



Northern Virginia Hazard Mitigation Plan

Annex 7-B: Town of Herndon

November 2022



Town of Herndon Overview

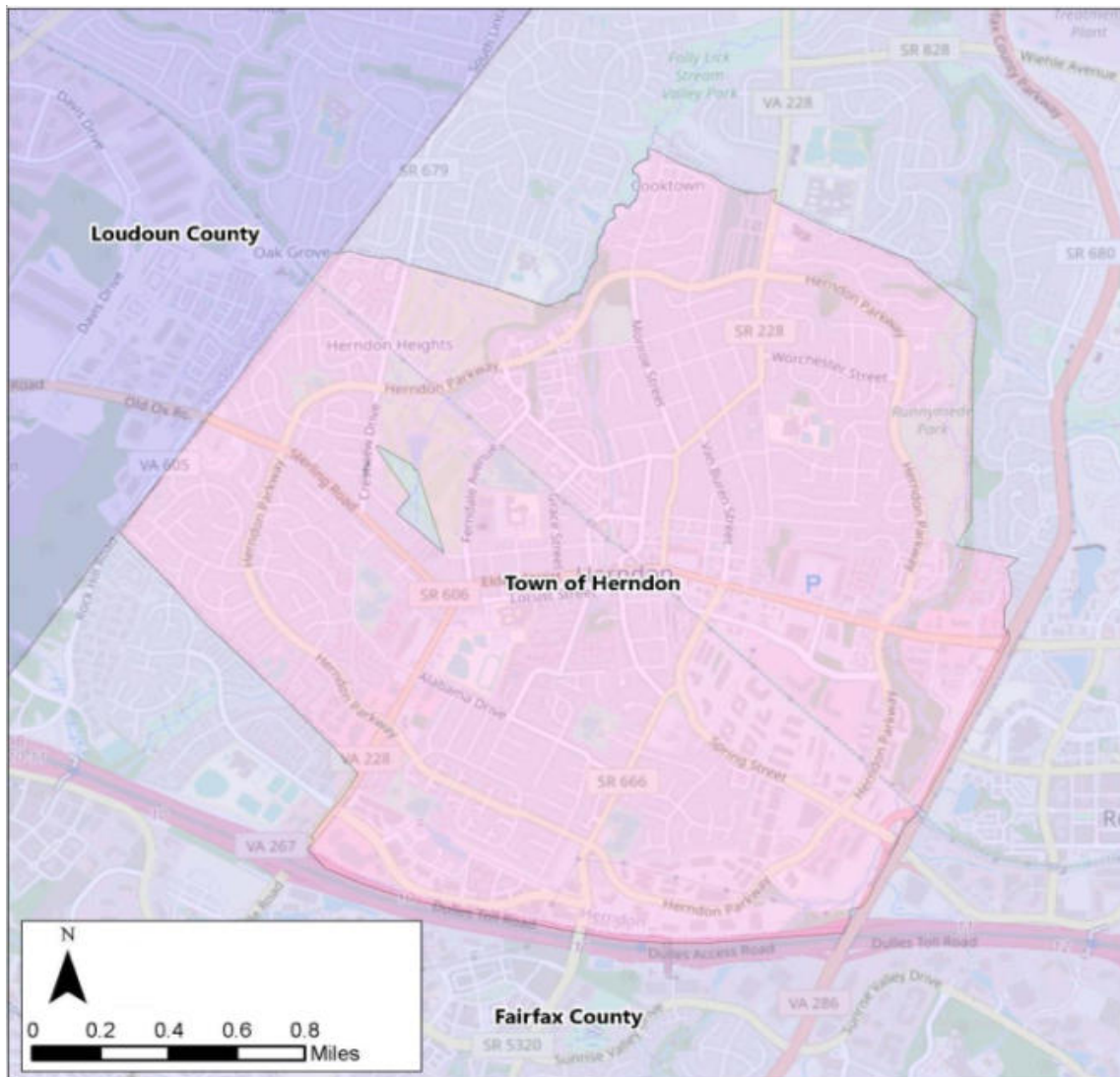








Table 1: Specific Jurisdictional Data

 ESTABLISHED	 LAND AREA	 2020 POPULATION	 GOVERNMENT ADDRESS	 HOUSEHOLDS	 MITIGATION FOCUS
1879	4.29 sq. mi.	24,367	777 Lynn Street, Herndon, VA 20170	7,920	Winter Weather, Flood/Flash Flood, High Wind/ Storm

Town of Herndon's Risk Environment

The following is a snapshot of the details in this annex. The well-researched details form the basis of effective mitigation strategies to improve community resilience.

Hazard Event History

National Centers for Environmental Information (NCEI), 1950–June 2021

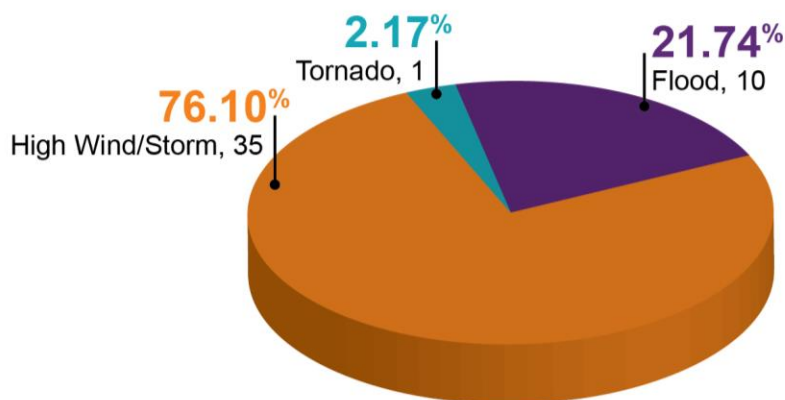


Figure 1: Number/Percentage of Hazard Events

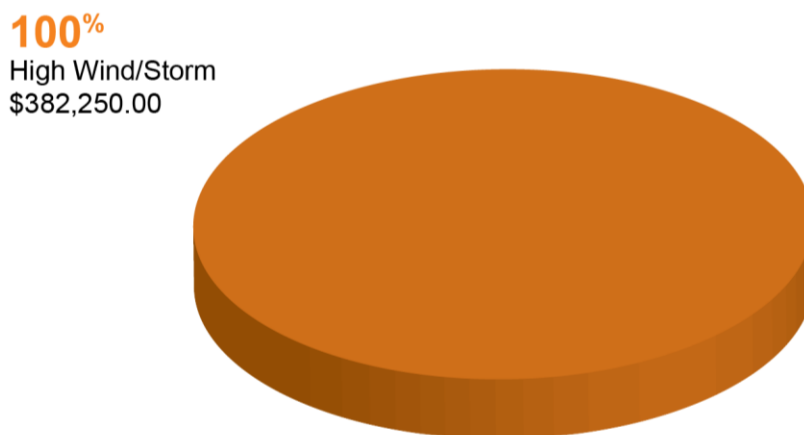


Figure 2: Property Damage Costs from Natural Hazard Events

Natural Hazard Risk Ranking

Table 2: Ranking of Natural Hazards by Risk

Hazard	Hazard Ranking
Winter Weather	High
Flood/Flash flood	High
High Wind/Severe Storm	High
Dam Failure	High
Tornado	Medium
Drought	Medium
Extreme Temperatures	Medium
Earthquake	Medium
Wildfire	Low
Sinkhole/Karst/Land subsidence	Low
Landslide	Low

Community Lifelines/Critical Assets

Table 3: Number of Critical Assets for Community Lifelines/Sectors

Lifeline/Sector	Number of Assets
Safety and Security	6
Food, Water and Shelter	2
Health and Medical	-
Energy	2
Communications	-
Transportation	8 highway bridges
Hazardous Materials	-
Education	26
Cultural/Historical	District
High Hazard Dams	-

A lifeline enables the continuous operation of government and business functions which are critical for human health, safety, or economic security. Lifelines are the most fundamental services for a community that, when stabilized, enable all other aspects of society to function. These lifelines are assets that may be a facility, infrastructure, operation, or entity.

