

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

Country Club Hills Annex

FINAL

July 2019

Prepared for:



Cook County
Department of Homeland Security and Emergency Management
69 W. Washington St., Suite 2600
Chicago, Illinois 60602

Toni Preckwinkle
President
Cook County Board of Commissioners

William Barnes
Executive Director
Cook County Department of Homeland
Security & Emergency Management

Table of Contents

Hazard Mitigation Point of Contact	2
Jurisdiction Profile.....	3
Capability Assessment	5
Jurisdiction-Specific Natural Hazard Event	11
Hazard Risk Ranking.....	13
Mitigation Strategies and Actions.....	14
New Mitigation Actions	18
Ongoing Mitigation Actions	21
Completed Mitigation Actions	29
Future Needs to Better Understand Risk/Vulnerability	32
Additional Comments.....	33
HAZUS-MH Risk Assessment Results	34
Hazard Mapping.....	37

Hazard Mitigation Point of Contact

Primary Point of Contact	Alternate Point of Contact
Jerry C Townsend 4200 W 183rd Street Country Club Hills, IL 60478 Telephone: (708) 798-3392 Email: jtownsend@countryclubhills.org	Robert Kopeck, Deputy Fire Chief 4520 West 175th Street Country Club Hills, IL 60478 Telephone: (708) 798-8488 Email: rkopeck@countryclubhills.org

Jurisdiction Profile

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

- **Date of Incorporation:** 1958
- **Current Population:** 16,511 as of 2018 US Census estimates.
- **Population Growth:** The 2012 Population Estimate from the US Census Bureau was 16,854 and the current population estimate is 16,511, indicating a small downward trend.
- **Location and Description:** Country Club Hills is a suburb south of Chicago in Cook County, approximately 23 miles south of downtown Chicago and 10 miles west of the Illinois/Indiana border. Two Interstate Highways, I-80 and I-57, pass through the city's boundaries. Suburbs adjacent to Country Club Hills include: Oak Forest and Markham to the north, Hazel Crest and Flossmoor to the east, and unincorporated Cook County to the west and south. According to the U.S. Census Bureau, Country Club Hills has a total land area of 4.82 square miles. The Cook County Forest Preserve is adjacent to the City on its west and south borders. The Forest Preserve facilities include open land, trails, a model airplane field, fishing, and picnic areas. The growth of the Chicago-land area was aided by the expansion of railroads in the 1800s. Country Club Hills is one the few Chicago-land communities with no railroads within its boundaries.
- **Brief History:** German farmers first began to settle in the area in the 1800s. In 1872, some of the settlers founded their own church and school, which they named St. John's Lutheran Church. Country Club Hills began in 1955 when local developer J. E. Merrion fulfilled his vision of spacious, affordable, middle income homes with a country-like atmosphere. New families were drawn to this area, enticed by the large, half-acre lots, award-winning home styles, and sprawling streets. By 1956, about 117 homes were completed, and a new group, the Country Club Hills Homeowners Association, pushed for incorporation. On July 12, 1958, the citizens of this growing area voted to incorporate as a City with a Mayor/Aldermanic Council type of government. The first election was held in August of 1958. The first City Hall was a 131 year old farm house located at 177th and Crawford. In April of 1972, a new municipal complex, located on 175th Place, was dedicated. This is the current site of the Police Department. The first commercial building permit was issued in November, 1961 for a Marathon gas station, located at Flossmoor Road and Cicero Avenue. In February of 1963, the first liquor license was issued to Garofalo's Family Foods, which was the City's first grocery store and was located at 183rd and Pulaski, the current site of Home Furniture. In December of 1963, the City's first pharmacy, O'Brien & Flynn, opened next to Garafalo's. The first tax-supported building constructed was the Civic Center, located at 187th & Baker, which was dedicated in September, 1964.
- **Climate:** The climate for the City of Country Club Hills is classified as humid continental, with all four seasons distinctly represented: wet springs; hot and often humid summers; pleasant autumns; and cold winters. Annual precipitation is average, and reaches its lowest points in the months of January (2.05" / 11.5" of snow) and February (1.94" / 9.1" of snow), and peaks in the months of May (4.13") and June (4.06"). Annual temperature averages are lowest in January (24.8 F degrees) and are highest in July (75.92 F degrees).

