

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

**Niles Annex**

**FINAL**

July 2019

Prepared for:



Cook County  
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## Hazard Mitigation Point of Contact

| Primary Point of Contact   | Alternate Point of Contact   |
|--|--|
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## Jurisdiction Profile

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

- **Date of Incorporation:** 1899
- **Current Population:** 29,184 according to the 2018 United States Census Bureau population estimate.
- **Population Growth:** The population of The Village of Niles has remained relatively flat with a less than 1 percent decrease from 2010 to 2016.
- **Location and Description:** The Village of Niles is located approximately 15 miles from downtown Chicago. It is bordered by Chicago on the south and west, Skokie and Morton Grove on the east, Glenview on the north, and Park Ridge and unincorporated Cook County on the west. The Village covers an area of 5.87 square-miles. Niles is located between three major highways: Interstate 90, 94, and 294.
- **Brief History:** The history of the Village of Niles goes back before its incorporation in 1899. It was first settled by Potawatomi Indians in the 1700's. The first pioneers were mainly German, settling in the area because of the rich farmland and its low cost. The early settlers engaged in truck farming/greenhouses and traveled the North Plank Road (Milwaukee Avenue) to the Chicago Markets. The population of the Village of Niles in 1884 was 200 people and consisted of two general stores, one pharmacy, a harness shop, two blacksmith shops, one doctor, two hotels, two schools, three churches, and three cemeteries. As of its incorporation in 1899, the population was 500. By the 1930s, the population increased to 2,135. The Village expanded by annexing an unincorporated area that became Golf Mill Shopping Center, dedicated in 1959. Based on the recent census, Niles may be characterized as a stable community that has a significant older population and increasing racial and ethnic diversity.
- **Climate:** Cold winters, warm summers, and relatively large daily, monthly, and yearly variations in both temperatures and precipitation characterize the climate in Niles. Average winter highs range in the 30s, while average lows range in the teens. Roughly 16 days per year have temperatures at or below 0°F. Average summer highs are in the 80s, while lows are in the 60s. Niles averages 10 days at, or above 90°F. Both spring and fall have more moderate temperatures. The average annual precipitation is 32 inches while the average annual snowfall is 36 inches. Winter snowfall in the Chicago area is enhanced by lake-effect snows from Lake Michigan.
- **Governing Body Format:** The Village of Niles is governed by an elected Mayor and Board of Trustees consisting of 6 Trustees. This body of Government will assume the responsibility for the adoption and implementation of this plan. The General Government Department works in cooperation with other departments to provide municipal services to residents and business owners. It is staffed by the Village Manager, Assistant Village Manager, Village Attorney, Village Clerk, Human Resource Coordinator, Deputy Clerk, Legal Secretary, and Communications Coordinator. The Village Manager's Office directs, advises, strategically plans and implements improvements in operation and service. The Village has 10 departments: Administration, Community Development, Family Services, Finance, Fire, Fitness Center, Police, Public Works, Senior Center, and Teen Center.

- **Development Trends:** The Village of Niles adopted the Niles 2030 Comprehensive Plan in October, 2011. The plan is the Village’s official policy guide for decision-making related to land use and development, physical improvement, and growth in Niles. The Niles 2030 Comprehensive Plan exists to preserve and protect important features, guide growth and change, manage development and redevelopment efforts, and improve the community’s overall appearance and image. At this time, an infrastructure enhancement project to address stormwater flooding issues has been studied, proposed and approved. It is anticipated the actual work will commence in the spring of 2014. The Village of Niles has a Community Development department to guide the physical development of the Village through the implementation of the Comprehensive Plan and Building Codes, and enhance the quality of life in our community by planning and sound infrastructure and public services, protection of the environment, and promotion of high quality social and economic growth.

