

**COOK COUNTY
MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN
VOLUME 2 - Municipal Annexes**

Tinley Park Annex

FINAL

July 2019

Prepared for:



Cook County
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Hazard Mitigation Point of Contact

Primary Point of Contact	Alternate Point of Contact
Pat Carr, Assistant Village Manager - Public Safety 17355 S. 68th Ct Tinley Park, IL 60477 Telephone: 708-444-5050 Email Address: pcarr@tinleypark.org	Steve Klotz, Deputy Fire Chief 17355 S. 68th Ct Tinley Park, IL 60477 Telephone: 708-444-5240 Email Address: sklotz@tinleypark.org

Jurisdiction Profile

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

- **Date of Incorporation:** 1892
- **Current Population:** 56,04 based upon the 2018 US Census population estimate.
- **Population Growth:** Tinley Park has experienced an 18.1% increase in population since 2000, making it one of the fastest-growing south suburbs of Chicago in 2009. Tinley Park's population has remained stable since 2010 with little increase or decrease.
- **Location and Description:** Tinley Park is a village located primarily about 18 miles SW of Chicago in Cook County, with a small but densely populated portion in Will County. It has an area of 16.04 square miles. Suburbs adjacent to Tinley Park include Orland Park to the northeast, Oak Forest to the northwest, Frankfort Square to the south, Hazel Crest, Oak Forest, Homewood, and Flossmoor to the east, and Mokena to the west. According to the US Census Bureau, Tinley Park has a total land area of 16.02 square miles.
- **Brief History:** The settlement of the area which now comprises Tinley Park began in the 1820s by emigrants from the Eastern United States. Though Irish, English, Scottish, Canadian, and American settlers were common throughout the area, German settlers became predominant by the 1840s, and the Village was established in 1853 as “Bremen,” meaning Irish, English, Scottish, Canadian, and other American settlers were also common in the area. In the late 19th century, railroads expanded rapidly, and the Village was located on the Chicago, Rock Island and Pacific Railroad line. The influence of the railroad on Bremen was so great that, in 1890, its name was changed to Tinley Park in honor of the Village’s first railroad station agent, Samuel Tinley, Sr. Even the Village’s official incorporation took place at the train depot on June 27, 1892. 1905 saw the Diamond Spiral Washing Machine Company found its first factory in Tinley Park. Local businessmen established an electric utility in 1909. A bottling facility for soda was operated in Tinley Park until the 1950s. Inventor John Rauhoff developed and manufactured a waterproofing additive for cement called Ironite, later used in the construction of Hoover Dam. In the latter part of the 20th century, Tinley Park was and remains to be, an area of rapid suburban expansion to the west and south of the original site, with over 11,000 housing units constructed between 1970 and 1994.
- **Climate:** The climate of Tinley Park 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 areas 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 area can experience in summer 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:** The Village of Tinley Park operates under the Council-Manager form of government, with a Mayor, Village Clerk, a six-member Board of Trustees, Village Manager and professional staff. The Mayor and Trustees serve as the policy-making body of the Village and are elected at-large, not by a specific area or ward. The Mayor and Trustees will assume the responsibility for the adoption and implementation of this plan. They perform such functions as passing resolutions and ordinances, approving the expenditure of money, levying taxes, approving subdivisions, zoning and other land-use regulations, generally deciding on important issues that affect the Village of Tinley Park. The Mayor, with the consent and approval of the Village Board, appoints department heads to direct the activities of the respective operating departments. Department heads report to the Village Manager, who in turn reports to the Village Board and is responsible for the implementation of the Village Board policy. Department heads include Police Chief, Fire Chief, Public Works Director, Emergency Management Director, Planning Director, Economic Development Director, Finance Director/Treasurer, and Marketing Director. In addition, numerous Village commissions and committees, staffed by volunteers representing private citizens and businesses alike, focus on various aspects of economic development, planning and zoning, residential issues and community projects/activities. Tinley Park has 15 Commissions with over 100 volunteers. These commissions include Plan Commission, Zoning Board of Appeals, Community Resource Commission, Police Pension Board, Civil Service Commission and much more.
- **Development Trends:** The Village of Tinley Park is predominate “built-out” with an economically advantageous mix of housing, businesses, industries, and community services/non-profits. Undeveloped land in the Village is primarily planned for commercial and industrial development. In recent years, residential development has slowed down and infill and redevelopment projects, particularly in the downtown area (near the train station), have experienced significant reinvestment with mixed-use and residential development. Tinley Park expects the redevelopment of the former Tinley Park Mental Health Center in the next several years, which is projected to be a 280 acre primarily residential development. As of 2019, Tinley Park has numerous current projects underway. There is a Downtown Tinley Redevelopment in the process with a public plaza, mixed-use development, wine bar, restaurant/brewery, new streetscape, New Bremen TIF district and a naturalized detention basin that will be called "Freedom Pond." Additionally, there are village-wide projects such as paving, water/sewer projects, water meter replacement, cameras, and residential developments.

