Thornton

Hazard Mitigation Plan Point of Contact

Primary 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: 1835

Current Population: The 2020 U.S. Census population was 2,386. The 2022 U.S. Census estimate indicated the population was 2,297.

Population Growth: The overall population has decreased by 5.04% between 2018 and 2022.

Location and Description: The Village of Thornton is located seven miles south of Chicago, in Cook County, and has a population of 2,338 in a 3.35 square mile radius. Suburbs adjacent to Thornton include South Holland and Harvey to the north, Glenwood and Homewood to the South, Lansing to the east, and East Hazel Crest and Homewood to the west. Interstates 294 94, and 80 intersect 2 miles east of Thornton. The community is approximately 50% residential and 40% industrial occupancies. The residential population is comprised of mostly blue-collar residences with an average household income of $54,911. Thornton is best known for being home to the world's largest operating limestone quarry. The north lob of the quarry will soon be the spilling point for the south end of the Deep Tunnel Project.

Brief History: Thornton is one of the oldest villages in the county, dating back to the early 1800s. Settlement began on the east side of Thorn Creek which was 40 feet wide and up to 10 feet deep at the time. The first quarry was dug in 1838, and in 1886, the larger quarries were purchased by R.E. Brownell, who owned them until 1938. Material Service Corp. purchased the quarries and has owned it until recently when it was taken over by Hanson Material Service.

Climate: The climate of Thornton and the Chicago area is classified as humid continental, with all four seasons distinctly represented: wet springs; hot and humid summers; pleasant autumns; and cold winters. Annual precipitation is average and reaches its lowest points in the months of January and February, and peaks in the months of May and June. Winter proves quite variable. Seasonal snowfall in the Village has ranged from 9 – 90 inches. The daily average temperature in January at Midway Airport is 24.8 °F (−4.0°C), and temperatures often stay below freezing for several

consecutive days or even weeks in January and February. Temperatures drop to or below 0 °F (−18 °C) on 5.5 nights annually at Midway and 8.2 nights at O'Hare. Spring in the Chicago area is perhaps the areas wettest and unpredictable season. Winter-like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the springtime as the area's lakeside location makes it a center of conflicts between large volumes of warmer and colder air, triggering many kinds of severe weather. Temperatures vary tremendously in the springtime: March is the month with the greatest span between the record highs and lows. On a typical summer day, humidity is usually moderately high and temperatures ordinarily reach anywhere between 78 and 92 °F (26 and 33 °C). The extreme heat that the Chicago area is capable of experiencing during the height of the summer season can persist into autumn. Temperatures have reached 100 °F high and subzero lows below −18 °C. Fall can bring heavy thunderstorms, many of which are capable of producing flooding. The average first accumulating snow occurs around November 19.

Governing Body Format: Thornton is a Village governed by a Village President and Board of Trustees consisting of six trustees. This body of Government will assume the responsibility for the adoption and implementation of this plan. The Village is managed by a Village Administrator and has a Fire Department, Police Department, Department of Public Works, Parks and Recreation Department, Building, Zoning & Health department, and Emergency Management Agency.

Development Trends: Thornton is fully built out. Accordingly, development has consisted of the redevelopment of current industrial and residential areas. Thornton's Comprehensive Community Plan (2003) outlines goals and objectives for development within the confines of the built environment. Depending on location, the Village offers various incentives for businesses. All available properties are listed on the Village of Thornton's website. One of the current Plan's land use goals was to "Encourage the development of a variety of housing types, at various economic levels, which can satisfy the needs for a variety of lifestyles and living expenses within the community." A development group recently finished building a 46-unit senior housing living structure in early 2016. The project received funding from the State and County as it was built for senior citizens with varying socioeconomic statuses. The building is currently full with a waiting list. Additionally, one transportation goal was to "Encourage the development of a variety of modes of travel to meet the needs of all citizens." Thornton bought land for a future commuter train station and train parking. In the last five years, the Village increased the number of PACE bus stops. Unfortunately, the new Senior Housing building was constructed after the PACE stops were in place and the closest stop to the facility is two blocks away.

Changes in Community Priorities: There have been no significant changes in priority regarding the hazards that could potentially impact the community or changes in priority regarding resilience.

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	In accordance with Public Act 096-0704, Illinois has adopted the IBC as its state Building Code 2015 IBC & IRC adopted: 2016
Zonings	Yes	No	No	Yes	(65 ILCS 5/) Illinois Municipal Code. Thornton Zoning Code adopted: 1983
Subdivisions	Yes	No	No	No	Thornton Subdivision Regulations adopted: 1983
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Post Construction Storm Water Management Ord. Adopted: 2006
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	No	No	No	No	
Site Plan Review	Yes	No	No	No	IBC adopted: 2016
Public Health and Safety	Yes	No	Yes	Yes	Cook County Board of Health.