- **Governing Body Format:** The City has a Mayor/Alderman Council form of government. The City Council has 5 elected alderman. The City is also a Home-Rule community whose purpose is to provide a full range of municipal services to its residential and commercial population. This body of Government will assume the responsibility for the adoption and implementation of this plan.
- **Development Trends:** The City of County Club Hills has the largest parcel of undeveloped land, Gatling Square Mile (400 acres), in Cook County, Illinois. A portion of this site will be the Chicagoland Outlets at Country Club Hills, which was targeted to begin construction in 2014. However, the outlet mall was never built. As of January 2019, new developer has stepped in to build something more reflective of the retail economy in the digital age: a logistics hub. Chicago-based Logistics Property Co. acquired the 102-acre site and announced plans this week to create a transportation and distribution center dubbed LogiPark 57-80. The City is also pursuing a casino for this parcel. The motto, “It’s Our Time. It’s Our Turn,” symbolizes the unity in Southland for the vast economic benefits that an entertainment and gaming resort could provide. The City is committed to sharing the financial benefit with other Chicago area’s Southland communities as well as forty-four area public schools.

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	2006 International Building Code; CABO-One and two dwelling Building Codes. City adopted an Electrical Code by Ordinance in accordance with 65 ILCD/5 Section 11-8-1. Published in full by Ordinance No. OA-2-92. 2006 International Energy Conservation Code; 2006 International Fire Prevention Code; 2006 International Property Maintenance Code; 2006 International Plumbing Code, First Edition and certain addenda found in Chapter 14.8.01 to 11.8.08 of City Code Book.

Zonings	Yes	No	No	Yes	City Code Chapter 15, Revised 10/2008
Subdivisions	Yes	No	No	No	City Code Chapter 17, Revised 10/2008
Stormwater Management	Yes	No	Yes	Yes	City Code Chapter 16, Revised 3/2009
Post Disaster Recovery	Yes	No	No	No	Emergency Operations Plan Resolution R-20-06 November 13, 2006
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	Yes	No	City Code Chapter 14, Article 16 MWRD review of sanitary connections and stormwater improvements
Public Health and Safety	Yes	No	Yes	Yes	Local Health Regulations City Code Chapter 12, Revised 2008 Cook County Board of Health.
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Country Club Hills Comprehensive Plan 2009
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					N/A
Floodplain or Basin Plan	Yes	No	Yes	No	
Stormwater Plan	Yes	No	MWRD	No	Regional stormwater impacts are managed by MWRD. The City lies within the Little

					Calumet and Hickory Creek watershed planning area of MWRD's comprehensive Stormwater Master Planning Program.
Capital Improvement Plan	No	No	No	No	
<i>What types of capital facilities does the plan address?</i>					N/A
<i>How often is the plan revised/updated?</i>					N/A
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	Yes	No	Yes	Yes	Resolution R-20-06 November 13, 2006
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	No	No	Yes	Yes	Cook County DHSEM
Post-Disaster Recovery Plan	Yes	No	No	Yes	Emergency Operations Plan Resolution R-20-06 November 13, 2006
Continuity of Operations Plan	Yes	No	Yes	No	Emergency Operations Plan Resolution R-20-06 November 13, 2006

Public Health Plans	Yes	No	Yes	No	Emergency Operations Plan Resolution R-20-06 November 13, 2006
---------------------	-----	----	-----	----	--

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	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

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	Robinson Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	Robinson Engineering
Planners or engineers with an understanding of natural hazards	Yes	Robinson Engineering
Staff with training in benefit/cost analysis	Yes	Robinson Engineering
Surveyors	Yes	Robinson Engineering
Personnel skilled or trained in GIS applications	Yes	Robinson Engineering
Scientist familiar with natural hazards in local area	Yes	

