Phoenix

Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact	Alternate Point of Contact
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Jurisdiction Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation: 1990

Current Population: The 2020 U.S. Census population was 1,708. The 2022 U.S. Census estimate indicated the population was 1,642.

Population Growth: The overall population has decreased by 14.70% between 2018 and 2022.

Location and Description: The Village of Phoenix is located in Southern Cook County approximately 19 miles from Chicago. Adjacent suburbs include: Riverdale to the north, South Holland to the east and south, and Harvey to the west. According to the U.S. Census, the Village of Phoenix has a total land area of .45 square miles.

Brief History: The development of Phoenix is closely tied to its larger neighbor, Harvey. Harvey was established as an industrial city with no saloons. Many of its early factories were located between the Illinois Central Railroad and Harvey's eastern boundary at Halsted Street. One local businessman, William McLatchy, owned a large tract of land in an unincorporated area outside of Harvey. Soon, five saloons had opened in the area and a small housing subdivision known as Phenix Park was constructed during the 1890s. City leaders in Harvey, seeing businesses just outside of their boundaries selling alcohol to local workers, sought to annex Phenix Park and render it "dry" or free of alcohol-related establishments. The residents of Phenix Park wanted to retain local control of their affairs as an independent village. On August 29, 1900, an election was held to determine the future status of the area. A total of 56 votes were cast with 38 (67.9%) voting in favor of incorporation and 18 (32.1%) against. Despite legal challenges from Harvey, the result was upheld. After incorporation, the name Phenix Park was changed to Phoenix. By 1910, the village had a population of 500, with most residents being of either Dutch or Polish ancestry. Industry in Harvey and the railroads provided a strong employment base for Phoenix residents. By 1930, the village was home to 3,033 people. New

housing was constructed to accommodate this growth. The population in 1960 was 4,203. In 1960, the municipal administration of Phoenix voted to de-annex the predominantly White portion of the village into Harvey. The exchange occurred in 1962 and with it, Phoenix lost one-third of its population as well as 60% of its tax base.

Climate: Phoenix averages 36 inches of rain and 33 inches of snowfall per year. The average number of days with any measurable precipitation is 109 and, on average, there are 186 sunny days per year in Phoenix. The July high is around 83 degrees and the January low is 11 degrees. The comfort index, which is based on humidity during the hot months, is a 46 out of 100, where higher is more comfortable.

Governing Body Format: The Village of Phoenix is governed by a Mayor and six (6) trustees. This body of Government will assume the responsibility for the adoption and implementation of this plan. Phoenix operates 3 Village departments: Police Department, Fire Department, and Clerk's Office.

Development Trends: Anticipated development levels for the Village of Phoenix are low. There has been a decrease in population and will most likely remain low. The Village of Phoenix has a strip mall located at 503 E. 153rd Street. The Village's newest Development is Sterling Lumber located on 151st Street. In August of 2019, Public Act 101-0274 was approved by the Illinois General Assembly - this created a tax increment allocation financing extension for an ordinance adopted on July 3, 1996 by the Village of Phoenix. The TIF is now extended through 2031.

Changes in Community Priorities: Working with all departments to make sure all resilience information is submitted.

Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in the *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction's fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction's administrative and technical capabilities is presented in the *Administrative and Technical Capability Table* below. Information on the community's National Flood Insurance Program (NFIP) compliance is presented in the *National Flood Insurance Program Compliance Table* below. Classifications under various community mitigation programs are presented in the *Community Classifications Table* below.

TABLE: LEGAL AND REGULATORY CAPABILITY					
	Local Authority	**State or Federal Prohibitions**	**Other Jurisdictional Authority**	**State Mandated**	**Comments**
Codes, Ordinances & Requirements					
Building Code	Yes	No	No	Yes	Ch. 22 Art I–X (2008)
Zonings	Yes	No	No	Yes	Ch. 106 (9/30/1959)
Subdivisions	No	No	No	No	
Stormwater Management	No	No	Yes	Yes	State regulates industrial activity from

					Construction sites 1 acre or larger under section 402 CWA. MWRD
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	Yes	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act. Ch. 50 Art II/ Div. 5 (1985)
Growth Management	No	No	No	No	
Site Plan Review	Yes	No	No	No	Ch. 42, Ast II Sec 42-23
Public Health and Safety	No	No	Yes	Yes	Cook County Board of Health.
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	No	No	No	No	
Is the plan equipped to provide integration to this mitigation plan?					N/A
Floodplain or Basin Plan	Yes	No	Yes	No	FEMA, Ch. 42, Art II
Stormwater Plan	No	No	Yes	No	Regional stormwater impacts are managed by MWRD. The Village lies within the Little Calumet River watershed planning area of MWRD's comprehensive Stormwater Master Planning Program. MWRD
Capital Improvement Plan	No	No	No	No	
What types of capital facilities does the plan address?					N/A
How often is the plan revised/updated?					N/A

Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	Yes	No	The Economic Development Commission is charged with reviewing all economic development related programs and incentives including tax incentives offered through the Cook County 6b program.
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	No	No	Yes	Yes	Cook County EMRS
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County EMRS Preparing THIRA
Terrorism Plan	No	No	Yes	Yes	Cook County EMRS
Post-Disaster Recovery Plan	No	No	No	No	
Continuity of Operations Plan	Yes	No	Yes	No	Cook County EMRS
Public Health Plans	No	No	Yes	No	Cook County DPH

TABLE: FISCAL CAPABILITY	
Financial Resources	**Accessible or Eligible to Use?**
Community Development Block Grants	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No

State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available?**	**Department/Agency/Position**
Planners or engineers with knowledge of land development and land management practices	Yes	Public works and Robinson Engineering/ Consultant
Engineers or professionals trained in building or infrastructure construction practices	Yes	Robinson Engineering/ Consultant
Planners or engineers with an understanding of natural hazards	Yes	Robinson Engineering/ Consultant
Staff with training in benefit/cost analysis	No	
Surveyors	Yes	Robinson Engineering/ Consultant
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Chief/Police Chief/Village Administrator
Grant writers	Yes	Robinson Engineering/ Consultant

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Public works
Who is your jurisdiction's floodplain administrator? (department/position)	None
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	7/11/2011
When was the most recent Community Assistance Visit or Community Assistance Contact?	Have not had a Community Assistance Visit
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes/ FEMA 2008/ FLOOD MAPS
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No; Undecided

NFIP Participation Activities

Maintaining compliance under the NFIP is an important component of flood risk reduction. All planning partners that participate in the NFIP have identified actions to maintain their compliance and good standing. Cook County entered the NFIP on April 15, 1981. Structures permitted or built in the County before then are called "pre-FIRM" structures, and structures built afterwards are called "post-FIRM." The insurance rate is different for the two types of structures. The effective date for the

current countywide FIRM is August 19, 2008. This map is a DFIRM (digital flood insurance rate map). The communities in Cook County that participate in the NFIP are shown in ***Table: NFIP Participating Communities in Cook County*** in **Volume I** of the Cook County MJ-HMP.

The NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. The communities in Cook County that participate in the NFIP and their "Policies in Force," "Total Coverage," and "Total Written Premiums" are shown in ***Table: Cook County Flood Insurance Policies*** in **Volume I** of the Cook County MJ-HMP.

Substantial Improvement Rule and the Substantial Damage Rule

The IDNR/OWR has developed a model ordinance for floodplain management, which has been adopted by most communities in Illinois. The ordinance includes the minimum requirements an NFIP participating jurisdiction must adopt and enforce, as well as additional higher regulatory requirements. The optional, higher regulatory standards include a minimum one foot of freeboard above the base flood elevation and cumulative tracking of damage repairs and improvements to establish substantial damage and substantial improvement compliance. Some jurisdictions have chosen to exceed the requirements of the model ordinance and have adopted more restrictive ordinances. This is most common in the communities in northeastern Illinois.

