Appendix 8: City of Linden

This appendix is part of the 2015 Union County Hazard Mitigation Plan (HMP) update, and includes only jurisdiction-specific information about the City of Linden, 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 2015 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 that are included in Table 8-1, and informing community leaders about the status of the County mitigation plan update, including this appendix

The City of Linden Planning Committee (LPC) 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 City attended the kickoff meeting held by Princeton Hydro in May 2014. To further the plan development, the City Planning Committee met with Princeton Hydro to review the plan documents and revise the mitigation strategy in a workshop format on July 24th, 2014, June 23rd, 2015, and September 25th, 2015. 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 8-1: Local Planning Committee (LPC) (Source: City of Linden)

Name	Title	Organization
James Schulhafer	Linden OEM Coordinator/Police Chief	City of Linden
Joseph Dooley	Fire Chief	City of Linden
Edward Chabak	Linden OEM Senior Deputy Coordinator/Police Sgt.	City of Linden
George Vircik	City Engineer/Floodplain Manager	City of Linden
Joseph Chrobak	Senior Engineer	City of Linden
Kathleen Colgan	Linden OEM Public Information Officer	City of Linden
Joseph Rizzo	Linden OEM Deputy Coordinator	City of Linden

2. Community Profile

The City of Linden has an area of 11.407 square miles and is located in southeastern Union County, New Jersey. Major transportation routes passing through Linden include the New Jersey Turnpike, Route 1 and Route 27. Linden lies on the Arthur Kill, a navigable waterway used by shipping traffic to the Port Authority of New York and New Jersey. Linden's rail station provides access to both the Northeast Corridor Line and the North Jersey Coast Line. The Linden Airport is a public use airport serving commuter, recreation and business traffic.

Linden's population as of the 2010 Census was estimated at 40,499. This is a 2.8 percent increase from the 2000 population, which was estimated at 39,394.[1] Figure 8-1 is a map of the City of Linden. See Section 2 for a map of Union County.

Originally settled as farmland on broad marshes, Linden has deep roots in industrial production and chemical works that emerged in the 19th century. The location of Linden on the Arthur Kill as well as on the rail lines helped fuel this industrial development. Although the chemical industry has declined over the years, Linden hosts substantial business and industry, including the Bayway Refinery and Merck & Co.

The City of Linden was originally incorporated as a township in March 1861, and incorporated as a City on January 1, 1925.[2] Linden uses a City form of government with a Mayor and ten-member Council with one Council President. The Mayor and Council President are elected to four-year terms, while the remaining Council members are elected for three-year staggered terms, so that two, three or four seats are open for election each year.

2.1 Land Use and Development

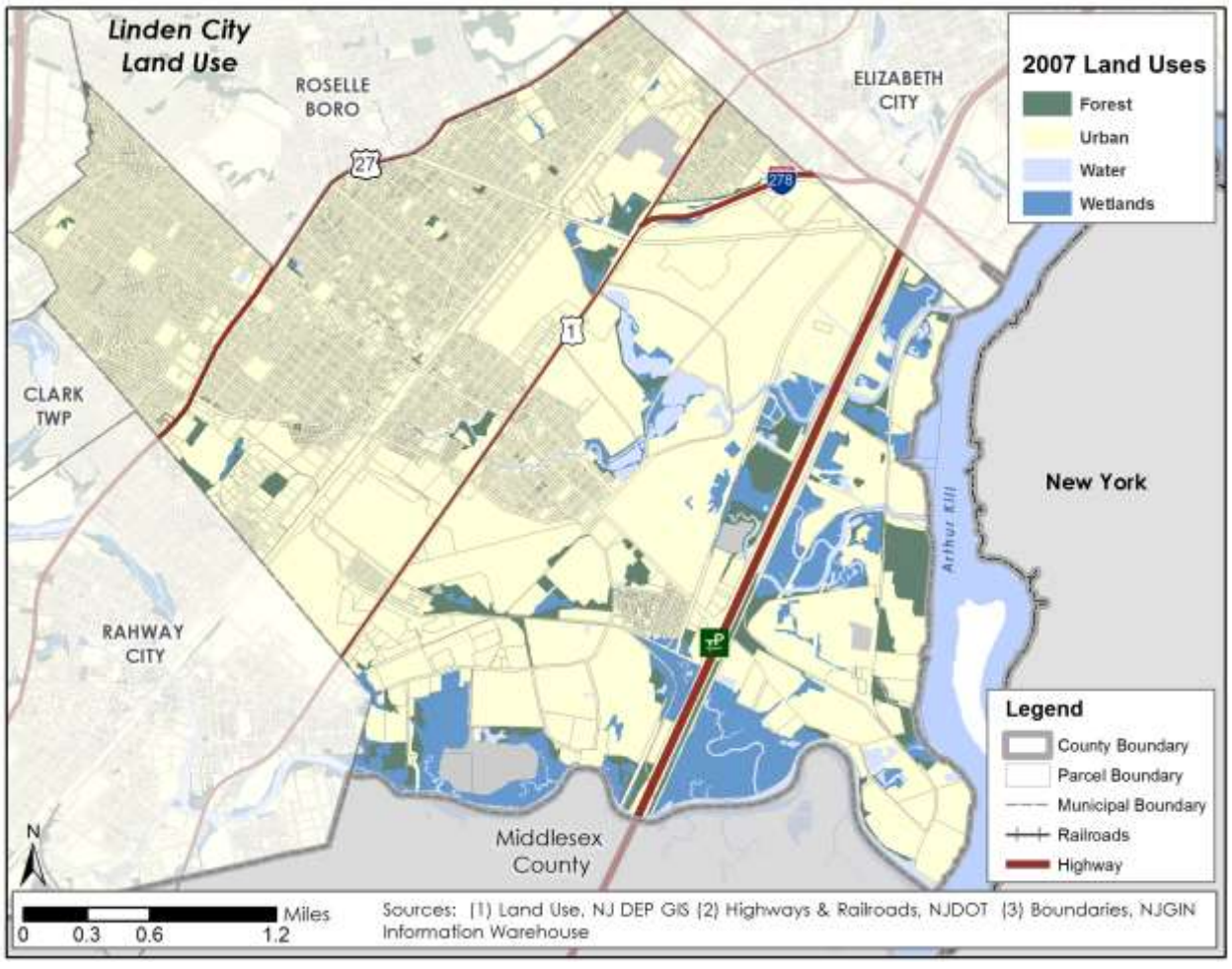
Linden is a community of mixed use development, with 81.71 percent of its 11.407 square miles of land area classified as urban/developed. Over 77.95 percent of the parcels within Linden are classified as residential, based on tax assessment data. Between 2000 and 2012, 894 building permits were issued for residential homes within the City. This is 5.57 percent of the total building permits issued for Union County during this time period. Just over 49 percent of these permits were for 1- and 2-family homes. Linden has a population density of 3661 people per square mile. The 2010 census estimates that 43 percent of the housing within the City was renter-occupied, higher than the County average of 30.5 percent renter-occupied properties.

[1] U.S. Dept. of Commerce, Bureau of the Census. American FactFinder, Linden City, New Jersey Retrieved 10/14/14.
[2] NJ League of Municipalities. Linden, NJ Community Information. http://www.njmls.com/NJ/UNION/LINDEN-community-information Retrieved 10/14/14.

Table 8-2: Land Use/Land Cover Trends (**NJDEP GIS, 2007**)

Land Cover Class	2002 *(acres)*	2007 *(acres)*	Percent Change	Percent of Total Land[3]
Agriculture	-	-	-	-
Barren Land	112.45	113.95	1.33%	1.61%
Forest	412.51	341.13	-17.30%	4.82%
Urban	5,714.96	5,786.15	1.25%	81.71%
Water	268.42	268.68	0.10%	3.79%
Wetlands	572.89	571.32	-0.27%	8.07%

Figure 8-1: Land Use/Land Cover Map City of Linden



[3] Uses the 2007 land cover values

3. Hazard Identification and Risk Assessment

This section 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 are included in detail in this appendix.

3.1 Background and Hazard Rankings

Like all the other jurisdictions in Union County, Linden 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 "assesses 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 main HMP.