Emergency manager	Yes	Fire Chief, Roger A. Agpawa
Grant writers	Yes	Robinson Engineering

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Community Development Department
Who is your jurisdiction’s floodplain administrator? (department/position)	Building Commissioner, Gino Bozzo
Are any certified floodplain managers on staff in your jurisdiction?	Yes, Michael Spolar, Robinson Engineering
What is the date of adoption of your flood damage prevention ordinance?	3/24/2009
When was the most recent Community Assistance Visit or Community Assistance Contact?	11/23/1998
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?	Yes, Training
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 – Class 8 Yes – Seeking to improve CRS Classification

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Community Rating System	Yes	8	1993
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	5	Unknown

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: 1
- 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
Hail	-	5/20/2014	-
Severe Storms, Straight-Line Winds and Flooding	DR-4116	4/26/2013	-
Severe Winter Storm and Snowstorm	DR-1960	1/31/2011	-
Severe Storms and Flooding	DR-1935	7/19/2010	-
Severe Storms and Flooding	DR-1800	9/13/2008	-
Severe Storms and Flooding	DR-1729	8/20/2007	-
Flooding	DR-1188	8/16/1997	-
Flooding	DR-1129	7/17/1996	-
Flooding, Severe Storms	DR-997	4/13/1993	-
Severe Storms and Flooding	DR-798	8/13/1987	-
Severe Storms and Flooding	DR-776	9/21/1986	-

Severe Storms, Flooding, Tornadoes	DR-643	6/30/1981	-
Severe Storms, Flooding, Tornadoes	DR-509	6/18/1976	-
Severe Storms and Flooding	DR-373	4/26/1973	-
Severe Storms and Flooding	DR-351	9/4/1972	-
Tornadoes	DR-227	4/25/1967	-

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.

Flood: The community has experienced flooding at the retention ponds at 179th Cicero Ave and 4200 Main St. as well as drainage ditched through the community.

Extreme Heat: Extreme heat has caused power loss at senior and assisted living facilities throughout the City.

High Winds: High wind events have caused power loss at senior and assisted living facilities throughout the City.

Ice Storms: Ice storms have caused power loss at senior and assisted living facilities throughout the City.

Tornado: Tornadoes have caused power loss at senior and assisted living facilities throughout the City.

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	Flooding	21
4	Tornado	33
5	Earthquake	18
6	Drought	2
7	Dam Failure	0

Note: The ranking of hazards was subjectively changed based on past experience.

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 C7.1—Continue participation in Community Rating System.						
Completed	Flood	8, 10, 11	City	Low	Local	Ongoing
Action C7.2—Enhance/Improve City code language and enforcement.						
Ongoing	All	2, 3, 4, 10	City	Low	Local	Ongoing
Action C7.3—Retrofit public buildings and critical facilities to improve vulnerability to natural hazards.						
Completed	All Hazards	1, 2, 5, 12	City	High	Local funds, FEMA Grant	Ongoing
Action C7.4—Retrofit water system to protect against power outages.						
Ongoing	Severe Weather, Severe Winter Weather, Tornado	1, 2, 12	City	High	Grants and IEPA Low Interest Loans	Ongoing

Action C7.5 —Retrofit sanitary sewer system to protect against sewer backups.						
Ongoing	Severe Weather, Floods, Tornado	1, 2, 12	City	High	Grants and IEPA Low Interest Loans	Ongoing
Action C7.6 —Form partnership between local, state, county, tollway, and regional entities to help expand resources and improve floodplain management coordination by developing a stormwater committee that meets regularly to discuss issues and recommend projects.						
Completed	Flood, Severe Weather	1, 3, 8	City	Low	Grants	Ongoing
Action C7.7 —Incorporate a GIS system/management plan for tracking permitting, land use patterns, tracking hazard data, and mapping risk for various hazards.						
Ongoing	All	3, 4, 10	City	Low	Grants	
Action C7.8 —Increase Hazard Awareness Education and Risk Awareness.						
Ongoing	All	5, 6, 8	City	Low	Grants	Ongoing
Action C7.9 —National Incident Management System (NIMS) training for Police, Fire, and Public Works Departments.						
Completed	All	1, 2, 5, 8	City	High	Grants and local	Ongoing
Action C7.10 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Ongoing	All	7, 13	City	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action C7.11 —Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	City	Low	General Fund	Short- and long-term
Action C7.12 —Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM City	Low	General Fund	Short-term
Action C7.13 —Consider participation in incentive-based programs such as Tree City and StormReady.						
Ongoing	All	3, 4, 5, 6, 7, 9, 10, 11, 13	City	Low	General Fund	Long-term