Existing Municipal Code:

Sec. 42-20 Definitions

Substantial damage means a building is considered *substantially damaged* when it sustains *damage* from any cause (fire, flood, earthquake, etc.), whereby the cost of fully restoring the structure would equal or exceed 50 percent of the predamage market value of the structure, regardless of the actual repair work performed.

Substantial improvement.

(1) The term "*substantial* improvement" means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

a. Before the improvement or repair is started; or

b. If the structure has been *damaged*, and is being restored, before the *damage* occurred.

A *substantial* improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

(2) The term "*substantial* improvement" does not include, either:

a. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to ensure safe living conditions; or

b. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

Sec. 42-23 Duties of the Enforcement Official

The building inspector shall be responsible for the general administration and enforcement of this article, that shall include the following:

(1) *Determining the floodplain designation*.

a. Check all new development sites to determine whether they are in a special *flood* hazard area (SFHA).

b. If they are in a SFHA, determine whether they are in a floodway, *flood* fringe or in a floodplain for which a detailed study has not been conducted and which drains more than one square mile.

c. Check whether the development is potentially within an extended SFHA (with a drainage area less than one square mile), indicating that the development would have adverse impacts regarding storage, conveyance, or inundation which would be the basis for the applicant being required to delineate the floodplain and floodway and be subject to the remaining sections of this article.

(2) *Professional engineer review*.

a. If the development site is within a floodway or in a floodplain for which a detailed study has not been conducted and which drains more than one square mile, the permit shall be referred to a registered professional engineer under the employ or contract of the village for review to ensure that the development meets the requirements of sections 42-26 or 42-27.

Sec. 42-28 Permitting requirements applicable to all floodplain areas

In addition to the requirements found in sections 42-25, 42-26 and 42-27 or development in flood fringes, designated floodways, and SFHA or floodplains where no floodways have been identified (zones A, AO, AH, AE, A1-A30, A99, VO, V1-30, VE, V, M, E, D, or X), the following requirements shall be met:

(3) *Protecting buildings*. All buildings located within a 100-year floodplain also known as a SFHA, and all buildings located outside the 100-year floodplain but within the 500-year floodplain, shall be protected from flood *damage* below the flood protection elevation.

a. This building protection criteria applies to the following situations:

1. Construction or placement of a new building;

2. A structural alteration to an existing building that either increases the first floor area by more than 20 percent or is a substantial improvement (exceeding the building's market value by more than 50 percent). This alteration shall be figured cumulatively beginning with any alteration that has taken place subsequent to April 1, 1990;

3. Installing a manufactured home on a new site or a new manufactured home on an existing site. This building protection requirements does not apply to returning a mobile home to the same site it lawfully occupied before it was removed to avoid *flood* damage; and

4. Installing a travel trailer on a site for more than 180 days.

b. This building protection requirement may be met by one of the following methods:

1. A residential or nonresidential building, when allowed, may be constructed on permanent land fill in accordance with the following:

(i) The lowest floor, including basement, shall be at or above the *flood* protection elevation.

(ii) Fill requirements.

A. The fill shall be placed in layers no greater than one foot deep before compaction and should extend at least ten feet beyond the foundation of the building before sloping below the *flood* protection elevation.

B. The top of the fill shall be above the *flood* protection elevation. However, the ten-foot minimum may be waived if a structural engineer certifies an alternative method to protect the building from damages due to hydrostatic pressures.

C. The fill shall be protected against erosion and scour.

D. The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties.

2. A residential or nonresidential building may be elevated in accordance with the following:

(i) The building or improvements shall be elevated on crawl space, stilts, piles, walls, or other foundation that is permanently open to floodwaters and not subject to damage by hydrostatic pressures of the base *flood* or 100-year frequency *flood*. The permanent openings shall be no more than one foot above existing grade, and consists of a minimum of two openings. The openings must have a total net area of not less than one square inch for every one square foot of enclosed area subject to *flooding* below the base *flood* elevation.

(ii) The foundation and supporting members shall be anchored and aligned in relation to *flood* flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris.

(iii) All areas below the *flood* protection elevation shall be constructed of materials resistant to *flood* damage.

A. The lowest floor (including basement) and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the *flood* protection elevation.

B. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the *flood* protection elevation.

(iv) The areas below the *flood* protection elevation may only be used for the parking of vehicles, building access or storage in an area other than a basement.

(v) Manufactured homes, and travel trailers to be installed on a site for more than 180 days, shall be elevated to or above the *flood* protection elevation; and, shall be anchored to resist flotation, collapse, or lateral movement by being tied down in accordance with the rules and regulations for the Illinois Mobile Home Tie-Down Act, issued pursuant to 77 Ill. Admin. Code part 870. In addition, all manufactured homes shall meet the following elevation requirements:

A. In the case of manufactured homes placed or substantially improved; outside of a manufactured home park or subdivision; in a new manufactured home park or subdivision; in an expansion to an existing manufactured home park or subdivision; or in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage from a *flood*, the top of the lowest floor shall be elevated to or above the *flood* protection elevation.

B. In the case of manufactured homes placed or substantially improved in an existing manufactured home park or subdivision, the manufactured home shall be elevated so that either the top of the lowest floor is above

the base *flood* elevation or the chassis is at least 36 inches in height above grade and supported by reinforced piers or other foundations of equivalent strength, whichever is less.

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	**Classification**	**Date Classified**
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	Unknown	Unknown
Public Protection/ISO	Yes	Unknown	Unknown
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	No	N/A	N/A

Opportunities to Expand and Improve Capabilities

Opportunities to expand and improve capabilities include grant writers and engineering support as well as grant administration support for reporting and fiscal monitoring.

Plan Integration

The capability assessment describes opportunities to "link" or integrate the mitigation plan into other planning mechanisms. The process and mechanism to identify opportunities to integrate the Cook County MJ-HMP into other planning mechanisms will occur during the Annual Update Process and be reflected in the Jurisdictional Annual Report each year. Specific plan integration opportunities will include:

- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the jurisdiction's land use plans, zoning, and subdivision codes.

Emergency Plan Integration:

Cook County EMRS is supporting communities to develop and update their respective Emergency Operations Plans, Continuity of Operations Plan/Continuity of Government Plan, and Recovery Plan in 2024. This is an ongoing countywide initiative and is being implemented in all municipalities.

Emergency Operations Plan (EOP)

An EOP template was created for all municipalities. The 2019 Cook County MJ-HMP and the hazards in the mitigation plan have been integrated into the Situation and Assumptions section of the EOP. Within that section, the natural hazards based on the 2019 MJ-HMP were added in the Initial Analysis and Assessment and Identification of Hazards section of the EOP. The hazards in the 2019 plan and the 2024 MJ-HMP did not change apart from adding wildfires for the Forest Preserve and unincorporated areas of the County. Future updates of the EOP will take into consideration any additional new natural hazards that are added to subsequent updates to the MJ-HMP.

Continuity of Operations Plan (COOP)

The Continuity of Operations Plan (COOP) for the municipality includes a Situation section that is based on the 2019 Cook County MJ-HMP jurisdictional annex, and specifically the hazards identified in the annex. The COOP-specific risk assessment is hazard-specific and based on likelihood of occurrence and severity of impact.

Recovery Plan

The goals of the Recovery Plan were developed to align with the 2019 Cook County MJ-HMP, and specifically prioritizes the responsibility of officials under this plan to save lives, protect property, relieve human suffering, sustain survivors, repair essential facilities, restore services, and protect the environment. The plan acknowledges that hazard mitigation is an important priority and consideration during the rebuilding process.

Jurisdiction-Specific Natural Hazard Event History

The information provided below was solicited from the jurisdiction and supported by NOAA and other relevant data sources.