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	Village of Tinley Park Building Code—2007
Zoning	Yes	No	No	Yes	Village of Tinley Park Zoning Ordinance, as amended through 8/6/2013; Tinley Park Legacy Code—2011
Subdivisions	Yes	No	No	No	Subdivision and Development Regulations, as amended through May 22, 2007
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Metropolitan Water Reclamation District Manages Stormwater in Cook County, Tinley Park.

					Additional local codes: Tinley Park Code of Ordinances, Chapter 51 (Retention of Stormwater)
Post Disaster Recovery	No	No	No	No	None
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	Yes	No	No	No	Village of Tinley Park Comprehensive Plan 2000
Site Plan Review	Yes	No	No	No	Village of Tinley Park Zoning Ordinance, as amended through August 6, 2013.
Public Health and Safety	Yes	No	Yes	Yes	<i>Cook County Board of Health.</i> Village of Tinley Park Code of Ordinances
Environmental Protection	No	No	No	No	None.
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Village of Tinley Park Comprehensive Plan, 2000; 2009 Legacy Plan for Downtown.
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					Yes
Floodplain or Basin Plan	No	No	Army Corps	No	
Stormwater Plan	Yes	No	MWRD	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.
Capital Improvement Plan	Yes	No	No	No	The Village adopts an annual update to a Capital Improvements Plan. The Plan includes all infrastructure and plant facilities within the Village, including stormwater management facilities.
<i>What types of capital facilities does the plan address?</i>					See above
<i>How often is the plan revised/updated?</i>					Annually
Habitat Conservation Plan	No	No	N/A	No	None.
Economic Development Plan	Yes	No	Yes	Yes	Economic Development Strategic Plan, 2007
Shoreline Management Plan	No	No	No	No	None
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes	Tinley Park EOP September 2018
Threat and Hazard Identification and Risk Assessment	Yes	No	Yes	No	Cook County DHSEM Preparing THIRA

Terrorism Plan	Yes	No	Yes	Yes	Tinley Park EOP
Post-Disaster Recovery Plan	Yes	No	No	No	Tinley Park EOP
Continuity of Operations Plan	Yes	No	Yes	No	Tinley Park EOP
Public Health Plans	Yes	No	Yes	No	Cook County DPH/Tinley Park EOP

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	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other: Recaptures, Tax Increment Financing Districts, Special Assessments	Yes

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	Planning Department (Planning Director, Planner II, Planner I); Public Works Department (Village Engineer); Public Works Department (Public Works Director)

Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works Department (Village Engineer); Building Department (Building Commissioner, Inspectors)
Planners or engineers with an understanding of natural hazards	Yes	Planning Department (Planning Director, Planner II, Planner I); Public Works Department (Village Engineer); Public Works Department (Public Works Director)
Staff with training in benefit/cost analysis	Yes	Planning Department (Planning Director); Public Works Department (Public Works Director, Assistant Director); Public Works Department (Village Engineer)
Surveyors	Yes	Public Works Department (Village Engineer)
Personnel skilled or trained in GIS applications	Yes	Planning Department (Planning Director, Planner II, Planner I); Public Works Department (Village Engineer); Public Works Department (Public Works Director); GIS Analyst (through MGP, Village’s GIS consultant)
Scientist familiar with natural hazards in local area	Yes	Public Works Department (Village Engineer)
Emergency manager	Yes	Emergency Management (EMA Director)
Grant writers	Yes	Planning Department (Planning Director); Public Works Department (Village Engineer); Economic Development Department (Director); Assistant Village Managers