					Thornton Municipal Code adopted: 1983
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Village of Thornton Comprehensive Community Plan/2003
Is the plan equipped to provide integration to this mitigation plan?					Unknown
Floodplain or Basin Plan	Yes	No	No	No	Local Ord. based on Fed. Regulation. Adopted: 2008
Stormwater Plan	No	No	MWRD	No	Regional stormwater impacts are managed by MWRD. The Village lies within the Litter Calumet River watershed planning area on MWRD's comprehensive Stormwater Master Planning Program
Capital Improvement Plan	Yes	No	No	No	Adopted: 2013
What types of capital facilities does the plan address?					Water and sewer infrastructure, municipal building and equipment.
How often is the plan revised/updated?					5 years
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	Yes	Yes	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	No	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	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
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	Contracted Engineering Firm

Engineers or professionals trained in building or infrastructure construction practices	Yes	Contracted Engineering Firm
Planners or engineers with an understanding of natural hazards	Yes	Contracted Engineering Firm
Staff with training in benefit/cost analysis	No	
Surveyors	No	
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
Grant writers	No	

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Building Department
Who is your jurisdiction's floodplain administrator? (department/position)	Building Commissioner
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	07/2008
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
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?	No
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:

13-1-13-1-2 Definitions

SUBSTANTIAL DAMAGE

Damage of any origin sustained by a structure whereby the cumulative percentage of damage during the life of the building equals or exceeds 50% of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination. The term includes Repetitive Loss Buildings See "Repetitive loss."

SUBSTANTIAL IMPROVEMENT

Any reconstruction, rehabilitation, addition, or improvement of a structure taking place during the life of the building in which the cumulative percentage of improvements equals or exceeds 50% of the market value of the structure before the improvement or repair is started.

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 building. This term includes structures which have incurred repetitive loss or substantial damage, regardless of the actual work done.

B. The term does not, however, include either:

1. 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 assure safe living conditions, or

2. Any alteration of a "historic structure" listed on the National Register of Historic Places or the Illinois Register of Historic Places, provided that the alteration will not preclude the structure's continued designation as a historic structure.

13-1-13-1-4 Duties of the Enforcement Official

A. Determining the floodplain designation. Check all new development sites to determine whether they are in a Special Flood Hazard Area (SFHA). 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. 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 Title.

B. Professional engineer review. 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 licensed professional engineer under the employ or contract of the Village for review to ensure that the development meets § 13-1-7 or 13-1-8. In the case of an Appropriate Use, the P.E. shall state in writing that the development meets the requirements of § 13-1-7.

G. Damage determinations. Make damage determinations of all damaged buildings in the SFHA after a flood to determine substantially damaged structures which must comply with § 13-1-9A3c.

13-1-13-1-9 Permitting Requirements Applicable to all Floodplain Areas

In addition to the requirements found in §§ 13-1-6, 13-1-7 and 13-1-8 for development in flood fringes, designated floodways, and SFHA or floodplains where no floodways have been identified, the following requirements shall be met.

Protecting buildings.

a. All buildings located within a one-hundred-year floodplain, also known as a SFHA, shall be protected from flood damage below the flood protection elevation. This building protection criteria applies to the following situations:

(1) Construction or placement of a new building or alteration or addition to an existing building valued at more than $1,000 or 70 square feet.

(2) Substantial improvements or structural alterations made to an existing building that increase the floor area by more than 20% or equal or exceed the market value by 50%. Alteration shall be figured cumulatively during the life of the building. If substantially improved, the existing structure and the addition must meet the flood protection standards of this section.

(3) Repairs made to a substantially damaged building. These repairs shall be figured cumulatively during the life of the building. If substantially damaged the entire structure must meet the flood protection standards of this section.

(4) Installing a manufactured home on a new site or a new manufactured home on an existing site (the building protection requirements do not apply to returning a manufactured home to the same site it lawfully occupied before it was removed to avoid flood damage).

(5) Installing a travel trailer or recreational vehicle on a site for more than 180 days per year; and

(6) Repetitive loss to an existing building as defined in § 13-1-2. This building protection requirement may be met by one of the following methods.

b. A residential or non-residential building, when allowed, may be construed on permanent land fill in accordance with the following:

(1) The lowest floor (including basement) shall be at or above the flood protection elevation; and

(2) Fill requirements.

