Meeting with Frank Culross and Keith Rang to go over the timeline and goals of the project and set dates and times of bi-weekly meetings for a Hazard Mitigation Plan Steering Committee.

May 27, 2005 – Village Administrator, Christopher Bradbury appointed certain members of the Village Staff to the Hazard Mitigation Plan Steering Committee. These members included the Village Administrator and his assistant, Village Engineer/Public Works Superintendent, Acting Building Inspector, EMS Administrator, Chief of Police and Fire Chief.

June 1, 2005 – Quarterly Mayor's Letter to all Rye Brook residents stated that the Village "has hired a consultant, through a grant, to prepare a Hazardous Mitigation Plan. This plan will include an assessment of the Village of Rye Brook's risks and vulnerabilities to potential hazard events, a strategy for minimizing those risks, and an action plan to implement the objectives of the plan.

June 7, 2005 – First meeting for the Hazard Mitigation Plan Steering Committee.

Village Administrator
Asst. to Administrator
Village Engineer/Public Works Director
Acting Building Inspector, Absent
EMS Administrator
Chief of Police
Fire Chief

Discussion items included deadlines and goals, reviewed and commented on the six top hazards in Rye Brook, and discussed current laws that would be beneficial to include within the report.

June 9, 2005 – Village “BLOG” website created in order for the public to provide feedback on the Hazard Analysis Report as well as the development of the Mitigation Plan. This was also mentioned in the Mayor’s newsletter and at Board Meetings.

June 21, 2005 – Further reviewed the Hazard Analysis Report and also reviewed the first draft of the Hazard Mitigation Plan. Committee also identified all at risk facilities located within the Village of Rye Brook.

Village Administrator
Asst. to Administrator
Village Engineer/Public Works Director
Acting Building Inspector, Absent
EMS Administrator
Chief of Police, absent.
Fire Chief
Police Lieutenant

July 5, 2005 – Reviewed the updated draft version of the Hazard Mitigation Plan and further analyzed risks and how to mitigate them.

Village Administrator
Asst. to Administrator
Village Engineer/Public Works Director
Acting Building Inspector
EMS Administrator
Chief of Police
Fire Chief

July 19, 2005 – Reviewed the updated draft version of the Hazard Mitigation Plan and further analyzed risks and how to mitigation them.

Village Administrator
Asst. to Administrator
Village Engineer/Public Works Director

Acting Building Inspector
EMS Administrator
Chief of Police, absent.
Fire Chief

August 2, 2005 – Reviewed the updated draft version of the Hazard Mitigation plan and further analyzed risks and how to mitigate them.

The member of the Planning Team responsible for updates to the plan left the community. Records indicate August 3, 2006 as the next meeting.

August 3, 2006 – Reviewed the plan and went through crosswalk to identify areas of improvement that needed to be made to the plan.

Village Administrator
Asst. to Administrator
Village Engineer/Public Works Director
Nadine Macura, NYSEMO Regional Planner
Neil Sweeting, Westchester County Emergency Planner

February 6, 2007 – Reviewed updates to plan, went through revised crosswalk for further updates.

Asst. to Administrator
Nadine Macura, NYSEMO Regional Planner

III. RISK ASSESSMENT

A. Identifying and Prioritizing Hazards

For the purposes of this report hazards were evaluated and ranked based on a credible worst-case event in order to support the preparation of materials that will be valuable in all situations. See Appendix B for the HAZNY evaluation factor descriptions and Appendix C for the HAZNY list of hazards.

1. Hazard Scope and Impact Area

The hazard's scope or impact area changes depending on the hazard event. Certain events cannot be anticipated within a specific location or in multiple specific locations throughout the village, not necessarily simultaneously. Other hazards will impact the entire village and others have an impact area much larger, like the entire county, tri-state area, or northeastern states. Hazards such as explosions, fires, power failure, and weather related incidents could occur in any part of the village in specific locations. Flooding events are geographically defined. Spills associated with hazardous materials in transit are most likely to occur in transportation corridors, but spills at fixed sites are more likely to occur at individual locations. The impact needs to be evaluated including the possibility that one hazard has the capability to trigger additional hazards. A severe winter storm will likely result in increased transportation accidents, while other seasonal storms may cause flooding.

2. Frequency of Occurrence

Each hazard is classified in terms of its frequency of occurrence. History is a good indicator of future events and was reviewed in making the selection. Information regarding frequency was based upon best available historical hazard event data and recent development and changes in the environment and economy of the village.

- Rare occurs once every 50 years.
- Infrequent occurs between once every 8 and once and every 50 years.
- Regular occurs between once a year and once every 7 years.
- Frequent occurs more than once a year.

3. Warning

The amount of warning of a hazard event is also characterized for each hazard. The amount of warning is very important because in some instances ample warning permits preparation and even prevention. In cases of no warning, response is dependent on prepared plans and procedures for response, rescue and recovery. In general natural hazards have some advance warning of at least a day or so, while man-made hazards tend to occur with little or no warning.

4. Length of Hazard Event and Recovery

Rating each hazard also depended on the expected length of the hazard event and the amount of time it would take to recover from the hazard events. As expected most hazard events have a relatively short duration, but full recovery back to pre-disaster conditions can take days or weeks.

B. Hazard Profile

All hazards in the HAZNY report were considered and included in the Table 1. There were no high hazards identified. In depth summaries of moderately high risk hazards follow. Similar hazards or hazards related by cascade effect have been combined for purposes of discussion.

Table 1: Hazard Profile and Analysis Reference Table

Hazard	Scope/Impact Area	Frequency of Occurrence	Warning	Duration:		Comments
				Length of Event	Recovery Time	
Moderately High Risk						
Fire	Large Region	Frequent	None	>1 day	1-2 days	Major fires involving large areas are not common. Serious injury /death is likely but not in large numbers.
Airport/Plane Crash	Large region	Rare	None	1 day	More than 2 weeks	Serious injury/death to extremely large numbers along with severe damage to public

						and private property is possible.
Transportation Accident	Large Region	Frequent	None	Less than 1 day	Less than 1 day	Serious injury/death is likely but not in large numbers. Limited property damage
Severe Storm	Large region	Frequent	Several Hours	Less than 1 day	3 days to 1 week	Moderate damage to private property and public facilities. Serious injury unlikely.
Hazardous Materials (in Transit)	Large Region	Frequent	None	2-3 days	More than 2 weeks	Serious injury likely but not in large numbers. Moderate damage to public and private property.
Explosion	Large Region	Infrequent	None	1 day	1-2 weeks	Serious injury/death likely but not to large numbers. Severe damage to private property. Moderate structural damage to public facilities.
Terrorism	Several Individual Locations	Rare	None	2-3 days	More than 2 weeks	Serious injury/death to large numbers. Severe damage to private property and severe structural damage to public facilities.
Utility failure	Large Region	Regular	None	2-3 day	Less than 1 day	Serious injury/death unlikely. Moderate damage to private property. Little or no structural damage to public facilities.

Moderately Low Risk

Tornado	Larger Region	Rare	None	Less than 1 day	More than 2 weeks	Serious injury/death likely to large numbers. Severe damage to private property and severe structural damage to public facilities.
Structural Collapse	Large Region	Rare	None	Less than 1 Day	More than 2 weeks	Serious injury/death likely but not in large numbers. Serious property damage
Ice Storm	Large Region	Regular	1 day	2-3 days	1-2 weeks	Serious injury/death unlikely. Moderate property damage.
Winter Storm	Large Region	Regular	1 day	2-3 days	3 days to 1 week	Serious injury/death unlikely. Moderate property damage
Oil Spill	Large Region	infrequent	None	Less than 1 day	More than 2 weeks	Serious injury/death unlikely. Moderate property damage
Extreme Temperatures	Large region	Regular	Several Days	4 days to 1 week	Less than 1 day	Serious injury/death likely but not in large numbers. Little or no property damage
Earthquake	Large Region	Rare	None	Less than 1 day	More than 2 weeks	Serious injury/death unlikely. Moderate property damage
Civil Unrest	Several individual Locations	Infrequent	None	4 days to 1 week	1-2 weeks	Serious injury/death unlikely. Little or no property damage
Flooding	Several Individual Locations	Infrequent	Several Hours	2-3 days	1-2 days	Serious injury/death unlikely. Moderate property damage
Landslide	Single Location	Rare	None	Less than 1 day	More than 2 weeks	Serious injury/death but not in large numbers Severe damage to private property. Little damage to public facilities.
Water Supply Contamination	Large Region	Rare	Several hours	More than 1 week	3 days-1 week	Serious injury/death to large numbers. Little property damage.
Drought	Large Region	Regular	Several Days	More than 1 week	Less than 1 day	Serious injury/death unlikely. Little or no property damage.
Radiological (in transit)	Large Region	Rare	None	1 day	More than 2 weeks	Serious injury/death unlikely. Little or no property damage.
Epidemic	Large Region	Infrequent	Several Days	More than 1 week	3 days to 1 week	Serious injury/death likely but not in large numbers. Little or no property damage.

Dam Failure	Several Individual Locations	Rare	Several Hours	1 day	1-2 weeks	Serious injury/death unlikely. Severe damage to private property. Moderate damage to public facilities.
Air Contamination	Large Region	Infrequent	Several days	2-3 days	3 days to 1 week	Serious injury/death likely but not in large numbers. Little or no property damage
Low Risk						
Hurricane	Large Region	Rare	Several Days	1 day	More Than 2 weeks	Serious injury/death likely but not in large numbers. Moderate property and public facilities damage
Hazardous Materials (Fixed Site)	Several Individual Locations	Infrequent	None	1 day	More than 2 weeks	Serious injury/death likely but not in large numbers. Moderate property and public facility damage
Radiological (Fixed)	Several Individual Locations	Rare	None	1 day	3 days to 1 week	Serious injury/death unlikely. Moderate damage to private property. Little damage to public facilities.
Ice Jam	Several Individual Locations	Rare	1 day	2-3 days	Less than 1 day	Serious injury/death likely but not in large numbers. Little or no property damage

1. Fire

Definition: the phenomenon of combustion manifested in light, flame, and heat.

Location: Most fires are associated with single-family homes, the primary land use in the village, and older neighborhoods are at higher risk because homes pre-date modern fire prevention codes.

Extent: Structural fires, while unusual, are one of the more frequently occurring hazards in the Village of Rye Brook. Wildfires are less likely to occur because of the nature of the open space and plant life in the village. Both structural fires and wildfires occur without warning. Structural fires usually affect a single location, but have the potential to spread quickly in the more densely developed commercial districts.

Previous Occurrences: Fires occur in the Village on an infrequent basis. There are usually a few minor fires within the Village during the course of year, major fires are infrequent occurring less than once per year.

Probability of Future Event: Based upon passed events, major fire are very infrequent while smaller contained fires may happen a few times per year, resulting in a high probability of fire, low probability of a major fire.

