

Chapter 6. Community Summaries

Participating localities submitted updated community summaries for this plan revision. Each summary includes a brief overview of the hazards of concern for that locality, current or ongoing mitigation efforts, and an updated list of projects identified for future mitigation opportunities.

6.1 Floyd County

6.1.1 Hazards and Risks

Floyd County's principal natural hazards are severe drought and wildfire. About 95% of county residents rely on private water systems. The 1998-2002 drought caused at least 500 households to lose their spring or well, requiring a new well. However, even many new wells have very limited yields. Housing developments on sloped, wooded areas are at significant risk of wildfire damage. Floyd County also experiences some flooding, though there is no larger concentrated area. The United States Geological Survey also suggests that Floyd County is particularly prone to landslide incidents, though there have been no significant events in recent history. In terms of man-made hazards, the location of gas/oil storage facilities in or near the Town of Floyd poses a risk.

6.1.2 Mitigation

Floyd County is seeking to better understand the water issues and related mitigation opportunities. Floyd County is also participating in the regional water supply planning effort. Floyd County will seek help from the Virginia DOF to do more dry hydrants and have more Firewise training and planning to enhance wildfire mitigation. Also training, perhaps from the VDEM, is needed related to potential gas leakage disasters.

From information and training gained during the preparation of the 2005 plan, Floyd added a wildfire mitigation component to their manufactured home park plan. It notes the importance of keeping the parks free of debris which might communicate fire between homes and other structures.

Floyd County is preparing their first full Comprehensive Plan update since that 2005 plan was approved. The current draft has substantial policy language regarding preventing development from over-burdening groundwater supplies, improving groundwater recharge. It also notes the following as not suitable for development: lands in the 100-year floodplain, lands with a degree of wildfire risk, land with steep slopes, and lands with unsuitable soils.

Floyd County participates in the NFIP, regulating future floodplain development and offering residents the opportunity to purchase flood insurance. The Town of Floyd does not participate in the program.

6.1.3 Mitigation Opportunities

Floyd County has identified several mitigation opportunities. Cost-effective projects are listed in the table below. These projects would only be possible with federal and/or state funding assistance.

Table 6-1. Floyd County Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Expanding public water and wastewater capacity and service area	Drought	High
Firewise training at more woodland home communities	Wildfire	High
Communication equipment interoperability	All natural and human-caused	High
Water resource study	Drought, Wildfire, Flooding	High
Develop drought contingency plan	Drought, Wildfire	High
Additional water sources and reserves	Drought, Wildfire	High
Table-top exercise for hazardous materials storage in or near Town of Floyd	Human-caused	Medium
Hazard related GIS layers	All natural and human-caused	Medium
Additional dry hydrants	Wildfire	Medium
Monitor and update applicable ordinances as needed to reflect any change in NFIP standards	Flooding	Medium

6.2 Giles County

6.2.1 Hazards and Risks

Giles County’s principal natural hazard is recurring flooding in its towns and along Doe Creek and Little Stony. Giles County also has some risks associated with drought and wildfire that can be mitigated. Moreover, there is the predominance of forest land in Giles County and increasing residential development nearby. Also, Giles County was the epicenter of the 1897 earthquake, the 3rd largest in eastern United States history. Giles County is also prone to sinkholes and landslides.

6.2.2 Mitigation

Giles County as well as the Towns of Narrows, Pearisburg, Pembroke and Rich Creek participate in the NFIP, regulating future floodplain development and offering residents the opportunity to purchase flood insurance. The County also benefits from the IFLOWs of rain and stream gauges operated by the NWS. Giles County has also worked with the Natural Resources Conservation Service to improve streambeds and streambanks in critical areas. Also County, Town and VDOT officials have stepped up drainage maintenance, before and after major weather events. The County’s volunteer emergency personnel are also participating in the formation of a regional swift water rescue team.