(a) The fill shall be placed in layers no greater than six inches deep before compaction and should extend at least 10 feet beyond the foundation of the building before sloping below the flood protection elevation; and

(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; and

(c) The fill shall be protected against erosion and scour during flooding by vegetative cover, riprap or other structural measure; and

(d) The fill shall be composed of rock or soil and not incorporate debris or refuse materials; and

(e) The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties, and when necessary, stormwater management techniques such as swales or basins shall be incorporated.

c. A residential or non-residential building may be elevated in accordance with the following:

(1) The building or improvements shall be elevated on crawl space, stilts, piles, walls, or other foundation that is permanently open to flood waters and not subject to damage by hydrostatic pressures of the base flood or one-hundred-year frequency flood. Designs must either be certified by a licensed professional engineer or architect or the permanent openings, one on each wall, 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; and

(2) 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; and

(3) All areas below the flood protection elevation shall be constructed of materials resistant to flood damage; and

(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; and

(b) Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the flood protection elevation provided they are waterproofed; and

(4) 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 and not later modified or occupied as habitable space; and

(5) In lieu of the above criteria, the design methods to comply with these requirements may be certified by licensed professional engineer or architect.

(6) 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 III. Adm. 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 (1) outside of a manufactured home park or subdivision, (2) in a new manufactured home park or subdivision, (3) in an expansion to an existing manufactured home park or subdivision, or (4) 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.

(10) Construction of new or substantially improved critical facilities shall be located outside the limits of the floodplain. Construction of new critical facilities shall be permissible within the floodplain if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor (including basement) elevated or structurally dry floodproofed to the five-hundred-year flood frequency elevation or three feet above the level of the one-hundred-year flood frequency elevation whichever is greater. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities.

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	4/4	08/2018
Public Protection/ISO	Yes	4	2015
StormReady	Yes	Gold (countywide)	2014
Tree City USA	No	N/A	N/A

Opportunities to Expand and Improve Capabilities

Due to the technical expertise needed to develop grant applications and benefit cost analyses for FEMA HMA grants, the Village of Thornton has a need for qualified grant writers to assist in the development and management of these grants.

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 goals and actions of the Hazard Mitigation Plan will be considered in the next capital improvement planning process.
- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the Comprehensive Plan.
- 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	Monkeypox

(reissued monthly through 10/28/2022)	

TABLE: NATURAL HAZARD EVENTS			
Type of Event	**FEMA Disaster Number (if applicable)**	**Date**	**Preliminary Damage Assessment/ Event Narrative**
Severe Winter Storm	-	12/2013	-
Severe Winter Storm	-	3/2013	-
Severe Winter Storm	-	2/2013	-
Severe Winter Storm	DR-1960	2/2011	-
Wind Storm	-	2/2003	-

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.

Flood: Patchy areas in neighborhoods throughout the Village experience basement seepage during periods of heavy rain due to aging storm sewer infrastructure. Thorn Creek runs through Thornton.
Severe Weather: High winds affected Thornton
Extreme Heat/Cold: The Village Hall and Fire Department is a designated warming/cooling center for the Village. Risk is related below to possible power outages.
Widespread Power Outage: Current Village hall back-up generator is 20 years old and only provide power for the Village side of the building. The addition of a secondary power supply would ensure power supply to critical public safety agency and cooling/warming facilities for the citizenry of the Village.
Wildfire (Wildfire Smoke): The Cook County Forest Preserve has multiple areas within Thornton's jurisdiction.

Indicator	Number	Percent
Families in poverty	21	2.5%
People with disabilities	467	14.5%
People over 65 years	511	15.8%
People under 5 years	111	3.4%
People of color	1,618	50.1%
Black	1,258	39%
Native American	0	0%
Hispanic	324	10%
Difficulty with English	75	2.4%
Households with no car	69	4.9%
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	Remained the Same
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	No Change is Anticipated
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

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	Remained the Same
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	No Change is Anticipated
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

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	Severe Weather
2	Severe Winter Weather
3	Tornado
4	Flood
5	Drought
6	Earthquake
7	Dam Failure

New Mitigation Actions

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

Action T1.13

Mitigation Action #13: Install Back Up Generator at Fire Department					
Lead Agency/Department Organization: Thornton Fire Department	**Supporting Agencies/ Organizations:** Public Works	**Estimated Cost:** Medium	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** All Hazards
Year Initiated		2025			
Applicable Jurisdiction		Village of Thornton			
Applicable Goal		1,2,3,4,5			
Applicable Objective		2,10			
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:		The fire department currently does not have a back up generator. In the event of a power outage the fire department does not have a way of receiving calls for service.			
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 T1.1

