

Appendices

Appendix 1. §319 projects and AgE BMPs

Basin	BMP	Amount	Unit	Date
Little Sandy Creek	AMD treatment system	1	Syst	Sep-20
Little Sandy Creek	Anoxic limestone drain	1,406	Sqft	Nov-20
Little Sandy Creek	Catch basin	435	Sqft	Nov-20
Little Sandy Creek	Constructed wetland	2,363	Sqft	Nov-20
Little Sandy Creek	Limestone leachbed	2,194	Sqft	Nov-20
Little Sandy Creek	Limestone leachbed	3,544	Sqft	Nov-20
Little Sandy Creek	AMD treatment system	1	Syst	Nov-20
Browns Creek-Coal River	Onsite wastewater system	5	IU	Nov-20
Browns Creek-Coal River	Onsite wastewater system	1	IU	Apr-20
Upper Indian Creek	Onsite wastewater system	1	IU	Sep-20
Burnside Branch	Fence	2,594	Ft	Sep-20
Burnside Branch	Fence	10,653	Ft	Sep-20
Hughes Creek-Kanawha River	Natural stream restoration	400	Ft	Jul-20
Lower Second Creek	Fence	2,187	ft	Sep-20
Lower Second Creek	Fence	33,889	ft	Sep-20
Mill Creek-Meadow River	Streambank protection	120	ft	Sep-20
Tenmile Creek	AMD treatment system	1	IU	Sep-20
Tenmile Creek	Limestone channel	550	Sqft	Sep-21
Tenmile Creek	Catch basin	4,000	Sqft	Sep-20
Statewide (WVCA)	Outreach	19,943	IU	Sep-20
Elks Run (WV Rivers)	Outreach	1,772	IU	Sep-20
Statewide (WVDEP)	Outreach	1,322	IU	Sep-20
Tilhance Creek	Conservation easements	62	Ac	Sep-20
Warm Springs Hollow	Conservation easements	34	Ac	Sep-20
Elks Run	Onsite wastewater pumpout	22	IU	Sep-20
Statewide	Nutrient management	4,298	Ac	Nov-20
Elks Run	Outreach	1,952	IU	Jun-20
Tuscarora Creek	Outreach	164	IU	Jun-20
WVDEP Statewide	Outreach	4,037	IU	Dec-20
WVCA Statewide	Outreach	19,923	IU	Dec-20
WIB calendar	Outreach	2,710	IU	Dec-20

BMP totals	Amount	Unit	Legend
AMD treatment systems	3	Syst	Syst - systems
Anoxic limestone drain	1,406	Sqft	Sqft - square feet
Limestone leachbed	6,330	Sqft	Ft - feet
Limestone channel	550	Sqft	Ac - acres
Catch basin	4,435	Sqft	IU - individual units
Constructed wetland	2,363	Sqft	
Fence	49,323	Ft	
Nutrient management	4,298	Ac	
Natural channel restoration	400	Ft	
Streambank protection	120	Ft	
Onsite wastewater	29	IU	
Conservation easements	96	Ac	
Outreach	26,076	IU	

Note: WIB calendar is not included in above total.