The *Natural Hazard Events Table* lists all past occurrences of natural hazards within the jurisdiction. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 0
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

Federal Disasters Declared

Disaster Declaration Number	Date Declared	Event
DR-227	4/25/1967	Tornado
DR-351	9/4/1972	Flood
DR-373	4/26/1973	Flood
DR-509	6/18/1976	Severe Storm(s)
DR-643	6/30/1981	Severe Storm(s)
DR-776	10/7/1986	Flood
DR-798	8/21/1987	Flood
DR-997	7/9/1993	Flood
DR-1129	7/25/1996	Severe Storm(s)
DR-1188	9/17/1997	Severe Storm(s)
DR-1729	9/25/2007	Severe Storm(s)
DR-1800	10/3/2008	Severe Storm(s)
DR-1935	8/19/2010	Severe Storm(s)
DR-1960	3/17/2011	Snow
EM-3068	1/16/1979	Snow
EM-3134	1/8/1999	Snow
EM-3161	1/17/2001	Snow
EM-3230	9/7/2005	Hurricane – Katrina Evacuation
EM-3435	3/13/2020	Biological
DR-4116	5/10/2013	Flood
DR-4489	3/26/2020	Biological
DR-4728	8/15/2023	Severe Storm(s)
DR-4749	11/20/2023	Flood

State Disaster Declarations

Date Declared	Event
7/26/2010	Severe Storms, High Winds, Torrential Rain
1/31/2011	Winter Weather
4/25/2011 5/25/2011	High Wind, Tornadoes, Torrential Rain
4/18/2013 4/20/2013 4/21/2013 4/25/2013 4/30/2013	Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds
1/6/2014	Heavy Snowfall, Frigid Temperatures
7/12/2017 7/14/2017	Thunderstorms, Heavy Rainfall, Flooding
1/29/2019	Winter Storm
2/6/2020	Severe Storms
3/12/2020 – present (reissued monthly)	COVID-19
2/16/2021	Winter Storms
2/1/2022	Winter Storms
8/1/2022 (reissued monthly through 10/28/2022)	Monkeypox

TABLE: NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment/ Event Narrative
Flash Flood	-	7/29/2016	-
Severe Weather	-	6/30/2014	-
Severe Storms, Straight-Line Winds and Flooding	DR-4116	4/26/2013	Debris, Miscellaneous, Response, Flooding, Severe Storm. Efforts were made to combat the rising waters caused by floods that flowed above 3 feet into homes, basements and down streets. More than seven inches of rain fell in Phoenix. Costs of additional equipment, overtime to staff, and bringing in other professional resources were over approximately $750,000. Citizen input included questions on infrastructure capacity to mitigate flood in the future. Questions arose regarding how residents

			could obtain help from FEMA. Preliminary damage estimates – not known; Insurance Claims – not known.
Severe Winter Storm and Snowstorm	DR-1960	1/31/2011	Damage assessment included the need for emergency protective measures, including snow assistance, for a continuous 48-hour period. Damage included significant debris, the need for additional, emergency services related to the disaster, and repairing or replacing damaged public facilities, such as roads, utilities and recreation areas. Storm cleanup severely strained the Village budget. Unplanned amounts (over $500,000) for additional salt, over time for public works and public safety staff. Securing additional staff and professional contractors were needed during this period as well. Snow melting led to flooding issues shortly thereafter which caused significant problems because of current infrastructure not having capacity. Previous floods brought much wear and tear on public infrastructure, and this incident caused additional, unforeseen problems. The storm caused serious social disruption and caused great hardship to several senior citizen communities. Phoenix is part of a regional emergency response plan.

			Property damage estimates – not known. Insurance Claims – not known.
Severe Storms and Flooding	DR-1935	7/19/2010	Significant flood damage to homes and businesses. Fallen debris required additional cleanup efforts. Severely damaged homes required significant rehabilitation. Loss of personal property conveyed. Village spent over $500,000 for staff overtime regarding public safety and public works. Equipment maintenance and contractor resources were required as well. Citizen input conveyed concerns on capacity of current public infrastructure –and when the infrastructure will be able to handle severe flooding issues. The storm caused serious social disruption and caused great negative to qualify of life for a long period of time. Insurance Claims not known; preliminary damage estimates – not known. Phoenix is part of a regional emergency response plan.
Severe Storms and Flooding	DR-1800	9/13/2008	Significant flood damage to homes and businesses. Fallen debris required additional cleanup efforts. Severely damaged homes required significant rehabilitation. Loss of personal property conveyed. Village spent over $500,000 for staff overtime regarding public safety and public works. Equipment maintenance

			and contractor resources were required as well. Citizen input conveyed concerns on capacity of current public infrastructure –and when the infrastructure will be able to handle severe flooding issues. The storm caused serious social disruption and caused great negative to qualify of life for a long period of time. Insurance Claims not known; preliminary damage estimates – not known. Phoenix is part of a regional emergency response plan.
Severe Storms and Flooding	DR-1729	8/20/2007	Severe damage to properties due to flooding and debris. The storm caused serious social disruption and caused great hardship to qualify of life for a long period of time. Village spent over $200,000 on staff overtime public works and public safety, equipment, and contractors to ensure capacity to deal with aftermath of storm. Citizen input involves infrastructure capacity and when capacity will be enhanced to deal with flood issues. Insurance claims – not known. Phoenix is part of a regional emergency response plan. Property damage estimates – not known; insurance claims data – not known.
Flooding	DR-1188	8/6/1997	Severe flood problems were a result of overflows of water that submerged dry land within the Village. The ground was saturated

			where the water either could not run off or could not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs - costs for overtime public safety staff, overtime public works and building staff, etc.; purchase of new equipment or repairing old; costs additional contractors; and more. Preliminary damage estimates not known. Insurance claims not known. Citizen input involves questions regarding the capacity of current public infrastructure; and when the capacity to handle flooding issues will be resolved.
Flooding	DR-1129	7/17/1996	Severe flood problems were a result of overflows of water that submerged dry land within the Village. The ground was saturated where the water either could not run off or could

			not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs – costs for overtime public safety staff, overtime public works and building staff, etc.; purchase of new equipment or repairing old; costs additional contractors; and more. Preliminary damage estimates not known. Insurance claims not known. Citizen input involves questions regarding the capacity of current public infrastructure; and when the capacity to handle flooding issues will be resolved.
Flooding, Severe Storms	DR-997	4/13/1993	The event included an unusual force of heavy rain fall and exceptionally strong winds with violent outbreaks of thunder and lightning. Severe flood problems were a result of overflows of water that submerged dry land within

			the Village. The ground was saturated where the water either could not run off or could not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs - costs for overtime public safety staff, overtime public works and building staff, etc.; purchase of new equipment or repairing old; costs additional contractors; and more. Preliminary damage estimates not known. Insurance claims not known. Citizen input involves questions regarding the capacity of current public infrastructure; and when the capacity to handle flooding issues will be resolved.
Severe Storms, Flooding	DR-798	8/13/1987	The event included an unusual force of heavy rain fall and exceptionally strong winds with violent outbreaks of thunder and

			lightning. Severe flood problems were a result of overflows of water that submerged dry land within the Village. The ground was saturated where the water either could not run off or could not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs – costs for overtime public safety staff, overtime public works and building staff, etc.; purchase of new equipment or repairing old; costs additional contractors; and more. Preliminary damage estimates not known. Insurance claims not known. Citizen input involves questions regarding the capacity of current public infrastructure; and when the capacity to handle flooding issues will be resolved.

