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

Inverness Annex

FINAL

July 2019

Prepared for:

Cook County
Department of Homeland Security and Emergency Management
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Hazard Mitigation 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: 1962
- Current Population: 7,438 as of the 2018 U.S. Census population estimate.
- Population Growth: Inverness population growth is relatively stable. From 2000 to 2010, the population grew 9.6% from 6749 to 7399, and increase around 2% from 2010 to 2016. The boundaries of the Village are set and no further annexations are expected.
- Location and Description: The Village is located approximately 30 miles northwest of the City of Chicago. It is bordered by the Villages of Barrington to the north, Hoffman Estates to the south, Palatine to the east, and South Barrington west. The Union Pacific/Metra Northwest rail line runs adjacent to the boundary of the community. According to the 2010 census, the village has a total area of 6.70 square miles.
- Brief History: In 1926, Arthur T. McIntosh, one of Chicago's leading land developers, acquired approximately 1,500 contiguous acres for development. With the area under their control, it became known as Inverness after the McIntosh clan home in Scotland. The first new homes were occupied by 1939 and were mostly situated around the edge of the Inverness Golf Club. Construction in Inverness was halted during World War II. During the early post-war years, the McIntosh Company had complete control over the sale of lots as well as the resale of homes. In 1962, Inverness was incorporated as a village to be governed by a president and board of trustees. The first meeting of the village board was July 5, 1962. During the 1970s and '80s, the village continued to grow at a pace that exceeded earlier predictions. It was also during this period that the village annexed large areas of existing homes in unincorporated Cook County, which laid the foundation for further annexations to the west, which continued to expand the village limits to what they are today.
- Climate: The climate of the Village of Inverness 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 city 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 city's wettest and unpredictable season. Winter like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the spring time as the city'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 the autumn season. Temperatures have reached 100 degrees 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 Nov 19.

- Governing Body Format: Inverness is governed by a Village President and a six member Board of Trustees. They are elected to staggered four year terms. The Presidents appoints a Village Administrator to oversee the day to day administration of the Village. This body of Government will assume the responsibility for the adoption and implementation of this plan. Operating Departments include: Police, Building, and Zoning and Administrations. Public Works is contracted and fire suppression and emergency medical services are provided by two fire protection districts.
- Development Trends: Development trends are stable and corporate boundaries are fixed. Future development will be residential in nature and primarily in-fill low-density development. The most resent developments have been the building of new single family homes.

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	Ord. 17-984, 9/2017; Title 4, Building Regulations
Zonings	Yes	No	No	Yes	Title 5, Zoning Regulations (Various Dates and Ordinances)
Subdivisions	Yes	No	No	No	Comprehensive Plan, Ord. 81-73- 97.5, 3/20/81; Title 6, Subdivision Regulations
Stormwater Management	Yes	No	Yes	Yes	Comprehensive Plan, Ord. 81-73- 97.5, 3/20/81; Title 7, Flood and Stormwater Management Regulations
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	*(765 ILCS 77/) Residential Real Property Disclosure Act. State mandated.*
Growth Management	No	No	No	No	
Site Plan Review	Yes	No	No	No	Chapter 1. General Building Provisions (Various Dates and Ordinances)
Public Health and Safety	No	No	Yes	Yes	Comprehensive Plan, Ord. 81-73- 97.5, 3/20/81; Title 9, Health and Sanitation Regulations
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Comprehensive Plan, Ord. 81-73- 97.5, 3/20/81
Is the plan equipped to provide linkage to this mitigation plan?					Yes, Plan includes a land use element.

Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	No	No	Yes	No	MWRD Detailed Watershed Plan Ord. 90-142 m 11/13/90, Title 7, Chapter 3, Stormwater Management Regulations
Capital Improvement Plan	No	No	No	No	
What types of capital facilities does the plan address?					N/A
How often is the plan revised/updated?					N/A
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	Yes	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	Res. 19-0806 Village of Inverness Emergency Operations Plan
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM
Terrorism Plan	Yes	No	Yes	Yes	Res. 19-0806 Village of Inverness Emergency Operations Plan
Post-Disaster Recovery Plan	No	No	No	No	
Continuity of Operations Plan	No	No	Yes	No	Cook County DHSEM
Public Health Plans	No	No	No	No	Res. 19-0806 Village of Inverness Emergency Operations Plan

TABLE: FISCAL CAPABILITY	
Financial Resources	**Accessible or Eligible to Use?**
Community Development Block Grants	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
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	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	Contractor
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering
Planners or engineers with an understanding of natural hazards	Yes	Contractor
Staff with training in benefit/cost analysis	Yes	Administration
Surveyors	Yes	Engineering
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Palatine Rural Fire Protection District
Grant writers	Yes	Contractor

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Engineering
Who is your jurisdiction's floodplain administrator? (department/position)	Village Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes, contract staff member
What is the date of adoption of your flood damage prevention ordinance?	11/9/93. Last revised 5/13/08
When was the most recent Community Assistance Visit or Community Assistance Contact?	Has not received 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)	No, some localized flooding not depicted on maps.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	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

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	**Classification**	**Date Classified**
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection/ISO	Unknown	Unknown	Unknown
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes	N/A	1992

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: 5
- 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	-	4/9/2015	-
Lightning	-	6/30/2014	$50,000 in property damage.
Snow/Cold	-	2013 - 2014	-
Tornado Activity	-	11/2013	-
Flood	-	4/2013	-
Snow/Cold	-	2012 - 2013	-
Severe Heat	-	7/2012	-
Severe Weather, Power Outages	-	6/2012	-
Flood	-	7/2011	-
Blizzard	-	2/2/2011	-
Flood	-	9/2008	-
Wind Storm	-	8/2007	-
Winter Storm	-	1/2005	-
Blizzard	-	1/2002	-
Blizzard	-	2/2000	-
Winter Storm	-	1/1999	-
Severe Heat	-	8/1995	-
Flood	-	1993	-
Flood	-	1988	-
Flood	-	8/1987	-

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: We experience flooding at Banbury Road, Palatine Road, and Dewey. This Impacts our access to roads and state systems.

High Winds: We experience high winds in central Inverness, which greatly impacts the overhead power lines resulting in a lack of power, which in turn, leads to no working wells (private). Aquifers and well data can be accessed through the Illinois State Geological Society Interactive Map (http://maps.isgs.illinois.edu/ilwater/)

Ice Storms: Areas with overhead power lines are susceptible to losing power during ice storms, putting our community at risk of having no working wells.

Extreme Heat and Cold: With a relatively older population (median age of 50.8), the residents over 65 are particularly susceptible to extreme climates.

Earthquake: While no fault line runs under the community, the community would like to incorporate building codes and debris planning that encompasses an all-hazards approach, which includes earthquake mitigation

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	Tornado	45
4	Flood	18
5	Earthquake	16
6	Drought	3
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 12.1—Continue community outreach and preparedness education activities.						
Ongoing	All	1, 2, 5, 6, 11	Village Administration	$500; Low	Annual Budget	Ongoing
Action 12.2—Review and update building and zoning code.						
Completed	Flood, Earthquake,Severe Weather, Severe Winter Weather, Tornado	2, 6, 8, 10	Village Administration	$500; Low	Annual Budget	Completed
Action 12.3—Develop and maintain a preplan for snow removal and dump operations.						
Ongoing	Winter Weather	1, 2, 4, 8	Village Administration	$500; Low	Annual Budget	Ongoing
Action 12.4—Develop and maintain an all-hazard debris removal plan.						
Ongoing	Flood, Earthquake, Severe Weather, Tornado	1, 2, 4, 8	Village Administration	$500; Low	Annual Budget	Ongoing
Action 12.5—Conduct Banbury Flood Study.						

