

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

Palos Park 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
Chief Joe Miller, Police Chief 8999 W. 123rd Street Palos Park, IL 60464 Telephone: 708-671-3770 Email Address: jmiller@palospark.org	Officer Fernando Flores, Emergency Management Coordinator 8999 W. 123rd Street Palos Park, IL 60464 Telephone: 708-289-4909 Email Address: fflores@palospark.org

Jurisdiction Profile

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

- **Date of Incorporation:** 1914
- **Current Population:** 4,778 as of the 2018 U.S. Census population estimate.
- **Population Growth:** The Village of Palos Park experienced a 4% growth in population since the 2000 census. The Village of Palos Park population as remained relatively stable since 2010.
- **Location and Description:** The Village of Palos Park is located 15 miles from Downtown Chicago in southwestern Cook County. According to the 2010 census, the village has a total area of 3.98 square miles of which 3.93 square miles (or 98.74%) is land and 0.04 square miles is water. The Village of Palos Park has three main roadways: Route 83, Route 45, Route 7. It is also bounded on three sides by Cook County Forest Preserve.
- **Brief History:** The main influx of settlers came to Palos with the building of the Illinois-Michigan Canal which was completed in 1848. The original name of the town was Trenton; it was changed in 1850 to Palos. The Village of Palos Park incorporated in 1914. In the early 1920s, an artist colony emerged and by 1940 the Village had become a center for artists, writers and intellectuals. From early on, the art colony in Palos Park played a pivotal role in the personal and artistic development of our community. Palos Park is predominately single-home residential with a balance of commercial and natural land use which compliments it's history.
- **Climate:** The climate of Palos Park is typical for Northern Illinois, and 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 averages 36 inches, and reaches its lowest points in the months of January and February, and peaks in the months of May and June.
- **Governing Body Format:** The Village of Palos Park is governed by a Village Council. The council is composed of a Mayor; who is also the Liquor Control Commissioner, a Commissioner of Accounts & Finances, a Commissioner of Streets & Public Improvements; who is also in charge of Recreation, a Commissioner of Public Health & Safety, and a Commissioner of Building and Public Property. The Village Council will assume responsibility for the adoption of this plan, while the Police Chief will oversee its implementation. The Village also has an elected Clerk. All six are elected at large to concurrent four year terms. The Village of Palos Park consists of eight departments; Building, Clerk's Office, Finance, Historic Preservation, Recreation, Police, Public Works, and Tree Body
- **Development Trends:** The Village of Palos Park adopted a comprehensive plan in 2009 which sets a "road map" for moderate development while maintaining and enhancing current village character for the next 10 to 15 years. This plan includes an annexation strategy which would increase the total village area. The current rate of development is low with consideration being given to the improvement of current commercial areas. In order to increase development, the Village of Palos Park has successfully annexed additional land. In January 2019, the village successfully annexed more than 1,400 acres of land west of its existing borders. The land

includes property occupied by Cog Hill Golf and Country Club, Mid-Iron Golf Club, and Gleneagles Country Club. Palos Park has released preliminary details, including plans for a golf resort, commercial development, and residential development.

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	IBC 2012, Ord. 2013-24, 6/10/13
Zonings	Yes	No	No	Yes	Ord. 2010-06, 2/8/10
Subdivisions	Yes	No	No	No	Ord. 2010-20, 6/14/10
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. MWRD
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act
Growth Management	No	No	No	No	
Site Plan Review	Yes	No	No	No	Ord. 2010-20, 6/14/10007

Public Health and Safety	No	No	Yes	No	Cook County DPH
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Ord. 2009-30, 12/7/09
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					N/A
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	Yes	No	Yes	No	Regional stormwater impacts are managed by MWRD. The Village lies within the Calumet – Sag Channel 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>					Unspecified for FY14
<i>How often is the plan revised/updated?</i>					Annual
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	Yes	No	The Economic Development Commission is charged with reviewing all economic development

					related programs and incentives including tax incentives offered through the Cook County 6b program.
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	No	No	Yes	Yes	Cook County DHSEM
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	No	No	Yes	No	Cook County DHSEM
Post-Disaster Recovery Plan	No	No	No	No	
Continuity of Operations Plan	No	No	Yes	No	Cook County DHSEM
Public Health Plans	No	No	Yes	No	Cook County DPH