Overall Summary: Fire protection services are provided by the Village of Port Chester Fire Department and the Rye Brook Fire Department. Mutual aid responses from surrounding communities are coordinated through the Westchester County Mutual Aid System.

The entire village is vulnerable to this type of hazard. If a major fire would occur in certain older sections of the Village where houses are built much

closer to each other this could cause major problems, recovery could take several days.

2. Airport/Airplane Crash

Definition: to damage in landing.

Location: This could occur anywhere within the Village, especially flight paths for the Westchester County Airport.

Extent: If a plane were to crash anywhere in Rye Brook the extent of the damage could be very severe, depending on location and size of the plane.

Previous Occurrences: None

Probability of Future Events: The probability of a plane crash is very low.

Overall Summary: Airport and airplane crashes are identified as moderate high-level hazards in Rye Brook. A 200-acre portion of the Westchester county Airport is within the Village of Rye Brook. The village is situated below the flight path of aircraft utilizing that airport and nearby New York City airports.

The airport encompasses 705 acres in total. It has 18 major hangars plus 13 additional buildings and an FAA control Tower staffed 17 hours per day. The airport averages 550 operations per day. It has 380 based aircraft, 85 corporate jets and 94 airline flights per day. The largest aircraft in continuous use at the airport is a Boeing 737 (up to 128 passengers).

The Rye Brook Fire Department is designated as a primary responding department in the Westchester County Airport Emergency Response Plan (August 2000). See Appendix D

3. Transportation Accident/Hazardous Materials (in transit)

Definition: an unforeseen and unplanned event or circumstance.

Location: This could happen on any roadway in the Village. The Hutchinson River Parkway is more susceptible to serious accidents due to its high volume and speed limit. Hazardous materials are unlikely to be transported on this due to its restriction to passenger cars only. A small portion of the I-287 corridor passes through the southern end of the Village and this area is concern for any possible Hazardous material spills.

Extent: This type of hazard could happen anywhere and at anytime. The extent is greater on certain highways, parkways and routes.

Previous Occurrences: There has never been any Hazardous Materials spilled or accidents in the Village. Several transportation accidents occur each year within the Village.

Probability of Future Events: The probability of a material hazards spill is very low, but the probability for a transportation accident involving a passenger vehicle is very high.

Overall Summary: Transportation accidents occur frequently with the potential of serious injury or death but likely not in large numbers and generally with limited public or private property loss. The highest hazard area is along the I-287 corridor.

Disasters associated with hazardous material incidents at fixed sites within or around the village were considered moderately high. The impact of such an event would likely be contained to the point of origin with possible additional contamination from hazardous materials being transported by water bodies and municipal infrastructure such as storm water drains and sewer pipes. Significant spill events are infrequent and typically occur without warning. The length of such an event and its recovery time are comparable to those of hazardous materials in transit. Radiological materials would most likely be identified in medical and dental facilities and would be present in small quantities.

Oil/fuel spills were rated as having a moderately high risk. The impact area of such an event would likely be limited. Smaller spill events are frequent within the village, which typically occurs without warning. The length of the event would likely be less than one day with a recovery time of a few days or less. The village has 2 gas stations and 3 other automobile service related facilities that are prone to periodic spills from tanker trucks. Spills have also been known to occur in residential and commercial structures within the village.

4. Severe Summer Storm

Definition: a disturbance of the atmosphere marked by wind and usually by rain, thunder and lightning.

Location: Anywhere in the Village

Extent: Many areas of the Village could be affected by a severe storm. Wind could damage trees and result in damaged houses, building, etc. Power outages could occur making for a safety hazard for elderly or sick individuals if there is extreme heat associated with the storm.

Previous Occurrences: According to the National Climate Data Center there have been 119 reported major thunderstorm and high wind events in Westchester County, New York since 1959.

Probability of Future Events: There is a high potential for a severe storm to pass through the Village with high winds, rain and lightning. Based on past events they usually last for a day or less.

Overall Summary: Thunderstorms and high winds are rated as a moderately low hazard. They occur frequently and usually last for a day or less. Recovery time is a few days to a week. The impact area is limited, but would likely have a greater impact to older homes.

There would be minimal impact on the Village other than trees and wires down. Some residents could have damage to their homes. Some minor flooding could occur on roads. No history of issues lasting more than one day. However, in 2006, there were a couple of events in Westchester County that impacted communities for multiple days.

5. Severe Winter Storm

Definition: A disturbance of the atmosphere marked by snow, hail or sleet.

Location: Anywhere in the Village.

Extent: The extent of damage from a severe winter storm could be throughout the Village. Icing could affect power lines causing a massive blackout, making a safety hazard for all populations, especially the elderly or sick in extreme cold situations. Some older buildings could be affected with the weight of snow or ice on them.

Previous Occurrences: According to the National Climatic Data Center, in the period between 1/1/1950 to 5/31/2005 Westchester County has experienced 42 severe snow and ice events. Usually Westchester County, along with the Village of Rye Brook encounters 2-4 severe snow storms a year, but could get more. The County has closed all non-essential services in the past and FEMA declared a snow emergency in March of 2003.

Probability of future events: The probability of a future winter storm in Rye Brook is high. These storms could occur frequently lasting up to a few days of constant snow, wind and icing conditions. These storms affect the Village as well as a large surrounding area, possibly making for a slow recovery.

Overall Summary: Winter and ice storms are a frequent event affecting the entire village. Older buildings with flat roofs are potentially vulnerable to a structural collapse associated with the weight of snow and ice from major storm events. Pre-1940 housing and older buildings would also be more vulnerable to freezing pipes and other impacts associated with extremely low temperatures. There is usually at least one day of warning prior to such events and they usually last a day to a few days. Recovery from winter related storms could take days to weeks.

6. Extreme Heat

Definition: Extreme heat is an extended period of hot weather with a potential for serious impact on human and/or animal populations particularly elderly and/or persons with respiratory ailments. A *heat wave* is a prolonged period of excessively hot weather, which may be accompanied by excessive humidity.

Location: Anywhere in the Village

Extent: Extreme heat can have an affect on a variety of populations throughout the Village. Extreme temperatures would have little impact on the buildings, infrastructure or critical facilities in the village.

Previous Occurrences: According to local information, there are five to seven days each year that could produce extreme heat in the Village of Rye Brook. Heat waves can last for several days in the summer months.

Probability of Future Events: It is almost certain the Village will experience some days with extreme temperatures during future summers.

Overall Summary: Due to the economic status of many of our residents, it is believed many have air conditioners readily available in their homes. For those residents without the use of air conditioning, on extremely hot days, the Village offers a 'cooling center' for all individuals at the Village's AJ Posillipo Senior Center.

The Village finds the 'cooling center' to be a very important site during the summer months. Though extreme heat effects only a limited number of days per year, heat waves can last several days to weeks before temperatures drop. Though the heat can affect the residents of Rye Brook, critical facilities, buildings and infrastructure will not be affected.

7. Hurricane

Definition: a tropical cyclone with winds of 74 miles (119 kilometers) per hour or greater that occurs especially in the western Atlantic, that is usually accompanied by rain, thunder, and lightning, and that sometimes moves into temperate latitudes.

Location: Anywhere in the Village

Extent: The extent of damage from a hurricane could be widespread, from damaged building, infrastructure, housing stock,

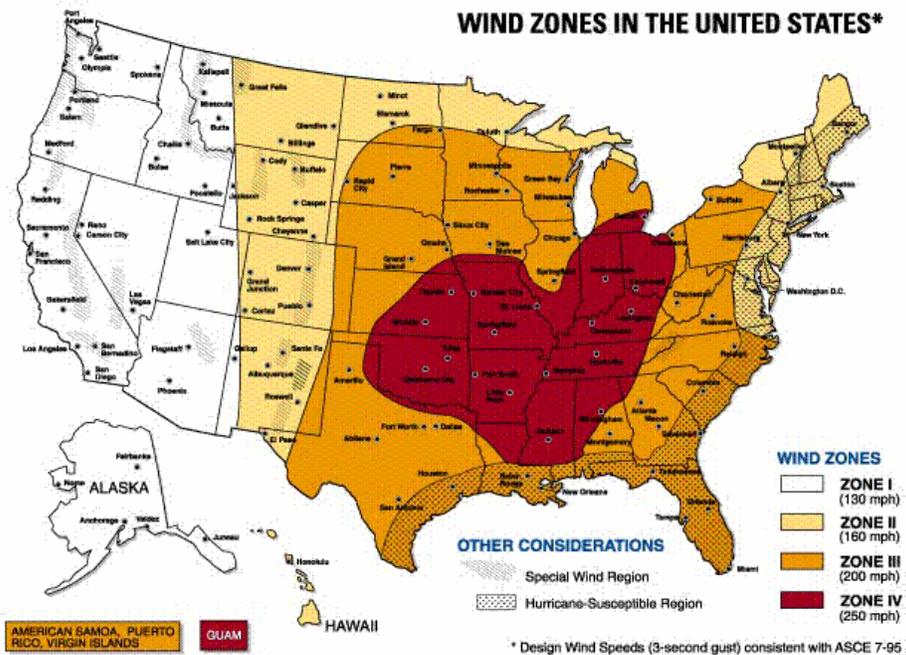
etc. Flooding could be a possibility with torrential downpours in some areas.

Previous Occurrences: National Weather Service information states there has been 9 hurricanes that have directly hit New York State within the previous 104 years. Hurricane Gloria hit Westchester County in 1985 and did substantial damage as well as the loss of many lives.

Probability of Future Events: Hurricanes are rated as a low risk in Rye Brook. Hurricanes that have an impact on this area of New York other than typical storm like wind and rain occur very infrequently. With the destruction of Hurricane Katrina on the gulf coast and the growing prediction concerning hurricanes potential path to New York, the Village is reassessing their risks and potential impact of such an event.

Overall Summary: A hurricane is a tropical cyclone in which winds reach 74mph or more and blow in a large spiral around a relatively calm center. Inland flooding from hurricanes can be a major threat to areas hundreds of miles from the coast as intense rain falls from huge tropical air masses.

The Village should prepare for a hurricane to hit once every ten years. A hurricane could have a detrimental impact in the Village and surrounding areas. If Rye Brook were to experience a category 4 or 5 hurricane, damage could be done to many buildings and infrastructure. This could be compounded with power outages for many days. The recovery time could last several weeks for a large-scale hurricane.



8. Flooding

Definition: Flooding usually is a natural, cyclic occurrence in existing water-bodies. When a water-body overflows its 'normal' banks, a potentially violent and/or destructive waterway can form.

A flash flood is a sudden transformation of a small stream into a violent waterway after heavy rain and/or rapid snowmelt.

Location: The Village of Rye Brook has the eastern and western branch of the Blind Brook flow through the Village. These two Brooks cause the most concern for any type of flooding within the Village.

Extent: Flooding through the Village in the last several years has been either non-existent or negligible until the recent storms of March and April 2007. The extent of these storms caused some houses to flood along specific areas of both the eastern and western branch of the Blind Brook.

