



## Appendix 13: Borough of Roselle

This appendix is part of the 2016 Union County Hazard Mitigation Plan (HMP) update, and includes only jurisdiction-specific information about the Borough of Roselle, which is one of the twenty (20) municipalities within Union County that is participating in the plan update. Union County led the planning process and outreach for this update. For a detailed description of the planning process and the public outreach efforts for this update, see Section 3 of the 2016 HMP.

### 1. Planning Process and Participation

The County formed a Steering Committee, which was responsible for key decisions during the plan update. This committee sent a letter to the Mayor of each municipality within the County. The Mayors and local officials selected a single individual to represent the town in the broader process. This person was the point of contact for the plan update, but worked with other municipal employees, consultants, volunteers, and other stakeholders throughout the planning process. This collection of participants, considered the local planning committee, is listed below. The committee was responsible for various decisions that informed the development of this appendix, including: prioritizing the natural hazards that can affect the community, reviewing and prioritizing the mitigation actions, and informing community leaders about the status of the County mitigation plan update, including this appendix.

The Borough of Roselle Planning Committee evaluated and identified the hazards of concern, completed the request for information (RFI), reviewed the plan documents and vulnerability assessment, identified local stakeholders for outreach, and worked collectively to update the mitigation strategy. In order to complete the update process, the Borough attended the kickoff meeting held by Princeton Hydro in May 2014. To further the plan development, the Borough Planning Committee met with Princeton Hydro to review the plan documents and revise the mitigation strategy in a workshop format on July 24th, 2014. Local ordinances, site plan requirements, emergency procedures and response plans, and stormwater management plans were reviewed for integration into this plan update. As the plan was developed, the Planning Committee reviewed all of the drafts and provided input on this individual appendix.

**Table 13-1**  
**Local Planning Committee** (Source: Borough of Roselle)

Name	Title	Organization
David Brown II	Borough Administrator	Borough of Roselle
George Phipps	Public Works Superintendent	Borough of Roselle
Jeffrey Guy	Construction Official	Borough of Roselle
Gerard Orlando	Chief of Police	Borough of Roselle
Carl O'Brien	Township Engineer	Maser Consulting, P.A.
Brett Peskin	Project Manager	Maser Consulting, P.A.



## 2. Community Profile

The Borough of Roselle has a total land area of 2.64 square miles and is located in central Union County, west of Elizabeth, New Jersey. Major transportation bordering Roselle include Route 27 and Route 28, and there is a Conrail freight railroad line passing through the Borough.

As of 2010, the population was estimated at 21,085. This is a 0.9 percent decrease from the 2000 population, which was estimated at 21,274.<sup>1</sup> See Section 2 of the 2016 Plan update for a map of Union County.

The site of present day Roselle originally was part of the Elizabethtown Settlement, and was later carved from Linden. Originally settled as farmland, the community grew as a result of land development ventures following the creation of the Mulford Station stop on the Central Railroad. On January 19, 1883 the Borough of Roselle became the first village lighted by Edison's incandescent light bulb. Electric trolleys followed, and Roselle became developed as a center of light industry and residences.<sup>2</sup>

The Borough of Roselle was formally incorporated on December 20, 1894, from portions of Linden Township following a dispute between residents and Linden over infrastructure services. The Borough is governed by an elected mayor and six councilpersons. One councilperson is elected at-large, while five of the council seats represent each of the five wards within the Borough. The Council is the law-making body of the Borough, and also appoints the Business Administrator to handle day-to-day management. The Mayor has limited powers in comparison to other jurisdictions in Union County.<sup>3</sup>

### 2.1 Land Use and Development

Roselle is a densely developed community with nearly 99 percent of its 2.64 square miles of land area classified as urban/developed. Over 90 percent of the parcels within Roselle are classified as residential, based on tax assessment data. Between 2004 and 2012, 25 building permits were issued for residential homes within the Borough. This is 0.3 percent of the total building permits issued for Union County during this time period. Ninety-six (96) percent of these permits were for 1- and 2-family homes. Roselle has a population density of 7986 people per square mile. The 2010 census estimates that 40.5 percent of the housing within the Borough was renter-occupied, higher than the County average of 30.5 percent renter-occupied properties.

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<sup>1</sup> U.S. Dept. of Commerce, Bureau of the Census. Roselle (borough) Quick Facts.

<http://quickfacts.census.gov/qfd/states/34/3464620.html>

<sup>2</sup> The Borough of Roselle, NJ. "A Brief History of Roselle". <http://www.boroughofroselle.com/History/>

