



AGENDA ITEM FORM

TYPE OF AGENDA ITEM:

- CONSENT AGENDA
- PRESENTATION
- ACTION ITEM
- TOWN MANAGER & STAFF COMMENTS
- PUBLIC HEARING
 - Duly Advertised

PURPOSE OF ITEM:

- INFORMATION ONLY
- DISCUSSION ONLY
- DISCUSSION AND/OR DECISION
 - Introduction Resolution
 - Ordinance Grant/MOU
 - By Motion Bylaws

PRESENTER: Richard West

PRESENTER TITLE: Assistant Director of Public Works

AGENDA ITEM:

Resolution Adopting the Northern Virginia Hazard Mitigation Plan 2010 Update

BACKGROUND / SUMMARY:

On July 19, 2012, staff presented the Update to the Northern Virginia National Mitigation Plan for adoption. Council directed staff to change the resolution to include verbiage that although Council adopts the updated plan that updated information on the Town of Dumfries portion of the plan to the MAC would be submitted for the record.

To see the full document go to <http://alexandriava.gov/fire/info/default.aspx?id=49926>

ATTACHMENTS:

- Extract from the Plan Update, Chapter 7: Jurisdiction Executive Summaries, XI. Town of Dumfries
- Updated Chart
- Revised Resolution Adopting the Northern Virginia Hazard Mitigation Plan 2010 Update

REQUESTED ACTION:

NO ACTION REQUESTED

Approve the resolution

FOR MORE INFORMATION, CONTACT: Name:

Richard West

Phone#: 703 221-3400

E-mail:

rwest@dumfriesva.gov

FOR USE DURING MEETING

| | | |
|--------------------------|--------------------------|------------|
| Y | N | |
| <input type="checkbox"/> | <input type="checkbox"/> | Brewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Praino |
| <input type="checkbox"/> | <input type="checkbox"/> | Washington |

VOTE:

| | | |
|--------------------------|--------------------------|----------|
| Y | N | |
| <input type="checkbox"/> | <input type="checkbox"/> | Foreman |
| <input type="checkbox"/> | <input type="checkbox"/> | Reynolds |

PASSED

| | |
|--------------------------|--------------------------|
| Y | N |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

NOT PASSED

| | | |
|--------------------------|--------------------------|-----------|
| | | |
| <input type="checkbox"/> | <input type="checkbox"/> | Forrester |
| <input type="checkbox"/> | <input type="checkbox"/> | Toney |



XI. Town of Dumfries

Located in Prince William County, Dumfries was chartered on May 11, 1749, and is Virginia's oldest continuously chartered town. John Graham gave the land on which the town was founded and it is named after his birthplace, Dumfrieshire, Scotland. The population of the town was 4,937 as of the 2000 Census and was estimated by the Census Bureau to be 4,954 in 2009. Based on the 2005-2009 American Community Survey, the town population was comprised of 47.6% white, 31.4% black or African American, 0.7% Native American, 2.8% Asian, 12.9% from other races, and 4.6% bi-racial. Hispanics or Latinos, of any race, represent 27.4% of the total population.



Dumfries has a moderate climate. Temperatures generally range from lows in the mid-20s in January to highs in the upper-80s and lower-90s during the month of July. Annual precipitation averages are approximately 39 inches of rain and 16 or more inches of snow fall in any given year. Recent history proves that weather events well outside of these averages can and do occur. Climate change is expected to continue the trend of the past 40 to 50 years of an increased frequency of extreme weather events.

Dumfries is also subjected to tidal and storm surge flooding, due to the town's location below the Fall Line on Quantico Creek. As sea levels rise, permanent inundation of low lying areas along and near the river shoreline is also a concern. Dumfries is also susceptible to other natural hazards and risks, such as storm damage and winter weather, as evidenced during the 2009 – 2010 winter and summer seasons.

To a large extent, historical records are used to identify the level of risk within the Northern Virginia region, including Dumfries, with the assumption that the data sources cited are reliable and accurate. Unless otherwise cited, data on historical weather-related events is based on information made available through the Storm Event Database by NOAA's NCDC⁴⁸. Hazards were ranked using a semi-quantitative scoring system that involved grouping the data values (normalized to account for inflation) based on statistical methods. This method prioritizes hazard risk based on a blend of quantitative factors extracted from NCDC and other available data sources. The parameters considered include:

- Historical occurrence;
- Vulnerability of population in the hazard area; and
- Historical impact, in terms of human lives and property and crop damage.

The hazard scores were assigned a category of 'Low'; 'Medium-Low'; 'Medium'; 'Medium-High'; or 'High'. Based on this methodology, Flood, Wind, Tornado, Winter Weather, and Drought hazards were ranked as 'High' for Dumfries. See Table 7.51 for a summary of hazard rankings.