Previous occurrences: Storms in March and April of 2007 cause each of the eastern and western branches of the Blind Brook to flood in specific areas. The Western branch caused flooding along Brook lane, Avon circle and Wyman Street. The eastern branch caused flooding in areas of Rock Ridge Drive. Previous to these two storms each of the brooks had little occurrence of doing any major flooding. Flooding did occur to a select few house build extremely close to the brook.

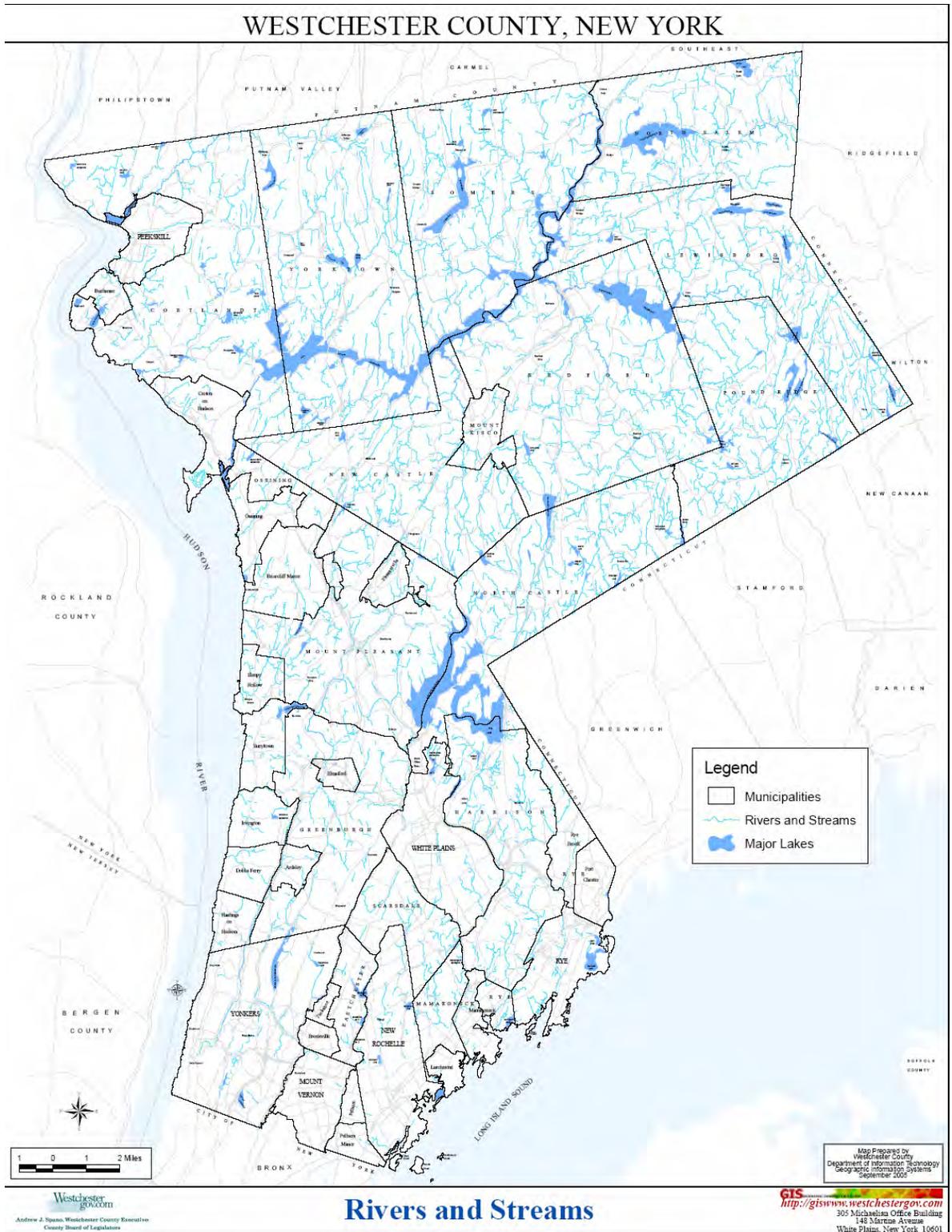
Probability of Future Events: Each of the branches of the Blind Brook will probably flood again. During heavy rainfall, rainfall and melting snow, or rainfall and impervious frozen surface provide for potential problems. Certain areas of the Brook some times rise above banks, but not enough to cause any problems. The storms of 2007 were extremely unusual in nature to cause any problems for the village.

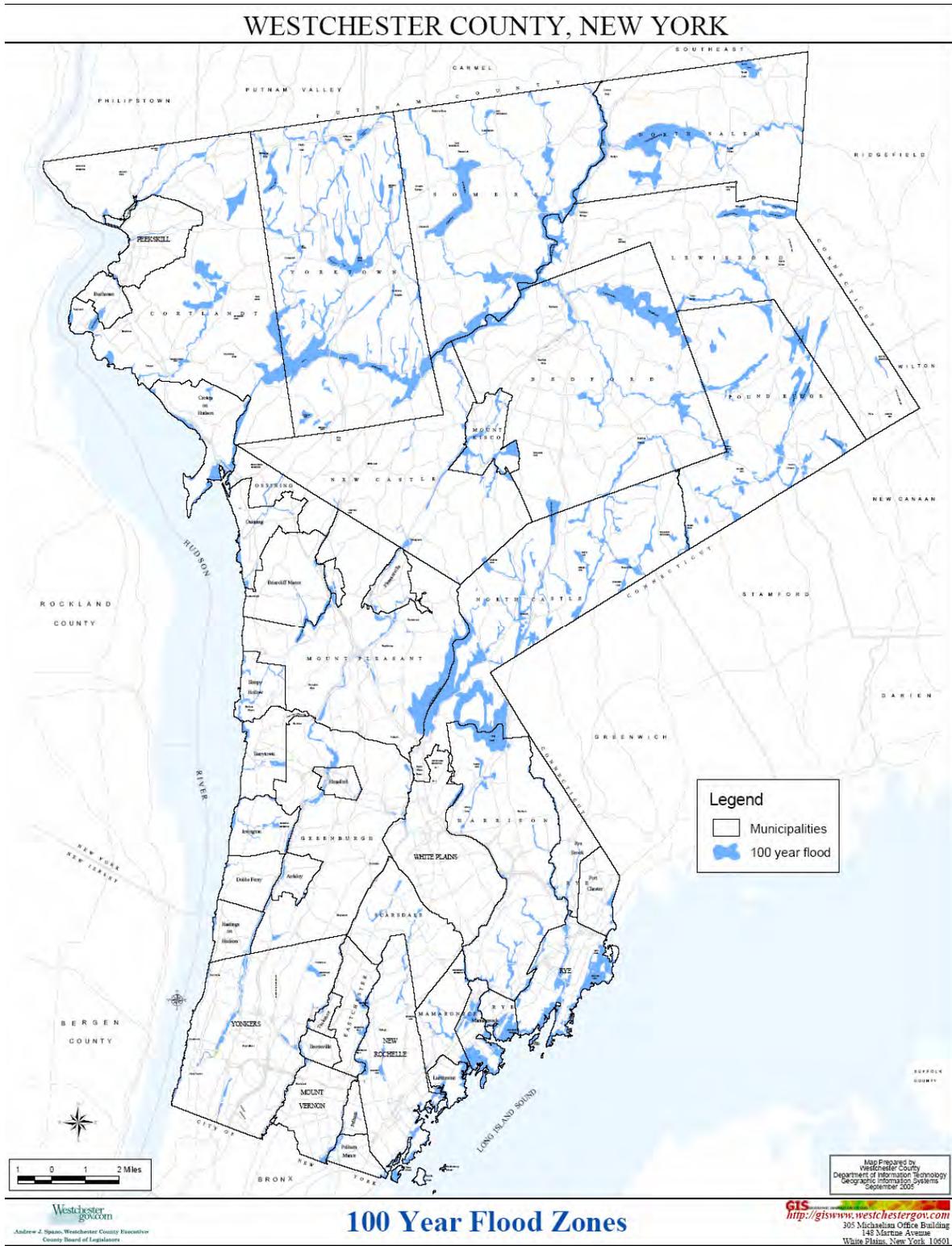
Summary: The Village of Rye Brook has the eastern and western branch running through the Village. Being in close proximity to the Sound Shore can provide for potential problems to each of the branches in the Village. In regards to the recent events, the high tide in the Long Island sound provided for a 'back-up' of water to each of the branches, causing greater flooding potential.

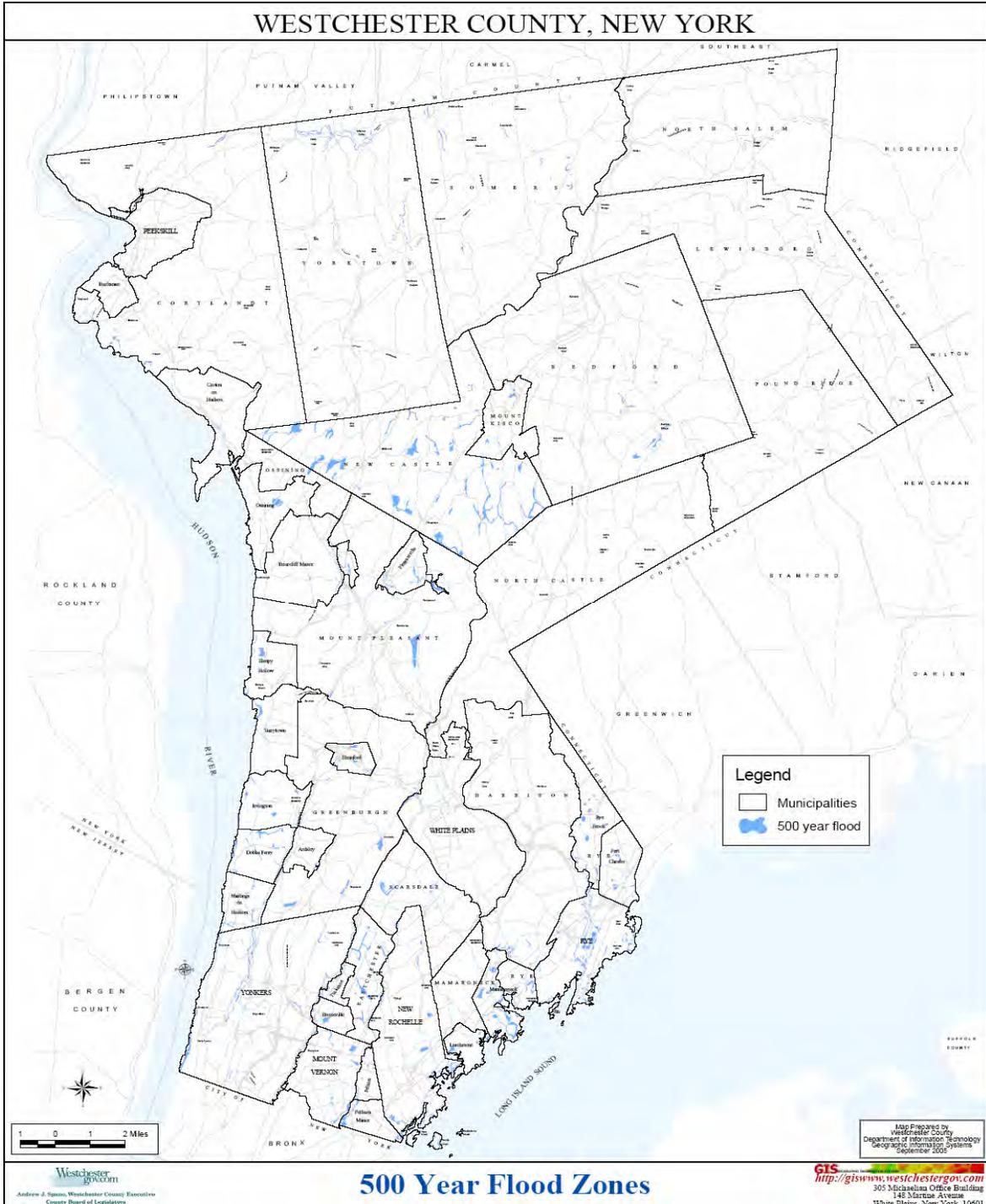
The Village is working on a variety of mitigation strategies to reduce the potential of further flooding throughout the Village. In the current Capital projects budget is a \$700,000 grant to fix drainage pipes through the Loch Lane area of the Village. Also in relation to that is a detention basin that has received state grant approval from the Clean Water/Clean Air Bond Act.