One of the first steps in developing municipal appendices was for the towns 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 8-3 shows Linden'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 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.

Table 8-3
City of Linden Hazard Identification and Prioritization

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

**Only the hazards ranked high and*

3.2 Flood Hazard

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 DFIRM data released in 2006 included updates to the Flood Insurance Study (FIS) based on revised hydrologic and hydraulic analysis for the Rahway River that was completed in March 2006. This map is shown in Figure 8-2.

After Sandy, FEMA released *Advisory Base Flood Elevation (ABFE) maps* for certain communities based on the partially completed flood study that were designed to help with rebuilding and recovery efforts. The City of Linden was one of these communities within Union County. The ABFEs are updated estimates of the 1% chance flood elevations derived from new coastal flood analysis and data. The data from the February 2013 release of the ABFE data is shown in Figure 8-3. This is not necessarily the final Flood Hazard data for the City, but. at the time the mapping was done for this plan update, the data mapped was the best available. For the most recent information on the flood zones within the City, please contact City Hall.

Figure 8-4 is a map of the ABFE data with the building footprints that were developed by NJDEP during this update of the flood mapping. At this time, building footprints are only available within the ABFE coastal study area. This map is a zoomed in image, not the entire hazard area, for demonstration purposes of this data. For more information, or to request the building footprint data, contact NJDEP.

The last map in the following series, Figure 8-5, is a map comparing the Effective FIRM with the ABFE data from February 2013. It shows where areas have been designated as V-zone and other changes that have occurred with the new mapping. At this time the ABFEs have not been adopted, but this data is best used for planning purposes.

