

## Hat and Black Creek Community Engagement Meeting

Nelson Memorial Library, Lovingson VA

February 27, 2024

### Agricultural Best Management Practices (BMPs): Prioritization

State and federal agricultural BMP cost share programs are administered by the Thomas Jefferson Soil and Water Conservation District (SWCD) and the Natural Resource Conservation Service (NRCS). Agricultural landowners can receive reimbursement for anywhere from 75% to over 100% of BMP implementation costs. The table below shows practices available through these programs that help to reduce sediment and phosphorus in streams. Input is needed regarding the likelihood of implementation of these practices by producers in the project area.

**Table 1.** Agricultural best management practices to consider for inclusion in the Hat and Black Creek watershed plan. *Priority? 1= High likelihood of implementation; 2 = Moderate likelihood of implementation; 3 = Low likelihood of implementation; 4 = Remove from consideration*

BMP Type	BMP Name	Units	Cost/unit	Cost/lb sediment removed	Cost/lb phosphorus removed	Priority (1-4)
Livestock stream access*	Livestock exclusion with 100 ft buffer	Feet	\$35	\$9.82	\$28,916.23	
	Livestock exclusion with 35-50 ft buffer		\$35	\$26.37	\$83,393.85	
	Livestock exclusion with 10-25 ft buffer		\$29	\$46.95	\$164,314.98	
	Livestock exclusion w/35 ft buffer (no water)		\$10	\$9.32	\$12,997.79	
Pasture	Precision rotational/prescribed grazing	Acres	\$300	\$1.05	\$3,320.22	
	Permanent vegetation on critical areas		\$3,000	\$1.69	\$1,901.97	
	Aforestation of erodible pasture		\$200	\$0.09	\$155.87	
	Nutrient management plan		\$3	NA	\$117.44	
Cropland (Hat Creek only)	Continuous no till	Acres	\$100	\$0.25	NA	
	Cover crops		\$65	\$1.14	NA	
	Permanent vegetation on cropland		\$350	\$0.82	NA	
Hay	Forest buffer	Acres	\$1,000	\$6.63	\$1,229.57	
	Aforestation of hayland		\$1,000	\$16.95	\$2,134.04	
	Nutrient management plan		\$4	NA	\$104.44	

**\* Buffers may be grassed (not grazed by livestock) or forested. What percentage of buffers do you anticipate would be grassed versus forested?**

## Urban/Residential Best Management Practices (BMPs): Prioritization

A similar level of cost share funding is not available for urban and residential BMPs; however, the Thomas Jefferson Soil and Water Conservation District (SWCD) administers an Urban/Residential BMP Cost Share Program (the Virginia Conservation Assistance Program) that provides assistance to homeowners interested in implementing conservation practices. The table below shows practices available through this program in addition to other BMPs that help to reduce sediment and phosphorus in streams. Input is needed regarding the likelihood of implementation of these practices by property owners in the project area.

**Table 2.** Urban/residential best management practices to consider for inclusion in the Hat and Black Creek watershed plan. *Priority? 1= High likelihood of implementation; 2 = Moderate likelihood of implementation; 3 = Low likelihood of implementation; 4 = Remove from consideration*

BMP Type	BMP Name	Units	Cost/unit	Cost/lb sediment removed	Cost/lb phosphorus removed	Priority (1-4)
Turfgrass	Tree planting	Acres	\$1,500	\$38.03	\$9,494.64	
	Wet ponds and wetlands	Acres	\$22,612	\$440.12	\$298,867.12	
	Bioretention filters		\$45,713	\$667.31	\$362,518.47	
	Bioswales	treated	\$36,570	\$533.84	\$290,011.60	
	Vegetated open channels		\$24,380	\$406.74	\$322,235.11	
	Nutrient management plan	Acres	\$3	NA	\$396.52	
Urban/Developed	Tree planting	Acres	\$1,500	\$11.93	\$8.41	
	Bioretention filters (urban)	Acres	\$50,000	\$56.46	\$108.27	
	Bioswales	treated	\$36,570	\$41.29	\$79.19	
	Vegetated open channels	Acres	\$24,380	\$32.53	\$87.98	
	Wet ponds and wetlands	treated	\$22,612	\$34.04	\$92.50	