Ongoing	Flood, Severe Weather	1, 2, 3, 9	Illinois Department of Transportation	Medium	FEMA's RiskMAP program, MWRD-Phase II	2014, Short-term
Action 12.6—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	Village Administration	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action 12.7—Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	Village Administration	Low	General Fund	Short-term and Long- term
Action 12.8—Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM Village Administration	Low	General Fund	Short-term
Action 12.9—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
Ongoing	All	3, 4, 5, 6, 7, 9, 10, 11, 13	Village Administration	Low	General Fund	Long-term
Action 12.10—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	Village Administration	Low	General Fund	Short-term and ongoing
Action 12.11—Where feasible, implement a program to record high water marks following high-water events.						
Ongoing	Flooding, Severe Weather	3, 6, 9	Village Administration	Medium	General Fund, FEMA Grant Funds (Public Assistance)	Long-term
Action 12.12—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Contracted Engineer	Low	General Fund	Short-term
Action 12.13—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 12.14—Implement Culvert cleaning and widening						
New	Flood	2, 7, 9	Village Administration	Medium/High	General Fund/Private	2022, Short-term
(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	Low	Low	Yes	No	Yes	High
2	4	Low	Low	Yes	No	Yes	High
3	4	Low	Low	Yes	No	Yes	High
4	4	Low	Low	Yes	No	Yes	High
5	4	High	Medium	Yes	Yes	No	Medium
6	2	High	High	Yes	Yes	No	Medium
7	13	Medium	Low	Yes	No	Yes	High
8	3	Medium	Low	Yes	Yes	Yes	High
9	9	Medium	Low	Yes	No	Yes	Medium
10	3	Medium	Low	Yes	No	Yes	High
11	3	Medium	Medium	Yes	Yes	No	Medium
12	5	Medium	Low	Yes	No	Yes	High
13	3	High	High	Yes	No	No	Medium
14	3	High	Medium	Yes	Yes	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 12.14

Mitigation Action	Implement Culvert cleaning and widening
Year Initiated	2019
Applicable Jurisdiction	Village of Inverness
Lead Agency/Organization	Village Administrations
Supporting Agencies/Organizations	Homeowners Associations
Applicable Goal	Protect lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.
Applicable Objective	Increase the resilience of (or protect and maintain) infrastructure and critical facilities. Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	General Fund/Private
Estimated Cost	
Benefits (loss avoided)	Reduce street flooding and impact on private septic systems.
Projected Completion Date	2022
Priority and Level of Importance (Low, Medium, High)	Medium Priority
Benefit Analysis (Low, Medium, High)	High Benefit
Cost Analysis (Low, Medium, High)	Medium and High Cost Depending on location
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Work with individual homeowners, group of neighbors and/or homeowner associations to coordinate the cleaning, regrading, and widening of Culverts and swales to restore and/or improvement storm water management. Project can include by be not limited to replacement of driveway culverts, removing natural sediment in the swales, digging out wider swales and ditches.

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 12.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.1	Continue community outreach and preparedness education activity	
Status Description: Yes	Ongoing in in Village Newsletters	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.3	Develop and maintain a preplan for snow removal and dump operations	
Status Description: Yes	Ongoing	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.4	Develop and maintain an all-hazard debris removal plan.	
Status Description:	Ongoing	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.5	Conduct Banbury Flood Study.	
Status Description: Yes	Study was completed was IDOT, Awaiting for funding from IDOT to resolve the following issue. No input from IDOT	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.6	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		X
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.7

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

Action 12.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.8	Actively participate in the plan maintenance strategy identified in this plan.	
Status Description: Yes	Reviewing plan on a annual basis	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.9	Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.	
Status Description: Yes	Active in Tree City USA program. Investigating participation in the Community Rating System and StormReady program.	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.10	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	Ongoing	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.11

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

Action 12.12

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.12	Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
Status Description: Yes	Ongoing as part of all new development in Inverness	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Action 12.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.13	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.	
Status Description: Yes	Planning as begun and is scheduled to be part of the FY 19 budget.	O
Completion status legend: **N** = New **O** = Action Ongoing toward Completion **C** = Project Completed **R** = Want Removed from Annex **X** = No Action Taken		