Figure 8-2: Effective FIRM map City of Linden

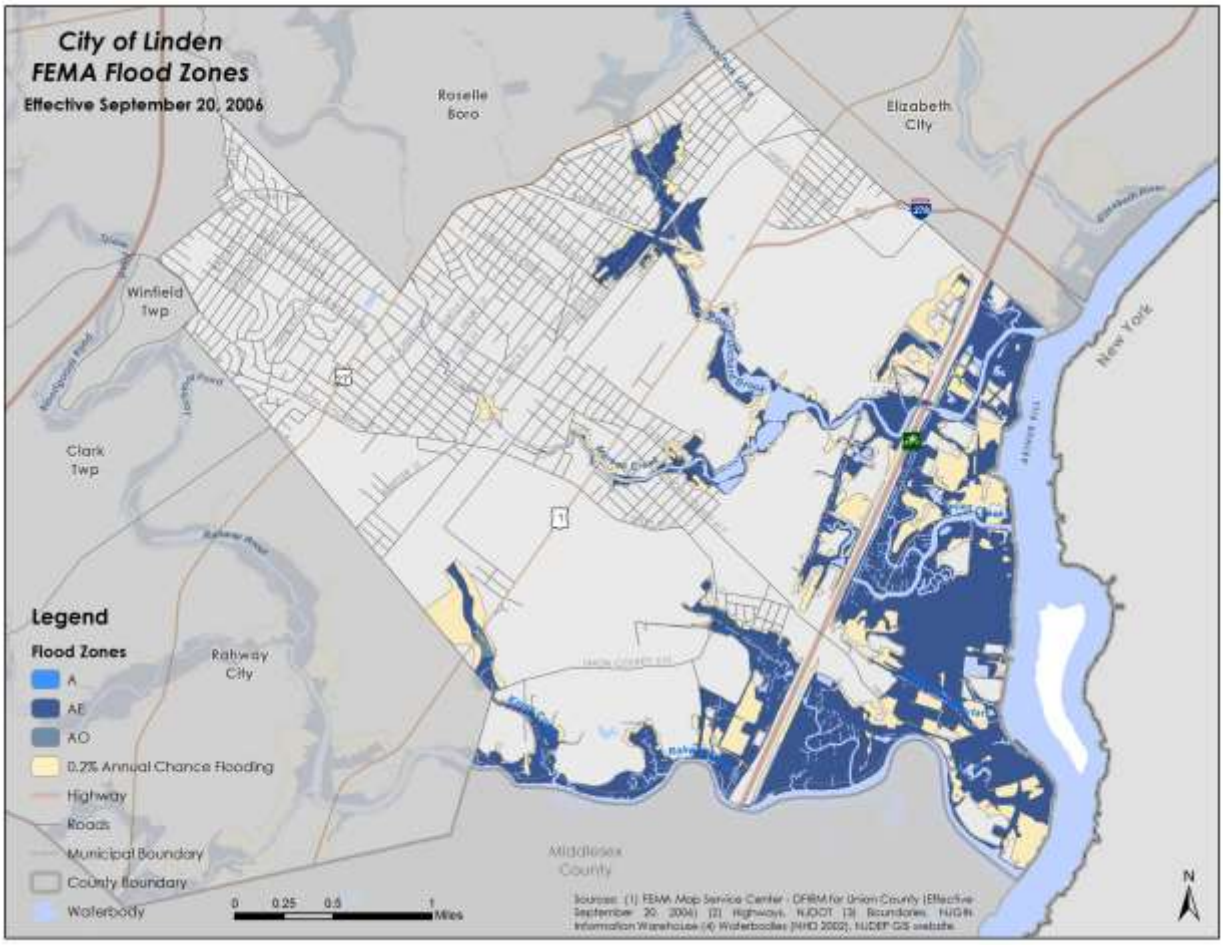


Figure 8-3: ABFE Flood Zones City of Linden

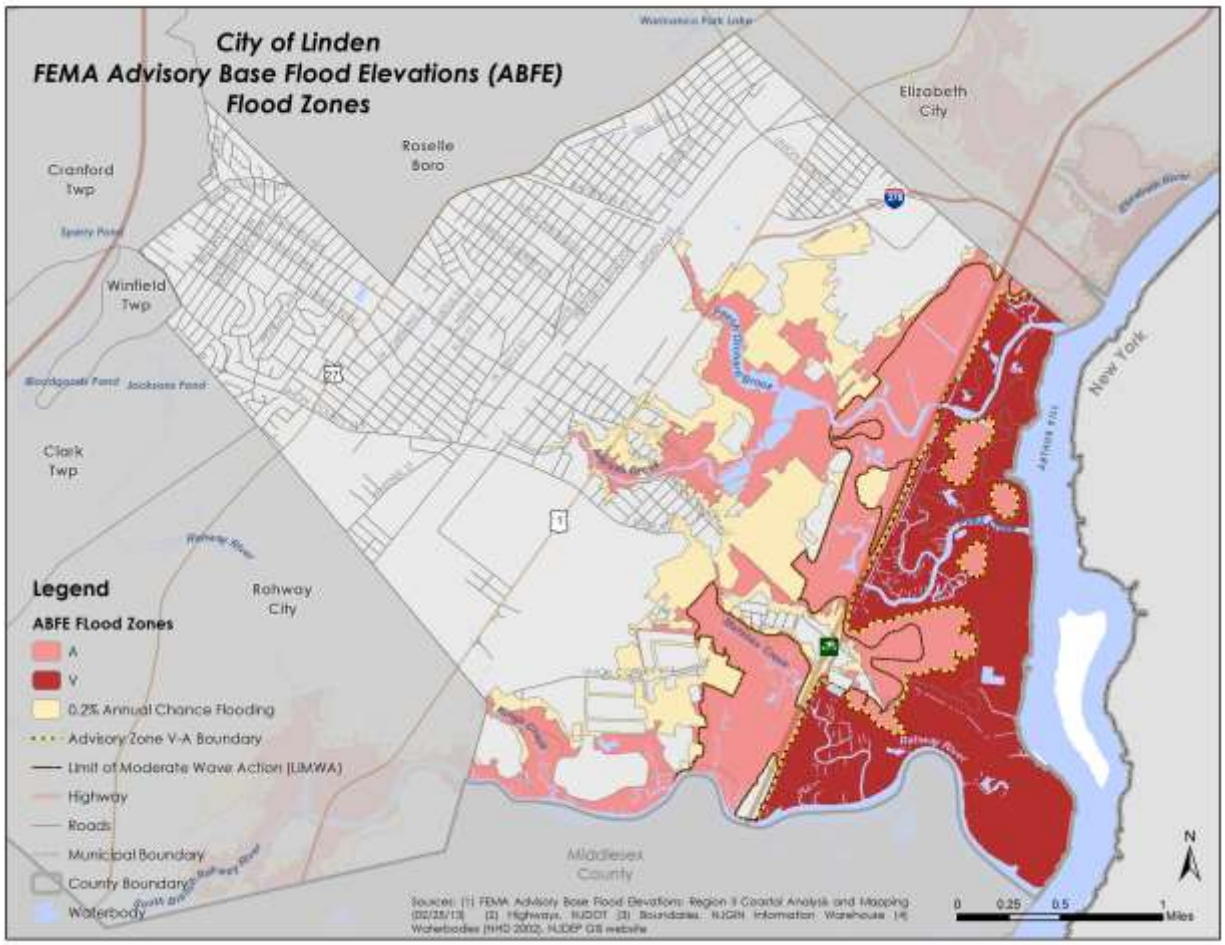


Figure 8-4: Sample Building Footprint Data City of Linden

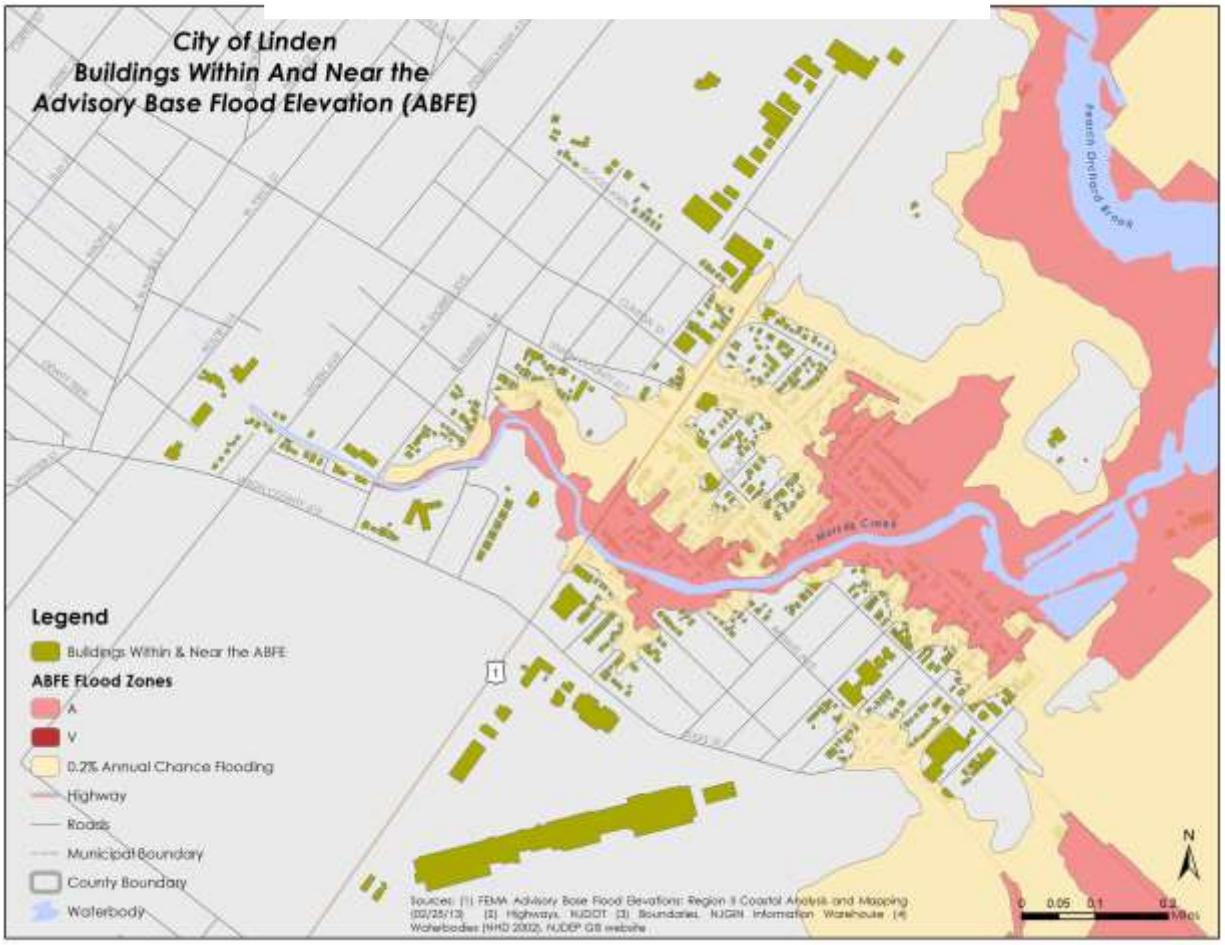
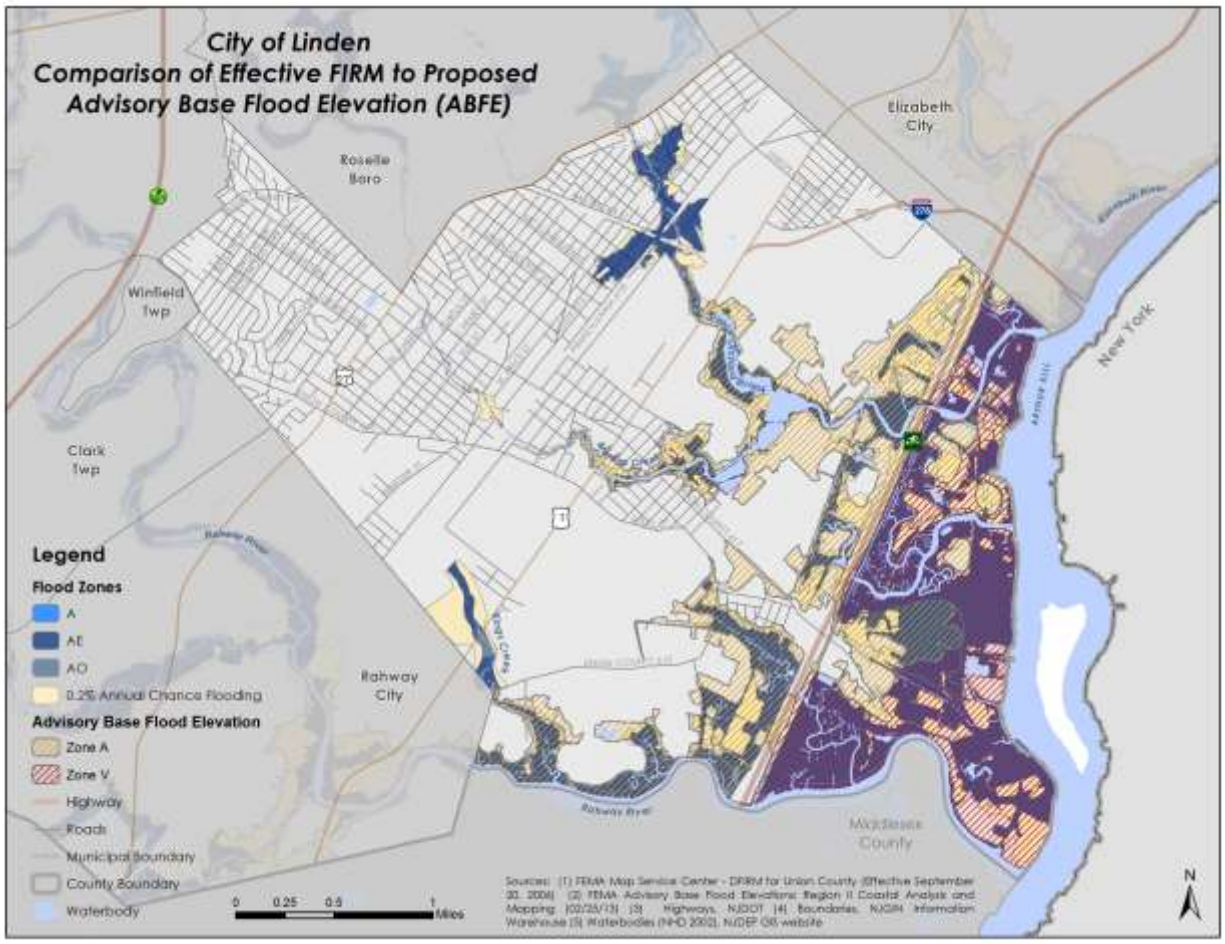


Figure 8-5: Comparison between FIRM and ABFE
City of Linden



3.2.1 Type, Location and Extent

As shown in Figure 8-2, the Effective FIRM for the City of Linden, the City has significant risk for flooding in large storm events. The City is subject to both riverine and tidal flooding from the West Brook, Peach Orchard Brook, King's Creek, Marshes Creek and Piles Creek, the Arthur Kill, and the Rahway River. The Rahway River makes up the City's southern boundary with Middlesex County and the Arthur Kill separates the City from New York State.