## Ideas for Pilot Projects

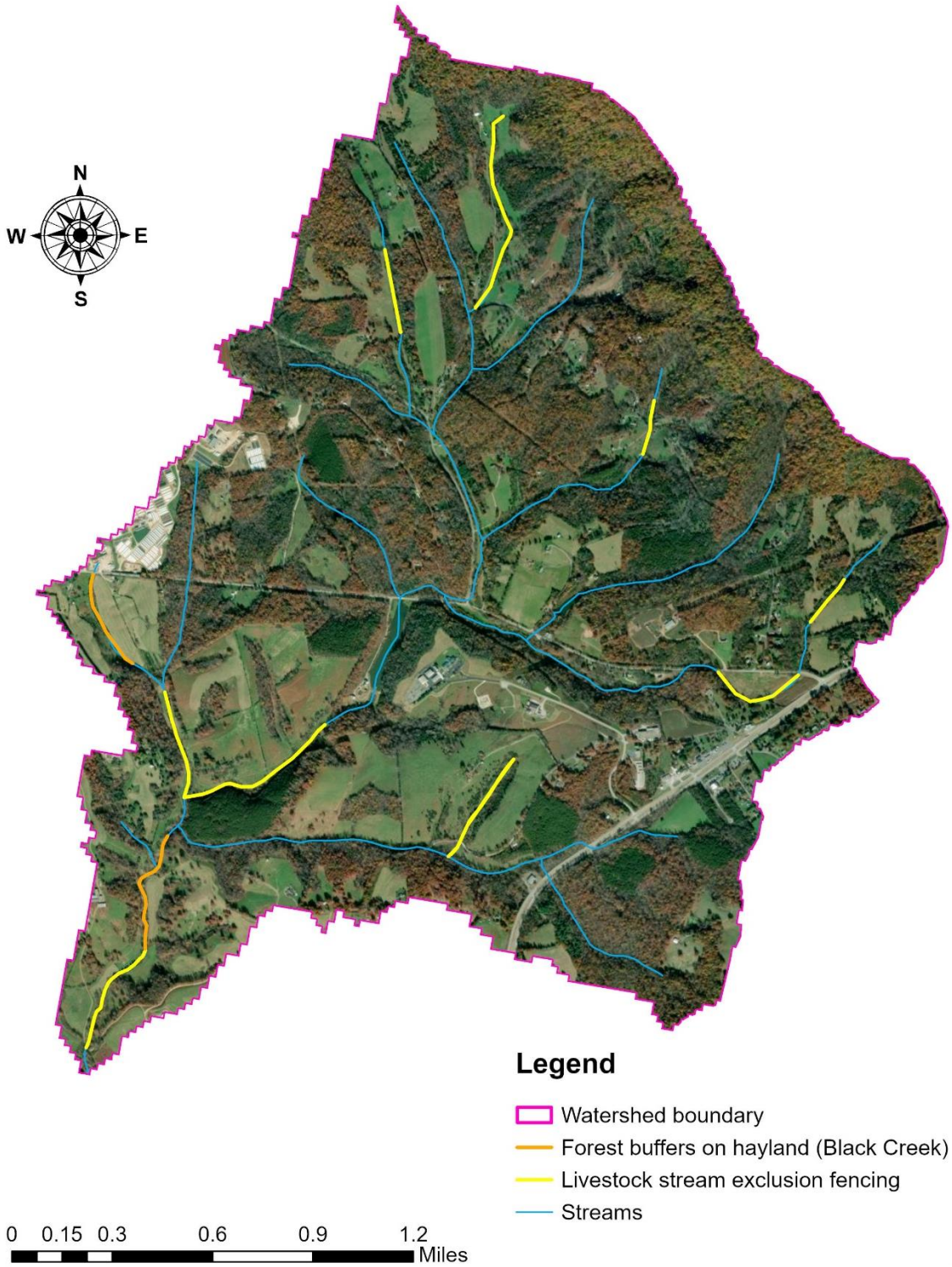
Pilot or demonstration projects may be included in the watershed plan provided they will reduce runoff of sediment and/or phosphorus to the streams. These are typically larger projects with a greater degree of visibility and often include an outreach component. While projects may not be eligible to receive funding through traditional BMP cost share programs, there are competitive grant programs that may assist with funding.