TABLE: FISCAL CAPABILITY	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes

Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Building Department Director
Engineers or professionals trained in building or infrastructure construction practices	No	
Planners or engineers with an understanding of natural hazards	Yes	Village Manager and Community Development Director
Staff with training in benefit/cost analysis	Yes	All Department Heads
Surveyors	Yes	Public Works
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Police Department/EMA/Manager
Grant writers	Yes	Village Manager/ Community Development Director

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Building Department
Who is your jurisdiction’s floodplain administrator? (department/position)	N/A
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	Ord. 2008-20, 6/9/2008
When was the most recent Community Assistance Visit or Community Assistance Contact?	2/4/98

Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No, undecided

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Unknown	Unknown	Unknown
Public Protection/ISO	Unknown	Unknown	Unknown
StormReady	Yes	Gold (Countywide)	
Tree City USA	Yes	N/A	1998

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
Severe Winter Weather	-	2/2014	-
Severe Winter Weather	-	1/2014	-
Severe Winter Weather	-	12/2013	-
Severe Weather	DR-4116	4/2013	-
Severe Weather	-	10/2012	-
Severe Winter Weather	DR-1960	1/2011	-
Severe Weather	DR-1935	7/2010	-
Severe Weather	DR-1800	9/2008	-
Severe Weather	DR-1729	8/2007	-
Severe Weather	DR-997	4/1993	-
Severe Weather	DR-798	8/1987	-
Severe Weather	DR-776	9/1986	-
Severe Weather	DR-643	6/1981	-
Severe Weather	DR-643	6/1976	-
Severe Weather	DR-373	4/1973	-

Severe Weather	DR-351	9/1972	-
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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 Village is susceptible to road flooding on McCarthy at 98th Ave and Southwest Highway at 131st.

Extreme Heat: The Village is vulnerable to extreme heat. Specifically, how it can result in power failure which would impact Sunrise Assisted Living and Holy Family Villa special needs populations.

High Winds: Historically, high winds have caused road obstruction from fallen trees and downed power lines throughout the Village.

Severe Winter Weather: The Village currently organize outreach programs to vulnerable populations, including establishing and promoting accessible heating centers in the community.

Lightning, Hail, Fog, Snow, Blizzard, Extreme Cold, Ice Storms, Epidemic or Pandemic, Widespread Power Outage, Hazardous Materials Release: The Village (Palos Park Police) wishes to ensure special populations located in assisted living and nursing homes are adequately protected in the event of an extended power outage. TBD Strategy.

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	33
4	Flood	18
5	Earthquake	32
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 P4.1 —Identify at-risk Village populations that may be exceptionally vulnerable to long-term power outages.						
Ongoing	All	5, 12	Village	Low	General Fund	Short-term
Action P4.2 —Increase the resilience of critical Palos Park infrastructure and facilities.						
Ongoing	All	2, 5	Village	High	FEMA Hazard Mitigation Grant	Short-term
Action P4.3 —Establish partnerships with all levels of government to improve methods to protect people and property.						
Ongoing	All	8	Village	Low	General Fund	Short-term
Action P4.4 —Promote public awareness of severe weather preparedness and 72-hour self-sufficiency.						

Ongoing	All	5, 8	Village	Low	General Fund	Short-term
Action P4.5 —Develop a Continuity of Operations (COOP) for Village operations during severe weather events.						
Ongoing	All	5	Village	Low	General Fund	Short-term
Action P4.6 —Develop and identify shelter locations and evacuation routes for local government, businesses, and residents.						
Ongoing	All	1,5	Village	Low	General Fund	Short-term
Action P4.7 —Organize outreach programs to vulnerable populations, including establishing and promoting accessible heating centers in the community.						
Ongoing	Severe Winter Weather	12	Village	Low	General Fund	Short-term
Action P4.8 —Develop and implement a natural hazard training and exercise program for all Village departments to enhance employee preparedness.						
Ongoing	All	1, 5	Village	Low	General Fund	Short-term
Action P4.9 —Integrate the Cook County Natural Hazard Mitigation Plan into the Palos Park Emergency Operations Plan.						
Ongoing	All	1, 5, 8	Village	Low	General Fund	Short-term
Action P4.10 —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	Village	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action P4.11 —Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	Village	Low	General Fund	Short-term
Action P4.12 —Actively participate in the plan maintenance strategy identified in this plan.						
Completed	All	3, 4, 6	DHSEM, Village	Low	General Fund	Completed