As the City is at the lower reach of the watershed, it is heavily impacted by flows along the Rahway River. Heavy storm events can cause overbank flooding from these streams and rivers. Additionally, the City experiences backflooding during tide cycles that coincide with rain events. At this time, the City does not experience any flooding during high tides on sunny days. Given the City's proximity to the Arthur Kill it is also vulnerable to storm surge and the potential impacts of sea level rise, both of which are discussed in subsections below.

There are significant concentrations of NFIP insurance claims (including properties classified as repetitive loss (see below) along the western reaches of both of these sources. The number of flood insurance claims (788) and the average amount of the claims ($22,498) in Linden suggests a high level of vulnerability to floods in this community, in terms of both the numbers of claims versus the overall number of parcels (8,161) and the presumed severity of flooding based on the claims amounts.

The Arthur Kill comprises the eastern boundary of this jurisdiction, and much of the floodplain in Linden is around this flood source. While a relatively large percentage of the City is in the FEMA Special Flood Hazard Area (the 100-year floodplain) in the eastern part of the jurisdiction, this area is largely marshland. The structures in this area such as the City's Department of Public Works, the Linden Roselle Sewage Authority, the PSEG Linden Generating Station, Linden municipal garage, several heavy industrial facilities, and pump stations have significant exposure because of their proximity to the Arthur Kill. This location, which is tidal, is subject to flooding from surge, as demonstrated by Hurricane Sandy in 2013.

Current FEMA guidance uses the term extent as analogous to potential severity. The extent of the flood hazard in the City of Linden is significant in specific flood-prone areas. Although there is no means to determine this definitively using the available data, extent can be partially deduced by the amounts of flood insurance claims – as discussed above, these average more than $22,000 per claim, a figure that suggests relatively high flood depths in the community. 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. More significantly, overbank flooding and surge have potential to cause several feet of flooding in localized areas during severe events, i.e. tropical storms, nor'easters, etc.

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 8-4 shows the number of parcels in City of Linden 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.

Table 8-4: Flood-prone Properties

Flood hazard area	Number of Buildings
A zone	1,672
V zone	96
500-year (0.2%) floodplain	1,812

3.2.2 Previous Occurrences and the Probability of Future Floods

Minor flooding occurs in the City of Linden 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 City 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 Linden.

3.2.3 Flood Impacts and Vulnerability to Flooding

As discussed elsewhere, flood impacts in the City of Linden have historically been significant, particularly in comparison to most other areas of the County (with exceptions). Impacts to the community range from direct damage to infrastructure, to interrupted public functions, to extensive damage to public and private properties, particularly in the areas described above. As discussed elsewhere in this subsection, some areas of Linden are highly vulnerable to flooding from both overbank events and storm surge. There are more than 500 parcels in the 100- and 500-year floodplains, and the community has a long history of flood insurance claims.

The subsections below focus on National Flood Insurance Program (NFIP) claims, which mainly (but not exclusively) address residential properties. In addition to the numerous privately-owned non-residential properties – tank farms and related infrastructure for example – the City itself owns and operates the usual range of municipal facilities that support the community. Some of these facilities were damaged during Hurricane Sandy, suggesting some level of flood vulnerability, although Sandy was a very severe event with relatively low probability. As discussed in other parts of this appendix, Linden has very significant exposure to the effects of storm surge, which was the primary mode of damage in Sandy. The City Department of Public Works experienced $1.3M in Sandy damage (FEMA Public Assistance Records). Both the DPW garage and the municipal garage flooded. The Linden Roselle Sewage Authority's treatment plant, which has exposure to both the Rahway River and the Arthur Kill flooded during Sandy and Irene.

City officials also noted that the jurisdiction has significant problems with tree roots intruding into sewer lines and impeding flow, with the result that some areas of the City flood because of storm drain backups during heavy rain events unrelated to hurricanes or tropical storms.

3.2.4 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. The City of Linden has been a member of the NFIP since 1976.

FEMA NFIP statistics indicate that as of February 2014, federal flood insurance policies were in-force on 272 properties in the City of Linden. This represents a dollar value of property and contents coverage totaling $78,814,200. Between 1978 and 2014, there have been a total of 254 NFIP insurance claims in City of Linden with a total claims value of $5,411,793. Table 8-5 compares the number of policies in-force and paid claims in the jurisdiction. The Table shows that the City of Linden comprises 4.5% of the NFIP policies in-force in Union County.

The City of Linden is presently a member of the Community Rating System (CRS), a voluntary program for communities participating in the NFIP. The CRS is a voluntary 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. Linden has a CRS rating of 8, and has participated in the CRS since 1991, which affords residents within the Special Flood Hazard Area a 10% discount on their annual premiums. Residents outside the flood hazard area receive a 5% discount on annual premiums.

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. Figure 8-5 shows all NFIP claims in the

Table 8-5
NFIP Policies and Claims

Number of Parcels:	
Linden:	12,113
Union County:	199,489
Number of Policies In-Force:	
Linden:	272
Union County:	6,055
Number of Claims:	
Linden:	254
Union County:	5,560
Total Paid Claims	
Linden:	$5,411,793
Union County:	$96,782,279
Repetitive Loss Properties:	
Linden:	28
Union County:	729
Total Building	
Linden:	
Union County:	$46,560,646
Total Contents	
Linden:	
Union County:	$46,560,646
Number of Claims	
Linden:	82
Union County:	2,115
Average Claim	
Linden:	$20,126.26
Union County:	$18,759,126

City of Linden between 1978 and 2014.

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 (RL) 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, 28 properties were located within Linden; this comprises 4.0% of the County total. Table 8-5 provides a comparison of the residential repetitive loss claims for Union County and City of Linden. The tables below include the number of repetitive loss properties, building and contents damages, the total number of claims, and the average claim amounts. City of Linden has properties, and the total of claims on them is relatively small, as shown in Table 8-5. These properties are also shown in Figure 8-5.

The RL claims can be broken down by focusing on specific areas in the jurisdiction where flood losses are concentrated. Table 8-6 provides a summary of the streets with the most cumulative repetitive loss flood insurance claims in Linden. The table includes the building, contents, and total claims data for the properties. Address data about individual sites is omitted for reasons of confidentiality.

It should be understood that flood risk to NFIP insured properties (including RL and SRL) is not the sole flood risk in the community. As is the case with most communities, the City of Linden, may have some properties that self-insured, meaning that its structures and infrastructure are not insured through the NFIP. FEMA Public Assistance records (project worksheets) provide some data about losses in events where there was a Presidential disaster declaration.

Table 8-6: Flood-prone Properties

Street Name	Building	Contents	Total	# Claims	Average
Madison Street	$216,841	$29,671	$246,512	6	$41,085
Clinton Street	$175,201	$18,392	$193,593	14	$13,828

3.2.5 Flood Risk to Repetitive Loss Properties in Linden

Residential flood risk is calculated by a simple methodology that uses the FEMA default present-value coefficients from the benefit-cost analysis software. 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 1983

(Source: FEMA NFIP query February, 2014)

and 2012 and the present, a period of 30 years.