<table>
<tr><th colspan="6">Mitigation Action #1: 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.</th></tr>
<tr><td>Lead Agency/Department Organization:
Village Administration</td><td>Supporting Agencies/ Organizations:</td><td>Estimated Cost:
High</td><td>Potential Funding Source:
FEMA Hazard Mitigation Grants, BRIC, HMGP, FMA</td><td>Estimated Projected Completion Date:
Long-term (depending on funding)</td><td>Hazard(s) Mitigated:
All</td></tr>
<tr><td colspan="2">Year Initiated</td><td colspan="4">2014</td></tr>
<tr><td colspan="2">Applicable Jurisdiction</td><td colspan="4">Village of Thornton</td></tr>
<tr><td colspan="2">Applicable Goal</td><td colspan="4">1,2,3</td></tr>
<tr><td colspan="2">Applicable Objective</td><td colspan="4">7,13</td></tr>
<tr><td colspan="2">Cost Analysis (Low, Medium, High)</td><td colspan="4">High</td></tr>
<tr><td colspan="2">Priority and Level of Importance (Low, Medium, High)</td><td colspan="4">Medium</td></tr>
<tr><td colspan="2">Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</td><td colspan="4">High</td></tr>
<tr><td colspan="2">Action/Implementation Plan and Project Description:</td><td colspan="4">Long-term, dependent on funding</td></tr>
<tr><td colspan="2">Actual Completion Date or Ongoing Indefinite</td><td colspan="4"></td></tr>
<tr><td colspan="2">Project Status & Changes in Priority
Completion status legend:
N = New; I = In Progress Toward Completion;
O = Ongoing Indefinitely; C = Project</td><td colspan="4">O</td></tr>
</table>

Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action T1.2

Mitigation Action #2: 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 Thornton			
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 T1.3

Mitigation Action #3: 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 Thornton				
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 T1.4

Mitigation Action #4: 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:**	**Estimated Projected**	**Hazard(s) Mitigated:** All

			General Fund	**Completion Date:** Long-term	
Year Initiated		2014			
Applicable Jurisdiction		Village of Thornton			
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** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action T1.5

Mitigation Action #5: 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 Thornton
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:	Work under MWRD
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 T1.6

Mitigation Action #6: 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 Thornton			
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:	Work under MWRD
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 T1.7

Mitigation Action #7: Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.					
Lead Agency/Department Organization: Contracted Village Engineer	**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 Thornton			
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:		Contracted Villager Engineer			

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 T1.9

Mitigation Action #9: Participate in programs which address emergency preparedness.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Medium	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Long-term, ongoing	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Thornton			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		1, 2, 3, 4, 5, 6, 8, 10, 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:		Continue to work on emergency operation plans, etc.			
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;		O			

R = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action T1.10

Mitigation Action #: Promote "self-sustainability" and disaster preparedness within the Village.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Long-term, ongoing	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Thornton			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		1, 6, 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)		Medium			
Action/Implementation Plan and Project Description:		Continue to work on self-sustainability and disaster preparedness within the Village			
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 T1.11

Mitigation Action #11: Provide a back-up generator for the fire department and replace the old generator at the Village Hall side of the building					
Lead Agency/Department Organization: Thornton Fire Department	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $100,000	**Potential Funding Source:** General Fund, BRIC, HMGP	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Extreme Heat, Extreme Cold, Widespread Power Outage
Year Initiated		2019			
Applicable Jurisdiction		Village of Thornton			
Applicable Goal		3			
Applicable Objective		2			
Cost Analysis (Low, Medium, High)		Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Ensure power supply to critical public safety agency and cooling/warming facilities for the citizenry of the Village Medium—Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property.			
Action/Implementation Plan and Project Description:		The Village Hall and the Fire Department are in the same building. The current back-up generator is old and only provides power to the Village side of the building. An addition to the Fire Department was built in 2009 and funding was not available to either increase the size of the generator or provide a second generator to cover the fire department side of the building. Because the fire department has a separate source of power, the installation of a second generator would be prudent. The Village Hall generator is 20 years old and should be replaced at the same time. The Village Hall and Fire Department is a designated warming/cooling center for the Village.			
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
Continue participation and improve class rating in ISO programs (Building Code Effectiveness Grading Schedule & PP).
Thornton School District 154 Wolcott School Playground Equipment

Future Needs to Better Understand Risk/Vulnerability

No needs have been identified at this time.

Additional Comments

No additional comments at this time.