Action P4.13 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
Completed	All	3, 4, 5, 6, 7, 9, 10, 11, 13	Village	Low	General Fund	Completed
Action P4.14 —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	Village	Low	General Fund	Short-term and ongoing
Action P4.15 —Where feasible, implement a program to record high water marks following high-water events.						
Completed	Flooding, Severe Weather	3, 6, 9	Village	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Completed
Action P4.16 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Building Department	Low	General Fund	Short-term
Action P4.17 —Ensure special populations located in assisted living and nursing homes are adequately protected in the event of an extended power outage.						
New	Extreme Heat, Lightning, Hail, Fog, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Epidemic or Pandemic, Widespread Power Outage, Hazardous	12	Palos Park Police	Looking for input; Low	Looking for input	Unknown

	Materials Release					
Action P4.18 —Establish a quarterly public awareness presentation series to enhance residents preparedness to various hazards.						
New	Extreme Heat, Lightning, Hail, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado	6, 12	Palos Park Police	Low	General Fund	TBD

(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	2	High	Low	Yes	No	Yes	High
2	2	High	High	Yes	Yes	No	High
3	1	High	Low	Yes	No	Yes	High
4	2	High	Low	Yes	No	Yes	High
5	1	High	Low	Yes	Yes	Yes	High
6	2	High	Low	Yes	No	Yes	High
7	2	High	Medium	Yes	Yes	Yes	High
8	3	High	High	Yes	Yes	No	Medium
9	1	High	Low	Yes	No	Yes	High
10	2	High	Low	Yes	No	Yes	High
11	3	High	Low	Yes	No	Yes	High
12	2	High	High	Yes	Yes	No	Medium

13	13	Medium	Low	Yes	No	Yes	High
14	3	Medium	Low	Yes	Yes	Yes	High
15	9	Medium	Low	Yes	No	Yes	Medium
16	3	Medium	Low	Yes	No	Yes	High
17	1	High	Low	Yes	Yes	No	High
18	2	Medium	Low	Yes	No	Yes	High

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Action P-4.17

Mitigation Action	Ensure special populations located in assisted living and nursing homes are adequately protected in the event of an extended power outage.
Year Initiated	2019
Applicable Jurisdiction	Village of Palos Park
Lead Agency/Organization	Palos Park Police
Supporting Agencies/Organizations	Looking for input
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. • Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards. • Promote public understanding of and support for hazard mitigation.
Applicable Objective	<ul style="list-style-type: none"> • Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area.
Potential Funding Source	Looking for input
Estimated Cost	Looking for input
Benefits (loss avoided)	Increasing
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	High priority
Benefit Analysis (Low, Medium, High)	High - Project will provide an immediate reduction of risk exposure for life and 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	TBD

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

Action P-4.18

Mitigation Action	Establish a quarterly public awareness presentation series to enhance residents preparedness to various hazards.
Year Initiated	2019
Applicable Jurisdiction	Palos Park
Lead Agency/Organization	Palos Park Police
Supporting Agencies/Organizations	Looking for input
Applicable Goal	<ul style="list-style-type: none"> Develop and implement a multi-hazard public awareness program.
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	General Fund
Estimated Cost	N/A
Benefits (loss avoided)	N/A
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	High
Benefit Analysis (Low, Medium, High)	Medium
Cost Analysis (Low, Medium, High)	Low
Actual Completion Date	Ongoing

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Establish a quarterly public awareness presentation series to enhance residents preparedness to various hazards.