Along with fixing specific drainage pipes and the creation of a new detention basin the Village has several possible flooding mitigation projects that are currently being explored. These potential projects include a detention basin at Beachwood Blvd, dredging Rich Manor Park and Hidden Falls, new piping at Avon Circle under Westchester Ave., and improvements to drains on Brook Lane. The Village is also looking at potential mitigation solutions in regards to the western branch of the Blind Brook with the City of Rye.

The following maps are included in this plan to show the rivers and streams in the Village as well as the areas that would be affected by the 100 and 500 year flood zones.







9. Eliminated Natural Disasters

The planning team met and decided not to consider some hazards. This is based on no previous events, no FEMA declared disasters and no potential for future problems.

These hazards are: Avalanche, Coastal Erosion, Coastal Storm, Dam failure, Drought, Earthquake, Expansive Soils, Flood, Hailstorms, Land Subsidence, Landslide, Tornado, Tsunami, Volcano, Wildfire and Windstorm.

10. Terrorism

Terrorism is considered a moderately high level hazard in the village. The events of September 11, 2001 have forced communities to discuss terrorism as a more serious possibility. The village enhanced training, education and equipment to local emergency services, law enforcement, and government personnel. Westchester County has identified the airport to be a significant target of opportunity. Terrorist events would last less than a day, but could take days to months to recover.

11. Utility Failure

A power failure would most likely impact only a section of the village, though significant events could impact the entire community. They occur frequently and have potential for prior warning if associated with storm events. The incident usually will last less than a day and take a few days or less to recover from. Power failures are typically associated with major storms or high-energy demand days in the summer months.

In August 2003 there was a massive power failure that impacted the entire northeastern United States. That event highlighted the condition of the power grid, the growing demand for electricity and the region's susceptibility to a major power failure. In light of that event there is increasing attention to the village's vulnerability to a major black out, which may occur on a more frequent basis than previously recognized.

A water supply failure would typically be an isolated incident, but could be a village wide. Such an incident would rarely occur and would most likely last a day or less. Recovery time is estimated to

be one day. The village is served by a public water supply system. Aquarion Water Company is the primary service provider.

El Paso Corporation’s Tennessee Gas Pipeline owns and operates a high-pressure natural gas transmission line that passes through the village. It includes compression stations on Brookside way and King Street at Glenville Road. Con Edison has a natural gas metering station at Glenville Road site where it transfers natural gas from the interstate transmission line to its local distribution system. A failure would be rare but could result in a significant localized event. Recover time is estimated to be one day.

C. At-Risk Facilities and Areas

There are a number of facilities and areas in the village that are sensitive and require protection from hazards. Sensitive or vulnerable facilities include those located in at-risk areas that are essential for providing emergency response to hazard events. Sites that have large concentrations of people or at-risk populations are sensitive and vulnerable during hazard events because they will require special attention from emergency workers. Hazardous materials facilities may require evacuation or heightened security, and areas with older construction are particularly susceptible to fire and structural collapse.

Table 2 in this section provides a list of facilities that regularly have higher population concentrations or are essential for response and recovery. The table includes the estimated number of people that regularly use the space and the structural value of the site should it be lost or damaged in a hazard event. The following is a summary of facilities and their potential vulnerability to hazard events.

Table 2: At-Risk or Sensitive Facilities

Facility Name	Facility Type	Approx. Number of People*	Estimated Structure Value*	100-Year Flood Zone**	Haz Mat Corridor
Village Hall/Police Station	Emergency Response	35	\$ 2,681,545		
Fire Station	Emergency Response	4	\$ 2,500,000		
Park & Highway Garage	Emergency Response	15	\$ 262,600	X	X
A.J.Posillipo Community Center	Seniors	130	\$ 1,145,500	X	X
Blind Brook High/Middle School	School	850	\$ 4,866,800		

Facility Name	Facility Type	Approx. Number of People*	Estimated Structure Value*	100-Year Flood Zone**	Haz Mat Corridor
Ridge St Elementary School	School	915	\$ 2,269,600		
Port Chester Senior High School	School	1,180	\$ 8,228,300		
Port Chester Middle School	School	950	\$ 7,394,300		X
Doral Arrowwood/Pfizer	Hotel	1,000	\$ 69,791,130		
Rye Town Hilton	Hotel	1,900	\$ 37,432,300		X
BelleFair/Sterling Glen Sewerage Pump Station	Utility	0	\$ 160,000		
BelleFair Water Pump Station	Utility	0			
Tennessee Gas Pipeline Compression Stations	Utility	0	N/A		
Con Edison Natural Gas Metering Facility	Utility	0	\$ 855,400		
Bowman Avenue Dam	Dam	0	N/A	X	X
Hidden Falls Dam	Dam	0	N/A		
Blind Brook Club Irrigation Dam	Dam	0	N/A		
Mobile Gas Station	Gas Station	10	\$ 499,900		
Gulf Gas Station	Gas Station	10	\$ 1,015,500		
Reckson Office Park	Office Park		\$ 28,092,150		
RPW Group	Office Park	200	\$ 22,221,050		
Rye Ridge Plaza	Office Park	400	\$ 5,892,300	X	X
Ridge – Bowman LLC (90 South Ridge)	Office Park	500	\$ 3,464,200		
Win Ridge Shopping Center	Shopping Center	725	\$ 9,596,000		X
Win Ridge South Shopping Center	Shopping Center	250	\$ 3,614,800		X
Washington Park Plaza Shopping Center	Shopping Center	350	\$ 11,407,630		
Grant St Senior Housing	Senior Housing	65	\$ 1,155,00		
King St Nursing Home	Nursing Care	500	\$ 2,924,110		
United Cerebral Palsy Association	Special Needs	450	\$ 9,440,800		
Sterling Glen of Rye Brook	Senior Housing	340	\$ 24,198,500		
Westchester County Airport	Airport	3,500	\$ 34,578,400		

*Figures were received from the Town of Rye Assessors office.

D. Asset Inventory

Table 3: Inventory of Property and Structural Assets*

	Number of Properties		Estimated Full Market Value	Estimated Structural Value
	#	%		
Village Wide	3,388	100%	\$ 3,060,105,769	\$ 1,901,934,858
Single-Family Properties	2,744	81%	\$ 2,091,823,450	\$ 1,034,438,782 (One, Two &

Two-Family Properties	216	6%	\$ 119,075,300	Three-Family)
Commercial & All Other Properties	428	13%	\$ 849,207,019	\$ 433,748,038

*as of 2004

1. Future Building Assessment

The Vulnerability of the types and numbers of future buildings is very minimal. The Village of Rye Brook has little room for housing and commercial development, and the Village has consistently rejected plans and submissions that would lead to overdevelopment. No new municipal or institutional buildings are foreseen in the next several years; a new Village Hall, Police Station and Fire House have been built within the past decade. As aforementioned there is little room for any new commercial or industrial buildings. There are two small residential development projects proposed.

One with ten (10) units within (3) structures being sought for approval, but this process will take several months to develop and possibly be passed, and no additional hazard is seen for this small-proposed development. This development is proposed on Bowman Avenue, west of South Ridge Street on a small peninsula bordering the Western Branch of the Blind Brook. Though this development is in the flood plain, the Village has imposed several regulations to mitigate any potential flooding on the property or in the buildings. The Village has also imposed strict stormwater regulations for the residential unit, essentially requiring the developer to collect any stormwater from the property, thus eliminating the potential to exacerbate any flooding within the Blind Brook.

Another development with (33) proposed units is a planned development in the early stages of review. This development is planned for an area off King Street and Anderson Hill Road. The development is currently under Village Planning and Attorney review with no official Board action or review due for several months. The Village has set forth very strong regulatory policies involving overdevelopment, managing teardowns/rebuilds, stormwater drainage and code enforcement to ensure the highest quality building stock possible for new and existing buildings; which this development will have to go through to receive any approval.

No new major infrastructure projects are foreseen within the coming months. On an annual basis, certain roadways are resurfaced and drainage improvements are made. Deteriorated roads are paved with priority, and then roads that are next on a specific list are paved.

There is a flood zone in the Village of Rye Brook. There is limited room to build within the flood zone in the Village. The proposed development off Bowman Ave. must be built in adherence to strict stormwater and flood mitigation regulations.

2. Existing Building Assessment

Anyone wishing to renovate or retrofit their house must adhere to strict building code standards. These codes are based upon New York State and take into consideration OSHA standards, handicap accessibility and flood zone restrictions. There is a flood zone in the Village of Rye Brook. Currently there are some buildings already built there.

3. Land use and development trends

The Village of Rye Brook has little land that is available for any future developmental trends. Two small developments are proposed and in the early stages of the approval process. Each of these developments will be put through an extensive review and must meet very strict building and zoning codes to ensure the safest housing possible. The Village has up-zoned, and is exploring up-zoning other neighborhoods to restrict the density of buildings while maintaining as much open space as possible.

E. Capability Assessment

The following is a summary of the Village of Rye Brook's capabilities for responding to hazard events. This section discusses the village's current capabilities with respect to fire protection, law enforcement, emergency medical care and public works. This section also addresses areas of emergency response in need of improvement or enhancement.

