

# AGENDA

Norton City Council

May 20, 2014

6:00 P.M.

1. Roll Call
2. Invocation – John Ellington
3. Pledge of Allegiance
4. Approval of Minutes
  1. Regular Meeting of May 6, 2014
5. Audience for Visitors
6. Old Business
  - A. Presentation of the Norton City School Budget for Fiscal Year 2014-15.
  - B. Update on the Safe Routes to School Project.
7. New Business
  - A. Presentation of a Draft Stormwater Management Ordinance.
  - B. Resolution Adopting the Updated LENOWISCO Hazard Mitigation Plan.
  - C. Discussion About Decommissioning The Swimming Pool.
  - D. Confirmation of a Check(s)/Transfer(s) in Excess of \$100,000.

E. Closed Meeting to Discuss Personnel as Per Section 2.2-3711 (A) (1) and Discussion or Consideration of the Acquisition of Real Property for a Public Purpose as Per Section 2.2-3711 (A) (3) of the Code of Virginia, as Amended.

1. Appointment to the Southwest Regional Recreation Authority for a Three (3) Year Term; Currently William "Buzz" Witt Whose Term Ends 6/30/2014.

To 6/30/2017

2. Nomination to the Board of Zoning Appeals for a Five (5) Year Term; Currently William Hutchinson Whose Term Ends 6/2/2014.

To 6/2/2019

3. Nomination to the Board of Zoning Appeals for a Five (5) Year Term; Currently Bill Bledsoe Whose Term Ends 6/2/2014.

To 6/2/2019

4. Nomination to the Board of Zoning Appeals for a Five (5) Year Term; Currently J. D. Adams Whose Term Ends 6/2/2014.

To 6/2/2019

8. Comments by the City Manager, City Attorney, and City Council.

9. Adjournment.

## **FY15 FISCAL BUDGET WORKSESSION**

The regularly scheduled meeting of the Norton City Council was held on Tuesday, May 6, 2014 at 6:00 p.m. in the Municipal Council Chambers with Mayor William Mays presiding.

Present: Mark Caruso, William Mays, Joseph Fawbush, and Terry Roop

Absent: Joseph Hunnicutt

Also Present: Fred L. Ramey, Jr., City Manager and Bill Bradshaw, City Attorney

The invocation was given by Father Tim Drake and was followed by the pledge of allegiance led by Police Chief James C. Lane.

Upon a motion by Councilman Fawbush, seconded by Councilman Caruso, and passed by unanimous vote, the minutes of the April 15, 2014 meeting were adopted as presented.

26122

During the Mayor's call for visitors, Ms. Imogene Emershaw, 1227 Spruce Street, NW and owner of property at 1223 Spruce Street, NW addressed Council. She advised that she and her son recently attended the Planning Commission's public hearing on April 10<sup>th</sup> regarding the proposed adoption of the amendment to the City's Zoning Ordinance for fences and hedges. She advised that her property at 1223 Spruce Street, NW is non-confirming and grandfathered. She handed out a brochure containing pictures of the situation she has experienced regarding a fence issue.

26123

At this time, Councilman Hunnicutt took his seat on Council.

26124

She further asked that Council take this information discussed by her tonight in consideration when voting on this recommendation from the Planning Commission.

She also advised, if adopted, this new ordinance would allow fences very close to non-confirming homes and citizens do not have the option of going to the Board of Zoning Appeals.

26125

In conclusion, Ms. Emershaw thanked Council for their time and for listening to her situation.

Also speaking against this new ordinance was Dee Belcher of Spruce Street and Delores Bolling of Hillcrest Drive. Ms. Bolling spoke to Council advising that her iron pins are now 18" into the City street. She advised that she has a \$1,200 iron fence in the front of her home that will not come down. She asked Council to consider not adopting the proposed language amendment regarding fences and hedges.

The City Attorney advised she would need a Special Use Permit as her fence is encroaching on City right-of-way.

Those speaking in favor of the amendment were Gerald and Deborah Lawson of 1076 Laurel Avenue.

Stan Wilson, Nosler Street, spoke briefly to Council asking for their consideration in the adoption of a resolution honoring Paul Kuczko, who is retiring, for his years of

service to the Lonesome Pine Office on Youth. The City Manager read the resolution and upon a motion by Councilman Caruso, seconded by Councilman Hunnicutt, and passed by the following unanimous vote: YES – Caruso, Hunnicutt, Fawbush, Roop, Mays, NO – None, ABSENT – None, Council moved to adopt A Resolution Honoring Paul Anthony Kuczko. (Insert)

26126

In attendance tonight was Mr. Bob Spera representing the Let Freedom Ring Activity to be held at the Lonesome Pine Airport in September. He had been in attendance at the April 1<sup>st</sup> meeting requesting an appropriation of \$2,000 to go toward this event and had been advised to come back with an updated report on the donations received during that time and also Council would have more of an idea as to their budget process.

26127

Mr. Spera briefly spoke to Council on this activity advising they lacked \$8,000 to cover the planned activities.

Mayor Mays advised that at the last activity held at the airport, the City had contributed \$1,000. This upcoming budget year, all boards and agencies have been cut ten percent.

Following a brief discussion and upon a motion by Councilman Roop, seconded by Councilman Caruso, and passed by unanimous roll call vote, Council moved to allocate \$900 from Contingency for the Let Freedom Ring activity.

Mr. Spera thanked Council for their time and consideration.

Dr. Scott Hamilton, President of Mountain Empire Community College, provided an update on activities at the college. Prior to the meeting, he had passed out new booklets on the college. Council was advised by Dr. Hamilton that the college had received their highest endowment ever on May 5<sup>th</sup> from the estate of Carol Buchanan.

26128

The college will graduate 696 students on May 15th and the enrollment has been down slightly; however dual enrollment has kept it to approximately one percent.

Council was given a schedule of upcoming events including the July Mountain Music School Program. He further advised that they're in the midst of their five year review and provided a list of goals they have prepared.

Councilman Caruso advised a good job was being done at the college and asked about the AIMS Program. Dr. Hamilton advised the program was doing good and they had 135 AIMS scholars.

Council expressed their appreciation to Dr. Hamilton for this update.

Amy Bond, Director of the Lonesome Pine Regional Library System, presented Council with a PowerPoint presentation and update on the library and programs/activities in which they sponsor and participate.

Activities within the City in which they participate in are: Norton Friends and Farmers Market (17 visits servicing 569 children), Fabulous Fridays (3 visits servicing 362 children, Best Friend Festival (servicing 256 children), Regency Towers Visits in conjunction with Mountain Empire Older Citizens (993 books) Norton Kids Central Children (servicing 520 children) and John I. Burton Teachers' Meetings.

She advised that appropriations from the City go solely to the Wise County Public Library in Wise, which is the primary library.

Following this presentation, she thanked Council for their support which has been essential since the inception of the library and which continues to be just as essential today. She advised they face a potential loss of \$448,865 in state funding and have applied for \$142,000 in federal e-rate funds, and the Big Read brought in \$9,500.

She explained to Council the waiver process in case funding is reduced below the level of previous years and that they would have to apply for this process. Any reductions have to be across the board and less or equal to all other departments within the jurisdictions.

The Waiver Appeal can be applied for one year and a one year reprieve can be granted. If the waiver is denied, they cannot operate on local funding and localities would lose libraries or have to restructure them on their own.

26129

Mr. Lann Malesky, the City's representative on the Library Board, spoke briefly to Council urging them to appropriate funds as previously given in order that the libraries can proceed to function and not have to jeopardize programs. He emphasized that this is a vital community asset and this should be considered during Council's budget deliberations.

Following a lengthy discussion, Ms. Bond and Mr. Malesky were advised that this is a very rough year budget wise.

Ms. Bond expressed her appreciation to Council.

Dr. Comer, Superintendent of the Norton City Schools, presented Council with a PowerPoint presentation on the 2014-2015 Norton City Schools Budget and acknowledged his gratitude that Mark Leonard, a member of the School Board, was present at tonight's meeting.

He advised with the General Assembly Budget is, in limbo budget wise, and his budget is the worst case scenario by state funding that they have had. He hopefully hopes it will improve. The composite index went down which equates to more state funding even with a lower number of students.

26130

Virginia Retirement Benefits are up from 11.66 to 14.50 with a number of positions not funded. Instructional funds are down due to retirements and there are no staff cuts. The Health Retirement Fund is being cut this year and will be out of their budget entirely in approximately seven years. Debt Service is going down and there is no increase in health insurance. Summarizing the budget, he advised there is a step increase for employees, the General Assembly should include additional dollars, local level funding with an additional \$25,000 to repair/replace hot water supply at Burton high school and \$16,825 for interpreter for new deaf student. In the proposed budget, the School Board is asking for \$77,825 in additional funding compared with what would be required for 825 students on which they are basing their budget.

Following a lengthy discussion, Mayor Mays advised they should look for local required funding effort and not expect the extra \$77,825.

The School Board is to come back to the next Council meeting on May 20<sup>th</sup> with an adopted budget and Council will, at that time, consider taking action on same.

Dr. Comer advised that he understood and expressed his appreciation to Council and advised that the School Board is very fortunate that Council values education. (Insert – Councilman Roop's Disclosure)

The City Manager advised that the Norton Planning Commission has recommended to Council that they consider the zoning amendment on which they held a public hearing on April 10<sup>th</sup>. Their vote was unanimous to forward the zoning amendment on fences and hedges for Council's consideration. He advised that Council, if they choose to, cannot approve this tonight as they will need to advertise and hold a public hearing on this. He further advised that they may want to table this item until they receive more information. Mr. Ramey then turned the meeting over to Winfred Collins, the City's Building Official.

26131

Winfred Collins, Building Official, via a PowerPoint presentation, discussed this section from the City of Lynchburg's ordinance and compared it to the current City ordinance. The current code section states that there is to be a five foot setback on each side and the rear yard and no fences can be placed in the front of residential zoned parcels. Commercial or industrial zoned parcels are not applicable to this code section.

The proposed amendment will not prohibit any lawful fence or wall if each does not exceed four feet in height in front yards and eight feet in height in side and rear yards in residential zones or ten feet in commercial or industrial zones and if it does not obstruct the normal observation of traffic. Mr. Collins then advised of some changes in wording he would like to make in this proposed amendment in wording.

Mr. Collins then answered questions from Council members.

After a discussion, it was the consensus of Council to table this item until after the budget process is completed and for Mr. Collins to survey various comparable entities as to their regulations on this topic.

Winfred Collins, Building Official, gave Council an update on the Stormwater Management Ordinance. Via PowerPoint presentation, Mr. Collins discussed recent changes to the Stormwater Management Act, new requirements for single-family residences, and the pros and cons of administering a local Virginia Stormwater Management Program.

In 2012, the General Assembly required all localities to have a local VSMP Program with an implementation date of July 1, 2014. In 2014, the General Assembly states that most localities may now choose whether to implement a local VSMP Program or have the Department of Environment Quality to administer this program for the locality with the implementation date of July 1, 2014 retained.

26132

He then discussed some mandatory requirements that remain in place and new rules for single family detached residential structures, Building and Land Disturbing Permits, pros and cons of adopting or not adopting local Virginia Stormwater Management Program, and deadlines for adopting a program.

Following a discussion, it was determined that the City Administration will bring a draft Stormwater Management Ordinance to the next meeting for Council to review prior to authorizing a public hearing to be advertised and will opt in to have their own program.

Upon a motion by Councilman Hunnicutt, seconded by Councilman Caruso, and passed by unanimous roll call vote, Council moved to go into closed meeting to discuss personnel as per Section No. 2.2-3711 (A) (1) of the Code of Virginia, as amended.

26133

Mayor Mays declared Council in closed meeting.

Upon a motion by Councilman Fawbush, seconded by Councilman Caruso, and passed by unanimous vote, Council moved to go back into open meeting.  
Mayor Mays declared Council back in open meeting. 26134

The Clerk polled each member of Council as to the Certification of Closed Meeting with each answering yes with the exception of Councilman Hunnicutt, who had stepped out of the meeting for a few minutes.

The Clerk then read A Resolution of the Certification of Closed Meeting. Upon a motion by Councilman Caruso, seconded by Councilman Fawbush, and passed by the following vote: YES – Caruso, Fawbush, Roop, Mays, NO – None, ABSENT – Hunnicutt (who had left the meeting for a few minutes and missed the vote), Council moved to adopt A Resolution of the Certification of Closed Meeting. (Insert) 26135

During the City Manager comments, Councilman Hunnicutt again took his seat on Council. 26136

In comments from the City Manager, Mr. Ramey advised that:

Shelly Knox, Parks and Recreation Director, attended a meeting of the High Knob Enhancement Committee earlier today and was informed that the contractor needs at least 10-12 weeks to complete the Tower Project. Project completion date is August 8, 2014.

The City Administration recently submitted a 50/50 Grant Application for the purchase of three police vehicles to be considered in September with Rural Development.

The City was notified yesterday that the date for our fireworks needs to be moved to either July 3<sup>rd</sup> or July 5<sup>th</sup>. This is due to state changes of individuals who met the requirements to set fireworks off. If Council has any comments on this, please e-mail him.

He plans to place an item on the next agenda to decommission the swimming pool using excess material from the Safe Route to Schools Project. He is having an engineer look at this possibility. 26137

Students from the Norton Class of WiseJAMS will be featured at the Crooked Road Youth Music Festival on Saturday, May 10<sup>th</sup> at 11 a.m. and 7 p.m.

A flyer was placed for each council member regarding the upcoming Business Appreciation Event on May 28<sup>th</sup> at UVA Wise. This event is co-sponsored by the Norton Industrial Development Authority. Council members were asked to advise him if they plan to attend.

Due to the length of the meeting, Mr. Ramey advised the budget work session scheduled for tonight can be rescheduled or can be done following this meeting as planned. It was the consensus of Council to reschedule this work session.

In comments from the City Attorney, Mr. Bradshaw advised that the Supreme Court today had a 5-4 decision upholding prayers prior to council meetings as long as certain criteria is met. In his opinion, the City of Norton meets these requirements. 26138

In comments from City Council, Councilman Roop stated if we are going to demolish the pool, it would be best to do it now while we have fill material. 26139

There being no further business to come before the Council, the meeting adjourned.

CITY OF NORTON, VIRGINIA

William J. Mays, Mayor

ATTEST:

Clerk

6-A



# Inter-Office Memo

To: Mayor and City Council  
From: Fred L. Ramey, Jr., City Manager **FR**  
CC:  
Date: May 10, 2014  
Re: Norton City Schools FY15 Budget

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At our May 20<sup>th</sup> Council meeting, Dr. Comer will present the proposed FY15 Fiscal Budget for Norton City Schools.

Thank You.

6-B

City of Norton



# Inter-Office Memo

To: Mayor and City Council  
From: Fred L. Ramey, Jr., City Manager *FR*  
CC:  
Date: May 10, 2014  
Re: SRTS Project Update

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The purpose of this agenda item is to provide City Council with a brief update on the recent project activities.

Thank You.

7-A

**CITY OF NORTON  
DRAFT ORDINANCE**



**Stormwater Management &  
Sediment Control Ordinance**

**May 20, 2014**

Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

Pursuant to State Code Section 62.1-44.15:27, this ordinance is adopted as part of an initiative to integrate the City of Norton's stormwater management requirements with the City of Norton's erosion and sediment control program, and the flood plain management program of the City of Norton, (Chapter 26.1 of Norton City Code) requirements into a unified stormwater program. The unified stormwater program is intended to facilitate the submission and approval of plans, issuance of permits, payment of fees, and coordination of inspection and enforcement activities into a more convenient and efficient manner for both the City of Norton and those responsible for compliance with these programs.

**~~Sec. 7-1. Title, purpose, and authority.~~**

~~This chapter shall be known as the "Erosion and Sediment Control Ordinance of City of Norton." The purpose of this chapter is to prevent degradation of properties, stream channels, waters and other natural resources of the County of Wise by establishing requirements for the control of soil erosion, sediment deposition and nonagricultural runoff and by establishing procedures whereby these requirements shall be administered and enforced.~~

~~This chapter is authorized by the Code of Virginia, Title 10.1, Chapter 5, Article 4 (Section 10.1-560 et seq.), known as the Virginia Erosion and Sediment Control Law.~~

**Sec. 7-1. PURPOSE, AUTHORITY, AND APPLICABILITY.**

- (a) The purpose of this Ordinance is to ensure the general health, safety, and welfare of the citizens of the City of Norton and protect the quality and quantity of state waters from the potential harm of unmanaged stormwater, including protection from a land disturbing activity causing unreasonable degradation of properties, water quality, stream channels, and other natural resources, and to establish procedures whereby stormwater and erosion and sediment control requirements related to water quality and quantity shall be administered and enforced.
- (b) This ordinance is applicable to all land-disturbing activities not specifically exempted under the definition of land disturbance or land disturbing activity (Section 7-2) and (Section 7-5) and exceeding 10,000 square feet of disturbance.
- (c) Land-disturbing activities exceeding 10,000 square feet but are less than one acre and not part of a larger common plan of development are subject only to the requirements of the Virginia Erosion and Sediment Control law and regulations.
- (d) Land-disturbing activities exceeding 10,000 square feet and exceeding one acre of disturbance, or are part of a larger common plan of development are subject to the law and regulations of both the Virginia Erosion and Sediment Control Program and the Virginia Stormwater Management Program.
- (e) This ordinance is adopted pursuant to Articles 1.1 (§ 10.1-603.2 et seq.) of Chapter 6 of Title 10.1 2.3 & 2.4 (§ 62.1-44.15:24, § 62.1-44.15:51 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia.

**Sec. 7-2. – Definitions.**

In addition to the definitions set forth in 4VAC50-60-10 9VAC25-840-10 and 9VAC25-870-10 of the Virginia Stormwater Management Regulations and Virginia Erosion and Sediment Control Regulations, as amended, which are expressly adopted and incorporated herein by reference, the following words and terms used in this Ordinance have the following meanings unless otherwise specified herein. Where definitions differ, those incorporated herein shall have precedence.

~~As used in the chapter, unless the context requires a different meaning:~~

Administrator means the Virginia Stormwater Management Program authority (VSMP) and the Virginia Erosion and Sediment Control Program authority (VESCP), including the City of Norton staff person or department responsible for administering the VSMP and VESCP on behalf of the City of Norton.

*Agreement in lieu of a plan* means a contract between the plan-approving authority and the owner that specifies conservation measures that must be implemented in the construction of a single-family residence; this contract may be executed by the plan-approving authority in lieu of a formal site plan.

~~Applicant means any person submitting an erosion and sediment control plan for approval or requesting the issuance of a permit, when required, authorizing land-disturbing activities to commence.~~

Applicant means any person submitting an application for a permit or requesting issuance of a permit under this Ordinance.

*Areas of Extreme Slope* means areas where conditions are favorable for significant stormwater runoff and/or significant sediment loss.

Best management practice or BMP means schedules of activities, prohibitions of practices, including both structural and nonstructural practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters and groundwater systems from the impacts of land-disturbing activities.

~~Board means the Virginia Soil and Water Conservation Board. (See "State Board")~~

*Certified inspector* means an employee or agent of a program authority who (i) holds a certificate of competence from the board in the area of project inspection or (ii) is enrolled in the board's training program for project inspection and successfully completes such program within one (1) year after enrollment.

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Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

*Certified plan reviewer* means an employee or agent of a program authority who (i) holds a certificate of competence from the board in the area of plan review, (ii) is enrolled in the board's training program for plan review and successfully completes such program within one (1) year after enrollment, or (iii) is licensed as a professional engineer, architect, certified landscape architect or land surveyor pursuant to Article 1 (Section 54.1-400 et seq.) of Chapter 4 of Title 54.1 of the Code of Virginia.

*Certified program administrator* means an employee or agent of a program authority who (i) holds a certificate of competence from the board in the area of program administration or (ii) is enrolled in the board's training program for program administration and successfully completes such program within one (1) year after enrollment.

*City* means City of Norton.

*Clearing* means any activity which removes the vegetative ground cover including, but not limited to, root mat removal or top soil removal.

*Clean Water Act or CWA* means the federal Clean Water Act (33 U.S.C §1251 et seq.), formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, or any subsequent revisions thereto.

*Common plan of development or sale* means a contiguous area where separate and distinct construction activities may be taking place at different times on difference schedules.

*Control measure* means any best management practice or stormwater facility, or other method used to minimize the discharge of pollutants to state waters.

*Department* means the Department of conservation and recreation Environmental Quality.

*Development* means a tract of land developed or to be developed as a single unit under single ownership or unified control which is to be used for any business or industrial purpose or is to contain three (3) or more residential dwelling units.

*Development* means land disturbance and the resulting landform associated with the construction of residential, commercial, industrial, institutional, recreation, transportation or utility facilities or structures or the clearing of land for non-agricultural or non-silvicultural purposes.

*Director* means the Director of the Virginia Department of conservation and recreation. Environmental Quality.

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*Ecologically sensitive area* means an area that is located near rivers, streams, wetlands or bodies of water.

*Erosion and sediment control plan or plan* means a document containing material for the conservation of soil and water resources of a unit or group of units of land. It may include appropriate maps, an appropriate soil and water plan inventory, and management information with needed interpretations and a record of decisions contributing to conservation treatment. The plan shall contain all major conservation decisions and all information deemed necessary by the plan approving authority to assure that the entire unit or units of land will be so treated to achieve the conservation objectives.

*Erosion impact area* means an area of land not associated with current land-disturbing activity but subject to persistent soil erosion resulting in the delivery of sediment onto neighboring properties or into state waters. This definition shall not apply to any lot or parcel of land of ten thousand (10,000) square feet or less used for residential purposes.

*Excavating* means any digging, scooping or other methods of removing earth materials.

*Filling* means any depositing or stockpiling of earth materials.

*General permit* means the state permit titled GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES found in 9VAC25-880 et seq. of the Regulations authorizing a category of discharges under the CWA and the Act within a geographical area of the Commonwealth of Virginia.

*Grading* means any excavating or filling of earth material or any combination thereof, including the land in its excavated or filled conditions.

~~*Land-disturbing activity* means any land change which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands in the Commonwealth, including, but not limited to, clearing, grading, excavating, transporting and filling of land, except that the term shall not include:~~

*Land disturbance or land-disturbing activity* means a man-made change to the land surface that potentially changes its runoff characteristics including clearing, grading, or excavation except that the term shall not include those the following exceptions and those exemptions contained in Section 7-5 of this ordinance:

- (1) Minor land-disturbing activities such as home gardens and individual home landscaping, repairs and maintenance work;
- (2) Individual service connections;

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- (3) Installation, maintenance, or repair of any underground public utility lines when such activity occurs on an existing hard-surfaced road, street or sidewalk provided the land-disturbing activity is confined to the area of the road, street or sidewalk which is hard-surfaced;
- (4) Septic tank lines or drainage fields unless included in an overall plan for land-disturbing activity relating to construction of the building to be served by the septic tank system;
- (5) Surface or deep mining;
- (6) Exploration or drilling for oil and gas including the well site, roads, feeder lines, and off-site disposal areas;
- (7) Tilling, planting, or harvesting of agricultural, horticultural, or forest crops, or livestock feedlot operations; including engineering operations and agricultural engineering operations as follows: construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds not required to comply with the Dam Safety Act, Article 2, (Section 10.1-604 et seq.) of Chapter 6 of the Code of Virginia, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage, and land irrigation; however, this exception shall not apply to harvesting of forest crops unless the area on which harvesting occurs is reforested artificially or naturally in accordance with the provisions of Chapter 11 (Section 10.1-1100 et seq.) of the Code of Virginia or is converted to bona fide agricultural or improved pasture use as described in Subsection B of Section 10.1-1163;
- (8) Repair or rebuilding of the tracks, rights-of-way, bridges, communication facilities and other related structures and facilities of a railroad company;
- (9) Disturbed land areas of less than ten thousand (10,000) square feet in size.
- (10) Installation of fence and sign posts or telephone and electric poles and other kinds of posts or poles;
- (11) Shoreline erosion control projects on tidal waters when all of the land disturbing activities are within the regulatory authority of and approved by local wetlands boards, the Marine Resources Commission or the United

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### Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

States Army Corps of Engineers; however, any associated land that is disturbed outside of this exempted area shall remain subject to this chapter; and

- (12) Emergency work to protect life, limb or property, and emergency repairs; however, if the land-disturbing activity would have required an approved erosion and sediment control plan, if the activity were not an emergency, then the land area disturbed shall be shaped and stabilized in accordance with the requirements of the plan-approving authority.

*Land-disturbing permit* means a permit issued by the City of Norton for the clearing, filling, excavating, grading, transporting of land or for any combination thereof or for any purpose set forth herein.

*Layout* means a conceptual drawing sufficient to provide for the specified stormwater management facilities required at the time of approval.

*Local erosion and sediment control program or local control program* means an outline of the various methods employed by the City of Norton to regulate land-disturbing activities and thereby minimize erosion and sedimentation in compliance with the state program and may include such items as local ordinances, policies and guidelines, technical materials, inspection, enforcement, and evaluation.

*Minor modification* means an amendment to an existing general permit before its expiration not requiring extensive review and evaluation including, but not limited to, changes in EPA promulgated test protocols, increasing monitoring frequency requirements, changes in sampling locations, and changes to compliance dates within the overall compliance schedules. A minor general permit modification or amendment does not substantially alter general permit conditions, substantially increase or decrease the amount of surface water impacts, increase the size of the operation, or reduce the capacity of the facility to protect human health or the environment.

*Natural channel design concepts* means the utilization of engineering analysis and fluvial geomorphic processes to create, rehabilitate, restore, or stabilize an open conveyance system for the purpose of creating or recreating a stream that conveys its bankfull storm event within its banks and allows larger flows to access its bankfull bench and its floodplain

*Operator* means the owner or operator of any facility or activity subject to regulation under this Ordinance.

*Owner* means the owner or owners of the freehold of the premises or lesser estate therein, a mortgagee or vendee in possession, assignee of rents, receiver, executor, trustee, lessee or other person, firm or corporation in control of a property.

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### Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

*Peak flow rate* means the maximum instantaneous flow from a given storm condition at a particular location.

*Permit or VSMP Authority Permit* means an approval to conduct a land-disturbing activity issued by the Administrator for the initiation of a land-disturbing activity, in accordance with this Ordinance, and which may only be issued after evidence of general permit coverage has been provided by the Department.

*Permittee* means the person to whom the permit authorizing land-disturbing activities is issued or the person who certifies that the approved erosion and sediment control plan will be followed and the person to whom the VSMP Authority Permit is issued.

*Person* means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, county, city, town or other political subdivision of the commonwealth, any interstate body, or any other legal entity.

*Plan-approving authority* means the program administrator responsible for determining the adequacy of a plan submitted for land-disturbing activities on a unit or units of lands and for approving plans.

*Program authority* means the City of Norton which has adopted a soil erosion and sediment control and stormwater management program that has been approved by the State Board.

*Regulations* means the Virginia Stormwater Management Program (VSMP) Permit Regulations, 4 VAC 50-60 9VAC25-870, and erosion and sediment control 9VAC25-840, as amended.

*Responsible land disturber* means an individual from the project or development team, who will be in charge of and responsible for carrying out a land-disturbing activity covered by an approved plan or agreement in lieu of a plan, who (i) holds a responsible land disturber certificate of competence, (ii) holds a current certificate of competence from the board in the areas of combined administration, program administration, inspection, or plan review, (iii) holds a current contractor certificate of competence for erosion and sediment control, or (iv) is licensed in Virginia as a professional engineer, architect, certified landscape architect or land surveyor pursuant to Article 1 (Section 54.1-400 et seq.) of Chapter 4 of Title 54.1 of the Code of Virginia.

*Runoff volume* means the volume of water that runs off the land development project from a prescribed storm event.

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*Single-family residence* means a noncommercial dwelling that is occupied exclusively by one (1) family.

Site means the land or water area where any facility or land-disturbing activity is physically located or conducted, including adjacent land used or preserved in connection with the facility or land-disturbing activity.

State means the Commonwealth of Virginia.

State Board means the State Water Control Board.

*State erosion and sediment control program* or *state program* means the program administered by the Virginia Soil and Water Conservation Board pursuant to the Code of Virginia including regulations designed to minimize erosion and sedimentation.

State permit means an approval to conduct a land-disturbing activity issued by the State Board in the form of a state stormwater individual permit or coverage issued under a state general permit or an approval issued by the State Board for stormwater discharges from an MS4. Under these state permits, the Commonwealth imposes and enforces requirements pursuant to the federal Clean Water Act and regulations, the Virginia Stormwater Management Act and the Regulations.

State Water Control Law means Chapter 3.1 (§62.1-44.2 et seq.) of Title 62.1 of the Code of Virginia.

*State waters* means all waters on the surface and under the ground wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

Stormwater means precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.

Stormwater management plan means a document(s) containing material describing methods for complying with the requirements of Section 7-12 of this Ordinance.

Stormwater Pollution Prevention Plan or SWPPP means a document that is prepared in accordance with good engineering practices and that identifies potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the construction site, and otherwise meets the requirements of this Ordinance. In addition the document shall identify and require the implementation of control measures, and shall include, but not be limited to the inclusion of, or the incorporation by reference of, an approved erosion and sediment control plan, an approved stormwater management plan, and a pollution prevention plan.

Subdivision means the same as defined in Appendix A of Norton City Code.

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Total maximum daily load or TMDL means the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources, natural background loading and a margin of safety. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.

Transporting means any moving of earth materials from one place to another place other than such movement incidental to grading, when such movement results in destroying the vegetative ground cover either by tracking or the buildup of earth materials to the extent that erosion and sedimentation will result from the soil or earth materials over which such transporting occurs.

Virginia Stormwater Management Act or Act means Article 2.3 (§62.1-44.15.24 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia.

Virginia Stormwater BMP Clearinghouse website means a website that contains detailed design standards and specifications for control measures that may be used in Virginia to comply with the requirements of the Virginia Stormwater Management Act and associated regulations.

Virginia Stormwater Management Program or VSMP means a program approved by the State Board after September 13, 2011, that has been established by a locality to manage the quality and quantity of runoff resulting from land-disturbing activities and shall include such items as local ordinances, rules, permit requirements, annual standards and specifications, policies and guidelines, technical materials, and requirements for plan review, inspection, enforcement, where authorized in this article, and evaluation consistent with the requirements of this article and associated regulations.

Virginia Stormwater Management Program authority or VSMP authority means an authority approved by the State Board after September 13, 2011, to operate a Virginia Stormwater Management Program.

Water quality volume means the volume equal to the first one-half inch of runoff multiplied by the impervious surface of the land development project.

**Sec. 7-3. - Local Erosion and Sediment and Stormwater Management Program Established. Submission and Approval of Plans; Prohibitions.**

- (a) Pursuant to Section ~~40.1-562~~ 62.1-44.15:54 of the Code of Virginia, the City of Norton hereby adopts the regulations, references, guidelines, standards and specifications promulgated by the board for the effective control of soil erosion and sediment deposition to prevent the unreasonable degradation of properties, stream channels, waters and other natural resources. Said regulations, references, guidelines, standards and specifications for erosion and sediment control are included in but not limited to the "Virginia Erosion and Sediment Control Regulations" and the Virginia Erosion and Sediment Control Handbook, as amended.
- (b) Pursuant to § 62.1-44.15:27 of the Code of Virginia, the City of Norton hereby establishes a Virginia stormwater management program for land-disturbing activities and adopts the applicable Regulations that specify standards and specifications for VSMPs promulgated by the State Board for the purposes set out in Section 7-1 of this Ordinance. The City of Norton hereby designates the Building Official as the Administrator of the Virginia stormwater management program.
- (c) No VSMP authority permit shall be issued by the Administrator, until the following items have been submitted to and approved by the Administrator as prescribed herein:
- (1) A permit application that includes a general permit registration statement, if such statement is required.
  - (2) An erosion and sediment control plan approved in accordance with Section 7-4 of this Ordinance;
  - (3) A stormwater management plan that meets the requirements of Section 7-6 of this Ordinance.
- (d) No VSMP authority permit shall be issued until evidence of general permit coverage is obtained.
- (e) No VSMP authority permit shall be issued until the fees required to be paid pursuant to Section 7-15, are received and a reasonable performance bond required pursuant to Section 7-16 of this Ordinance has been submitted.
- (f) No VSMP authority permit shall be issued unless and until the permit application and attendant materials and supporting documentation demonstrate that all land clearing, construction, disturbance, land development and drainage will be done according to the approved permit.

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(g) No grading, building or other local permit shall be issued for a property unless a VSMP authority permit has been issued by the Administrator.

(h) Before adopting or revising regulations, the City of Norton shall give due notice and conduct a public hearing on the proposed or revised regulations, except that a public hearing shall not be required when the City of Norton is amending its program to conform to revisions in the state program. However, a public hearing shall be held if the City of Norton proposes or revises regulations that are more stringent than the state program. In addition, in accordance with ~~Section 40.1-561~~ 62.1-44.15:52 of the Code of Virginia, stream restoration and relocation projects that incorporate natural channel design concepts are not manmade channels and shall be exempt from any flow rate capacity and velocity requirements for natural or manmade channels.

In accordance with ~~Section 40.1-561~~ 62.1-44.15:52 of the Code of Virginia, any plan approved prior to July 1, 2014 that provides for stormwater management intended to address any flow rate capacity and velocity requirements for natural or manmade channels shall satisfy the flow rate capacity and velocity requirements for natural or manmade channels if the practices are designed to (i) detain the water quality volume and to release it over forty-eight (48) hours; (ii) detain and release over a twenty-four-hour period the expected rainfall resulting from the one (1) year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5-, 2-, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or manmade channels as defined in regulations promulgated pursuant to 62.1-44.15:54 or 62.1-44.15.65. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (62.1-44.15:24 et seq.) and attendant regulations, unless such land-disturbing activities are in accordance with the grandfathering provisions of the Virginia Stormwater Management Program (VSMP) Permit Regulations.

The regulations shall:

1. Be based upon relevant physical and developmental information concerning the watersheds and drainage basins of the Commonwealth, including, but not limited to, data relating to land use, soils, hydrology, geology, size of land area

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being disturbed, proximate water bodies and their characteristics, transportation, and public facilities and services;

2. Include such survey of lands and waters as may be deemed appropriate by the Board or required by any applicable law to identify areas, including multijurisdictional and watershed areas, with critical erosion and sediment problems; and

3. Contain conservation standards for various types of soils and land uses, which shall include criteria, techniques, and methods for the control of erosion and sediment resulting from land-disturbing activities.