## 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.

| <b>TABLE: LEGAL AND REGULATORY CAPABILITY</b>                           |                        |                                      |                                       |                       |  |
|---|------------------------|--------------------------------------|---------------------------------------|-----------------------|--|
|   | <b>Local Authority</b> | <b>State or Federal Prohibitions</b> | <b>Other Jurisdictional Authority</b> | <b>State Mandated</b> | <b>Comments</b>  |
| <b>Codes, Ordinances &amp; Requirements</b>                             |                        |                                      |                                       |                       |  |
| Building Code   | Yes                    | No                                   | No                                    | Yes                   | Chapter 18, 3/05   |
| Zonings   | Yes                    | No                                   | No                                    | Yes                   | Appendix B, 5/13   |
| Subdivisions  | Yes                    | No                                   | No                                    | No                    | Chapter 90, 11/94  |
| Stormwater Management   | Yes                    | No                                   | Yes                                   | Yes                   | State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA.<br><br>Chapter 102, 3/11 |
| Post Disaster Recovery  | Yes                    | No                                   | No                                    | No                    | Chapter 33, 2/13   |
| Real Estate Disclosure  | Yes                    | No                                   | Yes                                   | Yes                   | (765 ILCS 77/) Residential Real Property Disclosure Act.<br><br>Chapter 22, 5/13   |
| Growth Management   | No                     | No                                   | No                                    | No                    |  |
| Site Plan Review  | Yes                    | No                                   | No                                    | No                    | Appendix B, 5/13   |
| Public Health and Safety  | Yes                    | No                                   | No                                    | No                    | Chapter 30, 2/13   |
| Environmental Protection  | Yes                    | No                                   | No                                    | No                    | Chapter 102, /65   |
| <b>Planning Documents</b>   |                        |                                      |                                       |                       |  |
| General or Comprehensive Plan   | Yes                    | No                                   | No                                    | No                    | Niles 2030 Comprehensive plan 10/2011  |
| <i>Is the plan equipped to provide linkage to this mitigation plan?</i> |                        |                                      |                                       |                       | Yes  |
| Floodplain or Basin Plan  | Yes                    | No                                   | No                                    | No                    | 3/11   |
| Stormwater Plan   | Yes                    | No                                   | No                                    | No                    | 3/11   |
| Capital Improvement Plan  | Yes                    | No                                   | No                                    | No                    |  |
| <i>What types of capital facilities does the plan address?</i>          |                        |                                      |                                       |                       | Utilities, facilities, roads, vehicles   |

| How often is the plan revised/updated?               |     |    |     |     | Annually  |
|--|-----|----|-----|-----|---|
| 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 | EOP, 8/07<br>Cook County DHSEM  |
| Threat and Hazard Identification and Risk Assessment | No  | No | Yes | No  | Cook County DHSEM<br>Preparing THIRA  |
| Terrorism Plan                                       | Yes | No | Yes | Yes | EOP, 8/07<br>Cook County DHSEM  |
| Post-Disaster Recovery Plan                          | Yes | No | No  | Yes | EOP, 8/07   |
| Continuity of Operations Plan                        | Yes | No | Yes | Yes | EOP, 8/07<br>Cook County DHSEM  |
| Public Health Plans                                  | Yes | No | Yes | Yes | EOP, 8/07<br>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 | No                             |

| <b>TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY</b>                                   |                   |  |
|---|-------------------|--|
| <b>Staff/Personnel Resources</b>  | <b>Available?</b> | <b>Department/Agency/Position</b>      |
| Planners or engineers with knowledge of land development and land management practices  | Yes               | Community Development                  |
| Engineers or professionals trained in building or infrastructure construction practices | Yes               | Community Development                  |
| Planners or engineers with an understanding of natural hazards                          | Yes               | Community Development and Public Works |
| Staff with training in benefit/cost analysis  | Yes               | Finance                                |
| Surveyors   | No                |  |
| Personnel skilled or trained in GIS applications  | Yes               | Cook County GIS Consortium and M.I.S.  |
| Scientist familiar with natural hazards in local area                                   | No                |  |
| Emergency manager   | Yes               | Niles Emergency Management Agency      |
| Grant writers   | Yes               | Administration                         |

| <b>TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE</b>   |   |
|---|---|
| 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?  | No  |
| What is the date of adoption of your flood damage prevention ordinance?   | 3/11  |
| When was the most recent Community Assistance Visit or Community Assistance Contact?  | 9/21/2011   |
| Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.  | None reported based on Community Assistance Visit |
| Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)   | Yes   |
| Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?  | No  |
| Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program? | Yes, Yes  |



**TABLE: COMMUNITY CLASSIFICATIONS**

|  | <b>Participating?</b> | <b>Classification</b> | <b>Date Classified</b> |
|--|-----------------------|-----------------------|------------------------|
| Community Rating System                      | Yes                   | 5                     | 10/13                  |
| Building Code Effectiveness Grading Schedule | Yes                   | 4                     | 6/13                   |
| Public Protection/ISO                        | Yes                   | 3                     | 12/11                  |
| StormReady                                   | Yes                   | Gold<br>(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: 13
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