Severe Storm, Flooding	DR-776	9/21/1986	The event included an unusual force of heavy rain fall and exceptionally strong winds with violent outbreaks of thunder and lightning. Severe flood problems were a result of overflows of water that submerged dry land within the Village. The ground was saturated where the water either could not run off or could not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs - costs for overtime public safety staff, overtime public works and building staff, etc.; purchase of new equipment or repairing old; costs additional contractors; and more. Preliminary damage estimates not known. Insurance claims not known. Citizen input involves questions regarding the capacity of current public infrastructure; and when

			the capacity to handle flooding issues will be resolved.
Severe Storms, Flooding, Tornadoes	DR-509	6/18/1976	The event of high winds was a violent occurrence with an unusual force of heavy rain fall and exceptionally strong winds with violent outbreaks of thunder and lightning. Severe flood problems were a result of overflows of water that submerged dry land within the Village. The ground was saturated where the water either could not run off or could not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs - costs for overtime public safety staff, overtime public works and building staff, etc.; purchase of new equipment or repairing old; costs additional contractors; and more. Preliminary damage estimates not known. Insurance claims not

			known. Citizen input involves questions regarding the capacity of current public infrastructure; and when the capacity to handle flooding issues will be resolved
Severe Storm, Flooding	DR-373	4/26/1973	The event included an unusual force of heavy rain fall and exceptionally strong winds with violent outbreaks of thunder and lightning. Severe flood problems were a result of overflows of water that submerged dry land within the Village. The ground was saturated where the water either could not run off or could not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs - costs for overtime public safety staff, overtime public works and building staff, etc.; purchase of new equipment or repairing old; costs additional

			contractors; and more. Preliminary damage estimates not known. Insurance claims not known. Citizen input involves questions regarding the capacity of current public infrastructure; and when the capacity to handle flooding issues will be resolved.
Severe Storms, Flooding	DR-351	9/4/1972	The event included an unusual force of heavy rain fall and exceptionally strong winds with violent outbreaks of thunder and lightning. Severe flood problems were a result of overflows of water that submerged dry land within the Village. The ground was saturated where the water either could not run off or could not run off quickly enough to stop accumulating. This was a result of strong rains. In addition, some of the flooding occurred on impermeable surfaces, such as concrete and paving, and could not rapidly dissipate into the ground. Therefore, there are systematic negative impacts on the community each time it floods due to sewer pipes, toilets and sinks into buildings, seepage through building walls and floors; the accumulation of water on property and in public right-of-ways. This leads to a negative impact on quality of life. It costs the Village over $500,000 each time a natural disaster occurs - costs for overtime public safety staff, overtime public

			works and building staff, etc.; purchase of new equipment or repairing old; costs additional contractors; and more. Preliminary damage estimates not known. Insurance claims not known. Citizen input involves questions regarding the capacity of current public infrastructure; and when the capacity to handle flooding issues will be resolved.
Tornadoes	DR-227	4/25/1967	Tornadoes with heavy rains and strong winds caused much damage within the Phoenix community. However, the extent of natural disaster damage is not always clear. However, what is clear - this event was a violent occurrence that exhausted a negative impact on quality of life and the economy. No preliminary damage estimates available. No insurance claims data available. When flooding is not the primary issue, very little citizen input in this regard

Jurisdiction-Specific Hazards: Vulnerabilities and Impacts

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are **relevant** and **unique** to the municipality.

Flooding: The Village was established in 1900. Sewer systems are very old and because of development, plainly outdated. We continue to see stormwater flooding on;

- 140th Harrison Ave to 142nd & Harrison Ave.
- 140th Place & 140th.,
- Street west of Western Ave. (2400 Blk.)
- Veterans Parkway on Blaine Ave.
- Cleveland Ave.
- Harrison Ave.
- From 147th to 150th. Street.

- 145th to 142nd St.

From Harrison Ave., Cleveland Ave., Blaine Ave., Palmer Ave., Mckinley Ave. Campbell Ave. cannot handle storm water because of combination sewers and the size of the sewers. 143rd St. from Western to Harrison Ave.

Indicator	Number	Percent
Families in poverty	166	18.6%
People with disabilities	433	11.3%
People over 65 years	458	11.9%
People under 5 years	304	7.9%
People of color	3,581	93.3%
Black	2,480	64.6%
Native American	0	0%
Hispanic	1,053	27.4%
Difficulty with English	250	7.1%
Households with no car	118	8.3%
Mobile homes	0	0%

Data are from the U.S. Census Bureau, American Community Survey. See methods for more information.

The community evaluated whether vulnerability, and subsequently the potential impacts, in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in this Hazard Mitigation Plan. Climate change, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard area or is not built to the updated building codes, it may increase the community's vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics were taken into consideration when assessing development trends.

Jurisdiction-Specific Climate Change Vulnerability and Impacts

The table below outlines if climate change, as assessed by the local planning team, has increased or decreased the municipality's vulnerability/exposure, and thereby the potential impacts, to each natural hazard over the past five (5) years (**Current Vulnerability**), and the effect of climate change in the future probability of occurrence and impacts (**Future Vulnerability**) from each natural hazard.

Future studies are needed to better understand the impact of climate change on the community's assets.

Hazard	Vulnerability
Current Vulnerability	
Dam and Levee Failure	Not Applicable
Drought	Remained the Same
Earthquake	Remained the Same
Flood (Riverine, Urban, Shoreline)	Increased
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Remained the Same
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Remained the Same
Tornado	Increased

Wildfire (Wildfire Smoke)	Remained the Same

Hazard	Vulnerability
Future Vulnerability	
Dam and Levee Failure	Not Applicable
Drought	Decrease
Earthquake	No Change is Anticipated
Flood (Riverine, Urban, Shoreline)	Increase
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Increase
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	No Change is Anticipated
Tornado	Increase
Wildfire (Wildfire Smoke)	Increase

Jurisdiction-Specific Changes (or Expected Changes) in Development Trends in Hazard-Prone Areas

The table below outlines if development, as assessed by the local planning team, over the past five (5) years (**Current Vulnerability**) has increased or decreased the jurisdiction's vulnerability / exposure, and thereby the potential impacts, to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts (**Future Vulnerability**) from these natural hazards.

Hazard	Vulnerability
Current Vulnerability	
Dam and Levee Failure	Not Applicable
Drought	Remained the Same
Earthquake	Remained the Same
Flood (Riverine, Urban, Shoreline)	Remained the Same
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Remained the Same
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Remained the Same
Tornado	Remained the Same
Wildfire (Wildfire Smoke)	Remained the Same

Hazard	Vulnerability
Future Vulnerability	
Dam and Levee Failure	Not Applicable
Drought	No Change is Anticipated
Earthquake	No Change is Anticipated
Flood (Riverine, Urban, Shoreline)	No Change is Anticipated
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	No Change is Anticipated
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	No Change is Anticipated
Tornado	No Change is Anticipated
Wildfire (Wildfire Smoke)	No Change is Anticipated

Newly constructed homes have been built near a flood plain and older homes that homes built in the mid 90's have been more exposed to flooding because the 90's homes were raised up. It has never been addressed since the development was put in and is long over due. We have been getting a lot of resident complaints and really need help mitigating the flooding problem.

Hazard Risk Ranking

The *Hazard Risk Ranking Table* below presents the ranking of the hazards of concern. Hazard area extent and location maps are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

TABLE: HAZARD RISK RANKING	
Rank	**Hazard Type**
1	Flood
2	Severe Weather
3	Severe Winter
4	Tornado
5	Earthquake
6	Drought
7	Flood

New Mitigation Actions

The following are new mitigation actions created during the 2024 update.