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

2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	Flood
X	Extreme Heat
X	Lightning
X	Hail
	Fog
X	High Wind
X	Snow
X	Blizzard
X	Extreme Cold
X	Ice Storms
X	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 P-4.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.1	Identify at-risk Village populations that may be exceptionally vulnerable to long-term power outages.	
Status Description: Yes	Regular updating is conducted to insure accurate identification of vulnerable populations.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.2	Increase the resilience of critical Palos Park infrastructure and facilities.	
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 P-4.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.3	Establish partnerships with all levels of government to improve methods to protect people and property.	
Status Description: Yes	Village personnel are members of various organizations which maintain and improve networking with all levels of government.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.4	Promote public awareness of severe weather preparedness and 72-hour self-sufficiency.	
Status Description: Yes	Public awareness is promoted through various social media platforms and public presentations. We are increasing messaging to 96-hour self-sufficiency.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.5	Develop a Continuity of Operations (COOP) for Village operations during severe weather events.	
Status Description: Yes	In the early planning stages within the Village administration.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.6	Develop and identify shelter locations and evacuation routes for local government, businesses, and residents.	
Status Description: Yes	Various shelters have been identified with annual updates to insure accurate information is available.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.7	Organize outreach programs to vulnerable populations, including establishing and promoting accessible heating centers in the community.	
Status Description: Yes	Various shelters have been identified with annual updates to insure accurate information is available. Social media platforms and personal interaction is utilized to keep populations informed.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.8	Develop and implement a natural hazard training and exercise program for all Village departments to enhance employee preparedness.	
Status Description: Yes	Exercises have been conducted within various Village departments. We are seeking to expand these efforts to include neighboring jurisdiction participation.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.9	Integrate the Cook County Natural Hazard Mitigation Plan into the Palos Park Emergency Operations Plan.	
Status Description: Yes	This was completed in the previous reporting period, but we are seeking to review and update these plans.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.10	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: 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 P-4.11

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.11	Continue to support the county wide actions identified 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 P-4.14

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.14	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		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.16

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.16	Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
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		

Completed Mitigation Actions

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

Action P-4.12

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.12	Actively participate in the plan maintenance strategy identified in this plan.	
Status Description: Yes	Actively participate in the plan maintenance strategy identified in this plan.	C
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.13	Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.	
Status Description: Yes	The Village has been recognized as a Tree City and will be seeking StormReady status from the National Weather Service.	C
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action P-4.15

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# P—4.15	Where feasible, implement a program to record high water marks following high-water events.	
Status Description: Yes		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

PALOS PARK EXISTING CONDITIONS	
2010 Population	4,847
Total Assessed Value of Structures and Contents	\$1,400,169,615
Area in 100-Year Floodplain	112.32 acres
Area in 500-Year Floodplain	137.00 acres
Number of Critical Facilities	17

HAZARD EXPOSURE IN PALOS 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	13	4	\$1,261,664	\$630,832	\$1,892,496	0.14%

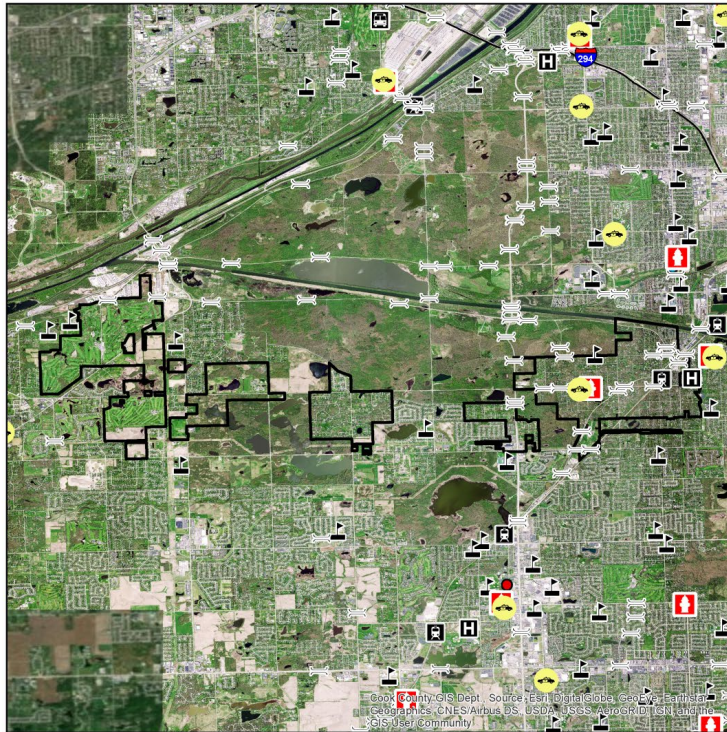
500-Year	33	10	\$3,173,140	\$1,586,570	\$4,759,710	0.34%
Tornado						
100-Year	—	—	\$184,401,179	\$102,547,781	\$286,948,960	20.49%
500-Year	—	—	\$454,913,251	\$247,784,705	\$702,697,956	50.19%

