

WIB and §319 partner highlights

This section highlights the activities of WIB staff as well as the WV Conservation Agency. Their contributions are critical to the success of our programs but without participation from a diverse group of partners and individuals' projects cannot move more and be successful. [Appendix 5](#) captures a list of most active partners in 2020.

WV Conservation Agency

Despite a global pandemic the [WV Conservation Agency](#) (WVCA) has been more productive than the past several years. Although there have been challenges managing projects the statewide Agriculture Enhancement (AgE) Program continues to be productive. WVCA staff used the AgE to implement nutrient management plans, grazing plans, alternate water and other BMPs that reduced nutrient loads throughout West Virginia. See [Appendix 1](#) and [Appendix 2](#). WVCA's most significant accomplishment was in the education and outreach arena. WVCA committed staff resources to the various virtual platforms and held a wide variety of events resulting in > 60% increase over last year. The table below provides multiple examples, but there is much more. Contact [Jennifer Skaggs](#) for more details.

Table 3. WVCA 2020 outreach examples.

Starting seeds in baggies. How to start seeds soil less and talk about recycling	Multiple Facebook live classes focusing on conservation methods for Ag, water quality and more	Multiple virtual curriculum design and lessons for many local schools
Soil Tunnel Trailer walk through events	Many tips/hints from Conservation Districts on social media	Urban soil and water conservation video series
EPCD YouTube Channel	Grow This! West Virginia	Paper pots - recycling
Agriculture Innovation Showcase	The hillside gardener	Small farms virtual conference

Divisional fencing examples.



WIB Basin Coordinators

WVDEP-WIB Basin Coordinators (BCs) contribute to the WIB mission by providing technical support and expert knowledge in a wide variety of subjects. They are the local contacts for most WVDEP-WIB programs and their skills are critical for enabling watershed group participation in the §319 process. To help get improvements on the ground, BCs have roles in:

- Fostering and supporting volunteer watershed associations and other organizations.
- Educating citizens on nonpoint pollution issues.
- Identifying local stakeholders and partners.
- Assisting with the development of watershed based plans.
- Facilitating project teams to implement water quality improvement projects.

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[Martin Christ](#) - Northern BC

The Northern (NBC) supported several watershed groups with their projects to decrease nonpoint source pollution projects. *Friends of the Cheat* (FOC) completed their Beaver Creek project, which addresses the largest load of dissolved aluminum and acidity in the Beaver Creek watershed (050200040604). The project is now discharging alkaline water, and only detection-limit concentrations of dissolved aluminum. NBC helped trouble shoot a slow permitting process, helped explain the need for additional resources to funders, participated in meetings with engineers and contractors, and offered advice to FOC.

Buckhannon River Watershed Association (BRWA) completed its Swamp Run #2 project (050200010306), which addresses the largest untreated source of acidity and iron to Swamp Run. NBC facilitated communication between engineers, project managers, BRWA, and the contractor, conducted stream and source monitoring, and helped with permit applications, construction oversight, and invoicing.

Save the Tygart Watershed Association (STTWA) made progress on two nonpoint source projects. For the Barlow project (050200010501), STTWA worked out a plan with partners. The NBC wrote and circulated this plan for discussion, which eventually became the workplan. The NBC also discovered locations where surface water entered the ground, recharging the polluted mine water. STTWA's Roaring Creek project (050200010406) partnered with the landowner to develop plans, secured funding, and moved through the Army Corps and WVDEP's stormwater permits.



GWF/WVWRI experiment on methods to refine AMD treatment.

Guardians of the West Fork (GWF) partnered with the *WV Water Research Institute* (WVWRI) to propose additional §319 projects to restore Lambert Run (050200020602), which currently violates water quality standards (WQS) for total iron. GWF and WVWRI proposed projects on two sources. NBC has revised the WBP and worked with WVWRI on a quality assurance project plan (QAPP) to support project data collection.

Friends of Blackwater (FOB) partnered with WVDEP to treat mine drainage in the North Fork of the Blackwater River (050200040203). NBC assisted with procuring a design engineer and identified some of the sources that must be treated. FOB also started a project on Beaver Creek of the Blackwater River (050200040202).

NBC helped with data collection, site selection, and review for eligibility by WVDEP.