In terms of drought, Giles County is participating in the regional water supply planning effort, to help ensure reliability and maximum cost-effectiveness. Concerning wildfire mitigation, Giles County collaborates with the Virginia DOF and the national forest service to do firefighter training and outreach. Giles County received a “Storm Ready” designation from the NWS on May 13, 2009. The County was the 6th locality out of 52 eligible to receive the designation.

Giles County participates in the “Code RED” emergency notification network to communicate potentially hazardous situations to citizens by telephone (both cellular and land-line numbers).

This system has been used by the sheriff's office to notify residents of rising water and road closures due to flooding.

6.2.3 Mitigation Opportunities

Giles County and the towns have identified several mitigation opportunities. Cost-effective projects are listed in the tables below. These projects would only be possible with federal and/or state funding assistance.

Table 6-2. Giles County Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Identify culvert replacement needs	Flooding	High
Replace culverts to reduce flooding	Flooding	High
Full-time forester for Giles County	Wildfire	High
Emergency Services Coordinator position	All natural and human-caused	Medium
Pursue additional water sources	Drought, Wildfire	Medium
Monitor and update applicable ordinances as needed to reflect any change in NFIP standards	Flooding	Medium

Table 6-3. Town of Narrows Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Debris containment	Flooding	High
Stormwater facilities	Flooding	High
Monitor and update applicable ordinances as needed to reflect any change in NFIP standards	Flooding	Medium

Table 6-4. Town of Pearisburg Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Upgrade stormwater system	Flooding	High
Business 460 stormwater mitigation	Flooding	High
Monitor and update the Town's zoning ordinance as needed to reflect any change in NFIP standards	Flooding	Medium

Table 6-5. Town of Pembroke Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Engineering study of structural needs	Flooding	High
Early warning system	Flooding	High
Monitor and update applicable ordinances as needed to reflect	Flooding	Medium

any change in NFIP standards		
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Table 6-6. Town of Rich Creek Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Replacement of wastewater treatment plant	Flooding	High
Stormwater drain replacement	Flooding	Medium
Adoption and enforcement of floodplain management requirements, including regulating all and substantially improved construction in the Special Flood Hazard Area	Flooding	Medium
Floodplain identification and mapping, including any local requests for map updates, if needed	Flooding	Medium

6.3 Montgomery County

6.3.1 Hazards and Risks

Montgomery County’s principal natural hazard is recurrent flooding in its villages and towns (discussed separately), in the eastern part of the county (Shawsville, Elliston & Lafayette areas) and along Plum Creek. Montgomery County also has some risks associated with drought and wildfire that can be mitigated. Specifically, agricultural interests have proven quite vulnerable to drought. Similarly, the county is experiencing the push of residential development into sloped, wooded areas, posing significant wildfire risks. Montgomery County is also prone to sinkholes and landslides and has slight earthquake risks.

6.3.2 Mitigation

Montgomery County participates in the NFIP, regulating future floodplain development and offering residents the opportunity to purchase flood insurance. The County’s floodplain regulation is more stringent than what is required by the NFIP. Montgomery county’s FIRMs were last updated in September 2009, when FEMA digitized the previous maps and fit the flood information to topography data provided by the County. One new detailed study was conducted along Plum Creek. In addition, flood zone designations have been incorporated into GIS layers for staff use during the permitting process. Montgomery County also utilizes Land Development Office software (LDO) to track flooding hazards during the permitting process.

Montgomery County has worked with the Natural Resources Conservation Service to improve streambeds and streambanks in critical areas. The County also benefits from the IFLOWs of rain and stream gauges operated by the NWS and a reverse 911 system. Also, several of the County’s volunteer fire and rescue squads participated in the formation of a regional swift water rescue team. In an effort to ensure citizens receive timely warnings in a major storm event, Montgomery County has worked to receive “Storm Ready” designation from the NWS. Montgomery County was declared a “Storm Ready Community” in November 2010.

