



# Socioeconomic Survey on Cost-Share Programs for Agricultural Conservation Practices in Second Creek, WV

## Background

Second Creek in southeastern West Virginia is a tributary of the Greenbrier River, which has been listed as impaired since 2008 due to high concentrations of fecal coliform bacteria (WVDEP 2016). Bacteria source tracking conducted by the West Virginia Conservation Agency (WVCA) determined that bacteria loads to local streams in the watershed may come in equal thirds from the different livestock management systems used in the county (i.e., grazing, confined livestock, and cropland where manure may be spread). The Second Creek Watershed-Based Plan (WVDEP 2008) concluded that about a third of the bacteria load could be reduced from grazing systems by restricting livestock from streams, developing alternative water sources to prevent loading near streams, and implementing practices to reduce stormwater from pastureland. Other practices could help to further reduce bacteria runoff.

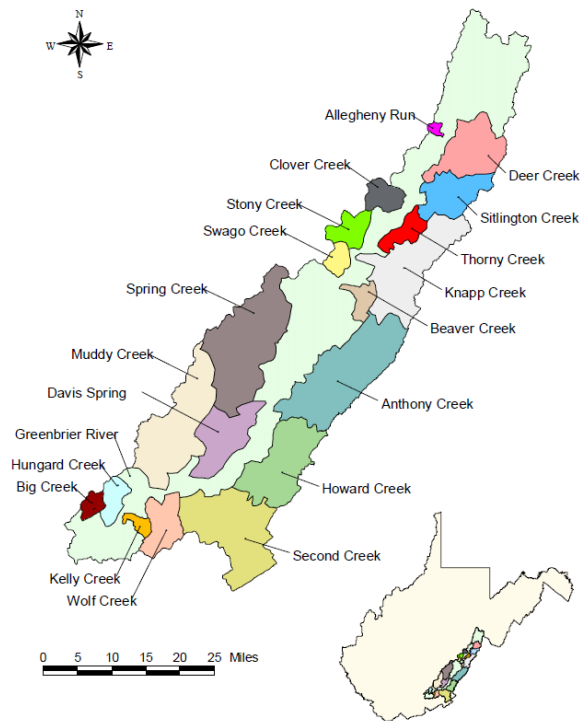
## Installing Practices to Reduce Pollutants

Since 2009, WVCA and U.S. Department of Agriculture (USDA) staff have worked with more than 120 farmers to install practices that reduce runoff of sediment, nutrients, and bacteria from livestock operations, achieving significant load reductions for fecal coliform, sediment, and nutrients. Practices included fencing to restrict stream access, armored stream crossings for livestock, heavy use area protection pads, vegetated riparian buffers, nutrient management plans, and prescribed grazing strategies (WVCA 2021).

## Administering the Survey

In late 2021, local, state, and federal project partners commissioned a survey of 122 farmers who had participated in conservation practice cost-share programs. Since 2009, those programs included [EPA's Section 319 Program](#), [USDA's Environmental Quality Incentives Program \(EQIP\)](#), [USDA's Conservation Reserve Enhancement Program \(CREP\)](#), and [West Virginia's Agricultural Enhancement Program \(AgEP\)](#). The survey gauged farmers' views on the environmental, financial, and other results of installing conservation practices, and sought their suggestions on how to improve the distribution of limited cost-share funding for conservation practices. Specific goals of the survey included determining the following:

- Overall economic impact for farmers within the watershed.
- Average economic impact to individual participating farms within the watershed.



**Location of Second Creek in the Greenbrier River Watershed, West Virginia (WVDEP 2008)**

- Economic impact to businesses throughout the watershed and surrounding areas.
- Overall type and value of the environmental benefits achieved.
- Socioeconomic benefits of nonpoint source pollution control programs, and if these should be factors in selecting priority areas for future funding.
- How to improve agency outreach activities for promoting conservation programs.

## Survey Results

The survey had a 43% return rate! The results provide important insight into increasing participation in conservation cost-share programs statewide. Important takeaways about farm production and water quality improvements included:

- More than 80% noticed improvements on their land and operations linked to adopted conservation practices.
- 80% said the conservation practices adopted by farmers are helping to improve water quality in the watershed.
- Nearly 70% said the conservation practices on their farms have helped to reduce soil erosion and pollutant runoff.
- Greater than 50% of respondents said they noticed the stream is less muddy and clears up faster after heavy rain.
- 78% said conservation practices on their farm have helped to improve production and their financial bottom line.

Respondents estimated that the practices improved the profitability of their operations by 21% on average.

Farmers offered insight into how best to target conservation practice funds, with nearly 70% indicating that funds should be directed to lower-income farms (although only 43% felt that public agencies should limit support to farmers below the [adjusted gross income limit used by USDA](#)). Eighty percent said that funds should be directed to areas with the greatest water quality issues. Farmers also provided their opinion on the best ways to engage farmers to install soil and water practices—the top-ranked response was to focus on potential positive impacts to their individual production level and financial bottom line. When asked to rank the top three reasons why farmers do not install needed conservation practices on their farms, the most selected responses were fear of government involvement in a farmer’s personal business (35/50 respondents), farmers not knowing enough about the program to be interested (29/50 respondents), and fear of regulatory agencies (18/50 respondents). When asked how they would describe their experience to a fellow farmer, over 80% said they would recommend to other farmers that they take the time to participate in a conservation practice program.

In an open-ended question asking farmers about the best ways to convince other farmers to install or adopt conservation practices, responses addressed a variety of themes, including:

- Educate farmers.
- Communicate directly to farmers.
- Share personal success stories with farmers.
- Conduct in-person consultations.
- Explain benefits of conservation practices to the farm and the environment.
- Provide funding/grants for farmers.
- Provide simple and straightforward explanations of what practices are and how funding works.
- Because every farm is different, work directly with farmers to cater to their specific need(s).
- Advertise the program.
- Provide peer mentorship.
- Be prepared to help farmers when asked.

## More Information

West Virginia Conservation Agency  
304-558-2204

Second Creek Watershed Based Plan  
<https://dep.wv.gov/WWE/Programs/nonptsour ce/WBP/Documents/WP/SecondCreekWBP.pdf>

Learn more at: <https://www.wvca.us/NPSP/>

## References

- WVCA (West Virginia Conservation Agency). 2021. Summary of Second Creek Watershed Survey: Soil and Water Conservation Practices. Prepared by Tetra Tech.
- WVDEP (West Virginia Department of Environmental Protection). 2008. [Total Maximum Daily Loads for Streams in the Greenbrier River Watershed, West Virginia](#). Prepared by Tetra Tech.
- WVDEP (West Virginia Department of Environmental Protection). 2016. [2016 West Virginia Integrated Water Quality Monitoring and Assessment Report](#).