- (i) Pursuant to Section ~~10.1-561.1~~ 62.1-44.15:53 of the Code of Virginia, an erosion control plan shall not be approved until it is reviewed by a certified plan reviewer. Inspections of land-disturbing activities shall be conducted by a certified inspector. The Erosion Control Program of the City of Norton shall contain a certified program administrator, a certified plan reviewer, and a certified inspector, who may be the same person.
- (j) The City of Norton hereby designates the Building Official as the plan-approving authority.
- (k) The program and regulations provided for in this chapter shall be made available for public inspection at the office of the Building Official.

**Sec. 7-4. - Submission and approval of plans; contents of plans.**

- (a) Except as provided herein, no person may engage in any land-disturbing activity until he or she has submitted to the erosion and sediment control program administrator for the City of Norton an erosion and sediment control plan for the land-disturbing activity and such plan has been approved by the plan-approving authority and evidence of Virginia Stormwater Management permit coverage on qualifying activities has been verified. Where land-disturbing activities involve lands under the jurisdiction of more than one (1) local control program, an erosion and sediment control plan, at the option of the applicant, may be submitted to the State Board for review and approval rather than to each jurisdiction concerned. Where the land-disturbing activity results from the construction of a single-family residence, an agreement in lieu of a plan may be substituted for an erosion and sediment control plan or a stormwater plan if executed by the plan-approving authority. A registration statement is not required for a detached single-family dwelling home construction within or outside a common plan of development or sale, but such projects must adhere to the requirements of the general permit.

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- (b) The standards contained within the "Virginia Erosion and Sediment Control and the Virginia Stormwater Regulations," the Virginia Erosion and Sediment Control Handbook and the Virginia Stormwater Management Handbook as amended and are to be used by the applicant when making a submittal under the provisions of this chapter and in the preparation of an Erosion and Sediment Control plan or Stormwater Pollution Prevention Plan. The plan-approving authority, in considering the adequacy of a submitted plan, shall be guided by the same standards, regulations and guidelines. When the standards vary between the publications, the state regulations shall take precedence.
- (c) The Administrator or any duly authorized agent of the Administrator shall review erosion and sediment control management plans and shall approve or disapprove erosion and sediment control management plans according to the following:
- (1) The Administrator shall determine the completeness of a plan in accordance with Section 7-4 of this Ordinance, and shall notify the applicant, in writing, of such determination, within 15 calendar days of receipt. If the plan is deemed to be incomplete, the above written notification shall contain the reasons the plan is deemed incomplete.
  - (2) The Administrator shall have an additional 60 calendar days from the date of the communication of completeness to review the plan, except that if a determination of completeness is not made within the time prescribed in subdivision (1), then plan shall be deemed complete and the Administrator shall have 60 calendar days from the date of submission to review the plan.
  - (3) The Administrator shall review any plan that has been previously disapproved, within 45 calendar days of the date of resubmission.
  - (4) During the review period, the plan shall be approved or disapproved and the decision communicated in writing to the person responsible for the land-disturbing activity or his designated agent. If the plan is not approved, the reasons for not approving the plan shall be provided in writing. Approval or denial shall be based on the plan's compliance with the requirements of this Ordinance.
  - (5) If a plan meeting all requirements of this Ordinance is submitted and no action is taken within the time provided above in subdivision (2) for review, the plan shall be deemed approved.

The plan-approving authority may waive the certificate of competence requirement for an agreement in lieu of a plan for construction of a single family residence unless the land disturbance exceeds one acre. If a violation occurs

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during the land-disturbing activity, then the person responsible for carrying out the agreement in lieu of a plan shall correct the violation and provide the name of an individual holding a certificate of competence, as provided by Section ~~40.1-561~~ 62.1-44.15:52 of the Virginia Erosion and Sediment Control Law. Failure to provide the name of an individual holding a certificate of competence shall be a violation of this chapter.

- (d) When the plan is determined to be inadequate, the plan-approving authority shall specify such modifications, terms and conditions that will permit approval of the plan. If no action is taken within forty-five (45) days, the plan shall be deemed approved and the person authorized to proceed with the proposed activity.
- (e) An approved plan may be changed by the plan-approving authority when:
  - (1) The inspection reveals that the plan is inadequate to satisfy applicable regulations and/or deficiencies have been discovered; or
  - (2) The person responsible for carrying out the plan finds that because of changed circumstances or for other reasons the approved plan cannot be effectively carried out, and proposed amendments to the plan, consistent with the requirements of this chapter, are agreed to by the plan-approving authority and the person responsible for carrying out the plans.
- (f) Variances: The plan-approving authority may waive or modify any of the standards that are deemed to be too restrictive for site conditions, by granting a variance. A variance may be granted under these conditions:
  - (1) At the time of plan submission, an applicant may request a variance to become part of the approved erosion and sediment control plan or stormwater pollution prevention plan. The applicant shall explain the reasons for requesting variances in writing. Specific variances which are allowed by the plan-approving authority shall be documented in the plan.
  - (2) During construction, the person responsible for implementing the approved plan may request a variance in writing from the plan-approving authority. The plan-approving authority shall respond in writing either approving or disapproving such a request. If the plan-approving authority does not approve a variance within ten (10) days of receipt of the request, the request shall be considered to be disapproved. Economic hardship alone is not a sufficient reason to request an exception from the requirements of this chapter. The request for an exception will be

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reviewed pursuant to 9VAC25-870-122. An exception to the requirement that the land-disturbing activity obtain a state permit will not be granted by the VSMP authority. Following disapproval, the applicant may resubmit a variance request with additional documentation.

- (g) In order to prevent further erosion, the City of Norton may require approval of a plan for any land identified in the local program as an erosion impact area.
- (h) When land-disturbing activity will be required of a contractor performing construction work pursuant to a construction contract, the preparation, submission, and approval of an erosion and sediment control plan and a shall be the responsibility of the owner. The preparation, submittal, and approval of stormwater plans shall be the operator as defined in Section 7-2 of this ordinance.
- (i) In accordance with the procedure set forth by ~~Section 10.1-563(E)~~ 62.1-44.15:55(E) of the Code of Virginia, any person engaging, in more than one jurisdiction, in the creation and operation of wetland mitigation or stream restoration banks, which have been approved and are operated in accordance with applicable federal and state guidance, laws, or regulations for the establishment, use, and operation of wetlands mitigation or stream restoration banks, pursuant to a mitigation banking instrument signed by the Department of Environmental Quality, the Marine Resources Commission, or the U.S. Army Corps of Engineers, may, at the option of that person, file general erosion and sediment control specifications for wetland mitigation or stream restoration banks annually with the board for review and approval consistent with guidelines established by the board.
- (j) State agency projects are exempt from the provisions of this chapter except as provided for in the Code of Virginia, ~~Section 10.1-564~~ 62.1-44.15:56.

#### **Sec. 7-5. - STORMWATER PERMIT REQUIREMENT; EXEMPTIONS.**

- (a) Except as provided herein, no person may engage in any land-disturbing activity until a VSMP authority permit has been issued by the Administrator in accordance with the provisions of this Ordinance.
- (b) Notwithstanding any other provisions of this Ordinance, the following activities are exempt, unless otherwise required by federal law:

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- (1) Permitted surface or deep mining operations and projects, or oil and gas operations and projects conducted under the provisions of Title 45.1 of the Code of Virginia;
- (2) Clearing of lands specifically for agricultural purposes and the management, tilling, planting, or harvesting of agricultural, horticultural, or forest crops, livestock feedlot operations, or as additionally set forth by the State Board in regulations, including engineering operations as follows: construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage, and land irrigation; however, this exception shall not apply to harvesting of forest crops unless the area on which harvesting occurs is reforested artificially or naturally in accordance with the provisions of Chapter 11 (§ 10.1-1100 et seq.) of Title 10.1 of the Code of Virginia or is converted to bona fide agricultural or improved pasture use as described in Subsection B of § 10.1-1163 of Article 9 of Chapter 11 of Title 10.1 of the Code of Virginia;
- (3) Single-family residences separately built and disturbing one to five acres, including additions or modifications to existing single-family detached residential structures but such projects must adhere to the requirements of the general permit.
- (4) Land disturbing activities that disturb less than one acre of land area, that are not part of a larger common plan of development or sale that is one acre or greater of disturbance;
- (5) Discharges to a sanitary sewer or a combined sewer system;
- (6) Activities under a State or federal reclamation program to return an abandoned property to an agricultural or open land use;
- (7) Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original construction of the project. The paving of an existing road with a compacted or impervious surface and reestablishment of existing associated ditches and shoulders shall be deemed routine maintenance if performed in accordance with this Subsection; and
- (8) Conducting land-disturbing activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment. In such situations, the Administrator shall be advised of the disturbance within seven days of commencing the land-disturbing activity and compliance with the administrative requirements of Subsection (a) is required within 30 days of commencing the land-disturbing activity.

**Sec. 7-6. - STORMWATER POLLUTION PREVENTION PLAN; CONTENTS OF PLANS.**

- (a) The Stormwater Pollution Prevention Plan (SWPPP) shall include the content specified by Section 9VAC25-870-54 and must also comply with the requirements and general information set forth in Section 9VAC25-880-70, Section II [stormwater pollution prevention plan] of the general permit.
- (b) The SWPPP shall be amended by the operator whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to state waters which is not addressed by the existing SWPPP.
- (c) The SWPPP must be maintained by the operator at a central location onsite. If an onsite location is unavailable, notice of the SWPPP's location must be posted near the main entrance at the construction site. Operators shall make the SWPPP available for public review in accordance with Section II of the general permit, either electronically or in hard copy.

**Sec. 7-7. - STORMWATER MANAGEMENT PLAN; CONTENTS OF PLAN.**

- (a) The Stormwater Management Plan, required in Section 7-3 of this Ordinance, must apply the stormwater management technical criteria set forth in Section 7-10 of this Ordinance to the entire land-disturbing activity, consider all sources of surface runoff and all sources of subsurface and groundwater flows converted to surface runoff. Individual lots in new residential, commercial, or industrial developments shall not be considered separate land-disturbing activities. Stormwater management plans for residential, commercial or industrial subdivisions will govern the development of individual parcels within that plan, throughout the development life even if ownership changes. The Stormwater Management Plan must include the following information:
  - (1) Information on the type and location of stormwater discharges; information on the features to which stormwater is being discharged including surface waters or karst features, if present, and the predevelopment and post-development drainage areas;
  - (2) Contact information including the name, address, and telephone number of the owner and the tax reference number and parcel number of the property or properties affected;
  - (3) A narrative that includes a description of current site conditions and final site conditions [Alternatively, the City of Norton may allow the information that addresses the current and final site conditions to be provided and documented during the review process];
  - (4) A general description of the proposed stormwater management facilities and the mechanism through which the facilities will be operated and maintained after construction is complete;
  - (5) Information on the proposed stormwater management facilities, including:

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- (i) The type of facilities;
  - (ii) Location, including geographic coordinates;
  - (iii) Acres treated; and
  - (iv) The surface waters or karst features, if present, into which the facility will discharge.
- (6) Hydrologic and hydraulic computations, including runoff characteristics;
- (7) Documentation and calculations verifying compliance with the water quality and quantity requirements of Section 7-10 of this ordinance.
- (8) A map or maps of the site that depicts the topography of the site and includes:
- (i) All contributing drainage areas;
  - (ii) Existing streams, ponds, culverts, ditches, wetlands, other water bodies, and floodplains;
  - (iii) Soil types, geologic formations if karst features are present in the area, forest cover, and other vegetative areas;
  - (iv) Current land use including existing structures, roads, and locations of known utilities and easements;
  - (v) Sufficient information on adjoining parcels to assess the impacts of stormwater from the site on these parcels;
  - (vi) The limits of clearing and grading, and the proposed drainage patterns on the site;
  - (vii) Proposed buildings, roads, parking areas, utilities, and stormwater management facilities; and
  - (viii) Proposed land use with tabulation of the percentage of surface area to be adapted to various uses, including but not limited to planned locations of utilities, roads, and easements.
- (b) If an operator intends to meet the water quality and/or quantity requirements set forth in Section 7-10 of this Ordinance through the use of off-site compliance options, where applicable, then a letter of availability from the off-site provider must be included. Approved off-site options must achieve the necessary nutrient reductions prior to the commencement of the applicant's land-disturbing activity except as otherwise allowed by § 62.1-44.15:35 of the Code of Virginia.
- (c) Elements of the stormwater management plans that include activities regulated under Chapter 4 (§54.1-400 et seq.) of Title 54.1 of the Code of Virginia shall be appropriately sealed and signed by a professional registered in the Commonwealth of Virginia pursuant to Article 1 (§ 54.1-400 et seq.) of Chapter 4 of Title 54.1 of the Code of Virginia.
- (d) A construction record drawing for permanent stormwater management facilities shall be submitted to the Administrator. The construction record drawing shall be appropriately sealed and signed by a professional registered in the Commonwealth of Virginia, certifying that the stormwater management facilities have been constructed in accordance with the approved plan. [NOTE: The Administrator may elect not to require construction record drawings for stormwater management facilities for which maintenance agreements are not required pursuant to Section 7-11 (b).]

**Sec. 7-8. – POLLUTION PREVENTION PLAN; CONTENTS OF PLANS.**

- (a) Pollution Prevention Plan, required by 9VAC25-870-56, shall be developed, implemented, and updated as necessary and must detail the design, installation, implementation, and maintenance of effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:
- (1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
  - (2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater; and
  - (3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- (b) The pollution prevention plan shall include effective best management practices to prohibit the following discharges:
- (1) Wastewater from washout of concrete, unless managed by an appropriate control;
  - (2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
  - (3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
  - (4) Soaps or solvents used in vehicle and equipment washing.
- (c) Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

**Sec. 7-9. - REVIEW OF STORMWATER MANAGEMENT PLAN.**

- (a) The Administrator or any duly authorized agent of the Administrator shall review stormwater management plans and shall approve or disapprove a stormwater management plan according to the following:
- (1) The Administrator shall determine the completeness of a plan in accordance with Section 7-8 of this Ordinance, and shall notify the applicant, in writing, of such determination, within 15 calendar days of receipt. If the plan is deemed to be incomplete, the above written notification shall contain the reasons the plan is deemed incomplete.
  - (2) The Administrator shall have an additional 60 calendar days from the date of the communication of completeness to review the plan, except

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that if a determination of completeness is not made within the time prescribed in subdivision (1), then plan shall be deemed complete and the Administrator shall have 60 calendar days from the date of submission to review the plan.

- (3) The Administrator shall review any plan that has been previously disapproved, within 45 calendar days of the date of resubmission.
- (4) During the review period, the plan shall be approved or disapproved and the decision communicated in writing to the person responsible for the land-disturbing activity or his designated agent. If the plan is not approved, the reasons for not approving the plan shall be provided in writing. Approval or denial shall be based on the plan's compliance with the requirements of this Ordinance.
- (5) If a plan meeting all requirements of this Ordinance is submitted and no action is taken within the time provided above in subdivision (2) for review, the plan shall be deemed approved.

(b) Approved stormwater plans may be modified as follows:

- (1) Modifications to an approved stormwater management plan shall be allowed only after review and written approval by the Administrator. The Administrator shall have 60 calendar days to respond in writing either approving or disapproving such request.
- (2) The Administrator may require that an approved stormwater management plan be amended, within a time prescribed by the Administrator, to address any deficiencies noted during inspection.

(c) The Administrator shall require the submission of a construction record drawing for permanent stormwater management facilities. The Administrator may elect not to require construction record drawings for stormwater management facilities for which recorded maintenance agreements are not required pursuant to Section 7-11 (b).

**Sec. 7-10 - TECHNICAL CRITERIA FOR REGULATED LAND DISTURBING ACTIVITIES.**

- (a) To protect the quality and quantity of state water from the potential harm of unmanaged stormwater runoff resulting from land-disturbing activities, the City of Norton hereby adopts the technical criteria for regulated land-disturbing activities set forth in Part II B of the Regulations, as amended, expressly to include 9VAC25-870-63 [water quality design criteria requirements]; 9VAC25-870-65 [water quality compliance]; 9VAC25-870-66 [water quantity]; 9VAC25-870-69 [offsite compliance options]; 9VAC25-870-72 [design storms and hydrologic methods]; 9VAC25-870-74 [stormwater harvesting]; 9VAC25-870-76 [linear development project]; and, 9VAC25-870-85 [stormwater management impoundment structures or facilities], and 9VAC25-870-93 through 9VAC25-870-99

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which shall apply to all land-disturbing activities regulated pursuant to this Ordinance, except as expressly set forth in Subsection (b) of this Section.

- (b) Any land disturbing activity shall be considered grandfathered by the VSMP authority and shall be subject to the Part II C technical criteria of the VSMP Regulation provided:
1. A proffered or conditional zoning plan, zoning with a plan of development, preliminary or final subdivision plat, preliminary or final site plan, or any document determined by the locality to be equivalent thereto (i) was approved by the locality prior to July 1, 2012, (ii) provided a layout as defined in 9VAC25-870-10, (iii) will comply with the Part II C technical criteria of the VSMP Regulation, and (iv) has not been subsequently modified or amended in a manner resulting in an increase in the amount of phosphorus leaving each point of discharge, and such that there is no increase in the volume or rate of runoff;
  2. A state permit has not been issued prior to July 1, 2014; and
  3. Land disturbance did not commence prior to July 1, 2014.
- (c) Locality, state and federal projects shall be considered grandfathered by the VSMP authority and shall be subject to the Part II C technical criteria of the VSMP Regulation provided:
1. There has been an obligation of locality, state or federal funding, in whole or in part, prior to July 1, 2012, or the department has approved a stormwater management plan prior to July 1, 2012;
  2. A state permit has not been issued prior to July 1, 2014; and
  3. Land disturbance did not commence prior to July 1, 2014.
- (d) Land disturbing activities grandfathered under subsections A and B of this section shall remain subject to the Part II C technical criteria of the VSMP Regulation for one additional state permit cycle. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board.
- (e) In cases where governmental bonding or public debt financing has been issued for a project prior to July 1, 2012, such project shall be subject to the technical criteria of Part II C.
- (f) Nothing in this section shall preclude an operator from constructing to a more stringent standard at his discretion.
- (g) The Administrator may grant exceptions to the technical requirements of Part II B or Part II C of the Regulations, provided that (i) the exception is the minimum necessary to afford relief, (ii) reasonable and appropriate conditions are imposed so that the intent of the Act, the Regulations, and this Ordinance are preserved, (iii) granting the exception

will not confer any special privileges that are denied in other similar circumstances, and (iv) exception requests are not based upon conditions or circumstances that are self-imposed or self-created. Economic hardship alone is not sufficient reason to grant an exception from the requirements of this Ordinance.

- (1) Exceptions to the requirement that the land-disturbing activity obtain required VSMP authority permit shall not be given by the Administrator, nor shall the Administrator approve the use of a BMP not found on the Virginia Stormwater BMP Clearinghouse Website, or any other control measure duly approved by the Director.
- (2) Exceptions to requirements for phosphorus reductions shall not be allowed unless offsite options otherwise permitted pursuant to 9VAC25-870-69 have been considered and found not available.

#### **Sec. 7-11 - LONG-TERM MAINTENANCE OF PERMANENT STORMWATER FACILITIES**

- (a) The Administrator shall require the provision of long-term responsibility for and maintenance of stormwater management facilities and other techniques specified to manage the quality and quantity of runoff. Such requirements shall be set forth in an instrument recorded in the local land records prior to general permit termination or earlier as required by the Administrator and shall at a minimum:
  - (1) Be submitted to the Administrator for review and approval prior to the approval of the stormwater management plan;
  - (2) Be stated to run with the land;
  - (3) Provide for all necessary access to the property for purposes of maintenance and regulatory inspections;
  - (4) Provide for inspections and maintenance and the submission of inspection and maintenance reports to the Administrator; and
  - (5) Be enforceable by all appropriate governmental parties.
- (b) At the discretion of the Administrator, such recorded instruments need not be required for stormwater management facilities designed to treat stormwater runoff primarily from an individual residential lot on which they are located, provided it is demonstrated to the satisfaction of the Administrator that future maintenance of such facilities will be addressed through an enforceable mechanism at the discretion of the Administrator.
- (c) If a recorded instrument is not required pursuant to Subsection 7-11 (b), the Administrator shall develop a strategy for addressing maintenance of stormwater management facilities designed to treat stormwater runoff primarily from an individual residential lot on which they are located. Such a strategy may include periodic inspections, homeowner outreach and education, or other method targeted at promoting the long-term maintenance of such facilities. Such facilities shall not be subject to the

requirement for an inspection to be conducted by the Administrator, or any duly authorized agent of the Administrator.

**Sec. 7-12. - Monitoring, reports, and inspections.**

(a) The City of Norton may require the person responsible for carrying out the plan to monitor the land-disturbing activity. The person responsible for carrying out the plan will maintain records of these inspections and maintenance, to ensure compliance with the approved plan and to determine whether the measures required in the plan are effective in controlling erosion and stormwater.

(b) The Building Official shall periodically inspect the land-disturbing activity in accordance with Sections 4VAC50-30-60, 9VAC25-840-60 & 9VAC25-870-114 of the Virginia Erosion and Sediment Control Regulations and the Virginia Stormwater Management Program regulations (9VAC25-870) to ensure compliance with the approved plan and to determine whether the measures required in the plan are effective in controlling erosion and sedimentation. The owner, permittee, or person responsible for carrying out the plan shall be given notice of the inspection.

If the Building Official determines that there is a failure to comply with the plan, notice shall be served upon the permittee or person responsible for carrying out the plan by mailing with delivery confirmation to the address specified in the permit application or in the plan certification, or by delivery at the site of the land-disturbing activities to the agent or employee supervising such activities.

The notice shall specify the measures needed to comply with the plan and shall specify the time within which such measures shall be completed. Upon failure to comply within the specified time, the permit may be revoked and the permittee or person responsible for carrying out the plan shall be deemed to be in violation of this chapter and shall be subject to the penalties provided by this chapter.

(c) The Administrator, or any duly authorized agent of the Administrator shall inspect the land-disturbing activity during construction for:

- (1) Compliance with the approved erosion and sediment control plan;
- (2) Compliance with the approved stormwater management plan;
- (3) Development, updating, and implementation of a pollution prevention plan; and

Chapter 7

Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

(4) Development and implementation of any additional control measures necessary to address a TMDL.

- (d) The Administrator, or any duly authorized agent of the Administrator may, at reasonable times and under reasonable circumstances, enter any establishment or upon any property, public or private, for the purpose of obtaining information or conducting surveys or investigations necessary in the enforcement of the provisions of this Ordinance.
- (e) In accordance with a performance bond with surety, cash escrow, letter of credit, any combination thereof, or such other legal arrangement or instrument, the Administrator may also enter any establishment or upon any property, public or private, for the purpose of initiating or maintaining appropriate actions which are required by the permit conditions associated with a land-disturbing activity when a permittee, after proper notice, has failed to take acceptable action within the time specified.
- (f) Pursuant to § 62.1-44.15:40 of the Code of Virginia, the Administrator may require every VSMP authority permit applicant or permittee, or any such person subject to VSMP authority permit requirements under this Ordinance, to furnish when requested such application materials, plans, specifications, and other pertinent information as may be necessary to determine the effect of his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of this Ordinance.
- (g) Post-construction inspections of stormwater management facilities required by the provisions of this Ordinance shall be conducted by the Administrator or any duly authorized agent of the Administrator pursuant to the City of Norton adopted and State Board approved inspection program, and shall occur, at minimum, at least once every five (5) years except as may otherwise be provided for in Section 7-11.
- (h) Upon determination of a violation of this chapter, the program administrator may, in conjunction with or subsequent to a notice to comply as specified in this chapter, issue an order requiring that all or part of the land-disturbing activities permitted on the site be stopped until the specified corrective measures have been taken.

If land-disturbing activities have commenced without an approved plan, the program administrator may, in conjunction with or subsequent to a notice to comply as specified in this chapter, issue an order requiring that all of the land-disturbing activities be stopped until an approved plan or any required permits are obtained.

Where the alleged noncompliance is causing or is in imminent danger of causing harmful erosion of lands or sediment deposition in waters within the watersheds of the Commonwealth, or where the land-disturbing activities have commenced without an approved plan or any required permits, such an order may be issued without regard to whether the permittee has been issued a notice to comply as specified in

## Chapter 7

### Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

this chapter. Otherwise, such an order may be issued only after the permittee has failed to comply with such a notice to comply.

The order shall be served in the same manner as a notice to comply, and shall remain in effect for a period of seven (7) days from the date of service pending application by the enforcing authority or permit holder for appropriate relief to the Circuit Court of Wise County.

If the alleged violator has not obtained an approved plan or any required permits within seven (7) days from the date of service of the order, the administrator may issue an order to the owner requiring that all construction and other work on the site, other than corrective measures, be stopped until an approved plan and any required permits have been obtained. Such an order shall be served upon the owner by mailing with delivery conformation to the address specified in the permit application or the land records of the City of Norton.

The owner may appeal the issuance of an order to the Circuit Court of Wise County. For appeals due to alleged violations of an VSMP permit as defined in Section 7-2, an owner or operator may appeal to the Circuit Court of Wise County.

Any person violating or failing, neglecting or refusing to obey an order issued by the program administrator may be compelled in a proceeding instituted in the Circuit Court of Wise County to obey same and to comply therewith by injunction, mandamus or other appropriate remedy. Upon completion and approval of corrective action or obtaining an approved plan or any required permits, the order shall immediately be lifted.

Nothing in this section shall prevent the program administrator from taking any other action authorized by this chapter.

#### **Sec. 7-13. - Penalties, injunctions, and other legal actions.**

- (a) Violators of this chapter shall be guilty of a Class I misdemeanor.
- (b) Any person who violates any provision of this chapter shall, upon a finding of the appropriate Court, be assessed a civil penalty. The civil penalty for any one violation shall be one hundred dollars (\$100.00), except that the civil penalty for commencement of land-disturbing activities without an approved plan shall be one thousand dollars (\$1,000.00). Each day during which the violation is found to have existed shall constitute a separate offense. In no event shall a series of specified violations arising from the same operative set of facts result in civil penalties which exceed a total of three thousand dollars (\$3,000.00), except that a series of violations

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### Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

arising from the commencement of land-disturbing activities without an approved plan for any site shall not result in civil penalties which exceed a total of ten thousand dollars (\$10,000.00).

- (c) The City of Norton or the owner or property which has sustained damage or which is in imminent danger of being damaged, may apply to the Circuit Court of Wise County to enjoin a violation or a threatened violation of this chapter, without the necessity of showing that an adequate remedy at law does not exist.

However, an owner of property shall not apply for injunctive relief unless (i) he has notified in writing the person who has violated the local program, and the program authority, that a violation of the local program has caused, or creates a probability of causing, damage to his property, and (ii) neither the person who has violated the local program nor the program authority has taken corrective action within fifteen (15) days to eliminate the conditions which have caused, or create the probability of causing, damage to his property.

- (d) In addition to any criminal penalties provided under this chapter, any person who violates any provision of this chapter may be liable to the City of Norton in a civil action for damages.

- (e) Without limiting the remedies which may be obtained in this section, any person violating or failing, neglecting, or refusing to obey any injunction, mandamus or other remedy obtained pursuant to this section shall be subject, in the discretion of the court, to a civil penalty not to exceed two thousand dollars (\$2,000.00) for each violation. A civil action for such violation or failure may be brought by the City of Norton. Any civil penalties assessed by a court shall be paid into the treasury of the City of Norton, except that where the violator is the locality itself, or its agent, the court shall direct the penalty to be paid into the state treasury.

- (f) With the consent of any person who has violated or failed, neglected or refused to obey any regulation or condition of a permit or any provision of this chapter, the City of Norton may provide for the payment of civil charges for violations in specific sums, not to exceed the limit specified in subsection (e) of this section. Such civil charges shall be instead of any appropriate civil penalty which could be imposed under subsection (e).

- (g) The Commonwealth's Attorney shall, upon request of the City of Norton or the permit issuing authority, take legal action to enforce the provisions of this chapter.

- (h) Compliance with the provisions of this chapter shall be prima facie evidence in any legal or equitable proceeding for damages caused by erosion, siltation or

Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

sedimentation that all requirements of law have been met, and the complaining party must show negligence in order to recover any damages.

(i) **FAILURE TO COMPLY WITH VSMP PROVISIONS**

(1) If the Administrator determines that there is a failure to comply with the VSMP authority permit conditions or determines there is an unauthorized discharge, notice shall be served upon the permittee or person responsible for carrying out the permit conditions by any of the following: verbal warnings and inspection reports, notices of corrective action, consent special orders, and notices to comply. Written notices shall be served by registered or certified mail to the address specified in the permit application or by delivery at the site of the development activities to the agent or employee supervising such activities.

(a) The notice shall specify the measures needed to comply with the permit conditions and shall specify the time within which such measures shall be completed. Upon failure to comply within the time specified, a stop work order may be issued in accordance with Subsection (b) or the permit may be revoked by the Administrator.

(b) If a permittee fails to comply with a notice issued in accordance with this Section within the time specified, the Administrator may issue an order requiring the owner, permittee, person responsible for carrying out an approved plan, or the person conducting the land-disturbing activities without an approved plan or required permit to cease all land-disturbing activities until the violation of the permit has ceased, or an approved plan and required permits are obtained, and specified corrective measures have been completed.

Such orders shall be issued in accordance with Section 7-12 (h) of this ordinance. Such orders shall become effective upon service on the person by certified mail, return receipt requested, sent to his address specified in the land records of the locality, or by personal delivery by an agent of the Administrator. However, if the Administrator finds that any such violation is grossly affecting or presents an imminent and substantial danger of causing harmful erosion of lands or sediment deposition in waters within the watersheds of the Commonwealth or otherwise substantially impacting water quality, it may issue, without advance notice or hearing, an emergency order directing such person to cease immediately all land-disturbing activities on the site and shall provide an opportunity for a hearing, after reasonable notice as to the time and place thereof, to such person, to affirm, modify, amend, or cancel such emergency order. If a person who has been issued an order is not complying with the terms thereof, the Administrator may institute a proceeding for an injunction, mandamus, or other appropriate remedy in accordance with Subsection 7-13(i) (3).

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Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

- (2) In addition to any other remedy provided by this Ordinance, if the Administrator or his designee determines that there is a failure to comply with the provisions of this Ordinance, they may initiate such informal and/or formal administrative enforcement procedures in a manner that is consistent with Section 7-13 of this ordinance.
- (3) Any person violating or failing, neglecting, or refusing to obey any rule, regulation, ordinance, order, approved standard or specification, or any permit condition issued by the Administrator may be compelled in a proceeding instituted in Wise County Circuit Court by the City of Norton to obey same and to comply therewith by injunction, mandamus or other appropriate remedy.
- (4) Any person who violates any provision of this Ordinance or who fails, neglects, or refuses to comply with any order of the Administrator, shall be subject to a civil penalty not to exceed \$32,500 for each violation within the discretion of the court. Each day of violation of each requirement shall constitute a separate offense.

(a) Violations for which a penalty may be imposed under this Subsection shall include but not be limited to the following:

- (i) No state permit registration;
- (ii) No SWPPP;
- (iii) Incomplete SWPPP;
- (iv) SWPPP not available for review;
- (v) No approved erosion and sediment control plan;
- (vi) Failure to install stormwater BMPs or erosion and sediment controls;
- (vii) Stormwater BMPs or erosion and sediment controls improperly installed or maintained;
- (viii) Operational deficiencies;
- (ix) Failure to conduct required inspections;
- (x) Incomplete, improper, or missed inspections; and
- (xi) Discharges not in compliance with the requirements of Section 9VAC25-88-70 of the general permit.

(b) The Administrator may issue a summons for collection of the civil penalty and the action may be prosecuted in the appropriate court.

(c) In imposing a civil penalty pursuant to this Subsection, the court may consider the degree of harm caused by the violation and also the economic benefit to the violator from noncompliance.

(d) Any civil penalties assessed by a court as a result of a summons issued by the City of Norton shall be paid into the treasury of the City of Norton to be used for the purpose of minimizing, preventing, managing, or mitigating pollution of the waters of the City of Norton and abating environmental pollution therein in such manner as the court may, by order, direct.

- (5) Notwithstanding any other civil or equitable remedy provided by this Section or by law, any person who willfully or negligently violates any provision of this

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### Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

Ordinance, any order of the Administrator, any condition of a permit, or any order of a court shall, be guilty of a misdemeanor punishable by confinement in jail for not more than 12 months or a fine of not less than \$2,500 nor more than \$32,500, or both.

#### Sec. 7-14. - Appeals and judicial review.

Any permit applicant or permittee who is aggrieved by a permit or enforcement decision of the City, is entitled to judicial review thereof by the circuit court of Wise County, provided an appeal is filed within 30 days from the date of the decision being appealed.

#### Sec. 7-15. - Permits; fees; security for performance.

- (a) Agencies authorized under any other law to issue grading, building, or other permits for activities involving land-disturbing activities may not issue any such permit unless the applicant submits with his application an approved erosion and sediment control plan and certification that the plan will be followed.
- (b) No person may engage in any land-disturbing activity until he has acquired a land-disturbing permit, unless the proposed land-disturbing activity is specifically exempt from the provisions of this chapter, and has paid the fees and posted the required bond.
- (c) A plan review and inspection fee in the amount authorized by City Council from time to time shall be paid at the time of submission of the erosion and sediment control plan and/or the Stormwater Pollution Prevention Plan.
- (d) No land-disturbing permit shall be issued until the applicant submits with his application an approved erosion and sediment control plan and certification that the plan will be followed.
- (e) Fees to cover costs associated with implementation of a VSMP related to land disturbing activities and issuance of general permit coverage and VSMP authority permits shall be imposed in accordance with a fee schedule or schedules approved by the City of Norton Council from time to time in accordance with and subject to statewide statutes and regulations of general applicability.

- (f) An approved fee schedule, entitled, "Fee Schedule for Stormwater Management Program Administration/Erosion and Sediment Control Program Administration/Permit Issuance" is on file in the Building Official's office.