In terms of drought, Montgomery County is participating in the regional water supply planning effort, to help ensure reliability and maximum cost-effectiveness. Concerning wildfire

mitigation, Montgomery County has mapped the areas of wildfire risk and collaborates with the Virginia DOF and the national forest service to do firefighter training and outreach.

Montgomery County is actively pursuing several mitigation projects currently, including the development of documents to promote underground pipeline safety, and obtaining additional IFLOWs gauges. These are included in the table below. Hazards and corresponding goals have been detailed in the Environmental Resources section of the 2025 comprehensive plan. In addition to floodplain data, the County has utilized its GIS system capabilities by adding additional layers to identify Claytor Lake inundation zones, wildfire risks, karst areas, shrink-swell soils and underground gas pipeline locations.

6.3.3 Mitigation Opportunities

Montgomery County has identified several mitigation opportunities. Cost-effective projects are listed in the table below. These projects would only be possible with federal and/or state funding assistance.

Table 6-7. Montgomery County Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Property acquisition in flood-prone areas	Flooding	High
Equalization basin	Flooding	High
Predevelopment database	Flooding, Geologic, Wildfire, Drought	High
Develop and promote pipeline safety	Human-caused	High
Additional IFLOWs gauges	Flooding	Medium
Expand current karst mapping	Geologic	Low
Residential acquisition (landslide) on Elliot Creek	Flooding, Geologic	Low
Acquisition of Plum Creek area businesses	Flooding	Low
Streambed/streambank restoration	Flooding, Drought	Low
Utilize zoning ordinances to further restrict undeveloped floodplains	Flooding	Medium
Encourage standards above NFIP standards when considering floodplain development	Flooding	Medium

6.4 Town of Blacksburg

6.4.1 Hazards and Risks

The Town of Blacksburg’s principal natural hazard is recurrent flooding along Stroubles Creek. Blacksburg also has some risks associated with wildfire, drought and earthquakes that can be mitigated.

6.4.2 Mitigation

The Town of Blacksburg participates and is in good standing with the NFIP. The town zoning ordinance consists of the Floodplain Overlay and Creek Valley Overlay districts to regulate uses, activities, and development in flood prone areas defined by FEMA and the Town of Blacksburg. The Town Floodplain Management Program meets and or exceeds the minimum standards set

forth by the NFIP and employs Certified Floodplain Managers (CFM) to manage the program. The Floodplain Overlay section of the zoning ordinance was updated to reflect new FEMA maps and regulations in 2009. The Town does utilize both a subdivision and zoning ordinance based on the town comprehensive plan to guide growth and development. The most recent comprehensive plan was approved by the Town Council in 2006. Additionally, the Town of Blacksburg does have an open space plan that guides acquisition and development of open spaces and parks around the town.

Emergency Operation Plans are in place in the Police Department, Fire Department, Rescue Squad, and the Public Works Department. Plans covering various situations are in place in the Engineering Department, Finance Department, and the Technology Department. There is also a draft Emergency Management Plan that the Emergency Preparedness Committee has reviewed.

In the event of a significant emergency the Virginia Department of Emergency Management (VDEM) coordinates assistance through Montgomery County who in turn assists the Town. Depending on the type of emergency the Town Manager may designate the Police Chief, Fire Chief, Rescue Chief, or another Department Director as the lead individual depending on the specifics of the situation.

In the next year the Emergency Preparedness Committee will finalize the Emergency Management Plan and review it with all Town Departments.

6.4.3 Mitigation Opportunities

The Town of Blacksburg has identified several mitigation opportunities. Cost-effective projects are listed in the table below. These projects would only be possible with federal and/or state funding assistance.