Appendices

Appendix 2. §319 projects and AgE load reductions

Basin	Pollutant	Reduction	Unit	Date
Little Sandy Creek	Acidity	75,152	Lbs/yr	Nov-20
Little Sandy Creek	Acidity	32,543	Lbs/yr	Nov-20
Tenmile Creek	Acidity	19,191	Lbs/yr	Dec-20
Little Sandy Creek	Metals (Al)	8,846	Lbs/yr	Nov-20
Little Sandy Creek	Metals (Al)	3,385	Lbs/yr	Nov-20
Tenmile Creek	Metals (Al)	2,026	Lbs/yr	Dec-20
Little Sandy Creek	Metals (Fe)	143	Lbs/yr	Nov-20
Little Sandy Creek	Metals (Fe)	521	Lbs/yr	Nov-20
Burnside Branch	Nitrogen	1,826	Lbs/yr	Sep-20
Burnside Branch	Nitrogen	1,325	Lbs/yr	Sep-20
Lower Second Creek	Nitrogen	1,775	Lbs/yr	Sep-20
Browns Creek-Coal River	Pathogens (coliform)	8.20E+10	CFU	Nov-20
Browns Creek-Coal River	Pathogens (coliform)	2.30E+13	CFU	Apr-20
Burnside Branch	Pathogens (coliform)	9.6E+11	CFU	Sep-20
Burnside Branch	Pathogens (coliform)	6.9E+11	CFU	Sep-20
Upper Indian Creek	Pathogens (coliform)	1.64E+10	CFU	Sep-20
Lower Second Creek	Pathogens (coliform)	9.3E+11	CFU	Sep-20
Mill Creek-Meadow River	Pathogens (coliform)	1.74E+09	CFU	Sep-20
Elks Run	Pathogens (coliform)	9.12E+10	CFU	Jun-20
Burnside Branch	Phosphorus	415	Lbs/yr	Sep-20
Burnside Branch	Phosphorus	301	Lbs/yr	Sep-20
Lower Second Creek	Phosphorus	403	Lbs/yr	Sep-20
Hughes Creek-Kanawha River	Sedimentation	30,000	Lbs/yr	Jul-20
Mill Creek-Meadow River	Sedimentation	76,000	Lbs/yr	Sep-20
AgE (statewide)	Nitrogen	287,225	Lbs/yr	Nov-20
AgE (statewide)	Phosphorus	274,911	Lbs/yr	Nov-20

Pollutant	LR	AgE	Totals	Unit	Legend
Acidity	94,343		94,343	Lbs/yr	Lbs/yr (pounds/year) CFU (colony forming units) AgE (Ag Enhancement Program)
Metals (total)	14,921		14,921	Lbs/yr	
Nitrogen	4,926	287,225	292,151	Lbs/yr	
Phosphorus	1,119	274,911	276,030	Lbs/yr	
Pathogens (coliform)	2.58E+13		2.58E+13	CFU	
Sedimentation	106,000		106,000	Lbs/yr	

Appendices

Appendix 3. Project status

Note: The shaded projects have been completed.

Organizations	2016	Available	Requested	Spent	PPS	PPE
	Nonpoint Program	\$643,448				
WV Dept. of Env. Protection	WVDEP Statewide NPS Program		\$295,082	\$295,082		
WV Conservation Agency	WVCA Statewide NPS Program		\$129,314	\$129,314	Aug-16	Dec-20
US Env. Protection Agency	EPA Watershed Plan Tracking		\$10,000	\$10,000		
Friends of the Cheat	NF Greens Run WBP - FY 15 carryover		\$25,516	\$25,463	Aug-16	Sep-19
Friends of the Cheat	Muddy Creek WBP - FY 15 carryover		\$60,484	\$60,484	Aug-16	Sep-20
Friends of Blackwater	Friends of Blackwater monitoring		\$12,986	\$12,406	Sep-16	Jun-18
Friends of Deckers Creek	Clean Creek Program		\$12,000	\$9,086	Sep-16	Jun-18
Friends of the Cheat	State of the watershed		\$15,000	\$14,275	Sep-16	Jun-18
Goodnews Mountaineer Garage	Mtneer Garage rain garden		\$3,000	\$2,906	Sep-16	Dec-17
WV Rivers Coalition	WVRC volunteer monitoring		\$18,000	\$18,000	Sep-15	Sep-17
Friends of Deckers Creek	FODC Kanesh Creek Study		\$13,350	\$7,087	Aug-17	Sep-19
WV Rivers Coalition	Capacity Building for WSAs		\$4,450	\$4,450	Aug-17	Sep-19
WV Rivers Coalition	WVRC-TU monitoring program		\$8,900	\$8,900	Aug-17	Sep-18
WV Conservation Agency	Howards Creek Improvements		\$13,350	\$11,388	Aug-17	Sep-18
Canaan Valley Institute	CVI ALIVE education		\$4,461	\$4,461	Aug-17	Sep-19
City of Charleston	City of Charleston Rain Barrel Kits		\$3,950	\$3,950	Apr-18	Jul-18
WV Conservation Agency	Sleepy Creek septic mini grant		\$21,000	\$21,000	Oct-18	Sep-20
	Watershed Projects	\$1,099,895				
Coal River Group	Browns Creek Phase I		\$8,381	\$8,381	(see below)	
Friends of the Cheat	Beaver Creek AMD		\$181,658	\$181,566	Aug-16	Jun-20
Friends of Deckers Creek	Sandy Run Renovation		\$236,600	\$116,291	Aug-16	Jun-20
Piney Creek Watershed Assoc	Beckley Little League - PCWA		\$54,291	\$54,291	Aug-16	Jun-19
WV Conservation Agency	Second Creek WSA		\$127,600	\$127,600	Aug-16	Sep-18
WV Conservation Agency	Back Creek		\$209,450	\$209,450	Aug-16	Sep-19
WV Water Research Institute	Swamp Run #2		\$183,954	\$99,704	Aug-16	Jun-21
WV Conservation Agency	Browns Creek - thru WVCA		\$94,000	\$94,000	May-17	Dec-19
Totals		\$1,743,343	\$1,746,777	\$1,529,535		
				Balance:	\$213,808	Exp Sep-21
Organizations	2017	Available	Requested	Spent	PPS	PPE
	Nonpoint Program	\$713,531				