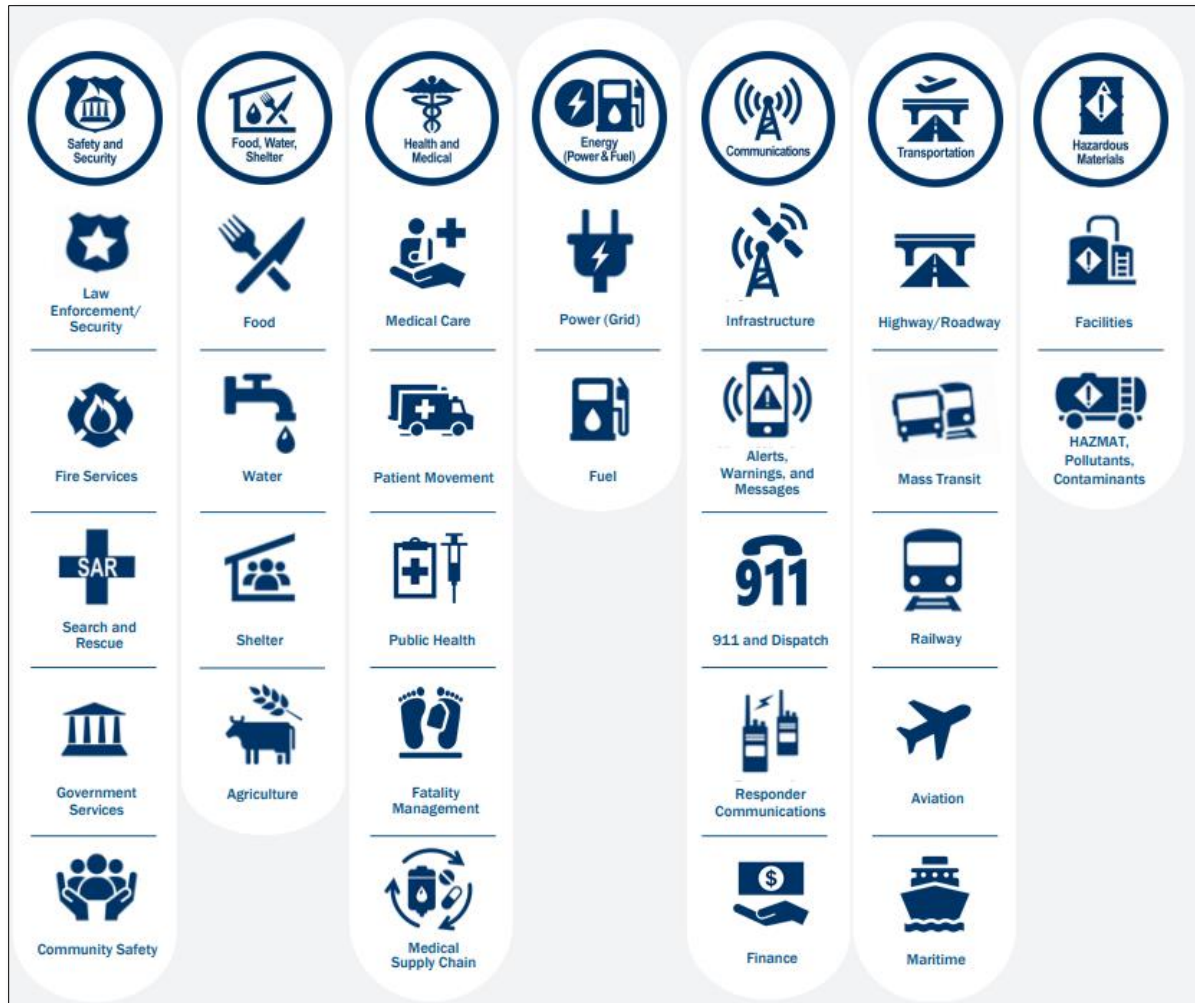


Figure 3: Community Lifeline Components

Community Lifelines Outlined

- **Safety and Security:** Law Enforcement/Security, Fire Service, Search and Rescue, Government Service, Community Safety
- **Food, Water, Shelter:** Food, Water, Shelter, Agriculture
- **Health and Medical:** Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management
- **Energy:** Power Grid, Fuel
- **Communications:** Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch
- **Transportation:** Highway/Roadway/Motor Vehicle, Mass Transit, Railway, Aviation, Maritime
- **Hazardous Materials:** Facilities, HAZMAT, Pollutants, Contaminants

Mitigation Capabilities Summary

Table 4: Capability Assessment Summary Ranking, Town of Herndon

Capability	Ranking
Planning and Regulatory	High
Administrative and Technical	Moderate
Safe Growth	High
Financial	Moderate
Education and Outreach	Moderate

Hazard Mitigation Plan Point of Contact

Table 5: Point of Contact Information

Contact Type	Contact Information
Primary Point of Contact	Mark Dale, Lieutenant Town of Herndon Police Department 571-455-5407 Mark.Dale@Herndon-va.gov 397 Herndon PW Herndon, VA 20170

Town of Herndon

This annex presents the following jurisdiction-specific information provided by the Town of Herndon for the 2022 update to the *Northern Virginia Hazard Mitigation Plan (NOVA HMP)*.

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1. Jurisdiction Profile

Established	1879
Total Land Area	4.29 sq. mi.
Geographic Region	Piedmont/Coastal Plain
Persons Per Household	3.17
Persons Per Square Mile	5,220
Median Age	35.5
Elevations	361 feet

1.1. Location

Located in the northwest of Fairfax County. The Town of Herndon is bounded by Loudoun County on the west, the unincorporated areas of Dranesville on the north, Reston on the east, and Hunter Mill on the south. Herndon is part of the suburban ring of Washington, D.C.

1.2. History

Incorporated in 1879, the area on which the Town was built was originally granted to Thomas Culpeper by King Charles II of England in 1688. Much of the downtown was destroyed by a fire on March 22, 1917 but was rebuilt with brick instead of wood. Much of the early development was agricultural, but the building of the railroad in the 1850s encouraged more residential growth. The Town population grew significantly in the decades between 1970 and 2010.

1.3. Demographics, Economy, and Governance

The Northern Virginia regional profile is presented in [Section 1, Base Plan](#) as context to the entire plan. The 2020 U.S. Census population estimate for the Town of Herndon is 24,367, an approximate 4.6% increase since 2010. The Town is densely populated with 5,220 residents per square mile.

Table 6: Population and Growth Rate

Year	Population	Percent Increase over Previous Census
1970	4,301	-
1980	11,449	166.2%
1990	16,143	41%
2000	21,655	34.2%
2010	23,292	7.6%
2020	24,367	4.6%

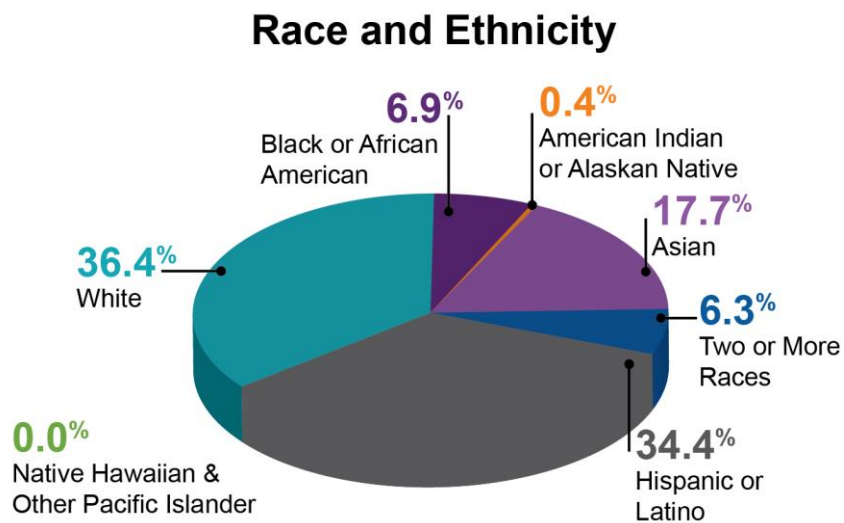


Figure 4: Race and Ethnicity Demographics from 2020 Census*

*Due to how people view Race and Ethnicity and answer the questions in the Census, there is overlapping of responses and results equal greater than 100% of the population.

Table 7: Economic Data

Economy	Data
Median Household Income (2019)	\$111,371
Unemployment Rate (September 2021)	4.1%
Per Capita Income (2019)	\$45,008
Percentage Below Poverty (2019)	6.3%

Approximately 44 percent of the town residents speak only English, while 56 percent speak other languages, predominantly Spanish.

1.4. Built Environment and Community Lifelines

The information related to Community Lifelines and critical assets in the Town of Herndon presented in this section has been collected from multiple sources, including Hazus (Version 4.2), and government websites. Data extracted from the Hazus Level 1 assessment indicates that the Town has an estimated 45 critical and historic assets. Due to the time lag in collecting and verifying data, and the method of documenting location and jurisdiction used in Hazus, this may not reflect the current inventory maintained by the Town of Herndon.

The Town of Herndon maintains a detailed list of community lifeline facilities, sites, and critical assets.

Table 8: Number of Assets per Community Lifeline/Sector¹

Lifeline/Sector	Number of Assets
Safety and Security	6
Food, Water, Shelter	2
Health and Medical	-
Energy	2
Communications	-
Transportation	8 highway bridges
Hazardous Materials	-
Education	26
Cultural/Historical	District
High Hazard Dams	-

1.4.1. Safety and Security

One police station and four fire stations serve the Town. In addition, the Herndon Emergency Operations Center provides a multi-agency coordination center for all-hazard response.

1.4.2. Food, Water, Shelter

Food commodities are available throughout the Town from public retail providers, wholesalers, and contracted services for specific institutions and facilities. Additional contracts may be entered into for post-disaster needs.

The Town of Herndon provides water and sewer services for its residents. Two potable water facilities are identified for the Town in the Hazus database.

The Hazus database does not identify schools that might be used as public shelters.

1.4.3. Health and Medical

The Hazus database does not identify health and medical facilities offering patient care, urgent care, emergency rooms, and other healthcare services in the Town of Herndon.

1.4.4. Energy

There are two utility companies that provide services to the Town of Herndon – Dominion Energy and Columbia Gas of Virginia.

1.4.5. Communications

The Hazus database does not identify town-level communication/broadcast facilities.

¹ Source: Fairfax County, Hazus-MH

Most communications and information systems and infrastructure in the United States are privately owned; however, Fairfax County maintains authority and control over public safety communications for fire, police, and other responding agencies for the Town of Herndon. In recent years, the federal government has taken a stronger role in protecting information and communications infrastructure, which may also present a challenge in relation to disaster impacts. Increasing reliance on this infrastructure by individuals, businesses, and government could cause vulnerabilities that emergency managers should take into consideration in pre- and post-incident planning and operations.

1.4.6. Transportation

The Town of Herndon is served by the following major highways and commuter rail lines:

- State Routes 228 and 606
- Washington Metropolitan Area Transit Authority (WMATA) Metrorail—Silver Line

Hazus identifies eight highway bridges in the Town. The maintenance of transportation facilities and systems is the responsibility of the owner or entity with authority, including municipal, county, state, and federal highway departments, and agencies; toll and rail authorities; and the military. The Virginia Department of Transportation maintains most primary and secondary roads in Fairfax County, except for the Dulles Toll Road, which is under the authority of the Metropolitan Washington Airports Authority (MWAA), and the George Washington Memorial Parkway, which is under the authority of the National Park Service. Metrorail maintains the authority for the operation and maintenance of the commuter rail system.

The Washington Dulles International Airport is located less than five miles from the Town of Herndon. The Hazus database identifies transportation assets at the county level only.

1.4.7. Hazardous Materials

The Hazus database identifies one oil refinery, one natural gas facility, and thirteen natural gas pipeline locations within Fairfax County; however, these are not identified at the town level.

1.4.8. Education

There are 26 public and private educational facilities listed in the Hazus database for the Town of Herndon.

1.4.9. Recreational, Cultural and Historic Sites, and Assets

The Herndon Parks and Recreation Department develops and maintains the community's park system to support recreation and the residents' health through the preservation of environmentally sensitive land and resources and areas of historic significance as well as the provision of recreational facilities and services.

The Town of Herndon maintains a historic preservation program that identifies and designates historic sites and structures. The Historic District Review Board provides guidance to property owners on appropriate measures for preserving and protecting historic properties and buildings. In addition, the Board educates the community on historic preservation and publishes guidelines that describe the Board's oversight and regulatory responsibilities for the Town's four historic districts and additional sites and structures. Historic District Overlay Guidelines educating property owners about appropriate changes to historic structures were most recently published in October 2020.

These sites are designated by the National Register of Historic Places, Virginia Landmarks Register, and/or the Historic Overlay District. Historic assets are addressed in the Town's Comprehensive Plan. The four Historic Overlay Districts are recognized under the Zoning Ordinance to provide regulations over and above the regular zoning protection to prevent the destruction of or encroachment upon such areas and structures, and to prevent the creation of environmental influences adverse to the purposes of these assets. These sites serve as an asset by providing significant context to the Town's development over time and contributing to the community's tourism economy.