Friends of Deckers Creek (FODC) continued projects on Sandy Run and Dillan Creek (050200030201) as well as Hartman Run (050200030202). NBC assisted with engineer procurement, source identification, conceptual design, and grant management.

The NBC also:

- Reviewed QAPPs.
- Drafted Standard Operating Procedure (SOPs) for reviewing QAPPs.
- Compiled data from some of the projects and uploaded it to WQX-Web.
- Provided mapping for §319 reports.
- Submitted a success story through the GRTS tool.
- Trained teachers about the skills used in the Envirothon Aquatic Science test.

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Jennifer Liddle - Southern BC

New organizations/re-establishing

The Southern (SBC) is helping to revive the *New River Clean Water Alliance* (NRCWA). The only in-person 2020 meeting involved a variety of stakeholders from within the Lower New watershed including watershed groups, National Park Service, regional councils, Beckley Sanitary Board, WVCA, multiple WVDEP sections, local outfitters and concerned citizens. This group is focusing on bacteria and is compiling data to prioritize project areas. To support the efforts, the SBC gathered additional agency partners, assisted with their water quality sampling, coordinated discussions on wastewater treatment options and participated in a video promoting NRCWA. Several virtual meetings have occurred and will continue. Friends of the Tug Fork (FOTF), a new watershed group, has begun the process of applying for their nonprofit status. They also received their first *WV Stream Partners* grant and the SBC will be meet with FOTF virtually to help identify possible 2021 projects.

Nonpoint Source Projects



Piney Creek Watershed Association (PCWA) has multiple §319 projects including: Crescent Elementary, Woodrow Wilson Restoration, Convention Center Phase II and the New River Drive. They are also supported by WIB's *Watershed Pilot Program* (WPP) and have started AGO grant to develop a subwatershed plan for Little Whitestick Creek. Virtual meetings are frequent as the technical advisory board and the monitoring committee keep projects moving forward.

Working closely with Plateau Action Network (PAN), WVDEP's Office of Abandoned Minelands (AML) and Special Reclamation, the SBC has completed 12 months of monitoring for the next phase of Summerlee. The SBC is the point person for

the efforts and facilitates communication between PAN, AML, and Special Reclamation. The data collected will be used to determine the best treatment option moving forward. WVDEP-AML will design, install, and take the lead on managing the current site, and all future projects. Due to Covid the sampling period was extended, as several months were missed. In spring/summer 2021 benthic sampling will be conducted below the project and at five other sites in Wolf Creek watershed.

Outreach

2020 in-person outreach events were canceled after March 13th. We hope that most will be re-scheduled and resume in the fall of 2021. Even though events were cancelled, planning continued and the transition to virtual events was successful. The SBC worked with the Project WET coordinator and the National Park Service to provide an online Water festival curriculum and assisted with a virtual STEM camp. Working with WIB's Basin Coordinators, WV River's Coalition, and others the inaugural virtual *WV Watershed Symposium* occurred in November 2020.

Helping watershed groups during the past year has been a challenge in the coalfields. Several groups have not been meeting since Covid shutdown, they do not have adequate internet or availability to attend virtual

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meetings. One exception is the *Greenbrier River Watershed Association* (GRWA), who continued their monthly meetings as well as select projects. The SBC facilitated board meetings and reorganization for the Mountain Resource and Conservation who offer grants to nonprofits in the coalfields. Another success is Friends of the Second Creek (FOSC) who has been providing quality watershed education to 4H and schools in Monroe County.



Re-used barrels are ready for distribution to participants of the Hampshire County virtual rain barrel webinars in summer 2020.

[Alana Hartman](#) - Potomac BC

WIB's Potomac BC (PBC) facilitated online meetings of the Tuscarora Creek Project Team and hosted online board meetings for the *Friends of The Cacapon River* (FOCR). She was a project liaison for a spring tree planting event in Romney, which was carried out and maintained by the town's public works crew. She co-hosted two virtual rain barrel workshops for Hampshire County residents and helped to distribute the barrels to participants afterward, using physically-distanced procedures. The workshops featured local speakers explaining their efforts to include green infrastructure in plans for the towns.