Appendices

WV Dept. of Env. Protection	WVDEP Statewide NPS Program		\$327,780	\$327,780		
WV Conservation Agency	WVCA Statewide NPS Program		\$73,653	\$31,736	Oct-16	Sep-20
US Env. Protection Agency	EPA Watershed Plan Tracking		\$10,000	\$10,000		
WV Rivers Coalition	WBP/SWPP integration		\$100,000	\$100,000	Mar-17	Sep-20
Friends of Blackwater	Beaver Creek WBP		\$10,078	\$10,078	Oct-17	Sep-19
WV Rivers Coalition	Building capacity for WSAs		\$5,000	\$5,000	Aug-18	Dec-19
WV Rivers Coalition	WVRC/TU water quality monitoring		\$10,000	\$10,000	Aug-18	Sep-20
Friends of Blackwater	Targeted Analysis of Beaver Creek		\$9,000	6,805	Aug-18	Sep-20
Guardians of the West Fork	Modification of AMD Site 7		\$5,808		Aug-18	Dec-19
WV Water Research Institute	Fisheries in treated AMD trib		\$12,000	\$12,000	Aug-18	Dec-20
Piney Creek Watershed Assoc	Piney Creek monitoring/education		\$4,000	\$4,000	Aug-18	Sep-20
Morris Creek Watershed Assoc	Morris Creek Lavender Patch		\$5,000	\$4,026	Aug-18	Jun-21
Friends of Deckers Creek	Evaluating coliform		\$12,000	\$4,718	Aug-18	Mar-21
Friends of the Cheat	State of the watershed 2018		\$9,000	\$9,000	Aug-18	Sep-20
	Watershed Projects	\$1,145,279				
Plateau Action Network	Summerlee AMD Monitoring		\$23,200	\$9,511	Mar-17	Jun-21
Piney Creek Watershed Assoc	New River Drive Soil Erosion		\$32,500		Mar-17	Jun-21
Morris Creek Watershed Assoc	Morris Creek Stream Restoration		\$72,000	\$71,486	Mar-17	Jun-21
Friends of the Cheat	Muddy Creek Dream Mountain		\$326,800	\$146,278	Sep-17	Jun-21
Friends of Deckers Creek	Hartman Run AMD		\$23,617	\$23,617	Sep-17	Jun-21
Friends of Blackwater	WALD treatment - Phase I		\$149,594	\$116,529	Sep-17	Jun-21
WV Water Research Institute	Cane Fork Treatment - Phase I		\$149,993	\$64,956	Sep-17	Jul-21
WV Conservation Agency	Spring Creek - Phase I		\$180,000		Sep-17	Jul-21
Friends of the Cheat	Beaver Creek AMD addition		\$115,628	\$99,822	Aug-16	Jun-21
WV Water Research Institute	Swamp Run #2		\$29,736		Aug-16	Sep-20
Totals		\$1,858,810	\$1,934,849	\$983,242		
				Balance:	\$875,568	Exp Sep-21
Organizations	2018	Available	Requested	Spent	PPS	PPE
	Nonpoint Program	\$513,417				
WV Dept. of Env. Protection	WVDEP Statewide NPS Program		\$288,949	\$288,949		
WV Conservation Agency	WVCA Statewide NPS Program		\$95,750		Oct-17	Jun-22
US Env. Protection Agency	Watershed Plan Tracking EPA in-kind		\$10,000	\$10,000		

