Second Creek Socioeconomic Survey

NASCA Field Staff
Sharing Session
October 2022



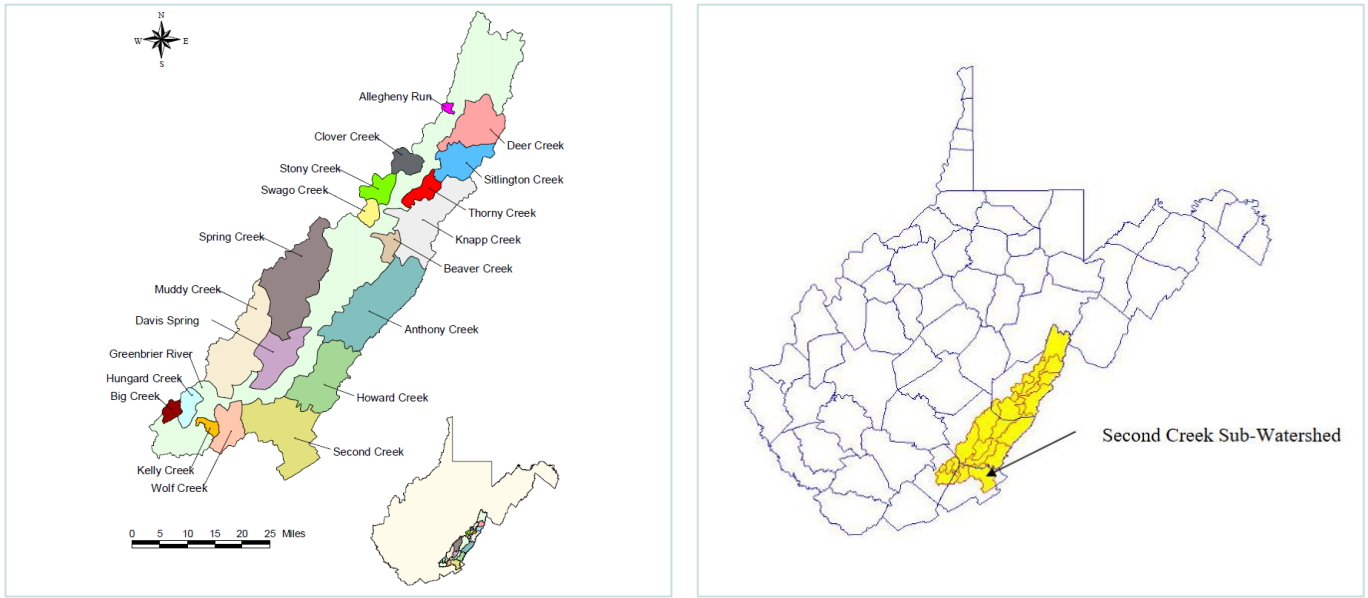
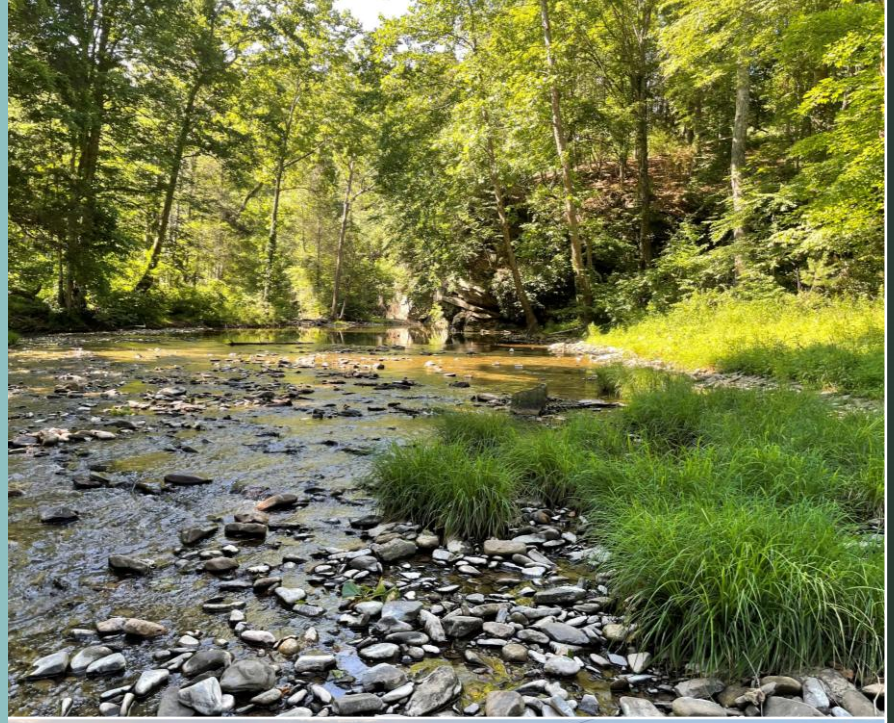