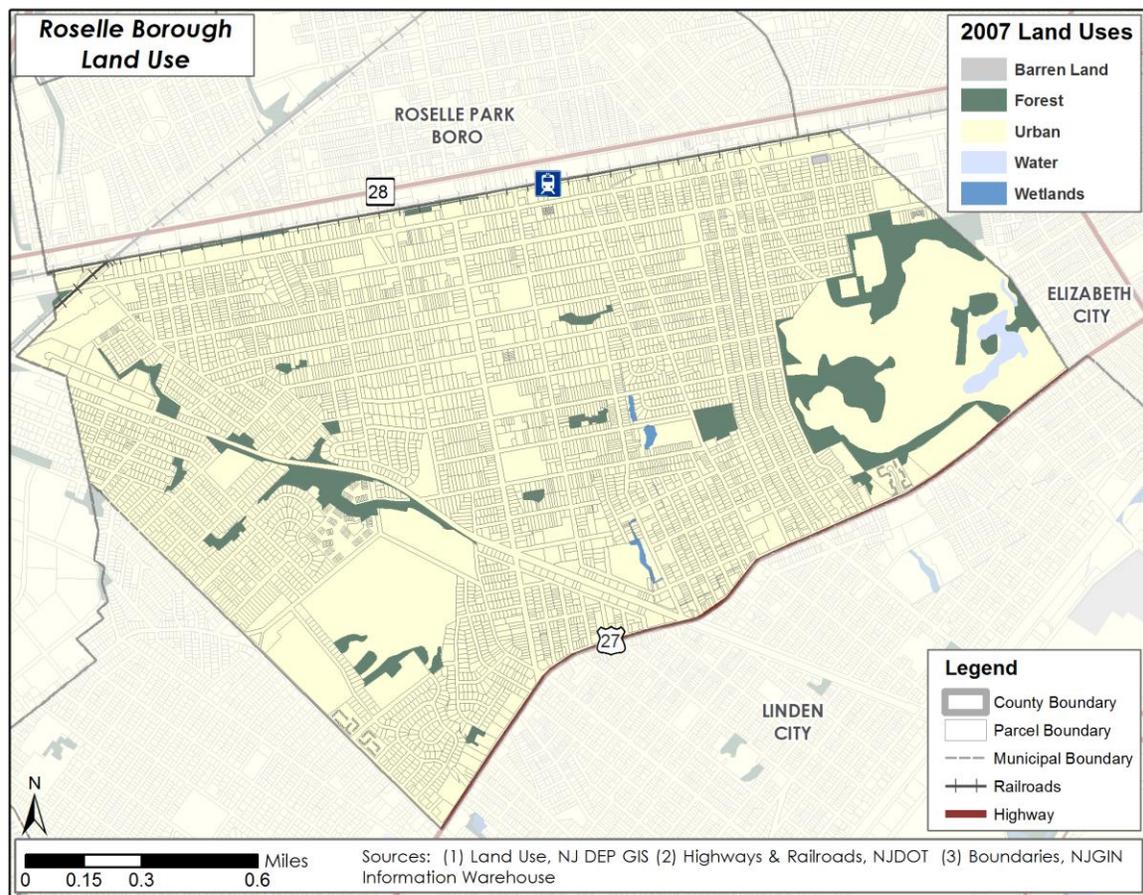
<sup>3</sup> The Borough of Roselle, NJ. "Elected Officials". <http://www.boroughofroselle.com/Officials/>



**Table 13-2**  
**Land Use/Land Cover Trends (NJDEP GIS, 2007)**

Land Cover Class	2002 (acres)	2007 (acres)	Percent Change	Percent of Total Land <sup>4</sup>
Agriculture	-	-	-	-
Barren Land	-	2.74	-	0.32
Forest	25.05	25.05	0.00	2.92
Urban	830.61	827.87	-0.33	96.56
Water	-	-	-	0.00
Wetlands	1.69	1.69	0.00	0.20

**Figure 13-1**  
**Land Use/Land Cover Map Borough of Roselle**



<sup>4</sup> Uses the 2007 land cover values



### 3. Hazard Identification and Risk Assessment

This section of the Roselle Park mitigation plan appendix describes the natural hazards and risks that can affect the community. It should be noted that -- in accordance with FEMA requirements -- only the hazards with aspects that are unique to the community (versus the County as a whole) are included in detail in this appendix.

#### 3.1 Background and Hazard Rankings

Like all the other jurisdictions in Union County, the Borough of Roselle is potentially subject to the effects of all the hazards that are considered in this mitigation plan. However, the majority of these hazards have minimal impacts on the area, and are discussed in detail in the County part of the mitigation plan. FEMA mitigation planning guidance requires that County mitigation plans include a risk assessment section that “assess[es] each jurisdiction’s risks where there vary from the risks facing the entire planning area” (44CFR 201.6 (c) (2) (iii)). Because the Union County HMP update includes separate appendices for each jurisdiction, this requirement is met in the appendices, while risks that affect the entire County uniformly are discussed in the County part of the HMP.

One of the first steps in developing jurisdictional appendices was for participating municipalities to review and prioritize the hazards that can affect them. This was done based on how often a hazard has occurred, how significant effects have been in the past, the difficulty and cost of recovering from such events. Jurisdictions ranked the list of hazards as either high, medium, low, or no concern.

Table 13-3 shows Roselle’s hazard rankings. The level of discussion and detail about specific hazards in this section are based on these rankings. Hazards that are ranked *high* include the most detail, and to the extent possible include probabilistic assessments of risk, i.e. likely future damages in the community based on the likelihood of occurrence. Hazards that are ranked *medium* have less detail and may in some cases refer to the main part of the county mitigation plan; they usually do not have probabilistic risk assessments, although potential future losses

**Table 13-3**  
**Borough of Roselle Hazard**  
**Identification and Prioritization**

Hazard	Priority
Erosion	H
Flood	H
Extreme Temperature – Cold	M
Extreme Temperature – Heat	M
Severe Storm – Winter Weather	M
Drought	L
Earthquake / Geological	L
Hail	L
Hazmats - Fixed Site	L
Hazmats - Transportation	L
High Wind – Straight-line Winds	L
Ice Storm	L
Severe Storm – Lightning	L
Dam Failure	N
High Wind – Tornado	N
Landslide (non-seismic)	N
Storm Surge	N
Wildfire	N

*\*Only the hazards ranked high and medium are analyzed in this appendix*



are discussed based on best available data. Hazards ranked *low* and *none* are not addressed in this jurisdictional appendix because they are discussed in the County part of the HMP, and there are no significant differences in risk between the County and the municipality.