| <b>TABLE: NATURAL HAZARD EVENTS</b>    |   |                       |                                      |
|--|---|-----------------------|--------------------------------------|
| <b>Type of Event</b>                   | <b>FEMA Disaster Number (if applicable)</b> | <b>Date</b>           | <b>Preliminary Damage Assessment</b> |
| Hail                                   | -   | 7/17/2017             | -                                    |
| Severe Cold/Wind Chill                 | -   | 1/6/2014              | -                                    |
| Severe Storm/Flooding                  | DR-4116                                     | 4/26/2013             | -                                    |
| Severe Cold/Wind Chill                 | -   | 12/22/2012            | -                                    |
| Severe Wind                            | -   | 11/23/2012            | -                                    |
| Severe Wind                            | -   | 11/11/2012            | -                                    |
| Severe Thunderstorm/Wind               | -   | 10/14/2012            | -                                    |
| Severe Heat                            | -   | 7/30/2012             | -                                    |
| Severe Thunderstorm/Wind               | -   | 7/26/2012             | -                                    |
| Severe Heat                            | -   | 7/25/2012             | -                                    |
| Severe Heat                            | -   | 7/18/2012             | -                                    |
| Severe Heat                            | -   | 7/7/2012              | -                                    |
| Severe Thunderstorm/Wind               | -   | 7/1/2012              | -                                    |
| Severe Cold/Wind Chill                 | -   | 2/24/2012             | -                                    |
| Severe Snowstorm                       | DR-1960                                     | 1/31/2011             | -                                    |
| Severe Storm/Hail                      | -   | 6/30/2011             | -                                    |
| Severe Thunderstorm/Lightning/Flooding | -   | 7/22/2011 - 7/23/2011 | -                                    |
| Severe Thunderstorm/Wind               | -   | 6/21/2011             | -                                    |
| Severe Storm/Flooding                  | DR-1935                                     | 7/19/2010             | -                                    |
| Severe Storm/Hail                      | -   | 4/5/2010              | -                                    |
| Severe Storm/Flooding                  | DR-1800                                     | 9/13/2008             | -                                    |
| Severe Snowstorm                       | EM-3068                                     | 1/16/1979             | -                                    |
| Tornado                                | 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.

**Dam/Levee Failure:** White Eagle Development has the potential to experience dam failure, as well as multiple locations on the northern branch of the Chicago River and Prairie Farmer Creek. These areas have also suffered from critical slope erosion.

**Flood:** We have experienced urban flooding in the following locations: Dutchmans Point, Ionquil Terrace, Oasis Grennan Heights, Evergreen Estates, Oakton Manor, Ransom Ridge, Chesterfield Gardens, Oak Park, Washington Park, Ballard Terrace, Courtland Park, and Golden Forties. In addition to these urban flooding-prone areas, we have experienced river flooding at River Gardens.

**Extreme Heat:** Our jurisdiction is particularly susceptible to extreme heat. Under extended periods of time, extreme heat can cause power outages. Considering that most of the high rise complexes in our area both do not have generators and are largely inhabited by older residents, this hazard's impact could be elevated.

**Lightning:** We have had our Village's communications struck out numerous times as a result of lightning.

**High Winds:** Previously, we have experienced high winds that have knocked down light poles.

**Ice Storms:** Similar to the jurisdiction-specific risks extreme heat poses to the Village, our community high rise has lost power due to winds. Since we do not have a generator as a backup, this hazard leaves our community with little recourse.

## 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.

| <b>Rank</b> | <b>Hazard Type</b>    | <b>Risk Rating Score (Probability x Impact)</b> |
|-------------|-----------------------|---|
| 1           | Severe Weather        | 54  |
| 2           | Flood                 | 54  |
| 3           | Tornado               | 54  |
| 4           | Severe Winter Weather | 39  |
| 5           | Earthquake            | 36  |
| 6           | Drought               | 12  |
| 7           | Dam Failure           | 7   |