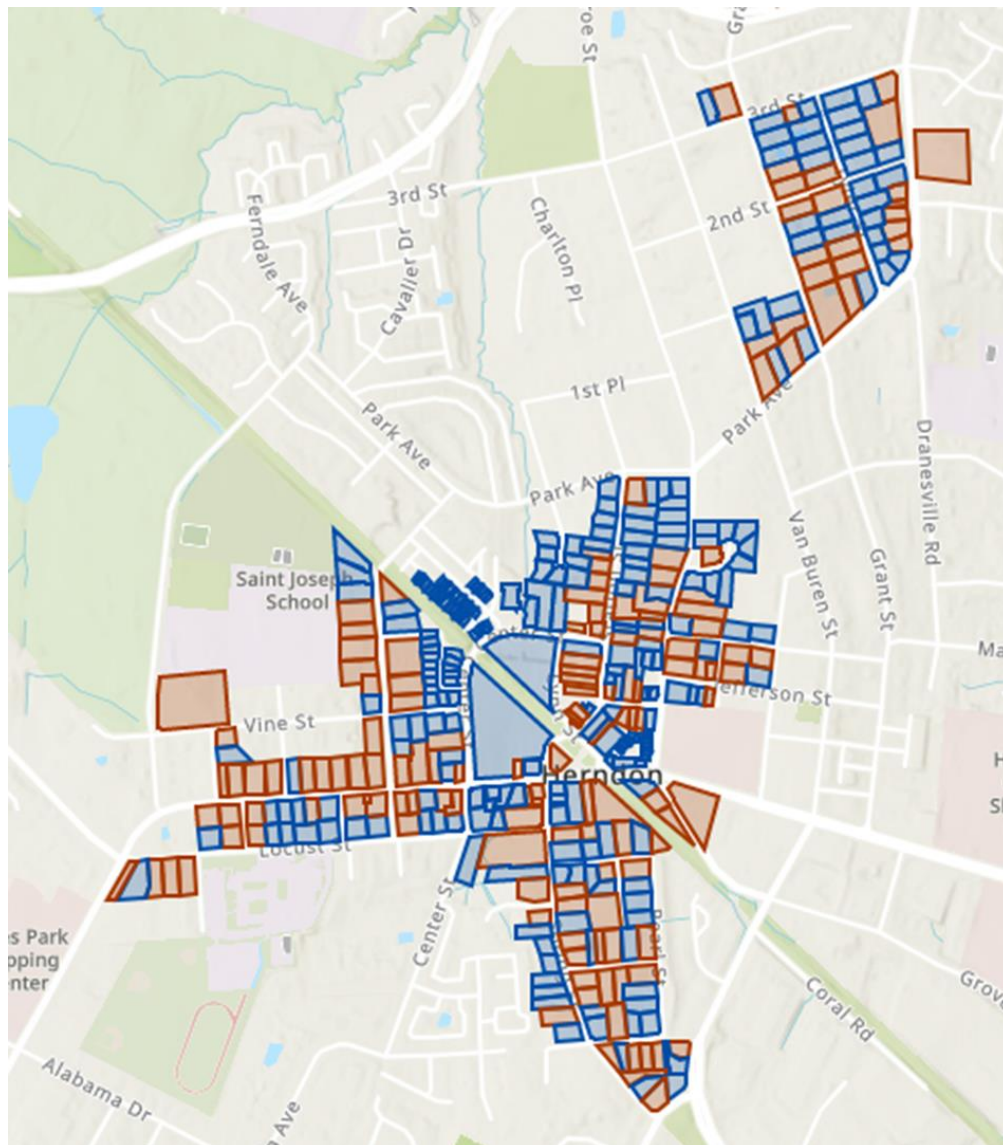


Figure 5: Town of Herndon Historic Overlay District Properties (Contributing and Non-Contributing)²

² Town of Herndon Department of Community Planning, <https://www.herndon-va.gov/departments/community-development/planning-policy/heritage-preservation>

1.5. Growth and Development Trends

The Town's population grew rapidly between the 1970s and 2000s, more than quadrupling during those decades. Since 2010, the rate of population growth stabilized, with the most recent change showing a 6.6% growth rate between 2010 and 2020.

The Town's 2030 land use plan indicates business corridors (pink), office parks (light blue), and the area designated for Regional Corridor Mixed Use (purple) which includes the Herndon Metrorail Station with a pedestrian bridge. The area in dark pink with the dotted border represents the Downtown Master Plan which is detailed in the Town's Comprehensive Plan. Areas in light yellow indicate neighborhood conservation areas. All areas in green indicate open space or recreational land uses.

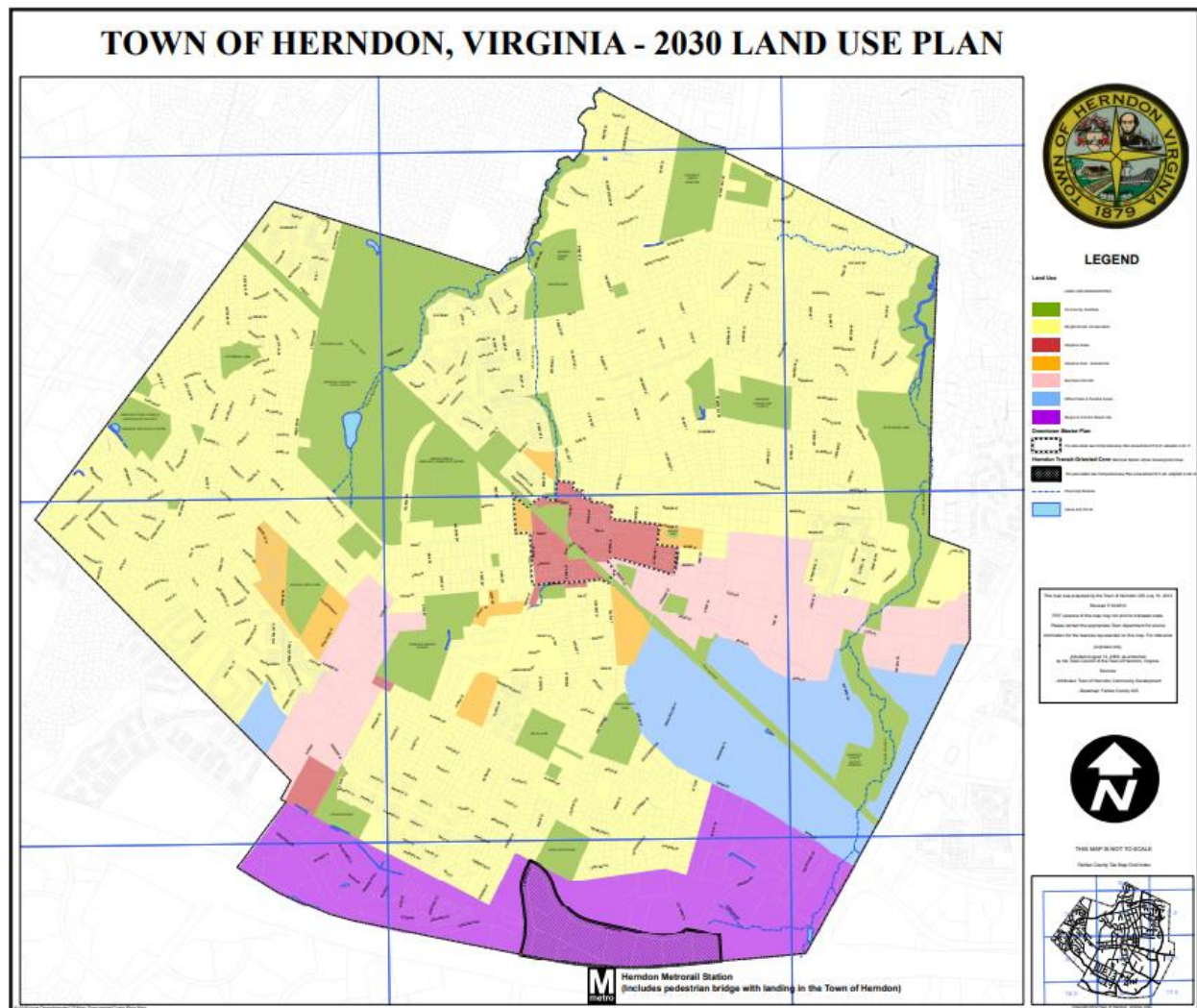


Figure 6: Town of Herndon 2030 Land Use Plan³

³ Town of Herndon; <https://www.herndon-va.gov/home/showpublisheddocument/3620/635986400070270000>

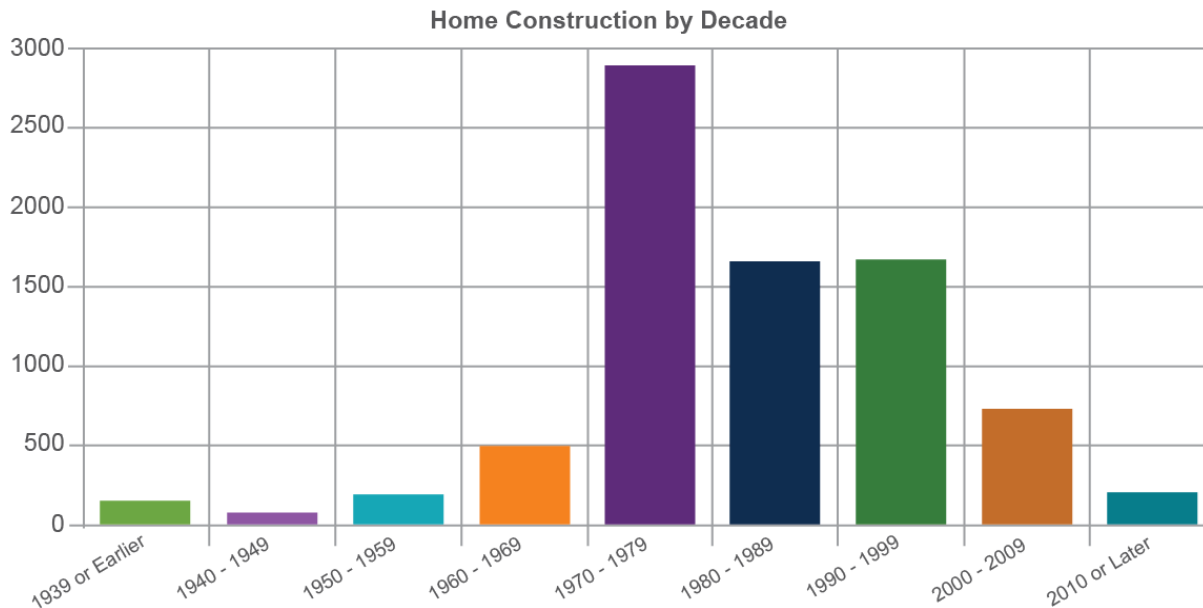


Figure 7: Home Construction by Decade, Town of Herndon⁴

Demands for increases in development and infrastructure in the future may result in pressures to build in areas that are susceptible to impacts from natural hazards such as floods. Land-use controls through the county's ordinances and regulations provide some protection against this pressure but should be continuously monitored for new demands that could increase hazard risks in the future.