## 3.2 Erosion

As a riverine community, Roselle does not have any coastal erosion issues. Their extensive flooding and stormwater history has led to streambank erosion and subsidence. They have not experienced any property or life loss to date from this hazard and have taken measures to reduce risk in the future.

The Morses Creek/West Brook has undergone channelization and bank stabilization improvements, consisting of both structural measures like gabion baskets and soil bioengineering/vegetative plantings. Maintenance measures will be required to ensure that the vegetative plantings remain stable and erosion is prevented.

## 3.3 Flood Hazard

### 3.3.1 Type, Location and Extent

Flooding in Roselle Borough is primarily related to overbank from Morses Creek (aka. West Brook), which traverses the west side of the jurisdiction in a roughly north to south direction. As shown in Figure 13-2, there are two Special Flood Hazard Areas in the western side of the Borough, both related to Morses Creek. In addition to the floodplain mapping, NFIP claims information indicates particularly floodprone areas immediately south of West 1st Avenue and around Hory Street west of the western branch of Morses Creek. These areas have concentrations of flood insurance claims, including numerous NFIP repetitive loss properties (see below).

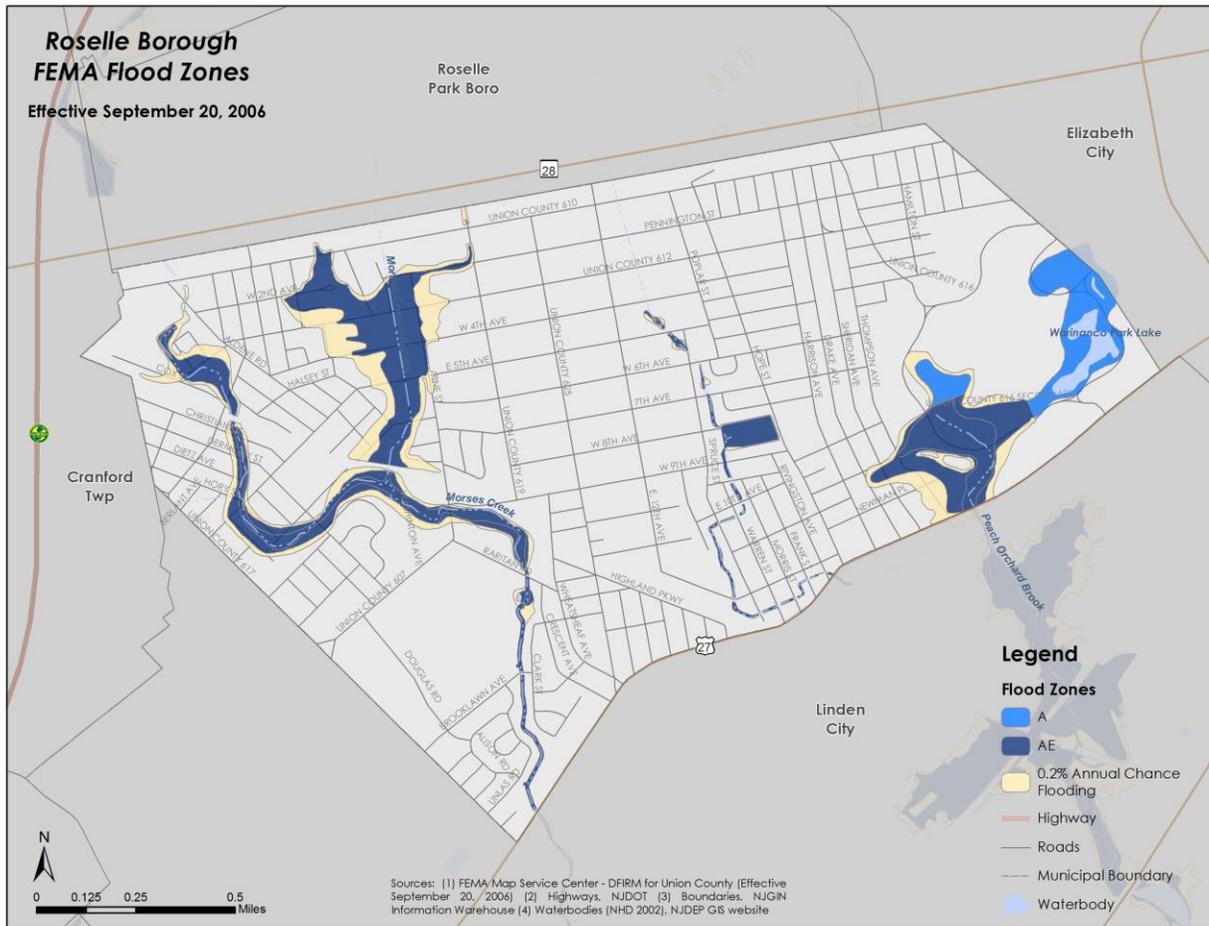
One of the best resources for determining flood risk in a jurisdiction is Flood Insurance Rate Maps (FIRMs), which are produced by FEMA. The FIRM is the official map of a community on which FEMA has delineated both the special flood hazard areas (1% annual chance of flooding) and the risk premium zones applicable to the jurisdiction. The effective FIRM date for Union County is September 20th, 2006. The FIRM is shown in Figure 13-2. The Preliminary FIRM for Union County was released on January 30<sup>th</sup>, 2015. The area within Roselle was not studied and therefore has not changed from the Effective FIRM.