## 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.

| <b>TABLE: HAZARD MITIGATION ACTION PLAN MATRIX</b>  |                          |                       |                      |                       |                           |   |
|---|--------------------------|-----------------------|----------------------|-----------------------|---------------------------|---|
| <b>Status</b>   | <b>Hazards Mitigated</b> | <b>Objectives Met</b> | <b>Lead Agencies</b> | <b>Estimated Cost</b> | <b>Sources of Funding</b> | <b>Timeline/Projected Completion Date (a)</b> |
| <b>Action N1.1</b> —Support Tier-1 Stormwater Relief Program projects (storm sewer and retention basin enhancements)  |                          |                       |                      |                       |                           |   |
| Completed   | Flood                    | 1, 2, 9, 11, 12, 13   | Village              | \$32,000,000          | Sales Tax, Grants         | Completed                                     |
| <b>Action N1.2</b> —Flood Control Assistance Program (sewer backflow protection and overland flood protection)  |                          |                       |                      |                       |                           |   |
| Ongoing   | Flood                    | 11, 12, 13            | Village              | \$300,000             | Sales Tax, Grants         | Ongoing                                       |
| <b>Action N1.3</b> —Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard- prone areas to protect structures from future damage. Consider properties with exposure to repetitive losses as a priority. |                          |                       |                      |                       |                           |   |
| Ongoing   | Flood                    | 11, 12, 13            | Village              | Unknown               | Grants/Gen. Revenue       | As funding becomes available                  |
| <b>Action N1.4</b> —Update the municipality’s emergency operations center.  |                          |                       |                      |                       |                           |   |
| Ongoing   | Multi-Hazard             | 1, 2, 8               | Village              | Unknown               | General Revenue           | As funding becomes available                  |
| <b>Action N1.5</b> —Educate the public about regional hazards.  |                          |                       |                      |                       |                           |   |
| Ongoing   | Multi-Hazard             | 1, 2, 5, 6, 8, 13     | Village              | \$80,000              | General Revenue           | As funding becomes available                  |
| <b>Action N1.6</b> —Promote the use of NOAA “All Hazards” radios for early warning and post event information.  |                          |                       |                      |                       |                           |   |

|   |  |                              |                |                   |                               |                                  |
|---|--|------------------------------|----------------|-------------------|-------------------------------|----------------------------------|
| Ongoing   | Multi-Hazard                                   | 1, 2, 5, 6, 8, 13            | Village        | Unknown           | General Revenue               | As funding becomes available     |
| <b>Action N1.7</b> —Continue to organize and train a Community Emergency Response Team  |  |                              |                |                   |                               |                                  |
| Ongoing   | Multi-Hazard                                   | 1, 2, 5, 6, 8, 13            | Village        | Unknown           | General Revenue               | As funding becomes available     |
| <b>Action N1.8</b> —The Nile Fire Department is educating local schools and businesses on the "Stop the Bleed" initiative and fire extinguisher use.  |  |                              |                |                   |                               |                                  |
| Ongoing   | All  | 7, 13                        | Village        | High              | FEMA Hazard Mitigation Grants | Long-term (depending on funding) |
| <b>Action N1.9</b> —Continue to support the countywide actions identified in this plan.   |  |                              |                |                   |                               |                                  |
| Ongoing   | All  | All                          | Village        | Low               | General Fund                  | Short- and long-term             |
| <b>Action N1.10</b> —Actively participate in the plan maintenance strategy identified in this plan.   |  |                              |                |                   |                               |                                  |
| Ongoing   | All  | 3, 4, 6                      | DHSEM, Village | Low               | General Fund                  | Short-term                       |
| <b>Action N1.11</b> —Continue to maintain/enhance Village’s classification under the Community Rating System (CRS).   |  |                              |                |                   |                               |                                  |
| Ongoing   | All  | 3, 4, 5, 6, 7, 9, 10, 11, 13 | Village        | Low               | General Fund                  | Long-term                        |
| <b>Action N1.12</b> —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                      | Engineering    | Low               | General Fund                  | Short-term and ongoing           |
| <b>Action N1.13</b> —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.  |  |                              |                |                   |                               |                                  |
| Ongoing   | All  | 3, 4, 6, 10, 13              | Village        | Low               | General Fund                  | Short-term                       |
| <b>Action N1.14</b> —Construct/replace Howard Street sewer outfall with larger capacity pipe to reduce flooding.  |  |                              |                |                   |                               |                                  |
| New   | Flood  | 2, 7, 13                     | Niles          | \$800,000; High   | Water Fund                    | October 2019                     |
| <b>Action N1.15</b> —Improve 5 year tree trimming cycle to reduce damage caused by falling limbs which cause power outage, blocking streets, and damaging resident property (cars and homes).   |  |                              |                |                   |                               |                                  |
| New   | High Wind, Ice Storms, Widespread Power Outage | 2, 13                        | Niles          | \$80,000; Medium  | Grants and Public Funds       | 5 year cycles                    |
| <b>Action N1.16</b> —Design and construct Golf Mill Park stormwater conveyance project to reduce flooding.  |  |                              |                |                   |                               |                                  |
| New   | Flood  | 2, 7, 13                     | Niles          | \$8,500,000; High | MWRD, TIF, Bond's             | December 2020                    |