Action C7.14 —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.						
Ongoing	Flooding	4, 6, 9	City	Low	General Fund	Short-term and ongoing
Action C7.15 —Where feasible, implement a program to record high water marks following high-water events.						
Ongoing	Flooding, Severe Wether	3, 6, 9	City	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action C7.16 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Robinson Engineering	Low	General Fund	Short-term
Action C7.17 —Consider the development and implementation of a Capital Improvements Program (CIP) to increase the Village’s regulatory, financial and technical capability to implement mitigation actions.						
Ongoing	All	1, 2, 7	Public Works	High	CIP component of general fund (if implemented)	Long-term
Action C7.18 —Replace the deteriorating roadside culverts with a close drainage system						
New	Flood	9	City of Country Club Hills	\$4 million; High	Grants	Ongoing
(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)
1	5	Medium	Low	Yes	Yes	Yes	High

2	4	High	Low	Yes	Yes	Yes	High	
3	4	High	High	Yes	Yes	No	Medium	
4	3	High	High	Yes	Yes	No	High	
5	3	High	High	Yes	Yes	No	Medium	
6	3	Low	Low	Yes	Yes	No	Medium	
7	3	Medium	Low	Yes	Yes	No	Medium	
8	3	High	Low	Yes	Yes	No	Medium	
9	4	High	High	Yes	Yes	Yes	High	
10	2	High	High	Yes	Yes	No	Medium	
11	13	Medium	Low	Yes	No	Yes	High	
12	3	Medium	Low	Yes	Yes	Yes	High	
13	9	Medium	Low	Yes	No	Yes	Medium	
14	3	Medium	Low	Yes	No	Yes	High	
15	3	Medium	Medium	Yes	Yes	No	Medium	
16	5	Medium	Low	Yes	No	Yes	High	
17	2	High	High	Yes	Yes	No	Medium	
18	1	High	High	Yes	No	No	High	

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Action C - 7.18

Mitigation Action	Replace the deteriorating roadside culverts with a close drainage system
Year Initiated	2019
Applicable Jurisdiction	City of Country Club Hills
Lead Agency/Organization	City of Country Club Hills
Supporting Agencies/Organizations	
Applicable Goal	Replace deteriorated roadside culverts with a closed storm water system
Applicable Objective	<ul style="list-style-type: none"> Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	Grants
Estimated Cost	Citywide \$4 million
Benefits (loss avoided)	Health and safety
Projected Completion Date	Ongoing
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	High
Cost Analysis (Low, Medium, High)	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

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 C - 7.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.2	Enhance/Improve City Code language and enforcement	
Status Description: Yes	City implementing MWRD's Watershed Management Ordinance, as amended February 15, 2018.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.4	Retrofit water system to protect against power outages	
Status Description: No	No work completed during this period.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.5	Retrofit sanitary sewer system to protect against sewer backups.	
Status Description: Yes	City performs cleaning and sewer repairs to minimize sewer backups.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.7	Incorporate a GIS system/management plan for tracking permitting, land use patterns, tracking hazard data, and mapping risk for various hazards	
Status Description: No	City currently using GIS system to map City utilities.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.8	Increase Hazard Awareness Education and Risk Awareness	
Status Description: Yes	City utilizes CodeRED weather warning and has links on its City website. http://countryclubhills.org/code-red/City has flood protection information on its website. http://countryclubhills.org/departments-services/community-development/flood-information/	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.10	Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.	
Status Description: No	No work completed during this period.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.11