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### Sec. 7-16. - Performance Bond

Prior to issuance of any permit, the Applicant may be required to submit a reasonable performance bond with surety, cash escrow, letter of credit, any combination thereof, or such other legal arrangement acceptable to the City of Norton Attorney, to ensure that measures could be taken by the City of Norton at the Applicant's expense should he fail, after proper notice, within the time specified to initiate or maintain appropriate actions which may be required of him by the permit conditions as a result of his land disturbing activity. If the City of Norton takes such action upon such failure by the Applicant, the City of Norton may collect from the Applicant for the difference should the amount of the reasonable cost of such action exceed the amount of the security held, if any. Within 60 days of the completion of the requirements of the permit conditions, such bond, cash escrow, letter of credit or other legal arrangement, or the unexpended or unobligated portion thereof, shall be refunded to the Applicant or terminated.

- (e) ~~All applicants for permits shall provide to the City of Norton a performance bond, cash escrow, or an irrevocable letter of credit acceptable to the erosion and sediment control program administrator, to ensure that measures could be taken by the City of Norton at the applicant's expense should the applicant fail, after proper notice, within the time specified to initiate or maintain appropriate conservation measures required of him by the approved plan as a result of his land disturbing activity.~~

~~The amount of the bond or other security for performance shall not exceed the total of the estimated cost to initiate and maintain appropriate conservation action based on unit price for new public or private sector construction in the locality and a reasonable allowance for estimated administrative costs and inflation which shall not exceed twenty five (25) percent of the cost of the conservation action. Should it be necessary for the City of Norton to take such conservation action, The City of Norton may collect from the applicant any costs in excess of the amount of the surety held.~~

~~Within sixty (60) days of adequate stabilization, as determined by the erosion and sediment control program administrator in any project or section of a project, such bond, cash escrow or letter of credit, or the unexpended or unobligated portion thereof, shall be either refunded to the applicant or terminated, based upon the percentage of stabilization accomplished in the project or project section. These~~

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Stormwater Management & Erosion and Sediment Control Ordinance-City of Norton

~~requirements are in addition to all other provisions relating to the issuance of permits and are not intended to otherwise affect the requirements for such permits.~~

DRAFT 4-2014

**Fee Schedule for Stormwater Management Program Administration/Erosion and Sediment Control Program Administration/Permit Issuance**

**Table 1**

Fee type	Total fee to be paid by Applicant (includes both VSMP authority and Department portions where applicable)	Department portion of "total fee to be paid by Applicant" (based on 28% of total fee paid*)
Land Disturbance Permit(Areas over 10,000 square feet but under 1 acre and not in a common plan of development.)	\$50	\$0
General/Stormwater Management-Single Family Homes whether located inside or outside a common plan of development.(1-5 acres)	\$100	\$0
General / Stormwater Management - Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance acreage less than 1 acre.)	\$290	\$0
General / Stormwater Management - Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 1 acre and less than 5 Acres)	\$2,700	\$756
General / Stormwater Management - Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres)	\$3,400	\$952
General / Stormwater Management - Large Construction Activity/Land Clearing [Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres]	\$4,500	\$1,260
General / Stormwater Management - Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$6,100	\$1,708
General / Stormwater Management - Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 100 acres)	\$9,600	\$2,688

(1) If the project is completely administered by the Department such as may be the case for a state or federal project or projects covered by individual permits, the entire applicant fee shall be paid to the Department.

(2) City of Norton projects are only subjected to Column 2, "Department portion", of the fee chart.

(3) Applicants required to obtain a VSMP will not be required to pay the fee for a land disturbance permit though a land disturbance permit will be issued and maintained by the Administrator.

Fees for the modification or transfer of registration statements from the general permit issued by the State Board shall be imposed in accordance with Table 2. If the general permit modifications result in changes to stormwater management plans that require additional review by the City of Norton, such reviews shall be subject to the fees set out in Table 2. The fee assessed shall be based on the total disturbed acreage of the site. In addition to the general permit modification fee, modifications resulting in an increase in total disturbed acreage shall pay the difference in the initial permit fee paid and the permit fee that would have applied for the total disturbed acreage in Table 1. [NOTE: Fees specified in this Subsection go to the City of Norton.]

**Table 2: Fees for the modification or transfer of registration statements for the General Permit for Discharges of Stormwater from Construction Activities**

<b>Type of Permit</b>	<b>Fee Amount</b>
General / Stormwater Management – Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance acreage less than 1 acre)	\$20
General / Stormwater Management – Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 1 and less than 5 acres)	\$200
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres)	\$250
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$300
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$450
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 100 acres)	\$700

The following annual permit maintenance shall be imposed in accordance with Table 3, including fees imposed on expired permits that have been administratively continued. With respect to the general permit, these fees shall apply until the permit coverage is terminated. [NOTE: Fees specified in this Subsection go to the City of Norton.]

**Table 3: Permit Maintenance Fees**

Type of Permit	Fee Amount
General / Stormwater Management – Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance acreage less than 1 acre)	\$50
General / Stormwater Management – Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance equal to or greater than 1 acre and less than 5 acres)	\$400
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres)	\$500
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$650
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$900
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater 100 acres)	\$1,400

General permit coverage maintenance fees shall be paid annually the City of Norton, by the anniversary date of general permit coverage. No permit will be reissued or automatically continued without payment of the required fee. General permit coverage maintenance fees shall be applied until a Notice of Termination is effective.

The fees set forth in Tables 1 -3 above, shall apply to:

- (1) All persons seeking coverage under the general permit.
- (2) All permittees who request modifications to or transfers of their existing registration statement for coverage under a general permit.
- (3) Persons whose coverage under the general permit has been revoked shall apply to the Department for an Individual Permit for Discharges of Stormwater From Construction Activities.

- (4) Permit and permit coverage maintenance fees outlined in table 3 may apply to each general permit holder.

No general permit application fees will be assessed to:

- (1) Permittees who request minor modifications to general permits as defined in Section 1-2 of this Ordinance. Permit modifications at the request of the permittee resulting in changes to stormwater management plans that require additional review by the Administrator shall not be exempt pursuant to this Section.
- (2) Permittees whose general permits are modified or amended at the initiative of the Department, excluding errors in the registration statement identified by the Administrator or errors related to the acreage of the site.

All incomplete payments will be deemed as nonpayments, and the applicant shall be notified of any incomplete payments. Interest may be charged for late payments at the underpayment rate set forth in §58.1-15 of the Code of Virginia and is calculated on a monthly basis at the applicable periodic rate. A 10% late payment fee shall be charged to any delinquent (over 90 days past due) account. The City of Norton shall be entitled to all remedies available under the Code of Virginia in collecting any past due amount.

## FUNDING AND STAFFING PLAN FOR THE CITY OF NORTON STORMWATER CONTROL PROGRAM

- Development trends in the City of Norton have leveled off somewhat since significant construction activity took place from 2005-2008. Current staffing levels were sufficient to handle the enforcement of the City's ESC ordinance during the peak time. It is the City's opinion that no additional staff will be required to administer the stormwater management program. Once the program is implemented and staff is certified in the stormwater disciplines, a smooth transition of land-disturbance permitting is expected. The Building Official will perform the program administration/enforcement, plan review, and inspections for the City's stormwater program.
- Winfred Collins, who is the City's Building Official and is the certified combined administrator for the ESC program, will be the contact person for the City's development and enforcement of the stormwater management program. Mr. Collins will also be perform the plan review, inspections, and administration/enforcement of the City's stormwater management program. Phone contact information is 276-679-1160. Email contact information is [winfredc@nortonva.org](mailto:winfredc@nortonva.org). Office hours are 8:30am to 5:00pm Monday through Friday.
- Funding for the stormwater management program will come from the building/zoning category of the City's operating budget. Revenue generated by permit fees will be used to offset the cost of enforcement of the program. The City has successfully operated its ESC program by this funding method since 2006. An increase in inspections is not anticipated since ESC inspections will be and have been conducted regardless of the disturbance area. A slight increase in program administration and plan review is expected because of the technical provisions of the stormwater program. City staff intends to utilize all available online resources from the various state agencies for the plan review, permitting, and administration of its storm water management program.

POLICIES AND PROCEDURES FOR IMPLEMENTING CITY OF NORTON'S  
STORMWATER CONTROL PROGRAM

Pending approval from the State Water Control Board, the City of Norton will implement the stormwater control program into its application review process on July 1<sup>st</sup>, 2014. Any proposed land disturbance activities will be evaluated to determine which area of the newly combined ordinance will be used to enforce the activity and to determine the permitting needs for the project. Disturbances over 10,000 SF but not over an acre, and not in a common plan of development will be issued a land disturbance permit pending approval of the required erosion and sediment control plan or an agreement in lieu of a plan, if the project involves a single family dwelling.

Projects that do not exceed an acre but are in a common plan of development, or projects that are 1 acre or above will be required to obtain a VSMP as well as a land disturbance permit. The land disturbance permit fee will be waived when it is issued in conjunction with a VSMP.

The VSMP will be obtained on the internet thru ePermitting with assistance from department staff. Distribution methods of the fees between the City and the Department of Environmental Quality will be determined when the internet based permit system is functional.

Land disturbance permits will continue to be issued locally.

Enforcement, inspections, plan review, and program administration will be performed by certified individuals in the building department. The City currently has a certified combined administrator for Erosion and Sediment Control. Training for the combined administrator in stormwater management is underway. The certification exams will be taken when they are made available.

Plans, inspections, notices of violation and other pertinent documentation will be maintained in the Building Officials office.

7-B

**RESOLUTION ADOPTING THE  
LENOWISCO HAZARD MITIGATION PLAN**

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

**WHEREAS**, the localities of the LENOWISCO Planning District agreed to jointly develop a district-wide plan for adoption by participating localities; and

**WHEREAS**, the efforts of participating localities and LENOWISCO staff have resulted in the development of an update to the original Hazard Mitigation Plan.

**NOW BE IT THEREFORE RESOLVED**, that the Norton City Council does hereby acknowledge the City's participation in the development of the updated LENOWISCO Hazard Mitigation Plan; and

**BE IT FURTHER RESOLVED**, that the Norton City Council, to meet local requirements under the Disaster Mitigation Act of 2000, as amended, does hereby approve and adopt the updated LENOWISCO Hazard Mitigation Plan.

ADOPTED this 20<sup>th</sup> day of May, 2014.

CITY OF NORTON, VIRGINIA

\_\_\_\_\_  
William J. Mays, Mayor

ATTEST:

\_\_\_\_\_  
Clerk

**RESOLUTION ADOPTING THE  
LENOWISCO COMPREHENSIVE HAZARD MITIGATION PLAN**

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

WHEREAS, the localities of the LENOWISCO Planning District agreed to jointly develop a district-wide plan for adoption by participating localities; and

WHEREAS, a Mitigation Advisory Committee ("MAC") comprised of citizens, business community members, non-profit organizations, public agencies, and representatives of the district's counties, city and towns, was formed to study the district's risks from and vulnerabilities to natural hazards, and to make recommendations on mitigating the effects of such hazards on the district and its localities; and

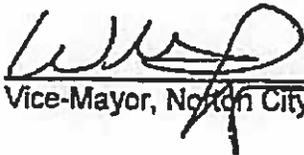
WHEREAS, a professional consulting firm was secured to assist the MAC in the development of a comprehensive natural hazard mitigation plan for the LENOWISCO Planning District, including the City of Norton; and

WHEREAS, the efforts of the MAC members and consulting firm have resulted in the development of a Comprehensive Hazard Mitigation Plan for the LENOWISCO Planning District.

NOW BE IT THEREFORE RESOLVED, that the Norton City Council does hereby acknowledge the City's participation in the development of the LENOWISCO Comprehensive Hazard Mitigation Plan; and

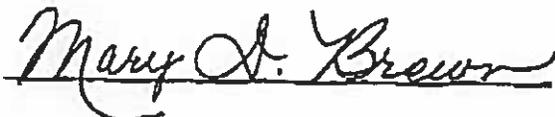
BE IT FURTHER RESOLVED, that the Norton City Council, to meet local requirements under the Disaster Mitigation Act of 2000, as amended, does hereby approve and adopt the LENOWISCO Comprehensive Hazard Mitigation Plan.

ADOPTED by the Norton City Council this 6th day of September, 2005.

  
\_\_\_\_\_  
Vice-Mayor, Norton City Council

9-6-05  
\_\_\_\_\_  
Date

ATTEST:

  
\_\_\_\_\_  
Mary A. Brown

# **LENOWISCO**

## **Planning District Commission**



### **Comprehensive Hazard Mitigation Plan**



**2013**

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## **SECTION A EXECUTIVE SUMMARY**

For the purposes of this Hazard Mitigation Plan, the LENOWISCO Planning District is comprised of Lee, Scott and Wise Counties, the City of Norton, and the towns of Appalachia, Big Stone Gap, Clinchport, Coeburn, Duffield, Dungannon, Gate City, Jonesville, Nickelsville, Pennington Gap, Pound, St. Charles, St. Paul, Weber City and Wise. Hereinafter in this document, the area will generally be referred to as the LENOWISCO district.

The area is vulnerable to many types of natural hazards — including floods, severe wind, winter storms, drought and severe thunderstorms — and has experienced the effects of each of these at some point in its history.

Recent decades have seen increasing development in areas of potential harm, increasing the potential for severe economic and social consequences if a major disaster or other catastrophic event were to occur. Such an event could have the potential to cost local governments, residents, and businesses millions of dollars in damages to public buildings and infrastructure, lost tax revenues, unemployment, homelessness, and emotional and physical suffering for several years to come.

A multi-hazard mitigation plan and update have been prepared for the LENOWISCO district. Having this mitigation plan in place will help the area to:

- Better understand local hazards and risks;
- Build support for mitigation activities;
- Develop more effective community hazard-reduction policies and integrate mitigation concepts into other community processes;
- Incorporate mitigation into post-disaster recovery activities; and
- Obtain disaster-related grants in the aftermath of a disaster.

### **Hazard Identification and Risk Assessment**

Prioritizing potential hazards that can affect the LENOWISCO district is based on the probability a potential hazard will affect the area and its potential impacts, given a disaster event. Values are assigned to each hazard type, based on the hazard's highest potential hazard level. These hazard categories represent the likelihood of a hazard event that could significantly affect the district. These categories are based on the classifications used in the Hazard Identification portion of this document and are **High, Medium-High, Medium, and Low**.

**Table A-1** on the following page summarizes the results of this analysis, which is explained more fully in Section E of this plan.

In order to focus on the most significant hazards, those assigned a level of High or Medium-High are the focus of analysis in the risk assessment.

**TABLE A-1  
Hazard Identification**

<b>Hazard Type</b>	<b>Hazard Level</b>
Flooding	High
Severe Winter Storm	Medium-High
Severe Wind (Including Tornado)	Medium-High
Severe Thunderstorm/Hail	Medium-High
Landslides, Land Subsidence, Soil Erosion	Medium-High
Drought	Medium-High
Wildfire	Medium
Earthquake	Medium
Dam/Levee Failure	Low
Extreme Heat	Low
Karst Topography	Low

**The Mitigation Strategy**

The LENOWISCO Mitigation Work Group provided input on actions and policies that could lessen the area's vulnerability to identified hazards. The following comments are reaffirmed:

- o Top priorities remain public safety, public education, and reduction of potential economic impacts of disasters.
- o Alternatives should consider the impacts on the LENOWISCO district as a whole.
- o Alternatives must not conflict with other local government programs.
- o Outreach and other efforts should be attempted to FEMA-designated Repetitive Loss Properties.
- o Past experiences from disasters should be built upon.
- o The success of past mitigation projects should be considered in developing alternatives.
- o CRS and the floodplain ordinance update, policies and activities should be a priority.

The following overarching goal and six specific goals were developed by the MAC to guide the area's future hazard mitigation activities.

**GOAL 1**

Ensure public health and safety within the LENOWISCO planning region before, during, and following hazardous events.

**GOAL 2**

Implement effective hazard mitigation measures that would minimize the impact of natural hazards on life and property for both existing and future development.

**GOAL 3**

Increase the area's floodplain management activities and participation in the National Flood Insurance Program.

**GOAL 4**

Incorporate hazard awareness and risk reduction principles into the daily activities, processes, functions, and policies of the community.

**GOAL 5**

Continue to assess and enhance understanding of the extent of our vulnerability to natural hazards.

**GOAL 6**

Publicize mitigation activities to reduce the area's vulnerability to the identified hazards.

The review of potential project and policies will continue to take social, technical, administrative, political, legal, economic, and environmental considerations into account. This process will help ensure that the most equitable and feasible actions be undertaken based on local jurisdiction's capabilities. These actions are laid out with an implementation strategy and timeframes in Section G of this plan.

**Conclusion**

This plan symbolizes the LENOWISCO Planning District's continued commitment and dedication to enhance the safety of its residents and businesses by taking actions before a disaster strikes. While each jurisdiction cannot necessarily prevent natural hazard events from occurring, they can minimize the disruption and devastation that so often accompanies these disasters.

**Overarching LENOWISCO Area Goal:**

*"To develop and maintain disaster resistant communities that are less vulnerable to the economic and physical devastation associated with natural hazard events."*

## **SECTION B INTRODUCTION**

### **Mitigation**

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long term risk to people and property from hazards and their effects. Hazard mitigation focuses attention and resources on community policies and actions that will produce successive benefits over time. A mitigation plan states the aspirations and specific courses of action that a community intends to follow to reduce vulnerability and exposure to future hazard events. These plans are formulated through a systematic process centered on the participation of citizens, businesses, public officials and other community stakeholders.

A local mitigation plan is the physical representation of a jurisdiction's commitment to reduce risks from natural hazards. Local officials can refer to the plan in their day-to-day activities and decisions regarding regulations and ordinances, granting permits, and in funding capital improvements and other community initiatives. Additionally, these local plans will serve as the basis for states to prioritize future grant funding as it becomes available.

It is hoped this hazard mitigation plan serving the LENOWISCO district will be a tool for all community stakeholders to use to increase public awareness about local hazards and risks, while at the same time providing information about options and resources available to reduce those risks. Teaching the public about potential hazards will help each of the area's jurisdictions protect themselves against the effects of the hazards, and will enable informed decision making on where to live, purchase property, or locate businesses.

### **Impetus for Local Mitigation Planning**

In October 2000, President William J. Clinton signed into law the Disaster Mitigation Act of 2000 (DMA 2000), which established a national disaster hazard mitigation grant program designed to help reduce loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act and added a new section, §322 - Mitigation Planning, which requires local governments to prepare and adopt jurisdiction-wide hazard mitigation plans for disasters declared after November 1, 2003, (subsequently revised to November 1, 2004) as a condition of receiving Hazard Mitigation Grant Program (HMGP) project grants and other forms of non-emergency disaster assistance. Local governments must review and if necessary, update the mitigation plan every five years from the original date of the plan to continue program eligibility.

As part of the implementation of DMA 2000, the Federal Emergency Management Agency (FEMA) prepared an Interim Final Rule (the Rule) to define the mitigation planning criteria for states and communities. Published in the Federal Register on February 26, 2002, at 44 CFR Part 201, the Rule was to serve as the governing document for DMA 2000 planning implementation.

## **Organization of the Plan**

This planning document has been organized in the following format:

**Section C – Planning Process** describes the LENOWISCO district’s stakeholder involvement and defines the processes followed throughout the creation of this plan.

**Section D – Community Profile** provides a physical and demographic profile of the LENOWISCO district, noting such items as climate, population, business characteristics and development trends within the planning area.

**Section E – Hazard Identification and Risk Assessment** evaluates natural hazards likely to affect the LENOWISCO district, and quantifies the vulnerabilities of local jurisdictions to future hazard events.

**Section F – Capability Assessment** analyzes the local jurisdictions’ policies, programs, plans, resources, and capability to reduce exposure to hazards in the community.

**Section G – Mitigation Strategy** addresses the LENOWISCO district’s issues and concerns for hazards by establishing a framework for loss-reduction activities and policies. The strategy includes future vision statements, goals, objectives, and a range of actions to achieve the goals.

**Section H – Plan Maintenance Procedures** specifies how the plan will be monitored, evaluated, and updated, including a process for continuing stakeholder involvement once the plan is completed.

**Appendices** – the last section of the plan includes supplemental reference materials and more detailed calculations and methodologies used in the planning process.

## **SECTION C PLANNING PROCESS**

### **Original LENOWISCO Plan**

From 2003 through 2005, the Virginia counties of Lee, Scott and Wise, the City of Norton, and numerous towns within the LENOWISCO Planning District, collaborated with the Virginia Department of Emergency Management to undertake a multi-jurisdictional natural hazards planning initiative.

The LENOWISCO Planning District Commission utilized a private consulting firm to lead the district through compilation of a hazard mitigation plan. To facilitate the planning process, a Mitigation Committee provided guidance for the planning initiative, and developed an initial set of goals to guide the development of a natural hazards mitigation plan.

These goals, based on the principles of hazard awareness and disaster prevention, included:

- o Recognize the potential impact of natural or manmade hazards on public and private buildings and facilities, and the utility and transportation systems that serve them
- o Maintain and enhance the economic stability, public health and safety of the area's communities
- o Ensure that the area's cultural richness and environmental quality are not jeopardized by the occurrence of a disaster
- o Ensure that the district has sustainable communities and businesses resistant to the human and economic costs of disasters

The consulting firm helped develop a hazard identification and risk assessment (HIRA) and subsequent natural hazard mitigation plan. District localities and other potential stakeholders had numerous opportunities for input throughout the planning process. Additionally, opportunities were provided to the public for input and participation throughout the planning process. Drafts of the HIRA and mitigation strategies were made available via the LENOWISCO website ([www.lenowisco.org](http://www.lenowisco.org)).

In the latter stages, copies of the draft plan were made available in public libraries in Lee, Scott and Wise Counties, and open public meetings were held to provide an overview to the public of the planning process and the results of the hazard identification and mitigation strategy.

Participating jurisdictions must formally adopt the hazard mitigation plan in order for it to be approved by the State of Virginia and the Federal Emergency Management Agency. Ultimately, this plan was adopted by the Counties of Lee, Scott and Wise, the City of Norton, and the Towns of Pennington Gap, Big Stone Gap, Coeburn, St. Paul, Pound, and Wise. Other towns within the district chose not to participate in the planning process, provide or support future mitigation strategies, and/or formally adopt the plan.

### **Plan Update**

Starting in 2009, the LENOWISCO Planning District Commission began efforts to secure the necessary funding for an update to its original hazard mitigation plan. The Commission was finally successful in this effort in late 2011, at which point the update process commenced.

During this update, Commission staff conducted a review and analysis of the previous plan.

Plan updates included community profiles, including 2010 Census data; hazard information and data, where available and practicable; updated and new mapping; and capability assessments of the three counties and one city in the district.

Participating localities' contributions to the update included assistance with updates of local information, data and mapping and the respective capability assessments, and meeting attendance as requested.

At various points, a Mitigation Work Group, representing the participating localities, worked with Commission staff in the review and update of hazard identification and risk assessment information and mitigation strategies.

The LENOWISCO Planning District Commission would like to thank and acknowledge the following persons who served their respective localities and departments during the planning process, on the Mitigation Work Group, and through the input of valuable information:

Becky Bryant, Town of Nickelsville  
Brian Bush, Town of Jonesville  
Bob Etherton, Town of Nickelsville  
James Ewing, Town of Jonesville  
David Gilmer, Scott County  
Phil Hensley, Town of Pennington Gap  
Greg Jones, Town of Gate City  
Gerald Miller, Town of Duffield

Laura Mullins, Town of Wise  
Robert Mullins, Wise County  
Kathie Noe, Scott County  
Dane Poe, Lee County  
Fred Ramey, City of Norton  
Shannon Scott, Wise County  
James Shelburne, Town of Pennington Gap  
Jessica Swinney, Wise County

### **Public Participation and Citizen Input**

Opportunities were provided during the planning process for review and input by the public.

Drafts of updated sections were made available for public review and comment via the LENOWISCO website, as was a copy of the full draft plan upon its completion. Copies of the full draft hazard mitigation plan were also placed in public libraries in Lee, Scott and Wise Counties.

### **Adoption**

Participating jurisdictions must formally adopt the hazard mitigation plan in order for it to be approved by the State of Virginia and the Federal Emergency Management Agency.

It is anticipated that this plan, upon conditional approval by state and federal reviews, will be adopted by the Counties of Lee, Scott and Wise, the City of Norton, and the Towns of Duffield, Gate City, Jonesville, Nickelsville, Pennington Gap and Wise. The remaining towns within the planning district either did not participate in the planning process, provide information or future mitigation strategies, or are not expected to adopt the approved plan.

Copies of the adoption language for each community will be added to the plan following conditional approval.

## **SECTION D COMMUNITY PROFILE**

### **Introduction**

The LENOWISCO Planning District is located in far southwestern Virginia, and includes Lee, Scott and Wise Counties and the City of Norton. The district covers roughly 1,385 square miles and, per the 2010 Census, is home to more than 94,000 people. The district is bound on the north and west by the State of Kentucky, on the south by the State of Tennessee, and on the east by the Virginia counties of Dickenson and Russell.

The LENOWISCO Planning District Commission, organized in 1965, serves its citizens and their local governments by promoting regional cooperation, helping to coordinate the activities and policies of member local governments, and providing planning assistance to local governments in all their activities. Much of the Commission's work is focused in the areas of project development, grantsmanship, project management services and geographic information services, particularly on multi-jurisdictional issues spanning more than one locality.

### **Topography and Climate**

The LENOWISCO district is located in the northeastern Appalachian region of the United States and enjoys a seasonal climate, with an average high temperature of 75 degrees Fahrenheit and an average low temperature of 36 degrees Fahrenheit. Virginia's climate results from global-scale weather patterns that are modified by the Commonwealth's diverse landscape in three ways.

First, the Atlantic Ocean and its "river" of warm water, commonly called the Gulf Stream, play a dominant role in differentiating Virginia's precipitation climate. Winter storms generally move or "track" from west to east and, in the vicinity of the east coast, move northeastward paralleling the coast and the Gulf Stream. This shift to a northeast track results in part from a storm's tendency to follow the boundary between the cold land and the warm Gulf Stream waters. These storms grow rapidly as they cross the coast; and as they move northeastward, moisture-laden air from the storm crosses Virginia from the east and northeast. The eastern slopes and foothills of the Blue Ridge Mountains are the prime recipients of this moisture. The great coastal storms of 1962, which are remembered primarily because of the high surf and storm surges along Virginia's coast, also produced record snowfalls along the northern section of the Blue Ridge Mountains.

The high relief of the Appalachian and Blue Ridge mountain systems also helps to control Virginia's climate. The influence here originates with the well-developed rainfall pattern evident along the great mountains of the western margin of North America. Great quantities of rain fall on these western slopes as moist air from the Pacific Ocean flows eastward, rises, condenses, and precipitates. As the air flows down over the eastern slopes, however, little rain falls and a "rain shadow" pattern results. Along the Appalachian and Blue Ridge Mountains of western Virginia, this airflow is sometimes from the west and sometimes from the east. When from the west, the New River and Shenandoah River valleys are in the rain shadow of the Appalachian Mountains; when the airflow is from the east, they are in the shadow of the Blue Ridge Mountains. As a result, both the New River and the Shenandoah River valleys are the driest portions of the state. Regions of equally low rainfall are rare in the eastern United States (although common along the eastern margins of the great plains of the central United States).

The third important local control on climate is the state's complex pattern of rivers and streams, which drain the precipitation that falls and modify the pattern of moist airflow from which the precipitation falls. These river systems drain the Commonwealth's terrain in all four geographical directions. In far southwestern Virginia, the Clinch and Holston Rivers drain south into North Carolina and Tennessee. The New River drains westward into the Ohio River, while the Shenandoah River drains northward into the Potomac. Finally, the Roanoke, James, York, and Rappahannock rivers drain eastward through the Piedmont and into the Tidewater area. Air flows across Virginia either up these river valleys or over the crests of the mountains and down into the valleys. With a southerly flow of air, for example, moist air would move up the Holston River drainage, and rainfall would increase up valley with increasing elevation. However, this same southerly airflow would be downhill into the New River drainage, and on toward the Ohio River basin. This downward flow of air is not conducive to rainfall.

### **Weather Systems**

Much of Virginia's rainfall results from storms associated with warm and cold fronts. As already noted, these storms generally move from west to east and, in the vicinity of the east coast, move northeastward. While a very large number of specific storm histories and storm tracks can occur, and a great diversity of precipitation patterns can result, not all are equally common. Storms are most frequently observed to move parallel to the Appalachian or the Blue Ridge Mountains, the coastal zone, and the Gulf Stream, all of which have a northeast trend, or to move parallel to the Great Lakes and the Ohio River Valley. When storms cross the east coast well to the south of Virginia and move offshore, the heaviest rain usually falls in southeastern Virginia. When these storms become very intense or when they closely skirt the coastline, the strong up-slope winds result in heavy rainfalls on the Blue Ridge. Frequently, frontal storms tracking along the Ohio Valley move across southern Pennsylvania and off the New Jersey coast; as such storms approach the coast, great quantities of moist air flow inland and then southward into Virginia.

When sufficient cold air invades Virginia from the west and northwest, frontal storms may cause heavy snowfalls. Two of the state's most dramatic frontal snowstorms of recent years occurred during the Christmas holidays of 1966 and 1969. In both cases, the storm tracked along the Gulf and the east coasts and crossed over Tidewater Virginia; a strong east and northeast flow brought moist air across the state, overriding cold air from the west. While heavy snows are common in the Piedmont region, the average winter does not have a major coastal snowstorm, and heavy winter snows usually are confined to the mountainous areas of the state. As remarkable as it may seem, some of the heaviest snowfalls in the eastern United States occur in the Appalachians of West Virginia, just a few miles west of Highland County, Virginia. More than 2,500 millimeters (100 inches) fall annually in this area; but Virginia, being in West Virginia's snow shadow, receives only a fraction of this amount.

While heavy snowfalls usually result from frontal storms, hurricanes are created by a different weather pattern. Hurricanes and tropical storms are intense cyclones formed within the deep, moist layers of air over warm, tropical waters. Unlike frontal storms, which derive much of their energy from the great temperature contrasts on either side of fronts, hurricanes and tropical storms derive most of their energy from the warm ocean surface. Tropical storms over the low-latitude oceans generally move from east to west. As they move westward, they are displaced farther and farther to the north. Eventually, they enter the westerly airstreams of the mid-latitudes, and then re-curve north and eastward. In the vicinity of Virginia, these tropical storms move in a general northeasterly track, like frontal storms, and intensify as they move along this route. Those storms that reach an intensity indicated by sustained winds of at least 74 miles an hour are classified as hurricanes.

Hurricanes and tropical storms that cross Virginia, including those immediately offshore, occur most frequently in early August and September and rarely appear before June or after November. During the month of September, anywhere from 10 to 40 percent of Virginia's rainfall comes from hurricanes and tropical storms. When Hurricane Camille, Virginia's most notable hurricane of recent times, passed through the state in 1969, upwards of 840 millimeters (33 inches) of rain fell on the eastern slopes of the Blue Ridge in Nelson County and caused record floods along the James River.

Prior to 1900, hurricane and tropical storm passages across Virginia were relatively common, averaging one per year. From 1905 to 1920, however, a hurricane struck, on average, only one year in every five. The frequency then increased to about three hurricanes in a five-year period before decreasing again in the 1960s and 1970s. The reasons for these variations are as yet unknown.

Thunderstorms, which occur in all months of the year, are most common in the deep, moist, warm air of tropical origin that is typical of summer. Over the last two decades Virginia state has averaged one thunderstorm day a decade in January, compared with nine thunderstorm days a month in July. Thunderstorm days are most frequent in southern Virginia, particularly in the far southwestern section, while northern Virginia experiences the least number of such storms. Thunderstorms are also most likely to occur during the warmest part of the day, with 4:00 p.m. the most probable time of occurrence. Typically, thunderstorms occur ten times more frequently at 4:00 p.m. than at 10:00 a.m. and five times more frequently at 4:30 p.m. than at 7:00 p.m. Thunderstorms produce complex patterns of rainfall, such that areas of heavy rain may be next to areas with little or no rain.

### **Watersheds**

The LENOWISCO district is located within three major water basins, the Clinch River Basin, Powell River Basin, and Holston River Basin. A number of streams and tributaries are located within these water basins. The Pound River and other smaller tributaries are located in the northeast portion of the district and drain into the Levisa Fork of the Big Sandy River. The watersheds are discussed in greater detail in the **Section E**.

### **Population**

More than 94,000 people live in the LENOWISCO planning area. Population density for the district as a whole is roughly 68 persons per square mile. This number varies from jurisdiction to jurisdiction with a high of 530 persons per square mile for the City of Norton, as befits its more urban character, to a low of 44 persons per square mile for Scott County, in line with its rural nature. A breakdown of the population by race can be found in **Table D-1**.

**TABLE D-1**  
**Racial Composition of Population**

	<b>Lee Co</b>	<b>Scott Co</b>	<b>Wise Co</b>	<b>Norton</b>	<b>LENOWISCO</b>	<b>Virginia</b>
White	94.2%	97.9%	93.0%	88.7%	94.4%	68.6%
Black	3.7%	0.6%	5.2%	6.3%	3.7%	19.4%
American Indian	0.4%	0.2%	0.1%	0.1%	0.2%	0.4%
Asian/PacIs/Other	0.8%	0.7%	0.7%	2.5%	0.8%	8.8%
Two or More Races	0.9%	0.7%	0.9%	2.4%	0.9%	2.9%
Hispanic (Any Race)	1.6%	1.0%	1.1%	1.7%	1.3%	7.9%

*U.S. Census Bureau – 2010 Census*

Census data can provide insights into potential special needs populations such as minors and seniors. Within the district, more than 5 percent of the population is under 5 years, roughly 20 percent is under 18 years, and more than 16 percent is 65 and older. Population projections suggest this elderly age group will continue to expand, reaching nearly 20 percent of the district's population by 2020.

Such data also show that language barrier issues may not be of concern in the LENOWISCO district. Less than 2 percent of the population speaks a language other than English at home (this percentage ranges from 1.5 percent in Scott County and the City of Norton to 3.2 percent in Lee County), and 1.3 percent are foreign-born.