**Action N1.17—Improve Stormwater Storage Areas in Niles**

|     |       |          |      |                      |      |            |
|-----|-------|----------|------|----------------------|------|------------|
| New | Flood | 2, 7, 13 | MWRD | \$8,838,000;<br>High | MWRD | 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             | 6                        | High     | High   | Yes                                | Yes                        | No   | High         |
| 2             | 3                        | Medium   | Low    | Yes                                | Yes                        | Yes  | High         |
| 3             | 3                        | Medium   | Medium | Yes                                | Yes                        | No   | Medium       |
| 4             | 3                        | High     | Medium | Yes                                | No                         | No   | Medium       |
| 5             | 6                        | High     | Low    | Yes                                | No                         | No   | Medium       |
| 6             | 6                        | High     | Low    | Yes                                | No                         | Yes  | High         |
| 7             | 6                        | High     | Medium | Yes                                | No                         | Yes  | High         |
| 8             | 2                        | High     | High   | Yes                                | Yes                        | No   | Medium       |
| 9             | 13                       | Medium   | Low    | Yes                                | No                         | Yes  | High         |
| 10            | 3                        | Medium   | Low    | Yes                                | Yes                        | Yes  | High         |
| 11            | 9                        | Medium   | Low    | Yes                                | No                         | Yes  | Medium       |
| 12            | 3                        | Medium   | Low    | Yes                                | No                         | Yes  | High         |
| 13            | 5                        | Medium   | Low    | Yes                                | No                         | Yes  | High         |
| 14            | 3                        | High     | High   | Yes                                | Unknown                    | Unknown  | High         |
| 15            | 2                        | Medium   | Medium | Yes                                | Unknown                    | Unknown  | Medium       |
| 16            | 3                        | High     | High   | Yes                                | Unknown                    | Unknown  | High         |
| 17            | 3                        | High     | High   | Yes                                | Yes                        | Unknown  | High         |

(a) See Chapter 1 for explanation of priorities.

### New Mitigation Actions

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



**Action N-1.14**

|   |   |
|---|---|
| <b>Mitigation Action</b>                                    | Construct/replace Howard Street sewer outfall with larger capacity pipe to reduce flooding.   |
| <b>Year Initiated</b>                                       | 2019  |
| <b>Applicable Jurisdiction</b>                              | Niles, IDNR, IEPA, ISACE, MWRD  |
| <b>Lead Agency/Organization</b>                             | Niles   |
| <b>Supporting Agencies/Organizations</b>                    | Niles Park District   |
| <b>Applicable Goal</b>                                      | Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. |
| <b>Applicable Objective</b>                                 | Increase the resilience of (or protect and maintain) infrastructure and critical facilities.<br>Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.          |
| <b>Potential Funding Source</b>                             | Water Fund  |
| <b>Estimated Cost</b>                                       | \$800,000   |
| <b>Benefits (loss avoided)</b>                              | Start with 50 Homes reduced flood risk which is Phase 1 of the multiphase project to reduce flooding to 100 homes.  |
| <b>Projected Completion Date</b>                            | October 2019  |
| <b>Priority and Level of Importance (Low, Medium, High)</b> | High Priority   |
| <b>Benefit Analysis (Low, Medium, High)</b>                 | High—Project will provide an immediate reduction of risk exposure for life and property.  |
| <b>Cost Analysis (Low, Medium, High)</b>                    | High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).   |
| <b>Actual Completion Date</b>                               |   |

| <b>Recommended Mitigation Action/Implementation Plan and Project Description</b> |  |
|--|--|
| <b>Action/Implementation Plan and Project Description:</b>                       |  |

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

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

**Action N-1.15**

|   |   |
|---|---|
| <b>Mitigation Action</b>                                    | Improve 5 year tree trimming cycle to reduce damage caused by falling limbs which cause power outage, blocking streets, and damaging resident property (cars and homes).  |
| <b>Year Initiated</b>                                       | 2019  |
| <b>Applicable Jurisdiction</b>                              | Niles   |
| <b>Lead Agency/Organization</b>                             | Niles   |
| <b>Supporting Agencies/Organizations</b>                    |   |
| <b>Applicable Goal</b>                                      | Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.<br>Develop, promote, and integrate mitigation action plans.<br>Promote public understanding of and support for hazard mitigation. |
| <b>Applicable Objective</b>                                 | Increase the resilience of (or protect and maintain) infrastructure and critical facilities.<br>Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.   |
| <b>Potential Funding Source</b>                             | Grants and Public Funds   |
| <b>Estimated Cost</b>                                       | \$80,000 Annually   |
| <b>Benefits (loss avoided)</b>                              | \$300,000 (property and trees)  |
| <b>Projected Completion Date</b>                            | 5 year cycles   |
| <b>Priority and Level of Importance (Low, Medium, High)</b> | Medium Priority   |
| <b>Benefit Analysis (Low, Medium, High)</b>                 | Medium—Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property.  |
| <b>Cost Analysis (Low, Medium, High)</b>                    | Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.   |
| <b>Actual Completion Date</b>                               |   |