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.11	Continue to support the countywide actions identified in this plan.	
Status Description: Yes	City continues to submit applications to fund infrastructure improvements	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.12

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.12	Actively participate in the plan maintenance strategy identified in this plan.	
Status Description: Yes	City prepares activity report every 2 years.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.13	Consider participation in incentive-based programs such as Tree City and Storm/Ready.	
Status Description: Yes	City participates in Storm Ready	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.14

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.14	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.	
Status Description: Yes	City is currently in good standing with NFIP.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.15

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.15	Where feasible, implement a program to record high water marks following high water events.	
Status Description: No	No work completed during this period.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.16

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.16	Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
Status Description: No	No work completed during this period.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.17

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.17	Consider the development and implementation of a Capital Improvement Plan (CIP) to increase the City's regulatory, financial, and technical capability to implement mitigation actions.	
Status Description: Yes	City prepares and reviews their capital improvement plan on annual basis.	O
<p style="text-align: center;">Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken</p>		

Completed Mitigation Actions

The following section represents completed mitigation actions, and serves as an archive of identified and completed projects.

Action C - 7.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.1	Continue participation in Community Rating System	
Status Description: Yes	Last renewal in 2017	C
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.3	Retrofit public buildings and critical facilities to improve vulnerability to natural hazards.	
Status Description: Yes	Building renovations at City's Police and Fire Stations.	C
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.6	Form partnership between local, state, county, tollway, and regional entities to help expand resources and improve floodplain management coordination by developing a stormwater committee that meets regularly to discuss issues and recommend projects	
Status Description: Yes	City participates in MWRD's Little Calumet River Watershed committee.	C
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action C - 7.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# C—7.9	National Incident Management System (NIMS) training for Police, Fire, and Public Works Department.	
Status Description: Yes	Completed incident training at City Theater in spring of 2018 with City's police, fire, and public works departments participating.	C
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

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

COUNTRY CLUB HILLS EXISTING CONDITIONS	
2010 Population	16,541
Total Assessed Value of Structures and Contents	\$2,512,997,301
Area in 100-Year Floodplain	164.25 acres
Area in 500-Year Floodplain	198.28 acres
Number of Critical Facilities	30

HAZARD EXPOSURE IN COUNTRY CLUB HILLS						
	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	120	37	\$8,798,042	\$5,317,550	\$14,115,592	0.56%

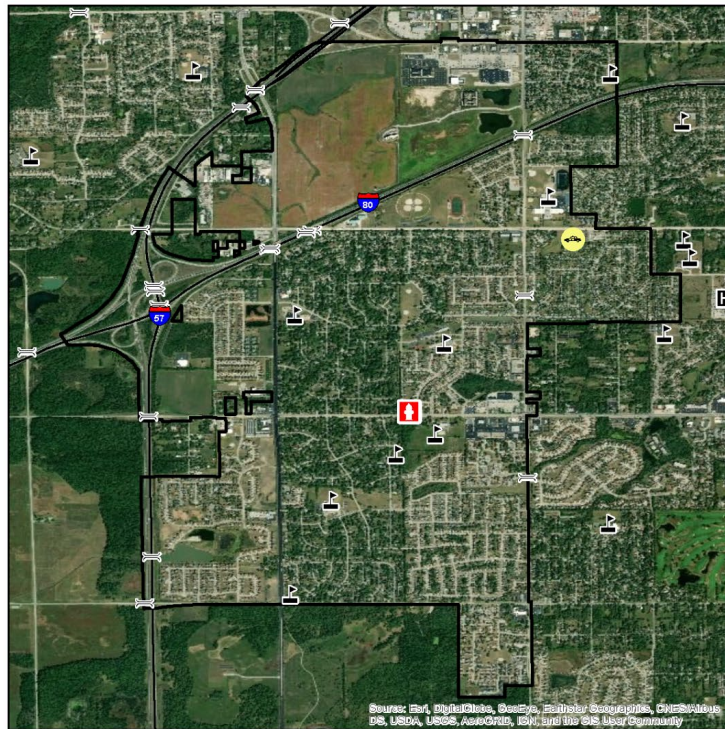
500-Year	185	57	\$13,318,920	\$7,577,988	\$20,896,908	0.83%
Tornado						
100-Year	—	—	\$256,944,237	\$156,430,709	\$413,374,946	16.45%
500-Year	—	—	\$0	\$0	\$0	37.55%