The Town of Herndon controls the land use policies and practices within its jurisdiction and will continue to be a planning partner with the county and regional entities to identify hazard mitigation opportunities related to growth and development that reduce risk.

⁴ Point2Homes.com. Retrieved at: <https://www.point2homes.com/US/Neighborhood/VA/Herndon-Demographics.html>

2. Jurisdiction Planning Process

For the 2022 NOVA HMP update, the Town of Herndon followed the planning process described in [Section 2, Base Plan](#). In addition to providing representation to the Northern Virginia Hazard Mitigation Planning Team, the Town supported the local planning process requirements by coordinating with representatives from other departments and agencies within its jurisdiction.

Table 9: Local Planning Group Participants

Name	Position/Title	Department/Agency
Mark Dale	Lieutenant	Town of Herndon Police Department
David Stromberg	Zoning Administrator	Community Development
Tammy Chastain	Deputy Director	Town of Herndon Public Works

The Town identified its chief hazard mitigation planning responsibility as representing the Town in coordination with the Fairfax County representative to the Emergency Managers Group. The Town also identified the following tasks as part of its mitigation planning responsibilities:

- Conduct a Hazard risk and vulnerability assessment
- Provide technical data and hazard information
- Conduct a Capabilities assessment
- Develop a Mitigation strategy
- Sponsor mitigation actions
- Review Plan drafts and provide input
- Lead Public outreach activities
- Implement of the Plan
- Maintain the Plan

Town of Herndon planning participants coordinated primarily by means of virtual meetings with Fairfax County during the planning process, and as needed, independently to carry out planning activities completed through a series of worksheets that provided background information on the history of hazard events, hazard risks and vulnerabilities, capabilities, and past mitigation efforts. Additional planning process documentation of the Planning Group meetings is included in the [Base Plan, Appendix A](#).

2.1. Public Participation

Several opportunities for public involvement were provided during the planning process, including a Public Hazard Survey, which was posted and advertised on the Police Department's Facebook and Twitter pages. The survey was opened on August 8th, 2021, and closed on November 3rd, 2021, with over 1,000 responses coming in over that period of time. The Town of Herndon had 15 responses from those who reported living in the Town.

There were 2 questions that got almost the same answer from everyone that took the survey, and those responses identified the natural hazard of climate change and the non-natural hazard of the pandemic to be the most concerning hazards for those who resided in the Northern Virginia Area.

In addition to the survey, the public was offered the opportunity to review and provide input to the Draft 2022 Plan update. Notification of the Draft Plan release was made social media pages. Documentation of the public survey and draft plan review is included in [Attachment 2 of Annex 7, Fairfax County](#).

3. Jurisdiction-Specific Hazard Event History

The Town of Herndon's comprehensive hazard history is combined with Fairfax County, and described in [Sections 4 and 5, Base Plan](#).

The National Oceanic and Atmospheric Administration (NOAA) National Center for Environmental Information (NCEI) Storm Events Database includes 1,478 recorded natural meteorological events that took place in Fairfax County between January 1, 1950, and May 2021. The county and its municipalities have been included in three Federal Disaster Declarations and emergencies between 2017 and May 2021.

Table 10: Federal Disaster and Emergency Declarations (2017–2021), Fairfax County⁵

Declaration	Date	Hazard	Assistance Type
DR-4512-VA	4/2/2020 (continuing)	COVID-19 Pandemic	Individual Assistance, Public Assistance
EM-3448-VA	3/13/2020 (continuing)	COVID-19 Pandemic	Public Assistance (Category B)
EM-3403-VA	9/11/2018	Hurricane Florence	Public Assistance (Category B)

The Town of Herndon Planning Team highlighted severe thunderstorms, snowstorms, and the March 2018 winter storm as significant hazards that have occurred since the 2017 plan. Data related to these hazard events is included in [Annex 7, Fairfax County](#).

⁵ Source: FEMA

4. Hazard Risk Ranking

After developing hazard profiles, the Town of Herndon conducted a two-step quantitative risk assessment for each hazard that considered population vulnerability, geographic extent/location, probability of future occurrences, and potential impacts and consequences. The numerical scores for each category were totaled to obtain an Overall Risk Score, which is summarized as one of these risk and vulnerability classifications:

- **Low:** Two or more criteria fall in lower classifications or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences or for hazards with minimal mitigation potential.
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating. The potential damage is more isolated and less costly than a widespread disaster.
- **High:** The criteria consistently fall in the high classifications and the event is likely/highly likely to occur with severe strength over a significant to extensive portion of the planning area.

The two-step hazard risk ranking methodology is detailed in [Section 4, Base Plan](#).

The Overall Risk Score for each hazard served as the basis for determining whether a vulnerability assessment should be conducted. Natural hazard profiles are presented within the hazard sub-sections in [Section 5, Base Plan](#), and local detail is provided in the Jurisdiction Annexes. Non-natural hazard profiles are presented in [Volume II of the Base Plan](#).

Table 11: Hazard Risk Ranking Summary, Natural Hazards

Hazard	Total Probability Score	Total Consequence Score	Overall Risk Score	Hazard Ranking
Winter Weather	3.7	3.5	7.2	High
Flood/Flash flood	1.7	4.2	5.9	High
High Wind/Severe Storm	2.7	3.2	5.8	High
Dam Failure	1.0	4.5	5.5	High
Tornado	1.3	4.2	5.5	Medium
Drought	2.0	3.2	5.2	Medium
Extreme Temperatures	2.7	2.5	5.2	Medium
Earthquake	1.7	3.2	4.9	Medium
Wildfire	1.0	3.0	4.0	Low
Sinkhole/Karst/Land subsidence	1.0	2.5	3.5	Low
Landslide	1.0	2.5	3.5	Low

Table 12: Hazard Risk Ranking Summary, Non-Natural Hazards

Hazard	Total Probability Score	Total Consequence Score	Overall Risk Score	Hazard Ranking
Infectious Disease/Public Health	3.0	5.8	8.8	High
Terrorism	1.0	6.4	7.4	High
Cyber Attack	2.0	4.7	6.7	High
Civil Unrest	1.3	5.0	6.3	Medium
Communication Disruption	1.3	3.7	5.0	Medium
Hazardous Materials	1.0	3.9	4.9	Low
Active Violence	1.0	3.6	4.6	Low

Based on the hazard risk scores, the Town of Herndon evaluated the level of risk for 18 hazards: 11 natural and 7 non-natural.

Eight natural hazards were identified as high or medium risk hazards to which the jurisdiction is vulnerable:

- **High:** Winter weather, Flood/Flash Flood, High Wind/Severe Storm, and Dam Failure
- **Medium:** Tornado, Drought, Extreme Temperatures, and Earthquake

Five non-natural hazards were ranked as high or medium risk:

- **High:** Infectious Disease/Public Health, Terrorism, and Cyber Attack
- **Medium:** Civil Unrest, and Communication Disruption

All other hazards are ranked as “low,” signifying a minimal risk to the Town of Herndon.

4.1. Additional Hazard Risk Considerations

Volume II of the *2022 Northern Virginia Hazard Mitigation Plan* addresses non-natural hazards identified by the jurisdiction. During the needs assessment process, the Town of Herndon identified the risk of cyber-related incidents on Critical Infrastructure/Key Resources (CI/KR). This hazard should be monitored in the next planning cycle to identify potential incidents, define risks and vulnerabilities, and develop a potential mitigation strategy.

5. Vulnerability Assessment

The methodology for calculating loss estimates presented in this annex is the same as that described in [Section 4, Base Plan](#). Quantitative loss estimates are provided when available. Qualitative measurement considers hazard data and characteristics, including the potential impact and consequences based on past occurrences. A discussion of community assets potentially at risk during a hazard event accompanies the data.

[Annex 7, Fairfax County](#) includes a statistical compilation of the number of events and related impacts for the two highest-ranked hazards for the Town of Herndon, severe winter weather and flood/flash flood.

5.1. National Flood Insurance Program

The Town of Herndon is a participant in the National Flood Insurance Program (NFIP).

Table 13: National Flood Insurance Program Status, Town of Herndon⁶

Init FHBM Identified	6/14/1974
Init FIRM Identified	8/1/1979
Current Effective Map Date	9/17/2010
Reg-Emer Date	8/1/1979

Table 14: NFIP Policy and Claims Status, Town of Herndon⁷

Policies In-Force	101
Premiums Paid	Unknown
Total Claims	16
Total Payment	\$19,000

Table 15: NFIP Status, as of October 11, 2021⁸

Category	NFIP Topic	Source of Information	Comments
Insurance	How many NFIP policies are in the community? What is the total premium and coverage?	FEMA Risk Map – March 2020	70 Policies
Insurance	How many claims have been paid in the community? What is the total amount of paid claims? How many of the	FEMA Risk Map – March 2020	16 Paid Claims totaling \$19,000

⁶ FEMA NFIP Community Status Report, September 9, 2021

⁷ FEMA NFIP Policy Information by State and Community Report, February 29, 2020

⁸ Town of Herndon, Floodplain/NFIP Administrator Richard Smith, PE

Category	NFIP Topic	Source of Information	Comments
	claims were for substantial damage?		
Insurance	How many structures are exposed to flood risk within the community?	FEMA Risk Map – March 2020	Between 40 -45 structures under current effective FEMA maps; 15 structures under draft FEMA maps
Insurance	Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	This information is not available. Information from the State NFIP Coordinator or the FEMA Insurance Specialist must be compared against those properties within a floodplain that lack any NFIP policy coverage.
Staff Resources	Is the Community FPA or NFIP Coordinator certified?	Community FPA	The Community FPA is a Professional Engineer licensed in the Commonwealth of Virginia. The FPA is not a Certified Floodplain Manager.
Staff Resources	Is floodplain management an auxiliary function?	Community FPA	Yes. Floodplain management in the Town is managed with overlay districts within the Town's zoning ordinance. The Senior Civil Engineer serves as the Floodplain Manager and administers all necessary permits and reviews of improvements within the floodplain limits. The Zoning Administrator administers the overlay district which addresses the RPA areas through a Special Exception process. Both staff members combine to enforce the Floodplain Ordinance.
Staff Resources	Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	The Town provides the following NFIP administration services: <ul style="list-style-type: none"> • Administers permit requirements for all improvements within the floodplain • Performs engineering technical review of all required aspects of floodplain applications

Category	NFIP Topic	Source of Information	Comments
			<ul style="list-style-type: none"> Interprets mapping using GIS provided by state agencies
Staff Resources	What are the barriers to running an effective NFIP program in the community, if any?	Funding for a dedicated CFM position and a GIS staff position	Community FPA
Compliance History	Is the community in good standing with NFIP?	Yes	State NFIP Coordinator, FEMA NFIP Specialist, community records
Compliance History	Are there any outstanding compliance issues (i.e., current violations)?	No	Community FPA
Compliance History	When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown. This occurred prior to either the current Zoning Administrator or my employment with the Town. (The Zoning Administrator administers the Floodplain Overlay District within the Town).	Community FPA

5.2. Population

Estimates of the number of residents in the Town of Herndon vulnerable to each hazard are presented in the various hazard sections in the [Base Plan](#).