Current FEMA guidance uses the term extent as analogous to potential severity. The extent of the flood hazard in Roselle Borough is relatively minor. The areas discussed above have experienced fairly shallow and low-velocity flooding at various times in the past, and in this case this is the best indicator of extent in the future. The most flood-prone areas of the jurisdiction can expect to experience flooding of a foot or two maximum (occasionally), with more frequent rain events causing a few inches of inundation at low spots, and those adjacent to culverts and stream channels. The current engineering design standard for the jurisdiction is a 25-year event (i.e. one with a 4% annual chance of occurring), so events more significant than that have the potential to inundate specific areas.



Table 13-4 shows the number of parcels in Roselle Borough with at least 60% of their area in the 100-year (1% annual) and 500-year (0.2% annual) floodplain. Although these figures offer some insight into the flood hazard in this jurisdiction, they are not particularly reliable as a risk indicator because in many cases structures and infrastructure (where the risk-producing impacts occur) are not located in the specific areas that are in the floodplain.

**Figure 13-2: Effective FIRM for Roselle Borough**





### 3.3.2 Previous Occurrences and the Probability of Future Floods

Minor flooding occurs in Roselle Borough at least annually, although the severity of these frequent events is minimal. As discussed in the main (County) section of the mitigation plan, more significant events like tropical cyclones and nor-easters occur every few years (section citation to main plan), and can result in significant flooding. Notwithstanding the potential effects of climate change on weather patterns, the Borough can probably expect to experience some level of flooding every year or two, with more significant events happening every five to ten years on average. The main (County) part of this HMP discusses past occurrences in detail, and that history and statistics are generally the same as for Roselle.

### 3.3.3 Flood Impacts and Vulnerability to Flooding

As discussed elsewhere, flood impacts in Roselle Borough are relatively minor based on various metrics such as NFIP claims, FEMA PA Program Project Worksheets, and the known history of flooding. There is no significant history of flood damage to critical facilities or populations in the jurisdiction.

Based on a review of NFIP claims, flood vulnerabilities in Roselle Borough appear to be more significant than in many other parts of Union County. The overall numbers of claims, the frequency of claims in certain locations, and the average claim amounts for properties classified as Repetitive Loss suggest significant though highly localized flood risks. Aside from the two areas discussed above, flood vulnerabilities in Roselle appear to be relatively minor, with only widely dispersed claims in the rest of the jurisdiction.

**Table 13-4: Flood-prone Properties**

Flood hazard area	Number of Parcels
100-year (1%) floodplain	359
500-year (0.2%) floodplain	196



**Table 13-5  
NFIP Policies and Claims**

<b>Number of Parcels:</b>	
Roselle:	5879
Union County:	199,489
<b>Number of Policies In-Force:</b>	
Roselle:	155
Union County:	6,009
<b>Number of Claims:</b>	
Roselle:	401
Union County:	5,560
<b>Total Paid Claims</b>	
Roselle:	\$7,289,309
Union County:	\$96,782,279
<b>Repetitive Loss Properties:</b>	
Roselle:	41
Union County:	707
<b>Total Building</b>	
Roselle:	\$69,432
Union County:	\$16,597,500
<b>Total Contents</b>	
Roselle:	\$6,555,598
Union County:	\$3,787,671
<b>Number of Claims</b>	
Roselle:	159
Union County:	2,061

### 3.3.4 National Flood Insurance Program and Repetitive Loss Properties

To provide a sense of the flood risk in a community it is also beneficial to summarize the policies in force and claims statistics from the National Flood Insurance Program (NFIP). The U.S. Congress established the NFIP with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the federal government will make flood insurance available within the community as a financial protection against flood losses. Roselle Borough has been a member of the NFIP since 1978.

FEMA NFIP statistics indicate that as of February 2014, federal flood insurance policies were in-force on 155 properties in Roselle Borough. This represents a dollar value of property and contents coverage totaling \$56,302,800. Between 1978 and 2014, there have been a total of 401 NFIP insurance claims in Roselle Borough with a total claims value of \$7,289,309. Table 13-5 compares the number of policies in-force and paid claims in the jurisdiction. The Table shows that Roselle Borough comprises 1.6% of the NFIP policies in-force in Union County.

Roselle Borough has been a member of FEMA’s Community Rating System (CRS) since 1992. The CRS is a voluntary program for communities participating in the NFIP. The CRS is an incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. For CRS participating communities, flood insurance premium rates are discounted in increments of 5% based on creditable activities. CRS communities are ranked between 1 and 10, with Class 1 communities receiving a 45% premium discount. Roselle Borough’s current rating is 7.

It should be noted that NFIP claims are not a direct or completely accurate proxy for flood risk in a community. The data does not include flood damages to structures that had no flood insurance. Also, in some cases, structures or contents may have been underinsured. The NFIP claims data also does not include any damages to public facilities, which may be insured via other means (such as self-insurance



or non-FEMA policies); such damages may also be addressed through other federal programs such as FEMA's Public Assistance Program.

FEMA requires a discussion of NFIP Repetitive Loss and Severe Repetitive flood loss statistics in hazard mitigation plans. The NFIP defines repetitive loss properties as those with two or more claims of more than \$1,000 each during any rolling ten-year period.

The flood risk assessment method is based on analysis of NFIP data on repetitive flood loss properties. The NFIP defines repetitive loss properties as those that have received at least two NFIP insurance payments of more than \$1,000 each in any rolling ten-year period. As of February 2014, Union County had 707 such properties based on a query of the FEMA BureauNet NFIP interface. Of this total, 41 properties were located within Roselle; this comprises 5.8% of the County total. Table 13-5 provides a comparison of the residential repetitive loss claims for Union County and Roselle Borough. The tables below include the number of repetitive loss properties, building and contents damages, the total number of claims, and the average claim amounts. Roselle Borough has properties, and the total of claims on them is relatively small, as shown in Table 13-5.