ESTIMATED PROPERTY DAMAGE VALUES IN COUNTRY CLUB HILLS

	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	\$8,724,059	\$2,465,112	\$11,189,170	0.45%
Flood				
10-Year	\$0	\$0	\$0	0.00%
100-Year	\$35,422	\$16,500	\$51,922	0.00%
500-Year	\$189,277	\$73,737	\$263,014	0.01%

Tornado				
100-Year	\$25,694,424	\$15,643,071	\$41,337,495	1.64%
500-Year	\$89,094,106	\$48,663,622	\$137,757,728	5.48%

Hazard Mapping

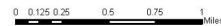


CITY OF COUNTRY CLUB HILLS

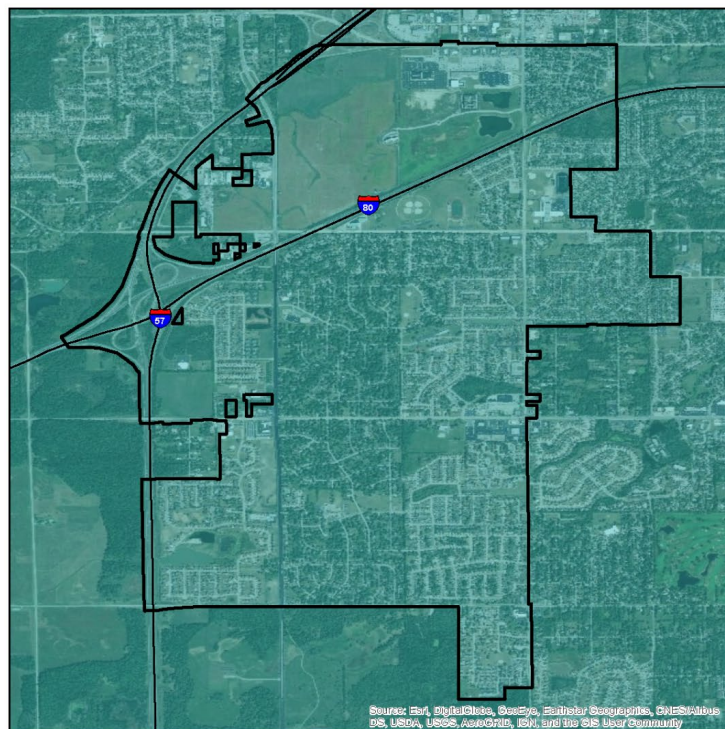
CRITICAL INFRASTRUCTURE

- 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 DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



CITY OF COUNTRY CLUB HILLS

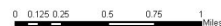
PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