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

|  |  |
|--|--|
| <b>Action/Implementation Plan and Project Description:</b> |  |
|--|--|

**Mitigation Action and Project Maintenance**

| Year | Status | Comments |
|------|--------|----------|
| 2019 | New    |          |
| 2020 |        |          |
| 2021 |        |          |
| 2022 |        |          |
| 2023 |        |          |

**Mitigated Hazards**

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

**Action N-1.16**

|   |   |
|---|---|
| <b>Mitigation Action</b>                                    | Design and construct Golf Mill Park stormwater conveyance project to reduce flooding.   |
| <b>Year Initiated</b>                                       | 2019  |
| <b>Applicable Jurisdiction</b>                              | Niles, MWRD, IDOT   |
| <b>Lead Agency/Organization</b>                             | Niles   |
| <b>Supporting Agencies/Organizations</b>                    | MWRD, Niles Park District   |
| <b>Applicable Goal</b>                                      | Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.<br>Promote public understanding of and support for hazard mitigation. |
| <b>Applicable Objective</b>                                 | Increase the resilience of (or protect and maintain) infrastructure and critical facilities.<br>Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.  |
| <b>Potential Funding Source</b>                             | MWRD, TIF, Bonds  |
| <b>Estimated Cost</b>                                       | \$8,500,000   |
| <b>Benefits (loss avoided)</b>                              | Approximately 120 homes reduced flood risk. Reduce flooding on strategic regional area.   |
| <b>Projected Completion Date</b>                            | December 2020   |
| <b>Priority and Level of Importance (Low, Medium, High)</b> | High Priority   |
| <b>Benefit Analysis (Low, Medium, High)</b>                 | High—Project will provide an immediate reduction of risk exposure for life and property.  |
| <b>Cost Analysis (Low, Medium, High)</b>                    | High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).   |
| <b>Actual Completion Date</b>                               |   |

| <b>Recommended Mitigation Action/Implementation Plan and Project Description</b> |  |
|--|--|
| <b>Action/Implementation Plan and Project Description:</b>                       |  |

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

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

**Action N-1.17**

|   |   |
|---|---|
| <b>Mitigation Action</b>                                    | Stormwater Storage Areas in Niles   |
| <b>Year Initiated</b>                                       | 2019  |
| <b>Applicable Jurisdiction</b>                              | Village of Niles  |
| <b>Lead Agency/Organization</b>                             | MWRD  |
| <b>Supporting Agencies/Organizations</b>                    | Village of Niles  |
| <b>Applicable Goal</b>                                      | Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events and potential damage from such activities. |
| <b>Applicable Objective</b>                                 | Increase the resilience of (or protect and maintain) infrastructure and critical facilities.<br>Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.  |
| <b>Potential Funding Source</b>                             | MWRD  |
| <b>Estimated Cost</b>                                       | \$8,838,000; MWRD Contribution: TBD   |
| <b>Benefits (loss avoided)</b>                              | N/A   |
| <b>Projected Completion Date</b>                            | TBD   |
| <b>Priority and Level of Importance (Low, Medium, High)</b> | High  |
| <b>Benefit Analysis (Low, Medium, High)</b>                 | High  |
| <b>Cost Analysis (Low, Medium, High)</b>                    | High  |
| <b>Actual Completion Date</b>                               |   |

| <b>Recommended Mitigation Action/Implementation Plan and Project Description</b> |  |
|--|--|
| <b>Action/Implementation Plan and Project Description:</b>                       | ID: Niles<br>Contract: 18-IGA-31 Watershed: North Branch Location: Niles, IL<br><br>New stormwater storage in open space in coordination with recreational improvements. |

| <b>Mitigation Action and Project Maintenance</b> |               |                                      |
|--|---------------|--------------------------------------|
| <b>Year</b>                                      | <b>Status</b> | <b>Comments</b>                      |
| <b>2019</b>                                      | New           | Drafting intergovernmental agreement |
| <b>2020</b>                                      |               |                                      |
| <b>2021</b>                                      |               |                                      |
| <b>2022</b>                                      |               |                                      |
| <b>2023</b>                                      |               |                                      |

| <b>Mitigated Hazards</b> |  |
|--------------------------|--|
|                          | <b>All Hazards</b>                             |
|                          | 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 N-1.2**

| <b>TABLE: ACTION PLAN MATRIX</b>   |  |                           |
|--|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description  | Status<br>(X, O, C, R, N) |
| # N1-2   | Flood Control Assistance Program (sewer backflow protection and overland flood protection)             |                           |
| Status Description:<br>Yes   | Provided \$1,700,000 to assist 482 property owners with the installation of sewer backflow protection. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |  |                           |