The RL claims can be broken down by focusing on specific areas in the jurisdiction where flood losses are concentrated. Table 13-6 provides a summary of the five streets with the most cumulative repetitive loss flood insurance claims in Roselle. The table includes the building, contents, and total claims data for the properties. Address data about individual sites is omitted for reasons of confidentiality.

**Table 13-6: Flood-prone Properties**

Street Name	# Claims	Average
West 3 <sup>rd</sup> Avenue	17	\$5,072
West 5 <sup>th</sup> Avenue	7	\$13,518
Hory Street	10	\$6,771
Kaplan Street	6	\$5,616
West 4 <sup>th</sup> Avenue	8	\$2,890

### 3.2.5 Flood Risk to Repetitive Loss Properties in Roselle

Residential flood risk is calculated by a simple methodology that uses the FEMA default present-value coefficients from the benefit-cost analysis software modules. To perform this calculation, the flood insurance claims data were reviewed to determine an approximate period over which the claims occurred. This method should be used only for very general estimates of flood risk because the NFIP data represents only part of the flood losses in any jurisdiction. This is because there are always



properties that are uninsured or under-insured. Most of the flood claims in the most recent query occurred between 1987 and 2011, a period of 25 years.

As shown in Table 13-7, there have been 159 flood insurance claims in the 25-year period, for an average number of claims per year of 6.4. Based on a 100-year horizon and a present value coefficient of 14.27 (the coefficient for 100 years using the mandatory OMB discount rate of 7.0 percent), the projected flood risk to these properties is \$288,254. It must be understood that individuals can obtain and cancel flood insurance policies, and the flood hazard depends on many variables, including the weather, so this projection is simply an estimate of potential damages. Nevertheless, it offers a useful metric that can be used in assessing the potential cost effectiveness of mitigation actions, although in this case, site-specific loss estimates are fairly small, meaning that the amount of grant funds that could be expended on projects will probably be limited.

**Table 13-7: Projected 100-year Flood,  
Based on Past Flood Insurance Claims**

Data	Value
Period in years	25
Number of claims	159
Average claims per year	6.4
Total value of claims	\$6,555,958
Average value of claims per year	\$262,238
<b>Projected risk, 100-year horizon</b>	<b>\$3,742,136</b>

*(Source: FEMA NFIP query February, 2014)*

### 3.2.6 Flood Risk to Severe Repetitive Loss Properties in Roselle

The definition of Severe Repetitive Flood Loss is included in the County portion of this mitigation plan. As of February 2014, Roselle Borough had no NFIP severe repetitive flood loss properties.



## 3.4 Straight Line Wind Hazard

### 3.4.1 Type, Location and Extent

The high wind – straight-line wind hazard (including type, location and extent) is uniform across Union County, and is discussed in detail in the County portion of this mitigation plan (see Section 4. For reasons of brevity these details are not repeated here. There are no wind hazards that are unique to Roselle Borough.

### 3.4.2 Previous Occurrences and the Probability of Future Occurrences

Previously occurrences and the probability of future events are the same for Roselle Borough as for Union County. Refer to Section 4 for that information at a County level.

### 3.4.3 Straight Line Wind Impacts and Vulnerabilities to the Hazard

Roselle Borough is a typical residential community, predominated by balloon-frame and unreinforced masonry residential structures, the majority of which have gable or hip roofs. As discussed in the County part of the plan, wind profiles in this area of the country indicate a relatively low potential for severe events, and adequate construction techniques and building codes have generally sufficed to keep risks low. There are two main sources of potential wind damage in such communities: (1) structural damage to residential and non-residential buildings, and (2) power losses, mainly due to trees falling on above-ground lines. There are established methodologies for completing general risk assessments for these hazards. These are explained in detail in the County portion of the plan (see Section 4). Table 13-8 below summarizes annual straight-line wind risks and cumulative risks over 50- and 100-year planning horizons in Roselle Borough. Risks are in seven discreet categories: building damages, contents damages, inventory loss, relocation costs, business income lost, rental income lost and wages lost.

The next table shows power loss risks in Roselle Borough, again annualized and for 50- and 100-year planning horizons.

**Table 13-8:**  
**Straight-line Wind Risks for**  
**Range of Loss Types**  
**Annualized and 50- and 100-**  
**year Planning Horizons**

Occupancy Class	Total SF	Total Annualized Damages	50-year Risk	100-year Risk
Residential	\$9,670,437	\$254,345	\$3,510,217	\$3,629,251
Commercial	\$1,567,689	\$23,015	\$317,635	\$328,406
Industrial	\$1,522,850	\$23,573	\$325,335	\$336,367
Agricultural	\$8,790	\$126	\$1,735	\$1,794
Religious	\$115,488	\$1,797	\$24,804	\$25,646
Government	\$23,404	\$320	\$4,422	\$4,572
Education	\$93,400	\$1,205	\$16,631	\$17,195
<b>Total</b>	<b>\$13,002,057</b>	<b>\$304,382</b>	<b>\$4,200,780</b>	<b>\$4,343,231</b>



**Table 13-9: Power Loss Horizons**

Period	Risk Value
Annual	\$193,742
50-year planning horizon	\$2,673,784
100-year planning horizon	\$2,764,553

## 3.5 Winter Weather Hazard in the Community

### 3.5.1 Type, Location and Extent

Because the hazards severe storm – winter weather, ice storms and extreme temperatures – cold are closely related, they are combined in this subsection of the appendix. Severe storms and winter weather risks are discussed in detail in Section 4 of the County portion of this mitigation plan. There are no significant differences in the type, location or extent of this hazard between the County and Roselle Borough, and there are no aspects of the hazard that are unique to this jurisdiction.