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

What department is responsible for floodplain management in your jurisdiction?	Village Engineer; Planning Department; Public Works Department
Who is your jurisdiction’s floodplain administrator? (department/position)	Village Engineer - Certified Floodplain Manager (CFM)
Are any certified floodplain managers on staff in your jurisdiction?	Village Engineer - Certified Floodplain Manager (CFM)
What is the date of adoption of your flood damage prevention ordinance?	1948 (Amended 2008)
When was the most recent Community Assistance Visit or Community Assistance Contact?	07/14/2004
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?	Yes - Upgraded in 2011

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	Yes	6	10/1/2011
Building Code Effectiveness Grading Schedule	Yes	6 - Res. 5 - Com.	5/30/2007
Public Protection/ISO	No	N/A	N/A
StormReady	Yes	Gold (countywide)	2014
Tree City USA	No	N/A	N/A

Jurisdiction-Specific Natural Hazard Event

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

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment
Severe Storms	-	7/21/2016	-
Hail	-	5/20/2014	-
Severe Storms	DR-4116	2013	-
Severe Winter Storms	DR-1960	2011	-
Severe Storms/Flooding	DR-1935	2010	-
Severe Storms/Flooding	DR-1800	2008	-
Severe Storms/ Flooding	DR-1729	2007	-
Severe Winter Storm	EM-3161	2000	-
Winter Snow Storm	EM-3134	1999	-
Flooding	DR-1188	1997	-
Flooding	DR-1129	1996	-
Severe Storms/Flooding	DR-997	1993	-
Severe Storms/Flooding	DR-798	1987	-
Severe Storms/Flooding	DR-776	1986	-

Jurisdiction-Specific Hazards and Impacts

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 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.

Extreme Heat: The Village's numerous high-density community events (concerts, parades, festivals) and Hollywood Casino Amphitheater attendees could be exposed and overcome to extreme heat emergencies. Also, extreme heat poses risks to assisted living and nursing home populations.

Lightning: The Village's numerous high-density community events (concerts, parades, festivals) and Hollywood Casino Amphitheater attendees could be exposed and overcome to extreme heat emergencies. Also, lightning poses risks to assisted living and nursing home populations.

Fog: The interstate 80 and 57 highway traffic could be impacted by ground fog causing significant MVA or transportation delays and detours.

Flooding: April 18, 2013 - Some village streets have been affected by the heavy rains, and residents have reported basement flooding.

ComEd also reported some power outages around Tinley Park. According to the power company's website, outages are in the following areas:

- Duvan Drive and 175th Street, caused by damaged power lines; 194 customers affected; power should be restored by about 6 a.m.
- Wyman and Nielsen drives, the cause is under investigation; 113 customers affected; power should be restored by about 8:34 a.m.

Severe Weather: 9/27/2009- Power lines blown down. Two rounds of thunderstorms bring isolated wind damage near the Illinois Wisconsin state line.

7/21/2016 - Wind gusts were estimated to 60 mph. Strong to severe thunderstorms moved across parts of northern Illinois during the evening hours of September 27th.

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	Risk Rating Score (Probability x Impact)
1	Severe Weather	54
2	Severe Winter Weather	54
3	Earthquake	32
4	Tornado	27
5	Flood	16
6	Drought	2
7	Dam Failure	0

Mitigation Strategies and Actions

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- New Mitigation Actions - New actions identified during this 2019 update process
- Ongoing Mitigation Actions - Ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

The *Hazard Mitigation Action Plan Matrix Table* below lists the actions that make up the jurisdiction’s hazard mitigation plan. The *Mitigation Strategy Priority Schedule Table* identifies the priority for each action.

TABLE: HAZARD MITIGATION ACTION PLAN MATRIX						
Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion Date (a)
Action T2.1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard prone areas.						
Ongoing	All	7, 13	Village of Tinley Park	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action T2.2 —Continue to support the county wide actions in this plan.						
Ongoing	All	All	Village of Tinley Park	Low	General Fund	Short and long-term
Action T2.3 —Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM, Village of Tinley Park	Low	General Fund	Short-term
Action T2.4 —Consider or maintain participation in incentive-based programs such as the Community Rating System, StormReady, and Tree City.						