**Action N-1.3**

| <b>TABLE: ACTION PLAN MATRIX</b>   |  |                           |
|--|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description  | Status<br>(X, O, C, R, N) |
| # N1-3   | Where appropriate, support retrofitting, purchase, or relocation of structures located in hazardprone areas to protect structures from future damage. Consider properties with exposure to repetitive losses as a priority |                           |
| Status Description:<br>Yes   | Planning is ongoing for a 13 acre-ft basin. The property was cleared to make way for the storm water project in 2020. The Village is in negotiations with MWRD to receive a 2 million dollar grant to support the basin.   | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |  |                           |

**Action N-1.4**

| <b>TABLE: ACTION PLAN MATRIX</b>   |  |                           |
|--|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description  | Status<br>(X, O, C, R, N) |
| # N1-4   | Update the municipality’s emergency operations center.   |                           |
| Status<br>Description:<br>Yes  | Village is currently updating the Emergency Operation Center (EOC) with an expected completion date of May 2019. 75% completed with remaining balance completed by January 2020. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |  |                           |

**Action N-1.5**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-5   | Update the municipality’s emergency operations center.  |                           |
| Status<br>Description:<br>Yes  | Village is currently updating the secondary Emergency Operation Center (EOC) with an expected completion date of May 2019. Secondary EOC is being updated with an expected completion May 2020. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

**Action N-1.6**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-6   | Promote the use of NOAA "All Hazards" radios for early warning and post event information.  |                           |
| Status<br>Description:<br>Yes  | Encouraged schools and businesses to utilize NOAA "All Hazards" radios. This information is reviewed annually with school administrators. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

**Action N-1.7**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-7   | Continue to organize and train a Community Emergency Response Team                |                           |
| Status<br>Description:<br>Yes  | Training class offered to civilians. Both fire and police conduct training class. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

**Action N-1.8**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-8   | The Nile Fire Department is educating local schools and businesses on the "Stop the Bleed" initiative and fire extinguisher use.  |                           |
| Status Description:<br>Yes   | In the Fall of 2018, the NFD will be educating local schools and businesses on when and how to use a fire extinguisher. They also will be offer classes on the "Stop the Bleed" initiative. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

**Action N-1.9**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-9   | Continue to support the countywide actions identified in this plan.                                   |                           |
| Status Description:<br>Yes   | The Village of Niles continues to support the county in any means necessary to protect the residents. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

**Action N-1.10**

| <b>TABLE: ACTION PLAN MATRIX</b>   |  |                           |
|--|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description  | Status<br>(X, O, C, R, N) |
| # N1-10  | Actively participate in the plan maintenance strategy identified in this plan. |                           |
| Status<br>Description:<br>Yes  | Providing this annual update.  | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |  |                           |

**Action N-1.11**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-11  | Continue to maintain/enhance Village’s classification under the Community Rating System (CRS).  |                           |
| Status<br>Description:<br>Yes  | Multiple projects have been completed and/or ongoing to help maintain/enhance the Village's CRS: installation of new storm sewers, construction of two retention basins, planning for the construction of a third water retention basin, assistance provided to homeowners for sewer backflow protection and overland flooding protection measures. Village rating went from 6 to 5 providing residents savings of 20 to 25%. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

**Action N-1.12**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-12  | 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<br>Description:<br>Yes  | The Village contracted with an engineer consulting firm to evaluate flooding issues and recommend remedies. As a result, multiple projects have been completed and/or ongoing to help alleviate flooding issues: installation of new storm sewers, construction of two retention basins, planning for the construction of a third water retention basin, assistance provided to homeowners for sewer backflow protection and overland flooding protection measures. | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

**Action N-1.13**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| # N1-13  | Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment. |                           |
| Status<br>Description:   |   | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |   |                           |

### Completed Mitigation Actions

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



**Action N-1.1**

| <b>TABLE: ACTION PLAN MATRIX</b>   |  |                           |
|--|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description  | Status<br>(X, O, C, R, N) |
| # N1-1   | Support Tier-1 Stormwater Relief Program projects (storm sewer and retention basin enhancements) |                           |
| Status Description:<br>Yes   | Installation of 11,200 feet of new storm sewer and construction of two water retention basins.   | C                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |  |                           |

## Future Needs to Better Understand Risk/Vulnerability

None at this time.