As shown in Table 8-7, there have been 82 flood insurance claims in the 30-year period, for an average number of claims per year of 2.7. 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 $1,270,529. 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.

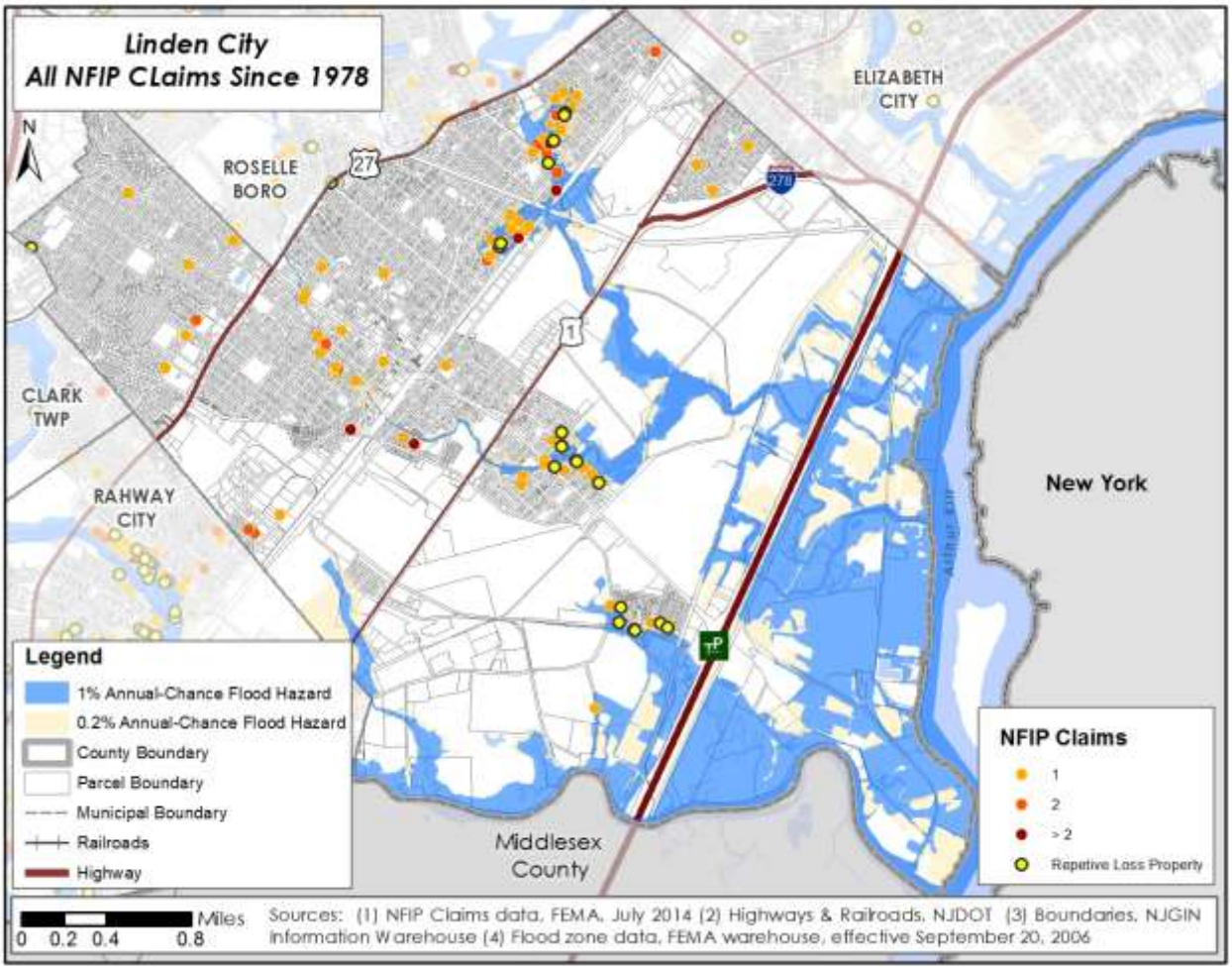
**Table 8-7: Projected 100-year Flood,
Based on Past Flood Insurance Claims**

Data	Value
Period in years	30
Number of claims	82
Average claims per year	2.70
Total value of claims	$2,671,035
Average value of claims per year	$89,035
Projected risk, 100-year horizon	**$1,270,529**

3.2.6 Flood Risk to Severe Repetitive Loss Properties in Linden

The definition of Severe Repetitive Flood Loss is included in the County portion of this mitigation plan. As of February 2014, the City of Linden had one NFIP severe repetitive flood loss properties. Data for this property is insufficient to perform a meaningful risk assessment.

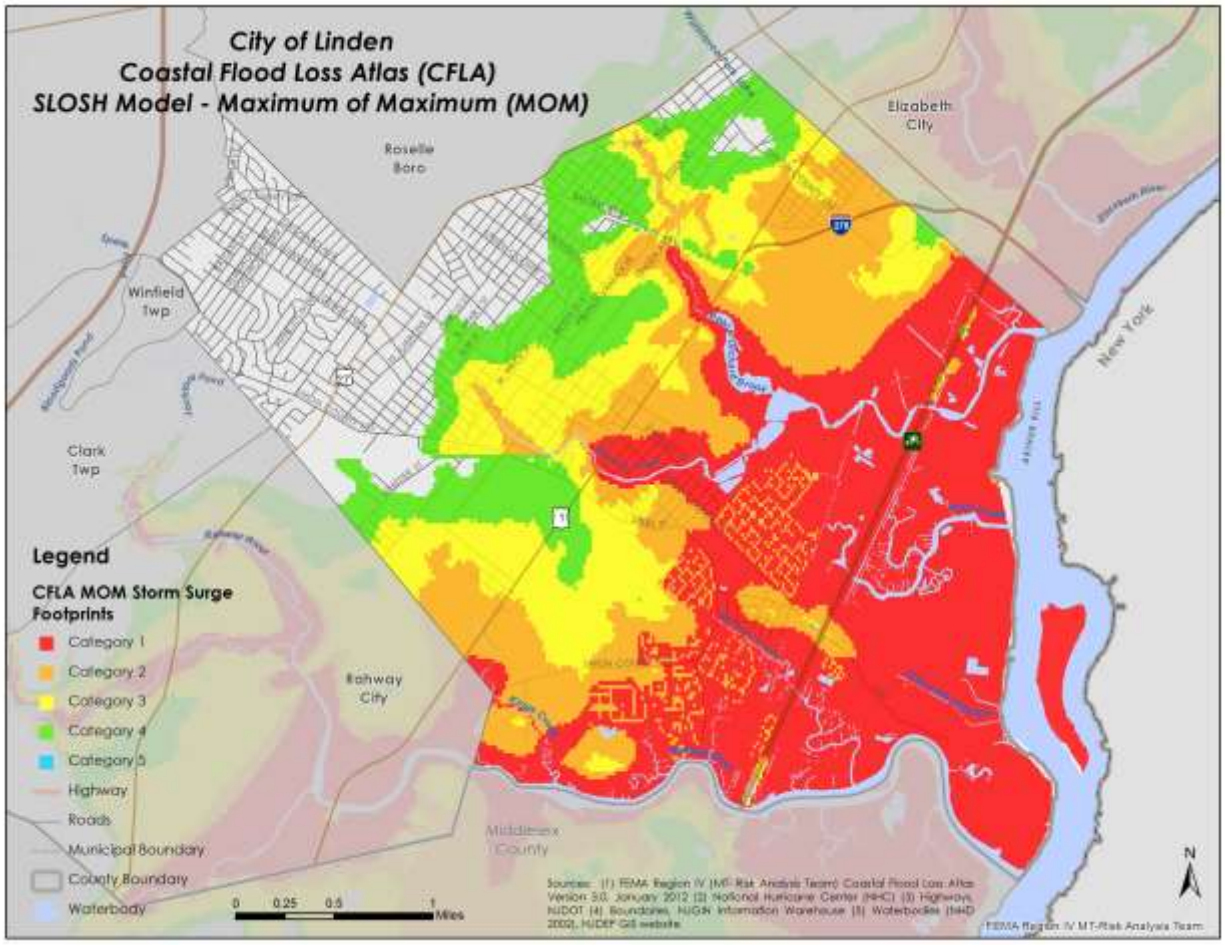
Figure 8-5: Comparison between FIRM and ABFE
City of Linden



3.2.7 Storm Surge

As shown in Figure 8-6 below, the City of Linden is subject to significant inundation related to storm surge, even during relatively high-probability Category 1 events, which, based on this NOAA SLOSH modeling, would flood numerous subdivisions throughout the eastern and southern areas of the City. Based on this modeling (SLOSH – see main County plan for additional description), expected surge from Hurricane Category 1 and 2 events is closely related to mapped floodplains, but Category 3+ events extend over a much wider area, encompassing the majority of the City. A large percentage of the community is vulnerable to surge effects.