1. Port Chester and Rye Brook Fire Departments

Fire services are provided by the Village of Port Chester Fire Department and the Rye Brook Fire Department. Port Chester Fire Department provides coverage 24 hours per day throughout the year. The Rye Brook Fire Department provides supplemental service from 7 a.m. to 7 p.m. Both departments are under the command and control of the Port Chester Fire Chief. Fire prevention is provided by the Rye Brook department.

The Port Chester Fire Department has 175 active volunteers and 12 career firefighters. The Rye Brook Department has 8 career

firefighters. Port Chester operates 10 major fire apparatuses and Rye Brook has 2 major fire apparatuses.

2. Police Department

The Rye Brook Police Department consists of 28 officers and 1 support staff position. A minimum of 3 sworn officers is always on duty. Assistance is available formally through the Westchester County Mutual Aid Plan and informally through assistance arrangements with contiguous departments.

The village has 13 police vehicles including 7 marked patrol cars and 1 motorcycle. Emergency equipment also includes a closed utility trailer, emergency portable light sets with generator and various cones, barricades and flairs.

3. Port Chester/Rye/Rye Brook Ambulance Corp

The Port Chester/Rye/Rye Brook Ambulance Corp. is a combination of career and volunteer members that respond to about 5,000 medical calls per year within Rye Brook and the adjacent Village of Port Chester and City of Rye. There are twenty volunteer and career Emergency Medical Technicians (EMT) and 15 career Paramedics. They have five ambulances with Basic and Advanced Life Support systems for pre-hospital treatment and transport to local hospitals. They also have 2 paramedic fly cars.

4. Village of Rye Brook Department of Public Works

The Public Works Department employs 10 full-time staff members plus various seasonal employees.

The department has a range of equipment and 10 vehicles that it uses for disaster response, cleanup and recovery. The department maintains a significant amount of municipal infrastructure including roads, sewers, drainage systems and trees. In major hazard events, these facilities are susceptible to damage.

IV. HAZARD POLICIES

A. Mission of Hazard Mitigation Plan

The overarching mission of the of this hazard mitigation plan is to identify cost-effective objectives and strategies to reduce risk to life and property associated with potential high risk natural hazards and man-made hazards and to improve village and community response and recovery in the event these hazards occur. It is important to highlight that the mission emphasizes *cost-effective* mitigation

approaches in recognition of the fiscal limitations of the village. This will require that the village develop *partnerships* and establish *priorities*, which are also included in the village's hazard mitigation mission. Partnerships can help overcome financial challenges but also expand possibilities for more effective implementation strategies and identify shared responsibilities in meeting hazard mitigation objectives

B. Goals of Hazard Mitigation Plan

. In support of this mission the following hazard mitigation goals were identified:

- Protect health and safety.
- Protect property and minimize property losses.
- Promote hazard mitigation strategies consistent with other natural resources, land use planning, quality of life and other policies of the village.
- Ensure that public funds are used in the most cost-effective and efficient manner.
- Encourage and facilitate partnerships among public agencies, local governments, citizens, non-profit organizations, businesses and other interests to advance the implementation of hazard mitigation strategies.

The most preferred goals are those that eliminate or reduce the number of facilities and structures within hazard prone areas. Where this goal cannot be realistically achieved enhancing the ability of structures to withstand hazard events should be pursued to minimize impacts. If efforts to avoid or minimize impacts cannot be practically implemented the village should seek to improve its response, recovery and preparedness to hazard events. Enhancing information on and community awareness of hazards are also important goals to advance effective mitigation planning.

C Existing Policies, Reports and Regulations

There are a variety of existing policies, reports and regulations that relate to hazard mitigation. This regulatory framework was evaluated at the local, state and federal level to determine the extent to which existing policies support, facilitate or hinder hazard mitigation. This review focuses primarily on existing policies that specifically address either hazard mitigation or emergency response or preparedness. Though some were included in this review there are likely many environmental protection, land development, natural resource conservation or other policies and regulations that may support or hinder hazard mitigation efforts.

a. Village of Rye Brook and Westchester County Policies

- **Rye Brook Disaster Preparedness Plan**

The Disaster Preparedness Plan is a guide for action during a major emergency. These operating procedures were last updated in February 2004 and include response systems for many of the hazards addressed in the report. Additionally, Chap 243 of the Village of Rye Brook Code (Water Supply Emergency) provides

guidelines for response and action in the event of a large-scale disruption of water services. The village and Nextel Wireless Network have been working to develop an agreement to erect a multi-carrier facility to enhance cellular phone communications so that emergency personnel will be able to communicate more easily. See Appendix E.

- **HAZNY**

The Hazard New York program, sponsored by NYSEMO, produced a Hazard Analysis Report of the community. HAZNY is an automated interactive spreadsheet that asks specific questions on potential hazards in a community. The program also records and evaluates the responses to these questions. HAZNY also includes historical and expert data on selected hazards. See Appendixes A-C.

- **Rye Brook Vision Plan**

In early 1999, the village embarked on a citizen based community-visioning process as an outgrowth of a series of town meetings organized by the Mayor and Trustees. Under the leadership of the Rye Brook Planning Board, it was determined to undertake a vision plan process that went beyond traditional master land-use planning.

The Rye Brook Vision Plan was completed in 2000. It is a policy statement that established a vision and specific action strategies for the future of the village across a broad range of issue areas. The plan emphasizes maintaining, enhancing and protecting Rye Brook's unique features to the greatest extent possible. See Appendix F.

- **Fire Prevention**

Chapter 91 of the Village of Rye Brook Code establishes regulations, consistent with nationally recognized good practice, for the safeguarding, to a reasonable degree, of life and property from the hazards of fire and explosion arising from the storage, handling, and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises.

Chapter 212 of the Code, adopted in 1997, requires that all new buildings be equipped with sprinkler systems. All pre-existing commercial buildings were required to be sprinklered by June 30, 2004. Pre-existing attached residential units must install sprinklers upon substantial (50%) alteration.

- **Storm Water Management Plan**

In 2002, Rye Brook contracted Dolph Rotfeld Engineering, P.C. to study the drainage in the East Branch Blind Brook Watershed. The study identified opportunities to improve drainage and reduce localized flooding at several locations in the village. See Appendix G.

- **School District Wide Safety Plans**

The Blind Brook-Rye School District and the Port Chester Rye Union Free School District have both developed district wide safety plans to guide their response to emergencies and violent incidents within the schools. See Appendixes H & I.

- **Westchester County CEMP Exercise and Incident Command System Overview**

The Comprehensive Emergency Management Plan (CEMP) provides general, all-hazard management guidance, using existing organizations, to allow the County to meet its responsibilities before, during and after emergencies and disasters.

- **Westchester County Non-Point Source Management Plan**

Westchester County Non-Point Source Management Plan (1998) was produced in accordance with the "Report and Recommendations (1993)" of the County Executive's Citizen's Committee on Non-Point Source Pollution in Long Island Sound. The document is divided into two sections. The first contains the recommended action plan for the Watershed Advisory Committee 3 (WAC-3) study area of the Long Island Sound watershed. The second assesses specific water quality protection techniques recommended in the first section. The principles of this plan have been endorsed by all of the municipalities that were in the WAC-3 study area. Some of the projects have been implemented including stream bank stabilization.

- **Westchester County Stream Control Law**

Enacted by the County in 1956 to address flooding concerns, the Stream Control Law 17 allows the County Department of Public Works to establish channel lines and grades for streams by filing an order with the County Clerk after performing required studies and investigations, preparing a map showing channel lines and grades, and holding a public hearing. The effect of filing an order establishing channel lines and grades is that any person or municipality planning to do work within those lines, or 100

feet there from must apply to the County Commissioner of Public Works for a permit.

The purpose of the law is to prevent obstruction of channel flows and deterioration of stream channels, but its jurisdictional reach is limited. The law was not designed to comprehensively manage stormwater runoff from new development, or prevent increased flood flows or damage from excess runoff. However, for projects that require a permit, conditions may include requiring zero-increase in runoff, constructing structures above the FEMA 100-year base flood elevation, and erosion controls.

The Stream Control Law applies to 38 miles of stream segments throughout the county, the last of which was added to the program in 1965. Less than 25% of all eligible stream channel lines have been established, primarily due to the expense involved and local concerns. Four miles of Blind Brook are included under the law.

b. New York State and Federal Policies

- **New York State Uniform Fire Prevention & Building Code**

The NYSUFP&BC is intended to provide minimum requirements to safeguard the public safety, health and general welfare, through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, and safety to life and property from fire and other hazards attributed to the built environment, as well as to ensure the public safeguards insofar as they are affected by the continued occupancy and maintenance of structures and premises. Furthermore the Fire Provisions of the NYSUFP&BC are intended to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises.

The Building Department is the lead agency responsible for enforcement of this code. All Code Enforcement Officials are required to complete a series of training courses in order to receive the required State Certification needed to enforce the State Code. This certification must be maintained by completing twenty-four hours of in-service training annually.

As per State Law, the Building Department, in conjunction with the Fire Department conducts annual inspections of all structures classified by the NYSUFP&BC as having an assembly occupancy. Furthermore all commercial structures as well as structures having an occupancy classification of multi-family are inspected on a

rotating schedule as permitted by staffing limitations, and department activity.

The village's newly created Safe Housing Task Force, comprised of members of the Rye Brook Building, Fire and Police Departments, will address the growing concerns of Rye Brook residents with respect to fire safety, and possible overcrowding in one and two family dwellings.

- **Federal Disaster Mitigation Act**

In October 2000, the President of the United States signed into law the Disaster Mitigation Act of 2000 (Public Law 106-390) to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988. The new legislation reinforced the importance of pre-disaster mitigation planning to reduce the Nation's disaster losses and is aimed primarily to control and streamline the administration of federal disaster relief and mitigation programs.

Section 203 establishes a "National Pre-disaster Mitigation Fund" in order to carry out a program that will "provide technical and financial assistance to States and local governments to assist in the implementation of pre-disaster hazard mitigation measures that are cost-effective and designed to reduce injuries, loss of life, and damage to property, including damage to critical services and facilities under the jurisdiction of the States or local governments."

Section 322 provides a new and revitalized approach to mitigation planning by specifically doing the following: Establishes a new requirement for local tribal mitigation plans, authorizes up to seven percent of the Hazard Mitigation Grant Program (HMGP) funds available to a state to be used for development of state local and tribal mitigation plans, and provides for states to receive an increased percentage of HMGP funds (from 15 to 20 percent) if, at the time of the declaration of a major disaster, they have in effect an approved State Mitigation Plan that meets the factors in the law.

- **Statewide Wireless Network**

New York State Office for Technology has proposed to develop a Statewide Wireless Network for voice and data radio communication services to enable public safety and public service entities operating within the State of New York to better respond to and protect our citizens.

- c. Utilize environmental protection laws, land development restrictions, natural resource conservation and other policies and regulations that support hazard mitigation.