While more than 72 percent of residents graduated from high school, only 12.5 percent hold bachelor's degrees or higher. These numbers, coupled with the population characteristics described in the preceding paragraphs, are important to keep in mind when developing public outreach programs. The content and delivery of public outreach programs should be consistent with the audience's needs and ability to understand complex information.

Median household income levels in all LENOWISCO localities fall at or below 70 percent of national levels and below 60 percent of state levels. More than 21 percent of LENOWISCO residents live below the poverty line, a rate significantly higher than the national rate of 14.3 percent and the state rate of 10.7 percent. This number may indicate that a large portion of the population will not have the resources available to them to undertake mitigation projects that require self-funding.

### Housing

There are roughly 43,500 housing units within the planning area. Of these, 7.5 percent are multi-family units, with Norton's much higher number reflecting its more urban nature. More than 72 percent of district residents own their own homes, with Norton again the outlier. Housing characteristics are broken down by jurisdiction in **Table D-2**.

**TABLE D-2**  
**Housing Characteristics**

	<b>Lee Co</b>	<b>Scott Co</b>	<b>Wise Co</b>	<b>Norton</b>
Housing units	11,745	11,916	17,940	1,945
Median value of owner-occupied housing units	\$77,900	\$90,400	\$79,800	\$82,800
Homeownership rate	72.8%	76.8%	71.5%	52.1%
Housing units in multi-unit structures	6.7%	4.8%	7.5%	29.3%

*U.S. Census Bureau – 2010 Census, American Community Survey*

### Industry and Business

Historically, coal mining has driven the local and regional economy. Recent decades of decline in the coal industry, however, have provided both challenge and opportunity. One of the district's most exciting developments in many years is the ongoing development of cutting-edge broadband infrastructure, which will aid in the attraction and retention of industry; foster entrepreneurship, especially in information technology areas; and provide improved education, health care and information access opportunities throughout the region, and positions the LENOWISCO district as one of the more advanced rural areas anywhere in the world.

Through the efforts and cooperation of local industrial development authorities and other agencies, the district has seen significant progress through an increase in available industrial sites and the expansion of marketing activity. Each county has one or more industrial parks, with public utilities, good transportation access, and access to the district's burgeoning broadband network.

A regional small business incubator network – one of Virginia's oldest – provides support programs. The regional broadband network has also significantly increased opportunities for home-based and similar entrepreneurial development, as conventional geographic barriers have been removed.

Tourism continues to be a growing segment of the local and regional economy. The district's historic, cultural and music heritage, scenic beauty and numerous attractions lure growing numbers of visitors to the area each year.

The LENOWISCO district remains home to three correctional facilities (one federal and two state), which provide more than 1,300 jobs to the area.

At present, the largest sectors of private sector employment in the LENOWISCO planning area are healthcare, retail trade, construction, mining, and accommodation and food services.

### **Transportation**

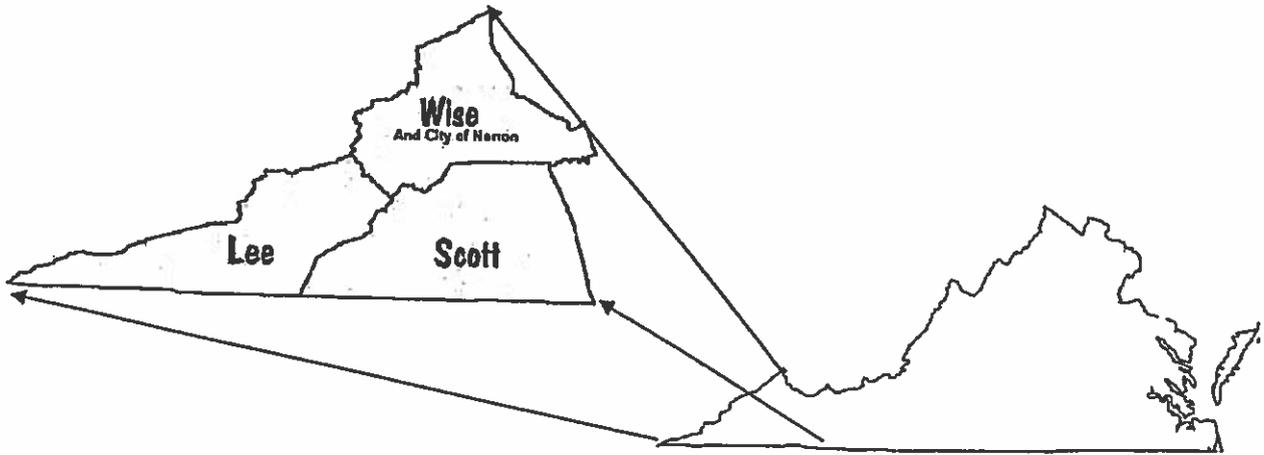
Numerous highways traverse the planning area, including U.S. Highways 23 and 58, which are primarily four-lane arterial highways, and U.S. 421 and Virginia routes 65, 71 and 72. The national interstate system – via I-26, I-81, or I-75 – is easily accessible to the east or west. Rail transportation is available from CSX Transportation and Norfolk Southern Railway. The Tri-Cities Regional Airport in Blountville, Tennessee, provides the nearest commercial air service, while Lee County Airport, with a 5,000 foot lighted runway, and the 5,280-foot Lonesome Pine Airport in Wise County offer local air service and corporate air terminals for the region.

### **Utilities**

Public water and sewer service is widely available throughout the planning area, through the municipal systems or public service authorities. American Electric Power, Old Dominion Power, and the Powell Valley Electric Cooperative serve the electrical power needs throughout the planning district.

### **Land Use**

The LENOWISCO planning area is shown in **Figure D-1**. For the purposes of hazard mitigation planning, the planning area includes Lee, Scott and Wise Counties and the City of Norton. Development within the City of Norton is urban and suburban in nature and is, for the most part, moderately populated. Development in Lee, Scott and Wise Counties tends to be rural in nature, although residential development is an important component in each county's long-range comprehensive plans. All three counties are moderately populated.



**Figure D-1**  
**LENOWISCO Planning Area**

## **SECTION E**

### **HAZARD IDENTIFICATION AND RISK ASSESSMENT (HIRA)**

#### **INTRODUCTION**

The Hazard Identification and Risk Assessment (HIRA) serves as a guide to all communities in the LENOWISCO planning area when assessing potential vulnerabilities to natural hazards.

The planning area for this study includes Lee County, Scott County, Wise County and the City of Norton. All jurisdictions situated within these counties have also been included in this portion of the study. Each local jurisdiction's inclusion in the full Mitigation Plan is again contingent on its participation in the planning process.

The purpose of this HIRA is to:

- 1) Identify natural hazards that could affect the planning area;
- 2) Assess the extent to which the area is vulnerable to the effects of these hazards; and
- 3) Prioritize potential risks to the community.

The first step, identifying hazards, will assess and rank potential natural hazards, in terms of probability of occurrence and potential impacts. It will also identify those hazards with the highest likelihood of significant impact on the community. This section is based on a review of the LENOWISCO planning area's hazard history. Hazards deemed of significant risk are analyzed further to determine the magnitude of potential events, and to characterize the location, type, and extent of potential impacts. This will include an assessment of what types of development are at risk, including critical facilities and community infrastructure.

#### **HAZARD IDENTIFICATION**

While there are numerous natural hazards that can potentially affect the communities within the LENOWISCO district, some are more likely than others to cause significant impacts and damages. Although reducing a community's vulnerabilities to all hazards is ideal, the highest level of consideration should be given to those hazards posing the greatest possible risk. This analysis attempts to identify and quantify possible hazard events that can most significantly impact the communities involved. Once these hazards have been identified, further analysis will be conducted to profile potential hazard events and to assess vulnerability to such events.

##### **Types of Hazards**

While nearly all disasters are possible for any given area in the United States, the most likely hazards that could potentially affect the communities in the LENOWISCO district generally include:

- Dam/levee failure
- Drought
- Earthquake
- Extreme heat
- Flooding
- Landslide
- Severe thunderstorm/hail
- Severe wind, including tornado
- Severe winter storm
- Wildfire

Depending on the severity, location, and timing of the specific events, each of these hazards can have devastating effects on homes, business, agricultural lands, infrastructure and citizenry.

To gain a fuller understanding of the hazards, a search of historic hazard data was undertaken. These data utilized information from local officials, existing reports and studies, state and national data sets, and other sources.

Unfortunately, extensive local historical data are not generally available for many potential hazards. In some cases, the precise number of events affecting the district and the subsequent level of impact to the local communities are not known. In such cases, state and regional hazard information was referenced whenever possible.

### **Probability of Hazards**

Historical data collected includes accounts of the hazard types listed above. Some hazards, however, have occurred much more frequently than others with a wide range of impacts. By analyzing the historical frequency of each hazard, along with the associated impacts, the hazards posing greater risks to the LENOWISCO district can be identified. This analysis allows local communities to focus mitigation strategies on those hazards most likely to cause significant impacts.

Prioritizing potential hazards that can threaten the district is based on two separate factors – the probability a potential hazard will affect the community and potential impacts on the community should such a hazard occur.

The probability of a hazard event occurring is largely based on the historical recurrence interval of the hazard. As an example, if flood damage occurs every five years while an earthquake event causes damage every 50 years, the flood probability will score much higher than the earthquake.

A hazard's impact on the community is made up of three separate factors: the size of the potentially affected geographic area, the primary impacts of the hazard event, and any related secondary impacts. While primary impacts are a direct result of the hazard, secondary impacts only arise subsequent to a primary impact. For example, a primary impact of a flood event may be road closures due to submerged pavement. A potential secondary impact in these circumstances is restricted access of emergency vehicles to citizens in a portion of the community due to the road closure.

### **Level of Hazard**

A formula has been developed to assign a value for probability and impact for each of the hazards considered. A hazard analysis worksheet, with a description of calculations and formulas utilized, is included as **Appendix I** of this plan. From that analysis, hazards are broken down into four distinct categories representing the level of consideration given during the planning process. These categories are High, Medium-High, Medium, and Low.

**This planning analysis will concentrate on the potential hazards identified by the Mitigation Advisory Committee as High and Medium-High level events. It should be noted that those hazards with a "Medium" or "Low" planning level are not to be interpreted as having little or no probability or impact, only that other hazards warrant more evaluation.**

**Table E-1** summarizes the results of the hazard level analysis.

**TABLE E-1  
Hazard Identification**

<b>Hazard Type</b>	<b>Hazard Level</b>
Flooding	High
Severe Winter Storm	Medium-High
Severe Wind (Including Tornado)	Medium-High
Severe Thunderstorm/Hail	Medium-High
Landslides, Land Subsidence, Soil Erosion	Medium-High
Drought	Medium-High
Wildfire	Medium
Earthquake	Medium
Dam/Levee Failure	Low
Extreme Heat	Low
Karst Topography	Low

Because the types of hazards discussed above are similar, some will be discussed concurrently in this analysis. For instance, analysis of severe wind encompasses severe thunderstorms and tornadoes. In addition, impacts of a dam/levee failure are covered by flood analysis. This analysis will concentrate on the potential hazards identified as High and Medium-High level events.

Extreme heat was identified in the hazard identification as a "Low" level of concern for the district. Extreme heat is generally defined as temperatures ten or more degrees above the average high temperature for the region during summer months, lasting for a prolonged period of time, and often accompanied by high humidity levels. Given the probability and likely limited impacts of this hazard, it was ranked a low level for planning consideration.

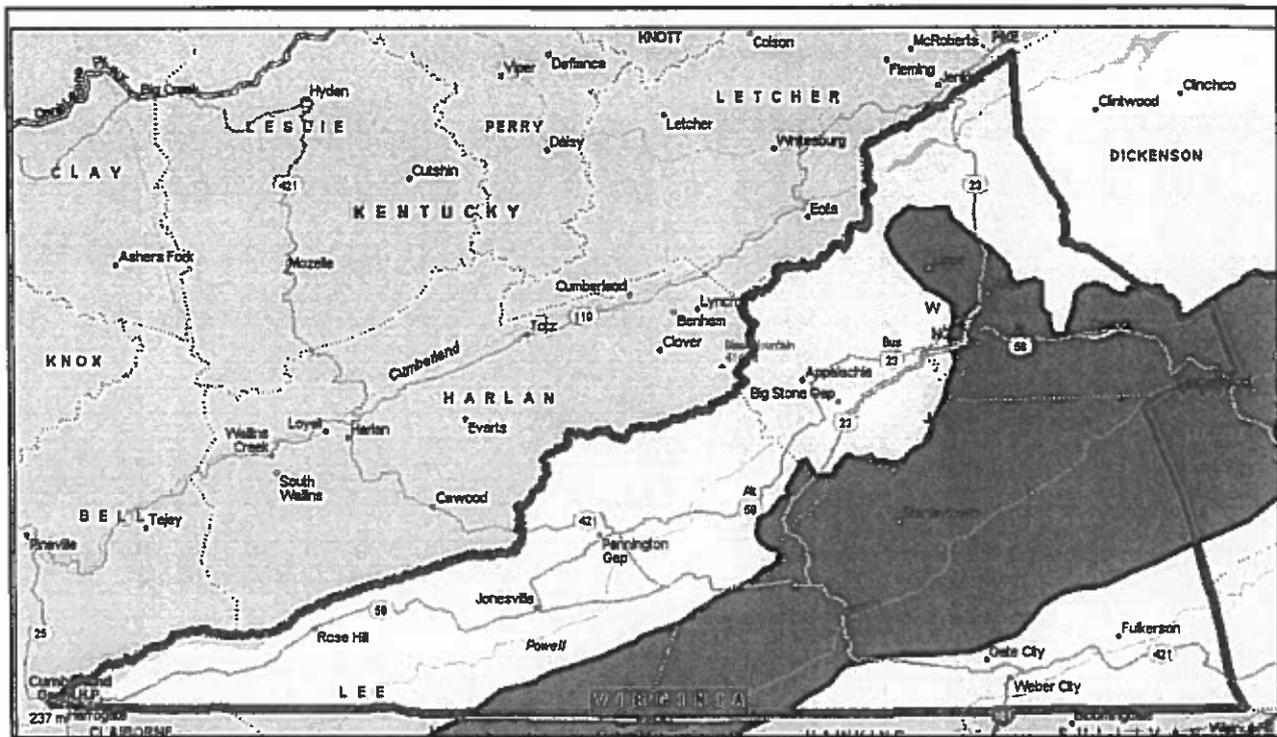
Likewise, Karst topography was identified as a low level of concern. Karst is a distinctive landscape topography largely formed by the dissolving of carbonate bedrocks such as limestone, dolomite, or marble by water. Karst topography causes unusual surface conditions like sinkholes, caves, disappearing streams, springs and vertical shafts. Although Karst topography is present throughout the area, historic losses and damages have been low. Much Karst areas throughout the region have been identified, and its presence limits future development in some areas, but it generally does not pose a significant threat for damages and loss of life.

## **FLOODING**

The most significant and frequent natural hazard to affect the LENOWISCO district is flooding. The LENOWISCO district is a mountainous region with steep ridges and pronounced valleys, with three major water basins – the Clinch, Powell and Holston river basins. A number of streams and tributaries are located within these basins. The Pound River and other smaller tributaries located in the northeastern portion of the district drain into the Levisa Fork of the Big Sandy River.

Because much of the flood history and flood data available for the area are organized by watershed, the discussion of some flood characteristics in this section has also been organized by watershed.





**Figure E-2**  
**Clinch River Basin**

Records of historic events in the LENOWISCO district are numerous, and floods on the Clinch River and its tributaries are well documented. The determined flood stage for the Clinch is 18 feet at Speers Ferry in Scott County. There have been more than 75 documented flood events that have crested above this level on the Clinch. The two largest recorded floods occurred in February 1862 and April 1977, with the river cresting at approximately 37 feet at Speers Ferry in April 1977. As with most historic floods, not a great deal of information is available regarding damages due to these events. A Tennessee Valley Authority report produced in 1966 provides information of previous floods and compares all floods to the March 12, 1963 flood. The March 1963 flood level was nearly equal to those in 1862 and 1977. Records from this event note several buildings inundated with floodwaters, with roadways blocked. Floodwater velocities in the 1963 flood ranged from 8 feet per second in the river channel and up to 2 feet per second on the flood plain in the community of Clinchport. During a Maximum Probable Flood, the crest would be 17 to 19 feet higher than the 1963 flood, and velocities in the channel would range up to 11 feet per second and up to 4 feet per second in the flood plain. The most recent significant flood event in the district occurred on February 13, 2003.

**Table E-2** on the following page shows flood heights for events on the Clinch River compiled from TVA reports of 1966 and 1977 and from USGS gauge data (TVA, USGS). The events shown are those with crest levels higher than 18 feet, the flood stage on the Clinch. Gauge readings prior to 1895, when the first gauge was installed at this location, were estimated from personal accounts and high water marks.

**Table E-2  
Historical Flooding on the Clinch River**

Occurrence	Location	Height at Gauge*	DETAILS
Mar 1826	Clinton TN		Greatest known flood on Clinch River, likely great flood in district
Feb 1862	Clinch River Area	1230.0 ft	Highest known flood over most of the Clinch River area
Mar 1867	Dungannon	1229.0 ft	No records, residents say flood exceeded only by flood of 1862
Mar 1886	Clinton TN	1224.0 ft	Only minor flooding in district
Apr 1896	Speers Ferry	1221.3 ft	First known flood reported at Speers Ferry, not major flood upstream
Feb 1897	Clinch River Area	1220.3 ft	Minor flooding, no high water marks.
Jun 1901	Entire river		Intense storms in headwater area caused great damage
Mar 1902	Clinch River Area	1224.7 ft	One of largest known floods in area, railway washouts and slides
Nov 1906	Clinch River Area	1218.1 ft	Minor flooding reported. Railroad traffic delayed
Jun 1907	Clinch River Valley	1221.8 ft	Extensive crop damage. Widely remembered flood
Apr 1912	Clinch River Area	1216.4 ft	Minor flooding
Apr 1913	Clinch River Area	1216.7 ft	Minor flooding
Mar 1917	Lower Clinch area	1224.0 ft	Major flooding in lower reaches of river, minor flooding upper reaches
Jan 1918	Clinch River	1225.2 ft	2-3 inches rain on snow-covered frozen ground caused major flooding
Feb / Jun 1923	Clinch River	1222.4 ft / 1214.9 ft	Two floods caused some damage to local railway division
Dec 1926	Clinch River Area	1221.2 ft	Prolonged rain in lower basin, washouts on smaller streams
Aug 1940	Clinch River Basin	1217.5 ft	Tropical storm produced 2-4 inches rain, heavy flow in upper reaches
1940-1957	Clinch River Area		Seven minor floods occurred, caused no particular damage
Jan 1957	Clinch River	1225.4 ft	Highest known flood of its time
May 1958	Clinch River	1220.5 ft	Minor flood
Mar 1963	Clinch River	1220.2 ft	>100 families evacuated in Richlands, two bridges washed away
Mar 1973	Clinch River	1224.2 ft	No record of flood damage
Apr 1977	Clinch River Area	1233.2 ft	Flood of record, \$9.5 million damages, heavy agricultural damages
Jan 1978	Clinch River	1223.8 ft	No record of flood damage
Feb 2003	Clinch River Area	1205.5 ft	Flooding caused by rainfall on 10" snow with rising temperatures

USGS, TVA 1966 and 1977

\* Speers Ferry Gauge - 1196.52 ft

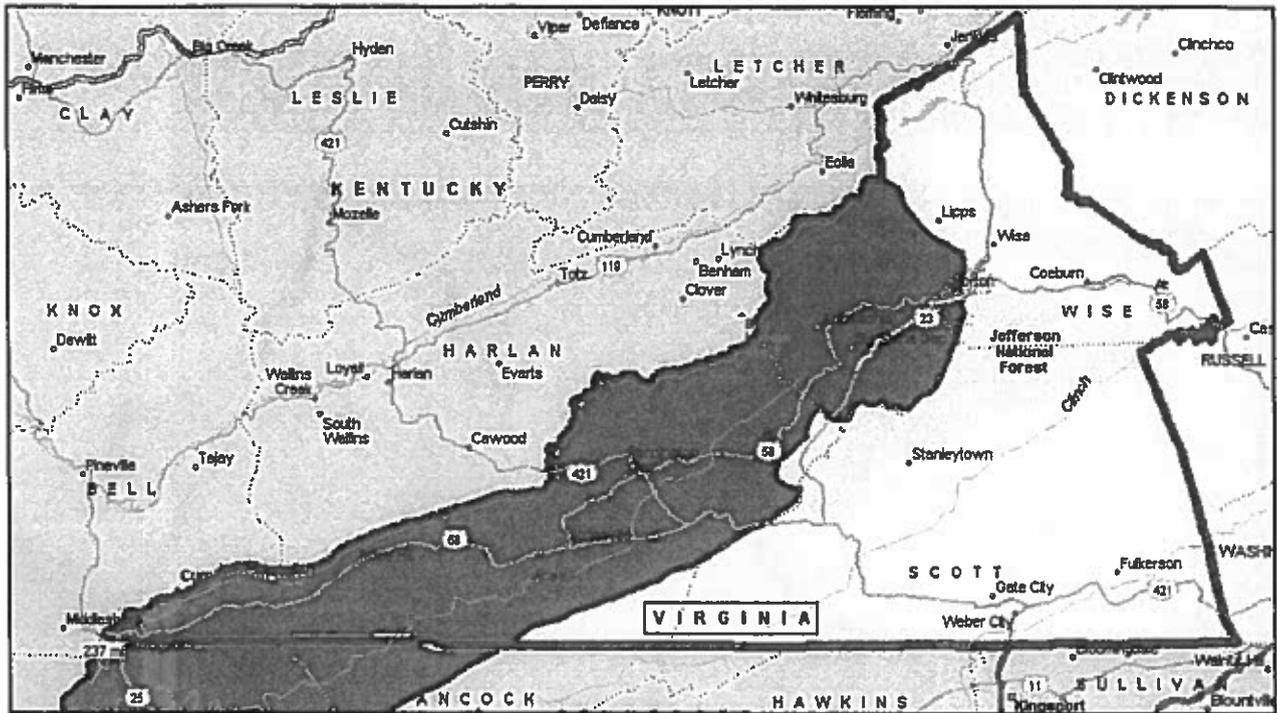
Recurrence intervals of floods can be estimated using the number of flood occurrences over a period of time. Using data from the USGS gauge at Speers Ferry and the 1966 TVA Report, there has been a flood recurrence interval of roughly once every 1.8 years.

#### Powell River Basin

The Powell River is another major river in the area, with a drainage area of roughly 938 square miles. A majority of this area is located within Lee County, with portions of the watershed in Wise County.

The Powell is fed by numerous tributaries originating from the high mountain ridges throughout the drainage area. The three major tributaries are North Fork Powell, South Fork Powell and Callahan Creek. Due to steep mountainous terrain in the area, the potential for rapid flooding following a moderate to significant rain event or spring snow melt is high.

Records of historic events in the district are numerous, and floods on the Powell River and its tributaries are well documented. The determined flood stage for the Powell is eight feet. There have been more than 75 recorded flood events since 1918 that have crested above this level. The two largest recorded floods occurred in April 1977 and March 1963, with the river cresting over 44 feet near Jonesville. As with most floods in this area, information regarding damages from these events is not readily available. A Virginia State Water Control Board report (1977) and a TVA report (1972) provide much information regarding previous floods. Records from these events indicate several buildings inundated with floodwaters, while roadways were blocked.



**Figure E-3  
Powell River Basin**

**Table E-3** includes flood heights for events on the Powell River compiled from TVA reports of 1972 and 1977, and from USGS gauge data (TVA, USGS). The events shown are those with crest levels higher than eight feet, the flood stage on the Powell.

**Table E-3  
Ten Highest Floods - Powell River near Jonesville VA**

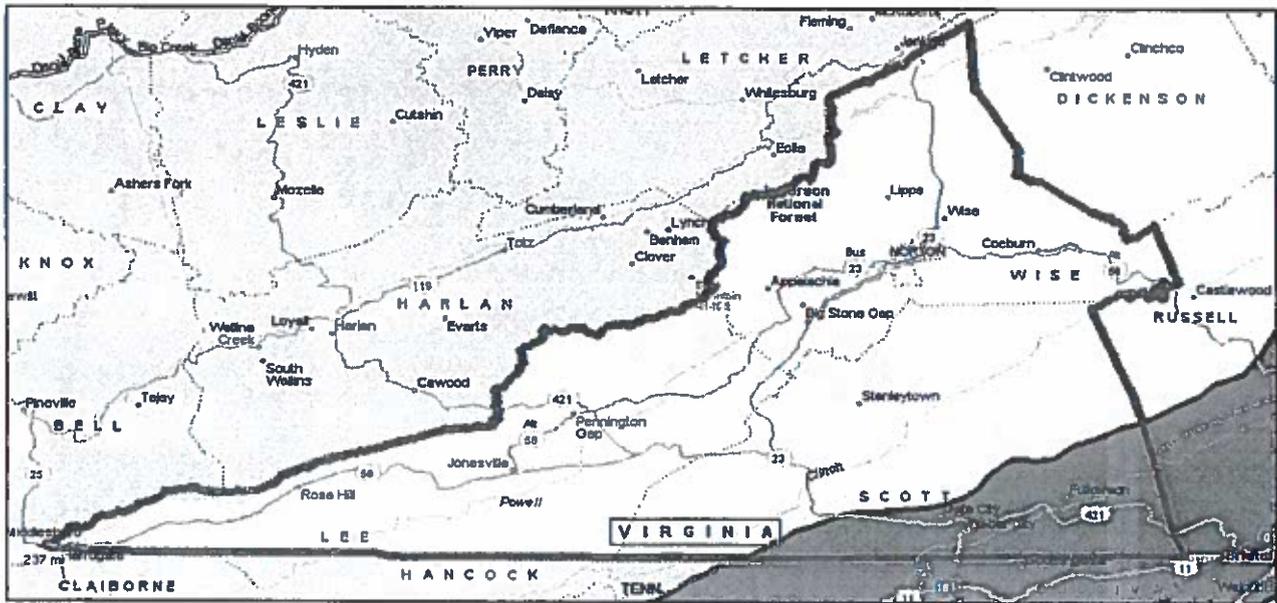
Date	Elevation
April 5, 1977	1303.4 ft
March 12, 1963	1292.4 ft
January 1, 1918	1292.1 ft
March 18, 2002	1291.5 ft
December 31, 1969	1291.2 ft
January 8, 1946	1289.9 ft
March 7, 1967	1288.1 ft
January 30, 1957	1286.0 ft
March 17, 1973	1285.8 ft
February 11, 1994	1285.7 ft

USGS

Based on data from the USGS gauge near Jonesville, there has been a flood recurrence interval of roughly once every 1.2 years.

### Holston River Basin

The North Fork Holston River is the third major river in the district. Most of the flood information available is for Big Moccasin Creek with a drainage area of approximately 95 square miles.



**Figure E-4**  
**Holston River Basin**

Big Moccasin Creek is fed by numerous tributaries originating from high mountain ridges throughout the drainage area. The major tributary is Little Moccasin Creek. Steep mountainous terrain allows for a high potential for rapid flooding following a moderate to significant rain event or spring snowmelt.

Although records of historic events in the district are numerous, floods on the North Fork of the Holston are not well documented, unlike floods on Big Moccasin Creek and its tributaries. The determined flood stage for Big Moccasin Creek is six feet, with roughly 55 recorded floods since 1862 cresting above this level. The largest recorded flood occurred in March 1963, with the river cresting over 10 feet near Gate City. As for most floods in this area, much information is not available regarding damages due to these events. A 1967 TVA report does provide information regarding previous floods, with records from these events indicating several buildings inundated with floodwaters and roadways blocked.

**Table E-4** on the following page includes flood heights for events on the Big Moccasin Creek compiled from a study completed by the 1967 TVA report and from USGS gauge data. The events shown are those with crest levels higher than six feet, the flood stage on the Big Moccasin Creek. Note that gauge readings prior to 1952, when the first gauge was installed at this location, have been estimated from personal accounts and high water marks.

**Table E-4  
10 Highest Floods - Moccasin Creek near Gate City VA**

Date	Elevation
March 12, 1963	1277.8 ft
January 30, 1950	1276.8 ft
May 6, 1958	1276.5 ft
February 18, 1944	1276.1 ft
January 8, 1946	1276.1 ft
January 29, 1957	1276.0 ft
August 14, 1940	1275.6 ft
January 16, 1947	1275.6 ft
February 2, 1950	1275.6 ft
April 16, 1956	1275.6 ft

USGS

Based on data from the USGS gauge near Gate City, there has been a flood recurrence interval of roughly once every 1.8 years.

**Hazard Profile**

The majority of the flooding in the LENOWISCO district is flash flooding that occurs following a period of intense or sustained rainfall. The highly mountainous terrain and associated steep slopes cause rainwater to run off rapidly, quickly filling streambeds. Flood-producing storms can occur throughout the year; historically, however, the most common months for significant flooding are January, February and March. These months, along with April and December, have the highest average precipitation and the highest frequency of intense rainfall events. In addition, flood events can be exacerbated by rapidly melting snow during the winter months.

Flooding occurs rapidly, often occurring before the rain event has passed, and flow passes very quickly through the smaller tributaries into the larger streams. The combined effects of these smaller tributaries can create extremely fast-moving floodwaters that greatly exceed the capacity of the larger streams. These fast-moving floodwaters allow residents in the floodplain little time to evacuate themselves or protect their property, and the force of such rapidly flowing waters increases the potential of damage and loss of life. The duration of these flood events varies. Floodwaters generally recede rapidly once the rain event has ended, but can last from a few hours to a few days.

**Warning System**

Because flash floods occur rapidly, the only potential warning to an upcoming flood event comes through the ability to forecast a heavy rain event prior to its occurrence. The National Weather Service (NWS) issues flood watches and warnings when heavy rains or severe storms threaten the area. These warnings are carried to local residents through local media outlets and online. In addition, the NWS, in conjunction with the National Oceanic and Atmospheric Administration (NOAA), operates the NOAA Weather Radio System. This system is a nationwide network of radio transmitters that broadcasts severe weather data to relatively inexpensive special receivers that can be purchased by the public. When a severe weather alert is issued, the transmitter will switch to alert mode, notifying residents of the potential risk. Although not extensive, the measures provide residents and citizens located in a flood-prone area some warning time to prepare for a potential flood.

### Secondary Effects

A significant flood event carries the potential for a variety of secondary impacts. Among the more common are impacts to infrastructure and utilities such as roadways, water service and wastewater treatment. Many roadways in the LENOWISCO district are vulnerable to damage due to floodwaters. The effect of flood damages to roadways can limit access to areas, cutting off some residents from emergency and other essential services. Another example is the presence of above-ground propane storage tanks, many of which are unsecured. If dislodged during a flood event, gas leaks can cause explosions or the tanks can become floating projectiles in quickly moving floodwaters.

### Hazard Areas

The portions of the district most susceptible to flooding are those directly adjacent to the area's major waterways. Flooding, however, can occur along the smaller tributaries. Due to the local terrain, the majority of development in the district is located in the valleys along these rivers. Development generally consists of residential and agricultural uses, with commercial districts typically confined within the incorporated towns. A significant amount of development in the district is located in the floodplain.

FEMA, through the National Flood Insurance Program (NFIP), has developed Flood Insurance Rate Maps (FIRMs) that identify flood zones through detailed hydrologic and hydraulic studies. These zones represent the areas susceptible to the 1 percent annual chance flood, or 100-year flood. Where possible, FEMA also determines a Base Flood Elevation (BFE) for the 100-year floodplain, which is the calculated elevation of flooding during this event and a commonly used standard for determining flood risk and managing potential floodplain development. These maps provide a more definitive representation of the highest flood risks in the communities. The specific flood hazard areas in each of the major watersheds are described below.

#### Clinch River Basin

The Clinch River, North Fork Clinch, Stock Creek, Copper Creek and Guest River have been studied in detail as part of the FEMA Flood Insurance Study, with BFEs determined for the 100-year flood. The 100-year floodplains along these rivers vary from 100 feet wide in some areas to more than 1,600 feet wide in other locations, depending on local topography. For areas along small streams and creeks in the Clinch River area, where minimal development is present and damage potential is low, approximate methods were used to determine the extent of the floodplain, and no BFEs were determined.

As noted in the Hazard History section, the 100-year flood level has been exceeded on the Clinch River. This does not preclude the occurrence of another 100-year event in the future, as history has often proven. The impact of watershed changes over time should be minimal due to the rural nature of the area.

#### Powell River Basin

The Powell River, North Fork of the Powell, South Fork of the Powell and Callahan Creek have been studied in detail, with BFEs determined for the 100-year flood. The 100-year floodplains along these rivers vary from 100 feet wide to more than 1,600 feet, depending on local topography. For areas along small streams and creeks in this basin, with minimal development and low damage potential, approximate methods were used to determine the extent of the floodplain, with no BFEs determined.

As noted elsewhere, large floods have occurred on the Powell River. This does not preclude the occurrence of a 100-year flood event in the future. The impact of watershed changes over time should be minimal, due to the area's rural nature.

### Holston River Basin

The North Fork of the Holston River, Big Moccasin Creek and Little Moccasin Creek have been studied, with BFEs determined for the 100-year flood. The 100-year floodplains along these rivers vary from 300 feet wide to more than 1,000 feet, depending on local topography. For areas along small streams and creeks in the Holston River area, with minimal development and low damage potential, approximate methods were used to determine the extent of the floodplain, and no BFEs were determined.

As noted, a 100-year flood has not been exceeded on the Holston River, which does not preclude the occurrence of a future 100-year event. The impact of watershed changes over time should be minimal due to the rural nature of the area.