Figure 8-6: Storm Surge Inundation Map
City of Linden



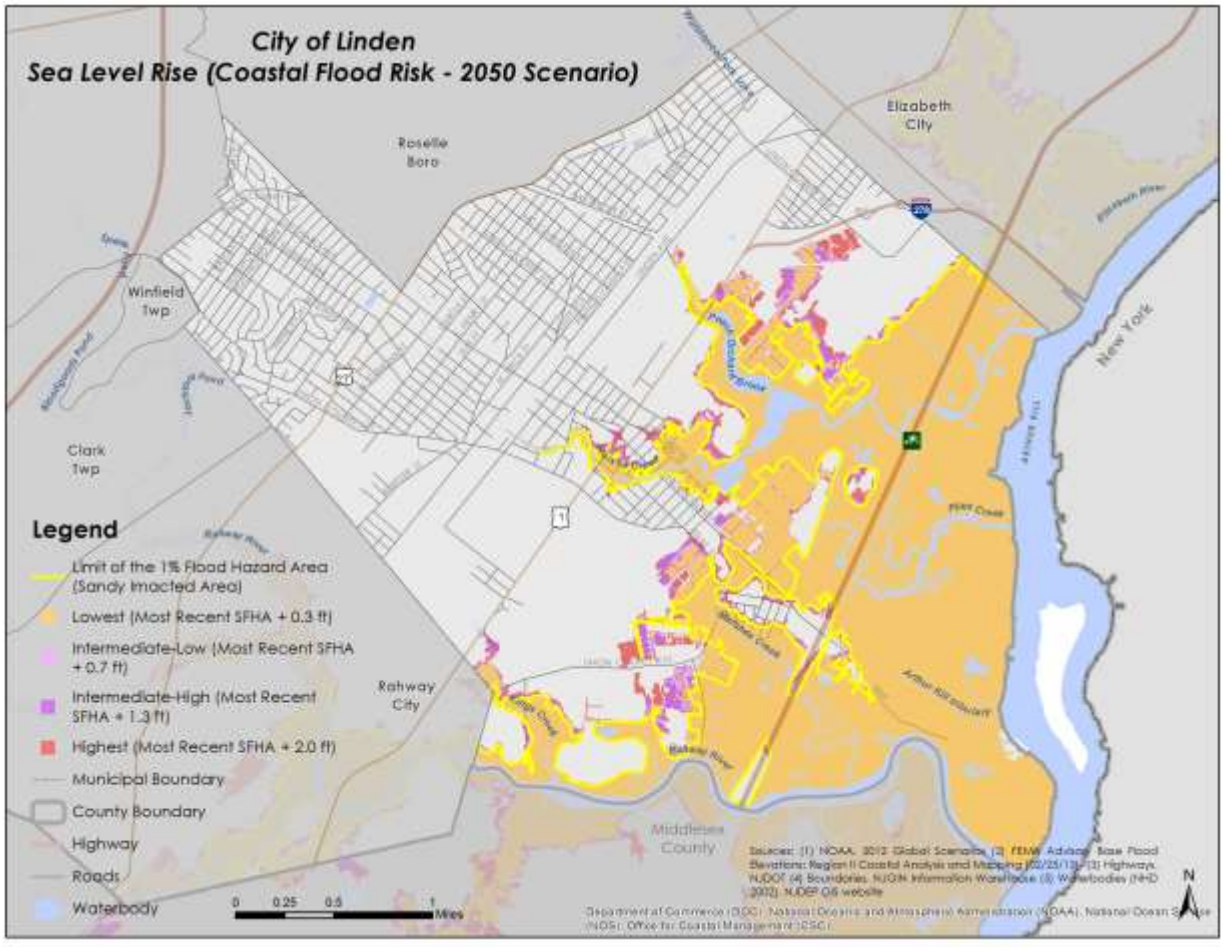
3.2.8 Sea Level Rise

In addition to the updated flood hazard data (ABFE maps) developed by FEMA there is also the concern of sea level rise and the impacts of future flood events to coastal communities over the next 20 to 50 years and beyond. NOAA, in partnership with FEMA the United States Army Corp of Engineers (USACE)

and several other agencies has created a set of map services and related tools to help communities, residents, and other stakeholders consider risks from future sea level rise in planning for reconstruction following Hurricane Sandy. Even if current storm patterns remain the same in the future, sea level rise will increase the impact of coastal flooding during storms. The following map, Figure 8-7, shows the sea level rise scenarios for year 2050. For maps of the entire coastal are for the County, see Section 4.

These maps provide best available elevation information for post-Sandy planning and rebuilding, as well as to support federal agency planning, as needed and applicable. These maps are not intended to support regulatory flood hazard zone designation, insurance ratings, or other legal or regulatory constraints. Rather, these maps and services support scenario planning that may help decision makers prepare for and adapt to uncertainties surrounding the future risks posed by sea level rise. They help make transparent the level of risk accepted under different scientific assumptions underlying the expected rate of sea level rise in the 21st century.[4]

Figure 8-7: Sea Level Rise Estimation for 2050
City of Linden



[4] NOAA – GeoPlatform. Sea Level Rise Planning Tool – New Jersey and New York

3.3 Hazardous Materials Releases – Fixed Sites and Transportation

The main section of this hazard mitigation plan includes more details about the hazardous materials hazards in the County as a whole, although by their nature such events are non-probabilistic. As such, it is impossible to estimate risk with any accuracy whatsoever. Hazardous materials releases are included in this appendix because the County required that it remain on the list of hazards, and the City of Linden indicated it as a hazard of high or medium concern. However, for reasons of security and a lack of open-source information, this subsection is necessarily short and very general.

This mitigation plan is a public document, and as such does not include any descriptions specific enough that they could be used for malicious purposes. As part of this HMP update, the planning team queried the New Jersey Department of Environmental Protection Right to Know database. The database includes reports of hazardous materials spills, listing their location, date of occurrence and the type of material. The database was queried from January 2000 to the present day. Results are a combination of occurrences on fixed sites and those related to transportation. For the City of Linden these tended to be in five categories.

3.3.1 Fixed Sites

The US Environmental Protection Agency maintains a database of toxic releases by site. The database is known as the Toxic Release Inventory (TRI), and provides basic information about the locations, types and amounts of releases of hazardous materials. This is explained in detail in the County section of this mitigation plan. Union County has 138 such sites, some of which are in the City of Linden. This does not suggest a specific level of increased risk, however, as the potential for exposure and possible effects are dependent on many factors, most of which are not explained in this appendix.

3.3.2 Transportation

Because of the large presence of the chemical and oil industries in eastern New Jersey, many major transportation routes and rail lines carry a high volume of hazardous materials, many of which could cause damage, death and injury to Union County under some circumstances. As noted, there are few open sources of information about the materials that are transported on these routes, the routes themselves, or the carriers' schedules. For more information contact the New Jersey State Department of Environmental Protection or New Jersey State Department of Transportation.

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 the City of Linden.

3.4.2 Previous Occurrences and the Probability of Future Occurrences

Previous occurrences and the probability of future events are the same for the City of Linden 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

The City of Linden 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. Table 8-8 provides information about potential wind damages (risk). The figures for total square footage and total annualized damages were generated by FEMA's HAZUS (Hazards US) software, which is explained further in the County portion of the plan. The 50-year and 100-year risk figures are generated by multiplying the total annualized damages by a standard *present value coefficient,* which discounts future losses (risks) by combining the planning horizon (50 and 100 years in this case) with the required FEMA/OMB discount rate of 7%.