- **Land Development Regulations**

The village has a variety of local laws that support hazard mitigation planning. The Subdivision Regulations and Zoning Code regulate the use, intensity, and pattern of development in the village. The Zoning Code regulates lot size and building construction and renovation.

- **Wetlands Protection**

The Wetlands and Watercourses Law requires the issuance of a permit for any structure or activities within a wetlands or its 100-foot buffer. Chapter 245 in the Code is designed to provide for the protection, preservation, maintenance and use of the sensitive areas by preventing damage, minimizing disturbance, preserving natural habitats and protecting against flood and pollution through the establishment of a Water Control Commission and otherwise protecting the quality of such areas that are essential.

- **Erosion And Sediment Control**

Chapter 118 of the Village Code maintains the channel capacity of watercourses to decrease the likelihood of flooding.

- **Steep Slope Protection**

Chapter 213 of the Code regulates the disturbance of steep slopes to minimize potential adverse effects and prevent flooding and erosion.

V. MITIGATION OBJECTIVES AND STRATEGIES

A. Developing Mitigation Strategies

No high-risk hazards were identified in Rye Brook's HAZNY profile (see Table 1). Eight moderately high-risk hazards were identified along with 16 moderately low risk and 4 low risk hazards. Meaningful hazard mitigation requires a broad array of strategies. Each hazard was considered by the village's All-hazard Mitigation Work Team. For purposes of developing mitigation strategies, hazards requiring similar responses were grouped together with the greatest focus placed on those identified as posing the highest risk to the village and its residents. The objectives identified in section 1 below were considered using the factors in section 2. The strategies for mitigation were then reviewed in terms of supporting the goals of this Hazard Mitigation Plan.

1. Identify mitigation objectives for each hazard and determine strategies that will achieve this objective.
 - a. Better assess the possibility of exposure to hazard events
 - b. Increase the number of structures that can withstand the impact of the hazard
 - c. Determine the most effective means of reducing risk
 - d. Improve awareness of the hazard
 - e. Enhance response and recovery
2. Consider the following factors for the implementation of the strategies:
 - a. relative implementation cost
 - b. effectiveness in mitigating a hazard
 - c. amount of time necessary for implementation
 - d. parties responsible for implementation
 - e. where funding for the strategy will come from
3. Evaluate the extent to which each strategy supports the goals of the Hazard Mitigation Plan.

B. Mitigation Strategies

1. Fire and Explosions

Objective: Increase the number of structures that are more resistant to fire or collapse

Strategies that reduce the potential for fire, explosion, earthquakes, or structural collapse should be encouraged. In many cases this involves confirmation of compliance with existing New York State Building Codes. Some of the village's building stock is old. It is being upgraded and redeveloped offering opportunities to meet current fire prevention and building code requirements.

The village has a stringent fire code that exceeds New York State Building Code requirements. Under Chapter 212 of the Village Code, all commercial buildings are required to be equipped with sprinkler systems. All residential buildings constructed since 1997 must be sprinklered and all pre-existing attached residential units must install sprinklers upon substantial (50%) alteration.

Rye Brook has an aggressive code enforcement program that includes annual inspection of all public assembly facilities and inspection of all commercial uses on a three-year cycle.

The following suggests additional strategies to either require or create incentives to encourage more structures to meet current requirements. The cost of these strategies is low for the village. Most costs would be borne by private property owners in meeting fire or building code regulations. The effectiveness of these strategies is considered moderate

and they will take years to implement, as each structure is upgraded. The Building Department or Fire Inspector may require more code compliance inspections. Changes in existing local regulations or implementation of incentives will require approval of the Board of Trustees.

Strategy: Insure compliance with all life safety codes through diligent inspections. Seek to inspect all commercial uses annually.

Strategy: Consider incentives to encourage the retrofitting of existing buildings within the Village Fire Limits to meet current NYS Building Code requirements.

Strategy: Consider providing incentives for the installation of sprinklers where not required by code.

Objective: Raise awareness regarding risk of fire, explosion and structural collapse.

The village should implement strategies that acquire information regarding potential fire and explosion threats, and structures that may be vulnerable to collapse. The location of these structures that present risk should be identified so that prevention and response measures can be appropriately defined.

Strategies defined here emphasize community outreach to raise fire awareness and proper fire prevention measures. Partnerships with local schools, businesses and community organizations will be a useful resource in carrying out these strategies. The following strategies can be low cost, but may require additional administrative commitment from the Building Department and the Fire Inspector.

Strategy: Conduct inventory of buildings not meeting current NYS Building Code requirements.

Strategy: Conduct inventory of sites or facilities that may be prone or vulnerable to explosions.

Strategy: Enhance fire safety awareness information and make such information more available to local homeowners and businesses via village website and Cable TV.

Strategy: Enhance building and fire inspections to ensure compliance with applicable building code and fire safety laws. Promote voluntary inspections of buildings, where not required by law, with amnesty provision.

Strategy: Utilize the village's Safe Housing Task Force to identify unsafe residential practices and improve through public education.

Objective: Enhance hazard response, recovery and preparedness.

The village should improve its ability to respond to and recover from a fire, collapse or other hazard events. The following strategies identify mitigation projects that will improve response of emergency service providers to hazard events. These strategies can be expensive to implement and may require additional capital improvement or budget funding or other outside sources such as state or federal grants.

Strategy: Create improved map of village roads and access routes to/from adjoining communities.

Strategy: Encourage and enhance training of Fire Department personnel through joint drills and response planning.

Strategy: Continue to evaluate roads for emergency vehicle access.

Strategy: Identify locations requiring alternative emergency evacuation routes and seek additional access in conjunction with future development.

2. Airport and Airplane Crash

Objective: Enhance hazard response, recovery and preparedness.

Approximately 30% of Westchester County Airport is located within the Village of Rye Brook. As a consequence, the village is situated below the flight path of aircraft utilizing that airport as well as nearby New York City airports.

Westchester County, as owner and operator, is responsible for airport safety and emergency response planning. The village should implement strategies that improve communications and coordination of activities among involved agencies. The village should also seek to enhance its capability to communicate alerts to its residents on both a general and targeted basis.

Strategy: Seek participation in Westchester County Airport safety and emergency response planning.

Strategy: Participate, in emergency response training exercise in conjunction with the airport.

Strategy: Work with Westchester County to enhance timely communication with village emergency responders. Seek to be alerted whenever an incident may be developing (i.e. airplane-in-trouble) prior to a call for assistance.

Strategy: Acquire and place in service a Reverse 911 calling system at the Rye Brook Police Headquarters that allows targeted notification of residents of developing incidents that might affect them.

3. Transportation Accident, Hazardous Materials (in transit).

Rye Brook's greatest exposure to significant transportation accidents and hazardous material spills is along the I-287 corridor. The diversity of hazardous materials and their potential health risk is a complex and evolving topic. The movement and storage of hazardous materials presents a threat to the community and emergency response personnel. The Building Department and the Fire Inspector are aware of and monitor sites that have potentially hazardous materials. It is essential that the village attempt to monitor hazardous materials and prepare responding emergency personnel.

Objective: Better assess exposure to hazardous materials events.

The village should implement strategies that seek to better identify the nature of materials in the community. Through identifying movement and storage of hazardous materials in the village, emergency personnel will have an understanding of the potential exposure to hazardous materials.

Movement of hazardous materials through the transportation corridors in the village is difficult to regulate, but identifying sensitive buildings in the transportation corridors, such as day care facilities and schools would prepare emergency personnel with information about the structure of the facility and the number of people regularly using the facility in the case of a hazardous event. There are locations throughout the village that regularly use and store hazardous materials. Knowledge of what is kept at each location prior to a hazardous event would permit emergency personnel to respond quickly with less risk.

Instituting these new strategies would be moderately costly and would have moderate effectiveness. Organized information potentially results in more effective response.

Strategy: Encourage the development of a regional monitoring system which storage and movement of hazardous materials is recorded. Keep monitoring system up to date by supplementing inspector reports with self-reporting.

Strategy: Share all known hazardous material storage with Building, Police, Fire, EMS and Highway Departments.

Strategy: Identify sensitive facilities within the hazardous materials corridors and near known hazardous material sites.

Strategy: Participate in annual training and safety awareness programs associated with the El Paso Corporation's Tennessee Gas Pipeline.

Strategy: Coordinate Tennessee Gas Pipeline response drills with the Town of Greenwich, Ct. Seek better location maps and insure adjacent property owner awareness.

Strategy: Conduct inspections of sites with or vulnerable to hazardous materials.

Strategy: Increase traffic enforcement in higher risk regions.

Objective: Increase the number of structures that are able to withstand impacts associated with hazardous materials events.

Where avoidance of exposure to hazardous materials cannot be practically achieved, the village should increase the number of structures and facilities that can withstand impacts associated with hazardous material events.

Strategies that advance this objective are generally more expensive to implement since they involve retrofitting of existing structures or acquiring new equipment. Partnerships with other New York State and Westchester County Agencies will likely be necessary for implementation.

Strategy: Consider retrofitting of existing critical facilities to withstand impacts associated with hazardous materials spills.

Strategy: Identify storm drain outfalls near or along major transportation routes or known hazardous materials sites and provide mitigation measures to prevent the conveyance of spilled hazardous materials into adjacent waterways.

Strategy: Ensure that hazardous material sites have in place proper spill mitigation and containment measures.

Objective: Improve awareness of hazardous materials and possible mitigation strategies.

Enhancing awareness of hazardous materials will better prepare the community in case a hazardous materials event occurs. The village's website is a cost effective means of distribution

Strategy: Provide information to residents and businesses regarding hazardous material risks and how to respond in the event a disaster occurs. Include seasonal safety awareness information in all newsletters and reference more detailed information on village web pages.

Strategy: Link from village's web pages to county, state and federal emergency response sites.

Objective: Enhance response, recovery and preparedness.

The following strategies emphasize enhancements in current planning, training and equipment for the Police, Fire and EMS Units. These strategies will require partnerships between the village emergency service

providers, Westchester County and area municipalities. Grants and other outside funding sources will be required due to the high cost of implementation of the strategies.

- Strategy: Arrange for use of school district buses in case evacuations are required.*
- Strategy: Arrange for use of village hotels should other shelter sites become unavailable,*
- Strategy: Enhance training of emergency service providers and pursue funding for appropriate protective gear and equipment.*
- Strategy: Identify or be provided advanced warning of the types of hazardous materials traveling on major transportation routes.*
- Strategy: Provide emergency service teams and others unable to relocate during hazardous materials events with necessary protective equipment.*
- Strategy: Through hazardous material education, encourage residents of single and two-family homes to store and use hazardous materials safely.*
- Strategy: Create improved street maps that identify alternate evacuation routes.*
- Strategy: Provide detailed storm drain maps to emergency responders to identify direction of flow in case of spills.*
- Strategy: Provide topographic maps to emergency responders to identify low-lying areas that might require evacuation.*
- Strategy: Coordinate strategic placement of clean up materials and protective equipment with the Westchester County Hazardous Materials Team.*
- Strategy: Provide training and supplemental protective equipment/materials to the Highway Department (i.e. ability to block downstream drains in case of spill).*
- Strategy: Conduct joint drills with Westchester County Hazardous Materials Team and adjoining communities.*
- Strategy: Conduct annual inspections of alternative emergency exits to residential and commercial developments to insure availability and user awareness.*

4. Severe Storms - Summer and Winter

Severe weather related disasters are regular events in the area. The village has regular procedure for such events. The following objectives strive to enhance damage prevention before a storm and improve disaster relief and recovery strategies for during and after the storm.