### Flood Maps

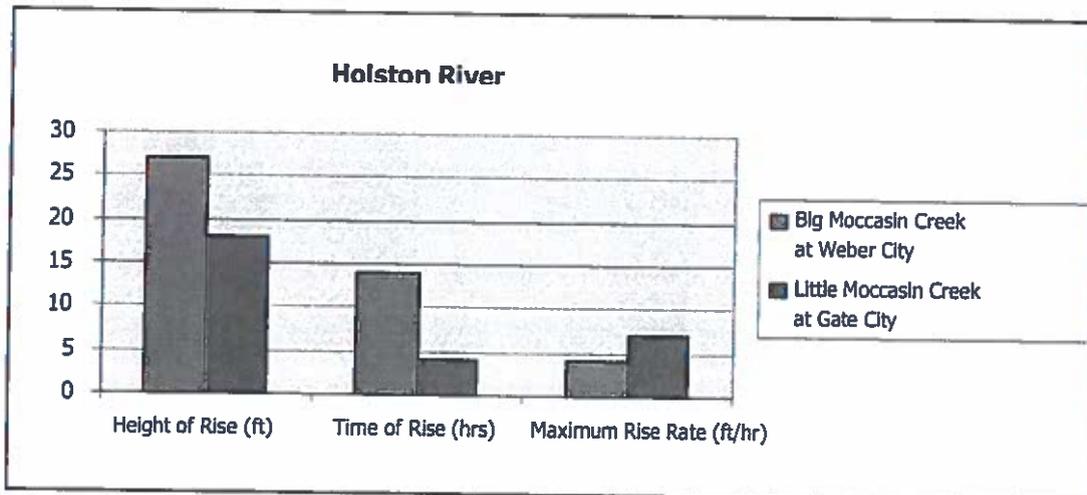
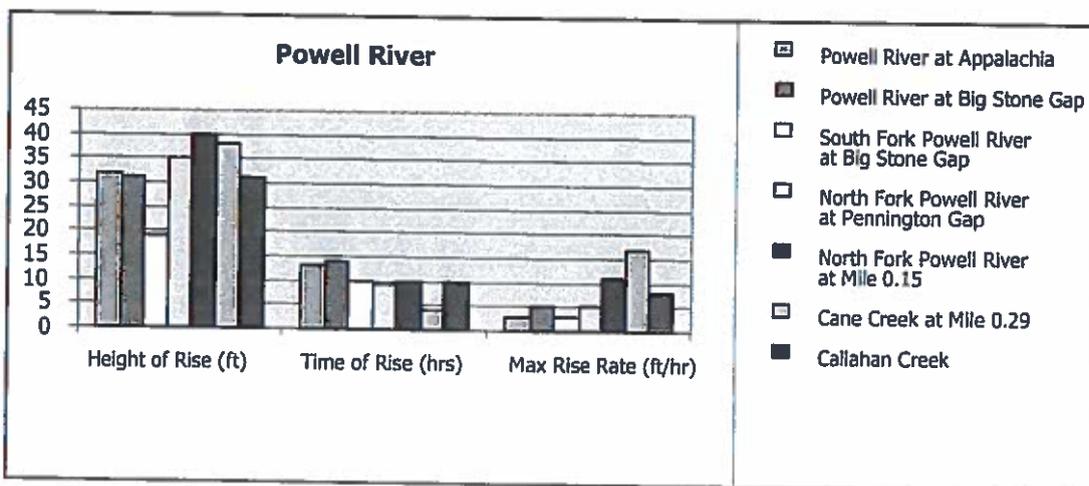
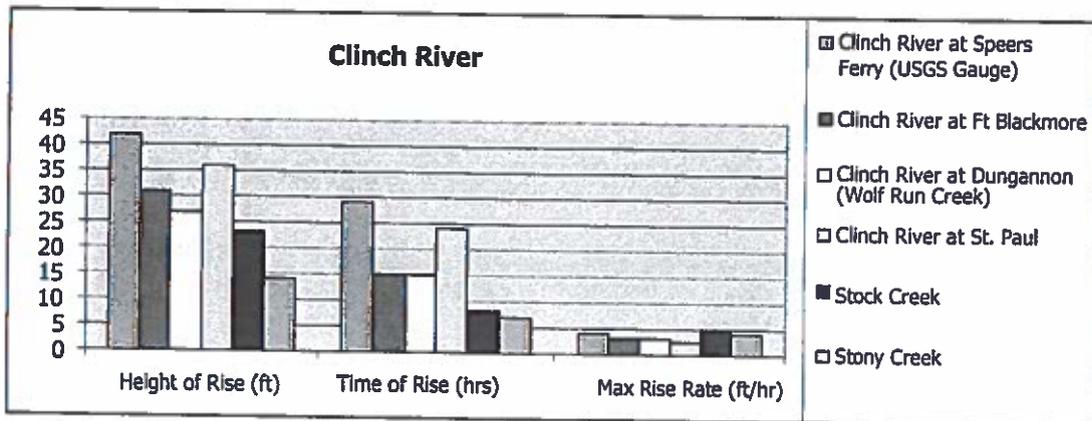
Historically, FEMA FIRMs have only been available as hard copy maps and not in digital format. However, in recent years FEMA has developed digital versions of the FIRMs called "Q3 flood maps" or "DFIRMS." These DFIRM databases can be incorporated into a GIS. A DFIRM database provides flood hazard data used for mapping and analysis of a county, a community or a portion thereof. Also available are Flood Insurance Rate Map (FIRM) scans, which are digital images of flood hazard information for a town, county or state. These images are digital pictures of entire flood maps that can be viewed and printed from a computer using various available applications. Two counties in the LENOWISCO district currently have DFIRM flood data available, Wise County and Lee County. The effective date for these is February 18, 2011. Based on input from the Planning District of the critical flood areas, the 100-year floodplains of Wise and Lee Counties, as shown on the FIRMs, were geo-referenced and scanned for use with a GIS system. Although having digital versions of the floodplain for all three counties would be ideal, Scott County is not yet available from FEMA. The areas of Lee, Scott and Wise Counties for which the floodplains have been digitized also include the following communities: Coeburn (Wise County Unincorporated Areas), Appalachia, Big Stone Gap, Hill (Scott County Unincorporated Areas), Clinchport, Gate City, Pennington Gap, and south of St. Charles (Lee County Unincorporated Areas). Maps of these areas, including known locations of structures, can be found at the end of this section.

### Vulnerability Analysis

In the previous sections of this analysis, specific areas susceptible to flooding in the LENOWISCO district were identified. The next step in a Hazard Identification and Risk Assessment is to identify what is vulnerable to the effects of potential flooding. Flooding impacts a community to the degree it affects the lives of its citizens and community functions overall. Therefore, the most vulnerable areas of a community will be those most affected by floodwaters in terms of potential loss of life, damages to homes and businesses, and disruption of community services and utilities. For example, an area with a highly developed floodplain is significantly more vulnerable to the impacts of flooding than a rural or undeveloped floodplain where potential floodwaters will have little impact on the community.

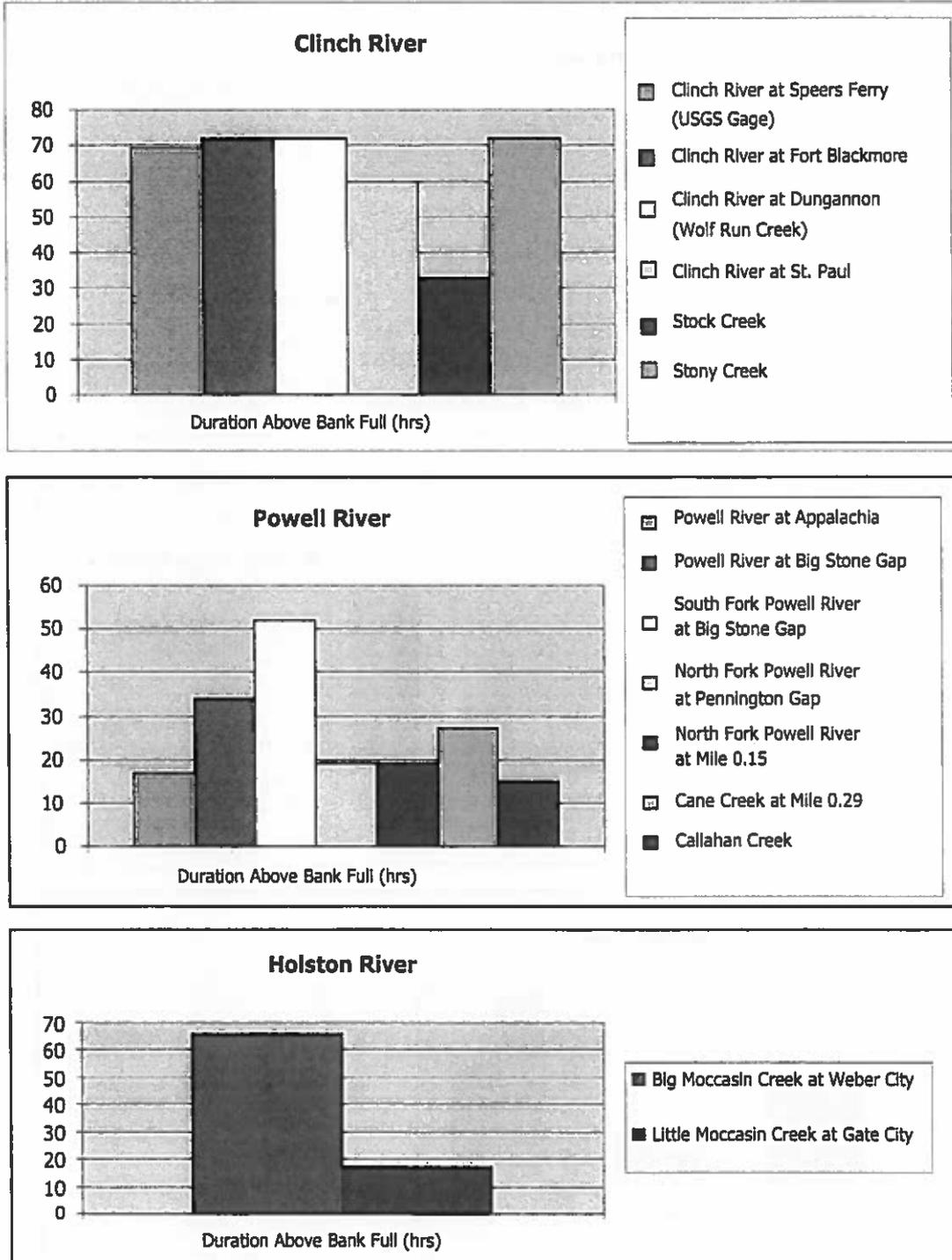
A number of factors contribute to the relative vulnerabilities of certain areas in the floodplain. Development, or the presence of people and property, in hazardous areas is a critical factor in determining vulnerability to flooding. Additional factors that contribute to flood vulnerability range from specific characteristics of the floodplain to characteristics of the structures located therein.

**Flood depth** – The greater the depth of flooding, the higher the potential for significant damages. Flood depths have been estimated for the maximum probable event for this area by various TVA and Corps of Engineers studies. Flood heights and rise rates in **Figure E-5** on the following page are based on the Maximum Probable Flood.



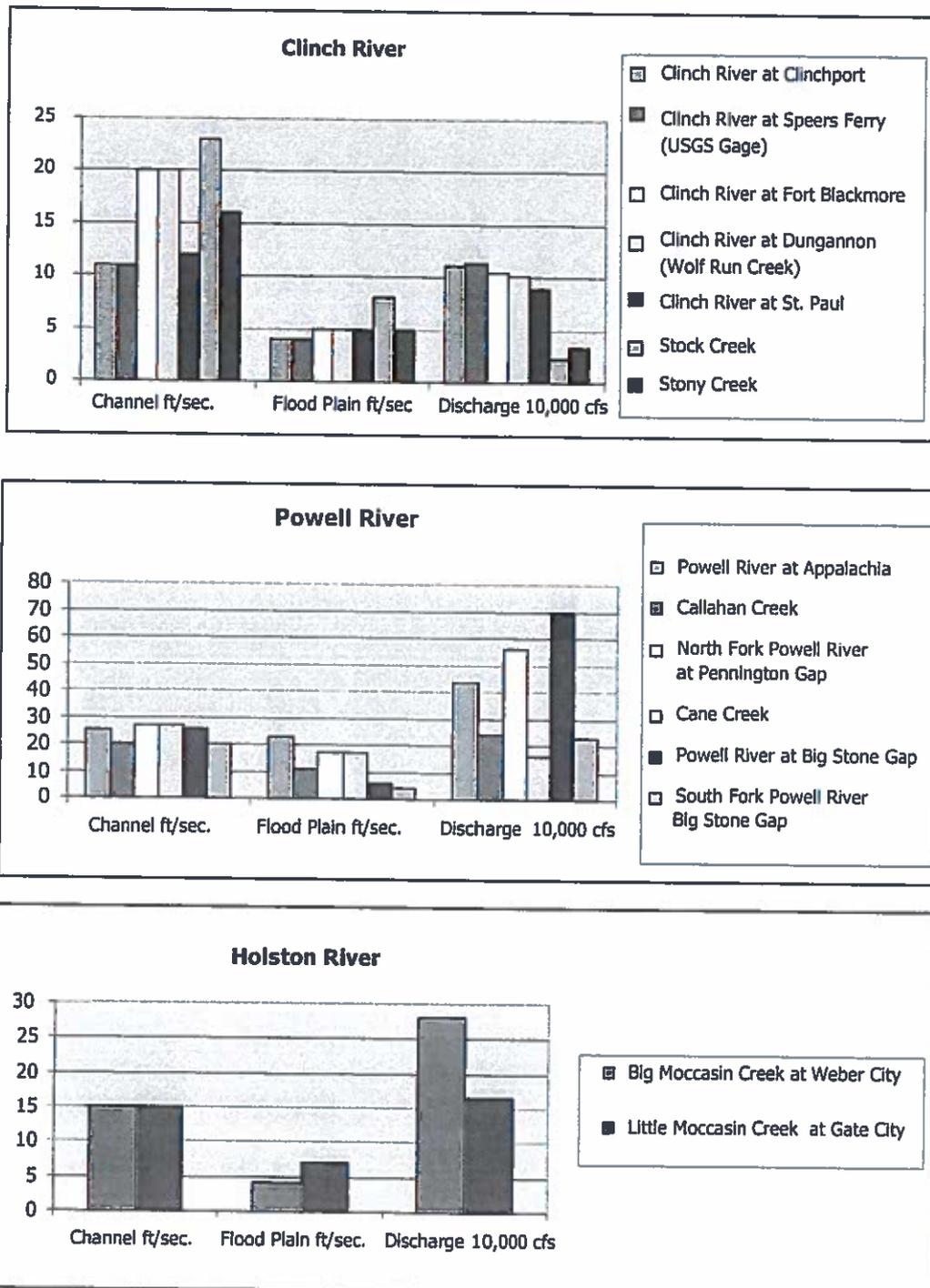
**Figure E-5  
River Basin Flood Heights and Rise Rates**

**Flood duration** – The longer floodwaters remain in contact with building components, the greater damage potential. As noted, floodwaters tend to recede quickly following an event, but may remain longer in localized areas. Flood durations in **Figure E-6** are based on the Maximum Probable Flood.



**Figure E-6**  
**River Basin Flood Durations**

**Velocity** – Flowing water exerts forces on a building’s structural members, increasing the likelihood of significant damage. The relatively high velocity of floodwaters in the area will increase damages throughout the district. Flood velocities in **Figure E-7** are based on the Maximum Probable Flood.



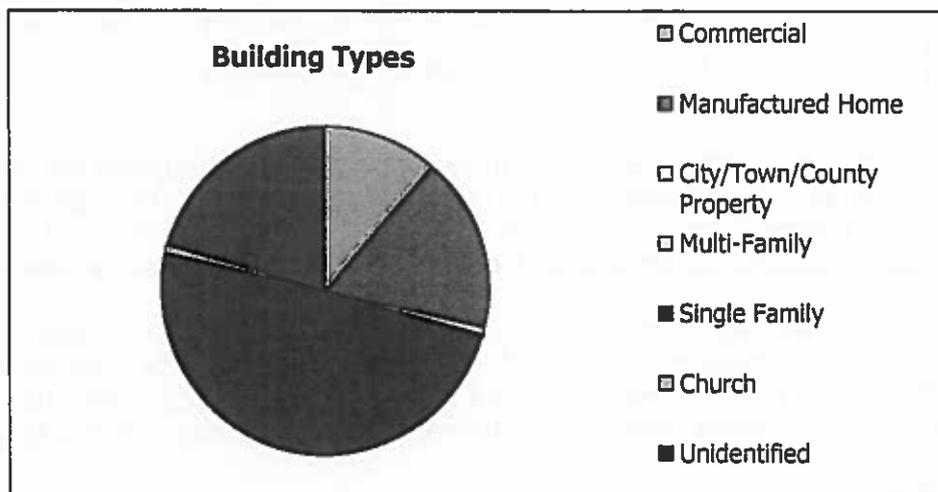
**Figure E-7**  
River Basin Flood Velocities

**Elevation** – The lowest possible point where floodwaters may enter a structure is the most significant factor contributing to its vulnerability to damage. Entry point elevations of structures in the planning area vary greatly relative to the BFE.

**Construction Type** – Certain types of construction are more resistant to the effects of floodwaters than others. Masonry buildings, constructed of brick or concrete blocks, are typically the most resistant to flood damages simply because masonry materials can be in contact with limited depths of flooding without sustaining significant damage. Wood frame structures are more susceptible to flood damage because construction materials used are easily damaged when inundated with water. The type of construction in the LENOWISCO district varies from area to area. Specific building types will be discussed in the specific flood area descriptions below.

**Structures at Risk**

To assess the district’s potential vulnerability to flooding, data for structures located in the floodplain were studied. These were identified by comparing floodplain areas from FEMA FIRMs with each county’s existing building data. Additional information was then collected, including occupancy type, building material type, number of stories, area, value per square foot, total value and flooding source. Using the type, occupancy and use of these structures, estimated building values were developed. Tax appraisal values for these buildings (minus land value) and square foot costs were used to develop a square foot value for each building type, which was applied to the properties located in the flood plain to estimate a structure value. From the data collected, an estimated 5,385 structures are located in the floodplain, with an estimated total value just over \$200 million. Of these structures, roughly 67 percent are some type of residential property, 12 percent are commercial properties, and 21 percent are of public, church or unidentified use. **Figure E-8** contains a more detailed breakdown of the use of all structures in the floodplain.



**Figure E-8**  
**Breakdown of Building Types in the Floodplain**

As shown, a wide variety of building types are present in the floodplains of the district. As noted, roughly 67 percent are residential properties, with many of the residential properties either mobile homes or low density residential properties.

**Table E-5** summarizes the estimated number, value, and predominant use of the structures located in the floodplain of all FEMA recognized flood sources. A more detailed discussion of the vulnerability of each flood source follows these tables.

**Table E-5  
Structures at Risk by Flooding Source**

Flood Source	Estimated Number of Structures	Estimated Total Value	Most Prevalent Building Type	Second Most Prevalent Building Type
<b>Lee County</b>				
Clinch River	25	\$1,250,000	Single Family Residential (65%)	Manufactured Home (20%)
Powell River	690	\$34,000,000	Single Family Residential (64%)	Manufactured Home (20%)
<b>Scott County</b>				
Clinch River	685	\$35,000,000	Single Family Residential (63%)	Manufactured Home (20%)
Holston River	400	\$20,000,000	Single Family Residential (62%)	Manufactured Home (21%)
<b>Wise County</b>				
Clinch River	1,060	\$35,200,000	Single Family Residential (38%)	Manufactured Home (23%)
Levisa Fork	900	\$31,800,000	Single Family Residential (46%)	Manufactured Home (13%)
Powell River	1,375	\$41,245,000	Single Family Residential (48%)	Manufactured Home (10%)
<b>City of Norton</b>				
Guest River	140	\$2,015,000	Single Family Residential (40%)	Manufactured Home (22%)
Powell River	110	\$435,000	Single Family Residential (49%)	Manufactured Home (10%)

As seen, the vast majority of structures located in the district's various floodplains are residential. Largely, the two highest uses are residential and manufactured home uses. The median value of homes in the district ranges from \$77,900 in Lee County to \$90,400 in Scott County. In addition to the value of the actual structures, contents values increase the vulnerability to damages due to flooding.

Mobile homes are scattered throughout the area. The estimated average value of these structures along the various rivers is approximately \$30,000. These structures tend to be more vulnerable than other residential types due to their lesser structural stability and flood-prone construction materials as well as the reduced means these residents have to protect themselves from potential flood damage.

**Critical Facilities**

The impacts of floodwaters on critical facilities, such as police and fire stations, hospitals, and water or wastewater treatment facilities, can greatly increase the overall effect of a flood event on a community. Some of these facilities in the district are located in areas with a high risk to flooding. Although data regarding the specific locations of these facilities in relation to the floodplain is limited, available sources provide the information in **Table E-6** on the following page. To accurately determine if a structure is actually located in the floodplain, site-specific information should be determined. Likewise, other critical facilities may be located in or near the floodplain, in addition to those listed.

**Table E-6  
Critical Facilities in the Floodplain**

<b>Jurisdiction</b>	<b>Facility</b>
Lee County	St Charles Elementary School
	Pennington Gap Fire Department
Wise County	Appalachia Fire Department
	Coeburn Hospital Clinic
	Coeburn Police Department
	Pound Rescue Squad
	Pound Police Department
	Powell Valley Fire Department

There are four wastewater treatment plants located near the rivers or their tributaries, but not located in the floodplain. If one of these facilities were to be damaged during a flood event, service could be interrupted and untreated sewage could be released into adjacent waterways.

Special needs populations are those requiring additional attention during a flood event, are not as able to protect themselves prior to an event, or are not able to understand potential risks. These can include non-English populations, elderly populations, or those in a lower socioeconomic group. Special needs populations in the district are primarily lower income and elderly individuals, living in a flood prone area, without the resources to take actions to protect themselves.

**Future Land Use Trends**

Due to existing development and very steep topography outside the river valleys, developable land in the LENOWISCO district is scarce. A dominant trend in the area is redevelopment, with older, lower value structures replaced by newer construction with significantly higher dollar values. This is especially true with older mobile homes replaced by new pre-fabricated modular homes. Many of these structures are located in the floodplain, where this redevelopment trend is increasing the value of structures at risk to damages due to flooding in the district.

## SEVERE WINTER STORMS

Severe winter storms and blizzards are extratropical cyclones that originate as midlatitude depressions (FEMA, 1997). Snowstorms, blizzards, and ice storms are the most common examples. These storms can bring heavy snowfall, high winds, ice, and extreme cold with them. Historically, winter storms in southwestern Virginia have produced significant snowfall, sleet, and freezing rain.

### Hazard History

On January 20-22, 1985, an arctic cold front swept across the state. New temperature records were set at several locations, and fresh snow helped wind chill temperatures plunge well below zero.

During the winter of 1993-1994, Virginia was struck by a series of ice storms. Although ice storms are not an uncommon event in the valleys and foothills of the Appalachian Mountains, and the region had been overdue for an ice storm, it was unprecedented to have several occur in succession.

The "Super Storm of March '93", or "The Storm of the Century," occurred March 12-15, 1993. This storm affected 26 eastern and central states and resulted in a federal disaster declaration. Snowfall across the region ranged from 12 to 48 inches depending on elevation. Far southwestern Virginia saw 30 to 42 inches of snow, the most in more than 25 years. Winds produced blizzard conditions with snow drifts up to 12 feet. Interstates were shut down. Shelters were opened for 4,000 stranded travelers. The Virginia National Guard helped with emergency transports and critical snow removal.

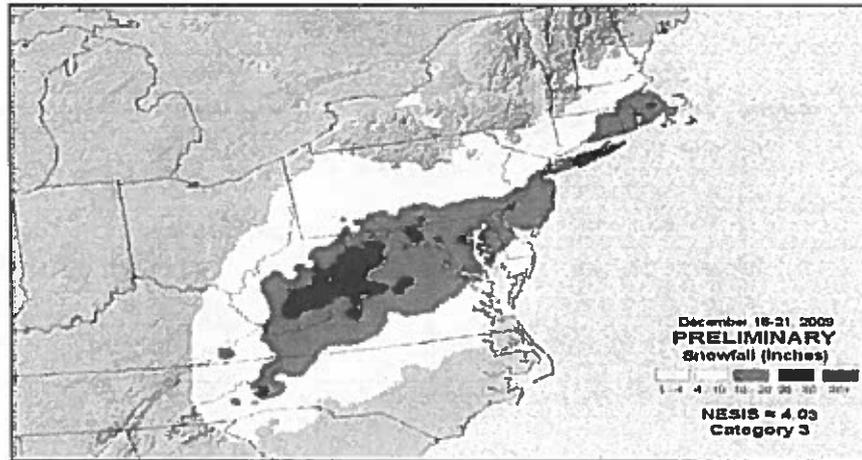
During an ice storm of February 10-11, 1994, some areas of southern Virginia received a devastating three inches of ice, causing tremendous tree damage and power outages for up to a week.

The "Blizzard of '96" or "Great Furlough Storm," began late on January 6. As much as 30 to 36 inches of snow fell over the western mountains.



**Figure E-9**  
**Snowfall - Blizzard of 1996**

A week before Christmas 2009, a nor'easter slammed the East Coast, breaking records for a December snowfall. Thousands were left without power, some for several days, in the biggest snowstorm to affect western Virginia since the January 1996 storm.



**Figure E-10**  
**Snowfall - Winter Storm of 2009**



*December 2009, near Wise*

*Photo courtesy Stephen L. Gibson*

Many snowstorms affecting the LENOWISCO district follow familiar storm tracks, but in late October 2012, Hurricane (dubbed "superstorm") Sandy brought an unusual mix of weather conditions to the Eastern seaboard. Wise County saw as much as 10 inches of snow, while much of Lee County had a minor dusting.

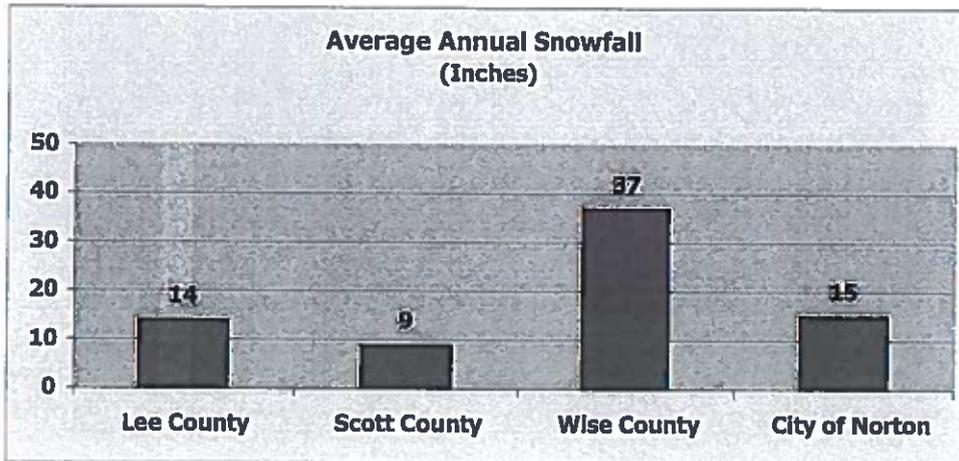
**Table E-7** includes ranges of snowfall for select historic events in southwestern Virginia. This table is not inclusive of all historic snowfall events.

**Table E-7  
Historic Snowfall Amounts**

Date	Amount
February 12 - March 10, 1960	65 inches
December 10-12, 1960	4-13 inches
January 20-22, 1985	4 inches
March 13-14, 1993	30-42 inches
January 6-13, 1996	30-36 inches
January 27-28, 1998	12-24 inches
December 18-20, 2009	8-12 inches
October 30-31, 2012	6-10 inches

**Hazard Profile**

Although the Commonwealth of Virginia is not generally associated with severe winter storms, the mountainous area in the southwestern portion of the state regularly experiences several snow storms each year. These storms can produce between 4 and 12 inches of snow from each event. Total average annual snowfall within the district varies greatly by locality. Lee County has an average annual snowfall of 14 inches per year, Scott County 9 inches per year, Wise County 37 inches per year, and the City of Norton 15 inches. As Table E-7 illustrates, however, storms producing higher snowfall amounts are clearly possible.



**Figure E-11  
Average Annual Snowfall for LENOWISCO**

In addition to snow, winter storms can also bring sleet and freezing rain. Sleet is generally described as frozen water particles that fall in the form of ice, while freezing rain falls as super cooled water which can freeze on impact with the ground, trees, or roadways. In its most severe form, freezing rain can fall as part of an ice storm that can coat the area with a layer of ice up to three inches thick.

Ice storms can cause significant damage by snapping tree limbs and bending trees to the ground. These fallen limbs and trees can completely block roadways, cut access to certain areas of the district for days, and interfere with and destroy overhead utility lines.

### **Predictability and Frequency**

The National Weather Service tracks winter storms by radar. Based on this radar information and models, the National Weather Service provides up-to-date weather information and issues winter storm watches to indicate when conditions are favorable for a winter storm, and winter storm warnings if a storm is actually occurring or detected by radar. On average, southwestern Virginia will experience one or two severe winter storms in a given year. Snowfalls amounts for these storms can vary from a few inches to a foot of snow in extreme cases. The higher elevations of the district (i.e. High Knob in the Jefferson National Forest) can experience as much as 48 inches of snow in a severe winter storm.

### **Secondary Effects**

Secondary effects of winter storms are broad. Treacherous driving conditions can result in automobile accidents, with personal injury and property damage. Deliveries of heating fuel can be delayed by impassible roads. Impassible roads can also result in schools being closed because buses are not able to access their routes. Costs of salting and sanding roads and of snow removal can be staggering to communities both large and small. The costs to repair roads after spring thaws can also be significant.

After a significant snowfall, the resulting thaw that occurs when the temperature rises above freezing can cause flooding in some areas. As noted in the flood section of this HIRA, January, February and March are the months with the highest occurrences of flooding. The rainy season coincides with snowfall and subsequent melting. Because of the mountainous terrain in this area, flood events tend to occur rapidly and with little warning.

The local economy also can suffer if businesses close due to inclement winter weather. The impact can be significant in a larger event. In addition, disabled transportation systems may mean that shipments of goods and services are delayed, which may result in decreased inventory for retailers and increased inventory for industrial and commercial suppliers.

### **Vulnerability Analysis**

Winter storms can disrupt lives for periods of a few hours or up to several days, depending upon the storm's severity. Transportation systems are usually among the first and hardest hit sectors. Snow and ice can block primary and secondary roads, and treacherous conditions make driving difficult. Some motorists may be stranded during a storm, and emergency vehicles may not be able to access all areas. The steep slopes throughout the LENOWISCO district aggravate the situation, making some secondary roads impassible during even a minor winter weather event.

Utility infrastructure can also be adversely affected by winter storms. Heavy snow and ice can cause power lines to snap, leaving citizens without power and, in some cases, heat for hours or even days. Likewise, telephone lines can also snap, disabling communication within portions of a community. Frozen water pipes can rupture in homes, and water and sewer mains can also freeze and leak or rupture if not properly maintained. These ruptures can lead to flooding and property damage. People's health can also be adversely affected by severe winter weather. People who lose heat in their homes, those who get stuck in snowdrifts while driving, or people working and playing outdoors can suffer from hypothermia and frostbite. Since winter weather hazards generally affect the entire district and vary in intensity and form, it is not possible to quantify primary effects or specific damages.

## SEVERE WIND EVENTS

Wind can be one of nature's most destructive forces. Strong winds can erode land mass and shorelines, topple trees and manmade structures, and destroy a community's critical utilities and infrastructure. Damaging winds that affect the LENOWISCO district are typically associated with severe thunderstorms or the remnants of tropical storms or hurricanes. Winds from a severe thunderstorm can reach more than 60 mph in the region. These storms generally develop along a cold front and can extend for hundreds of miles.

Although rare, tornadoes can occur in the LENOWISCO district. If and when such events occur, the level of damages depends on the strength of the tornado, along with the number and type of facilities and resources affected. If a tornado were to impact the Planning District, the level of damages sustained would depend most on the strength of the tornado, along with the type and number of facilities and resources impacted.

**Table E-8** notes respective wind speeds and typical damage descriptions for the Enhanced Fujita tornado intensity scale.

**Table E-8**  
**Enhanced Fujita Scale**

Scale Value	Wind Speed (mph)	Description of Typical Damage
EF0	65 - 85	Light damage. Tree branches snapped; antennas and signs damaged.
EF1	86 - 110	Moderate damage. Roofs off; trees snapped; trailers moved and/or overturned.
EF2	111 - 135	Considerable damage. Weak structures and trailers demolished; cars moved.
EF3	136 - 165	Severe damage. Roofs and some walls torn off well-constructed buildings; trains overturned; trees uprooted; cars lifted up and thrown.
EF4	166 - 200	Devastating damage. Well-constructed houses leveled; structures blown off weak foundations; cars thrown; large missiles generated.
EF5	> 200	Incredible damage. Houses lifted off foundations and carried some distance; large missiles thrown over 100 yards; trees debarked.

### **Hazard History**

Records of the impacts of high wind events in the LENOWISCO district are limited. The relatively large distance between the district and the Atlantic Coast limit the impacts of the winds associated with hurricanes and tropical storms. Because the highest winds speeds associated with a hurricane or tropical storm are typically located to the east of the storm's eye, and the paths of most of these storms are to the east of the LENOWISCO district, extremely high winds from these events are rare. Damaging winds from severe thunderstorms have occurred throughout southwestern Virginia on a regular basis. Wind damages have typically been localized throughout the region and have included broken tree limbs, blown down trees, damage to power lines, and moderate building damage.

Table E-9 includes historical tornado occurrences in the LENOWISCO district.

**Table E-9  
Documented Tornadoes, 1920-2012**

Date	Deaths	Injuries	Path Length (miles)	Rating	Location(s)
May 2, 1929	13	100	4	F2	Scott
March 4, 1944	0	32	30	F3	Lee, Scott, Wise
April 5, 1957	0	3	N/K	F1	Wise
April 4, 1974	0	0	8.6	F0	Lee
April 13, 1996	0	0	0.5	F0	Scott
May 26/27, 2004	0	0	1.5/1	F1/F0	Lee, Scott
April 25, 2006	0	0	1.5	F0	Scott
March 4, 2008	0	2	1	EF1	Wise
May 8, 2009	0	0	1.7	EF2	Pound
June 16, 2009	0	0	0.1	EF0	Lee
March 2, 1012	0	1	1.0	EF1	Lee

The following is an account of the deadliest high wind event in the LENOWISCO district.