Ongoing	All	3, 4, 5, 6, 7, 9, 10, 11, 13	Village of Tinley Park	Low	General Fund	Long-term
Action T2.5 —Maintain good standing under the National flood insurance program.						
Ongoing	Flooding	4, 6, 9	Village of Tinley Park	Low	General Fund	Short-term and ongoing
Action T2.6 —Where feasible, implement a program to record high water marks following high-water events.						
Ongoing	Flooding, Severe Weather	3, 6, 9	Village of Tinley Park	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action T2.7 —Integrate the hazard mitigation plan into other plans, programs or resources that dictate land use or development.						
Ongoing	All	3, 4, 6, 10, 13	Planning Department	Low	General Fund	Short-term
Action T2.8 —Streambank Stabilization along Midlothian Creek						
New	Flooding	2, 3, 9	MWRD	\$654,948	MWRD	Short-term
Action T2.9 —North Street Permeable Pavers						
New	Flooding	2, 3, 9	MWRD	Unknown	MWRD	Short-term
Action T2.10 —Post-Disaster Recovery Ordinance						
New	All	6, 12	Emergency Management	\$10,000; Low	Local Funds	2020
(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.						

TABLE: MITIGATION STRATEGY PRIORITY SCHEDULE

Action Number	Number of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority (a)
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1	2	High	High	Yes	Yes	No	Medium	
2	13	Medium	Low	Yes	No	Yes	High	
3	3	Medium	Low	Yes	Yes	Yes	High	
4	9	Medium	Low	Yes	No	Yes	Medium	
5	3	Medium	Low	Yes	No	Yes	High	
6	3	Medium	Medium	Yes	Yes	No	Medium	
7	5	Medium	Low	Yes	No	Yes	High	
8	3	High	High	Yes	Yes	Unknown	High	
9	3	High	Unknown	Yes	Yes	Unknown	Medium	
10	2	Medium	Low	Yes	Unknown	Unknown	Medium	

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

The following are new mitigation actions created during the 2019 update.

Action T2.8

Mitigation Action	Streambank Stabilization along Midlothian Creek
Year Initiated	2019
Applicable Jurisdiction	Village of Tinley Park
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	Village of Tinley Park
Applicable Goal	<ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. • Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events and potential damage from such activities.
Applicable Objective	<ul style="list-style-type: none"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	
Estimated Cost	\$654,948
Benefits (loss avoided)	
Projected Completion Date	
Priority and Level of Importance (Low, Medium, High)	
Benefit Analysis (Low, Medium, High)	
Cost Analysis (Low, Medium, High)	
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	ID: MTCR-G2 Contract: 10-882-CF

	Watershed: Little Cal River Location: Tinley Park, IL Stabilize approximately 495 linear feet of Midlothian Creek from 66th Court, north of 173rd Street. Lay back the creek banks. Install two rock cross-vanes, four rock vanes, and 280 linear feet of soil lifts. Project protects structures and infrastructure in imminent danger of failure from active streambank erosion and flooding.
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Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	Bids under review.
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
X	Flood
	Extreme Heat
	Lightning
	Hail
	Fog
	High Wind
	Snow
	Blizzard
	Extreme Cold
	Ice Storms
	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident
	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Action T2.9

Mitigation Action	North Street Permeable Pavers
Year Initiated	2019
Applicable Jurisdiction	Village of Tinley Park
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	Village of Tinley Park
Applicable Goal	
Applicable Objective	<ul style="list-style-type: none"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	MWRD
Estimated Cost	
Benefits (loss avoided)	
Projected Completion Date	2020
Priority and Level of Importance (Low, Medium, High)	
Benefit Analysis (Low, Medium, High)	
Cost Analysis (Low, Medium, High)	
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards

	Dam/Levee Failure
	Drought
	Earthquake
X	Flood
	Extreme Heat
	Lightning
	Hail
	Fog
	High Wind
	Snow
	Blizzard
	Extreme Cold
	Ice Storms
	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident
	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Action T2.10

Mitigation Action	Post-Disaster Recovery Ordinance
Year Initiated	2019
Applicable Jurisdiction	Village of Tinley Park
Lead Agency/Organization	Emergency Management
Supporting Agencies/Organizations	Community Development, Public Works
Applicable Goal	<ul style="list-style-type: none"> Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.
Applicable Objective	<ul style="list-style-type: none"> Use the best available data, science and technologies to educate the public and to improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types and community development patterns, and the measures needed to protect life safety. Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area.
Potential Funding Source	Local Funds
Estimated Cost	\$10,000
Benefits (loss avoided)	
Projected Completion Date	2020
Priority and Level of Importance (Low, Medium, High)	Medium Priority
Benefit Analysis (Low, Medium, High)	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.
Cost Analysis (Low, Medium, High)	Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	A post-disaster recovery ordinance regulates repair activity, generally depending on property location. It prepares a community to respond to a disaster event in an orderly fashion by requiring citizens to: 1) obtain permits for repairs, 2) refrain from making repairs, or 3) make repairs using standard methods.