### 3.5.2 Previous Occurrences and the Probability of Future Occurrences

Previous occurrences of the severe storm-winter weather/ice storm/extreme temperature - cold hazards are discussed in detail in the County portion of this hazard mitigation plan (see Section 4), and for reasons of brevity are not repeated here. There are no meaningful differences between the County as a whole versus Roselle Borough with regard to occurrences or the future probability of these hazards.

### 3.5.3 Winter Weather Impacts and Vulnerabilities to the Hazard

The impacts from these three hazards in Roselle Borough are substantially similar to the County as a whole, and include lost productivity, traffic accidents, downed trees (and related power losses), medical events (such as heart attacks), and hypothermia (which rarely causes any significant or long-term problems). The community has no unique or pronounced vulnerabilities to these hazards. Like most established communities, over time Roselle Borough has adapted its systems and infrastructure to minimize the effects of cold weather and associated meteorological effects. In rare cases, buildings may experience structural problems due to snow loads, and public or private infrastructure may fail due to freezing. However, these problems are usually minor and are addressed by private citizens (through their own work, or via insurance proceeds) or by the government in the case of infrastructure.

Perhaps the most significant potential impacts of winter weather are traffic accidents (with related injuries and fatalities), and power losses from ice and downed trees. For the most part, damage to vehicles is addressed via private insurance, records of which are proprietary. However, there are national statistics regarding injuries and deaths related to such weather. Local values for injuries and deaths can be deduced from national statistics. Figures for Roselle Borough are displayed in the table below. Refer to the County portion of this mitigation plan for source citations and an explanation of the methodology.



An additional source of risk from cold and winter weather is hypothermia deaths. Although the risk from this hazard is relatively small, it can nevertheless be calculated by deduction from national statistics. Annual deaths nationwide were obtained from a U.S. Centers for Disease Control report (National Health Statistics Reports, Deaths Attributed to Heat, Cold and Other Weather Events in the United States, 2006-2010).

**Table 13-10**  
**Winter Storm-related Risks**  
**(traffic injuries and fatalities),**  
**Mountainside Borough**  
**50- and 100-year Planning Horizons**

	Injuries (combined)	Deaths
Snow/sleet	\$2,895,936	\$328,866
Icy pavement	\$2,253,060	\$248,040
Snow/sleet	\$2,171,690	\$218,532
Total annual risk (all hazards)	\$7,320,685	\$795,438
50-year risk	\$101,025,454	\$10,977,041
100-year risk	\$104,466,176	\$11,350,897

**Table 13-11**  
**Risks from Hypothermia Roselle Borough**

2010 Population	% of US	Annual Death \$	50-year Horizon	100-year Horizon
21,085	0.0067%	\$568,952	\$7,851,535	\$8,118,943

## 3.6 Extreme Temperature – Heat

### 3.6.1 Type, Location and Extent

Heat risks are discussed in detail in Section 4-3 of the County portion of this mitigation plan. There are no significant differences in the type, location or extent of this hazard between the County and Roselle Borough, and there are no aspects of the hazard that are unique to this jurisdiction.

### 3.6.2 Previous Occurrences and the Probability of Future Occurrences

Previous occurrences of the heat hazard are discussed in detail in Section 4-3, and for reasons of brevity are not repeated here. There are no meaningful differences between the County as a whole versus Roselle Borough with regard to occurrences or the future probability of this hazard.

### 3.5.3 Heat Impacts and Vulnerabilities to the Hazard

Heat impacts in Roselle Borough are substantially similar to the County as a whole. There are various potential impacts from this hazard, including stresses on electrical systems, damage to infrastructure such as roads, and illness/death. There are no reliable data related to the first two effects, but there is some information related to deaths from heat-related hazards from a U.S. Centers for Disease Control report (National Health Statistics Reports, Deaths Attributed to Heat, Cold and Other Weather Events in



the United States, 2006-2010.). As explained in the County portion of this mitigation plan, national-level data about such deaths were scaled to the local level by population.

**Table 13-12**  
**Heat-related Risks, Roselle Borough**  
**Annual, 50- and 100-year Planning Horizons**

Horizon	Damages
Annual risk	\$203,564
50-year risk	\$2,809,177
100-year risk	\$2,904,852

### 3.7 Critical and Public Facilities

None of the Borough of Roselle’s publically owned facilities are in the floodplain.

Name	Address
Mun. Bldg.	210 Chestnut St.
L.V. Moore M.S.	720 Locust St.
P.O. 07203	104 Chestnut Ave.
Fire H.Q.	
G. Wilday M.S.	Brooklawn Ave.
Roselle Catholic H.S.	Raritan Road
Police H.Q.	
A. Clark H.S.	122 East Sixth Ave.
Pub. Lib.	
Dr. C.C. Polk Sch.	1100 Warren St.
Washington Sch.	501 Washington Ave.
Harrison Sch.	310 Harrison Ave.
Victory Sch. at the Occupational Center of U.C.	301 Cox St.
St. Joseph's Sch.	140 East Third Ave.
Warinanco Skating Center	Warinanco Park/Thompson Ave.



## 4. Borough of Roselle Mitigation Strategy

This section contains goals, objectives, and action items for the Borough of Roselle, as part of the Union County Plan Update. The goals are similar to the goals outlined in the County plan, but the objectives are adjusted for the jurisdiction. The definitions for these terms can be found in Section 5 of the Union County Plan Update.