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 8-9 summarizes annual straight-line wind risks and cumulative risks over 50- and 100-year planning horizons in the City of Linden. Risks are in seven discreet categories: building damages, contents damages, inventory loss, relocation costs, business income lost, rental income lost and wages lost. The Occupancy Class data comes from HAZ-US. A federal database that classifies buildings based on the occupant not the use of the building. For the City of Linden, there are 18 buildings that have been classified as Agriculture, this does not indicate that these buildings are used for Agricultural purposes, and the losses in the table are not associated with a loss in crops.

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

Occupancy Class	Total SF	Total Annualized Damages	50-year Risk	100-year Risk
Residential	19,596,374	$491,076	$6,777,335	$7,007,158
Commercial	9,581,255	$149,474	$2,062,891	$2,132,844
Industrial	2,622,964	$49,281	$680,120	$703,184
Agricultural	25,859	$394	$5,438	$5,622
Religious	268,586	$4,474	$61,746	$63,840
Government	112,656	$1,797	$24,803	$25,644
Education	213,629	$2,862	$39,495	$40,835
Total	32,421,324	$699,357	$9,651,828	$9,979,127

The next table shows power loss risks in the City of Linden, again annualized and for 50- and 100-year planning horizons. The methodology for these calculations (and additional jurisdiction-level data) can be found in Section 4 of the County plan, and two paragraphs above

Table 8-9: Power Loss Horizons

Period	Risk Value
Annual	$339,554
50-year planning horizon	$4,685,961
100-year planning horizon	$4,845,038

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 the City of Linden, 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 cold temperature 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 the City of Linden with regard to occurrences or the future probability of these hazards.

3.5.3 Severe Storm – Winter Weather Impacts and Vulnerabilities to the Hazard

The impacts from these three hazards in the City of Linden 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 the City of Linden 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 the City of Linden are displayed in the table below. The data in the table were developed using statistics from the U.S. Federal Highway Administration, which produces reports on the numbers of roadway injuries and deaths related to winter weather. The figures for Linden were derived by proportioning the population to the national population. The annual risk figures are translated into 50- and 100-year risks using a *present value coefficient* that discounts annual values over these time periods using the FEMA/OMB standard discount rate of 7%.

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 (CDC) report. The CDC report compiles statistics on annual hypothermia risks nationwide. The basis of the calculations in the table below is simply basing the risk of death in Linden as a proportion of the national figures, then determining a "death value" based on current FEMA guidance (this is explained in more detail in the County portion of the HMP). Risks over 50- and 100-year planning horizons are estimated using a *present value coefficient* that discounts annual values over these time periods using the FEMA/OMB standard discount rate of 7%.

Table 8-10: Winter Storm-related Risks (traffic injuries and fatalities), City of Linden 50- and 100-year Planning Horizons

	Injuries (combined)	Deaths
Snow/sleet	$5,562,366	$631,670
Icy pavement	$4,327,563	$476,422
Snow/sleet	$4,171,271	$419,744
Total annual risk (all hazards)	$14,061,201	$1,527,837
50-year risk	$194,044,576	$21,084,145
100-year risk	$200,653,340	$21,802,228

Table 8-11:
Risks from Hypothermia City of Linden

2010 Population	% of US	Annual Death $	50-year Horizon	100-year Horizon
40,499	0.0128%	$1,092,814	$15,080,831	$15,594,454

3.6 Extreme Temperature – Heat

3.6.1 Type, Location and Extent

Heat 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 the City of Linden, 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 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 Linden with regard to occurrences or the future probability of this hazard.

3.6.3 Heat Impacts and Vulnerability to the Hazard

Heat impacts in Linden 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 8-12: Heat-related Risks, City of Linden
Annual, 50- and 100-year Planning Horizons

Horizon	Damages
Annual risk	$390,995
50-year risk	$5,395,728
100-year risk	$5,579,495

3.7 Public Facilities

The City experienced damage to its Department of Public Works facility in Sandy and other municipal facilities have experienced flooding in severe storms. There is one public school within the SFHA, but it has not filed for NFIP or Public Assistance to date.

3.7.1 Transportation

Critical highways include U.S Routes 1&9, the New Jersey Turnpike, Route 278, Wood Avenue, Park Avenue, County Road – Stiles Street, and State Highway 27 – St George Avenue.

There are also rail lines within the City including New Jersey and Amtrak passenger lines, as well as ConRail/Norfolk Southern freight rail.

There is one airport in Linden, the Linden Airport.

3.7.1 Public Facilities

The facilities below were designated by the County as important buildings within the City. The data available at the time of this plan was provided by the County's GIS department and may not reflect recent assessment records. The data for the facilities marked with a "-" was not available at the time of the plan's development.

Name	Address	Building Value ($)	Square Footage	Located in SFHA?
Pub. Sch. 10	2801 Highland Ave.	2,103,000	45,670.39	N
Linden Acad. for Science and Technology	128 W. St. Georges Ave.	5,386,000	40,507.31	N
Linden H.S.	121 W. St. Georges Ave.	6,456,000	74,324.69	N
Pub. Sch. 8	500 W. Blancke St.	1,506,000	15,898.52	N
J.E. Soehl M.S.	300 E. Henry St.	3,370,000	56,777.54	N
Pub. Sch. 5	1014 Bower St.	1,381,000	30,842.87	N
Pub. Sch. 9	1409 Deerfield Terrace	2,250,000	50,324.68	N
Myles J. McManus M.S.	300 Edgewood Rd.	4,130,000	65,397.80	N
Pub. Sch. 1	728 North Wood Ave.	2,823,600	33,298.69	N
Sinai Christian Academy	2301 Grier Ave.	888,000	13,807.46	N
Pub. Sch. 2	1700 S. Wood Ave	1,640,000	28,812.94	N
Pub. Sch. 4	1602 Dill Ave.	2,178,500	33,538.63	Y
Pub. Sch. 6	19 E. Morris Ave.	1,900,000	23,510.69	N
P.O. 07036	340 W St. Georges Ave.	785,000	3,550.84	N
P.O. 07036	938 S. Wood Ave.	140,000	6,469.20	N
Main P.O. 07036	400 N. Wood Ave.	517,500	12,494.21	N
Mun. Bldg. & Police H.Q.	301 N. Wood Ave.	5,201,300	43,262.16	N
Main Pub. Lib.	31 E. Henry St.	4,349,700	7,186.77	N
Fire Headquarters	302 South Wood Ave	-	-	N

Fire Sta.	DeWitt Terrace and West St. George Ave	-	-	N
Fire Sta.	East Elizabeth Ave and Chandler Ave	-	-	N
Fire Sta.	2400 South Wood Ave	-	-	N
John T. Gregorio Rec Center	330 Helen St	-	-	N
Linden Multipurpose Center	1025 John St	-	-	N
P.A.L Building	400 Maple Avenue	-	-	N

4. City of Linden Mitigation Strategy

This section contains goals, objectives, and action items for the City of Linden, 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.

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 tables below lists prioritized mitigation projects and actions identified by the City of Linden. RLSA is upgrading Main Street pump station with an elevation and upgrading project to improve resiliency.

4.3.1 Existing Mitigation Actions

The table below includes the actions that were determined by the City of Linden during the development of the 2010 HMP. The Current Status reflects the status of these projects at the time of this plan update. The actions marked with a ~~strikethrough~~ in every column are no longer considered appropriate mitigation actions for the City and will not be pursued at this time. The actions with strikethrough in the priority column have changed priority levels within the strategy.