Hazard Mapping

VILLAGE OF THORNTON

CRITICAL INFRASTRUCTURE

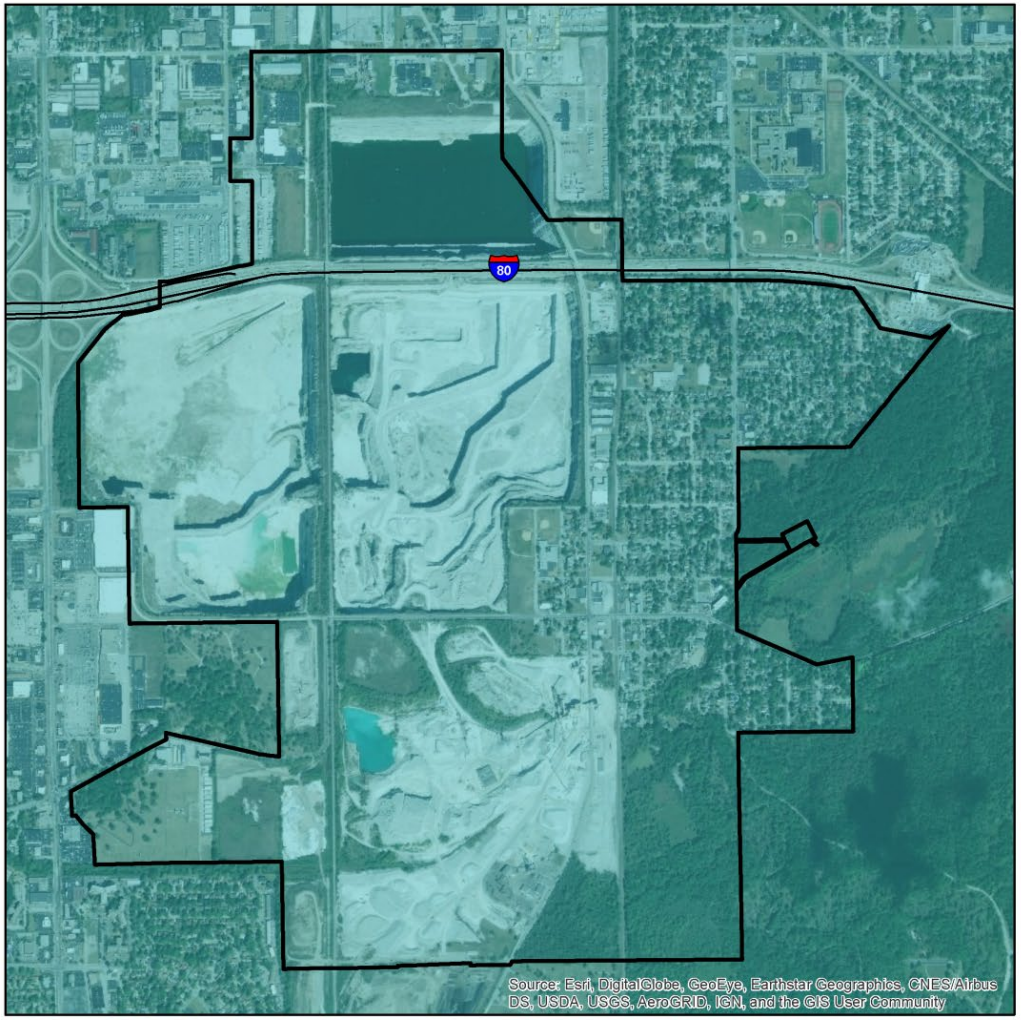
- Oil Facilities
- Transit Centers
- Military Facilities
- Police Stations
- Fire Stations
- Hazardous Waste
- Airports
- Hospitals
- Highway Bridges
- Warming Centers
- Cooling Centers
- Schools
- Railroad Stations

Base Map Data Sources:
Cook County, ESRI

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.075 0.15 0.3 0.45 0.6 Miles



VILLAGE OF THORNTON

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
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