- Mercalli Scale, Potential Shaking**
- II-III Weak

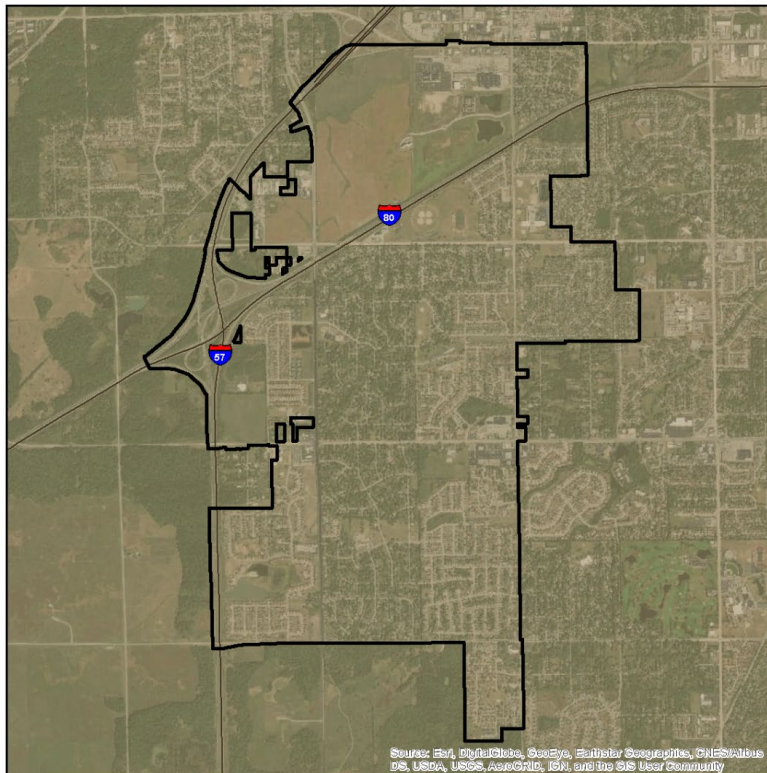
Data provided by the USGS Earthquake Hazards Program and Cook County.

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.

The information included on this map has been compiled for Cook County from a variety of sources and is subject to change without notice. Cook County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. Cook County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of Cook County.



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



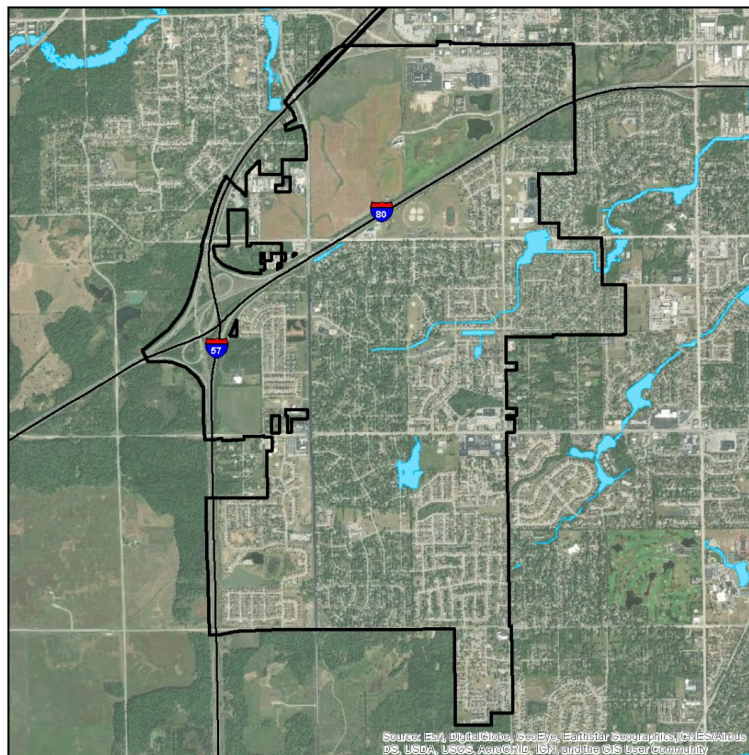
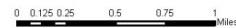
**CITY OF
COUNTRY CLUB HILLS**
NATIONAL EARTHQUAKE HAZARD
REDUCTION PROGRAM (NEHRP)
SOIL CLASSIFICATION

- 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 (2759 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.

The information included on this map has been compiled for Cook County from a variety of sources and is subject to change without notice. Cook County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. Cook County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of Cook County.