The Centers for Disease Control and Prevention's (CDC) Social Vulnerability Index (SVI) is a tool that can be used to identify specific vulnerable populations.

The Overall CDC SVI for Fairfax County, including the Town of Herndon is presented in [Annex 7, Fairfax County](#).

5.3. Built Environment and Community Lifelines and Assets

The Town of Herndon provided a list of thirty-seven town-owned sites and structures as part of its critical facilities inventory. The listing identifies the location (including address, latitude, and longitude), construction type, roof type, building value, contents value, property in open value, and total insured value of all assets. The inventory does not identify whether facilities are in hazard-prone areas such as flood zones and was not categorized by the FEMA Community Lifelines, but this could be addressed in the next planning cycle by sorting the sites in the Lifeline categories and creating GIS maps of the sites overlaid on flood zones, wildfire risk areas, and other areas susceptible to specific hazards.

Using the best Hazus data available, scenarios were run at the county level for earthquake, flood, and hurricane wind to determine potential exposure of buildings, infrastructure, and economy. Information presented in [Annex 7, Fairfax County](#) includes the Town of Herndon.

Vulnerabilities include structures, systems, resources, and other assets defined by the community as susceptible to damage and loss from hazard events.⁹ The vulnerability of critical infrastructure is presented within the lifeline sector categories identified by FEMA.

The assets at risk were identified during the planning process as potential assets vulnerable to one or more hazards.

Table 16: Community Lifelines/Critical Facilities Exposed to FEMA Floodplains, Town of Herndon¹⁰

Facility Type	Total Number	In 100-Year Floodplain	In 500-Year Floodplain
Highway Bridges	8	5	0

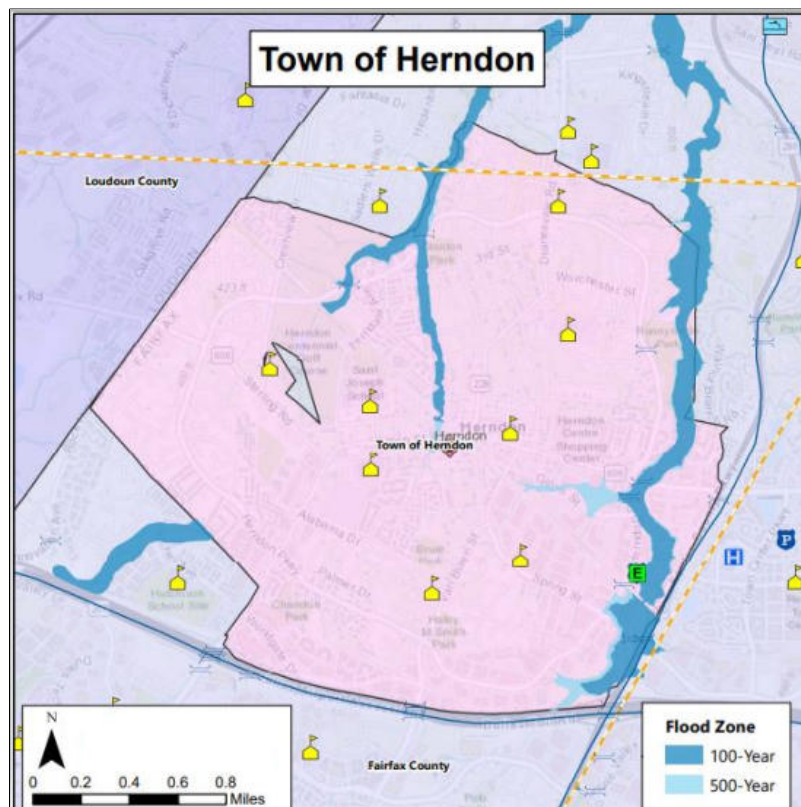


Figure 8: Critical Facilities Exposed to FEMA Floodplains, Town of Herndon¹¹

⁹ Although Fairfax County maintains a separate critical facilities inventory, information used in this analysis is extracted from the Hazus-MH critical facilities database to maintain consistency with other jurisdictions.

¹⁰ Source: Hazus-MH

¹¹ Hazus 100- and 500-Year Flood Scenarios, August 3, 2021.

Overlaying the critical facilities in Herndon on the mapped flood zones illustrate that the only facilities within the 100- or 500-year floodplains are highway bridges.

5.4. Environment

Information related to environmental vulnerability is presented in the hazard-specific sections of the [Base Plan](#).

5.5. Economy

Information related to economic vulnerability is presented in the hazard-specific sections of the [Base Plan](#). Specific direct economic losses (in thousands of dollars) related to a 2500-year 6.5 magnitude earthquake event are identified by Hazus for specific assets and presented in [Annex 7, Fairfax County](#).

5.6. Cultural/Historical

Information related to the vulnerability of cultural and historical assets are presented in the hazard-specific sections of the [Base Plan](#).

Historic structures and sites are frequently more vulnerable to flood hazards due to the typical development of a city or town along waterways. Because removing historic structures from their original sites affects their historical value, there are challenges to protecting these fragile sites.

The Town of Herndon has significant historical and cultural landmarks that are identified and protected by overlay districts. The *Historic District Overlay Guidelines*, adopted on November 17, 2020, provide a process and detailed procedures that may be applied in post-disaster impact conditions to protect cultural and historical assets from inappropriate repair, demolition, or redevelopment. As a Certified Local Government, under the Virginia Department of Historic Resources, the Town of Herndon indicates its commitment to protect and maintain these assets.

6. Capability Assessment

The Town of Herndon reviewed its legislative and departmental capabilities to identify resources, strengths, and gaps for implementing hazard mitigation efforts. Using a Capabilities Assessment Worksheet, the community documented existing institutions, plans, policies, ordinances, programs, and resources that could be brought to bear on implementing the mitigation strategy. The capabilities in relation to hazard mitigation were assessed in the following categories:

- Planning and regulatory
 - Implementation of ordinances, policies, site plan reviews, local laws, state statutes, plans, and programs that relate to guiding and managing growth and development
- Administrative and technical
 - County, city, and town staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions
- Safe growth
 - Use of community planning through comprehensive plans as hazard mitigation to increase community resilience

- Financial
 - Resources that a jurisdiction has access to or is eligible to use to fund mitigation actions
- Education and outreach
 - Programs and methods that could be used to implement mitigation activities and communicate hazard-related information

In addition to the Capabilities Assessment Worksheet, the Town completed a Jurisdiction Needs Identification Questionnaire that summarized changes in and enhancements of capabilities since the last plan. This information is integrated into the summaries in this section.

6.1. Capability Assessment Summary, Ranking, and Gap Analysis

The Town of Herndon ranked the level of capability in relation to each assessment category as a means of identifying where elements could be strengthened or enhanced. Capabilities were ranked on a qualitative basis as demonstrated by the jurisdiction's authorities, programs, plans, and/or resources:

- **Limited:** The jurisdiction has limited capabilities within this category and is generally unable to implement most mitigation actions.
- **Low:** The jurisdiction has some capabilities within this category and can implement a few mitigation actions.
- **Moderate:** The jurisdiction has some capabilities within this category, but improvement is needed in order to implement some mitigation actions.
- **High:** The jurisdiction has significant capabilities within this category as demonstrated by its authorities, programs, plans and/or resources, and can implement most mitigation actions.

Table 17: Capability Assessment Ranking Summary

Capability	Ranking
Planning and Regulatory	High
Administrative and Technical	Moderate
Safe Growth	High
Financial	Moderate
Education and Outreach	Moderate

6.1.1. Planning and Regulatory Capabilities Summary

The Town utilizes the all-hazards approach when developing any jurisdictional plans, including emergency operations, continuity of operations, and hazard-specific plans, as well as the hazard mitigation plan.

The following plans have been newly developed or updated since the 2017 HMP:

- Town of Herndon 2030 Comprehensive Plan
- Town of Herndon Adopted FY 2021–FY 2026 Capital Improvement Program

- Fairfax County Community-Wide Energy and Climate Action Plan (CECAP)
- Fairfax County Emergency Operations Plan, dated June 2019
- Fairfax County Pre-Disaster Recovery Plan, dated April 2020

While currently working with FEMA to update flood maps, the Town also maintains a Floodplain Management Plan, Flood Response Plan, and Historic Preservation Plan. Additionally, the Town is a part of Fairfax County's Radiological Emergency Plan and Disaster Recovery Plan, and regional Evacuation Plan. During the COVID-19 pandemic, the Town implemented temporary Continuity of Governmental Operations procedures.

Capability Analysis: High

Significant planning and regulatory tools are in place within the Town of Herndon and illustrate successes in integrating hazard mitigation planning with existing planning mechanisms. This demonstrates that the Town recognizes the benefit of incorporating hazard mitigation in local planning and regulatory processes such as the Comprehensive Plan, Capital Improvement Plan, and land development and floodplain regulations and how to use these to develop and implement mitigation actions. Area of improvement for this capability include following and updating codes and increasing economic planning activities. The Town also identifies the need to monitor the plan to incorporate the other organizations and partnerships identified throughout the plan to enhance this capability.