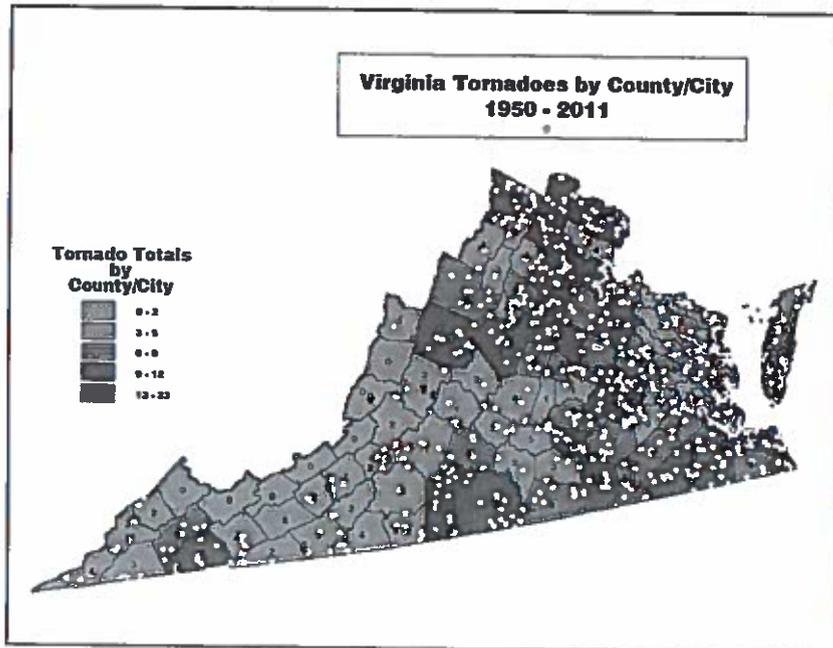
**May 2, 1929, "Virginia's Deadliest Tornado Outbreak"**

It has been said that tornadoes do not occur in mountainous areas. This is false. It was a warm May day with a cold front moving in from the west. The first tornado hit Rye Cove in Scott County in extreme southwest Virginia. The elevation of Rye Cove is about 1500 feet and it sits between two ridges that rise another 500 feet above. The tornado struck the school house, and the principal described what he saw:

*"It was raining at the time, 11:55 a.m., and classes were recessed for noon. About 25 children were in the building, the remainder being on the playground. I was walking down the hall when I saw what looked like a whirlwind coming up the hollow. Trees were swaying and as the whirlwind neared the building, it became a black cloud. It struck the building and I believe I yelled. The next thing I remember, I was standing knee-deep in a pond 75 feet from where the building stood. I was badly shaken up and frightened and surprised that I was able to wade out of the water. Bodies of children were scattered over a wide radius."*

Twelve children and a teacher were killed and 42 more were injured. The school was an oak-framed, well-constructed, two-story building. It contained 10 classrooms and an assembly room. An eyewitness from a nearby hillside saw two clouds rush together about a mile down the valley. They formed the tornado that struck the school just moments later. The school collapsed and pieces were scattered up to 2 miles. The tornado continued on for a few miles, but fortunately, no other communities were in its path. Several buildings in Rye Cove were destroyed. A total of 100 people were injured.

*(Virginia Tornadoes: Written by Barbara McNaught Watson, Warning Coordination Meteorologist, Sterling, VA)*



**Figure E-12  
Virginia Tornado Totals by County**

### **Hazard Areas**

The LENOWISCO district is not classified as an area with a higher than average base wind speed nationally. According to the Virginia Uniform Statewide Building Code (USBC), the minimum design wind speed for the area is 90 mph. High wind events, primarily severe thunderstorms, have occurred in every portion of the district. There are no proven indicators to specifically predict where high winds may occur, and these events can be expansive enough to affect the entire area. Although localized geography, such as mountain ranges and gorges, can contribute to potential damages caused by these events, no specific locations within the district have been identified due to these conditions. Therefore, the entire district is considered to have an equal risk of being impacted by a high wind event.

### **Vulnerability Analysis**

Depending on the type of wind event, the damage sustained can range from extremely localized to widespread, and from moderate to devastating. The potential impacts of a severe wind event to the district depend on the event's specific characteristics, but can include broken tree branches and uprooted trees; snapped power, cable, and telephone lines; damaged radio, television, and communication towers; damaged and torn off roofs; blown out walls and garage doors; overturned vehicles; totally destroyed homes and businesses; and serious injury and loss of life. Downed trees and power lines can fall across roadways and block key access routes, as well as cause extended power outages to portions of the district.

The extent and degree of damages from a high wind event are primarily related to the intensity of the event, measured in terms of wind speed. Sustained high winds can be the most damaging, although a concentrated gust can also cause significant damage. As wind speeds increase, the extent of damage varies depending on a number of site specific characteristics that will be discussed later in this section. Although no specific areas of the LENOWISCO district can be designated as having a higher risk of being affected by a severe wind event, there are a number of factors that contribute to a particular area's vulnerability to damages if a high wind event should occur.

Certain characteristics of an area or of a structure increase its resistance to damages than others. Many of these factors are extremely specific to the particular location, or the particular structure in question. However, each factor's effects on vulnerability can be discussed in general. The following is a list of these factors and a description of how they relate to vulnerability, particularly in the district.

#### Design Wind Pressures

Buildings must be designed to withstand both external and internal wind pressures on the structural framing and exterior elements. The level to which these structures are designed, as expected, directly correlates with their ability to resist damages due to high winds. Virginia's building code dictates to what design wind speed a structure must be designed, as noted in the previous section. For some building types, those structures constructed subsequent to the adoption of the building code are most likely to be the most resistant to damages from wind. However, the resistance to wind damage based on these code requirements is only effective to the level the requirements are enforced, and no comprehensive data on the date built for these structures exists for the district.

#### Building Type

The type of building construction will have a significant impact on potential damages from high wind events. A summary of basic building types – listed in order of decreasing vulnerability (from most to least vulnerable) – is provided below.

- **Manufactured:** This building type includes manufactured buildings produced in large numbers of identical or smaller units; typically include light metal structures or mobile homes.
- **Non-Engineered Wood:** Wood buildings not specifically engineered during design; may include single and multi-family residences, some 1-2 story apartment units and small commercial buildings.
- **Non-Engineered Masonry:** Masonry buildings not specifically engineered during design; may include single and multi-family residences, some 1-2 story apartment units and small commercial buildings.
- **Lightly Engineered:** Structures may combine masonry, light steel framing, open-web steel joists, wood framing, and wood rafters. Some portions of these buildings have been engineered while others have not. Examples include motels, commercial, and light industrial buildings.
- **Fully Engineered:** These typically have been designed for a specific location, and have been fully engineered during design. Examples include high rise office buildings, hotels, hospitals, and most public buildings.

The LENOWISCO district includes a variety of building types. Residential construction is primarily wood framed, varying from single story to multiple stories, although some masonry residential properties are present as well. As mentioned in the list above, non-engineered wood framed structures are among the most susceptible to potential damage. With this type of construction being the most prevalent for residential properties in the district, a majority of residential structures in the area could be classified as having a high level of vulnerability to damages should a high wind event occur.

Other types of structures found throughout the district that are vulnerable to damages during high wind events are metal framed buildings, primarily associated with light industrial buildings, as well as some agricultural buildings.

According to the Virginia USBC, agricultural buildings, such as barns and silos, are required to meet minimum requirements and be constructed in accordance with the state building code. Although the potential for human losses in these structures may be lower, the potential for high amounts of damages are significant.

Other factors that affect the potential for damage include height, shape, and the integrity of the building envelope. Taller buildings and those with complex shapes and complicated roofs are subject to higher wind pressures than those with simple configurations. The building envelope is composed of exterior building components and cladding elements including doors and windows, exterior siding, and roof coverings and sheathing. Any failure or breach of the envelope can lead to increased pressures on the structure's interior, further damage to contents and framing, and possible collapse.

**Critical Facilities**

The vulnerability of critical facilities such as police and fire stations, hospitals, shelters, and utility services varies greatly depending on the factors described in the sections above. In order to accurately assess the relative vulnerability of these structures, data regarding the vulnerability factors would be required. Generalizations based on the vulnerability factors can be made in certain instances. Due to the high level of importance to the community, the ability of these structures to resist the forces of high wind events greatly affects the community's overall vulnerability to these hazards.

**Estimating Losses**

Due to the varying characteristics of potential wind events that can affect the district, loss estimation for a particular event is a difficult undertaking. Severe thunderstorms or straight line wind events could bring severe winds to the entire district, although damages may only occur in localized areas. Potential wind damages can be estimated on various structure types, however, based on the potential wind speeds and building types described in the sections above. The FEMA Benefit Cost module, used for estimating the benefits of potential wind mitigation projects, contains a wind damage function based on building type and potential wind speed. This wind damage function expresses the potential damage to a building as a percentage of the building's replacement value, and potential damages to a building's contents as a percentage of the value of its contents. For use in this module, FEMA separates structures according to the building types described in the vulnerability analysis section.

Using these building types, and the potential wind speeds for the LENOWISCO district, potential damages can be expressed in terms of a percentage of the building and contents values. ASCE 7 categorizes the southwestern Virginia area as a 90-mph wind zone, based on a 50-year recurrence interval. Based on ASCE 7, the potential wind speed for an event with a 100-year recurrence interval is estimated to be 107 percent of the 50-year wind speed, or 96.3 mph.

**Table E-10** includes estimates of potential damage of the specific building types in the LENOWISCO area for the 50- and 100-year interval wind event. It should be noted that the 100-year wind speed assumed corresponds with an EF1 category tornado on the Enhanced Fujita Scale. Damages from the impact of a tornado stronger than an EF1 could greatly exceed these estimates.

**Table E-10  
Potential Wind Damage by Building Type**

Building Type	50-Year Event (90 mph)		100-Year Event (96.3 mph)	
	Building Damage	Contents Damage	Building Damage	Contents Damage
Manufactured	25 %	40 %	50 %	100 %
Light Engineered	5 %	2.5 %	15 %	15 %
Non-Engineered Wood	7.5 %	5 %	20 %	20 %
Non-Engineered Masonry	5 %	2.5 %	15 %	15 %
Fully Engineered	2.5 %	2.5 %	5 %	15 %

## **LANDSLIDES**

A landslide is an occurrence of ground movement in which soil, rock or debris move outward and downward along a slope. Types of landslides can include rock falls, deep seated failures of slopes, shallow debris slides, and mudslides. The difference in these types of slides depends on the type of movement, as well as the type of material.

Landslides can occur suddenly and dramatically or can occur slowly over a period of time. The exact location and timing of a landslide cannot be predicted. Landslides are common throughout the Appalachian Mountains because of the extremely steep slopes present.

### **Hazard History**

Historically, numerous landslides have occurred throughout the LENOWISCO district. In some cases, slide locations are still visibly apparent; unfortunately, detailed historic records of the location and extent of landslides have not been kept. Because a majority of landslide occurrences have occurred adjacent to existing roadways, or around a roadway under construction, the best resource for obtaining landslide data is local offices of the Virginia Department of Transportation (VDOT), which have been utilized in gathering any information practicable. The following section includes a description of the landslide data by county.

#### **Lee County**

VDOT has documented seven locations in Lee County where historic landslide activity has occurred. All these landslide areas are included in the northern and eastern portions of the county, and can be found on the "*Lee County, Virginia Landslide Locations*" map, included at the end of this section. These locations include:

- U.S. 421 west of Pennington Gap and just east of the Kentucky border
- Multiple locations along Rt. 606 north of Pennington Gap, both east and west of Rt. 721
- Rt. 611 approximately 2.25 miles west of U.S. 23
- Multiple locations along U.S. 58 & U.S. 421 east of Rt. 612
- Rt. 621 approximately 1.0 mile west of Rt. 622

#### **Scott County**

In Scott County, VDOT has documented historic landslide locations in four major areas, primarily in the southern portion of the county. These locations, also found on the "*Scott County, Virginia Landslide Locations*" map included at the end of this section, include:

- Multiple locations along U.S. 58 & U.S. 421, east of Rt. 726 and west of Rt. 638
- Multiple locations along U.S. 23, west of Gate City, both east and west of Rt. 643
- Along Rt. 72 north of Gate City and approximately 1.2 miles north of Rt. 627
- Along Rt. 604 approximately 3 miles west of Rt. 622

#### **Wise County**

VDOT has identified seven primary landslide locations in Wise County, most of which are located along major roadways. Likewise, these locations can also be found on the "*Wise County, Virginia Landslide Locations*" map included at the end of this section.

- Black Mountain section of Rt. 160
- Norton Bypass section of U.S. 23
- Indian Creek Mountain north of Wise

- Pound Bypass section of U.S. 23, just north of J. W. Adams School
- U.S. 23 between the north junction with Rt. 610 and the base of the mountain in Powell Valley
- U.S. 23 in the town of Appalachia
- Alt. U.S. 58 in the vicinity of Route 657

It should be noted that these locations do not represent all the historic slide locations in the LENOWISCO district. Many small landslides that do not directly impact the public are not reported or recorded. These landslides have typically been located along smaller roadways throughout the area, and numbers of slides and potential damage amounts are unknown.

### **Hazard Profile**

Where and when landslides occur is based on a number of natural factors, and can be exacerbated by man-made conditions. The most prominent natural factors affecting susceptibility to landslides are topography, geology and precipitation. No single factor will cause a landslide to occur, but a combination of factors will. Topography plays an obvious role in the occurrence of landslides. The steeper a slope, the greater the forces of gravity that act on the slope's rocks or soils, increasing the potential for failure. Geology is an important factor as well, as the strength of the rock, soil or debris to resist the forces of gravity greatly affects the likelihood of a landslide. Therefore, the type and sequence of rock and soil types and layers greatly affect slope stability. The potential for landslides on slopes with the combination of steep terrain and loose or weak soil can be exacerbated by high levels of precipitation. Precipitation is a key catalyst for the occurrence of landslides. Water can seep into the voids between soil and rock particles, decreasing the strength of the slope, and increasing the potential for landslides. As a result landslides are most common during or following heavy periods of rain.

Other factors that increase landslide potential include erosion, undercutting, and slope loading. When the base of a slope is eroded or undercut, the strength of the entire slope can be compromised. In mountainous regions such as the LENOWISCO district, this commonly occurs along existing roadways, or during the construction of new roadways. Slope loading can also increase the potential for landslides. The construction of structures or roadways on a steep slope can increase the strain on the material, thus increasing the potential of a slide. The amount of ground cover and vegetation on a slope also can play a role in a slopes susceptibility to landslides, as dense cover can secure an otherwise unstable slope.

Landslides can be triggered by other natural hazards. The effect of extreme precipitation including flooding has been discussed above. In addition, ground shaking associated with an earthquake can trigger landslides on unstable slopes. Thin surface soils and steep topography throughout the LENOWISCO district create conditions favorable to erosion and landslides. Widespread construction of roads, clearing of lands, and preparation of development sites on very steep slopes exacerbate the problem.

### **Predictability**

The exact time or location that a landslide will occur can not be predicted. As noted, landslides can be caused by a combination of many different factors. In some instances, the potential for a landslide to occur at a particular location can be identified based not only on topographical and geologic factors, but also on other physical indicators. The United States Geological Survey (USGS) has developed a landslide overview map for the United States that combines susceptibility to landslides as well as the history of past landslide incidences in the area. The map ranks the susceptibility of an area and the past incidence on a level of high, moderate, and low.

A level of high incidence was given to areas where more than 15 percent of the land had been involved in land sliding, and a level of high susceptibility was given to areas where more than 15 percent of the land area was determined to be susceptible to landslides based on geologic and topographic factors. Virtually the entire LENOWISCO district is located within an area of both high susceptibility and high incidence, indicating the highest possible national risk level.

### **Hazard Areas**

Because of the physical characteristics of the area, nearly the entire LENOWISCO district is located in a high risk area to the effects of landslides. As noted previously, due to the many factors that contribute to when and where a landslide will occur, it is extremely difficult to indicate precise locations that are at a greater risk of being affected by a landslide than other areas. One of the best indicators, however, of where a landslide may occur are locations of past landslide activity. These areas have demonstrated susceptibility to landslide occurrence, making additional landslides at these locations likely.

Historic landslide problem areas are indicated in the landslide location maps included at the end of this section. As noted previously, these maps do not depict all areas within the LENOWISCO district where historic landslides have occurred, or where they may be a problem in the future. Historically, detailed records have not been maintained by local or county governments, therefore the data required to identify all known high landslide risk areas located within the planning district is not available.

### **Vulnerability Assessment**

Because the conditions that cause landslides are very site specific, the impacts of an individual landslide can vary greatly. Landslides can damage or destroy anything in the slide's path, including homes, businesses, roads and utilities. Landslide debris can also partially or fully block rivers, with the potential then for significant flooding. The precise impacts of a landslide will depend on the specific characteristics of the slide, as well as the level of development in the slide area. Due to the extreme steep slopes throughout the LENOWISCO district, virtually all development in the area is at high risk to the effects of landslides. The vulnerability of specific structures and assets can only be determined by a detailed investigation of the site characteristics, primarily the proximity to at-risk slopes. A majority of the more densely developed areas of the district are located in areas with more gradual slopes, thus the risk of widespread damages due to landslides in the densely developed areas is limited. A majority, however, of the unincorporated areas throughout the district have extremely steep slopes. The potential for landslide damage to structures in these areas could be high.

Based on past occurrences, the most vulnerable assets located within the LENOWISCO district are its roadways. Many of the roads in the area traverse steep slopes increasing the vulnerability to damage. Damage to a roadway affected by a landslide can vary from partial blockage to total destruction. In addition to the damage to the road itself, more significant economic and safety impacts may be felt by the community due the loss of function of the roadway. Many roadways throughout the district provide the only direct access from one community to another, or potentially the only access to certain remote areas. This reduction in access can increase the response time of emergency vehicles, creating a potentially serious threat to public safety in these areas.

## DROUGHT

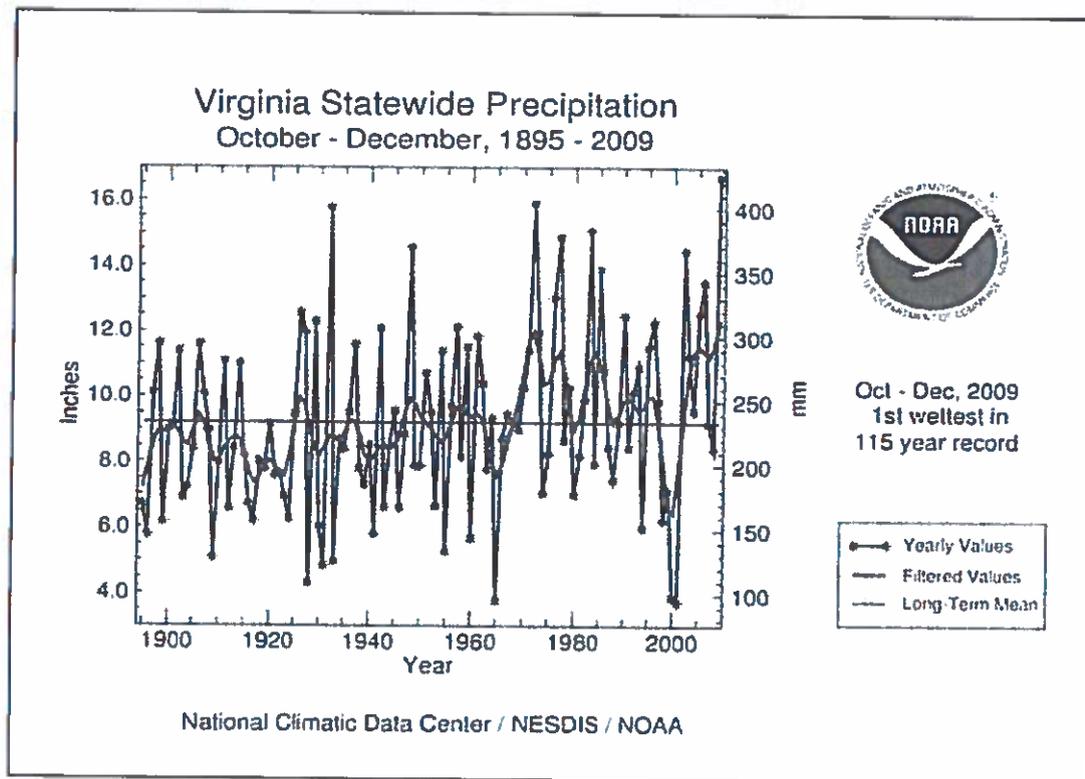
*"Drought is a condition of moisture deficit sufficient to have an adverse effect on vegetation, animals, and man over a sizeable area."*

Three significant types of drought can affect the LENOWISCO district – meteorological, agricultural, or hydrologic drought. Meteorological drought is simply a departure from a normal precipitation amount, and is reliant on no other factors. Agricultural drought describes a soil moisture deficiency to the extent it affects the needs of plant life, primarily crops. Hydrologic drought is defined in terms of shortfall of water levels of lakes and reservoirs, and stream flow in rivers, streams, and soils. Drought is a natural part of most climatic areas, but the severity of droughts differs based on duration, geographic extent, and intensity.

### Hazard History

There have been a number of significant droughts recorded in Virginia since 1900. The most recent drought extended over a period of four years, from 1998 to 2002. This period saw rainfall levels well below normal and caused many communities throughout the region to institute water restrictions.

Although meteorologists have attempted to predict long term changes and trends in weather patterns, the onset of a significant drought can not be predicted. As indicated in **Figure E-12**, extended periods of dry weather have occurred many times from over the past 100+ years.



**Figure E-12**  
**Virginia Tornado Totals by County Virginia Statewide Precipitation**

### **Hazard Profile**

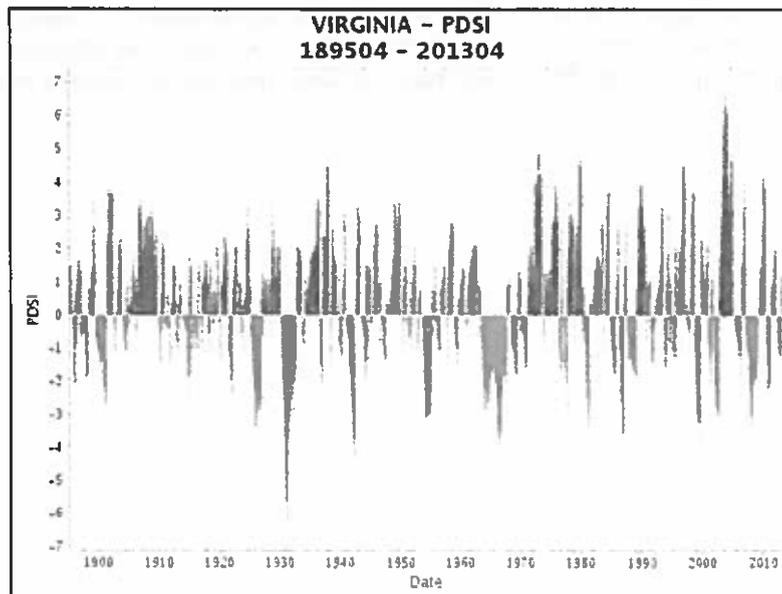
Just as there are multiple types of drought, there are multiple methods to indicate when a drought is occurring, as well as its severity. The multiple indices are based on a variety of data including precipitation amounts, stream flows, soil moisture, snow pack, as well as other water storage data. Typically, drought indices used depend on the type of drought being measured. It should be noted that not all types of drought must be occurring simultaneously. In some cases, an area can be affected by one form of drought, while levels measuring another form of drought are normal.

The most commonly used drought indicator is the Palmer Drought Index. This index was developed in the 1960s by the National Oceanic and Atmospheric Administration (NOAA), and uses temperature and rainfall data to determine dryness. Negative numbers indicate drought, while positive numbers indicate surplus rainfall. Minus two is considered a moderate drought, minus three is severe drought, and minus four is extreme drought. Likewise, positive two is considered a moderate rainfall, positive three, a severe rainfall, and positive four, an extreme rainfall.

In addition to the Palmer Index, the Standard Precipitation Index (SPI) and the Crop Moisture Index (CMI) are also used to measure drought. The SPI relates the deficit in precipitation compared to normal levels to varying degrees of time. Because the duration of lower than average precipitation levels has varying effects on stream flows, water storage levels, and soil moisture content, the SPI attempts to measure drought based on the long term deficit in precipitation. The CMI measures short term moisture conditions across predominate crop producing regions. It is based on the temperature and precipitation levels for a given week as well as the CMI value for the previous week.

The University of Virginia Climatology Office uses the Palmer Drought Severity Index (PDSI) to measure long-term moisture status.

**Figure E-13** shows the PDSI history for Virginia from 1895 through April 2013.



**Figure E-13**  
**Historical Palmer Drought Severity Index for Virginia**

### **Vulnerability Analysis**

Were a significant drought event to occur, it could bring extensive economic, social and environmental impacts to the district. Typically, one of the most significant economic effects to a community is the agricultural impact. Other economic effects could be felt by businesses that rely on adequate water levels for their day to day business such as carwashes and laundromats.

Drought can also create conditions that promote the occurrence of other natural hazards such as wildfires and wind erosion. The likelihood of flash flooding is increased if a period of severe drought is followed by a period of extreme precipitation. Low-flow conditions also decrease the quantity and pressure of water available to firefighters to fight fires, while the dry conditions increase the likelihood fires will occur.

Environmental drought impacts include those on both human and animal habitats and hydrologic units. During periods of drought, the amount of available water decreases in lakes, streams, aquifers, soil, wetlands, springs, and other surface and subsurface water sources. This decrease in water availability can affect water quality such as salinity, bacteria, turbidity, and temperature increase and pH changes. Changes in any of these levels can have a significant effect on the aquatic habitat of a numerous plants and animals found throughout the district. Low water flow can result in decreased sewage flows and subsequent increases in contaminants in the water supply. Decrease in the availability of water also decreases drinking water supply and the food supply as food sources become scarcer. This disruption can work its way up the food chain within a habitat. Loss of biodiversity and increases in mortality can lead to increases in disease and endangered species.

### **CONSIDERATION OF OTHER HAZARDS**

As noted, this planning analysis concentrates on the potential hazards identified as High and Medium-High level events. It should again be noted that the "Medium" level hazards of earthquake and wildfire and the "Low" level hazards of extreme heat and karst terrain are not to be misconstrued as having little or no probability or impact, only that other hazards were deemed to warrant more detailed evaluation.

## SECTION F CAPABILITY ASSESSMENT

### Introduction

This portion of the plan assesses the LENOWISCO area's current capacity to mitigate the effects of the natural hazards identified in Section E of this plan. This assessment includes a comprehensive examination of the following local government capabilities:

1. *Staff and Organizational Capability*
2. *Technical Capability*
3. *Fiscal Capability*
4. *Policy and Program Capability*
5. *Legal Authority*
6. *Political Willpower*

The purpose of conducting the capabilities assessment is to identify potential hazard mitigation opportunities available to LENOWISCO's local governments. The assessment will also highlight positive measures already in place or being done at the City or County level, which should continue to be supported and enhanced, if possible, through future mitigation efforts. This examination ensures that existing plans, studies, and reports are incorporated into this mitigation plan.

The capability assessment serves as the foundation for designing an effective hazard mitigation strategy. It not only helps establish goals and objectives for the LENOWISCO area to pursue under this plan, but assures those goals and objectives are realistically achievable under given local conditions.

This section is divided into four parts, each a brief profile of the capabilities of the county and city jurisdictions. **Table F-1** summarizes the plans and ordinances of each jurisdiction that can support hazard mitigation goals and strategies.

**Table F-1  
Jurisdiction Capabilities – Plans and Ordinances**

<b>Plan or Ordinance</b>	<b>Lee County</b>	<b>City of Norton</b>	<b>Scott County</b>	<b>Wise County</b>
Building Code	✓	✓	✓	✓
Comprehensive Land Use Plan		✓	✓	✓
Emergency Operations Plan	✓	✓	✓	✓
Floodplain Ordinance	✓	✓	✓	✓
Floodplain Management Plan				✓
Local Hazard Mitigation Plan				
Open Space Plan				
Stormwater Management Plan		✓	<i>In process</i>	<i>In process</i>
Stormwater Ordinance		✓	<i>In process</i>	<i>In process</i>
Subdivision Ordinance	✓	✓	✓	✓
Watershed Protection Plan				
Zoning Ordinance	✓	✓	✓	✓

## **CITY OF NORTON**

### **Staff and Organizational Capability**

The City of Norton has limited staff and organizational capability to implement hazard mitigation strategies. The City is administered by council-manager form of government with a five person **City Council**. The **Council** is elected to staggered four year terms. The **City Manager** oversees the day-to-day operations of city government.

The **City Manager**, who is hired by the **Council**, acts on their behalf and manages the various City departments. More specifically, the **City Manager** directs and supervises the administration of all city offices, boards, commissions and agencies under the general direction and control of the Board.

Responsibilities include:

- Development of the annual budget,
- Coordination of public relations programs,
- Provision of administrative services to the City,
- Administration of equal employment opportunity and affirmative action policies and programs,
- Human Resource Management and Payroll,
- Risk Management,
- Facilities Management, and
- A number of delegated programs.

The City has a number of professional staff departments to serve the residents of the community and to carry out day-to-day administrative activities. These include the following:

- General Government and Administration
- Health and Human Services
- Parks and Recreation
- Planning and Community Development
- Public Safety (Police Department and Fire Department)
- Public Works
- Public Utilities

There are also 14 Local Boards and Commissions which provide administrative support to the city departments and **City Council**.

The **Public Works Department** is responsible for the engineering, mapping drainage issues and natural hazard.

The **Planning and Community Development Department** enforces the National Flood Insurance Program requirements and other applicable local codes. It also houses the City's geographic information systems (GIS). The department is also responsible for addressing land use planning, as well as, developing mitigation strategies.

### **Technical Capability**

The City of Norton has limited technical capability to implement hazard mitigation strategies.

### **Technical Expertise**

The City has no licensed engineers. The City does have a building department and zoning administrator. The City also has a person responsible for Information Technology (IT) which can enhance local government operations and the community's ability to develop and maintain a state-of-the-art hazard mitigation program.

### **Geographic Information Systems (GIS)**

GIS systems can best be described as a set of tools (hardware, software and people) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. The City has online GIS capability for all City departments to further hazard mitigation goals.

### **Internet Access**

The City does provide its employees with high speed broadband Internet service. Internet access provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. IT can make distance – a major factor for City officials and residents – far less important than it used to be. It is believed that Internet access will help further the City's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

### **Fiscal Capability**

The City of Norton has limited fiscal capability to implement hazard mitigation strategies.

For Fiscal Year 2014, the City's budgeted expenditures are \$9.5 million. The majority of these funds are obligated to education, although "public safety" will cost the city \$2.2 million for this period. The City of Norton receives most of its revenues through local taxes and through restricted intergovernmental contributions (federal and state pass through dollars). It is likely the City could afford to provide the local match for existing hazard mitigation grant programs.

### **Policy and Program Capability**

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community's vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within mitigation strategies.

### **Recent Hazard Mitigation Efforts**

The City of Norton has not undertaken specific hazard mitigation efforts in the past.

### **Community Rating System Activities**

Communities that regulate development in floodplains are able to participate in the National Flood Insurance Program (NFIP). In return, the NFIP makes federally-backed flood insurance policies available for properties in the community.

The Community Rating System (CRS) was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction. The City does not participate in the CRS.

#### **Emergency Operations Plan**

The City of Norton has developed and adopted a Emergency Operations Plan which predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. The Plan describes the City's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The Plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the City to protect lives and property immediately before, during and immediately following an emergency. There are no foreseeable conflicts between this Hazard Mitigation Plan and the City of Norton's Emergency Operations Plan, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the City Council as having the lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the Emergency Operations Plan.

#### **Floodplain Management Plan**

The City of Norton does not currently have a separate floodplain management plan for purposes of the National Flood Insurance Program. This Hazard Mitigation Plan is intended to fulfill the CRS planning requirement should the community decide to participate in the CRS system.

#### **Stormwater Management Plan**

The City of Norton does not currently have an adopted stormwater management plan, but does apply stormwater management provisions through their subdivision regulations. According to the City's Subdivision Ordinance, lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval. The City is currently developing a local stormwater management program that will become effective July 1, 2014, if approved by the State Water Control Board. Once adopted and approved by the state, the program will require owners and/or developers to submit a Stormwater Pollution Prevention Plan for any project that will exceed one acre or is located in a common plan of development. For projects ranging from 10,000 square feet to one acre, an erosion and sediment control plan will be required.

#### **Comprehensive Plan**

The City's most recent Comprehensive Plan was adopted on April 15, 2003, with several updates since that time. The plan provides the future vision for the community regarding growth and development. Hazard mitigation planning is not specifically addressed in the plan.

#### **Ordinances**

The City of Norton has adopted several ordinances that are relevant to hazard mitigation. **Table F-2** on the following page provides an inventory of these ordinances, along with information to be considered when developing mitigation strategy.

#### **Open Space Plans**

The City of Norton does not currently have a separate Open Space Plan.

**Watershed Protection Plan**

The City does not currently have a separate Watershed Protection Plan. The Upper Tennessee River Watershed Strategic Plan (2000) does contain information for the Clinch, Holston and Powell Rivers.

**Table F-2  
City of Norton - Ordinances Related to Hazard Mitigation**

<b>Ordinance</b>	<b>Adoption Date</b>	<b>Description/Purpose</b>	<b>Mitigation Effectiveness</b>
<b>Flood Damage Prevention Ordinance</b>	<b>May 1979</b>	<p>The Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the City prior to any construction or substantial improvement activities. Permits will only be approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices and uses. Most importantly, establishes the requirements for elevation and floodproofing (non-residential) to base flood elevation.</p> <p>The Ordinance requires the minimum standards of the National Flood Insurance Program (NFIP). The City's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. Potentially those floodplain areas will be redelineated with updated topography, and base flood elevations will be recalculated.</p>	<b>HIGH</b>
<b>Subdivision Ordinance</b>	<b>December 1983</b>	<p>Although not designed specifically for hazard mitigation purposes, this Ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events.</p>	<b>MODERATE</b>
<b>State of Emergency Ordinance</b>	<b>Prior to 1975</b>	<p>The Ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event.</p>	<b>LOW</b>

**Legal Authority**

Local governments in Virginia have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Virginia, which are (a) regulation, (b) acquisition, (c) taxation, and (d) spending. The scope of this local authority is subject to constraints, however, as all of Virginia's political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated.