ESTIMATED PROPERTY DAMAGE VALUES IN PALOS 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	\$9,644,465	\$2,772,323	\$12,416,788	0.89%
Flood				
10-Year	\$0	\$0	\$0	0.00%
100-Year	\$15,950	\$5,800	\$21,751	0.00%
500-Year	\$377,699	\$166,329	\$544,027	0.04%

Tornado				
100-Year	\$18,440,118	\$10,254,778	\$28,694,896	2.05%
500-Year	\$66,417,335	\$36,176,567	\$102,593,902	7.33%

Hazard Mapping



VILLAGE OF PALOS PARK

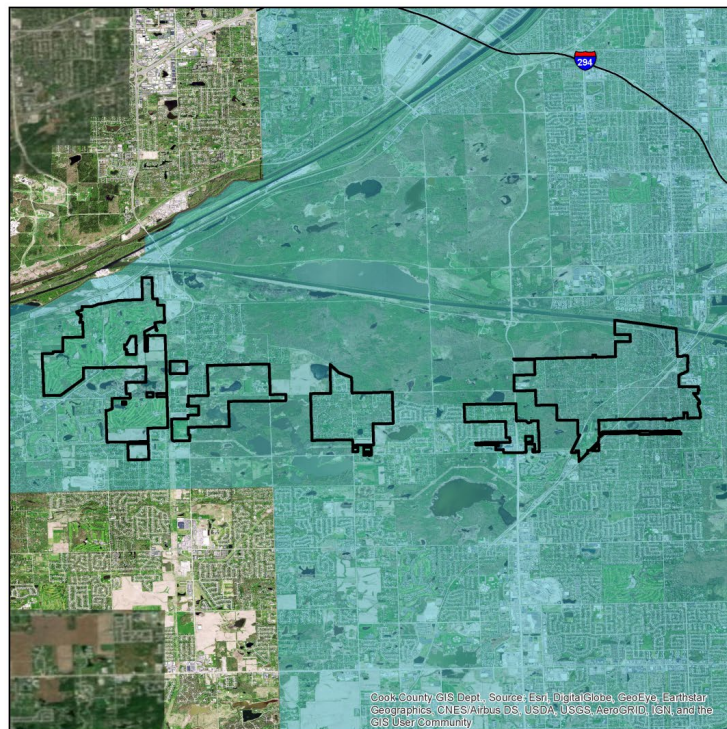
CRITICAL INFRASTRUCTURE

- 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



Cook County GIS Dept. Source: ESRI, DigitalGlobe, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the
GIS User Community