## Additional Comments

None at this time.

## HAZUS-MH Risk Assessment Results

| <b>NILES EXISTING CONDITIONS</b>                |                 |
|---|-----------------|
| 2010 Population                                 | 29,803          |
| Total Assessed Value of Structures and Contents | \$8,233,631,719 |
| Area in 100-Year Floodplain                     | 101.42 acres    |
| Area in 500-Year Floodplain                     | 209.80 acres    |
| Number of Critical Facilities                   | 76              |

| <b>HAZARD EXPOSURE IN NILES</b> |                |           |                         |               |                        |                                   |
|---------------------------------|----------------|-----------|-------------------------|---------------|------------------------|-----------------------------------|
|                                 | Number Exposed |           | Value Exposed to Hazard |               |                        | % of Total Assessed Value Exposed |
|                                 | Population     | Buildings | Structure               | Contents      | Total                  |                                   |
| <b>Dam Failure</b>              |                |           |                         |               |                        |                                   |
| Buffalo Creek                   | 0              | 0         | \$0                     | \$0           | <b>\$0</b>             | 0.00%                             |
| U. Salt Cr. #2                  | 0              | 0         | \$0                     | \$0           | <b>\$0</b>             | 0.00%                             |
| Touhy                           | 0              | 0         | \$0                     | \$0           | <b>\$0</b>             | 0.00%                             |
| U. Salt Cr. #3                  | 0              | 0         | \$0                     | \$0           | <b>\$0</b>             | 0.00%                             |
| U. Salt Cr. #4                  | 0              | 0         | \$0                     | \$0           | <b>\$0</b>             | 0.00%                             |
| <b>Flood</b>                    |                |           |                         |               |                        |                                   |
| 100-Year                        | 26             | 8         | \$6,415,921             | \$6,942,169   | <b>\$13,358,090</b>    | 0.16%                             |
| 500-Year                        | 1,440          | 443       | \$104,127,369           | \$57,411,202  | <b>\$161,538,571</b>   | 1.96%                             |
| <b>Tornado</b>                  |                |           |                         |               |                        |                                   |
| 100-Year                        | —              | —         | \$946,960,546           | \$797,111,261 | <b>\$1,744,071,807</b> | 21.18%                            |
| 500-Year                        | —              | —         | \$786,019,601           | \$486,096,898 | <b>\$1,272,116,499</b> | 15.45%                            |

| <b>ESTIMATED PROPERTY DAMAGE VALUES IN NILES</b> |   |          |            |                                   |
|--|---|----------|------------|-----------------------------------|
|  | Estimated Damage Associated with Hazard |          |            | % of Total Assessed Value Damaged |
|  | Building                                | Contents | Total      |                                   |
| <b>Dam Failure</b>                               |   |          |            |                                   |
| Buffalo Creek                                    | \$0                                     | \$0      | <b>\$0</b> | 0.00%                             |
| U. Salt Cr. #2                                   | \$0                                     | \$0      | <b>\$0</b> | 0.00%                             |
| Touhy  | \$0                                     | \$0      | <b>\$0</b> | 0.00%                             |
| U. Salt Cr. #3                                   | \$0                                     | \$0      | <b>\$0</b> | 0.00%                             |
| U. Salt Cr. #4                                   | \$0                                     | \$0      | <b>\$0</b> | 0.00%                             |
| <b>Earthquake</b>                                |   |          |            |                                   |

|                       |               |              |                      |       |
|-----------------------|---------------|--------------|----------------------|-------|
| 1909 Historical Event | \$20,732,001  | \$4,420,378  | <b>\$25,152,378</b>  | 0.31% |
| <b>Flood</b>          |               |              |                      |       |
| 10-Year               | \$541,404     | \$1,522,946  | <b>\$2,064,350</b>   | 0.03% |
| 100-Year              | \$945,171     | \$2,410,660  | <b>\$3,355,831</b>   | 0.04% |
| 500-Year              | \$11,533,906  | \$7,305,313  | <b>\$18,839,219</b>  | 0.23% |
| <b>Tornado</b>        |               |              |                      |       |
| 100-Year              | \$94,696,055  | \$79,711,126 | <b>\$174,407,181</b> | 2.12% |
| 500-Year              | \$114,758,862 | \$70,970,147 | <b>\$185,729,009</b> | 2.26% |

# Hazard Mapping