Thus, this portion of the capabilities assessment will summarize Virginia's enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

## **Regulation**

### **General Police Power**

Virginia's local governments have been granted broad regulatory powers in their jurisdictions. Virginia State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. *The City of Norton has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.*

### **Building Codes and Building Inspection**

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes. The City of Norton does have building codes. Municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards". Local regulations cannot be less restrictive than the state code. Local governments in Virginia are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates their duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. *The City of Norton has adopted a building code and established a Building/ Inspections Department to carry out its building inspections.*

### **Land Use**

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. *The City of Norton has not adopted a land use regulation.*

### **Planning**

According to State Statute, local governments in Virginia may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan.

While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan", the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community. *The City of Norton has established a Planning and Community Development Department.*

### Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Virginia to engage in zoning. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications that control height and bulk such as lot size, building height and set backs, and density of population. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. *The City of Norton enforces a city wide zoning ordinance dated 1998.*

### Subdivision Regulations

Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. This definition does not include the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved. Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations only indirectly affect the type of use made of land or minimum specifications for structures. Flood-related subdivision controls typically require that sub-dividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. *The City of Norton has adopted a Subdivision Ordinance.*

### Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential resulting from land disturbing activities involving one or more acres or land disturbing activities in a common plan of development. A reduction in damage from development is achieved through requirements such as onsite retention/detention ponds, temporary erosion and sediment controls, bio retention gardens, permanent stabilization, etc. A recent bill passed by the General Assembly (62.1-44.15:27) is an initiative to integrate stormwater management requirements, erosion and sediment control programs, and floodplain management programs across the Commonwealth. The City of Norton is in the process of adopting an ordinance pertaining to stormwater regulations, and will do so prior to January 1, 2014.

### Floodplain Regulation

Virginia State Statutes provide cities and counties the land use authority. In particular, issues such as floodplain control are empowered through §15.2-2223 and §15.2-2280 of the Code of Virginia. The City of Norton has adopted a local floodplain ordinance as a requirement of participation in the National Flood Insurance Program.

### **Acquisition**

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely “hazardproofing” a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Virginia legislation empowers cities, towns, counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain. *The City of Norton proposes to use acquisition as a local mitigation tool.*

### **Taxation**

The power to levy taxes and special assessments is an important tool delegated to local governments by Virginia law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development. Communities have the power to set preferential tax rates for areas more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. *The City of Norton does levy property taxes. The City also uses preferential tax districts and special assessments for purposes of guiding growth and development.*

### **Spending**

The fourth major power that has been delegated from the Virginia General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a Capital Improvement Plan (CIP). A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. *The City of Norton has a Five-Year Capital Improvement Plan adopted in June 2002 and that plan undergoes an annual review.*

### **Political Willpower**

Most City residents are knowledgeable about the potential hazards that their community faces, and in recent years have become more familiar with the practices and principles of mitigation. Because of this fact, coupled with the City of Norton’s history with natural disasters, it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

## LEE COUNTY

### Staff and Organizational Capability

Lee County has limited staff and organizational capability to implement hazard mitigation strategies. Lee County is governed by a five member **Board of Supervisors**, with members representing the five districts into which the county is divided. There is also a County Administrator. The **Board** bears the responsibility of serving the people and improving the quality of life in the County. The business of the County is conducted through the department and board system.

The county's professional staff departments, boards, authorities, and commissions are as follows:

- County Administration
- Central Accounting
- Central Purchasing
- County Attorney
- Community Development Department
- Building Inspections
- Animal Control
- Litter Control
- Emergency Services Department
- Solid Waste Management Department
- Electoral Board
- General Registrar
- Commissioner of the Revenue
- Treasurer
- Commonwealth's Attorney
- Clerk of Circuit Court
- Sheriff's Department
- Juvenile and Domestic Relations Court
- Planning Commission
- Industrial Development Authority
- Board of Zoning Appeals
- Public Service Authority
- Airport Authority

The **Emergency Services Department** is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events.

The **Building Inspection Department** enforces the National Flood Insurance Program requirements and other applicable local codes.

The **Public Service Authority** oversees the maintenance of sewer and water treatment facilities.

Of the above departments, agencies and offices, County Administration and Emergency Services have specifically delegated responsibilities to carry out mitigation activities or hazard control tasks, and are adequately staffed, trained and funded to accomplish their missions.

## **Technical Capability**

Lee County has limited technical capability to implement hazard mitigation strategies.

### **Technical Expertise**

The County does not have a full-time planner on staff to administer hazard mitigation programs. The County does have an Inspections office which enforces a building code. The County does have a person responsible for Information Technology (IT) which can enhance local government operations and the community's ability to develop and maintain a state-of-the art hazard mitigation program.

### **Geographic Information Systems (GIS)**

GIS systems can best be described as a set of tools (hardware, software and people) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. Lee County does not currently have GIS capability to further hazard mitigation goals.

### **Internet Access**

The County does provide its employees with Internet service. Internet access provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for County officials and residents - far less important than it used to be. It is believed that Internet access will help further the community's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

## **Fiscal Capability**

Lee County has limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2013, the County's budgeted expenditures were \$18.3 million. The majority of these funds are obligated to operations, although "public safety" did cost the county \$4.1 million for this period. The County receives most of its revenues through Property Taxes, Local sales tax and other local services and through restricted intergovernmental contributions (federal and state pass through dollars). It is likely the County could afford to provide the local match for the existing hazard mitigation grant programs.

## **Policy and Program Capability**

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community's vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within mitigation strategies.

### **Recent Hazard Mitigation Efforts**

Lee County has not undertaken specific hazard mitigation efforts in the past.

### **Community Rating System Activities**

Communities that regulate development in floodplains are able participate in the National Flood Insurance Program (NFIP). In return, the NFIP makes federally backed flood insurance policies available for properties in the community. The Community Rating System (CRS) was implemented in

1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction.

The County does not participate in the Community Rating System.

### **Emergency Operations Plan**

Lee County adopted a Comprehensive Emergency Management Plan in December 1990, with the most recent revision/update adopted in July 2013. The Plan predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. For the most part, the Plan describes the County's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The Plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the County to protect lives and property immediately before, during and immediately following an emergency. There are no foreseeable conflicts between **this** Hazard Mitigation Plan and Lee County's Comprehensive Emergency Management Plan, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the Board of Supervisors as having lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the Emergency Management Plan.

### **Floodplain Management Plan**

Lee County does not currently have a separate floodplain management plan for purposes of the National Flood Insurance Program's Community Rating System (CRS). This plan is intended to fulfill the CRS planning requirement should the County decide to enter the CRS.

### **Stormwater Management Plan**

The County does not currently have an adopted stormwater management plan, but does apply stormwater management provisions through their subdivision regulations. Lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval.

### **Comprehensive Plan**

Lee County does have a Comprehensive Plan, most recently updated in 2011.

### **Ordinances**

Lee County has adopted several ordinances that are relevant to hazard mitigation. **Table F-3** on the following page provides an inventory of these ordinances, along with information to be considered when considering mitigation strategy.

### **Open Space Plans**

Lee County does not currently have a separate Open Space Plan.

### **Watershed Protection Plan**

Lee County does not currently have a separate Watershed Protection Plan. However, the Upper Tennessee River Watershed Strategic Plan dated, 2000, contains information for the Clinch, Holston and Powell Rivers.

**Table F-3  
Lee County - Ordinances Related to Hazard Mitigation**

Ordinance	Adoption Date	Description/Purpose	Mitigation Effectiveness
<p><b>Flood Damage Prevention And Control Ordinance</b></p> <p><i>Now called Flood Damage Reduction Ordinance</i></p>	<p><b>December 1990</b></p> <p><b>Revised/Amended January 2011</b></p>	<p>The Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the County prior to any construction or substantial improvement activities. Permits will only be approved if they meet provisions of the ordinance, including development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices and uses. Establishes requirements for elevation and floodproofing (non-residential) to base flood elevation.</p> <p>The Ordinance requires the minimum standards of the National Flood Insurance Program (NFIP). The County's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. Potentially those floodplain areas will be re-delineated with updated topography, and base flood elevations will be recalculated.</p>	<p><b>HIGH</b></p>
<p><b>Subdivision Ordinance</b></p>	<p><b>1997</b></p>	<p>The Ordinance is designed to regulate all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or change in existing streets/roads. All proposed subdivisions must go through an approval process involving multiple individuals/agencies. Subdivision plats are required for review and must include location of areas subject to flooding. Lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval. Plats are also reviewed by the local permit officer to determine what additional permits are required.</p> <p>Although not designed specifically for hazard mitigation purposes, this Ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events.</p>	<p><b>MODERATE</b></p>
<p><b>State of Emergency Ordinance</b></p>		<p><b>Granted by State Code 44-146.21, no local ordinance needed. Local emergencies declared by ES Director and confirmed by local governing body by resolution.</b></p> <p>The purpose of this Ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a State of Emergency. Establishes authority and procedures for the Board of Supervisors to proclaim a State of Emergency, and to impose the following restrictions as described in the ordinance: curfew; evacuation; possession/transportation/transfer of intoxicating liquors, dangerous weapons and substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during the State of Emergency.</p> <p>The Ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event.</p>	<p><b>LOW</b></p>

## **Legal Authority**

Local governments in Virginia have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Virginia, which are (a) Regulation; (b) Acquisition; (c) Taxation; and (d) Spending. The scope of this local authority is subject to constraints, however, as all of Virginia's political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Virginia's enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

## **Regulation**

### **General Police Power**

Virginia's local governments have been granted broad regulatory powers in their jurisdictions. Virginia State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. *Lee County has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.*

### **Building Codes and Building Inspection**

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes. Lee County does have building codes. Municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the state code. Local governments in Virginia are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates their duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. *Lee County has adopted a building code and established a Building Inspections Office to carry out its building inspections.*

### **Land Use**

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. *Lee County has not adopted a land use regulation.*

### Planning

According to State Statutes, local governments in Virginia may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan", the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community. *Lee County has established a Planning Commission.*

### Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Virginia to engage in zoning. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use such as lot size, building height and set backs, density of population, etc. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. *Lee County enforces a county wide zoning ordinance which was adopted in 1993.*

### Subdivision Regulations

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require that sub-dividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. The definition of subdivision does not include the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved. *Lee County has adopted a Subdivision Ordinance.*

### Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small scale development of less than 5 acres. A reduction in damage from small scale development is achieved through requirements such as on-site retention/detention ponds, etc. The State of Virginia encourages local governments to adopt stormwater regulations under land use authorities. *Lee County has not adopted stormwater regulations.*

### Floodplain Regulation

Virginia State Statutes provide cities and counties the land use authority. In particular, issues such as floodwater control are empowered through (state statute citation). Lee County has adopted a local floodplain ordinance as a requirement of participation in the National Flood Insurance Program.

### **Acquisition**

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Virginia legislation empowers cities, towns, counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain. *Lee County proposes to consider acquisition as a local mitigation tool.*

### **Taxation**

The power to levy taxes and special assessments is an important tool delegated to local governments by Virginia law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. *Lee County does levy property taxes.*

### **Spending**

The fourth major power that has been delegated from the Virginia General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption of annual budgets and a Capital Improvement Plan (CIP). A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. *Lee County has not adopted and implemented a capital improvement program.*

### **Political Willpower**

Most County residents are knowledgeable about the potential hazards their community faces, and in recent years have become more familiar with the practices and principles of mitigation. Because of this fact, coupled with Lee County's history with natural disasters, it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

## **SCOTT COUNTY**

### **Staff and Organizational Capability**

Scott County has limited staff and organizational capability to implement hazard mitigation strategies. Scott County is governed by a seven member Board of Supervisors. The members represent the six election districts into which the county is divided, while one Supervisor is elected at-large. There is also a County Administrator.

The Board bears the responsibility of serving the people and improving the quality of life in the County. The business of the County is conducted under the County Board Form as authorized under VA Code Section 15.2-400 et. seq. Scott County is one of four counties using this form.

The county's professional staff departments, boards, authorities, and commissions are as follows:

- Animal Control
- Board of Elections
- Central Accounting
- Central Purchasing
- Clerk of the Court
- Commissioner of Revenue
- Commonwealth's Attorney
- County Administrator
- County Attorney
- Department of Social Services
- E-911 Department
- Economic Development Authority
- Emergency Management
- GIS Department
- Health Department
- Housing & Redevelopment Authority
- Inspections
- Parks/Golf Course Department
- Public Service Authority
- Public Works Department
- Recreation Department
- School Board
- Sheriff's Department
- Treasurer
- Zoning

The Emergency Management Department is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and manmade disaster events.

The Inspections Department enforces the National Flood Insurance Program requirements and other applicable local codes.

The Public Works Department oversees the maintenance of the county's buildings and grounds. Stormwater facilities fall under the purview of either the individual towns or VDOT. Sanitary sewer and water treatment facilities and the transmission lines for both fall under the control of either the towns or the Public Service Authority.

Of the above departments, agencies and offices, the Emergency Management Department and Inspections Department have specifically delegated responsibilities to carry out mitigation activities or hazard control tasks, and are adequately staffed, trained and funded to accomplish their missions.

### **Technical Capability**

Scott County has limited technical capability to implement hazard mitigation strategies.

### **Technical Expertise**

The County does not have a full-time planner on staff to administer hazard mitigation programs. The County does have an inspections office which enforces a building code. All other technical, professional and engineering services are obtained via procurement of services from private companies and organizations. The County does, however, have a staff person responsible for Information Technology (IT) which can enhance local government operations and the community's ability to develop and maintain a state-of-the art hazard mitigation program.

### **Geographic Information Systems (GIS)**

GIS systems can best be described as a set of tools (hardware, software and people) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. Scott County has GIS capability operating under the direction of E911.

### **Internet Access**

Scott County does provide its employees with high speed broadband Internet service. Internet access provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for County officials and residents – far less important than it used to be. It is believed that Internet access will help further the community's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

### **Fiscal Capability**

Scott County has limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2013, the County's total budgeted expenditures were about \$56 million; of this total \$34 million was for Education. The majority of these funds are obligated to operations although "Public Safety" cost the county approximately \$5 million for this period. The County receives most of its revenues through Local Property Taxes, State and Local Sales Tax, and other local services and through restricted intergovernmental contributions (federal and state pass through dollars). It is likely the County could afford to provide the local match for existing hazard mitigation grant programs.

## **Policy and Program Capability**

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community's vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within mitigation strategies.

## **Recent Hazard Mitigation Efforts**

Scott County has undertaken specific hazard mitigation efforts in the past.

## **Community Rating System Activities**

Communities that regulate development in floodplains are able to participate in the National Flood Insurance Program (NFIP). In return, the NFIP makes federally-backed flood insurance policies available for properties in the community. The Community Rating System (CRS) was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction. Scott County does not participate in the Community Rating System.

## **Emergency Operations Plan**

Scott County developed and adopted an updated Comprehensive Emergency Management Plan (March 2010), which predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. For the most part, the Plan describes the County's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The Plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the County to protect lives and property immediately before, during and immediately following an emergency. There are no foreseeable conflicts between this Hazard Mitigation Plan and Scott County's Comprehensive Emergency Management Plan, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the Board of Supervisors as having lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the Emergency Management Plan. Scott County's Comprehensive Emergency Management Plan is currently under review for re-adoption in March 2014.

## **Floodplain Management Plan**

Scott County does not currently have a separate floodplain management plan for purposes of the National Flood Insurance Program's Community Rating System (CRS). This plan is intended to fulfill the CRS planning requirement should the County decide to enter the CRS. It should be noted that the incorporated towns of the county are responsible for administering the National Flood Insurance Program within their corporate limits.

## **Stormwater Management Plan**

Scott County is presently developing a stormwater management plan, to be in effect July 1, 2015. The County Subdivision Ordinance does require the subdivider to supply all necessary information needed to determine what improvements are necessary to properly develop the subject property, including contour intervals, drainage plans and flood control devices. If any portion of the land being subdivided is subject to flood, the area is to be shown on the plat.

### **Comprehensive Plan**

Scott County most recently updated its Comprehensive Plan in 2011. The plan provides the future vision for the county regarding growth and development. Hazard mitigation planning is not specifically addressed in the plan.

### **Ordinances**

Scott County has adopted several ordinances that are relevant to hazard mitigation. **Table F-4** on the following page provides an inventory of these ordinances, along with information to be considered when developing this Plan's Mitigation Strategy.

### **Open Space Plans**

Scott County does not currently have a separate Open Space Plan.

### **Watershed Protection Plan**

Scott County does not currently have a separate Watershed Protection Plan. However, the Upper Tennessee River Watershed Strategic Plan, dated 2000, contains information for the Clinch, Holston and Powell Rivers.

### **Legal Authority**

Local governments in Virginia have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Virginia, which are (a) regulation, (b) acquisition, (c) taxation, and (d) spending. The scope of this local authority is subject to constraints, however, as all of Virginia's political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Virginia's enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

### **Regulation**

#### **General Police Power**

Virginia's local governments have been granted broad regulatory powers in their jurisdictions. Virginia State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. Scott County has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

**Table F-4  
Scott County - Ordinances Related to Hazard Mitigation**

Ordinance	Adoption Date	Description/Purpose	Mitigation Effectiveness
<b>Flood Damage Prevention and Control Ordinance</b>	<b>June 1991</b>	<p>The Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the County prior to any construction or substantial improvement activities. Permits will only be approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices and uses. Most importantly, establishes the requirements for elevation and floodproofing (non-residential) to base flood elevation.</p> <p>The Ordinance requires the minimum standards of the National Flood Insurance Program (NFIP). The County's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. Potentially those floodplain areas will be redelineated with updated topography, and base flood elevations will be recalculated.</p>	<b>HIGH</b>
<b>Subdivision Ordinance</b>	<b>1988</b>	<p>The Ordinance is designed to regulate all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or a change in existing streets/roads. All proposed subdivisions must go through an approval process involving the Planning Commission, County Attorney's Office, and Inspections Office (for flood zone clearance). Subdivision plats are required for review and must include the location of areas subject to flooding.</p> <p>While not designed specifically for hazard mitigation purposes, this Ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects that development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events.</p>	<b>MODERATE</b>
<b>State of Emergency Ordinance</b>	<b>October 1974</b>	<p>The purpose of this Ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a State of Emergency. Establishes the authority and procedures for the Board of Supervisors to proclaim a State of Emergency, and to impose the following restrictions as described in the ordinance: curfew; evacuation; possession/transportation/transfer of intoxicating liquors, dangerous weapons and substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during the State of Emergency.</p> <p>The Ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event.</p>	<b>LOW</b>

### Building Codes and Building Inspection

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes. Scott County has building codes. Municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards". Local regulations cannot be less restrictive than the state code. Local governments in Virginia are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates their duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. Scott County has adopted a building code and established an Inspections Office to carry out its building inspections functions.

### Land Use

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. Scott County has not yet adopted a land use regulation.

### Planning

According to State Statutes, local governments in Virginia may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan", the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community. Scott County has established a Planning Department.

### Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Virginia to engage in zoning. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications that control height and bulk such as lot size, building height and set backs, and density of population. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. Scott County adopted a county-wide zoning ordinance in January 2009.

### Subdivision Regulations

The definition of "subdivision" in Scott County's Subdivision Ordinance is the division of a parcel of land into three or more lots or parcels of less than two acres each for the purpose of transfer of ownership or building development, or, if a new street is involved in any such division, any division of parcel of land. Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations only indirectly affect the type of use made of land or minimum specifications for structures. Flood-related subdivision controls typically require that subdividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Scott County has adopted a Subdivision Ordinance.

### Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small scale development of less than 5 acres. A reduction in damage from small scale development is achieved through requirements such as onsite retention/detention ponds, etc. The State of Virginia encourages local governments to adopt stormwater regulations under land use authorities. Scott County has not adopted stormwater regulations, but is in the process of adopting such an ordinance to become effective July 1, 2015. Additionally, Scott County has adopted and enforces its Soil and Erosion Control Ordinance (last amended in 2009). This ordinance is administered under an agreement with the Scott County Soil and Conservation District.

### Floodplain Regulation

Virginia State Statutes provide cities and counties the land use authority. In particular, issues such as floodplain control are empowered through §15.2-2223 and §15.2-2280 of the Code of Virginia. Scott County has adopted a local floodplain ordinance as a requirement of participation in the National Flood Insurance Program. Scott County's Floodplain Ordinance was adopted in June 1991 and is administered by the Inspections Department.

### Acquisition

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Virginia legislation empowers cities, towns, counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain. Scott County proposes to continue using acquisition as a local mitigation tool.

### Taxation

The power to levy taxes and special assessments is an important tool delegated to local governments by Virginia law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area.

This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political.

Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. While Scott County does levy property taxes, it does not use preferential tax districts and special assessments for purposes of guiding growth and development.

### **Spending**

The fourth major power that has been delegated from the Virginia General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a Capital Improvement Plan (CIP). A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. Scott County is in the process of implementing a formal capital improvement program, which should be completely in operation for Fiscal Year 2015.

### **Political Willpower**

Most County residents are knowledgeable about the potential hazards their community faces, and in recent years have become more familiar with the practices and principles of mitigation. Because of this fact, coupled with Scott County's history with natural disasters, it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

## **WISE COUNTY**

### **Staff and Organizational Capability**

Wise County has limited staff and organizational capability to implement hazard mitigation strategies. Wise County is governed by an eight member Board of Supervisors. The members represent the four districts into which the county is divided. There is also a County Administrator. The Board bears the responsibility of serving the people and improving the quality of life in the County. The business of the County is conducted through the department and board system.

Those professional staff departments and boards are as follows:

- Board of Election Commissioners
- Economic Development Department
- Emergency Services Department
- Equal Opportunity Office
- Finance Department
- Human Resources
- Information Systems
- Inspections
- Legal Department
- Animal Welfare Shelter
- Fire Department
- Planning and Growth Management
- Sheriff's Department
- Public Works Department
- Public Services Authority

The Emergency Services Department is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events.

The Zoning Department maintains a part-time planner that is also responsible for addressing land use planning, as well as, developing mitigation strategies. The department also enforces the National Flood Insurance Program requirements and other applicable local codes.

The Public Works Department oversees the maintenance of county infrastructure including roadways. The Public Services Authority oversees sewer and the community's water treatment facilities.

Of the above departments, agencies and offices, the Emergency Services Department and the Zoning Department have specifically delegated responsibilities to carry out mitigation activities or hazard control tasks, and are adequately staffed, trained and funded to accomplish their missions.

### **Technical Capability**

Wise County has limited technical capability to implement hazard mitigation strategies.

### **Technical Expertise**

The County has a part-time planner on staff to administer the community's hazard mitigation programs. The County Engineer provides expertise in the area of water resources and associated technical work. The County does have an inspections office which enforces a building code.

The County has a person responsible for Information Technology (IT) which can enhance local government operations and the community's ability to develop and maintain a state-of-the art hazard mitigation program.

### **Geographic Information Systems (GIS)**

GIS systems can best be described as a set of tools (hardware, software and people) used to collect, manage, analyze and display spatially-referenced data. Many local governments are now incorporating GIS systems into their existing planning and management operations. Wise County currently has GIS capability to further hazard mitigation goals.

### **Internet Access**

Wise County provides its employees with high speed broadband Internet service. Internet access provides an enormous opportunity for local officials to keep abreast of the latest information relative to their work and makes receiving government services more affordable and convenient. Information technology also offers increased economic opportunities, higher living standards, more individual choices, and wider and more meaningful participation in government and public life. Simply put, information technology can make distance – a major factor for County officials and residents – far less important than it used to be. It is believed Internet access will help further the community's hazard mitigation awareness programs, but should be supplemented with more traditional (and less technical) means as well.

### **Fiscal Capability**

Wise County has limited fiscal capability to implement hazard mitigation strategies. For Fiscal Year 2014, the County's budgeted expenditures were approximately \$62 million. The majority of these funds are obligated to operations, although "public safety" is budgeted for a little over \$7 million for this period. The County receives most of its revenues through State contribution and Local taxation, and through restricted intergovernmental contributions (federal and state pass through dollars). It is likely the County could afford to provide local match for existing hazard mitigation grant programs.

### **Policy and Program Capability**

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that either increase or decrease the community's vulnerability to natural hazards. Positive activities, which decrease hazard vulnerability, should be sustained and enhanced if possible. Negative activities, which increase hazard vulnerability, should be targeted for reconsideration and be thoroughly addressed within mitigation strategies.

### **Recent Hazard Mitigation Efforts**

Wise County has not undertaken specific hazard mitigation efforts in the past.

### **Community Rating System Activities**

Communities that regulate development in floodplains are able to participate in the National Flood Insurance Program (NFIP). In return, the NFIP makes federally-backed flood insurance policies available for properties in the community. The Community Rating System (CRS) was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction. Wise County does not participate in the Community Rating System.

### **Emergency Operations Plan**

Wise County has developed and adopted a Comprehensive Emergency Management Plan dated 1988 which predetermines actions to be taken by government agencies and private organizations in response to an emergency or disaster event. The Plan was adopted in September 1988. For the most part, the Plan describes the County's capabilities to respond to emergencies and establishes the responsibilities and procedures for responding effectively to the actual occurrence of a disaster. The Plan does not specifically address hazard mitigation, but it does identify the specific operations to be undertaken by the County to protect lives and property immediately before, during and immediately following an emergency. There are no foreseeable conflicts between this Hazard Mitigation Plan and Wise County's Comprehensive Emergency Management Plan, primarily because they are each focused on two separate phases of emergency management (mitigation vs. preparedness and response). The Plan does identify the Board of Supervisors as having lead role in the long-term reconstruction phase following a disaster – which presents a unique window of opportunity for implementing hazard mitigation strategies. However, none are specified within the Emergency Management Plan.

### **Floodplain Management Plan**

Wise County does not currently have a separate floodplain management plan for purposes of the National Flood Insurance Program's Community Rating System (CRS). This plan is intended to fulfill the CRS planning requirement.

### **Stormwater Management Plan**

Wise County is in the process of adopting a stormwater management plan, and does apply stormwater management provisions through their subdivision regulations. Lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval.

### **Comprehensive Plan**

Wise County has developed and adopted a Comprehensive Plan in October 1998. The plan provides the future vision for the county regarding growth and development. Hazard mitigation planning is not specifically addressed in the plan.

### **Ordinances**

Wise County has adopted several ordinances that are relevant to hazard mitigation. Table F-5 on the following page provides an inventory of these ordinances, along with information to be considered when developing this Plan's Mitigation Strategy.

### **Open Space Plans**

Wise County does not currently have a separate Open Space Plan.

### **Watershed Protection Plan**

Wise County does not currently have a separate Watershed Protection Plan. However, the Upper Tennessee River Watershed Strategic Plan dated 2000 contains information for the Clinch, Holston and Powell Rivers.

**Table F-5  
Wise County - Ordinances Related to Hazard Mitigation**

Ordinance	Adoption Date	Description/Purpose	Mitigation Effectiveness
<p align="center"><b>Floodplain Ordinance</b></p>	<p align="center"><b>1980 August</b>  <b>2011 (revised)</b></p>	<p>The Ordinance is designed to minimize public and private losses due to flood conditions in specific areas. It requires a development permit be submitted to the County prior to any construction or substantial improvement activities. Permits will only be approved if they meet the provisions of the ordinance, which include development standards that will minimize the potential for flood losses. Standards are established for construction materials, equipment, methods, practices and uses. Most importantly, establishes the requirements for elevation and floodproofing (non-residential) to base flood elevation.</p> <p>The Ordinance requires the minimum standards of the National Flood Insurance Program (NFIP). The County's floodplain areas are currently being re-studied as part of the State's Floodplain Mapping Program. It is possible those floodplain areas will be redelineated with updated topography, and that base flood elevations will be recalculated.</p>	<p align="center"><b>HIGH</b></p>
<p align="center"><b>Subdivision Ordinance</b></p>	<p align="center"><b>1976</b>  <b>2003 (revised)</b></p>	<p>The Ordinance is designed to regulate all divisions of land for purposes of sale or building development (immediate or future), including all divisions of land involving the dedication of new streets/roads or a change in existing streets/roads. All proposed subdivisions must go through an approval process involving multiple individuals/agencies. Subdivision plats, required for review, must include the location of areas subject to flooding. Lands subject to flooding, irregular drainage conditions, excessive erosion and other reasons unsuitable for residential use shall not be platted for residential use unless the hazards can be and are corrected. For major subdivisions, a stormwater drainage plan must be prepared and necessary stormwater drainage improvements must be completed before final plat approval. Plats are also reviewed by the local permit officer to determine additional permits required. Furthermore, all waterfront development must meet setback requirements and impervious surface requirements. Plats are also reviewed by engineers hired by the developer and the Virginia Department of Transportation to identify matters of topography and drainage.</p> <p>Although not designed specifically for hazard mitigation purposes, the Ordinance will prevent flood losses in tandem with the Flood Damage Prevention Ordinance. It will also minimize the adverse effects development can have on stormwater drainage through impervious surface requirements and through sedimentation and erosion control. Through its roadway requirements, the ordinance also provides for adequate ingress and egress to subdivisions by emergency vehicles for fires or severe weather events.</p>	<p align="center"><b>MODERATE</b></p>
<p align="center"><b>State of Emergency Ordinance</b></p>	<p align="center"><b>September 1988</b></p>	<p>The purpose of this Ordinance is to authorize the proclamation of a State of Emergency and the imposition of prohibitions and restrictions during a State of Emergency. Establishes the authority and procedures for the Board of Supervisors to proclaim a State of Emergency, and to impose the following restrictions as described in the ordinance: curfew; evacuation; possession/transportation/ transfer of intoxicating liquors, dangerous weapons and substances; access to areas; movements of people in public places; operation of businesses and other places; and other activities or conditions the control of which may be reasonably necessary to maintain order and protect lives or property during the State of Emergency.</p> <p>The Ordinance does not incorporate any long-term mitigation actions, such as temporary moratoria on the reconstruction of structures damaged or destroyed by a disaster event.</p>	<p align="center"><b>LOW</b></p>

## **Legal Authority**

Local governments in Virginia have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Virginia, which are (a) regulation, (b) acquisition, (c) taxation, and (d) spending. The scope of this local authority is subject to constraints, however, as all of Virginia's political subdivisions must not act without proper delegation from the State. All power is vested in the State and can only be exercised by local governments to the extent it is delegated. Thus, this portion of the capabilities assessment will summarize Virginia's enabling legislation which grants the four types of government powers listed above within the context of available hazard mitigation tools and techniques.

## **Regulation**

### General Police Power

Virginia's local governments have been granted broad regulatory powers in their jurisdictions. Virginia State Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard. Wise County has enacted and enforces regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

### Building Codes and Building Inspection

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through building codes. Wise County has building codes. Municipalities and counties may adopt codes for their respective areas if approved by the state as providing "adequate minimum standards". Local regulations cannot be less restrictive than the state code. Local governments in Virginia are also empowered to carry out building inspections. It empowers cities and counties to create an inspection department, and enumerates their duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters. Wise County has adopted a building code and established a Building Inspections Office to carry out its building inspections.

### Land Use

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Each local community possesses great power to prevent unsuitable development in hazard-prone areas. Wise County has adopted land use regulation including zoning.

### Planning

According to State Statutes, local governments in Virginia may create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is illustrated by the requirement that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan", the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community. Wise County has established a committee of volunteers known as the Planning Commission.

### Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. Broad enabling authority is granted for municipalities and counties in Virginia to engage in zoning. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications that control height and bulk such as lot size, building height and set backs, and density of population. Local governments are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. Wise County enforces a county wide zoning ordinance which was adopted in April 1991.

### Subdivision Regulations

Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. The definition of subdivision does not include the division of land into parcels greater than 3 acres where no street right-of-way dedication is involved. Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations only indirectly affect the type of use made of land or minimum specifications for structures. Flood-related subdivision controls typically require that sub-dividers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Wise County has adopted a Subdivision Ordinance.

### Stormwater Regulations

Stormwater regulations are most often used to control runoff and erosion potential which results from small scale development of less than 5 acres. A reduction in damage from small scale development is achieved through requirements such as onsite retention/detention ponds, etc. The State of Virginia encourages local governments to adopt stormwater regulations under land use authorities. Wise County is in the process of adopting stormwater regulations.

### Floodplain Regulation

Virginia State Statutes provide cities and counties the land use authority. In particular, issues such as floodplain control are empowered through §15.2-2223 and §15.2-2280 of the Code of Virginia. Wise County has adopted a local floodplain ordinance as a requirement of participation in the National Flood Insurance Program.

### **Acquisition**

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazardproofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. Virginia legislation empowers cities, towns, counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain. Wise County proposes to continue using acquisition as a local mitigation tool.

### **Taxation**

The power to levy taxes and special assessments is an important tool delegated to local governments by Virginia law. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community. Communities have the power to set preferential tax rates for areas which are more suitable for development in order to discourage development in otherwise hazardous areas. Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development. Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of necessary services within municipal or county boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development. Wise County does levy property taxes, and uses preferential tax districts and special assessments for purposes of guiding growth and development.

### **Spending**

The fourth major power that has been delegated from the Virginia General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption annual budgets and a Capital Improvement Plan (CIP). A CIP is a schedule for the provision of municipal or county services over a specified period of time. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend services, a community can control growth to some extent especially in areas where the provision of on-site sewage disposal and water supply are unusually expensive. In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to services. A CIP that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs. Wise County has adopted and implemented a capital improvement program.

### **Political Willpower**

Most County residents are knowledgeable about the potential hazards their community faces, and in recent years have become more familiar with the practices and principles of mitigation. Because of this fact, coupled with Wise County's history with natural disasters, it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

## **SECTION G MITIGATION STRATEGY**

This section of the LENOWISCO Hazard Mitigation Plan describes the development of a **Mitigation Strategy**. It is a process of setting mitigation goals, considering mitigation alternatives, developing objectives and implementation approaches, and deriving a mitigation action plan.