Completed Mitigation Actions

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

Action 12.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# 12.2	Review and update building and zoning code.	
Status Description: Yes	Ongoing	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

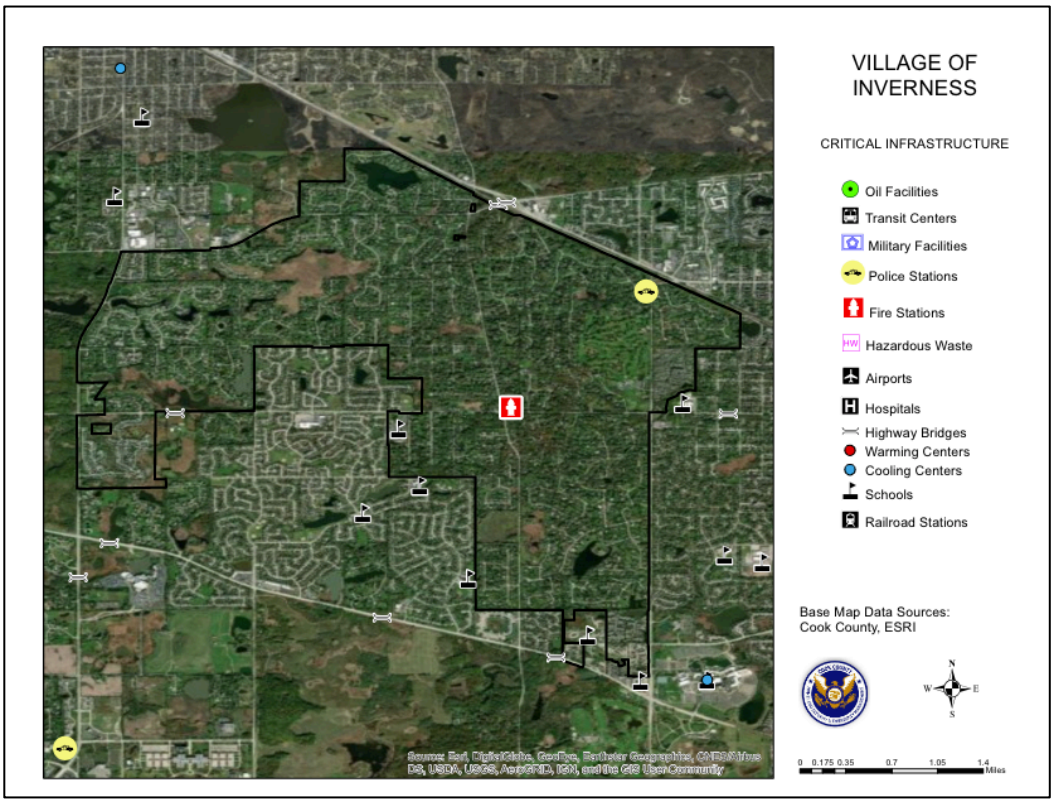
INVERNESS EXISTING CONDITIONS	
2010 Population	7,399
Total Assessed Value of Structures and Contents	$1,949,819,383
Area in 100-Year Floodplain	432.09 acres
Area in 500-Year Floodplain	564.19 acres
Number of Critical Facilities	8