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	Flood
	Extreme Heat
	Lightning
	Hail
	Fog
	High Wind
	Snow
	Blizzard
	Extreme Cold
	Ice Storms
	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident
	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Ongoing Mitigation Actions

The following are ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Action T2.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# T2—1	Where appropriate, support retrofitting, purchase, or relocation of structures in hazard prone areas.	
Status Description: Yes	Replacing and expanding sewer pipe in flood prone areas	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action T2.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# T2—2	Continue to support the county wide actions in this plan	
Status Description: Yes		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action T2.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# T2—3	Actively participate in plan maintenance strategy in this plan	
Status Description: Yes	Review plan every six months with stakeholders.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action T2.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# T2—4	Consider or maintain participation in incentive-based programs such as the Community Rating System, StormReady, and Tree City.	
Status Description: Yes	Maintaining our CRS program with FEMA that allows our residents to receive insurance discounts.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action T2.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# T2—5	Maintain good standing under the National flood insurance program.	
Status Description: Yes	Maintain a CRS program with FEMA that allows residents to receive flood insurance discounts.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action T2.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# T2—6	Where feasible, implement a program to record high water marks following high water events.	
Status Description: No		X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action T2.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# T2—7	Integrate the hazard mitigation plan into other plans, programs or resources that dictate land use or development.	
Status Description: Yes	Hazard mitigation plan is included in our Emergency Operations Plan and utilized by the Village Planning and public works departments.	O
<p style="text-align: center;">Completion status legend:</p> <p style="text-align: center;"> N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken </p>		

Completed Mitigation Actions

Tinley Park has no completed actions at this time.

Future Needs to Better Understand Risk/Vulnerability

No needs have been identified at this time.

Additional Comments

No additional comments at this time

HAZUS-MH Risk Assessment Results

TINLEY PARK EXISTING CONDITIONS	
2010 Population	56,703
Total Assessed Value of Structures and Contents	\$8,736,599,950
Area in 100-Year Floodplain	1,115.39 acres
Area in 500-Year Floodplain	1,562.49 acres
Number of Critical Facilities	67

HAZARD EXPOSURE IN TINLEY PARK						
	Number Exposed		Value Exposed to Hazard		Total	% of Total Assessed Value Exposed
	Population	Buildings	Structure	Contents		
Dam Failure						
Buffalo Creek	0	0	\$0	\$0	\$0	0.00%
U. Salt Cr. #2	0	0	\$0	\$0	\$0	0.00%
Touhy	0	0	\$0	\$0	\$0	0.00%
U. Salt Cr. #3	0	0	\$0	\$0	\$0	0.00%
U. Salt Cr. #4	0	0	\$0	\$0	\$0	0.00%
Flood						
100-Year	2,220	683	\$315,052,830	\$277,210,062	\$592,262,892	6.78%