Mitigation Action, Program, or Project	Hazard	Priority	Implementation Mechanism	Responsible Party	Project Duration	Estimated Cost	Current Status
Upgrade, maintenance and improvement of sewer lines to reduce infiltration	Flood	High	Capital Improvement	Linden DPW	Ongoing	$265,000	Ongoing – budget line items for improvements
Installation of channel improvements along West Brook at Clinton Street	Erosion / Flood	Low	Capital Improvement	Linden Engineer	Six months	<$600,000	Put in grant request.
~~Installation of channel improvements for Peach Orchard Creek at Elizabeth Avenue~~	~~Flood~~	~~Low~~	~~Capital Improvement~~	~~Linden DPW~~	~~3-months~~	~~<$500,000~~	~~Not completed, waiting on funding. Have design~~
Construct flood walls along West Brook	Flood	Low	Capital Improvement	Linden DPW	1-year	$1.7 million	*On hold due funding*
Upgrade and improvement to drainage system and retention basin along Canter Avenue, Dalziel Road, and Hurst Street	Flood	High	Capital Improvement	Linden DPW	3-6-months	$300,000	On hold due to private property issues/easements
~~Flood proofing for the municipal EOC~~	~~Flood~~	~~High~~	~~Capital Improvement~~	~~Linden OEM~~	~~3-6-months~~	~~$135,000~~	~~Relocated EOC to 12 North Stiles st.~~

Mitigation Action, Program, or Project	Hazard	Priority	Implementation Mechanism	Responsible Party	Project Duration	Estimated Cost	Current Status
Upgrade and improvement of Peach Orchard Creek and storm-water management system at Edward Muraski Towers-Senior Center and at Ann J. Ferguson Towers-Senior Center	Flood	High	Capital Improvement	Linden DPW	3-months	1,000,000	Ongoing – waiting on funding. Have design Combined with Action 3, and Ferguson towers
~~Upgrade and improvement of storm-water management system~~	~~Flood~~	~~High~~	~~Capital Improvement~~	~~Linden Administrator~~	~~3-months~~	~~$250,000~~	~~Combine~~
Flood proofing to protect Department Of Public Works	Flood	High	Capital Improvement	Linden DPW	1-year	$160,000	In progress. Raised electrical. Generator elevated
Backup generator and upgrading of facilities for John T. Gregorio Community Center **(Primary Care Shelter)**	Severe Weather	High	Capital Improvement	Linden	1-month	$575,000	In progress, under design, funds secured
Backup generator for Linden Multi-purpose Center	Severe Weather	High	Capital Improvement	Linden	1-month	$200,000	On hold – lack of funds
~~Flood proofing of the Mount Mariah Church **(Shelter)**~~	~~Flood~~	~~High~~	~~Capital Improvement~~	~~Linden administrator~~	~~1-Month~~	~~$200,000~~	~~Facility may relocate – project on hold~~
~~Floodproofing of Police Department/City Hall/Storage Facility~~	~~Flood~~	~~High~~	~~Capital Improvement~~	~~Linden Administration~~	~~3-months~~	~~$500,000~~	~~*No longer necessary. Moved critical items out of there*~~
GEO-LOCATE two dams on Conoco Phillips refinery –	Flood	Medium	Capital Improvement	Linden OEM	1 Year	Staff salary	Ongoing
Collection of additional specific data for Plan update (natural events)	Severe Winter Weather	~~High~~ Low	Capital Improvement	Linden OEM	1 Year	Staff salary	No longer a priority
Collection of additional specific data for Plan update (HazMat)	Haz Materials Release	~~High~~ Low	Capital Improvement	Linden OEM	1 Year	Staff salary	No longer a priority

Mitigation Action, Program, or Project	Hazard	Priority	Implementation Mechanism	Responsible Party	Project Duration	Estimated Cost	Current Status
Acquisition/Elevation of 1 Repetitive Loss property on Clinton Street.	Flood	High	Capital Improvement	OEM	2-4 years	$300,000	Offer made
Acquisition/Elevation of 1 Repetitive Loss property on Hussa Street.	Flood	~~High~~ Low	Capital Improvement	OEM	2-4 years	$250,000	On hold, not a state priority
Acquisition/Elevation of 1 Repetitive Loss property on N. Stiles Street.	Flood	~~High~~ Low	Capital Improvement	OEM	2-4 years	$350,000	On hold – not a flood zone.
Acquisition/Elevation of 1 Repetitive Loss property on Sherman Street.	Flood	~~High~~ Low	Capital Improvement	OEM	2-4 years	$220,000	On hold, not a state priority. Isolated property
Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	High	Emergency Management	OEM Coordinator, in coordination with SCOEM	One Year	Staff Time	Had several community meetings with FEMA, and Blue Acres, senator Sweeney helped. Disaster assistance for filing claims after Sandy for several weeks

4.3.2 New Mitigation Action

Mitigation Action, Program, or Project	Hazard	Priority	Implementation Mechanism	Responsible Party	Project Duration	Estimated Cost
Rutgers put in grant NFWF grant, for restoration and green infrastructure work in Marshes Creek green infrastructure improvements includes. drainage improvements, and bird surveys and restoration of wetlands	Flooding	high		Engineering		2.5 million
Back-up generator for City Hall	All	High	Capital Improvement	OEM	1-year	$575,000
Range Road Bridge – replace	Flooding	Medium	Capital improvement	County	1 year	500,000

Storm sewer improvements to Rosewood Terrace Area and Wickersham Ave.	Flooding	High	Capital Improvement	Engineering	2 year	1 million
The City will continue to support acquisition of properties at-risk	Flooding	High		Administration/ Building Dept/OEM	Ongoing	Varies
The City will continue to support elevations of properties at-risk	Flooding	High		Administration/ Building Dept/OEM	Ongoing	Varies
The City will continue to expand outreach to reach residents, with translations for non-english speaking communities	All	Medium		Administration/ OEM	Ongoing	Varies
Acquisition of repetitive and severe repetitive loss residential properties on Madison Street, Main Street, Irene Street, Arthur Street, and Parkway Avenue.	Flood	High	State of NJ Blue Acres Program	State of NJ	2 years	$8 million

5. Capability Assessment

5.1. Planning and Regulatory

Tool	City 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)	N
Stormwater Management Plan/Ordinance	Y
Comprehensive Plan / Master Plan	Y (2003)
Capital Improvements Plan	Y
Site Plan Review Requirements	Y
Habitat Conservation Plan	N
Economic Development Plan	Y
Local EOP	Y (9/16/14)
Continuity of Operations Plan	Y
Post Disaster Recovery Plan or Ordinance	FEMA
Wildfire Protection Plan	State DEP
Real Estate Disclosure req.	State
Other (e.g. steep slope ordinance, local waterfront revitalization plan)	N
Freeboard	Y
Cumulative Substantial Damages	Y
Shoreline Management Plan	N

5.2 Communication and Emergency Response

	Does the City 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	Y – limited
Shallow water boats	Y - County

5.3 Staff/Personnel

	Does this City have this expertise on staff?
Staff with expertise or training in benefit/cost analysis	Y
Grant Writer(s)	Y
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	Y
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

5.4 Fiscal Capabilities

Fiscal Mechanism	Does the City 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	Y
Incur debt through general obligation bonds	Y
Incur debt through special tax bonds	N
Incur debt through private activity bonds	N
Withhold public expenditures in hazard-prone areas mitigation grant programs	N

6 Plan Maintenance and Adoption

6.1 Plan Maintenance

The City of Linden 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 City Engineer 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 X. 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 City Engineer will convene a meeting of the LPC to review and approve all changes. The City retains the discretion to implement minor changes to the document without formal procedures involving the City Council subject to local policies and regulations.

In addition to the annual progress report, the City of Linden 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 Linden 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,
- All public and stakeholder input and comment on the Plan that has been received by the City.
- Copies of any grant applications filed on behalf of the City

6.1.2 Continued Public Input

The City of Linden 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.

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 City of Linden's LPC shall ensure that:

- Copies of the latest approved Plan are available for review at City 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 City of Linden will post a notice on the City's website and invite the public to review and comment.
- For major changes involving City Council approval, the City will use its standard public notice procedures inviting the public to review the document and provide feedback.

6.2 Plan Adoption

On [insert date] Union County submitted the initial draft of the 2015 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].

The City Council approved the plan on [insert date]. The resolution for adoption and the County's adoption resolution are provided as Appendix E of the 2015 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.