Table 7.51: Hazard Ranking for Town of Dumfries

| Hazard | Flood | Wind | Tornado | Winter Weather | Drought | Earthquake | Landslide | Wildfire | Karst |
|---------|-------|------|---------|----------------|---------|------------|-----------|----------|---------|
| Ranking | High | High | High | High | High | Med | Med-Low | Med | Med-Low |

Annualized loss statistics for Prince William County based on NCDC historical data as the result of Flood, High Wind, Tornado and Winter Storm are summarized in Table 7.52.

Table 7.52: NCDC Annualized Loss by Hazard for Prince William County

Annualized Loss as determine through NCDC data
(based on property and crop damages and number of years of record)

| | Flood | High Wind | Tornado | Winter Storm | Total Annualized Loss (All Hazards) |
|------------------------|-----------|-----------|-----------|--------------|-------------------------------------|
| <i>Years of Record</i> | 17 | 21 | 59 | 17 | |
| Prince William County | \$155,044 | \$795,511 | \$117,080 | \$60,502 | \$1,242,539 |

It should be noted that while the NCDC storm events data is the most comprehensive database available for which to compare most natural hazards, its considerable limitations include spotty property and crop damage data that are considered to significantly under-estimate actual losses.

FEMA’s HAZUS^{MH} model provides another method for estimating annualized loss that uses science and engineering principals and building stock values along with historical hazard occurrences to analyze potential damage and economic loss. Annualized loss statistics for Dumfries based on HAZUS^{MH} runs for flood, hurricane, and earthquake are found in Tables 7.53, 7.54 and 7.55 below.

Table 7.5 3: HAZUS^{MH} - Annualized Loss Due to Flood for Town of Dumfries

| Jurisdiction | Building | Contents | Inventory | Relocation | Income | Rental | Wage | Total |
|------------------|-----------|-----------|-----------|------------|--------|--------|---------|------------------|
| Town of Dumfries | \$396,000 | \$449,000 | \$7,000 | \$0 | \$0 | \$0 | \$2,000 | \$854,000 |

Table 7.54: HAZUS^{MH} - Annualized Loss Due to Hurricane for Town of Dumfries

| Jurisdiction | Building | Contents | Inventory | Relocation | Income | Rental | Wage | Total |
|------------------|----------|----------|-----------|------------|--------|--------|------|----------------|
| Town of Dumfries | \$4,441 | \$451 | \$4 | \$392 | \$23 | \$191 | \$41 | \$5,542 |



Table 7.55: HAZUS^{MH} - Annualized Loss Due to Earthquake for Town of Dumfries

| Jurisdiction | Annualized Loss |
|------------------|-----------------|
| Town of Dumfries | \$2,492 |

As seen in the HAZUS^{MH} analysis, the potential annual loss to property, contents, inventory and related effects due to flooding is high, due to Dumfries’s location. Earthquakes occasionally occur in the region; that was the case July 16, 2010, when a 3.6 magnitude quake centered near Gaithersburg, Maryland, shook the area.

A. Town of Dumfries Mitigation Actions and Action Plan



| # | Agency/Department: Mitigation Action | Lead Agency Department Organization | Flood | Winter Weather | Thunderstorm | Tornado | Hurricane | Drought | Wildfire | Earthquake | Extreme Temps | Dam Failure | Erosion | Landslides | Karst | Human-Caused | Funding Source | Target Completion Date | Interim Measure of Success | Priority | Keep Action Redacted (Yes/No) |
|-------------|---|--|-------|----------------|--------------|---------|-----------|---------|----------|------------|---------------|-------------|---------|------------|-------|--------------|--|--|--|----------|-------------------------------|
| | | | | | | | | | | | | | | | | | | | | | |
| 1 (2010) | Assess the roadway structure at various intersections throughout the Town of Dumfries to avoid repeated flooding. | Public Works | X | | X | | X | | | | | | X | | | | Hazard Mitigation Assistance grant funding, State funding possible, and any Grant programs | December 2015 | Identify funding sources by January 2012 | High | No |
| 2 (2010) | Continue to implement an effective MS-4 Program which will bring awareness to help prevent hazardous waste material being flushed down the drain or into ditches. | Public Works | | | | | | | | | | | | | | X | Environmental Friendly funding, EPA grants, town/county funding, and fee based funding | December 2015, but mainly an ongoing program | Identify all drainage outfalls and have them electronically uploaded on a data base by December 2011. | High | No |
| 3 (2010) | Conduct annual outreach to each FEMA-listed repetitive loss and severe repetitive loss property owner, providing information on mitigation programs (grant assistance, mitigation measures, and flood insurance information) that can assist them in reducing their flood risk. | Building official with assistance from Zoning Director | X | | X | | X | | | | | | | | | | FEMA Unified Hazard Mitigation Assistance funding for qualified structures. | Ongoing | Develop outreach materials, or identify appropriate outreach materials for dissemination by June 2011. | Medium | No |
| 4 (2010) | Support mitigation of priority flood-prone structures through promotion of acquisition/demolition, elevation, flood proofing, minor localized flood control projects, mitigation reconstruction and where feasible using FEMA HMA programs | Public Works in conjunction with Zoning Department | X | | X | | X | | | | | | | | | | FEMA Unified Hazard Mitigation Assistance funding for qualified structures. | Ongoing | Identify all priority flood-prone structures by December 2011. | Medium | No |