Action P-7.20

Mitigation Action #20: Provide drain relief systems and increase capacity for drainage and runoff to flood water					
Lead Agency/Department Organization: Administration	**Supporting Agencies/ Organizations:** Farnsworth Group	**Estimated Cost:** High	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Flood Mitigation Assistance (FMA) Program Community Development Block Grant (CDBG) Community Wildfire Defense Grant	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** Flood (Riverine, Urban, Coastal/Shoreline)
Year Initiated		2025			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		1,2,3,4,5,6,9,12,13			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			

Action/Implementation Plan and Project Description:	We would take measures in providing drain relief systems and increasing capacity for drainage and runoff to flood water and will seek engineering assistance in completing a full flood mitigation design.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Ongoing Mitigation Actions

The following are ongoing actions with no definitive end or that are still in progress. During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Action P-7.1

Mitigation Action #1: IMPROVE PUBLIC INFRASTRUCTURE regarding mitigation of floods and other hazards with specific concentrations on water/sewer infrastructure projects. Some other mitigation efforts include: sewer lining and smoke testing for combined sewer overflow; street reconstruction/drainage; new sidewalk design/construction to include better drainage; elevated tank raising; water main replacements for sustainability; elevated tank painting for better sustainability; sanitary sewer cleaning; utility upgrades/efficiency regarding public street lights; local roads and bridge assessments to ensure sustainability. Basic premise is to increase resilience of infrastructure and critical facilities which also includes the establishment of public rain gardens as well.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $10,000,000; High	**Potential Funding Source:** BRIC, HMGP, FMA	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flooding, Severe Weather
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3			
Applicable Objective		Ongoing			

	All 1, 2, 3, 7, 9, 12 (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years.
Cost Analysis (Low, Medium, High)	High
Priority and Level of Importance (Low, Medium, High)	Medium
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	High
Action/Implementation Plan and Project Description:	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action P-7.2

Mitigation Action #2—STRENGTHEN BUILDING AND ZONING CODES – impacts of natural hazards on future land uses; integrate hazard mitigation policies; strengthen land-use planning efforts; reduce natural hazard risk and vulnerability to potentially isolated populations.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,5			
Applicable Objective		2, 4, 10, 12			

Cost Analysis (Low, Medium, High)	Low
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	Medium
Action/Implementation Plan and Project Description:	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action P-7.3

Mitigation Action #3—72-HOUR SELF SUFFICIENCY – increase Phoenix capacity to handle hazards and related crisis within its own government immediately and strengthen intergovernmental agreements and cooperation during and after hazards as well. Specifics increasing local capacity through all phases of emergency management; increase resilience; improve systems that provide early warnings; establish new partnerships and strengthen existing partnerships.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $50,000; Medium	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated	2014				
Applicable Jurisdiction	Village of Phoenix				
Applicable Goal	1,2,3				
Applicable Objective	1, 2, 5, 8				
Cost Analysis (Low, Medium, High)	Medium				
Priority and Level of Importance (Low, Medium, High)	High				

Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	High
Action/Implementation Plan and Project Description:	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action P-7.4

Mitigation Action #4—ENHANCE TORNADO WARNING PROTOCOL – help minimize disruption of Phoenix government operations; Improve early warning systems and emergency response communications; enhance partnerships regarding warning protocol.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $100,000; Medium	**Potential Funding Source:** BRIC, HMGP	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Tornado
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,5			
Applicable Objective		1, 5, 8			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					

Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action P-7.5

Mitigation Action #5—PROVIDE SHELTER FACILITIES - working alongside early warning program; established partnerships with other governments and communities; reduce loss of injury/save lives.					
Lead Agency/Department Organization: Village Administration and Township	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $500,000; High	**Potential Funding Source:** HMGP, BRIC	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		5, 8, 12			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.6

Mitigation Action #6—DEVELOP EVACUATION PLAN - working alongside early warning program; established partnerships with other governments and communities; reduce loss of injury/save lives.					
Lead Agency/Department Organization: Village Administration and Township	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $100,000; Medium	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated					
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		5,8,12			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.7

Mitigation Action #7—DEVELOP POST-DISASTER RECOVERY PLAN - utilizing resilience of critical facilities; development, improvements, and protection of early warning and post warning systems; utilizing good data; establishment of good partnerships with neighboring communities and other governments; encouragement of natural environment mitigation efforts

Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $100,000; Medium	**Potential Funding Source:** BRIC, HMGP	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		2, 5, 6, 8, 13			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.8

Mitigation Action #8—DEVELOP PUBLIC EDUCATION PROGRAMS – Although it would be most helpful to have all planning programs in place prior to outreach and education, its crucial to involve residents and businesses with what keeps them safe. Outreach and education include posting information on Village Website; discussions about private rain gardens; keeping your home safe with proactive measures. Education programs will involve village hazard mitigation policies; early warning systems; utilizing the best data available and technologies to educate public; partnership identifications with other governments, agencies, and communities and where to seek help while in a disaster; education about codes and land use within the area; and encourage residents and businesses as to when and how to mitigate hazards regarding their own properties.

Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $150,000	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		4, 5, 6, 8, 10, 11, 13			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.9

Mitigation Action #9: Where appropriate, support retrofitting, purchasing, or relocating structures in hazard-prone areas to prevent future damage. Give priority to properties with exposure to repetitive losses.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** FEMA Hazard Mitigation	**Estimated Projected Completion Date:**	**Hazard(s) Mitigated:** All

			Grants, BRIC, HMGP, FMA	Long-term (depending on funding)	
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3			
Applicable Objective		7,13			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.10

Mitigation Action #10: Continue to support the countywide actions identified in this plan.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short- and Long-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,5			

Applicable Objective	All
Cost Analysis (Low, Medium, High)	Low
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	Medium
Action/Implementation Plan and Project Description:	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action P-7.11

Mitigation Action #11: Actively participate in the plan maintenance strategy identified in this plan.					
Lead Agency/Department Organization: EMRS, Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,5			
Applicable Objective		3,4,6			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			

Action/Implementation Plan and Project Description:	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action P-7.12

Mitigation Action #12: Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,5,6			
Applicable Objective		3, 4, 5, 6, 7, 9, 10, 11, 13			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion;		O			

O = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action P-7.13

Mitigation Action #13: Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term and Ongoing	**Hazard(s) Mitigated:** Flooding
Year Initiated	2014				
Applicable Jurisdiction	Village of Phoenix				
Applicable Goal	1,2,5				
Applicable Objective	4,6,9				
Cost Analysis (Low, Medium, High)	Low				
Priority and Level of Importance (Low, Medium, High)	High				
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	Medium				
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O				

Action P-7.14

Mitigation Action #14: Where feasible, implement a program to record high water marks following high-water events.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Medium	**Potential Funding Source:** General Fund, FEMA Public Assistance (PA)	**Estimated Projected Completion Date:** Long Term	**Hazard(s) Mitigated:** Flooding, Severe Weather
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,5			
Applicable Objective		3,6,9			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.15

Mitigation Action #15: Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.

Lead Agency/Department Organization: Engineering Division, Economic Development, Community Development, Public Affairs, and Public Works Departments	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Medium	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term and ongoing	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,5			
Applicable Objective		3,4,6,10,13			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.16

Mitigation Action #16: Consider the development and implementation of a Capital Improvements Program (CIP) to increase the Village's regulatory, financial and technical capability to implement mitigation actions.					
Lead Agency/Department Organization: Public Works	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:**	**Estimated Projected Completion Date:**	**Hazard(s) Mitigated:** All

			CIP Component of General Fund (if implemented)	Long-term and Ongoing	
Year Initiated		2014			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,5			
Applicable Objective		1,2,7			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action P-7.19

Mitigation Action #19: Repair out of service fire hydrants and sidewalks					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:** Farnsworth Engineering Group	**Estimated Cost:** $128,000	**Potential Funding Source:** DCEO Grants	**Estimated Projected Completion Date:** 2024	**Hazard(s) Mitigated:** All
Year Initiated		2022			
Applicable Jurisdiction		Village of Phoenix			
Applicable Goal		1,2,3,4,5,6			

Applicable Objective	1, 2, 3, 4, 5, 6
Cost Analysis (Low, Medium, High)	High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	The benefits that this mitigation action plan will offer to our community are safer sidewalks for our residents and visitors to our community, a feeling of pride and working fire hydrants in case of fires to provide additional security and safety to all. High—Project will provide an immediate reduction of risk exposure for life and property.
Action/Implementation Plan and Project Description:	We will be repairing 7 hydrants throughout the village and over 30% of all of our village wide sidewalks. The sidewalks that have trip hazards, cracks and vegetation growth will be first priority and then we will implement a 50/50 program for residents who we were not able to accommodate with grant funds.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Completed Actions

Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

Completed Action Items
Storm Sewer Assessment

Flood Hazard Mitigation study

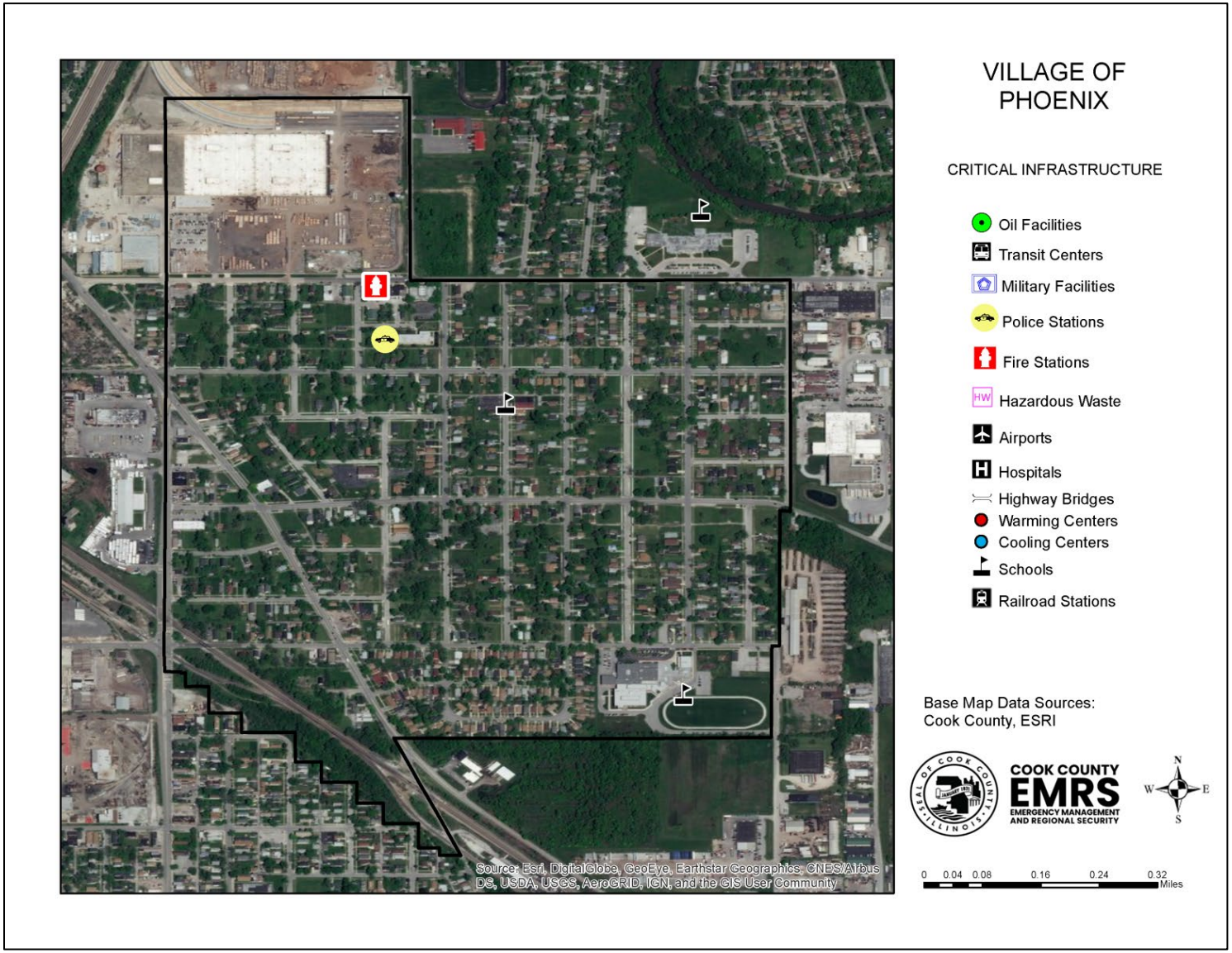
Future Needs to Better Understand Risk/Vulnerability

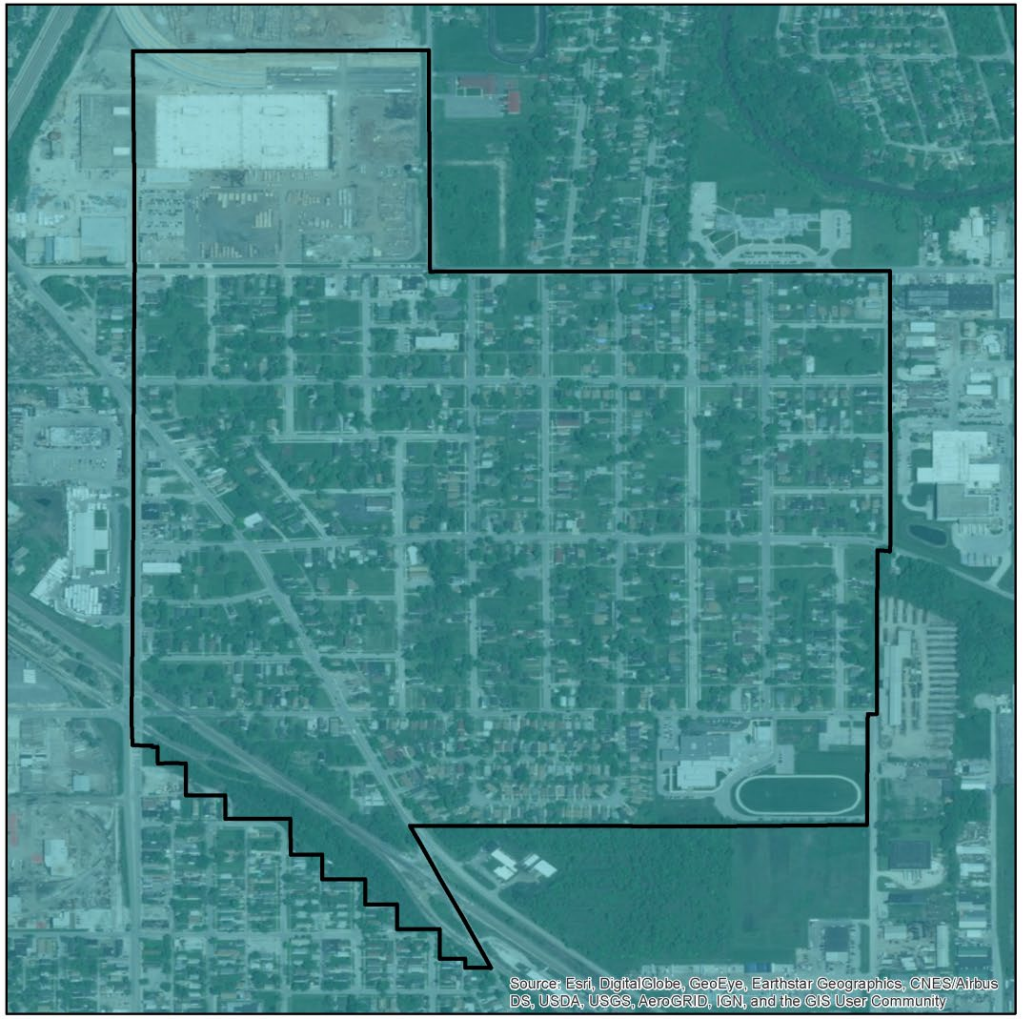
The ability to replace outdated equipment and receive training for our Public Works Department to be able to fix water main breaks.

Additional Comments

Regarding the needs of the Village of Phoenix, improved public infrastructure that would help to mitigate floods and alleviate severe weather hazards would assist greatly with improving quality of life during and after natural hazard events. This is with the understanding that all planning and construction programs will be sustainable and energy efficient. In addition, the Village is looking forward to implementing educational outreach programs regarding hazard mitigation and improving public safety. The Village will implement public works measures to complement hazard mitigation programming as well.