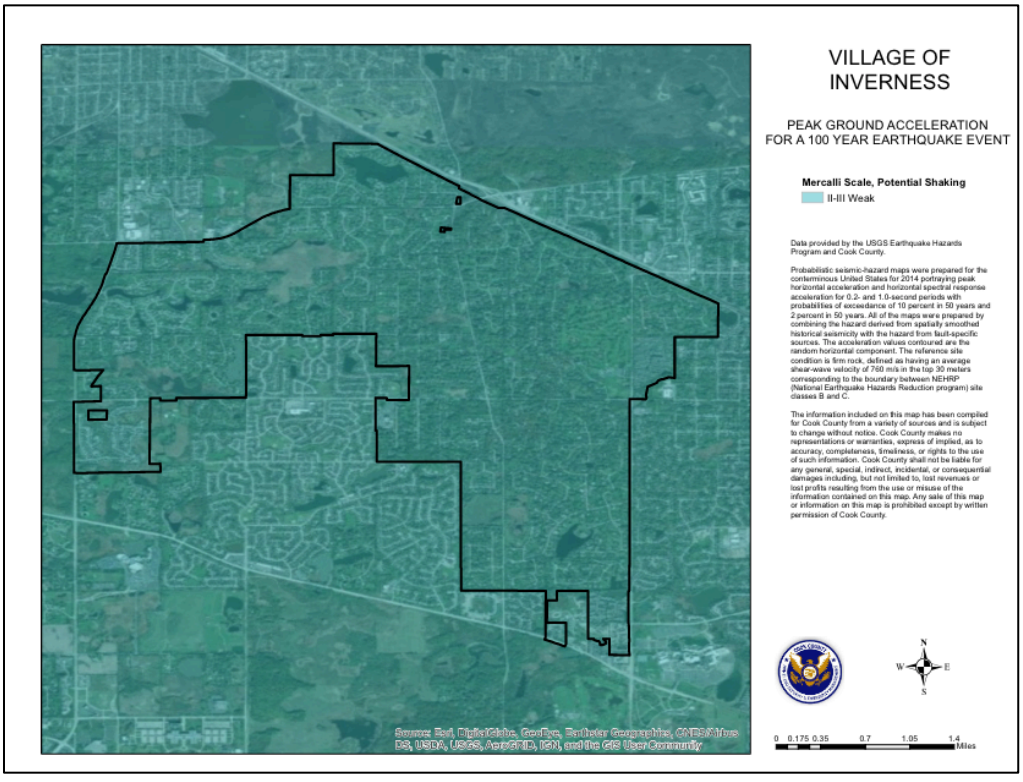
HAZARD EXPOSURE IN INVERNESS						
	Number Exposed		Value Exposed to Hazard			% of Total Assessed Value Exposed
	Population	Buildings	Structure	Contents	**Total**	
Dam Failure						
Buffalo Creek	0	0	$0	$0	**$0**	0.00%
U. Salt Cr. #2	0	0	$0	$0	**$0**	0.00%
Touhy	0	0	$0	$0	**$0**	0.00%
U. Salt Cr. #3	0	0	$0	$0	**$0**	0.00%
U. Salt Cr. #4	0	0	$0	$0	**$0**	0.00%
Flood						
100-Year	26	8	$4,394,069	$2,197,035	**$6,591,104**	0.34%
500-Year	91	28	$10,653,386	$5,326,693	**$15,980,079**	0.82%
Tornado						
100-Year	—	—	$145,649,494	$72,824,747	**$218,474,241**	11.20%
500-Year	—	—	$210,339,155	$105,169,578	**$315,508,733**	16.18%