6.1.2. Administrative and Technical Capabilities Summary

- The staff of the Community Development and Public Works departments include planners, engineers, and a floodplain manager who are integrated into mitigation planning and understand natural and non-natural hazards.
- A contracting firm is used to provide the surveying function for the Town.
- The Information Technology Department includes personnel skilled in GIS that can provide hazard related data and mapping support.
- The Police Department currently executes emergency management duties and includes a one-person Emergency Management Department.
- Staff with grant writing capabilities are available in the Community Development, Public Works, and Police Departments.
- The Town coordinates with Everbridge as an emergency warning system for internal and external notification and warning.

Capability Analysis: Moderate

The Town of Herndon has a sufficient staffing capability to provide for significant coordination for the purpose of mitigation planning and action implementation. While this is identified as sufficient at the current time, the need for continued funding for positions through general budget and grant opportunities and the need for ongoing education, training, and exercises offers an area for improvement.

6.1.3. Safe Growth Capabilities Summary

- Growth guidance instruments such as future land-use policies, zoning regulations, and maps identify natural hazard areas such as floodplains and discourage or prohibit development or redevelopment within these areas.

- The Comprehensive Plan includes a transportation element that addresses the appropriate placement and utilization of transportation systems.
- Environmental policies and the Chesapeake Bay Preservation Overlay district encourage appropriate development to protect ecosystems.
- Public safety plans and procedures address emergency evacuation and other safety measures associated with safe growth.
- The capital improvement program integrates hazard mitigation projects identified in the hazard mitigation plan.
- The building code and floodplain regulations provide for a Base Flood Elevation (BFE) sufficient to protect property from the 100-year flood event.

Capability Analysis: High

The Town of Herndon has well-established safe growth regulatory and enforcement capabilities to limit or prevent inappropriate development in identified hazard areas and protect the natural environment. No additional enhancements are identified at this time.

6.1.4. Financial Capabilities Summary

- The Town has used capital improvement project funding in the past to increase storm drainage and repair roads, and this funding source could be used to fund future mitigation actions.
- The Town has the authority to levy taxes for specific purposes and incur debt through general obligation bonds and/or special tax bonds. These funding sources could be used in the future to complete mitigation actions, although it is likely that other funding sources will be utilized first.
- The Town participates in multiple federal and state funding programs through various disciplines.
- Fees for water, sewer, gas, electric, or stormwater utilities and services and impact fees for new development are a part of the Town's general fund. The general fund could be used to support future mitigation actions and projects.

Capability Analysis: Moderate

Although rising operational costs and limited financial resources are an everyday challenge to most local governments, the Town of Herndon has achieved moderate success in leveraging and combining local, state, and/or federal funding sources to implement mitigation-related projects. The Town notes that public/private partnerships are an unlikely option for funding. The process of identifying potential grants, developing and submitting applications, and managing grant-funded projects is time-consuming and challenging, especially if multiple disasters have occurred simultaneously. In addition, onsite work restrictions imposed during the COVID-19 pandemic between March 2020 and continuing into 2022 have presented challenges in staff availability and coordination. To address these shortfalls, the Town may access technical assistance available to potential applicants provided by many grant programs, seek support from the county, or expand its capabilities to develop and manage mitigation actions through contracted services to enhance this capability.

6.1.5. Education and Outreach Capabilities Summary

- The Town of Herndon historical preservation groups and historical society are proactive in educating about the importance and protection of cultural and historical assets.

- Fairfax County is designated as a StormReady community, which includes the Town in components of public education and training.
- The Fairfax County Park Authority promotes the concepts and actions of the FireWise program.
- The county partners with local schools to participate in the Student Tools for Emergency Planning (STEP) program curriculum, which includes packing an emergency preparedness bag for fifth-grade students.
- Community Rating System initiatives within the NFIP program can increase public awareness of and involvement in hazard mitigation.
- The Town promotes information about recycling and reusing items, does educational outreach about stormwater at the farmers market, and sends out educational flyers and e-newsletters about public works in water bills.

Capability Analysis: Moderate

The Town has existing education and outreach mechanisms that can be utilized to increase awareness about mitigation. This capability can be enhanced by engaging the Virginia Department of Emergency Management mitigation staff to provide technical assistance to support increased jurisdictional involvement. Many hazard mitigation educational tools and materials are available from state agencies, as well as disaster preparedness and response organizations such as the American Red Cross, FEMA, and faith-based organizations with disaster response missions.

As a component of the capability assessment, the Town of Herndon identified activities related to each natural hazard that support risk reduction.

Table 18: Capability Summary – Activities that Reduce Natural Hazard Risk or Impacts

Hazard	Activity
Dam Failure (including Levees)	<ul style="list-style-type: none"> • Public education and operational plans address preparedness and response to reduce risk.
Drought	<ul style="list-style-type: none"> • Public education and operational plans address preparedness and response to reduce risk. • Land use and environmental policies acknowledge the importance of protecting the natural environment.
Earthquake	<ul style="list-style-type: none"> • State and international building codes provide for seismic design regulations. • Public education and operational plans address preparedness and response to reduce risk.
Extreme Temperature	<ul style="list-style-type: none"> • Public education and operational plans address preparedness and response to reduce risk.
Flood/Flash Flood	<ul style="list-style-type: none"> • Floodplain administration and regulations ensure that inappropriate activities and future development in the floodplain are prohibited. • Stormwater management program and projects address flood prevention and risk reduction.
High Wind/Severe Storm	<ul style="list-style-type: none"> • State and international building codes provide for wind load design regulations.
Karst/Sinkhole/Land Subsidence	<ul style="list-style-type: none"> • Land use and environmental policies acknowledge the importance of protecting the natural environment.

Hazard	Activity
Landslide	<ul style="list-style-type: none"> Land use and environmental policies acknowledge the importance of protecting the natural environment.
Winter weather	<ul style="list-style-type: none"> Public education and operational plans address preparedness and response to reduce risk.
Tornado	<ul style="list-style-type: none"> Public education and operational plans address preparedness and response to reduce risk.
Wildfire	<ul style="list-style-type: none"> Public education and operational plans address preparedness and response to reduce risk.
Non-Natural Hazards	<ul style="list-style-type: none"> Public education and operational plans address preparedness and response to reduce risk. Beginning with the 2022 NOVA HMP, hazard mitigation planning is being integrated into existing planning and risk reduction activities for technological and human-caused hazards.
Climate Change	<ul style="list-style-type: none"> Ongoing resilience planning and utilizing the <i>Community-Wide Energy and Climate Action Plan</i> will allow for the identification and mitigation of climate change-related issues in future planning cycles.

7. Resilience to Hazards

7.1. National Risk Index

The National Risk Index (NRI) is a dataset and online tool developed by FEMA and other partners to help illustrate communities in the United States at risk for 18 natural hazards. Hazard risk is calculated on data for a single hazard type and reflects the relative risk for that hazard type and should be considered only as a baseline relative risk measurement for the purpose of a general comparison with the local hazard risk ranking in the Hazard Risk Ranking section of this annex. In addition, some hazards are defined differently from the hazards in this plan so a direct hazard-to-hazard comparison of risk is not able to be determined. The NRI provides an overview of hazard risk, vulnerability, and resilience. The designation of “low risk” is driven by lower loss due to natural hazards, lower social vulnerability, and higher community resilience. The Town of Herndon is included in the Fairfax County NRI in [Annex 7, Fairfax County](#).

7.2. Community Resilience Estimate

The Community Resilience Estimate (CRE) is a data product produced by the U.S. Census Bureau that can be utilized to estimate potential community resilience to disasters by combining data from several sources to analyze individual and household level risk factors.

The index produces aggregate-level (Census tract, county, and state) small area estimates that help determine how at risk specific neighborhoods might be to disasters due to characteristics that may make specific segments of the population more vulnerable to the impacts and consequences of disasters. The 10 risk factors¹² include the following:

1. Income-to-poverty ratio
2. Single or zero caregiver household
3. Unit-level crowding
4. Communication barrier
5. Aged 65 years or older
6. Lack of full-time or year-round employment (household)
7. Disability
8. No health insurance coverage
9. No vehicle access (household)
10. No broadband internet access (household)

¹² The Community Resilience Estimates are developed by the U.S. Census Bureau; initial release date, August 10, 2021. Methodology is described at the [U.S. Census Bureau Community Resilience Methodology page](https://www.census.gov/programs-surveys/community-resilience-estimates/technical-documentation/methodology.html) (<https://www.census.gov/programs-surveys/community-resilience-estimates/technical-documentation/methodology.html>).

Fairfax County, VA

Map of Percentage of Residents in Tract with 3+ Risk Factors

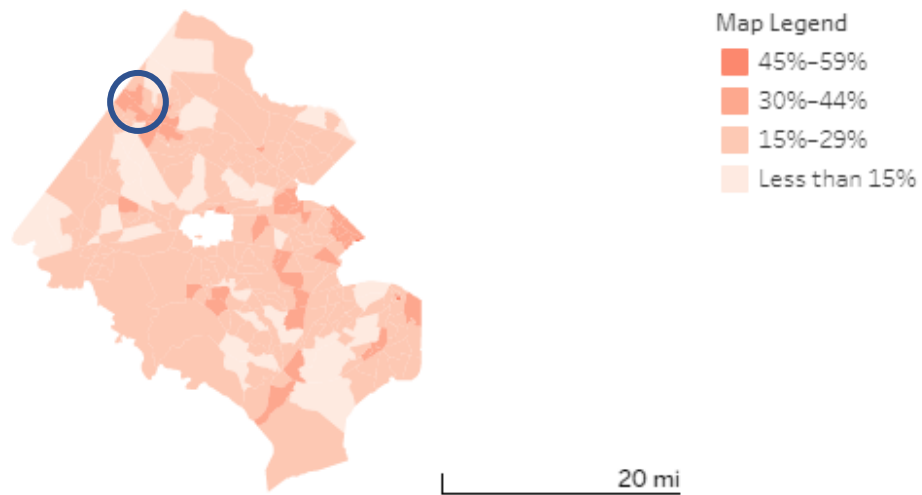


Figure 9: Community Resilience Estimate¹³

The estimate is categorized into three groups: zero risks, one or two risks, and three or more risks. The CRE for Fairfax County is 14.72 percent, meaning that 167,857 of county residents have three or more risk factors.

The combination of data and analysis described in this section provides a comprehensive representation of Fairfax County's risk, vulnerability, and resilience to all hazards.

7.3. New Hazard Risk Challenges or Obstacles to Be Monitored in the Next Planning Cycle

The Town of Herndon Planning Team identified specific hazard challenges and obstacles to be monitored in the next planning cycle:

- The risk of cyber-related incidents on critical infrastructure and key resource sites.
- Climate change causing increased precipitation intensity and quantities, increased extreme heat, increased storm severity, and increased coastal (Potomac River) flooding.
- Increases in the number of excessive rainfall events that impact new areas with floods.