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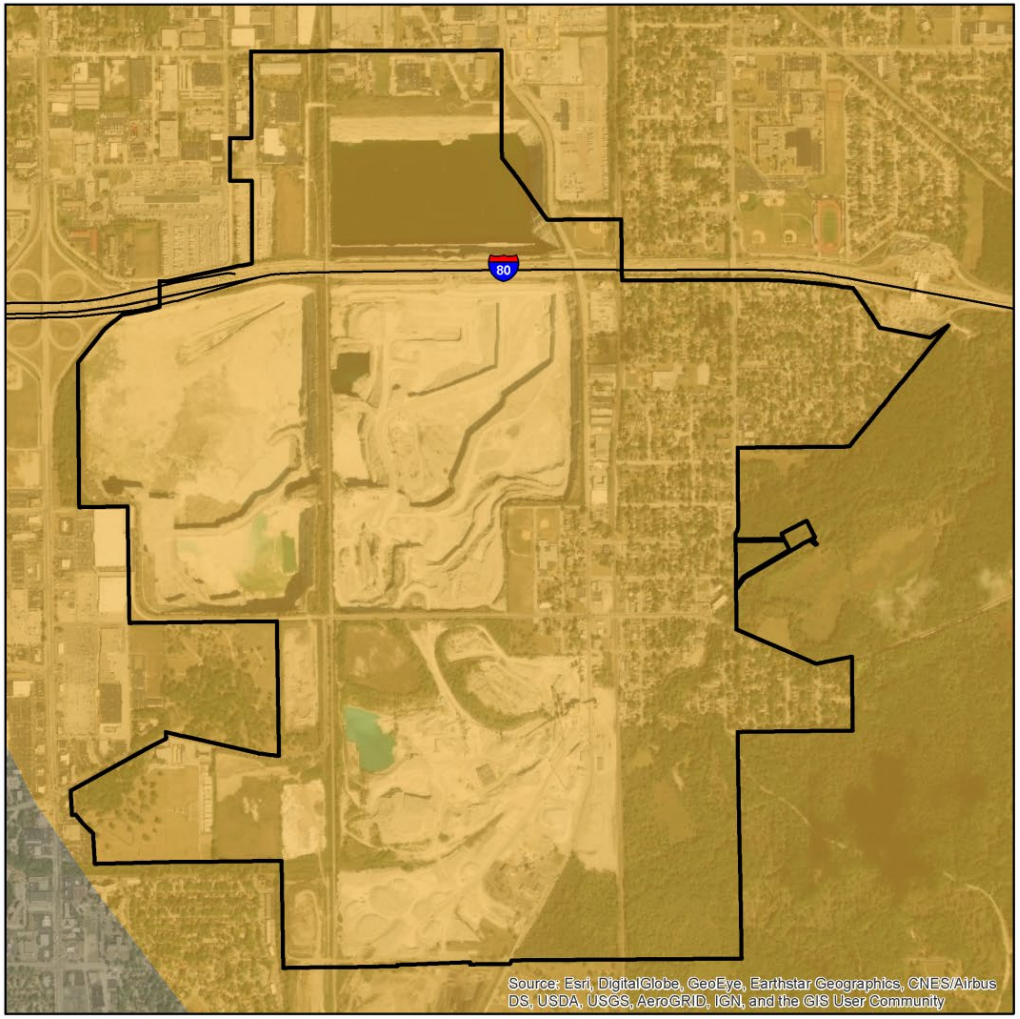

VILLAGE OF THORNTON

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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COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