### 4.1 Goals

- Goal 1: Improve **LOCAL KNOWLEDGE** about the potential impacts of hazards, and the identification of specific measures that can be taken to reduce their impacts
- Goal 2: Improve **DATA COLLECTION, USE, AND SHARING** to reduce the impacts of hazards
- Goal 3: Improve **CAPABILITIES, COORDINATION, AND OPPORTUNITIES** to plan and implement risk reduction projects, programs, and activities
- Goal 4: Pursue a range of **MITIGATION OPPORTUNITIES**, including addressing NFIP repetitive and severe repetitive loss properties, and reducing risk to public properties and infrastructure

### 4.2 Objectives

- Objective 1.A: Increase risk awareness among officials and citizens.
- Objective 1.B: Maintain and improve jurisdiction-level awareness regarding funding opportunities for mitigation, including that provided by FEMA and other federal and State agencies.
- Objective 2.A: Improve the availability and accuracy of risk- and mitigation-related data at the local level, as the basis for planning and development of risk-reduction activities.
- Objective 2.B: Ensure that government officials and local practitioners have accurate and current information about best practices for hazard mitigation planning, project identification, and implementation.
- Objective 2.C: Develop and maintain detailed data about critical facilities, as the basis for risk assessment and development of mitigation options.
- Objective 3.A: Continue support of hazard mitigation planning, project identification, and implementation at the municipal level.
- Objective 3.B: Continue close coordination with the County in a range of risk-related areas, such as FEMA programs, mitigation planning, development of hazard mitigation projects, etc.
- Objective 3.C: Increase property owner participation in the National Flood Insurance Program.
- Objective 3.D: Implement activities to improve the community's CRS rating.
- Objective 3.E: Work towards increasing the integration of mitigation principles and activities in a range of local regulations, plans, ordinances and activities.
- Objective 3.F: Maintain and improve coordination with surrounding communities with regard to understanding and reducing risks.
- Objective 4.A: Facilitate development and timely submittal of project applications meeting state and federal guidelines for funding (1) for RL and SRL properties and (2) for hardening/retrofitting infrastructure that is at the highest risk.
- Objective 4.B: Maintain and enhance local planning and regulatory standards related to future development and investments.



### 4.3 Mitigation Strategy

The table below lists prioritized mitigation projects and actions identified by the Borough of Roselle.

Mitigation Action, Program, or Project	Hazard	Priority	Implementation Mechanism	Responsible Party	Target Start Date	Project Duration	Estimated Cost	Current Status
GENERATOR - COMMUNITY CENTER	Flood/Wind	Medium	Capital Improvement	DPW	2017	6 months	\$50,000	Seeking funding
GENERATOR - DPW	Flood/Wind	Medium	Capital Improvement	DPW	2017	6 months	\$50,000	Seeking funding
GENERATOR – SANITARY SEWER PUMP STATION	Flood/Wind	High	Capital Improvement	DPW	2017	6 months	\$50,000	Seeking funding
ADDRESS REPETITIVE LOSS PROPERTIES THROUGH CHANNEL IMPROVEMENTS TO TRIBUTARIES TO WEST BROOK/MORSES CREEK AND PEACH ORCHARD BROOK/JOUET BROOK	Flood	High	Capital Improvement	Engineering	2017	3 years	\$5 million	Seeking funding
IMPROVEMENTS AND CONVERSIONS OF ROADWAY STORMWATER SYSTEMS (Various Locations)	Flood	Medium	Capital Improvement	Engineering	2016	3 years	\$2 million	Seeking funding
MAINTENANCE TO WEST BROOK AND PEACH ORCHARD BROOK	FLOOD	MEDIUM	CAPITAL IMPROVEMENTS	ENGINEERING	2016	SEMI-ANNUAL	\$250,000	SEEKING FUNDING
Elevation or acquisitions of repetitive loss properties not addressed through channel improvements	Flood	Medium	Grants	Engineering	2017	1-5 years	100,000	New



Mitigation Action, Program, or Project	Hazard	Priority	Implementation Mechanism	Responsible Party	Target Start Date	Project Duration	Estimated Cost	Current Status
Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	High	Emergency Management	OEM Coordinator, in coordination with County OEM		One Year	Staff Time	Distributed Roselle Flood Hazard Map brochure in 2014 (3,700 residents)



## 4.4 Capability Assessment

As part of this plan update each town self-assessed their existing planning and regulatory tools, communication and emergency response capabilities, staff and personnel, and their capabilities to leverage municipal funds to achieve hazard mitigation planning objectives. This capability assessment should be updated as part of the ongoing maintenance process.

### 4.4.1 Planning and Regulatory

Tool	Borough Has (y/n)
Zoning Ordinance	Y
Subdivision Ordinance	Y
Flood Damage Prevention Ordinance (per NFIP)	Y
Special Purpose Ordinances (e.g. wetlands, critical or sensitive areas)	Y
Stormwater Management Plan/Ordinance	Y
Comprehensive Plan / Master Plan	Y
Capital Improvements Plan	N
Site Plan Review Requirements	Y
Habitat Conservation Plan	N
Economic Development Plan	N
Local EOP	Y
Continuity of Operations Plan	N
Post Disaster Recovery Plan or Ordinance	N
Wildfire Protection Plan	N
Real Estate Disclosure req.	Y
Other (e.g. steep slope ordinance, local waterfront revitalization plan)	N
Freeboard	N
Cumulative Substantial Damages	N
Shoreline Management Plan	N