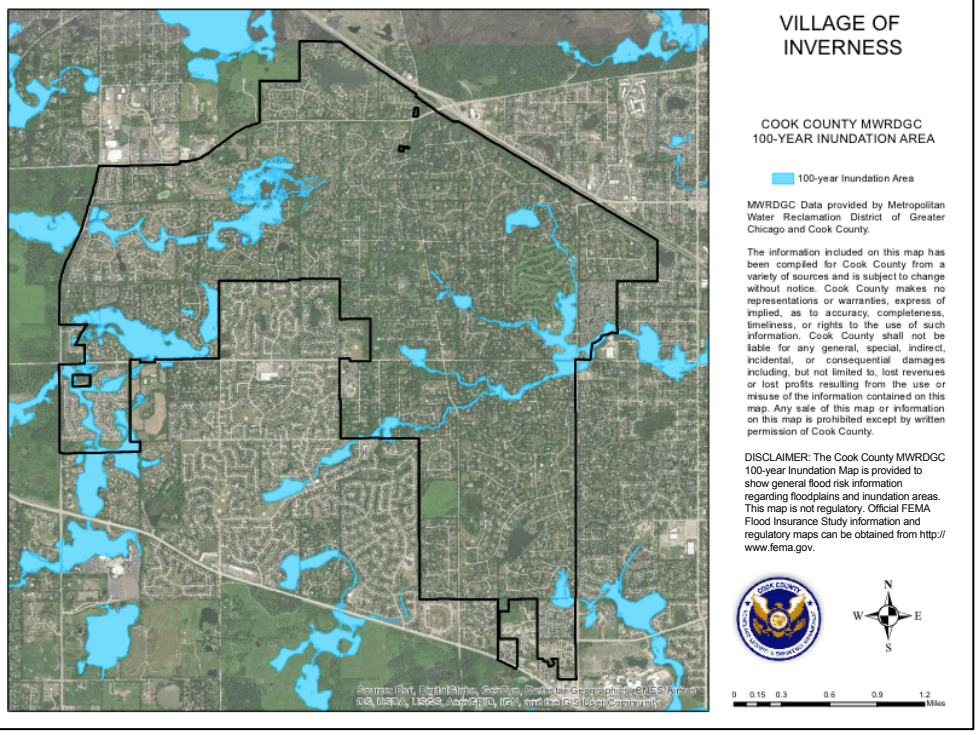
ESTIMATED PROPERTY DAMAGE VALUES IN INVERNESS				
	Estimated Damage Associated with Hazard			% of Total Assessed Value Damaged
	Building	Contents	**Total**	
Dam Failure				
Buffalo Creek	$0	$0	**$0**	0.00%
U. Salt Cr. #2	$0	$0	**$0**	0.00%
Touhy	$0	$0	**$0**	0.00%
U. Salt Cr. #3	$0	$0	**$0**	0.00%
U. Salt Cr. #4	$0	$0	**$0**	0.00%
Earthquake				

1909 Historical Event	$5,628,981	$1,128,525	**$6,757,506**	0.35%
Flood				
10-Year	$76,490	$34,521	**$111,011**	0.01%
100-Year	$304,320	$133,993	**$438,313**	0.02%
500-Year	$711,732	$292,503	**$1,004,235**	0.05%
Tornado				
100-Year	$14,564,949	$7,282,475	**$21,847,424**	1.12%
500-Year	$30,709,517	$15,354,758	**$46,064,275**	2.36%