Appendices

Friends of Deckers Creek	Long term O&M for AMD treatment		\$12,000		Aug-19	Sep-21
WV Rivers Coalition	Building Capacity for watershed groups		\$5,000	\$1,053	Aug-19	Sep-21
Experienced Learning	App watershed & stream monitors		\$15,000	\$15,000	Aug-19	Sep-20
Friends of Blackwater	Sand Run Investigation		\$7,500	\$3,258	Aug-19	Sep-21
Piney Creek Watershed Assoc	Piney Ck WSA data loggers		\$8,034	\$7,955	Aug-19	Sep-21
WV Rivers Coalition	WVRC/TU WQ monitoring		\$10,000	\$10,000	Aug-19	Sep-21
WV Rivers Coalition	Source water		\$17,000	\$17,000	Feb-18	Sep-19
Friends of the Cheat	Capacity Expansion		\$12,000	\$9,762	Aug-19	Mar-21
Friends of Deckers Creek	Using GIS to improve services		\$10,000		Aug-19	Sep-21
Save the Tygart	Beaver Creek load refinement		\$2,700		Oct-20	Sep-21
Friends of Blackwater	Outreach/State of the watershed		\$4,000		Oct-20	Sep-21
Experienced Learning	App watershed & stream monitors		\$15,000		Oct-20	Sep-21
	Watershed Projects	\$1,347,125				
Friends of Blackwater	WALD Passive Treatment II		\$134,000		Sep-18	Dec-21
Friends of the Cheat	Beaver Creek McElroy Seep		\$130,000	\$59,889	Sep-18	Sep-21
Friends of Deckers Creek	Dillan Creek Remediation I		\$207,000	\$10,924	Sep-18	Jun-22
WV Water Research Institute	Barlow Portal I		\$212,716	\$17,991	Sep-18	Sep-21
Piney Creek Watershed Assoc	Woodrow Wilson Stream Restoration		\$60,000	\$0	Sep-18	Jun-22
WV Conservation Agency	Upper Indian Creek		\$100,000	\$99,502	Mar-18	Sep-21
WV Conservation Agency	Second Creek IV		\$100,000		Sep-18	Sep-21
WV Conservation Agency	Back Creek Protection		\$216,515	\$12,790	Sep-18	Sep-21
Coal River Group	Browns Creek Phase II		\$186,000	\$58,090	Nov-19	Jun-22
	Totals	\$1,860,542	\$1,902,877	\$594,349		

Balance: \$1,266,193 **Exp** **Sep-22**

Organizations	2019	Available	Requested	Spent	PPS	PPE
	Nonpoint Program	\$624,232				
WV Dept. of Env. Protection	WVDEP Statewide NPS Program		\$340,692	\$340,692		
WV Conservation Agency	WVCA Statewide NPS Program		\$65,000		Jun-19	Jun-23
US Env. Protection Agency	EPA Watershed Plan Tracking		\$10,000	\$10,000		
WV Rivers Coalition	Integrating SW and WBP II		\$80,000	\$6,637	Sep-19	Mar-21
Friends of the Cheat	Monitoring and maintenance		\$14,500		Oct-20	Sep-22
Friends of Deckers Creek	Stream data loggers		\$9,800	\$8,803	Oct-20	Sep-22
Trout Unlimited	Increasing riparian delivery		\$14,000		Oct-20	Sep-22
WV Rivers Coalition	WV Watershed Network		\$10,000		Oct-20	Sep-22
WV Rivers Coalition	WVRC-TU monitoring program		\$10,000		Oct-20	Sep-22