| # | Agency/Department: Mitigation Action | Lead Agency Department Organization | Flood | Winter Weather | Thunderstorm | Tornado | Hurricane | Drought | Wildfire | Earthquake | Extreme Temps | Dam Failure | Erosion | Landslides | Karst | Human-Caused | Funding Source | Target Completion Date | Interim Measure of Success | Priority | Keep Action Redacted (Yes/No) |
|----------|---|-------------------------------------|-------|----------------|--------------|---------|-----------|---------|----------|------------|---------------|-------------|---------|------------|-------|--------------|---|------------------------|--|----------|-------------------------------|
| | where appropriate. | | | | | | | | | | | | | | | | | | | | |
| 5 (2010) | Promote structural mitigation to assure redundancy of critical facilities, to include but not limited to roof structure improvement, to meet or exceed building code standards, upgrade of electrical panels to accept generators, etc. | Public Works | X | | X | | X | | | | | | | | | | FEMA Unified Hazard Mitigation Assistance funding for qualified structures. | Ongoing | Query local government building services staffs as to effectiveness of provided information regarding the structural review. | Medium | No |
| 6 (2010) | Review Town of Dumfries' 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. | Public Works, Zoning Departments | X | | X | | X | | | | | | | | | | General funds | Ongoing | Establish a schedule of review and review committee (if necessary) by June 2011. | Medium | No |
| 7 (2010) | Continue to identify and employ a broad range of warning systems throughout the Town of Dumfries. | Town of Dumfries Police Department | X | X | X | X | X | X | X | X | X | X | X | X | X | X | UASI funding, DHS grants, town/county funding | December 2015 | Identify one new warning system to utilize by December 2012. | Low | No |



XI. Town of Dumfries

A. Town of Dumfries Mitigation Actions and Action Plan

Mitigation Actions and Action Plan to be further evaluated and revised as deemed necessary.

Meanings Priorities in the following chart:

- High (H) – actions should be implemented in the short-term
- Medium (M) – actions should be implemented in the long-term
- Low (L) – actions should be implemented only as funding becomes available





| # | Agency/Department: Mitigation Action | Lead Agency Department Organization | Flood | Winter Weather | Thunderstorm | Tornado | Hurricane | Drought | Wildfire | Earthquake | Extreme Temps | Dam Failure | Erosion | Landslides | Karst | Human-Caused | Funding Source | Target Completion Date | Interim Measure of Success | Priority | Keep Action Redacted (Yes/No) |
|-------------|---|--|-------|----------------|--------------|---------|-----------|---------|----------|------------|---------------|-------------|---------|------------|-------|--------------|--|--|--|----------|-------------------------------|
| | | | | | | | | | | | | | | | | | | | | | |
| 1 (2010) | Assess the roadway structure at various intersections throughout the Town of Dumfries to avoid repeated flooding. | Public Works | X | | X | | X | | | | | | | | | | Hazard Mitigation Assistance grant funding, State funding possible, and any Grant programs | December 2015 | Intersections identified. Mine Road geometry was improved to eliminate ponding May 2012. | High | No |
| 2 (2010) | Continue to implement an effective MS-4 Program which will bring awareness to help prevent hazardous waste material being flushed down the drain or into ditches. | Public Works | | | | | | | | | | | | | | X | EPA, state grants, Stormwater Management Fees | December 2015, but mainly an ongoing program | Entire system surveyed and evaluated by US Army Corps of Engineers, September 2004. Digitized by staff May 2012. | High | No |
| 3 (2010) | Conduct annual outreach to each FEMA-listed repetitive loss and severe repetitive loss property owner, providing information on mitigation programs (grant assistance, mitigation measures, and flood insurance information) that can assist them in reducing their flood risk. | Building official with assistance from Zoning Director | X | | X | | X | | | | | | | | | | FEMA Unified Hazard Mitigation Assistance funding for qualified structures. | Ongoing | Identify repetitive loss property owners, develop outreach materials for next Plan Update (2015) | Medium | No |
| 4 (2010) | Support mitigation of priority flood-prone structures through promotion of acquisition/demolition, elevation, flood proofing, minor localized flood control projects, mitigation reconstruction and where feasible using FEMA HMA programs | Public Works in conjunction with Zoning Department | X | | X | | X | | | | | | | | | | FEMA Unified Hazard Mitigation Assistance funding for qualified structures. | Ongoing | Identify all priority flood-prone structures for next Plan Update (2015) | Medium | No |



