Stream Health Initiative (Phase II)

Table 1. Strategies for Further Consideration

Strategies listed here were identified by the Stakeholder Work Group and have potential for further consideration as they have been determined to i) have a high impact on improving stream health; ii) be generally supported by the community representatives that participated in the Stream Health Initiative; and/or iii) have a high likelihood of success, with appropriate staffing and resources. Further study of the staffing and resource needs for each strategy is required. Descriptions here provide a general categorization of these needs.

Many of the strategies described align with the strategies, actions, goals, and recommendations in the Climate Action Plan (CAP) and Biodiversity Action Plan (BAP). These items are cross-referenced in the Analysis & Discussion section for each strategy.

Section I - New or Revised Regulations						
Strategy		**Analysis & Discussion**	**Expected Staffing & Resource Needs**			**Next Step**
			Implementation	**Administration/ Enforcement**	**Funding**	
A	Reestablish county-wide requirements for perpetual retention and management of 100’ stream buffers, with exemptions for agriculture, forestry, and other limited land uses.	Perpetual retention and management of 100' stream buffers was required prior to the 2014 update to the WPO. Implementation of this strategy may include: i) review of existing provisions to ensure exemptions and allowances for uses within stream buffers are narrowly-tailored and well-defined; ii) creation of an overlay district, iii) updates to the Zoning and Water Protection Ordinances; and iv) development of clear standard operating procedures and guidance for enforcement. This work could align with planned and upcoming updates to the Zoning Ordinance. *Alignment: CAP L.1.7, L.1.13; BAP 1.4, 14.1, 16.1*	*	*		Initiate Proposal Development
B	Develop restoration requirements and guidelines for: i) when agricultural or forestal land is converted to residential use; and ii) for mitigation when violations of the Water Protection Ordinance occur.	Current requirement for conversion is to allow natural revegetation to occur within 100’ stream buffer. Implementation to strengthen this requirement may include: i) requiring revegetation of 100' stream buffers with native species; ii) requiring installation of stream buffer signs to delineate restoration areas and a bond to be posted until restoration is complete; iii) Requiring any existing roads within a stream buffer to be removed or relocated; v) requiring revegetation of 100' buffers around ponds and implementation of Army Corps of Engineers (ACOE) mitigation requirements. For violations, strengthening existing mitigation and restoration requirements is recommended. Implementation may include requiring revegetation of 100' stream buffers with native vegetation and development of other restoration guidelines. *Alignment: CAP L.1.7, L.1.13; BAP 1.4, 14.1, 16.1*	*	*		Initiate Proposal Development

Section I - New or Revised Regulations						
Strategy		**Analysis & Discussion**	**Expected Staffing & Resource Needs**			**Next Step**
			Implementation	**Administration/ Enforcement**	**Funding**	
C	Amend the Zoning Ordinance to clarify that environmental restoration projects, specifically stream mitigation and nutrient banks, are permitted by-right throughout the County, subject to consistent regulations for their review and approval.	Environmental restoration projects are not currently permitted by the Zoning Ordinance, except when located within the Flood Hazard Overlay District. Implementation may include i) adopting a ZTA to clarify §30.3.11, which describes and permits 'environmental restoration projects' by-right within the Flood Hazard Overlay District, but does not specifically describe stream mitigation and nutrient banks; ii) adopting a ZTA to permit environmental restoration projects, specifically stream mitigation and nutrient banks, as a use permitted by-right in all zoning districts; and iii) developing regulations for their review and approval. This can align with the upcoming updates to the Zoning Ordinance. *Alignment: CAP L.1.7, L.1.13; BAP 17.1*	*			Initiate Proposal Development
D	Review existing policies and regulations to identify opportunities for better alignment with the Chesapeake Bay Preservation Act (CBPA).	Albemarle County was one of the first counties to voluntarily adopt provisions of the CBPA into its ordinances. Full adoption of the CBPA, including complete alignment with the CBPA Designation and Management Regulations (see VA Code §9VAC25-830) for Resource Protection Areas and Resource Management Areas, has been proposed and evaluated. Full adoption of the CBPA regulations would include restrictions on agricultural land use that are strongly opposed by the stakeholder representatives that participated in the Stream Health Work Group. However, in review of these regulations, staff believe there may be opportunities to update sections of our ordinances to better align with the CBPA. *Alignment: CAP L.1.7, L.1.13; BAP 14.1*	*			Assess Opportunities