Hazard Mapping





VILLAGE OF PHOENIX

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking

II-III Weak

Data provided by the USGS Earthquake Hazards Program and Cook County.

Probabilistic seismic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.2- and 1.0-second periods with probabilities of exceedance of 10 percent in 50 years and 2 percent in 50 years. All of the maps were prepared by combining the hazard derived from spatially smoothed historical seismicity with the hazard from fault-specific sources. The acceleration values contoured are the random horizontal component. The reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters corresponding to the boundary between NEHRP (National Earthquake Hazards Reduction program) site classes B and C.

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COOK COUNTY EMRS
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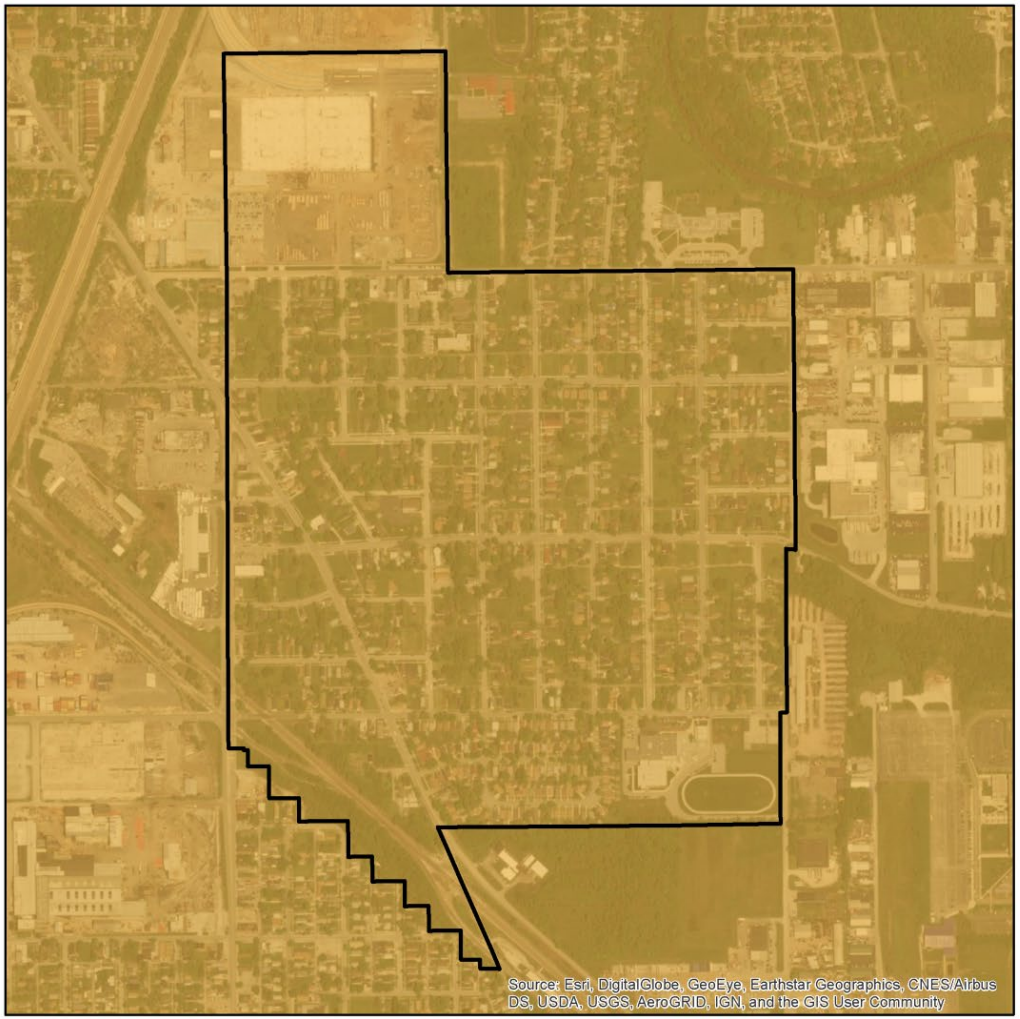