Objective: Implement most effective means of reducing risk

The strategies developed for the most effective means of reducing risk in the event of flooding or a severe storm are high cost and high effectiveness.

Strategy: Identify and mitigate, to extent feasible, all essential village facilities located within the 100-year flood zone (i.e. A.J. Posillipo Community Center and Highway Garage).

Strategy: Continue with Storm Water Drainage projects in problem areas of the village in order to diminish risk of flooding as identified in 2002 Storm Water analysis of East Branch Blind Brook (Dolph Rotfeld Engineering, P.C.)

Strategy: Acquire undeveloped flood prone property and explore joint project with City of Rye to enhance storm water detention at Bowman Avenue.

Strategy: Inspect annually all dams and storm water detention structures in village.

Strategy: Inspect village trees on regular basis to insure proper trimming and removal as necessary.

Strategy: Consider local legislation establishing stormwater management requirements to minimize increases in stormwater runoff from land development to reduce flooding, siltation and help maintain the integrity of stream channels.

Objective: Improve awareness of flooding and possible mitigation strategies.

Enhancing the community's awareness of the risks associated with severe storms and flooding in the village and the possible mitigation strategies will better prepare the community in case a severe storm or flooding event occurs.

Using the village's website is a cost effective means of distribution.

Strategy: Provide information to residents and businesses regarding the risk of severe storms and flooding. Distribute information on damage prevention and emergency response before a disaster occurs.

Strategy: Develop links off of the village's web pages to county, state and federal emergency response sites to help residents prepare for hazardous events.

Objective: Enhance response, recovery and preparedness.

The following strategies emphasize enhancements in current planning, training and equipment for the Police, Fire and Highway Departments. These strategies will require partnerships between the village emergency service providers, Westchester County and area municipalities. Grants and other outside funding sources will likely be required due to the high cost of implementation of some of the strategies.

Strategy: Maintain a stock of sand bags to be used in a flooding event and store at the highway garage.

Strategy: Upgrade the capability of municipal centers (Village Hall, Police and Fire Stations) to serve as an emergency response center. This will require some modifications including acquisition of adequate emergency power generators.

Strategy: Review emergency shelter options identified in Rye Brook's Disaster Preparedness Plan. Determine suitability of each for various emergencies and upgrade facilities as necessary (i.e. emergency generators, pre-positioned supplies, etc.).

Strategy: Maintain a trained shelter management team (annual refresher training).

Strategy: Explore feasibility of additional emergency shelter options in conjunction with neighboring communities.

Strategy: Obtain materials and equipment for mitigating impact of hazard event and minimizing the discomfort of the public. Work with other municipalities or organizations that can supply aid. Assess need for food and water storage. Contact Red Cross as possible supplier.

Strategy: Use resources provided by county level emergency response teams.

Strategy: Consider methods of maintaining electricity at designated locations.

Strategy: When possible, identify or provide advanced warning to residents if a storm presents particular risks (i.e. tides, snow on roof, snow shoveling).

Strategy: Encourage residents to react to severe weather in a safe and responsible way.

Strategy: Encourage residents to maintain emergency supplies and develop individual emergency response plans.

Strategy: Develop a procedure to address companion animal evacuation and recovery and inform residents about temporary shelter locations to house these displaced animals.

5. Extreme Heat

Objective: Limit the number of health hazards related to extreme heat.

Strategy: Encourage residents with respiratory problems to limit exposure to the sun and stay in a cool place.

Strategy: Inform residents to drink plenty of fluids and beware of any signs of dehydration of days with extreme heat.

Strategy: Encourage residents to insure pets and animals are properly cared for.

Strategy: Use the services of a cooling center for residents who do not have access to air conditioning.

Objective: Increase the number of structures that can withstand extreme heat.

Strategy: Develop a plan to provide a standby generator to all critical facilities for the Village.

Strategy: Encourage residents to check their batteries in the fire and carbon monoxide alarms and flash lights in case of a heat related power failure.

6. Hurricane

Objective: Increase the number of structures that can withstand the impacts of and earthquake.

Strategy: Continue to ensure all Steep Slope permit applications adhere to the strictest standards for possible earthquakes on the property.

Strategy: Continue to enforce and strengthen the Rye Brook Building Code

7. Terrorism

Objective: Decrease the number of structures that are vulnerable to Terrorist Events.

The village should implement strategies that identify and reduce the vulnerability to terrorist attacks. The village will need to monitor changes in conditions that may make the village more vulnerable to these hazard

events, such as changes in the flight paths to regional airports. Reducing risk of terrorism requires partnerships with adjacent communities, local businesses, schools and federal, state and county transportation and security agencies. Since the following strategies emphasize data collection and monitoring the cost of implementation is considered low. The Police and Fire Departments would be primarily responsible for implementation.

Strategy: Conduct discrete inventory of potential terrorist targets within and near the village and implement appropriate security measures.

Strategy: Improve security measures at emergency response facilities and other sensitive facilities.

Strategy: Monitor changes in flight paths to Westchester County or other regional airports that may impact the village.

Strategy: Improve communication among regional responding agencies and enhance ability to alert residents.

Strategy: Encourage regional response drills on an annual basis.

Strategy: Equip highway department with protective gear.

Objective: Increase awareness of terrorism.

In addition to prevention strategies the village should improve its ability to respond to increased demand for medical assistance during a hazard event. The following strategies identify mitigation projects that will improve response of emergency service providers to all hazard events.

Strategy: Enhance training of Police, Fire and EMS personnel.

Strategy: Evaluate roads for emergency vehicle access.

8. Utility Failure

Objective: Increase resistance of utility failure through conservation

The village should work with utility service providers and local group facilities such as schools, senior and medical providers to increase the resistance to drought, water supply failure, power failure and heat waves. Implementing conservation practices would reduce vulnerability to these hazard events.

Strategy: Consider amending local legislation to encourage greater water conservation practices in non- and drought emergency times.

Strategy: Improve coordination with local medical care facilities to determine whether additional support is necessary in the event of a heat wave or problem with the water supply.

Strategy: Improve coordination with local and regional power service providers.

Strategy: Ensure that critical facilities in the village have appropriate backup generation capabilities.

Objective: Improve awareness of hazards and possible mitigation strategies.

The village should work to increase awareness of drought, water supply failure, power failure and heat wave hazards. Providing information regarding conservation practices can reduce vulnerability to these hazard events. More training of emergency personnel is an additional mitigation measure that could be implemented.

Strategy: Provide information to residents and businesses regarding water conservation practices.

Strategy: Enhance training and equipment of emergency service personnel

9. Stormwater Mitigation/Flooding

Objective: Improve awareness of flooding potentials

Strategy: Revive stormwater drainage marking projects to inform the public of the risk associated with improper drainage use.

Strategy: Distribute and post information to residents on what they can do to minimize risk of flooding on their property.

Objective: Ensure all buildings are compliant with codes regarding flooding

Strategy: Require all new building in the flood plain to be built at least 2 feet above the base flood elevation.

Strategy: Require the use of flood proofing new buildings and existing structures if owner is applying for construction permits.

Strategy: Consider revisions to the building code for low lying areas to comply with strict standards to reduce the potential for flooding.

Objective: Increase the ability of infrastructure to handle increasing water due to storms and development

Strategy: Routinely clear drainage basins to increase storage capacity

Strategy: Construct new detention basin off Edgewood Drive

Strategy: Secure final property easements for loch lane drainage improvements

Strategy: Explore possible detention basin on Beachwood Blvd

Strategy: Install new pipe at Avon Circle under Westchester Ave.

Strategy: Explore dredging projects at Rich Manor Park and Hidden Falls Pond

C. Potential Project List

The STAPLEE criterion was used by the Rye Brook Hazard Mitigation team in order to formulate a list of priorities for potential projects to be completed within the Village of Rye Brook. The STAPLEE method was a valuable resource in deciding which programs were cost-effective and could legitimately be implemented. A detailed list of the STAPLEE criterion are listed below.

- 1) **Social:** Is the project compatible with the present and future community values?
- 2) **Technical:** Is the project feasible with available village resources?
- 3) **Administrative:** Does the village have the capability to implement the project?
- 4) **Political:** Is there public support both to implement and maintain the project?
- 5) **Legal:** Does the village have the authority to implement the project?
- 6) **Economic:** Is the project cost effective?
 - Cost/benefit analysis (the most benefit from the least amount of money)
 - a. Favorable – extremely beneficial results for minimal costs to the village, especially if the project mitigates against a high priority hazard
 - b. Fair – ratio is neither good nor bad, meaning the cost is high but the project is necessary for mitigation against a high priority hazard or the cost is low but the project mitigates against a low priority hazard
 - c. Unfavorable – the cost to the village greatly exceeds benefits of the project, or cost is too great when considering that the project mitigates against a low priority hazard
- 7) **Environmental:** Does the project concern the environment: land, Water, endangered species?

The Village of Rye Brook has determined a few specific projects that could help mitigate potential hazards, while improving the response and training

of staff, as well as helping to protect infrastructure and the environment within the Village.

1) Stormwater Management

A. Summary:

The Village of Rye Brook has a very strict Stormwater management program. During all phases of planning or apply for a building permit, applicants must meet the necessary requirements for stormwater management. Many residential zoning district amendments are being considered through the Village Board of Trustees and Village Planning Board to better ensure strict stormwater standards. These prevention techniques reduce the risk of flooding within the Village.

B. Responsible Party

The Village Engineer is responsible for stormwater management projects.

C. Existing Resources:

Funding for many of these projects are bonded because of the cost and the life span of these projects.

D. Cost/Benefit Review:

The benefit as well as the cost can be high for many projects.

E. Timeframe

Regulating and improving stormwater management is a continuous process that must be taken into consideration for any project within the Village.

2) Building/Zoning Codes:

A. Summary

The Zoning Code regulates the use, intensity and pattern of development in the Village. The Building Code regulates the construction and renovation of new and existing

B. Responsible Party

The Building Department is responsible for all codes, updates, additions or subtractions.

C. Existing Resources

Cost are built into the general budget for code review and updates.

D. Cost/Benefit Review

Stricter codes and enforcement is a high benefit with a low cost

E. Timeframe

Strengthening codes is a continuous process.