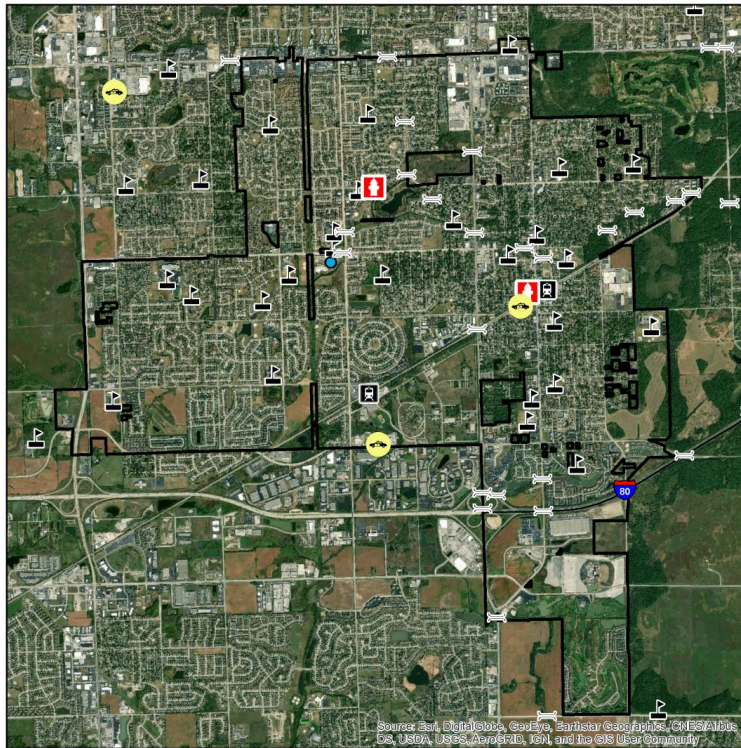
500-Year	4,004	1,232	\$533,207,086	\$431,715,172	\$964,922,258	11.04%
Tornado						
100-Year	—	—	\$891,722,179	\$661,568,922	\$1,553,291,101	17.78%
500-Year	—	—	\$1,409,052,129	\$838,144,036	\$2,247,196,165	25.72%

ESTIMATED PROPERTY DAMAGE VALUES IN TINLEY PARK

	Estimated Damage Associated with Hazard			% of Total Assessed Value Damaged
	Building	Contents	Total	
Dam Failure				
Buffalo Creek	\$0	\$0	\$0	0.00%
U. Salt Cr. #2	\$0	\$0	\$0	0.00%
Touhy	\$0	\$0	\$0	0.00%
U. Salt Cr. #3	\$0	\$0	\$0	0.00%
U. Salt Cr. #4	\$0	\$0	\$0	0.00%
Earthquake				
1909 Historical Event	\$63,527,033	\$19,304,315	\$82,831,348	0.95%
Flood				
10-Year	\$85,641	\$37,450	\$123,091	0.00%
100-Year	\$7,028,745	\$10,279,379	\$17,308,124	0.20%
500-Year	\$15,812,331	\$23,524,793	\$39,337,124	0.45%

Tornado				
100-Year	\$89,172,218	\$66,156,892	\$155,329,110	1.78%
500-Year	\$205,721,611	\$122,369,029	\$328,090,640	3.76%

Hazard Mapping



VILLAGE OF TINLEY PARK

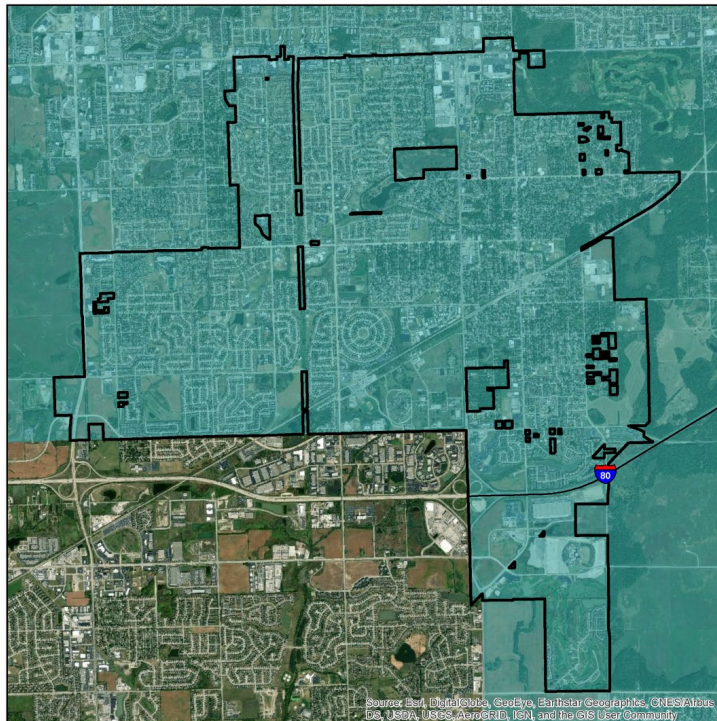
CRITICAL INFRASTRUCTURE

- 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



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus, DE, USA, USDA, AeroGRID, IGN, and the GIS User Community