COUNTRY CLUB HILLS

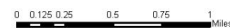
**COOK COUNTY MWRDGC
100-YEAR INUNDATION AREA**

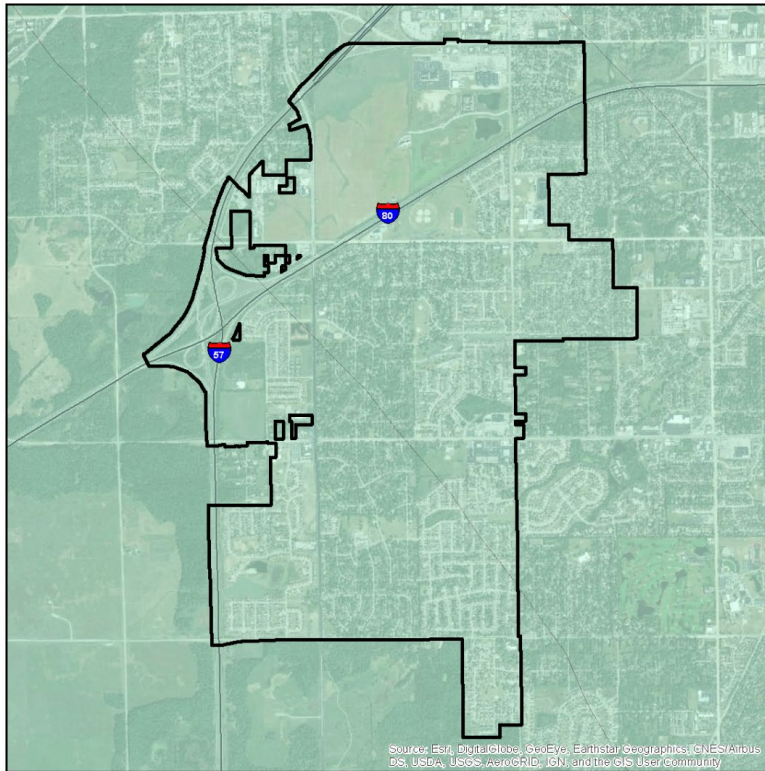
- 100-year Inundation Area

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

The information included on this map has been compiled for Cook County from a variety of sources and is subject to change without notice. Cook County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. Cook County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of Cook County.

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>.





CITY OF COUNTRY CLUB HILLS

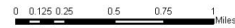
LIQUEFACTION SUSCEPTIBILITY

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

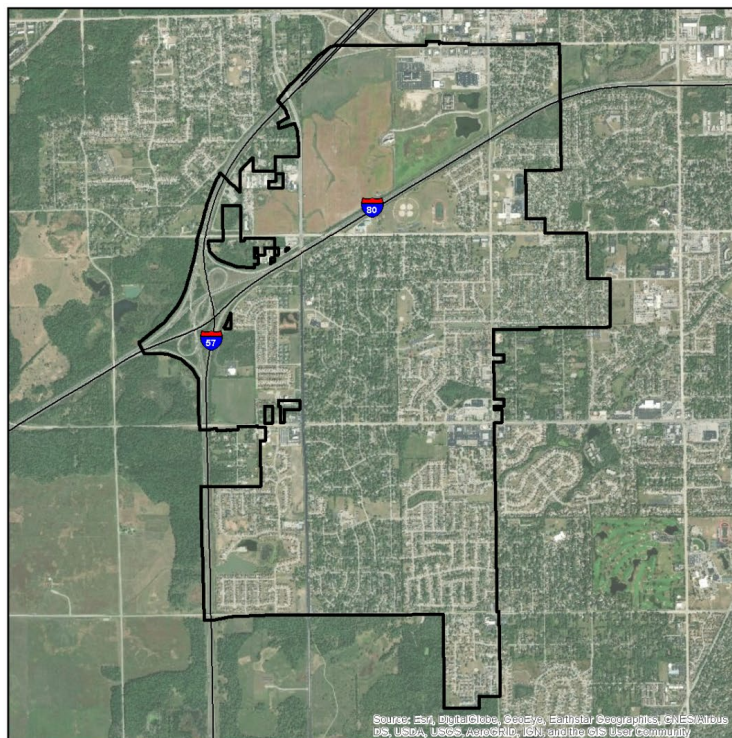
Data provided by the Illinois State Geological Survey and Cook County.

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 States (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean M. 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.

The information included on this map has been compiled for Cook County from a variety of sources and is subject to change without notice. Cook County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. Cook County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of Cook County.



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

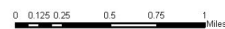


COUNTRY CLUB HILLS

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