Table 6-8. Town of Blacksburg Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Series of stormwater detention ponds	Flooding	High
Hazard related GIS layers	All natural and human-caused	High
New rescue station	All natural and human-caused	High
Development of water supply plan which includes a drought ordinance	Drought	High
Implement remote monitoring system for utility operation	All natural and human-caused	Medium
Provision of back-up power for critical infrastructures	All natural and human-caused	Medium
Increase fireflow for Town's High System	All natural and human-caused	Medium
Emergency water interconnection between High System and Low System	All natural and human-caused	Medium
Provision of backup power at critical intersections	All natural and human-caused	Medium
Creation of development guidelines for wildfire prevention	Wildfire	Low
Undergrounding utilities	Wildfire, wind, winter weather	Low

Monitor and update applicable ordinances as needed to reflect any change in NFIP standards	Flooding	Medium
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6.5 Town of Christiansburg

6.5.1 Hazards and Risks

The Town of Christiansburg’s principal natural hazard is recurring flooding, including in areas which are not shown as flood hazard areas on the FIRMs. Christiansburg also has some risks associated with drought and earthquakes that can be mitigated.

6.5.2 Mitigation

The Town of Christiansburg participates in the NFIP, regulating future floodplain development and offering residents the opportunity to purchase flood insurance. Christiansburg has participated in flood mapping updates for the area. Those maps have been updated and are being used. The Town’s emergency personnel participate in a regional swift water rescue team.

As the Town has not updated its Comprehensive Plan since the Hazard Mitigation Plan was adopted in 2005, it has not been directly incorporated into planning mechanisms. However, the town does include regulations beyond FEMA and NFIP minimums in their zoning ordinance and addresses floodplains in its comprehensive plan descriptively under the natural environment chapter and again in the goals, strategies, and objectives of the comprehensive plan.

6.5.3 Mitigation Opportunities

The Town of Christiansburg has identified several mitigation opportunities. Cost-effective projects are listed in the table below. These projects would only be possible with federal and/or state funding assistance.

Table 6-9. Town of Christiansburg Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Home acquisition	Flooding	Low
Undergrounding utility lines	Wildfire, wind, winter weather	Low
Monitor and update the Town’s zoning ordinance as needed to reflect any change in NFIP standards	Flooding	Medium

6.6 Pulaski County

6.6.1 Hazards and Risks

Pulaski County’s principal natural hazard is recurring flooding, largely near the Town of Pulaski (which will be discussed separately) and along streams like Big Reed Island Creek. The county also has some risks associated with drought and wildfire that can be mitigated. Specifically, agricultural interests have proven quite vulnerable to drought. Similarly, large, steep, wooded tracts with limited access, like Camp Powhatan, pose significant wildfire risks. The county is also prone to sinkholes and landslides, and has slight earthquake risks.

6.6.2 Mitigation

Pulaski County participates in the NFIP (NFIP), regulating future floodplain development and offering residents the opportunity to purchase flood insurance. The Town of Dublin does not participate in NFIP. The county also benefits from the IFLOWs, a system of rain and stream gauges operated by the NWS. Pulaski County also continues to work with the Natural Resources Conservation Service to improve streambeds and stream banks in critical areas, such as along Falling Branch and Little Creek.

In terms of drought, Pulaski County continues to participate in the regional water supply planning effort, to help ensure reliability and maximum cost-effectiveness. Pulaski County collaborates with the Virginia Department of Forestry and the national forest service to do firefighter training and outreach to mitigate some wildfire impacts. Additionally, the County is working with VDOF to develop a county-wide community wildfire plan for numerous communities throughout the County.

6.6.3 Mitigation Opportunities

Pulaski County has identified several mitigation opportunities. Cost-effective projects are listed in the table below. These projects would only be possible with federal and/or state funding assistance.