VILLAGE OF TINLEY PARK

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking
II-III Weak

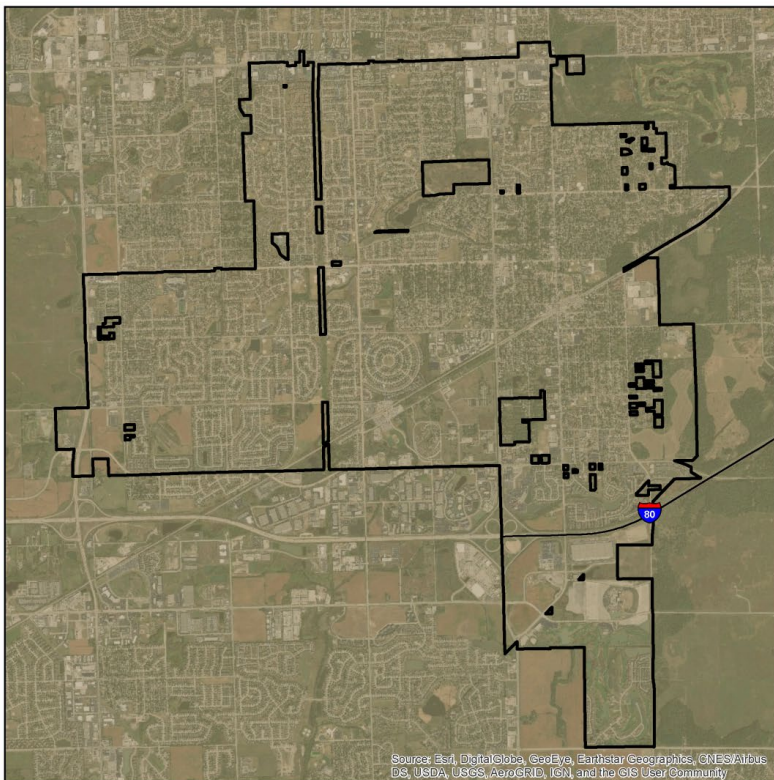
Data provided by the USGS Earthquake Hazards Program and Cook County

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 780 m/s in the top 30 meters corresponding to the boundary between NEI-HPD (National Earthquake Hazards Reduction program) site classes B and C.

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VILLAGE OF TINLEY PARK
NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

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

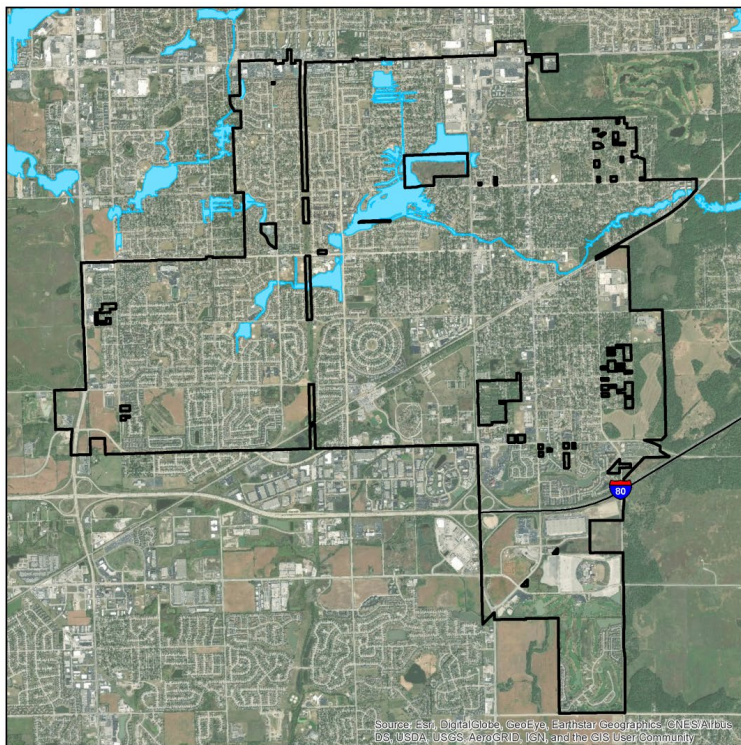
Data provided by the Illinois State Geological Survey and Cook County.