Appendices

Piney Creek Watershed Assoc	Piney Creek SWS planning		\$6,000		Oct-20	Sep-22
	Watershed Projects	\$1,190,064				
Friends of the Cheat	Sovern Tom Clark AMD		\$152,000	\$21,068	Jun-19	Sep-22
Friends of Deckers Creek	Marilla Park Restoration		\$118,121	\$6,513	Jun-19	Jun-22
Friends of Deckers Creek	Slabcamp Run AMD Phase I		\$207,778	\$7,065	Jun-19	Dec-22
WV Water Research Institute	Roaring Creek N. Portal		\$262,195	\$11,105	Jun-19	Dec-22
Piney Creek Watershed Assoc	Crescent Elementary SW		\$90,000		Jun-19	Jun-22
WV Conservation Agency	Burnside Branch Indian Ck		\$121,770	\$56,513	Jun-19	Feb-23
WV Conservation Agency	Mill Creek Meadow River		\$111,200		Jun-19	Dec-22
WV Conservation Agency	Second Creek Karst III		\$127,000	\$7,654	Jun-19	Dec-23
Totals		\$1,814,296	\$1,814,296	\$476,050		

Balance: \$1,338,246 **Exp Sep-23**

Organizations	2020	Available	Requested	Spent	PPS	PPE
	Nonpoint Program	\$626,612				
WV Dept. of Env. Protection	WVDEP Statewide NPS Program		\$468,612	\$361,707		
WV Conservation Agency	WVCA Statewide NPS Program		\$68,000		Jun-19	Jun-23
WV Dept. of Env. Protection	GI in southern WV		\$80,000		TBD	
Save the Tygart	Beaver Creek WBP development		\$10,000		Jul-20	Sep-23
	Watershed Projects	\$1,259,388				
Friends of Blackwater	Beaver Creek Seep 100-02		\$182,211	\$1,266	Jul-20	Sep-23
Friends of the Cheat	Sovern Tom Clark Passive Treatment		\$212,000	\$2,771	Jul-20	Sep-23
Friends of Deckers Creek	Dillan Creek Phase II		\$191,500		Jul-20	Sep-23
WV Water Research Institute	Lambert Site 7 Passive Treatment		\$65,252		Jul-20	Sep-23
WV Conservation Agency	Sleepy Creek VI		\$92,130		Jul-20	Sep-23
Piney Creek Watershed Assoc	Little League Convention Center II		\$97,132		Jul-20	Sep-23
WV Conservation Agency	Anthony Creek Ag BMPs		\$150,000		Jul-20	Sep-23
WV Conservation Agency	Pipestem Creek Ag BMPs		\$117,663		Jul-20	Sep-23
WV Conservation Agency	Cherry Fork Ag BMPs		\$151,500		Jul-20	Sep-23
Totals		\$1,886,000	\$1,886,000	\$365,744		

Balance: \$1,520,256 **Exp Sep-24**

- Exp Grant expiration
- PPS Performance period (Start)
- PPE Performance period (End)

Appendices

Appendix 4. §319 and AgE project HUC list

Elks Run	020700041107
Tuscarora Creek	020700040907
Laurel Fork-North Fork South Branch	020700010101
Red Lick Run-North Fork South Branch	020700010103
Mill Creek-North Fork South Branch	020700010106
Jordan Run-North Fork South Branch	020700010107
East Dry Run-South Branch Potomac	020700010303
Mill Run-South Branch Potomac	020700010308
Johnson Run-Mill Creek	020700010402
Rough Run-South Fork South Branch Potomac	020700010505
Middle Fork Sleepy Creek	020700040202
Outlet Back Creek	020700040409
Hoke Run-Opequon Creek	020700040909
Rattlesnake Run-Potomac River	020700041106
Middle Blackwater River	050200040202

Beaver Creek-Little Sandy Creek	050200040603
Browns Creek-Coal River	050500090608
Burnside Branch	050500020701
Hughes Creek-Kanawha River	050500060306
Lower Second Creek	050500030703
Mill Creek-Meadow River	050500050605
Tenmile Creek-Buckhannon River	050200010304
Upper Indian Creek	050500020703
Left Fork-Sandy Creek	050200010502
Little Laurel Run-Tygart Valley River	050200010701
Teter Creek	050200010704
Hackers Creek-Tygart Valley River	050200010705
Wickwire Run-Tygart Valley River	050200010707
Headwaters Elk Creek	050200020202
Horseshoe Run	050200040501