VILLAGE OF PALOS PARK

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

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

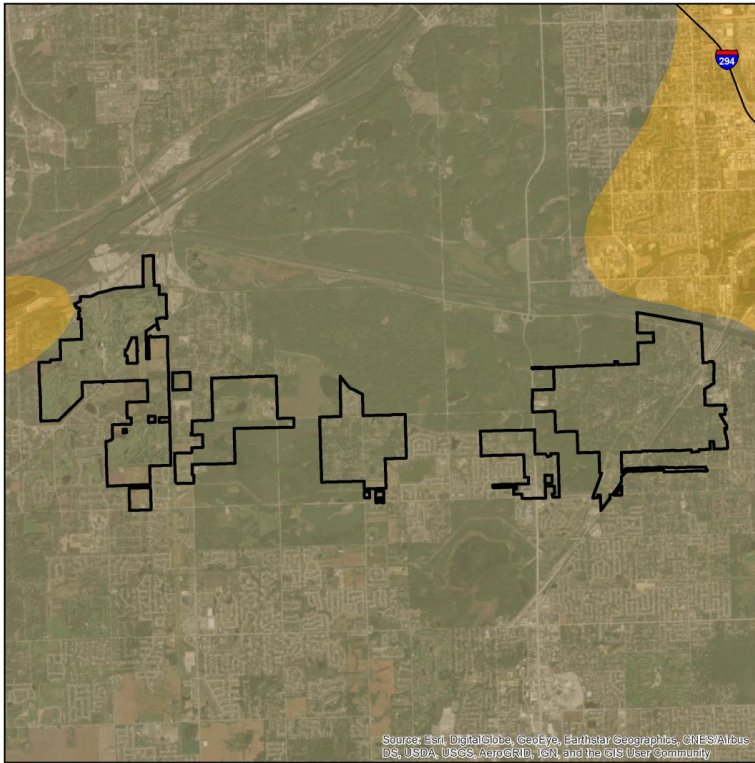
Data provided by the USGS Earthquake Hazards Program and Cook County.

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 NEHRP (National Earthquake Hazards Reduction program) site classes B and C.

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Cook County GIS Dept. Source: ESRI, DigitalGlobe, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the
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VILLAGE OF PALOS PARK

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

TYPE

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

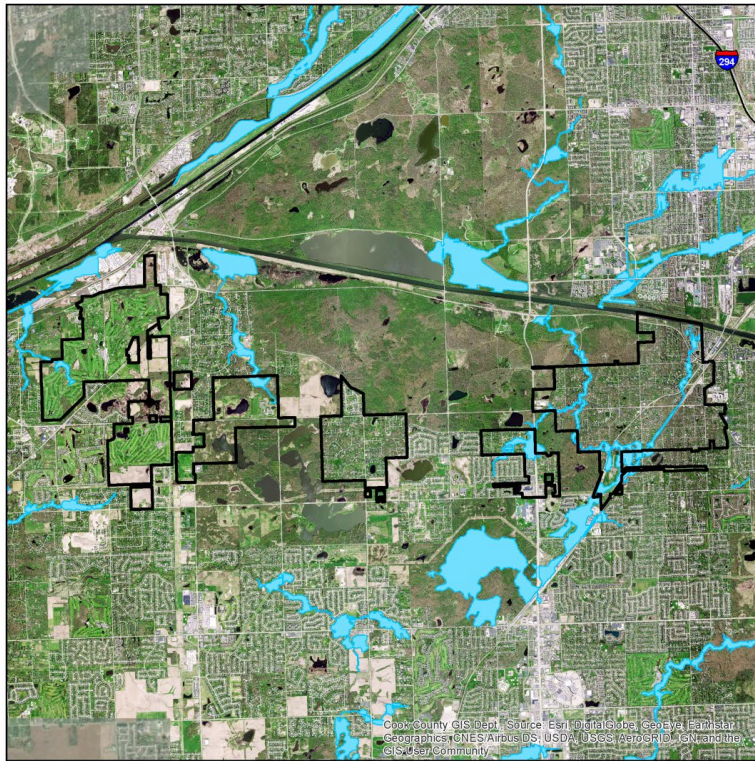
Data provided by the Illinois State Geological Survey and Cook County.