Section II - Incentives and Voluntary Opportunities						
Strategy		**Analysis & Discussion**	**Expected Staffing & Resource Needs**			**Next Step**
			Implementation	**Administration/ Enforcement**	**Funding**	
A	Establish a riparian buffer easement program focused on protecting water quality through: i) new riparian buffer easements in high priority areas; and ii) by strengthening existing whole-property easements with additional provisions to protect stream health.	Current programs do not consistently require permanent protection of riparian buffers and are largely opportunistic. A new program focused specifically on riparian buffers and water quality in high priority areas could provide an opportunity to protect buffers on properties that are otherwise exempt from regulatory requirements, and/or have had investments made in buffer restoration through cost-share programs. Implementation may include: i) encouraging donation of riparian buffer easements to the County, particularly for properties where a whole property easement is not viable; ii) establishing a grant program to incentivize riparian buffer easements, prioritizing geographic areas that help protect the public water supply, improve water quality, and/or provide important benefits for conservation and connectivity; iii) working with TJSWCD and other partner organizations to encourage and incentivize permanent protection of riparian buffers established through cost-share programs; iv) conducting a review of stream buffer provisions in existing conservation easements held by ACEA and Albemarle County; and v) encouraging amendment of existing easements, either through donation or by providing an incentive, to include additional provisions for stream protection such as expanded buffer widths, intermittent stream buffers, livestock exclusion, and other BMPs. *Alignment: CAP L.1.1, L.1.7, L.1.13, L.2.3; BAP 1.1, 1.2, 1.4, 2.1, 2.3, 5.1, 5.2, 5.3*	*	*	*	Initiate Proposal Development
B	Establish a Conservation Easement Assistance Program to help landowners with the transactional costs of placing land under conservation easement.	Transactional costs are a major barrier for many landowners. Loudoun County has a program that could serve as a model. Implementation may include: i) establishing ranking criteria to prioritize geographic areas that help protect the public water supply, improve water quality, and/or provide important benefits for conservation and connectivity; and determining acceptance requirements, which may include additional provisions for protecting stream health, such as such as expanded buffer widths, intermittent stream buffers, livestock exclusion, and other BMPs. *Alignment: CAP L.1.1, L.1.7, L.1.13, L.2.3; BAP 1.1, 1.2, 1.4, 2.1, 5.1, 5.2, 5.3*	*	*	*	Initiate Proposal Development
C	Create a Stream Health Improvement Fund that offers assistance to landowners engaged in conservation or cost-share programs, and to support specific restoration projects that benefit stream health.	This strategy could provide a flexible framework to support a variety of projects, based on a scoring and ranking criteria designed to prioritize those that maximize benefits to stream health. The fund could be paid into when mitigation for development projects is not possible. Eligible projects may include A and B above, as well as i) providing assistance to help landowners reach 100% cost share when enrolling in agricultural or residential programs that implement BMPs; ii) filling gaps in existing cost-share programs; and supporting stream restoration projects. *Alignment: CAP L.1.1, L.1.7, L.1.13, L.2.3, L.3.1; BAP 1.1, 1.2, 1.3 1.4, 2.1, 5.1, 5.2, 5.3*	*	*	*	Assess Opportunities

Section II - Incentives and Voluntary Opportunities						
Strategy		**Analysis & Discussion**	**Expected Staffing & Resource Needs**			**Next Step**
			Implementation	**Administration/ Enforcement**	**Funding**	
D	Support existing cost-share programs that promote best management practices that improve stream health.	Voluntary programs that provide financial incentives are strongly supported by the agricultural community. Implementation may include: i) supporting TJSWCD's re-enrollment efforts where contracts are nearing expiration; ii) exploring gaps in existing programs and considering how to fill them; and iii) maintaining and increasing support to the TJSWCD for the Albemarle Conservation Assistance Program (ACAP). *Alignment: CAP L.1.7, L.1.13, L.2.1, L.2.3, L.3.1, L.5.5; BAP 1.1, 1.2, 1.3 1.4, 14.2, 14.3*	*	*	*	Assess Opportunities
E	Explore options to encourage on-site treatment of stormwater and minimization of impervious surfaces by providing an incentive for low-impact development (LID) practices.	Low-impact development (LID) practices are focused on managing stormwater as close to the source as possible. Implementation may include i) providing an incentive for subdivisions, new development, or redevelopment to install LID practices; and/or ii) providing a grant to existing HOAs for redesign of common areas to include implementation of LID practices. *Alignment: CAP L.1.7, L.1.13, L.2.1, L.2.6; BAP 16.4*	*	*	*	Assess Opportunities