### 4.4.2 Communication and Emergency Response

	Does the Borough have this (y/n)
Outdoor warning system	N
Nixle	Y
Auto-Dialer/Reverse 911/Emailer	Y
Social Media	Y
Website Updates	Y
Other Emergency Communications	Y
Mutual Aid Agreements	Y
Emergency Operations Center	Y
Evacuation Vehicles	Y
Swift-water rescue	N
Shallow water boats	Y



#### 4.4.4 Staff/Personnel

	Does this Borough have this expertise on staff?
Staff with expertise or training in benefit/cost analysis	N
Grant Writer(s)	N
Emergency Manager	Y
Professionals trained in conducting damage assessments	Y
Scientist familiar with natural hazards in the municipality.	N
Personnel skilled or trained in "GIS" applications	N
Surveyor(s)	N
NFIP Floodplain Administrator	Y
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y

#### 4.4.5 Fiscal Capabilities

Fiscal Mechanism	Does the Borough have this capability?
Community development Block Grants (CDBG)	Y
Capital Improvements Project Funding	Y
Authority to Levy Taxes for specific purposes	Y
User fees for water, sewer, gas or electric service	Y
Impact Fees for homebuyers or developers of new development/homes	N
Incur debt through general obligation bonds	Y
Incur debt through special tax bonds	Y
Incur debt through private activity bonds	N
Withhold public expenditures in hazard-prone areas mitigation grant programs	N



## 5. Plan Maintenance and Adoption

### 5.1 Plan Maintenance

The Borough of Roselle will review this Appendix of the County's hazard mitigation plan appendix each year and give the County's HMP Coordinator an annual progress report. The Emergency Management Coordinator is responsible for convening the LPC, initiating the plan review, and submitting the annual progress report. The LPC may use worksheets #1 and #3 in the FEMA 386-4 guidance document, to facilitate the review and progress report. FEMA guidance worksheets are provided in Appendix G. Local progress reports shall be provided to the County HMP Coordinator at least two weeks prior to the annual plan review meeting.

Additionally, the LPC will convene and review the plan when major hazard events impact the jurisdiction, potentially yielding opportunities for mitigation grant funding, or when new information suggests that plan elements do not accurately reflect the community's risk or its mitigation priorities.

If necessary, the Emergency Management Coordinator, or designated HMP Coordinator, will convene a meeting of the LPC to review and approve all changes. The Borough retains the discretion to implement minor changes to the document without formal procedures involving the Borough Council subject to local policies and regulations.

In addition to the annual progress report, the Borough of Roselle will provide Union County with a copy of the written notice of any changes to the jurisdictional appendix at the time such changes are implemented.

The LPC shall document, as needed and appropriate:

- Hazard events and losses in Roselle and the effects that mitigation actions have had on impacts and losses,
- Progress on the implementation of mitigation actions, including efforts to obtain outside funding for projects,
- Any obstacles or impediments to the implementation of actions,
- Additional mitigation actions believed to be appropriate and feasible,
- Any changes to local capabilities,
- Efforts to integrate the information included in this plan into other local planning mechanisms including, but not limited to, the comprehensive plan, capital improvement planning, budgeting, zoning amendments, and variance approvals,
- All public and stakeholder input and comment on the Plan that has been received by the Borough.
- Copies of any grant applications filed on behalf of the Borough



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### 5.1.2 Continued Public Input

The Borough of Roselle is committed to incorporating public input into its ongoing hazard mitigation planning. The public will have an opportunity to comment on the Plan prior to any changes and during the 5-year plan update. The annual progress reports will be posted on the County mitigation website in addition to the adopted Plan. The Borough will post a link to the plan on the municipal website.

All public comments and input on the plan will be recorded and addressed, as appropriate. Opportunity to comment on the plan will be provided directly through the County's website. Public comments can also be submitted in writing to the County's HMP Coordinator. All public comments shall be addressed to: Union County Office of Emergency Management c/o All Hazards Pre-disaster Mitigation Plan Coordinator 300 North Ave East, Westfield, NJ 07090.

The Borough of Roselle's LPC shall ensure that:

- Copies of the latest approved Plan are available for review at Borough Hall along with instructions to facilitate public input and comment on the Plan.
- Public notices are made as appropriate to inform the public of the availability of the Plan, particularly during Plan update cycles.
- For minor changes to this appendix, the Borough of Roselle will post a notice on the Borough's website and invite the public to review and comment.
- For major changes involving Borough Council approval, the Borough will use its standard public notice procedures inviting the public to review the document and provide feedback.

## 5.2 Plan Integration

The Hazard Mitigation Plan is a critical tool to help identify vulnerabilities and develop specific projects to reduce studied risk within the jurisdiction. However, it is not the only tool that may help minimize the impact of future hazard events on the people, infrastructure, and economy in the community. Using the data included in this Plan update to inform future updates of its Comprehensive Plan, Capital Improvement Planning and annual budget, stormwater management, zoning and code updates, and variance and subdivision applications will improve the resiliency of the community and reduce future risk to persons and property. All efforts to integrate the plan into other local mechanisms can be reported to the Plan Coordinator at each annual update.

## 5.3 Plan Adoption

On [insert date] Union County submitted the initial draft of the 2016 Plan Update to NJOEM for review and comment. After addressing NJOEM comments in the document, the HMP was resubmitted for final consideration and approval by NJOEM and FEMA. FEMA approved the plan on [insert date], and the Plan update was forwarded to the Union County Board of Chosen Freeholders for adoption, which occurred on [insert date].



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The Township Council approved the plan on [insert date]. The Township resolution and the County's adoption resolution are provided as Appendix E of the 2016 HMP update. Following adoption, the plan update was resubmitted to FEMA for final approval, which occurred on [insert date]. The FEMA approval letter is included as Appendix D.