***Is there a pilot project that you would like to see included in the plan?***

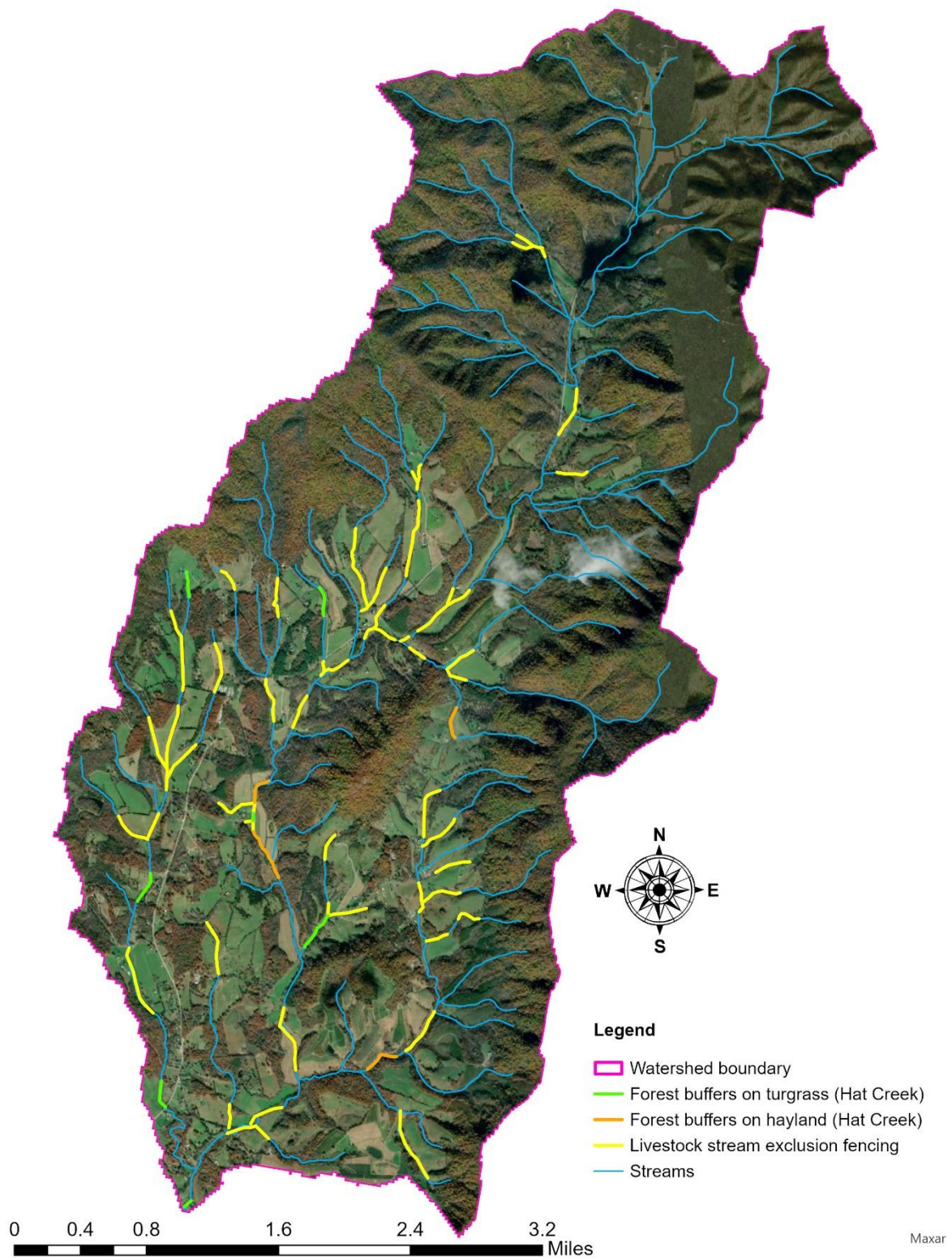
***Are there practices that are not included above that you would like to see in the plan?***

## Targeting and Identification of Priority Areas for Implementation

Opportunities for livestock stream exclusion fencing and streamside buffer plantings have been identified for both Hat and Black Creek based on aerial imagery (Figure 1 and Figure 2). While the intent of the watershed plan is not to identify particular property owners, priority areas can be identified for implementation. These could be based on known areas of extensive streambank erosion, landslide and debris flow path mapping conducted in the watersheds, or other current or historic information.



**Figure 1.** Opportunities for streamside buffer plantings and livestock stream exclusion fencing in the Black Creek watershed.



**Figure 2.** Opportunities for streamside buffer plantings and livestock stream exclusion fencing in the Hat Creek watershed.

## Next Steps

An implementation scenario will be developed for each watershed based on the feedback provided on BMPs at the meeting today. This scenario will meet the sediment and phosphorus reductions called for in the watershed study (Table 3). In addition, an interim scenario will be developed for sediment in Hat Creek and sediment and phosphorus in Black Creek. At the next meeting, the group will review both scenarios, provide feedback and assist in the development of an implementation timeline. In addition, the group will review estimated costs and discuss education and outreach strategies.

**Table 3.** Selected sediment and phosphorus reduction scenarios for the Hat and Black Creek watersheds.

Source	Sediment Reduction Scenario		Phosphorus Reduction Scenario
	Black Creek	Hat Creek	Black Creek
	Reduction (%)	Reduction (%)	Reduction (%)
Cropland	-	4	-
Hay	23	4	49
Pasture	23	4	49
Vineyard	-	4	-
Forest	-	-	-
Trees	-	-	-
Shrub	-	-	-
Harvested	-	-	-
Wetland	-	-	-
Gravel	5	1	49
Turfgrass	5	1	49
Developed Pervious	5	1	49
Developed Impervious	5	1	49
Streambank Erosion	23	4	49
VPDES Individual Permit	-	-	54
Domestic Sewage General Permit	-	-	-
<b>Total Reduction</b>	<b>12%</b>	<b>2.4%</b>	<b>45%</b>

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