Section III - Monitoring, Education, & Partnerships						
Strategy		**Analysis & Discussion**	**Expected Staffing & Resource Needs**			**Next Step**
			Implementation	**Administration/ Enforcement**	**Funding**	
A	Develop a county-wide water quality testing program for landowners that could also serve as a screening tool to help identify waterways that would benefit from long-term monitoring or stream health improvement projects.	There is broad community interest and support for increasing our knowledge of the status of the County's waterways. A water quality testing program could help identify sources of water quality impairments, in order to strategically target conservation and restoration efforts to maximize benefits for stream health and effectively direct limited resources. The Rivanna Conservation Alliance (RCA) water monitoring program currently provides high quality and long-term stream health data within the Rivanna River watershed, and RCA has indicated a willingness to develop and implement this new program throughout the County. County staff and RCA have also received numerous requests from the public for site specific assessments of waterways on their properties; this program could address that need while simultaneously contributing to community education goals and providing a wider sample of water quality data throughout the County. The wider sample could provide an added benefit of identifying new long-term monitoring and reference sites. *Alignment: CAP L.2.3*	*	*	*	Initiate Proposal Development
B	Assist with community engagement to help recruit new volunteers to support RCA's water monitoring program.	Increasing public involvement in RCA's water monitoring efforts is strongly supported by community stakeholders. This approach is not only cost-effective, but also contributes to community education goals. *Alignment: CAP L.2.3*	*			Initiate Proposal Development
C	Review and update stream health resources on the County's website.	The need to provide up to date educational resources, direct landowners to existing programs and opportunities, and to provide clarity on policies and regulations, was emphasized through community engagement. *Alignment: CAP L.1.3, L.1.6, L.2.3, L.3.1; BAP 1.6, 1.7, 3.4, 14.2, 14.3, 15.1, 20.2*	*			Initiate Proposal Development
D	Expand and formalize a new landowner education project.	The Natural Heritage Committee (NHC) is piloting a program that involves sending an information packet to new landowners informing them of cost share, stewardship, and conservation programs, particularly in high priority conservation areas. Rivanna Water and Sewer Authority (RWSA) also recently received a grant from VDH to send out mailings in targeted watersheds to discuss what people can do to improve water quality flowing into the reservoirs. Exploring creative ways to educate the public and increase awareness of opportunities for landowners was identified as a high priority by stakeholders and community members. *Alignment: CAP L.1.3, L.1.6, L.2.3, L.3.1, L.5.6; BAP 1.6, 1.7, 3.2, 3.4, 14.2, 14.3, 15.1, 20.2, 20.4, 20.6*	*	*	*	Initiate Proposal Development

Section III - Monitoring, Education, & Partnerships						
Strategy		**Analysis & Discussion**	**Expected Staffing & Resource Needs**			**Next Step**
			Implementation	Administration/ Enforcement	Funding	
E	Support expansion of education programs for students and a coordinated, watershed-wide approach, especially at the middle school & high school level.	RCA currently provides stream health education programs for students in our region. Implementation of this strategy would likely involve additional support for RCA to expand their efforts and establish a consistent element of the science curriculum, through planning and material development and teacher trainings, and in collaboration with staff from County Schools. The role of local government County staff would primarily be focused on facilitation and support of their efforts. Specifically, development of Meaningful Watershed Educational Experiences (MWEE) programs in 4th, 8th, & 12th grade as outlined in the Chesapeake Bay Agreement has been proposed.	*	*	*	Assess Opportunities
F	Explore grant opportunities to support stream health restoration, conservation, and education projects and programs.	There are many state and federal grant opportunities to help support the restoration, conservation, and education programs described in Section II and III. There are also numerous opportunities for the County to partner with other local organizations in these efforts to support mutual goals. Examples of potential grant opportunities include the James River Water Quality Improvement Program, NFWF Small Watershed Grants, Regional Conservation Partnership Program (RCPP) - NRCS, and the US EPA 319 grant program. *Alignment: CAP L1.1, L.1.6, L.1.13, L.2.3, L.3.1, L.3.2; BAP 1.6, 1.7, 2.1, 3.4, 5.1, 5.2, 5.3, 14.2, 14.3, 20.6*	*			Assess Opportunities
G	Explore ways to work with VDOT to reduce the impacts from public roads.	Implementation may involve developing a program to track 'high-consuming' gravel roads, as well as problematic section of paved roadways, that may be impacting water quality and addressing those impacts through installation of BMPs.	*			Assess Opportunities