| # | Agency/Department: Mitigation Action | Lead Agency Department Organization | Flood | Winter Weather | Thunderstorm | Tornado | Hurricane | Drought | Wildfire | Earthquake | Extreme Temps | Dam Failure | Erosion | Landslides | Karst | Human-Caused | Funding Source | Target Completion Date | Interim Measure of Success | Priority | Keep Action Redacted (Yes/No) |
|----------|---|-------------------------------------|-------|----------------|--------------|---------|-----------|---------|----------|------------|---------------|-------------|---------|------------|-------|--------------|---|------------------------|---|----------|-------------------------------|
| 5 (2010) | where appropriate. Promote structural mitigation to assure redundancy of critical facilities, to include but not limited to roof structure improvement, to meet or exceed building code standards, upgrade of electrical panels to accept generators, etc. | Public Works | X | | X | | X | | | | | | | | | | FEMA Unified Hazard Mitigation Assistance funding for qualified structures. | Ongoing | Town Hall was evaluated January 2011. Community Center and Shop to be evaluated in FY 2013. | Medium | No |
| 6 (2010) | Review Town of Dumfries' 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. | Public Works, Zoning Departments | X | | X | | X | | | | | | | | | | General funds | Ongoing | Establish a schedule of review by December 2012. | Medium | No |
| 7 (2010) | Continue to identify and employ a broad range of warning systems throughout the Town of Dumfries. | Town of Dumfries Police Department | X | X | X | X | X | X | X | X | X | X | X | X | X | X | UASI funding, DHS grants, town/county funding | December 2015. | Initiated Blackboard Connection 2010. Identify additional warning systems and implement as funding becomes available. | Low | No |

AT A REGULAR MEETING OF THE DUMFRIES TOWN COUNCIL, HELD ON TUESDAY, JULY 10, AT 7:00 P. M., IN COUNCIL CHAMBERS, LOCATED AT 17755 MAIN STREET, DUMFRIES, VIRGINIA: ON A MOTION DULY MADE BY _____, AND SECONDED BY _____, THE FOLLOWING RESOLUTION WAS ADOPTED BY THE FOLLOWING VOTE:

Charles C. Brewer, ____;
Gerald M. Foreman, II, ____;
Kristin W. Forrester, ____;
Louis A. Praino, ____;
Helen D. Reynolds, ____;
Willie J. Toney, ____;
Gwen P. Washington, ____;

RESOLUTION TO ADOPT THE NORTHERN VIRGINIA HAZARD MITIGATION PLAN UPDATE

WHEREAS, the Disaster Mitigation Act of 2000, as amended, requires that local governments develop, adopt, and update natural hazard mitigation plans in order to receive certain federal assistance; and,

WHEREAS, the Northern Virginia Regional Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44C.F.R.201.6; and,

WHEREAS, a Mitigation Advisory Committee (MAC), comprised of representatives from the Counties of Arlington, Fairfax, Loudoun, and Prince William; the Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park; and Towns of Clifton, Dumfries, Haymarket, Herndon, Leesburg, Middleburg, Purcellville, Occoquan, Quantico, Round Hill, and Vienna, was convened in order to assess the risks of hazards facing the Northern Virginia region, and to make recommendations on actions to be taken to mitigate these hazards; and,

WHEREAS, a request for proposals was issued to hire an experienced consulting firm to work with the MAC to update a comprehensive hazard mitigation plan for the Northern Virginia region; and,

WHEREAS, the plan incorporates the comments, ideas and concerns of the community and of the public in general, which this plan is designed to protect, ascertained through a series of public meetings, publication of the draft plan, press releases, and other outreach activities; and

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Dumfries this 10th day of July, 2012 does hereby approve and adopt the Northern Virginia Hazard Mitigation Plan Update dated December 7, 2011, **and directs the Town Manager to submit updated information on the Town of Dumfries portion of the plan to the MAC for the record**, and

BE IT FURTHER RESOLVED that the Town of Dumfries recognizes that recent events of the Virginia Earthquake, Hurricane Irene, and Tropical Storm Lee are not captured in the current FEMA approved plan or the pending update of the local Hazard Mitigation Plan. Being committed to mitigation planning and activities, the Town of Dumfries, as part of the next update, will fully endeavor to identify, evaluate, and include these events and their impacts.

By Order of Council:

Gerald M. Foreman, Mayor

ATTEST:

Dawn Hobgood, Town Clerk