VILLAGE OF PHOENIX

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

TYPE

- C - Very Dense Soil, Soft Rock
- D - Stiff Soil
- F- Site Specific Evaluation

Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

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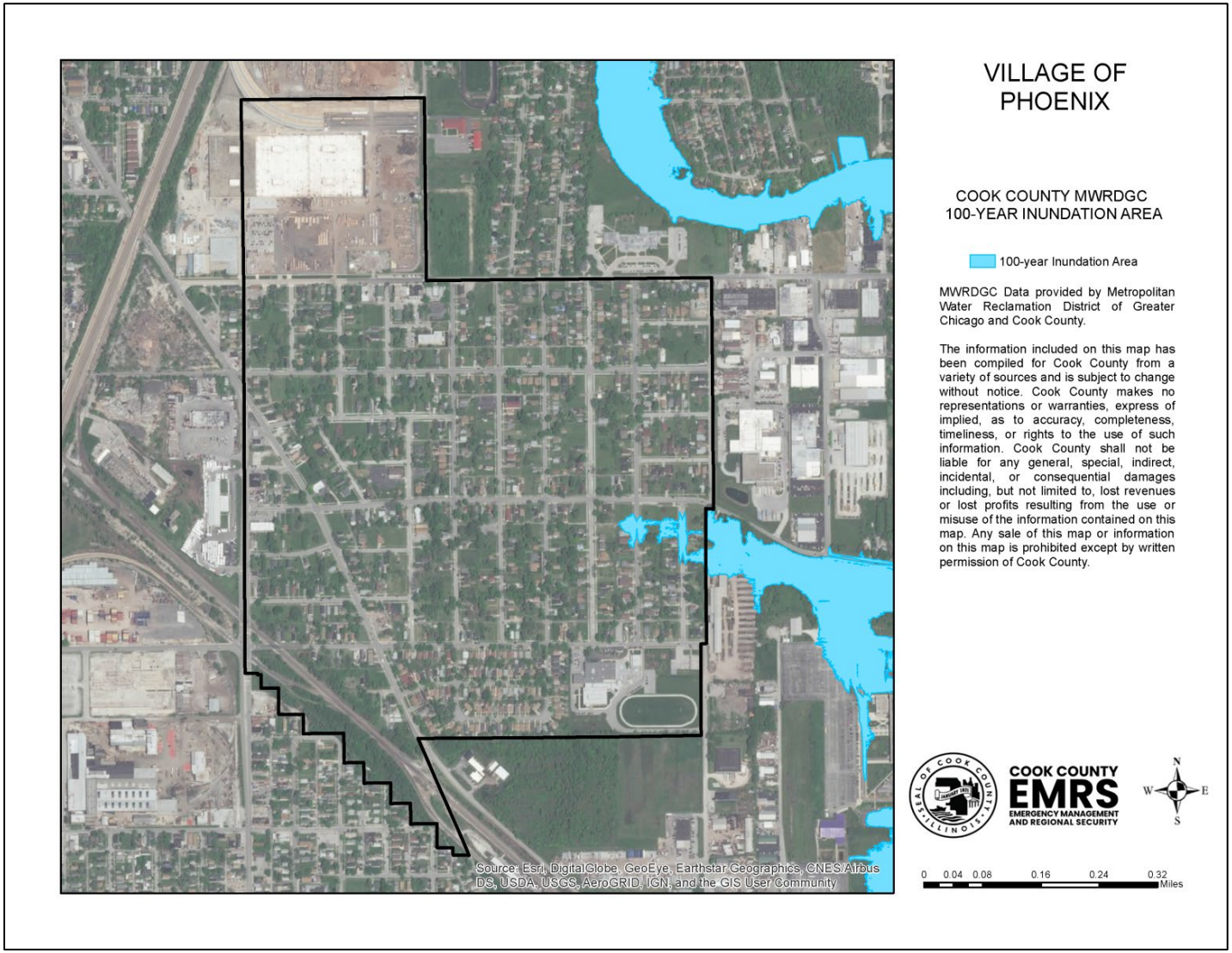
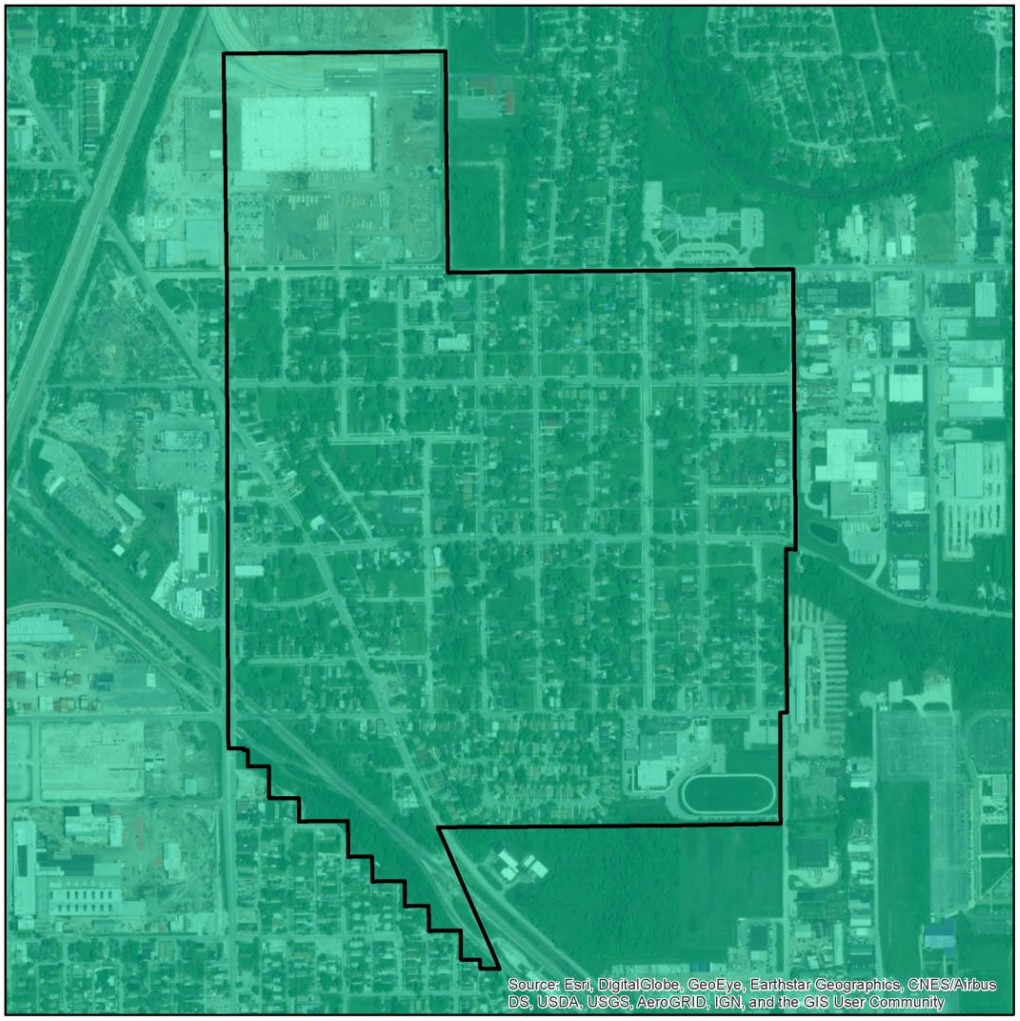
DISCLAIMER: The Cook County MWRDGC 100-year Inundation Map is provided to show general flood risk information regarding floodplains and inundation areas. This map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from http://www.fema.gov.





VILLAGE OF PHOENIX

LIQUEFACTION SUSCEPTIBILITY

LIQUEFACTION SUSCEPTIBILITY

- high
- low
- very low

Data provided by the Illinois State Geological Survey and Cook County.

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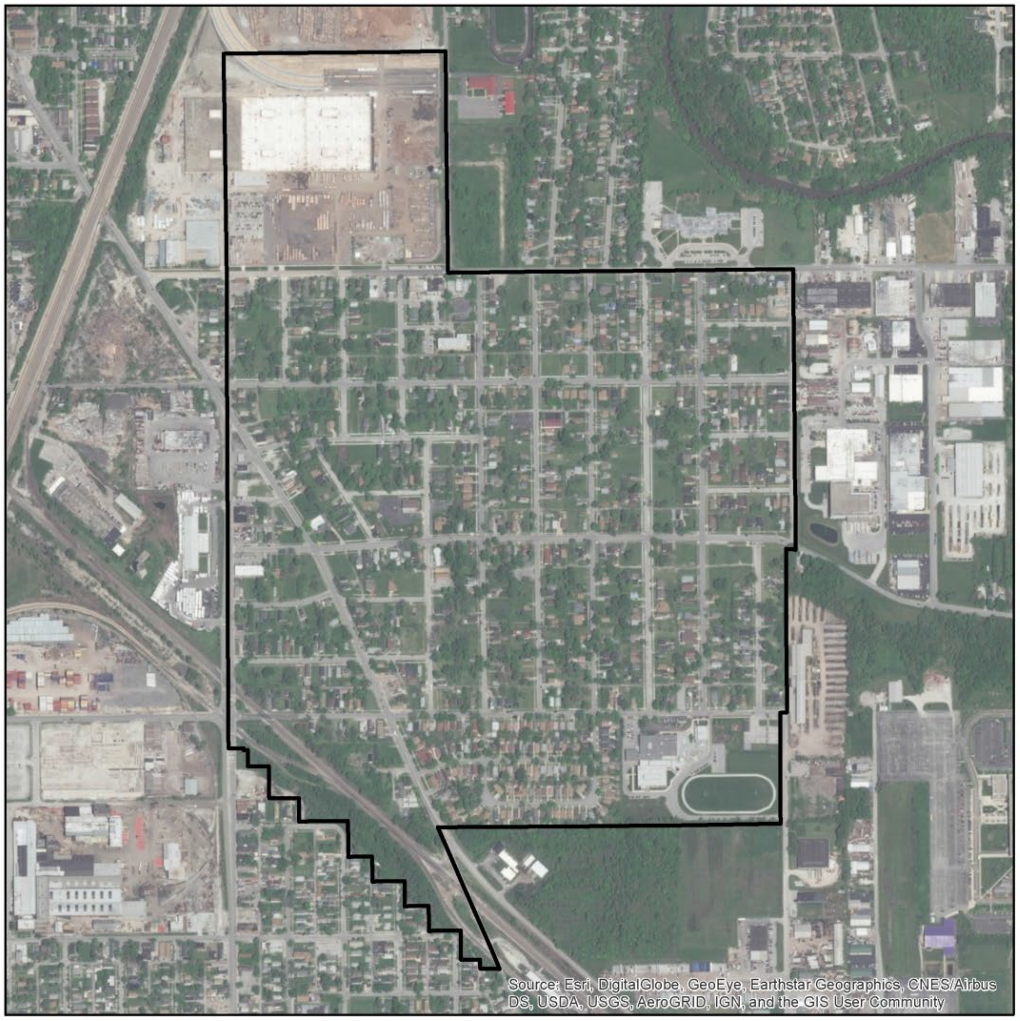

VILLAGE OF PHOENIX

100- AND 500- YEAR TORNADO EVENTS

Magnitude

4 (100 year event)

5 (500 year event)

Historic tornado data provided by NOAA/NWS showing the initial points and paths of all F4 and F5 events observed from 1950 to 2017.

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

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