¹³ Community Resilience Estimates, U.S. Census Bureau

8. Mitigation Actions

8.1. Goals and Objectives

The Town of Herndon Planning Team adopted the regional goal statement presented in [Section 8, Base Plan](#).

8.2. Status of Previous Actions

The Town of Herndon monitors actions and tracks progress through the periodic review, evaluation, revision, and update of the NOVA HMP. Some projects that contribute to risk reduction have been completed or are currently in progress, but have not been included in this plan for one of the following reasons:

- Project funding has been approved, received, or identified, and additional resources are not needed to complete the project.
- The project scope is inconsistent with the hazard mitigation planning goals defined in this plan.
- The responsible department, agency, or organization maintains an internal tracking system that documents progress and resulting risk reduction.

All five of the Town's previous mitigation actions are in progress and are being carried forward for the 2022 plan update.

8.3. New Mitigation Actions

The Town of Herndon Planning Team identified four new mitigation actions to include in this plan. Proposed actions address risks consistent with the jurisdiction's highest risk hazards—flood/flash flood and winter weather—in addition to actions that address hazard mitigation education programs for all hazards.

The Town of Herndon Jurisdiction Needs Assessment Questionnaire highlighted Fairfax County's *Community-wide Energy and Climate Action Plan (CECAP)*, September 14, 2021, as providing the opportunity to identify actions and strategies to mitigate climate-related hazards and reduce the impact of climate-related events on residents and businesses.

8.4. Action Plan for Implementation and Integration

The new actions, combined with those carried forward from the 2017 plan, result in a total of nine actions that will be implemented in the upcoming planning cycle.

The Town of Herndon Police Department is responsible for coordinating municipal departments and agencies participating in hazard mitigation activities. The department's designated Mitigation Coordinator is responsible for implementing the mitigation plan on two levels: implementation of the jurisdiction's actions and facilitating the implementation of the multi-jurisdictional regional plan. Tasks to ensure that the Town's actions are implemented are integrated into the *Action Plan for Implementation and Integration* (which includes the prioritized list of Mitigation Actions) and plan maintenance procedures described in the next section. The Action Plan for Implementation and Integration describes how the Town's hazard mitigation risk assessment and goals will be incorporated into its existing plans and procedures.

Table 19: Action Plan for Implementation and Integration, Town of Herndon

Existing Plan or Procedure	Description of How Mitigation Will Be Incorporated or Integrated
Integrate goals into the local comprehensive plan.	Continue to coordinate with the Department of Community Development and other applicable departments to incorporate current and emerging risks and actions into planning efforts.
Review/update land development regulations for consistency with mitigation goals.	Continue coordination with the Department of Community Development regarding future land use projects.
Review/update building/zoning codes for consistency with mitigation goals.	Work with Zoning Administrator regarding town zoning ordinances and consistency with mitigation goals.
Maintain regulatory requirements of the floodplain management program (NFIP).	Support the Community Development Department who is responsible for floodplain management.
Continue public engagement in mitigation planning.	Continue to promote awareness of hazards and incorporate public feedback into planning processes and seek resident feedback supporting mitigation.
Identify opportunities for mitigation education and outreach.	Identify opportunities to conduct community outreach to promote the importance of mitigation projects.
Review/update emergency plans to address evacuation and sheltering.	Evacuation has been identified as a priority incident annex to be developed as part of the 2021 update to the Town 's EOP.
Maintain ongoing enforcement of existing policies.	Support the Department of Community Development with any applicable enforcement policies.
Monitor funding opportunities.	Police Department will continue to monitor funding sources and coordinate with Departments on projects that support mitigation actions.
Incorporate goals and objectives into day-to-day government functions.	Police Department will incorporate the concept of mitigation into day-to-day government functions, including continual monitoring of the action items identified in the 2022 update.
Incorporate goals into day-to-day development policies, reviews, and priorities.	Continue work with Departments of Public Works and Community Development to incorporate mitigation into day-to-day activities.

9. Annex Maintenance Procedures

9.1. Maintenance of the NOVA HMP, Base Plan

The point of contact for the Northern Virginia Mitigation Project Team is the facilitator for the process to monitor, evaluate, and update the **NOVA HMP, Base Plan**. This facilitator is responsible for initiating the annual activities, convening the NOVA Planning Team (made up of the Emergency Managers Group and Planning Group), and providing follow-up reports to designated entities defined in the method and schedule for the plan maintenance process, as outlined in **Section 3, Base Plan**.

Table 20: Town of Herndon Plan Maintenance Responsibilities for the Northern Virginia Hazard Mitigation Plan, Base Plan

Activity	Responsibilities
Monitoring the Plan	<ul style="list-style-type: none"> • Represent the jurisdiction during the monitoring process. • Collect, analyze, and report data to Fairfax County/NOVA Planning Group. • Maintain records and documentation of all jurisdictional monitoring activities. • Assist in disseminating reports to stakeholders and the public. • Promote the mitigation planning process with the public and solicit public input.
Evaluating the Plan	<ul style="list-style-type: none"> • Represent the jurisdiction during the evaluation process. • Collect and report data to the Fairfax County/NOVA Planning Group. • Maintain records and documentation of all jurisdictional evaluation activities. • Assist in disseminating information and reports to stakeholders and the public.
Updating the Plan	<ul style="list-style-type: none"> • Represent the jurisdiction during the planning cycle, including plan review, revision, and update process. • Collect and report data to the Fairfax County/NOVA Planning Group. • Maintain records and documentation of all jurisdictional plan review and revision activities. • Help disseminate reports to stakeholders and the public.

9.2. Maintenance of the Jurisdiction Annex

In addition to maintenance of the **NOVA HMP, Base Plan**, the Town of Herndon Mitigation Planning Coordinator will facilitate the method and schedule for maintaining the **Jurisdiction Annex**. The Town's maintenance method and schedule may coincide with that of Fairfax County and be conducted simultaneously.

9.2.1. Plan Maintenance Schedule

- **Monitor:** Annually and/or following major disaster(s)
- **Evaluate:** Annually and/or following a major disaster(s)
- **Update:** Annual tasks over the five-year planning cycle; planning process in the fifth year

Table 21: Town of Herndon Jurisdiction Annex Maintenance Procedures

Activity	Procedure and Schedule	Outcome
Monitoring the Annex	<ol style="list-style-type: none"> 1. Schedule the annual plan review with the jurisdiction planning team. 2. Review the status of all mitigation actions, using the <i>Mitigation Action Implementation Worksheet</i> (Section 3, Attachment A, NOVA HMP Base Plan). 	<ul style="list-style-type: none"> • Produce an annual report that includes the following: <ul style="list-style-type: none"> ▪ Status update of all mitigation actions ▪ Summary of any changes in hazard risk or vulnerabilities and capabilities ▪ Summary of activities conducted for the Action Plan for Implementation and Integration
Evaluating the Annex	<ol style="list-style-type: none"> 3. Schedule the annual plan evaluation with jurisdiction planning team. 4. Evaluate the current hazard risks and vulnerabilities and hazard mitigation capabilities using the <i>Planning Considerations Worksheet</i>, (Section 3, Attachment C, NOVA HMP Base Plan). 	<ul style="list-style-type: none"> • Submit the annual report to the NOVA HMP Planning Project Team Point of Contact.
Updating the Annex	<ol style="list-style-type: none"> 1. Coordinate with Fairfax County and the Northern Virginia jurisdictions to identify the method and schedule for the five-year update of the NOVA HMP. 2. Participate in the planning process. 3. Provide input related to the plan components. 4. Following FEMA Approvable Pending Adoption (APA) designation, adopt the updated plan. 	<ul style="list-style-type: none"> • Adoption of the FEMA-approved plan every five years will maintain the jurisdiction's eligibility for federal post-disaster funding.

Mitigation actions presented in the Town of Herndon Jurisdiction Annex may be reviewed, revised, and updated at any time.

The Town of Herndon will continue to be a planning partner with multiple jurisdictions and regional entities, including Fairfax County, to identify hazard mitigation opportunities that reduce risk to the hazards identified in this plan.

10. Annex Adoption

The Town of Herndon Jurisdiction Annex will be adopted simultaneously with the adoption of the *NOVA HMP*.

11. Attachments

- Attachment 1: Adoption Resolution
- Attachment 2: Documentation of Public Participation
- Attachment 3: Mitigation Action Worksheets

11.1. Attachment 1: Adoption Resolution

[This page is a placeholder for the Adoption Resolution for this jurisdiction.]