3) PUBLIC EDUCATION:

A. Summary:

The potential negative effects from any Hazard can be reduced by continually educating the public. With continued education the public can plan for and prepare for the worst, understanding what must be done in certain situations. The Village is continually the conduit between FEMA, SEMO, the American Red Cross, Con ED and other public and private entities publications and educational materials. The Village offers these education materials over the Internet, at Village Hall and the Village Senior Center.

The Village Police and Fire department also play a role in training the public through awareness programs. The Fire Department is involved with the school during fire prevention week and the Police Department hold training sessions for interested citizens.

Public education is continuous throughout the year. Funding for such programs are within the Police and Fire budget and educational materials such as brochures and pamphlets are given to the Village to be distributed to citizens.

B. Responsible Department:

The Village Administration, Police and Fire Departments are responsible for aspects of Public Education awareness.

C. Existing Resources:

Public Education is built into the general operating budget.

D. Cost/Benefit Review:

Training the public and having them more alert and aware of what to do in case of an emergency is a great benefit with a low cost.

E. Timeframe:

Public Education and Training is a continuous process.

4) MANAGEMENT AND STAFF TRAINING

A. Summary:

A quick response to any hazard can have a lasting impact on the residents of this community. In addition to a fast response, additional training to personnel such as the Building and Fire

Inspector and Code Enforcement Officer can help the village better understand the risk to certain facilities, taking a pro active approach to a possible disaster.

This type of training and development is a cost effective way to ensure Village personnel have the necessary skills to detect possible problems that could arise in an emergency situation and help eliminate the problem. The Village is very involved with providing their employees the highest quality training possible. The Director of Public Works, Junior Engineer, Building/Fire Inspector, Code Enforcement Officer and other general management consistently take classes and courses to help them better understand potential hazard elimination strategies and techniques.

B. Responsible Department:

Department heads are responsible for scheduling and ensuring staff participate in frequent training courses to ensure the most up to date knowledge relating to a variety of different topics.

C. Existing Procedures:

Training is included in the general operating budget.

D. Cost/Benefit Review

Normally there is a low cost for training, with a high benefit.

E. Timeframe:

This is a continuous process

5) EMERGENCY POWER SOURCE

A. Summary:

The Village of Rye Brook, including Village Hall, Highway Garage, Senior Center and the Police Department have all experienced power outages several times per year due to weather related incidents. Only Village Hall and the Police Department currently have access to a standby generator, leaving the Highway Garage and the Senior Center vulnerable to power outages. The Village is in process of reviewing the possibility of portable generators to be used at any Village site. A portable generator is advantageous to the Village because it can be used at any site in which power is needed, not just Village buildings, but emergency situations or to assist at risk residents.

B. Responsible Department:

Village Administration is responsible for ensuring adequate power support through portable or standby generators to multiple facilities.

C. Existing Resources:

The Village is looking to include a large scale permanent backup generator in this years capital purchases.

D. Cost/Benefit Review:

Purchase of such equipment represents a high benefit with a high cost.

E. Timeframe:

The process from budget approval to purchase can take several months for a permanent generator.

6) EQUIPMENT INVENTORY

A. Summary:

Evaluation and classification of Village resources and equipment is beneficial information to have in case of an emergency. The Village has begun the process of gathering this data in accordance with the National Incident Management System. A uniformed classification system of all Village owned equipment will reduce the response time for any emergency.

B. Responsible Department

The Director of Public Works is in process of collecting and classifying each piece of equipment.

C. Existing Resources:

This does not require any additional funding.

D. Cost/Benefit Review:

This is a low cost way of inventorying Village equipment for better usage during emergency situations, resulting in a high benefit.

E. Timeframe:

This process is currently taking place and must be constantly updated to ensure the accuracy.

VI. PLAN IMPLEMENTATION AND MONITORING

This section of the hazard mitigation plan discusses the planning process for the preparation and adoption of the plan. It also addresses how the action strategies outlined in Section V of the plan will be incorporated into existing village programs.

This section concludes with a description of the measures that will be implemented to monitor the plan's progress, evaluate the effectiveness of the plan and provide for the updates to the plan.

a. Hazard Plan Preparation

The village began the hazard mitigation planning process in 2003 with a comprehensive review of potential natural hazards that could impact it. The result was the Village of Rye Brook Hazard Analysis Report created by the Westchester County Department of Emergency Service's Office of Emergency Management.

The village received a grant-in-aid from the New York State Emergency Management Office in 2004 to undertake a hazard mitigation analysis and prepare this report. In April 2005, the village engaged Culross Associates Ltd. of Rye, NY to facilitate the analysis and report preparation.

The Village Administrator appointed an All-Hazard Mitigation Work Team that he chairs. The Work team includes the Chief of Police, Fire Chief, EMS Administrator, Village Engineer/Public Works Superintendent, Acting Building Inspector, and Administrative Assistant to the Village Manager. In a series of group discussions, they outlined the risks caused by the hazards in the village, determined realistic strategies for mitigation, response and recovery, and ultimately distinguished between immediate and long-term needs. The group was able to utilize existing response plans and find logical solutions to the problems presented by hazard events in the area. The result of the meetings was the Hazard Mitigation Report.

The public was invited to comment and participate throughout the planning process. In June 2005 a "BLOG" was created on the village website to encourage comment and provide feedback on the Hazard Analysis Report and the development of the mitigation plan. The process was mentioned in the Mayor's Newsletter distributed to all residents and at meetings of the Village Board of Trustees. The village published a public notice in The Journal News newspaper at the beginning of the mitigation plan development. A public meeting to review the draft plan and receive comment was held on August 9, 2005. A notice was also published prior to this meeting.

The final draft of the report was posted on the village website and residents were invited to use the citizen comment sheet in order to respond to it. The resident responses were considered in the preparation of the final document.

Only one comment from the public was received. Susan Porto, of 15 Churchill Road, Rye Brook, expressed her concern by phone on September 7, 2005. The resident suggested that there should be a strategy for companion animal evacuation and recovery during a hazardous event. This comment was incorporated into this plan on page 29.

A record of public notices and public opportunities to participate in the planning process is found in Appendix J.

b. Hazard Plan Adoption

The Board of Trustees of Trustees will be responsible for adopting the hazard mitigation plan. This legislative board is the most appropriate since it is responsible for establishing the village policy, particularly those related to hazard mitigation. The Board of Trustees also has the authority to implement most of the strategies recommended in this plan including setting policy direction for village staff, allocating funding and adopting amendments to existing village laws.

After the Board of Trustees approves the plan, the plan will be reviewed and revised on an annual basis. A committee of Village employees, most notably the Village Administrator, Asst. to Administrator and Public Works Director will monitor and evaluate the plan. Any possible changes in the Village that could possibly impact the plan in any way will be discussed at these meetings. Any possible changes or updates will be brought up at Senior Staff meetings and to the public if further input or actions are necessary and/or required.

c. Implementation through Existing Programs

Successful plan implementation will require that strategies be implemented through the existing village programs and planning mechanisms and instituted in policy formation and decision making process. Section V: Mitigation Objectives and Strategies discusses responsibility for implementation for each strategy. It also identifies the existing village program that will best facilitate the implementation of strategies. Existing programs include:

1. Village Code Revisions. Code revisions will require the Board of Trustees to adopt revisions to the existing Village Code including changes in the Village zoning code, floodplain management requirements, subdivision regulations, housing standards or other relevant Village Code Chapters or planning documents.
2. The Vision Plan. The plan takes into consideration the environmental limitations and risks of the village. The conclusion and recommendations of the plan support the goals of hazard mitigation.
3. Code Enforcement. In some cases, hazard mitigation could be enhanced by stepped-up enforcement, and changes in approach by the Code Enforcement Agency, staff permitting. In other cases modification in police enforcement or fire prevention activities may be necessary.
4. Capital Improvements Program and Budget. Strategies involving significant village expenditures will need to be implemented through the Capital Improvements Program, which is approved annually by the Board of Trustees. Strategies involving smaller expenditures such as funding increases to increase maintenance or enforcement activities will likely be administered through the annual budget process, which is also adopted by the Board of Trustees.

5. To further promote plan implementation, the mitigation plan will be reviewed and considered prior to the adoption of new or amended zoning, land use, and public safety statues and other appropriate local ordinance, policies and programs. Consideration of hazard mitigation as part of the formation of the City Policy will help institutionalize mitigation concerns as part of the City's decision-making process. The Hazard Mitigation Planning Team will assist in this process.

- d. Plan Monitoring

It is important that a process be defined to encourage and facilitate the implementation of the plan recommendations after its adoption by the Board of Trustees. The process will require that the plan be regularly monitored to evaluate the extent to which the proposed mitigation strategies have been implemented. The Hazard Mitigation Plan will be under constant review as goals are achieved through proposed strategies and new strategies are developed and added as amendments to the plan.

After the Board of Trustees approves the Hazard Mitigation Plan the plan will be reviewed, revised and resubmitted to NYSEMO and FEMA every five years for re-approval. The resubmitted plan will be updated to reflect current hazard concerns. New strategies for mitigation of existing or developed conditions will be added to the plan as will any new emergency response plans created by the Village. The Mitigation Plan will continue to be available to residents on the village website and comments through the citizen comment form will be used during the plan's review in order to maintain citizen participation. The plan will be subject to the same adoption method as stated in Section VI Part B and resubmitted to the appropriate state agencies.

The Planning Team needs to meet every year or after a major event to monitor the information contained in the plan. The Village Administrator is responsible to reconvene the Planning Team for this purpose.

- e. Plan Evaluation

The Planning Team needs to evaluate the information in the plan every year or after a major event. The Village Administrator has the responsibility to assign duties and objectives for the mitigation strategies as well as evaluating the future progress. Each of the potential projects will need to be monitored and evaluated for progress.

- f. Plan Maintenance

The Village Administration Department will be responsible for updating the Hazard Mitigation Plan. The Village Administrator will convene the planning team every April to monitor the plan, revise the plan and make any updates and revisions as the planning team deems fit.

The plan will be sent to the New York State Emergency Management Office, as well as the Federal Emergency Management Agency every five years for professional review of the plan.

g. Public Support

The public will have an opportunity to make any comments or suggestions regarding the plan at any time. The plan will always be located at Village Hall and any possible revisions will be included on the Village website to solicit comments and concerns from Village residents.

Appendix A

Village of Rye Brook Hazard Analysis report

Appendix B

HAZNY Evaluation Factors

Appendix C

HAZNY List of Hazards

Appendix D

Westchester County Airport Emergency Response Plan

Appendix E

Rye Brook Community Disaster Preparedness Plan

Appendix F

Village of Rye Brook Vision Plan

Appendix G

Stormwater Analysis: East Branch Blind Brook (Summary)

Appendix H

Blind Brook-Rye School District Wide Safety Plan

Appendix I

Port Chester Rye union Free School District wide Safety Plan

Appendix J

Public Notices & Opportunities to Participate in Planning Process