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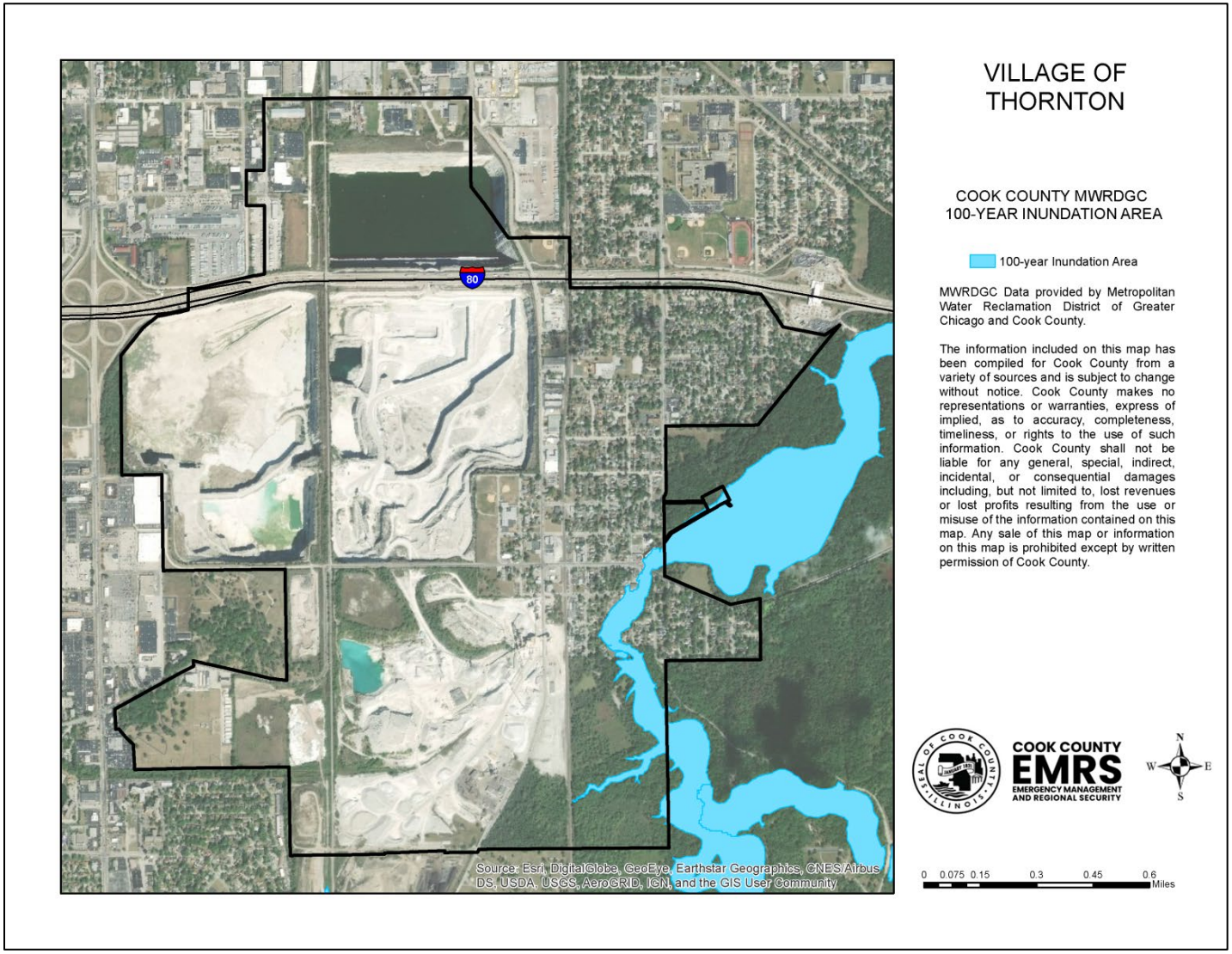
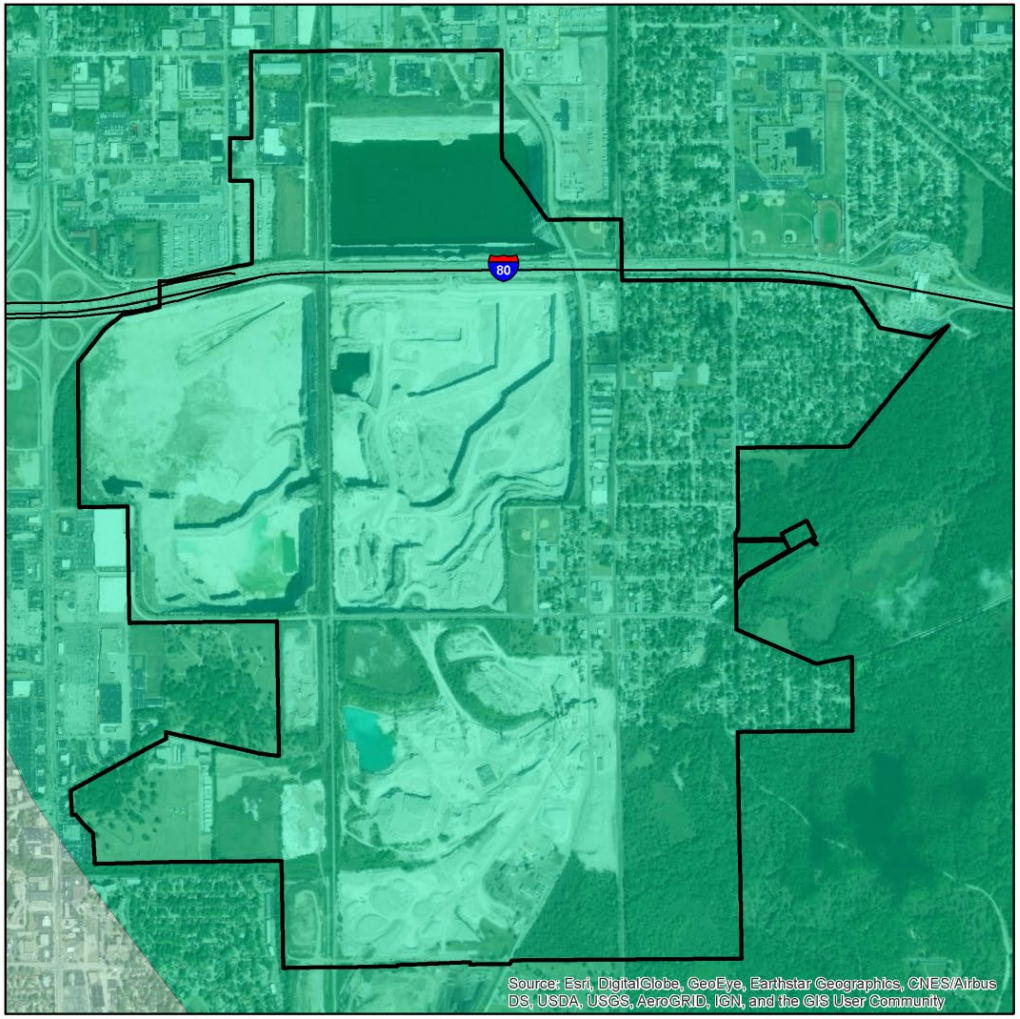
Miles