Hazard Mapping






VILLAGE OF INVERNESS
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 of 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.
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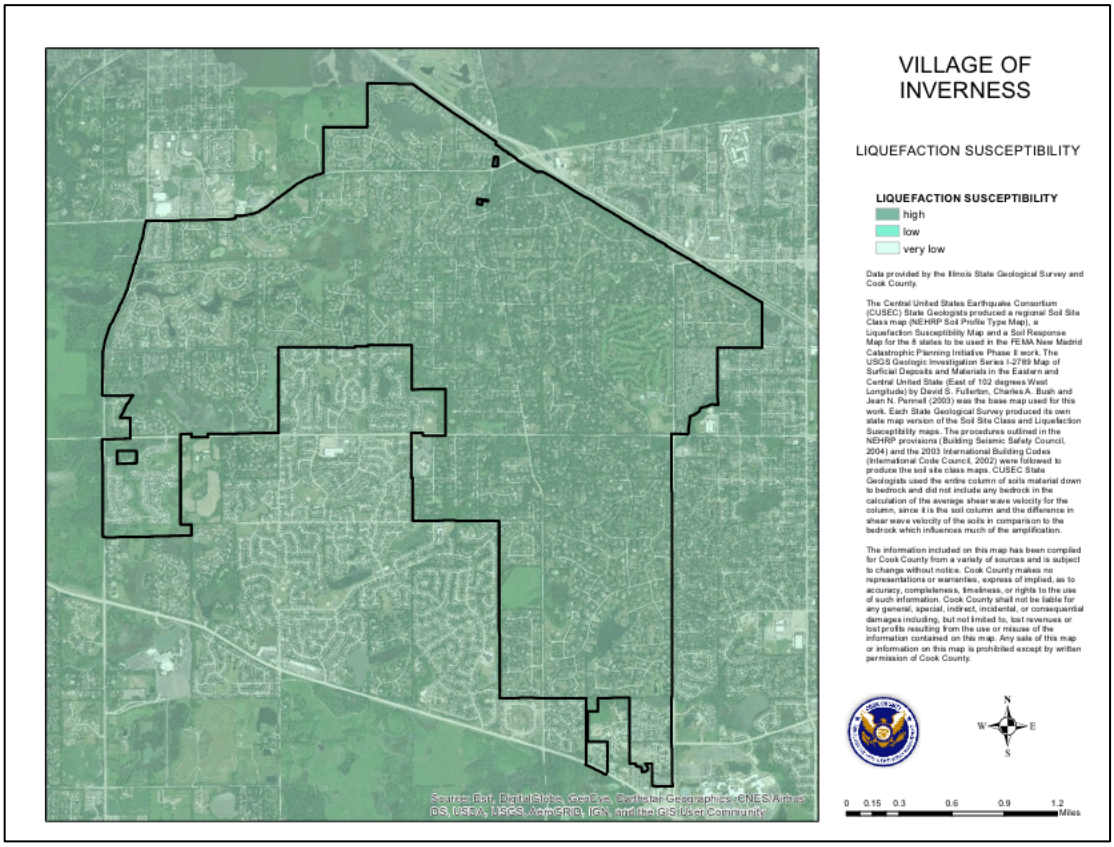
VILLAGE OF INVERNESS
LIQUEFACTION SUSCEPTIBILITY
LIQUEFACTION SUSCEPTIBILITY
high
low
very low
Data provided by the Illinois State Geological Survey and Cook County.
The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type 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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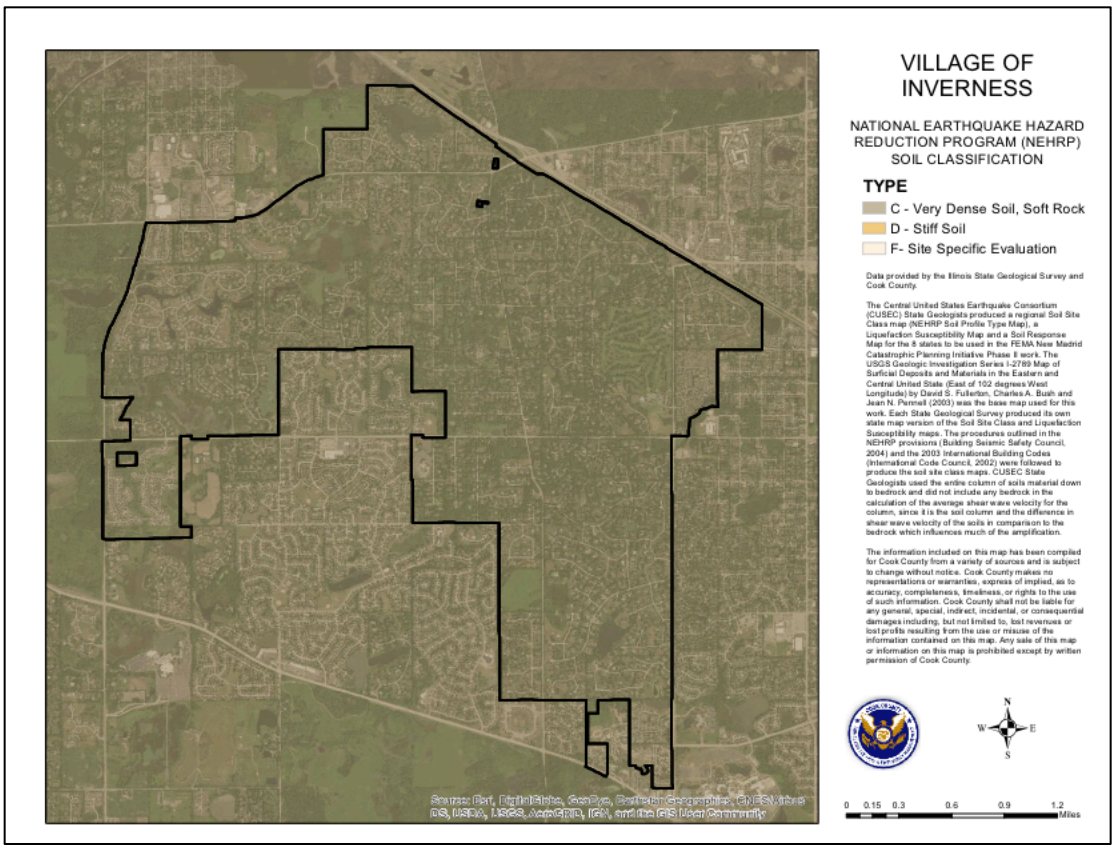
VILLAGE OF INVERNESS
NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION
TYPE
C - Very Dense Soil, Soft Rock
D - Stiff Soil
F- Site Specific Evaluation
Data provided by the Illinois State Geological Survey and Cook County.
The Central United States Earthquake Consortium (CUSEC) State 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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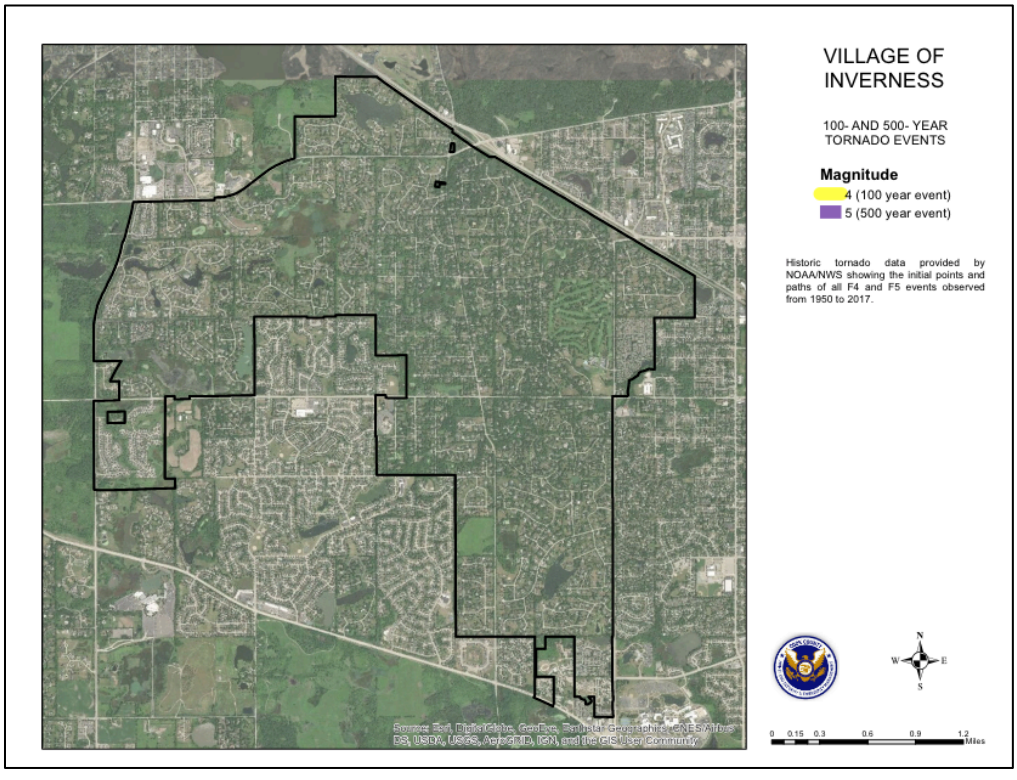
VILLAGE OF INVERNESS
100- AND 500- YEAR TORNADO EVENTS
Magnitude
4 (100 year event)
5 (500 year event)
Historic tornado data provided by NOAA/NWS showing the initial points and paths of all F4 and F5 events observed from 1950 to 2017.
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Miles