11.2. Attachment 2: Documentation of Public Participation



Figure 10: Town of Herndon HMP Survey Social Media Outreach Twitter

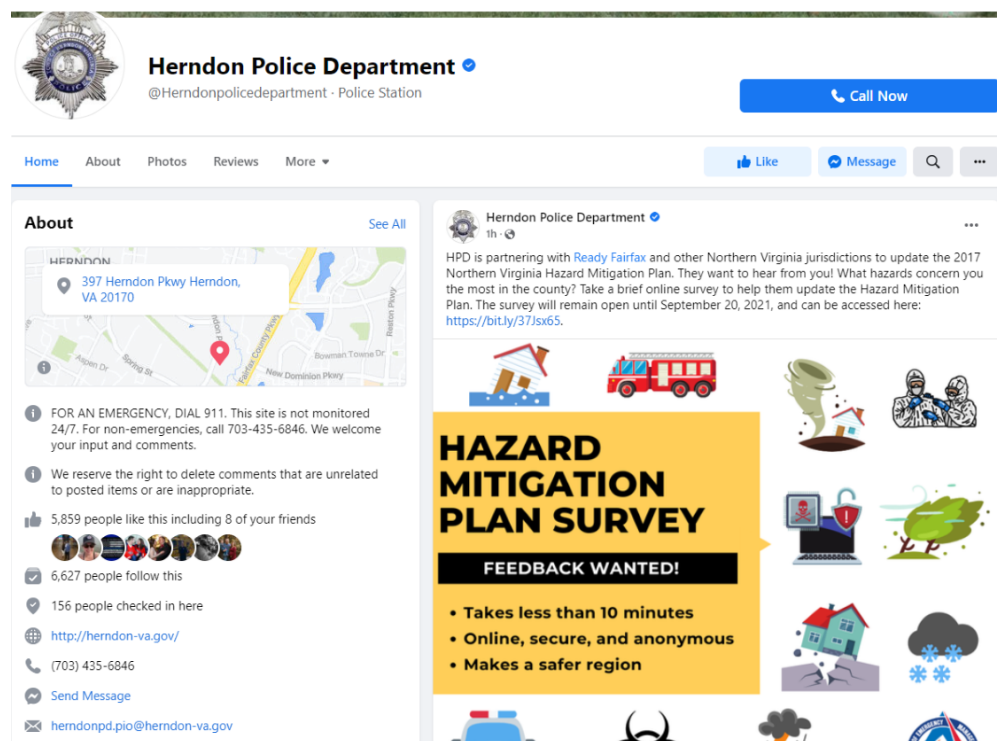


Figure 11: Town of Herndon HMP Survey Social Media Outreach Facebook

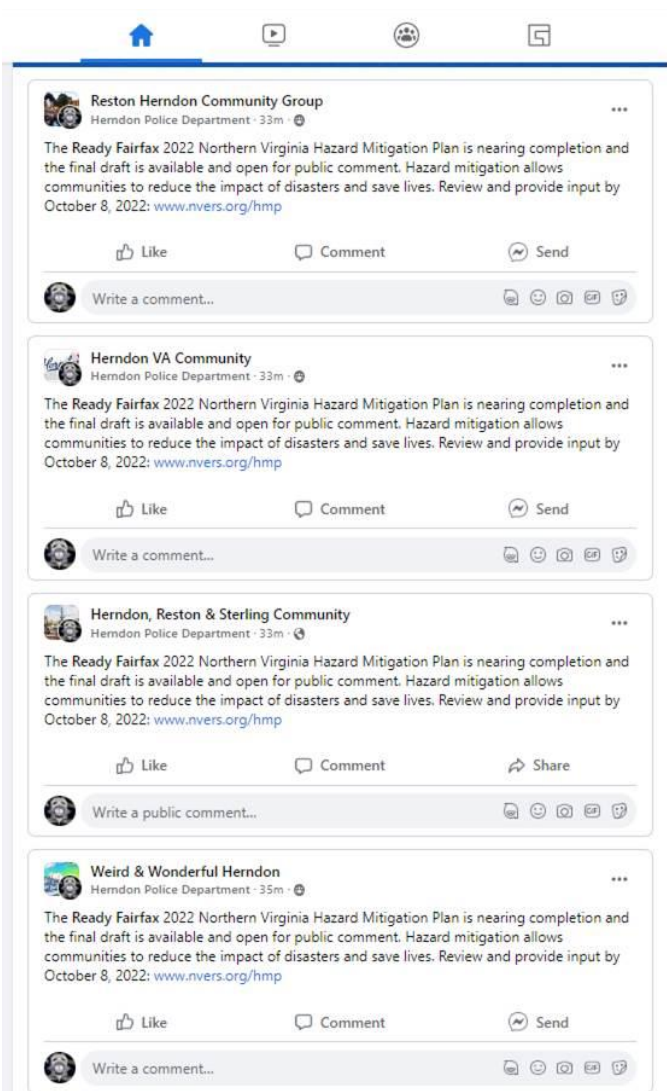
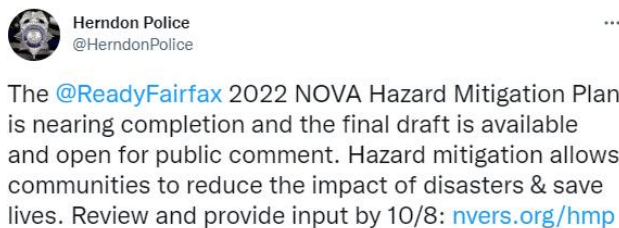


Figure 12: Final Draft Public Comment Social Media Outreach



1:30 PM · Sep 12, 2022 · Twitter Web App

Figure 13: Final Draft Public Comment Twitter

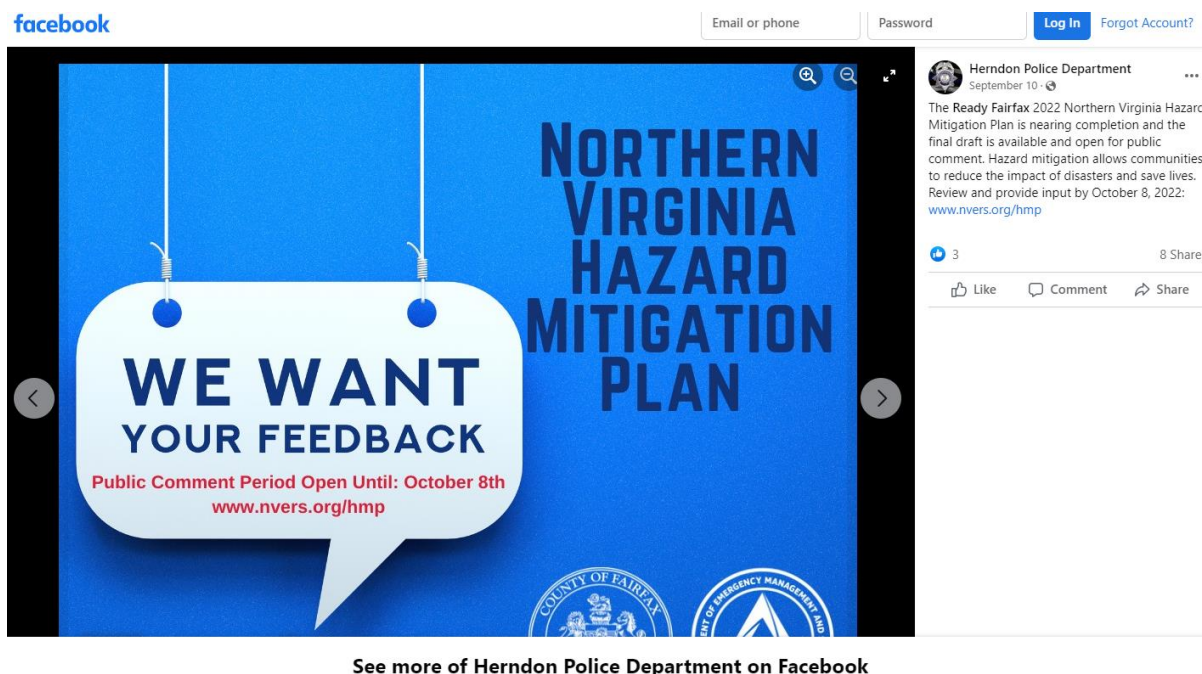


Figure 14: Final Draft Public Comment Facebook

11.3. Attachment 3: Mitigation Actions

Table 22: Previous Mitigation Actions

Project No.	Agency/ Department Mitigation Action	Lead Agency/ Department/ Organization	Hazard(s)	Funding Source	Target Completion Date	Interim Measure of Success	Priority	Current Status
2017-1	Purchase and plan for deployment of industrial-grade water pumps to mitigate floodwaters in known flood-prone locations, including roadways.	Public Works	<ul style="list-style-type: none"> Flood/Flash Flood Winter Weather 	FEMA Unified Hazard Mitigation Assistance Funding	Ongoing	Identify and prioritize locations for placement of pumps, identify funding.	Medium	In progress
2017-2	Improve flood prone intersections by adding new drainage structures and systems. Two known intersections: 1) Herndon Pkwy and Van Buren Street, 2) Monroe Street and Worldgate Drive.	Public Works	<ul style="list-style-type: none"> Flood/Flash Flood Winter Weather 	Currently included in town 2022 CIP budget	Expected completion in 2022	Meet construction milestones and deadlines.	Medium	In progress
2017-3	Evaluate and assess older stormwater systems in the Town to include 5-year CCTV inspections and trenchless repair methods.	Public Works	<ul style="list-style-type: none"> Flood/Flash Flood Winter Weather 	FEMA Unified Hazard Mitigation Assistance Funding, town's capital budget	Ongoing	Initiate and follow a plan and schedule for evaluation and assessment.	Medium	In progress

Project No.	Agency/ Department Mitigation Action	Lead Agency/ Department/ Organization	Hazard(s)	Funding Source	Target Completion Date	Interim Measure of Success	Priority	Current Status
2017-4	Support mitigation of priority flood-prone structures through the promotion of acquisition/demolition, elevation, floodproofing, minor localized flood control projects, mitigation reconstruction, and, where feasible and appropriate, using FEMA HMA programs.	Public Works	<ul style="list-style-type: none"> Flood/Flash Flood High Wind/Severe Storm Winter Weather 	FEMA Unified Hazard Mitigation Assistance Funding	Ongoing	Identify Properties.	Medium	In progress (Currently no repetitive loss properties. Updated NFIP mapping may change properties impacted. Exploring all options, including buyouts.)
2017-5	Review locality's compliance with the National Flood Insurance Program with an annual review of the Floodplain Ordinances and any newly permitted activities in the 100-year floodplain. Additionally, conduct an annual review of repetitive loss and severe repetitive loss property list requested of VDEM to ensure accuracy. The review will include verification of the geographic location of each repetitive loss property and determination if that property has been mitigated and by what means. Provide corrections if needed by filing form FEMA AW-501.	Community Development/ Public Works	<ul style="list-style-type: none"> Flood/Flash Flood High Wind/Severe Storm Winter Weather 	General Funds	Ongoing	Establish a schedule of review.	Medium	In progress

Table 23: New Mitigation Actions

Project No.	Agency/ Department Mitigation Action	Lead Agency/ Department/ Organization	Hazard	Funding Source	Target Completion Date	Interim Measure of Success	Priority	Comment
2022-1	Reclaim Sugarland Run Creek creekbanks to reduce and eliminate destabilization.	Public Works	<ul style="list-style-type: none"> Flood Severe Weather 	FEMA Unified Mitigation Assistance Funding, town's capital budget	Ongoing	Complete geomorphic assessment.	Medium	None
2022-2	Work with FEMA to re-examine flood zones and update FIRMS. Use this information to reevaluate NFIP activities.	Public Works	<ul style="list-style-type: none"> Flood Severe Weather 	FEMA Unified Hazard Mitigation Assistance Funding town's capital budget	Ongoing	Multi-year project; meet FEMA deadlines throughout project.	Medium	Use this information to re-evaluate NFIP activities.
2022-3	Continue to implement building and development standards as required under the NFIP.	Planning and Zoning	<ul style="list-style-type: none"> Flood 	Hazard Mitigation Assistance grant funding, US Army Corps of Engineers, town Funding, VDEM				
2022-4	Develop an outreach/education program aimed at promoting hazard mitigation for the residents of Herndon	Police Dept. Planning and Zoning	<ul style="list-style-type: none"> All Hazards 	Town Funding			High	This program will be completed when funding is available.