### **Setting Mitigation Goals**

A typical methodology for the hazard mitigation planning process involves:

- o Describing the problem (hazard identification)
- o Estimating the impacts the problem could cause (vulnerability assessment)
- o Assessing existing safeguards that can/should lessen those impacts (capability assessment)
- o Using this information to determine if something should be done (determine acceptable risk) and, if so, what that should be (develop an action plan)

When a community ultimately decides that certain risks are unacceptable and that certain mitigation actions may be achievable, the development of goals and actions takes place. Goals and actions help to describe what should occur, using increasingly more narrow descriptors. Initially, broad-based goals – i.e., general, long-term statements – are developed. Goals are then accomplished by implementing actions, which are more detailed and achievable in a finite time period.

During this plan update, existing goals were reviewed and reaffirmed. Actions were then reviewed and developed by participating jurisdictions as a logical extension of the plan's objectives.

While priorities will logically differ from one jurisdiction to the next, for the entire planning area overall, protecting new and existing development from the effects of hazards remains the top priority. This can be attained community by community, while also supporting the district's overarching goal.

Participating jurisdictions continue to confirm the following goals for the LENOWISCO district, which then form the basis for a mitigation action plan suitable for implementation across the district.

- GOAL 1** Ensure public health and safety within the LENOWISCO planning region before, during, and following hazardous events
- GOAL 2** Implement effective hazard mitigation measures that will minimize the impact of natural hazards on life and property for both existing and future development
- GOAL 3** Increase the area's floodplain management activities and NFIP participation
- GOAL 4** Incorporate hazard awareness and risk reduction principles into the daily activities, processes, functions, and policies of the community
- GOAL 5** Continue to assess and enhance understanding of the extent of vulnerability to natural hazards
- GOAL 6** Publicize mitigation activities to reduce the area's vulnerability to the identified hazards

## **Considering Mitigation Alternatives**

A range of potential mitigation alternatives were again considered, and are noted in **Appendix II**. Actions specific to a community are devised based on available information and the communities' respective capacities and capabilities.

## **Prioritizing Alternatives**

Selecting and prioritizing the most appropriate mitigation alternatives for area communities involves taking social, technical, administrative, political, legal, economic and environmental considerations into account when reviewing potential actions to undertake. These considerations help ensure that the most equitable and feasible actions are undertaken based on a jurisdiction's capabilities.

## **Mitigation Actions**

In formulating a mitigation strategy, a wide range of activities should be considered to help achieve goals and to lessen the vulnerability of the LENOWISCO area to the effects of natural hazards.

A mitigation action plan is comprised of proactive mitigation actions designed to reduce or eliminate future losses from natural hazards. Considerations when developing mitigation actions include the anticipated level of cost effectiveness of a given measure. Because mitigation is an investment to reduce future damages, it is important to select measures for which the reduced damages over the life of the measure are likely to be greater than the project cost.

For structural measures, the level of cost effectiveness is primarily based on the likelihood of damages occurring in the future, the severity of the damages when they occur, and the level of effectiveness of the selected measure, factors of primary concern when selecting measures. For those measures that do not result in a quantifiable reduction of damages, such as public education and outreach, the relationship of probable future benefits and each measure's cost are considered.

## **LENOWISCO Planning District Commission Mitigation Actions**

When formulating a mitigation action plan, a wide range of activities are considered to help achieve communities' goals and lessen their vulnerabilities to the effects of natural hazards. **Appendix II** includes the range of alternatives again considered.

Previously identified actions were reviewed and revised, and mitigation actions proposed for implementation in the LENOWISCO district are noted following. Each is designed to help achieve goals and objectives identified in this plan.

### **ACTION #1**

Target FEMA's Repetitive Loss Properties, and other known repetitively flooded properties, throughout the district for potential mitigation projects.

Category: Property Protection

Hazard: Flood

Background: Known repetitive loss properties are those that have sustained flood damage and received flood insurance claim payments on multiple occasions. Local jurisdictions have participated in past acquisition programs to remove properties from vulnerable areas, and future projects are envisioned.

Priority: High

**ACTION #2**

Undertake educational outreach activities by developing and distributing brochures and education materials for FEMA's Repetitive Loss Properties, with specific mitigation measures emphasizing acquisition, relocation and elevation.

Category: Public Information and Awareness

Hazard: Flood

Background: There are several repetitive loss properties identified within the district. Although acquisition of flood-prone properties has been undertaken previously, local citizens are often reluctant to relocate from an area where they have strong family and community ties. Citizens should be educated about flood loss cycles associated with flood-prone areas and encouraged to work with local government officials to develop mutually agreeable strategies to address repetitive losses.

Priority: High

**ACTION #3**

Investigate critical facilities to evaluate resistance to wind, fire, landslide and flood hazards. Examine critical facilities within the district's communities and make recommendations to address deficiencies.

Category: Public Information and Awareness

Hazard: All

Background: The ability to recover quickly after a disaster rests, in part, on a community's ability to maintain critical functions during response and recovery. Efforts should be undertaken to ensure that community critical facilities (e.g., fire departments, hospitals, schools) can withstand the impact of various hazards. Local emergency management entities can undertake future studies with recommendations for improvements.

Priority: High

**ACTION #4**

Support Public Works initiatives to improve stormwater infrastructure throughout the area.

Category: Structural Projects

Hazard: Flood

Background: Local stormwater channels are often not identified on FEMA FIRM's. Consequently, stormwater hazards are often overlooked as natural hazards although they can cause significant problems during times of high water. Many jurisdictions do not regulate stormwater runoff, thereby increasing flood damage potential during an event.

Priority: High

**ACTION #5**

Perform analysis of emergency communication systems in all jurisdictions to ensure compatibility during an event.

Category: Public Information and Awareness

Hazard: All

Background: Many natural disasters and other types of emergencies affect multiple jurisdictions simultaneously. The ability to communicate from jurisdiction to jurisdiction and between local jurisdictions and state and regional agencies is essential to a timely and appropriate response to an emergency or hazard event.

Priority: Moderate

**ACTION #6**

Evaluate the district's community floodplain ordinances and enforcement procedures that may be outdated for possible upgrades.

Category: Prevention

Hazard: Flood

Background: Each locality has adopted and enforces NFIP floodplain management regulations. By sharing information, communities can learn from each another how best to implement, monitor and enforce NFIP regulations and overall floodplain management.

Priority: Moderate

**ACTION #7**

Initiate and encourage dialogue with public utility companies about incorporating mitigation as infrastructure is laid, maintained or repaired.

Category: Prevention

Hazard: All

Background: Mitigation initiatives that protect utility infrastructure can most often be installed at the beginning of a project less expensively than with retrofitting. Local governments can serve to educate utility companies regarding the risk of natural hazards and provide technical guidance and references about hazard proofing their facilities.

Priority: Moderate

**ACTION #8**

Develop "hazard information centers" on local communities' websites, in public libraries and via social media, where individuals can find hazard and mitigation information.

Category: Public Information and Awareness

Hazard: All

Background: More local governments are utilizing technological capabilities as a primary means of official communication with residents. Use of available technologies to educate community residents about natural hazards and mitigation opportunities is growing nationwide.

Priority: Moderate

**ACTION #9**

Utilize existing wildfire maps to prioritize potential project areas in the district.

Category: Public Information and Awareness

Hazard: Fire

Background: Financial assistance is available to at-risk communities for hazard mitigation type projects aimed at reducing identified fire hazards.

Priority: Moderate

**ACTION #10**

Investigate benefits of Community Rating System for non-participating jurisdictions.

Category: Prevention

Hazard: All

Background: Communities that regulate development in floodplains are able to participate in the National Flood Insurance Program (NFIP). In return, the NFIP makes federally-backed flood insurance available for properties in the community. The Community Rating System (CRS) recognizes and encourages community floodplain management activities that exceed minimum NFIP standards. Localities should be educated on the benefits of CRS participation.

Priority: Low

**Table G-1  
Mitigation Action Items – Participating LENOWISCO Localities**

<b>Locality</b>	<b>#1</b>	<b>#2</b>	<b>#3</b>	<b>#4</b>	<b>#5</b>	<b>#6</b>	<b>#7</b>	<b>#8</b>	<b>#9</b>	<b>#10</b>	<b>Additional</b>
Lee County	✓	✓	✓		✓	✓	✓	✓	✓	✓	
Town of Jonesville			✓					✓			✓
Town of Pennington Gap			✓	✓				✓			✓
Scott County	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Town of Duffield			✓								
Town of Gate City			✓					✓			
Town of Nickelsville			✓	✓				✓			✓
Wise County	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Town of Wise			✓					✓			✓
City of Norton	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Additional Mitigation Actions**

A number of LENOWISCO localities have identified potential mitigation actions, to be implemented based on viability analysis and available funding.

- o Town of Jonesville (Lee County)  
Potential residential acquisition project(s) in flood-prone areas  
Need for early warning system in town
- o Town of Nickelsville (Scott County)  
Stormwater mitigation, plant with severe I&I issues
- o Town of Pennington Gap (Lee County)  
Stormwater mitigation, drainage culverts underneath downtown  
Needed improvements in early warning system in town
- o Town of Wise (Wise County)  
Potential residential acquisition project(s) in flood-prone areas  
(Town has past experience with implementation of acquisition projects)
- o City of Norton  
Stormwater mitigation, upgrades to main interceptor in central business district
- o Scott County  
Potential residential acquisition project(s) in flood-prone areas  
(County has past experience with implementation of acquisition projects)
- o Wise County  
Need for generators for emergency shelter facilities

## **SECTION H**

### **PLAN MAINTENANCE PROCEDURES**

#### **Plan Adoption, Implementation and Maintenance**

##### **Formal Plan Adoption**

Ten (10) local governments in the LENOWISCO district participated in this plan update, and are expected to formally the plan by resolution of their respective governing boards upon the plan's conditional approval by state and federal reviewers. The adoption resolutions will be incorporated into the final Hazard Mitigation Plan.

##### **Implementation**

Upon adoption, the plan continues to face a larger test, that of implementation. Implementation implies two concepts: action and priority.

This plan recognizes numerous worthwhile and priority recommendations. Several localities have identified specific mitigation actions and projects, which can be pursued independently. Since funding is always an important consideration, many LENOWISCO localities can pursue low- or no-cost recommendations as well.

An example of a low-cost, high priority recommendation would be In the education of elected officials and the general public regarding participation in the National Flood Insurance Program (NFIP). One way to strengthen commitment to the NFIP is through amendment of local floodplain ordinances. Another example is pursuing a regional goal of increased education and awareness of locality employees and public officials regarding natural hazard mitigation, floodplain management, floodplain regulations, and enforcement. These efforts can lead to long-term changes in vulnerability and can be initiated at little cost, while promoting public education through awareness in the communities.

Another implementation approach is to take steps to incorporate the various facets of this plan into other community plans and strategies, including comprehensive planning, capital improvement budgeting, and economic development planning. Mitigation is most successful when integrated into day-to-day functions and priorities of government and development, accomplished by an ongoing effort to identify and highlight benefits to each community.

At the same time, it is important and beneficial to constantly monitor and identify funding opportunities that can be utilized to implement higher cost actions, as well as study ways to meet required local match or participation requirements. Opportunities include special pre- and post-disaster funds, special district budgeted funds, state or federal ear-marked funds, and grant programs, including those that can serve or support multi-objective applications.

With adoption of this plan, the LENOWISCO district's localities endeavor to:

- o Pursue the implementation of high priority, low/no-cost actions
- o Integrate mitigation into community decision-making by identifying and stressing recommendations of the Hazard Mitigation Plan when other community goals, plans and activities are considered
- o Monitor multi-objective, cost-share opportunities to assist participating communities in the implementation of recommended actions of this plan

## **Maintenance**

Plan maintenance requires an ongoing effort to monitor and evaluate the implementation of the plan, and to update the plan as progress, roadblocks, or changing circumstances are recognized.

This monitoring and updating will take place through ongoing review by LENOWISCO localities and mitigation planning personnel and updates as needed.

Such reviews and updates will involve as many participating jurisdictions as possible. Public notice will be given and public participation invited, at a minimum, through available online postings and press releases to the local media outlets, primarily newspapers and radio stations, and the appropriate social media.

Evaluation of progress can be achieved by monitoring changes in the vulnerability identified in the plan. Changes in vulnerability can be identified by noting lessened vulnerability as a result of implementing recommended actions, increased vulnerability as a result of failed or ineffective mitigation actions, and/or increased vulnerability as a result of new development (and/or annexation).

Any such updates of the plan will be by written changes, as the LENOWISCO jurisdictions deem appropriate and necessary.

## **APPENDIX I DETAILED HAZARD IDENTIFICATION PARAMETERS AND METHODOLOGY**

Based on local and regional hazard data, an analysis of the hazards potentially affecting the LENOWISCO area is based on the four parameters described below. These parameters are based on two separate factors – the probabilities that a potential hazard will affect the planning area and the potential impacts on the planning area should a hazard event occur. Hazard identification computations used to prioritize potential threats to the LENOWISCO area are detailed later in this appendix.

- **Probability** – This parameter addresses the probability a potential hazard will affect the district. The probability for each hazard is based on the history of events in the area, plus any other relevant available data. Hazard probabilities are classified into one of four categories by estimating a hazard's average annual frequency, which is the probability of a specific hazard event occurring in a given year. Inconsistencies in historical data render some frequencies relatively simple to estimate and others more difficult. In some cases, frequency estimates rely on experience with similar events that have occurred near the planning area.
- **Affected Area** – This is the first of three impact parameters, and addresses the potentially affected geographic area should a hazard event occur. The extent of the affected area for each hazard is determined based on the specific characteristics of each hazard, the area's history of such events, and experience with similar nearby events. The affected areas are classified into one of four categories based on the extent of the district directly impacted by the hazard, ranging from a single building or facility to a widespread area.
- **Primary Impact** – This second impact parameter addresses potential direct damages to buildings, facilities and individuals should a hazard event occur. The primary impact is determined based on specific characteristics of each hazard, the history of such events in the area, and experience with nearby similar events. Primary impacts are classified into one of four categories by estimating the typical damage to a building or facility from a given hazard, ranging from negligible (less than 10 percent damage) to catastrophic (greater than 50 percent damage).
- **Secondary Impacts** – This third impact parameter addresses potential secondary impacts should a hazard event occur. While primary impacts are a direct result of the hazard, secondary impacts arise only subsequent to a primary impact. For example, a primary impact of a flood event may be road closures due to submerged pavement, while a secondary impact could be restricted access of emergency vehicles to citizens in a portion of the community due to the road closure. Other examples of secondary impacts include loss of building or facility services (functional downtime), power outages, and mass evacuation of city residents. Secondary impacts are determined based on the specific characteristics of each hazard, the history of such events in the area, and experience with nearby similar events. Secondary impacts are classified into one of four categories by estimating the typical impacts to the area at large from a given hazard, ranging from negligible (no loss of function, downtime, and/or evacuations) to high (major loss of function, downtime, and/or evacuations).

Once these parameters are determined, a preference scale is utilized to determine a hazard level for each hazard type considered. The preference scale used as a model for this hazard analysis assigns a numerical value between 1 and 4 to each parameter, with 1 representing the lowest hazard potential and 4 the highest. These numerical values are then modified by weighing each parameter by a factor to reflect the overall importance of that parameter, with 0.6 representing parameters of lowest importance and 2.0 representing parameters of highest importance. In this case, probability parameters are assigned a factor of 2.0 to reflect their high importance, while the affected area, primary impact and secondary impacts parameters are assigned factors of 1.0, 0.8 and 0.6, respectively, to reflect lesser importance.

Finally, the factored values assigned to the various parameters for each hazard are totaled, and the hazard types with the highest totals are considered the highest potential hazard level. In order to quantify these hazard parameters, the following formula assigns a value for probability and impact for each of the hazards considered.

**Hazard Level = Probability x Impacts**

**Probability = (Probability score x Importance factor)**

**Impacts = (Affected Area + Primary Impact + Secondary Impacts)**

**Affected Area = Affected Area score x Importance factor**

**Primary Impact = Primary Impact score x Importance factor**

**Secondary Impact = Secondary Impact score x Importance factor**

Tabulations are shown below. Hazard levels are broken down into four distinct categories that represent the likelihood of a hazard event of that type significantly impacting the LENOWISCO area: High, Medium-High, Medium, and Low.

*Note: the assigning of numerical values and importance factors for parameters is qualitative in nature and based on data from a number of sources with varying degrees of accuracy. Thus, a margin of error of +/- 10 percent is assumed for the total scores used to arrive at the hazard level values.*

Hazard Type	Probability	Impact			Total Score	Hazard Planning Consideration
		Affected Area	Primary Impact	Secondary Impact		
Dam/Levee Failure	2	3.0	3.2	2.4	17	Low
Drought	6	4.0	0.8	0.6	32	Medium-High
Earthquake	4	4.0	1.6	1.2	27	Medium
Extreme Heat	2	4.0	0.8	0.6	11	Low
Flooding	8	3.0	2.4	1.8	58	High
Landslides, Land Subsidence, Soil Erosion	6	2.0	2.4	1.2	34	Medium-High
Severe Thunderstorm/Hail	8	3.0	0.8	0.6	35	Medium-High
Severe Wind (Incl Tornado)	6	3.0	1.6	1.2	35	Medium-High
Severe Winter Storm	6	4.0	1.6	1.8	44	Medium-High
Wildfire	6	1.0	2.4	1.2	28	Medium

<b>Probability</b>	Importance:	2.0
<i>Based on estimated likelihood of occurrence</i>		
<b>Level</b>	<b>Probability</b>	<b>Score</b>
1	Unlikely	2.0
2	Somewhat Likely	4.0
3	Likely	6.0
4	Highly Likely	8.0

<b>Primary Impact</b>	Importance:	0.8
<i>Based on percentage of damage to typical facility</i>		
<b>Level</b>	<b>Probability</b>	<b>Score</b>
1	Negligible - less than 10% damage	0.8
2	Limited - between 10% and 25% damage	1.6
3	Critical - between 25% and 50% damage	2.4
4	Catastrophic - more than 50% damage	3.2

<b>Affected Area</b>	Importance:	1.0
<i>Based on size of geographical area affected</i>		
<b>Level</b>	<b>Probability</b>	<b>Score</b>
1	Isolated	1.0
2	Small	2.0
3	Medium	3.0
4	Large	4.0

<b>Secondary Impacts</b>	Importance:	0.6
<i>Based on estimated loss of function, downtime and/or evacuations</i>		
<b>Level</b>	<b>Probability</b>	<b>Score</b>
1	Negligible - no loss, downtime, evacuations	0.6
2	Limited - minimal loss, downtime, evacuations	1.2
3	Moderate - some loss, downtime, evacuations	1.8
4	High - major loss, downtime, evacuations	2.4

<b>Hazard Level</b>		
<b>Total Score (Range)</b>	<b>Hazard Level</b>	<b>Distribution</b>
0.0 - 18.0	Low	2
18.1 - 30.0	Medium	4
30.1 - 48.0	Medium-High	4
48.1 - 60.0	High	1

## **APPENDIX II MITIGATION ALTERNATIVES**

### **General Multi-Hazard Mitigation Alternatives**

The mitigation alternatives selected should be linked to the LENOWISCO area's goals and objectives, and should address each jurisdiction's hazard risks and vulnerability. The following are potential mitigation measures not specific to one hazard, which can benefit a community's overall hazard reduction efforts.

#### **Comprehensive Plans**

Comprehensive plans address how and where a community should grow by guiding the rate, intensity, form and quality of physical development. These plans address land use, economic development, transportation, recreation, environmental protection, the provision of infrastructure, and other municipal functions. Comprehensive plans help to guide other local measures such as capital improvement programs, zoning ordinances, subdivision ordinances and other community policies and programs. By integrating hazard considerations into the plan, mitigation can become integrated with community functions and can therefore be an institutionalized part of a jurisdiction's planning efforts. Density and development patterns should reflect the LENOWISCO area communities' ability to protect their jurisdictions, the environment, and the ability to evacuate the area. Development management tools should be incorporated into the local policies that address the location, density, and use of land, with a particular emphasis on development within high-risk areas. Efforts should be made to keep people and property out of high-hazard areas whenever possible. Particularly hazardous areas could be used for recreational uses, open space, or wildlife refuges.

#### **Capital Budget Plans**

Capital budget plans typically provide for the future and ongoing provision of public facilities and infrastructure. These plans can be vital tools in keeping new development out of high-hazard areas by limiting the availability of public infrastructure. Public facilities can often be relocated to less hazardous areas in the aftermath of a disaster, or they can be upgraded or floodproofed. Power and telephone lines can be buried underground. To maximize the gravity flow area of wastewater treatment plants, the facilities are often located at the community's lowest elevation. If this point lies within a floodplain, for example, consideration may be given to relocating or floodproofing such facilities. New locations for critical facilities should not be in hazard-prone areas, or in areas where their function may be impaired by a given hazard event (e.g., where water can flood access roads). Critical facilities should be designed and/or retrofitted to remain functional and safe before, during and after a hazard event.

#### **Zoning**

Zoning is by far the most common land-use control technique used by local governments. While a useful tool for regulating and restricting undesirable land uses, zoning has a somewhat more limited benefit when it comes to mitigation. Zoning is most effective on new development rather than existing development, which does little to address pre-existing development in hazardous areas. Communities with a large amount of undeveloped land will benefit much more than older, more established communities. Even for new development, the issuance of variances, special use permits, rezoning, and the failure to enforce existing codes, however, weaken zoning's ability to prevent certain types of building practices.

### **Building Codes**

Building codes regulate the design, construction, and maintenance of construction within most communities. These regulations prescribe standards and requirements for occupancy, maintenance, operation, construction, use, and appearance of buildings. Building codes are an effective way to ensure that new and extensive re-development projects are built to resist natural hazards. In Virginia, communities are required by law to adopt and enforce the Uniform Statewide Building Code, which has provisions for wind, water, and seismicity.

### **Public Outreach and Education Programs**

Educating the public about what actions they can take to protect themselves and their property from the effects of natural hazards can be an effective means to reduce losses. These types of programs can target public officials, citizens, businesses, or the local construction trade. The program can cover preparedness, recovery, mitigation, and general hazard awareness information. The information can be presented in a variety of ways, from workshops, brochures, advertisements, or local media. Potential outreach and education topics include:

- Code Awareness Training
- Sheltering and Evacuation
- Flood Insurance
- School Information (Primary, Secondary, Colleges, and Universities)
- New Homeowner/Resident Information
- Emergency Preparedness for Families, Businesses, and Tourists
- Driver Safety in Disasters
- Special Needs Outreach
- Hazard Mitigation for Homeowners, Renters and Businesses

### **Vegetative Planting and Treatment**

Vegetative planting and treatments can help to capture and filter runoff and can reduce landslides. Perennial vegetation includes grass, trees and shrubs, which cover the soil, reduce water pollution, slow the rate of runoff, increase filtration and prevent erosion. This type of land treatment includes maintaining trees, shrubberies and the vegetative cover, terracing (a raised bank of earth with vertical sloping sides and a flat top to reduce surface runoff), stabilizing slopes, grass filter strips, contour plowing, and strip farming (the growing of crops in rows along a contour).

### **Vegetative Maintenance**

Vegetative maintenance is the pruning and maintenance of trees, bushes and other vegetation that can increase threats to power lines during storms, or can act as fuels during wildfires. This can be applied in limited areas that have a significant vulnerability to these hazards, such as an easement or along the urban-wildland interface.

### **Hazard-Specific Alternatives**

The following are potential mitigation measures more effective when applied to a specific hazard.

#### **Flood**

Flood mitigation measures can be classified as structural or non-structural. In simple terms, structural mitigation attempts to eliminate the possibility of flooding at a particular location. Non-structural mitigation removes the potentially effected people or property from the potentially flooded area. The following is a list of potential mitigation measures.

### Floodplain Management Ordinances

Floodplain management ordinances are weakened by development pressures, a lack of suitable sites outside the floodplain, community desires to be near the water, inability to effectively monitor floodplain management activities, or by land-use planning policies that encourage development into floodplain areas. Plans or policies that place more properties at risk also reduce the storage capacity and functions of natural floodplains. Degradation of the floodplain in this way increases flood depths and affects the reliability of Flood Insurance Rate Maps. Structures built in floodplains, particularly those not utilizing a freeboard (that exceeds the minimum Base Flood Elevation), are consequently even more vulnerable to damage by floods.

### Acquisition

Acquisition involves the purchasing of a property that is cleared and permanently held as open space. Acquisition permanently moves people and property out of harm's way, increases floodplain capacities, recreation areas and open space, and can help to preserve wetlands, forests, estuaries and other natural habitats. Participation in federally funded grant programs requires voluntary participation by the owner. Acquisition programs can be expensive to undertake, and the property must be maintained and will no longer accrue taxes for the community, but it is by far the most effective and permanent mitigation technique. Acquisition is most effective when targeting repetitive loss structures, extremely vulnerable structures, or other high-hazard areas.

### Elevation

Elevation is the raising of a structure above the Base Flood Elevation. Elevation is often the best alternative for structures that must be built or remain in flood prone areas, and is less costly than acquisition or relocation. However, elevating a structure can increase its vulnerability to high winds and earthquakes. Some building types are either unsuitable or cost-prohibitive to elevate.

### Relocation

Relocation involves the moving of a building or facility to a less hazardous area, on either the same parcel or another parcel. This measure also moves people and property out of harm's way, and is a very effective measure overall. Some building types are either unsuitable or cost-prohibitive to relocate.

### Stormwater Management Plans

New development that increases the amount of impervious surfaces affects the land's ability to absorb the water and can intensify the volume of peak flow runoff. Without efficient stormwater management, runoff can cause flooding, erosion and water quality problems. Stormwater management plans should incorporate both structural and nonstructural measures in order to be most effective.

Structural measures include retention and detention facilities that minimize the increase of runoff due to impervious surfaces and new development. Retention facilities allow stormwater to seep into the groundwater. Detention systems accumulate water during peak runoff periods that will be released at off-peak times. Nonstructural measures include establishing impervious surface limit policies and maintenance programs for existing drainage systems.

### Dry Floodproofing

Dry floodproofing involves making all areas below the flood protection level watertight by strengthening walls, sealing openings, using waterproof compounds, or applying plastic sheeting on the walls. This method is not recommended for residential structures, but may work well for new construction, retrofitting, or repairing a nonresidential structure. Due to pressure exerted on walls and floors by floodwater, dry floodproofing is effective on depths less than 2 to 3 feet. Floodproofing of basements is not recommended.

### Wet Floodproofing

Opposite of dry floodproofing, wet floodproofing lets the floodwater actually enter a structure. This technique is effective on deeper flood depths, as it does not have the same potential to build up exterior pressure. Again, this method is not recommended for residential structures and may not be used for basements under new construction, substantial improvements, or substantially damaged structures.

### Storm Drainage Systems

Mitigation efforts include installation, re-routing, or increasing the capacity of storm drainage systems. Examples include the separation of storm and sanitary sewers, addition or increase in size of drainage or retention ponds, drainage easements, or creeks and streams.

### Drainage Easements

Easements can be granted that enable regulated public use of privately owned land for temporary water retention and drainage areas.

### Structural Flood Control Measures

Water can be channeled away from people and property with structural control measures such as levees, dams or floodwalls. These measures may also increase drainage and absorption capacities. These structural control measures may also increase Base Flood Elevations and could create a false sense of security.

### Basement Backflow Prevention

LENOWISCO area communities should encourage the use of check valves, sump pumps, and backflow prevention devices in homes and buildings, if the infrastructure allows.

### Wind

Proper engineering and design of a structure can increase a structure's ability to withstand the lateral and uplift forces of wind. Building techniques that provide a continuous load path from the roof of the structure to the foundation are generally recommended.

### Windproofing

Windproofing is the modification of a building's design and construction to resist damages from wind events, and can help to protect the building's occupants from broken glass and debris. Windproofing involves the consideration of aerodynamics, materials and the use of external features such as storm shutters. These modifications could be integrated into the design and construction of a new structure or applied to reinforce an existing structure. Manufactured homes, typically vulnerable to the effects of extreme wind events, can be protected by anchoring the structures to their foundations. Mobile homes could be tied down to their pads in order to prevent them from being destroyed.

Public facilities, critical infrastructure and public infrastructure (such as signage and traffic signals) should all be windproofed in vulnerable areas. However, windproofing is not a viable mitigation technique to protect against tornados.

### Community Shelters/Safe Rooms

Community shelters and concrete safe rooms can offer protection and reduce the risk to life. Locations for these shelters or safe rooms are usually in concrete buildings such as shopping malls or schools. Communities lacking basements and other protection nearby should consider developing tornado shelters.

### **Burying Power Lines**

Buried power lines can offer uninterrupted power during and after severe wind events and storms. Burying power lines can significantly enhance a community's ability to recover in the aftermath of a disaster. Buried power lines are typically more expensive to maintain and are more vulnerable to flooding. Encouraging back-up power resources in areas where burial is not feasible will enable the continuity of basic operations (e.g., security, refrigeration, heat, etc.) for businesses and facilities when there is a loss of power.

## **Available Mitigation Techniques**

### **Prevention**

Preventative activities are intended to keep hazard problems from getting worse. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:

- Planning and zoning
- Open space preservation
- Floodplain regulations
- Storm water management
- Drainage system maintenance
- Capital Improvements programming
- Shoreline/riverine/fault zone setbacks

### **Property Protection**

Property protection measures protect existing structures by modifying the building to withstand hazardous events, or removing structures from hazardous locations. Examples include:

- Acquisition
- Relocation
- Building elevation
- Critical facilities protection
- Retrofitting (i.e., windproofing, floodproofing, seismic design standards, etc.)
- Insurance
- Safe rooms

### **Natural Resource Protection**

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their mitigation functions. Such areas include floodplains, wetlands, and dunes. Parks, recreation or conservation agencies, and organizations often implement these measures.

Examples include:

- Floodplain protection
- Riparian buffers
- Fire resistant landscaping
- Fuel Breaks
- Erosion and sediment control
- Wetland preservation and restoration
- Habitat preservation
- Slope stabilization

### **Structural Projects**

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- o Reservoirs
- o Levees/dikes/floodwalls/seawalls
- o Diversions/detention/retention
- o Channel modification
- o Storm sewers
- o Wind retrofitting
- o Utility protection/upgrades

### **Emergency Services**

Although not typically considered a "mitigation technique," emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- o Warning systems
- o Evacuation planning and management
- o Sandbagging for flood protection
- o Installing shutters for wind protection

### **Public Information and Awareness**

Public information and awareness activities are used to advise residents, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- o Outreach projects
- o Speaker series/demonstration events
- o Hazard map information
- o Real estate disclosure
- o Library materials
- o School children education
- o Hazard expositions
- o Web presence/social media

## **APPENDIX III REFERENCES**

The following documents and data were among those utilized during compilation of this Plan:

*LENOWISCO Hazard Mitigation Plan, 2005*

*LENOWISCO Comprehensive Economic Development Strategy, 2012*

*2010 United States Census, U.S. Census Bureau*

### **HIRA References**

Federal Emergency Management Agency, *Understanding Your Risks*

National Climatic Data Center, National Oceanic and Atmospheric Administration

National Drought Mitigation Center

National Weather Service, climate data and historical data

United States Geological Survey

Virginia Department of Environmental Quality

7-c

City of Norton



# Inter-Office Memo

To: Mayor and City Council  
From: Fred L. Ramey, Jr., City Manager **FR**  
CC:  
Date: May 10, 2014  
Re: Decommissioning City Swimming Pool

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The City of Norton swimming pool was closed in 2011 and plans have been designed for a new pool complex when the funds are available. The current pool facility remains vacant and there could be a good opportunity to decommission the pool as part of the Safe Routes to School Project.

I plan to discuss this concept further to see if this is something that City Council may want to consider at this time.

Thank You.

7-D

132331

05-13-2014

Thomas Construction Company, Inc.  
SRTS Sidewalk/AML Highwall Project  
Construction pay application No. 2  
VDOT Funded portion

\$135,380.03

4-C01-096000-0102

CITY OF NORTON  
GENERAL OPERATING FUND  
NORTON, VA 24273

THE FIRST BANK & TRUST  
NORTON, VA

132331

68-446/514  
10

\*\*\*\*\*One Hundred Thirty-Five Thousand Three Hundred Eighty Dollars and Three Cents\*\*\*\*\*

PAY TO THE ORDER OF:

DATE

AMOUNT

05-13-2014

\$135,380.03

Thomas Construction Company, Inc.  
P O Box 4806 GRS  
Johnson City, TN. 37602-4806

*[Handwritten Signature]*  
\_\_\_\_\_  
AUTHORIZED SIGNATURE

⑈ 132331 ⑈ ⑆ 051404464 ⑆ 100002346 ⑈

05-02-2014

Consolidated Pipe and Supply Co., Inc.  
Invoice NO. 2433266-003-000 -\$99,457.50  
Invoice NO. 2440947-000-000 -\$ 6,705.00

Account no. 240311

4-002-040000-0043

132325  
\$106,162.50

**CITY OF NORTON**  
**GENERAL OPERATING FUND**  
NORTON, VA 24273

THE FIRST BANK & TRUST  
NORTON, VA

132325

68-446/514  
10

\*\*\*\*\*One Hundred Six Thousand One Hundred Sixty-Two Dollars and Fifty Cents\*\*\*\*\*

PAY TO THE ORDER OF:

DATE

AMOUNT

05-02-2014

\$106,162.50

Consolidated Pipe & Supply Co., Inc.  
722 Mountain View Drive  
Piney Flats, TN. 37686

\_\_\_\_\_  
AUTHORIZED SIGNATURE

⑈ 132325 ⑆ ⑆ 051404464 ⑆ 100002346 ⑆



# NORTON CITY SCHOOLS — SCHOOL BOARD

PO BOX 498  
22 TENTH STREET  
NORTON, VA 24273-0498

TIM CASSELL  
*CHAIRPERSON*  
STEVE CHILDERS  
*VICE-CHAIRPERSON*  
VALERIE BROWN  
MARK LEONARD  
SHERRY ADAMS

DIVISION SUPERINTENDENT  
JEFF COMER

TO: Jeff Shupe  
FROM:  Yvonne Isom, Finance Manager  
SUBJECT: Request For Funds  
DATE: April 28, 2014

The Norton City Schools request a deposit of City Funds in the amount of \$175,000.00 to cover employee fringe benefits.