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 States (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, 2003) 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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0 0.2 0.4 0.8 1.2 1.6 Miles

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF TINLEY PARK
COOK COUNTY MWRDGC 100-YEAR INUNDATION AREA

- 100-year Inundation Area

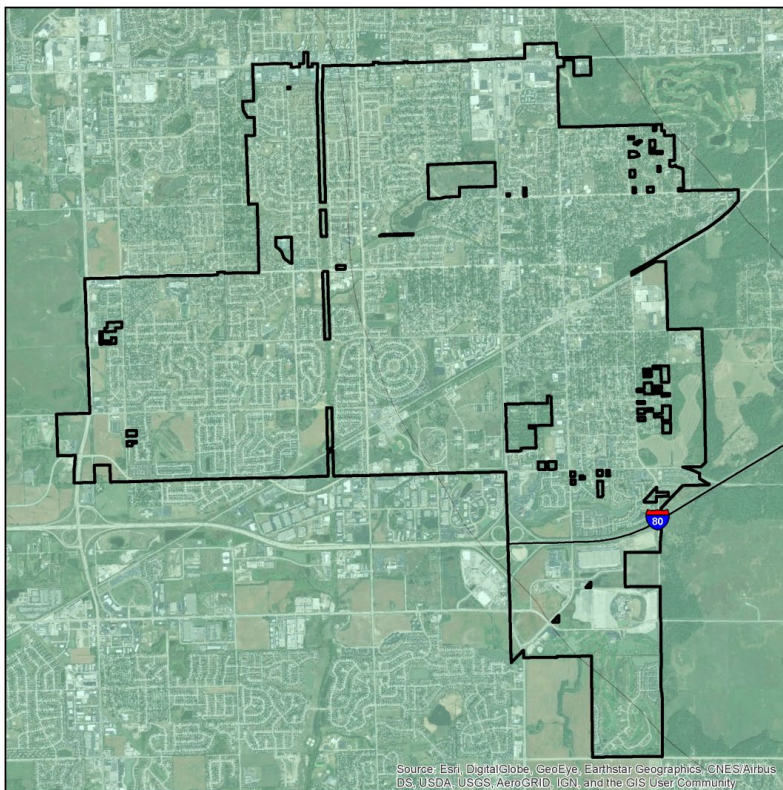
MWRDGC Data provided by Metropolitan Water Reclamation District of Greater Chicago and Cook County.

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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>.

0 0.2 0.4 0.8 1.2 1.6 Miles

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF TINLEY PARK

LIQUEFACTION SUSCEPTIBILITY

- LIQUEFACTION SUSCEPTIBILITY**
- high
 - low
 - very low

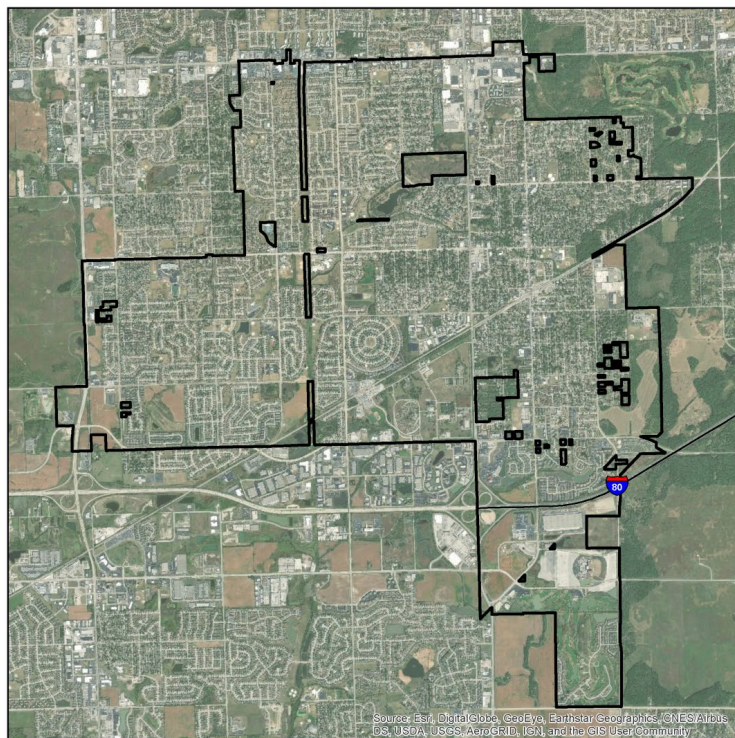
Data provided by the Illinois State Geological Survey and Cook County

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VILLAGE OF TINLEY PARK

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.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community