Appendices

Appendix 5. Partners active in 2020

FY16 projects

WVU Water Research Institute
Buckhannon River Watershed Association
City of Charleston
Coal River Group
Friends of Blackwater
Friends of Deckers Creek
Friends of the Cheat
Local landowners
US Environmental Protection Agency
WV Conservation Agency
WV Rivers Coalition
WVDEP Watershed Improvement Branch

FY18 projects

US Environmental Protection Agency
Berkeley County Farmland Protection Board
Blue Heron Environmental Network
Coal River Group
Experienced Learning
Friends of Blackwater
Friends of Deckers Creek
Friends of the Cheat
Kanawha County Health Department
Local landowners
Save the Tygart Watershed Association
USDA Natural Resource Conservation Service
WV Conservation Agency
WV Rivers Coalition
WVDEP Watershed Improvement Branch

FY20 projects

US Environmental Protection Agency
Greenbrier River Watershed Association
Guardians of the West Fork
Guardians of the West Fork
New River Conservancy
Piney Creek Watershed Association
Save the Tygart Watershed Association
Sleepy Creek Watershed Association
WV Conservation Agency
WVDEP Watershed Improvement Branch
WVU Water Research Institute

FY17 projects

Cabin Creek Watershed Association
Canaan Valley Institute
Elks Run Watershed Group
Friends of Blackwater
Friends of Deckers Creek
Friends of the Cheat
Guardians of the West Fork
Local landowners
Morris Creek Watershed Association
Piney Creek Watershed Association
US Environmental Protection Agency
WV Conservation Agency
WV Rivers Coalition
WVDEP Abandoned Minelands Program
WVDEP Watershed Assessment Branch
WVDEP Watershed Improvement Branch
WVU Water Research Institute

FY19 projects

US Environmental Protection Agency
Friends of Deckers Creek
Friends of the Cheat
Local landowners
Piney Creek Watershed Association
Save the Tygart Watershed Association
Trout Unlimited
WV Conservation Agency
WV Rivers Coalition
WVDEP Watershed Improvement Branch
WVU Water Research Institute

FY21 projects

US Environmental Protection Agency
WVU Water Research Institute
WVDEP Watershed Improvement Branch
WV Conservation Agency
Local landowners
Guardians of the West Fork
Friends of the Cheat
Friends of Deckers Creek
Friends of Blackwater
Elks Run Watershed Group
Canaan Valley Institute

Note: The list above represents the majority of partners for projects that had some level of activity during the past year. In many instances many more organizations and individuals were involved. Diverse partners are critical for project success.

Appendices

Appendix 6. 2021 grant award

<u>Organizations</u>	<u>Nonpoint Funds</u>	<u>\$319</u>	<u>Match</u>	<u>Total</u>	
WV Dept. of Env. Protection	WVDEP NPS Program	\$375,240	\$174,068	\$549,308	
US Env. Protection Agency	EPA Watershed Tracking	\$10,000		\$10,000	
WV Conservation Agency	WVCA NPS Program	\$116,900	\$77,933	\$194,833	
	Total Nonpoint	\$502,140	\$252,001	\$754,141	27%
	<u>Watershed Project Funds</u>				
WV Conservation Agency	Back Creek Phase IV	\$156,000	\$162,824	\$318,824	
WV Conservation Agency	Elks Run Phase III	\$96,800	\$64,780	\$161,580	
WV Conservation Agency	Indian Creek III	\$150,000	\$100,000	\$250,000	
WV Conservation Agency	Mudlick Run	\$110,000	\$73,335	\$183,335	
Canaan Valley Institute	Tuscarora Creek III	\$95,477	\$63,660	\$159,137	
Friends of Blackwater	Beaver Creek passive treatment	\$132,252	\$111,700	\$243,952	
Friends of the Cheat	Sovern Tom Clark III	\$192,500	\$131,500	\$324,000	
Friends of Deckers Creek	Slabcamp OLC-650	\$270,031	\$177,000	\$447,031	
WV Water Research Institute	Lambert Site 2	\$150,000	\$100,000	\$250,000	
	Total Watershed	\$1,353,060	\$984,799	\$2,337,859	73%
	Total \$319 request	\$1,855,200	\$1,236,800	\$3,092,000	