Table 6-10. Pulaski County Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Relocate ECC/Sheriff's Office	All natural and human-caused	High
Elevating homes	Flooding	High
Upgraded rescue and utility communication equipment	All natural and human-caused	High
Wildfire Mitigation -- Creating Defensible Space for High Risk Communities	Wildfire	Medium
Dredging of upper Claytor Lake	Flooding	Low
Monitor and update applicable ordinances as needed to reflect any change in NFIP standards	Flooding	Medium

6.7 Town of Pulaski

6.7.1 Hazards and Risks

The Town of Pulaski's principal natural hazard is recurrent flooding in the downtown, along Dora Highway, and in Kersey's Bottom. According to the Army Corps of Engineers, the town has suffered at least eleven 100-year floods and one 500-year flood in the past 90 years or so. At least 200 structures are affected by flooding in the town.

6.7.2 Mitigation

The Town of Pulaski participates in the NFIP (NFIP), regulating future floodplain development and offering residents the opportunity to purchase flood insurance. Moreover, the Town has set up a special committee, composed of private citizens, Town staff and elected officials, which

drafted a Flood Mitigation Plan. The Town is also pursuing the Community Rating System to reduce flood insurance premiums in Town. The town also benefits from the IFLOWs of rain and stream gauges operated by the NWS.

In terms of drought, the Town of Pulaski is participating in the regional water supply planning effort, to help ensure reliability and maximum cost-effectiveness.

6.7.3 Mitigation Opportunities

The Town of Pulaski has identified several mitigation opportunities. Cost-effective projects are listed in the table below. These projects would only be possible with federal and/or state funding assistance.

Table 6-11. Town of Pulaski Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Channel dredging, straightening	Flooding	High
Replace or rehabilitate railroad bridge (acting as dam)	Flooding	High
Acquisition of other Repetitive Loss properties	Flooding	High
Flood education/ outreach	Flooding	Medium
Monitor and update applicable ordinances as needed to reflect any change in NFIP standards	Flooding	Medium

6.8 City of Radford

6.8.1 Hazards and Risks

The City of Radford’s principal natural hazard is flooding along the New River and Connelly’s Run. The city also has some vulnerability to drought and wildfire, particularly the abandoned railroad tie-pile in the western portion of the city.

6.8.2 Mitigation

Fortunately, the City owns most of the floodplain along the New River and has turned much of it into public park space. This limits the amount of private property that could be damaged from floods. The City also adheres to the Radford Riverfront Plan, which emphasizes ecological protection, public access and limited commercial development. The City participates in the NFIP and recently updated their floodplain ordinance, FIRMs and GIS data in cooperation with FEMA. This assists in regulating future floodplain development and the GIS provides citizens with the opportunity to visualize the flood hazards so that they can be more informed about purchasing flood insurance or of their risks. The City’s emergency personnel are also participating in the formation of a regional swift water rescue team. The GIS department and engineering department have also made improvements to the City’s storm drainage basin maps which helps analyze runoff and flash floods.

In terms of drought, the City is participating in the regional water supply planning effort, to help ensure reliability and maximum cost-effectiveness. There are ongoing improvements to the water distribution system to make it as efficient as possible.

Code Red, a reverse E-911 and emergency notification systems, was also implemented to improve the City's response in the event of an emergency.

Negotiations are underway for removal of the railroad tie-pile; removal is expected to begin in 2011.

6.8.3 Mitigation Opportunities

The City has identified several mitigation opportunities. Cost-effective projects are listed in the table below. These projects would only be possible with federal and/or state funding assistance.

Table 6-12. City of Radford Hazard Mitigation Opportunities

Project	Hazard(s) Mitigated	Priority
Tie-pile removal along New River	Flooding, Wildfire	High
Intermediate Water System Improvement Project	Flooding, Drought	High
Improvements to Impervious Surface Maps	Flooding	Medium
Storm Drainage Basin Map Improvements	Flooding	Medium
Little River Dam Improvements	Flooding	Medium
Regional stormwater detention project: Connelly's Run	Flooding	Low
Mutual aid agreements for emergency response	All natural and human-caused hazards	Low
Monitor and update applicable ordinances as needed to reflect any change in NFIP standards	Flooding	Medium