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 THORNTON

LIQUEFACTION SUSCEPTIBILITY

LIQUEFACTION SUSCEPTIBILITY

- high
- low
- very low

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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COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

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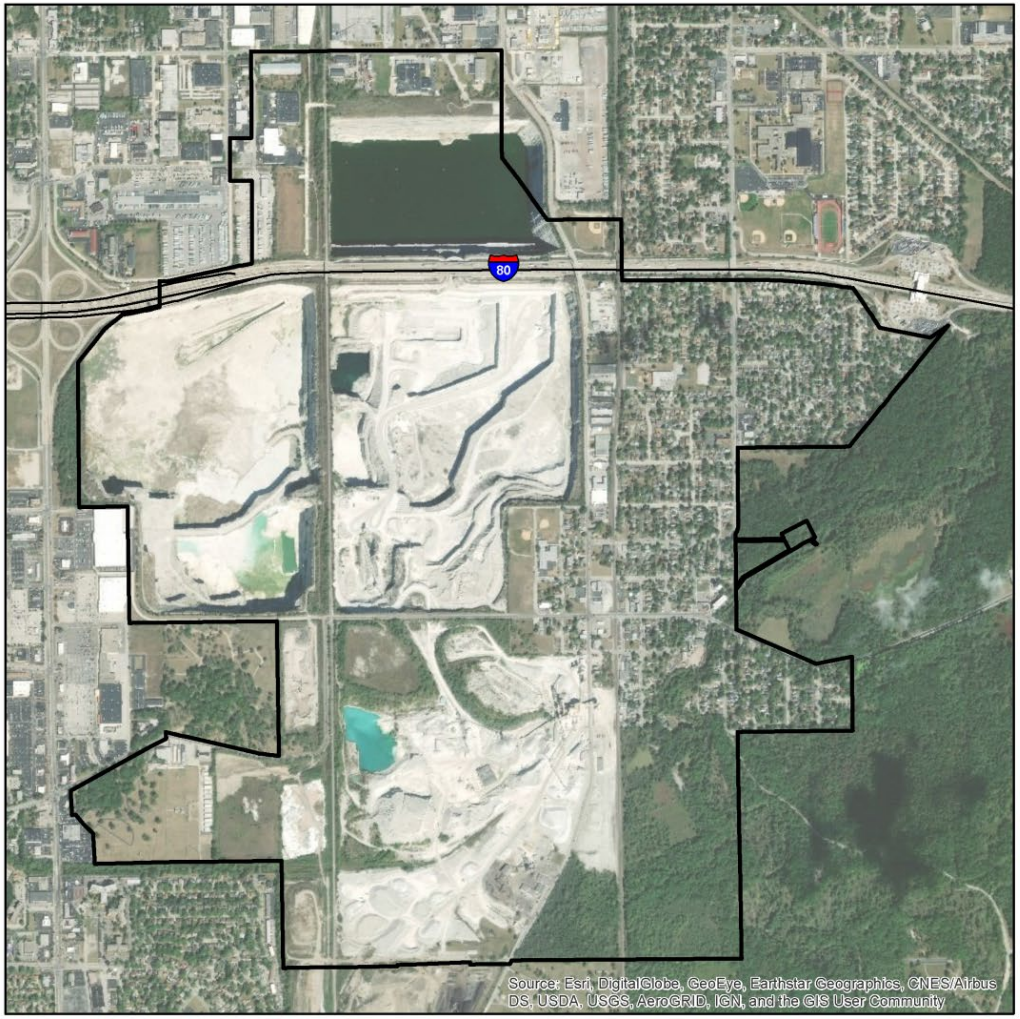

VILLAGE OF THORNTON

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

N W E S

0 0.075 0.15 0.3 0.45 0.6 Miles