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 H. Peneil (2003) was the base map used for this work. Each State Geologist 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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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF PALOS PARK

COOK COUNTY MWRDGC 100-YEAR INUNDATION AREA

- 100-year Inundation Area

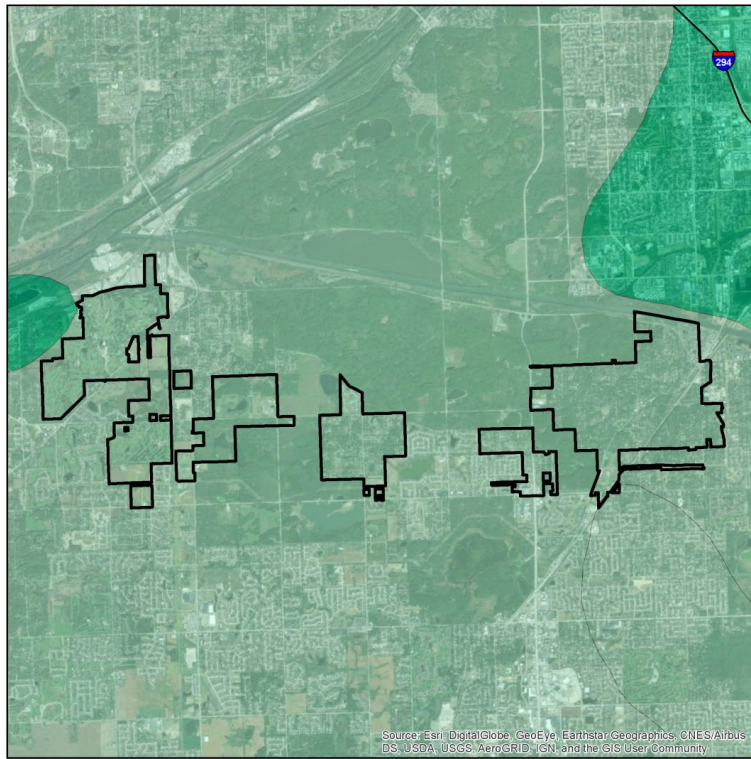
MWRDGC Data provided by Metropolitan Water Reclamation District of Greater Chicago and Cook County.

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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. The map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from <http://www.fema.gov>.



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



VILLAGE OF PALOS PARK

LIQUEFACTION SUSCEPTIBILITY

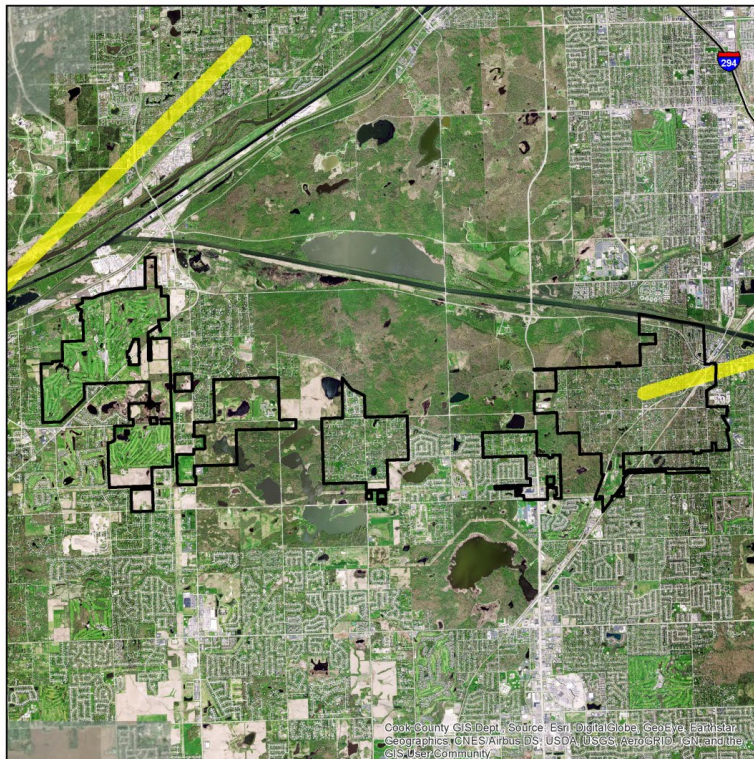
LIQUEFACTION SUSCEPTIBILITY

- 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 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 PALOS PARK

100- AND 500- YEAR TORNA DO 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.