The PBC spoke to the CB Citizens Advisory Committee in February about West Virginia's participation in the Chesapeake Bay Program, and she presented a virtual poster at the *National Nonpoint Source Conference* on green infrastructure and technical support for communities. She also hosted a *WV stormwater webinar* featuring the former Stormwater Specialist, Sebastian Donner, who shared insights on WVDEP's stormwater guidance manual. The PBC visited several properties, providing technical assistance to managers and landowners on best practices, and available funding for reducing erosion and stormwater pollution. This included private and commercial land along the Cacapon River and Tuscarora Creek, and streets, parking lots and parks in Ranson, Martinsburg and Wardensville. The PBC continued to facilitate meetings of the CB Tributary Team and submits BMP data from multiple sources to the CB Program.

Group photo of student presenters, judges, and organizers of the Wild & Wonderful Water Science Fair.



[Tomi Bergstrom](#) - Western BC

The Western BC (WBC) worked with WVWRI to create a project committee to monitor the water quality changes of liming on Cane Fork. She worked with *Coal River Group* (CRG) to submit their next §319 project for the Browns Creek remediation effort. This project is now in phase II and multiple septic systems have been rehabilitated. Their outreach efforts and successful projects have resulted in a long waiting list of interested landowners within and beyond the project area. The WBC worked with *Morris Creek Watershed Association* (MCWA) lavender field project, analyzing BEHI data to determine how the fields are reducing erosion along streambanks. The *Fourpole Creek Watershed Association* (FCWA) is close to submitting their WBP for review. The WBC has worked with the group to provide feedback,

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create maps, analyze data, and form a project committee.

Before the pandemic, the WBC hosted the *Wild & Wonderful Water Science Fair* inspiring over 300 students to investigate water science - 65 presented at and attended the event. The WBC adapted outreach events to a virtual world. She formed a committee who created and recorded seven water lessons, then she edited and posted the lessons in Schoology for teacher access. More than 30 teachers used the information in their

classroom, reaching an estimated 750 students. Stormwater education and rain barrels workshops were hosted virtually - 80 attendees participated. The WBC is partnered with the City of Charleston to sponsor a FestivALL event as a single-use plastic awareness event, highlighting plastic and stormwater pollution. The WBC also hosted a webinar on wetlands and presented at the *WV Science Teachers Conference* on wetland education. Before her assistant moved to a new position, she completed six rain barrel installations at West Virginia schools, through the *Rain Barrels in School Program*; hosted a webinar on water conservation and created online challenges for World Water Day as well as *World River Day*.



Summer interns were trained on how to collect water quality data along Browns Creek as new septic systems were being installed.

Timothy Craddock - Nonpoint Source Program Coordinator

In addition to his regular grant/program management duties the NPS Coordinator plays a role in watershed outreach, primarily as an advisory and subject matter expert. He frequently provided §319 program and project assistance, helped to organize and presented at multiple nonpoint source and volunteer monitoring webinars. The NPS Coordinator updates and monitors *WIB's calendar of events* which posted 1,200 entries/events on WVDEP websites as well as several agencies and partner sites. We estimate the calendar was viewed more than 1,600 times last year and is getting more and more attention. The NPS Coordinator was a member of the *National Nonpoint Source* virtual conference planning committee and will serve as a moderator for a session on AMD at the National Monitoring Conference in April 2021.

Multiple staffing challenges occurred in 2020. We lost two stormwater specialist positions – their focus was primarily the Chesapeake Bay drainage but there was technical assistance provided in other §319 project areas. We also lost the *WV Save Our Streams* Coordinator; however, that position was filled in February 2021 and we expect good things for the program's future.

WV Watershed Symposium

West Virginia Watershed Network (WVWN) holds an annual Watershed Celebration Day to provide watershed organizations an opportunity to learn, celebrate, and network with their peers. This year, the WVWN moved Watershed Celebration Day online and hosted a *Virtual Watershed Symposium*. The symposium was held Nov 5-6, through video conferencing. Staying true to its Watershed Celebration Day roots, we kicked off by honoring four



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outstanding groups and two individuals for their contributions towards watershed restoration. The symposium also provided presentations and resources for watershed groups to hone their skills and be more effective in their efforts to preserve and protect their watersheds. Event details available at:

<https://wvivers.org/resources/watershed/wcd2020/>

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.