Image: WVDEP 2008

Second Creek Watershed





- Harvested cropland acres: 24,741
- Total number of cattle/calves: 26,000
- Total number of sheep/lambs: 2,500
- Broilers: 2,082
- Goats: 411
- Hogs: 209

- Total acres in the county: 302,561
- Number of farms: 796
- Total acres of farmed land: 144,630
- Average farm size, in acres: 182









https://www.monroecountywv.gov/photogallery/scenic/4

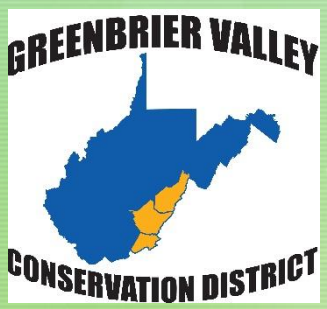
History

- Conservation Programs Available
  - EQIP etc.
  - Agricultural Enhancement Program
  - §319 Program
- The “survey” idea
  - Informal internal discussions initially
  - 2019 EPA tour sparked further discussion and the idea to pursue the grant

This Project Was A Collaborative Effort of the Following Agencies:



West Virginia Conservation Agency













Made possible by a grant from the U.S. EPA

Development

- EPA Task Order
- Multiple meetings via teleconference
- Role of Tetra Tech

Goals

- Overall economic impact for farmers in the watershed
- Average economic impact to individual participating farms in the watershed
- Economic impact to businesses throughout the watershed and surrounding areas
- Overall type and value of the environmental benefits achieved
- Socio-economic benefits of nonpoint source pollution control programs
- Identification of factors to consider in selecting priority areas for future funding
- Approaches for improving agency outreach activities for promoting conservation programs

Survey

122 surveys

53 completed

- 43 mailed
- 5 online submission
- 2 hand delivered
- 3 in-person interviews

43% return rate



Sample of Survey

Rate your level of agreement with each of the following statements:

If a fellow farmer asked me about my experience with conservation practices and programs, I would respond positively and recommend that they take the time to participate.

Strongly Disagree – Slightly Disagree – Neutral – Slightly Agree – Strongly Agree

In my opinion, the conservation practices installed on dozens of farms throughout the Second Creek watershed have helped to improve water quality in Second Creek.

Strongly Disagree – Slightly Disagree – Neutral – Slightly Agree – Strongly Agree

Overall, installing conservation practices on my farm has helped to improve production and the financial bottom line for my operations.

Strongly Disagree – Slightly Disagree – Neutral – Slightly Agree – Strongly Agree

Rank the following options:

The reason I decided to install conservation practices on the land that I farm was because:

____ I was concerned about erosion and declining soil quality on my farm
____ I was concerned about water quality in Second Creek and its tributaries
____ The conservation practices might help to improve my financial bottom line
____ I felt pressure from others to “go along with the group”
____ The financial outlays were affordable because of the cost-share programs

Short answer:

The biggest reason I decided to increase the soil and water conservation practices on my farm is because:

Demographics

Age	• **Older than 70: 41%** • **60-69: 29%**	• **40 to 59: 28%** • **younger than 40: 2%**
Race	• White: 90% • Prefer not to answer: 6%	• American Indian or Alaskan Native: 2% • Other races: 2%
Gender	• Male: 85% • Female: 11% • Prefer not to answer: 4%	
Education	• High school graduate or equivalent: 27% • Bachelor's degree: 25% • Graduate degree: 25%	• Some college but no degree: 10.5% • Associate degree: 10.5% • Prefer not to answer: 2%
Employment	• Retired: 46% • Working 40 or more hours a week: 28% • Working 21-39 hours a week: 4%	• Non-farm self-employed: 14% • Not employed and not looking for work: 6% • Prefer not to answer: 2%
Household Income	• Prefer not to answer: 30% • Over $150,000: 11% • $125,000–$149,999: 6% • $100,000–$124,999: 9%	• $75,000–$99,999: 9% • $50,000–$74,999: 22% • $25,000–$49,999: 9% • $0–$24,999: 4%









Results



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.

Best ways to get other farmers to implement practices:

- Educate farmers.
- Share personal success stories with farmers.
- Conduct in-person consultations.
- Provide funding/grants for farmers.
- Advertise the program.
- Provide peer mentorship.

What farmers had to say:

"Employees may need to go out to the farms and recruit for participants. Or visit places that farmers will be to speak in general conversations."

"Personal outreach and communications."

"Widespread education partnered with peer mentorship."

"Educate and share personal stories."

"Show them what others have done and share their positive experiences. Show them that the benefits go far beyond their bottom line."



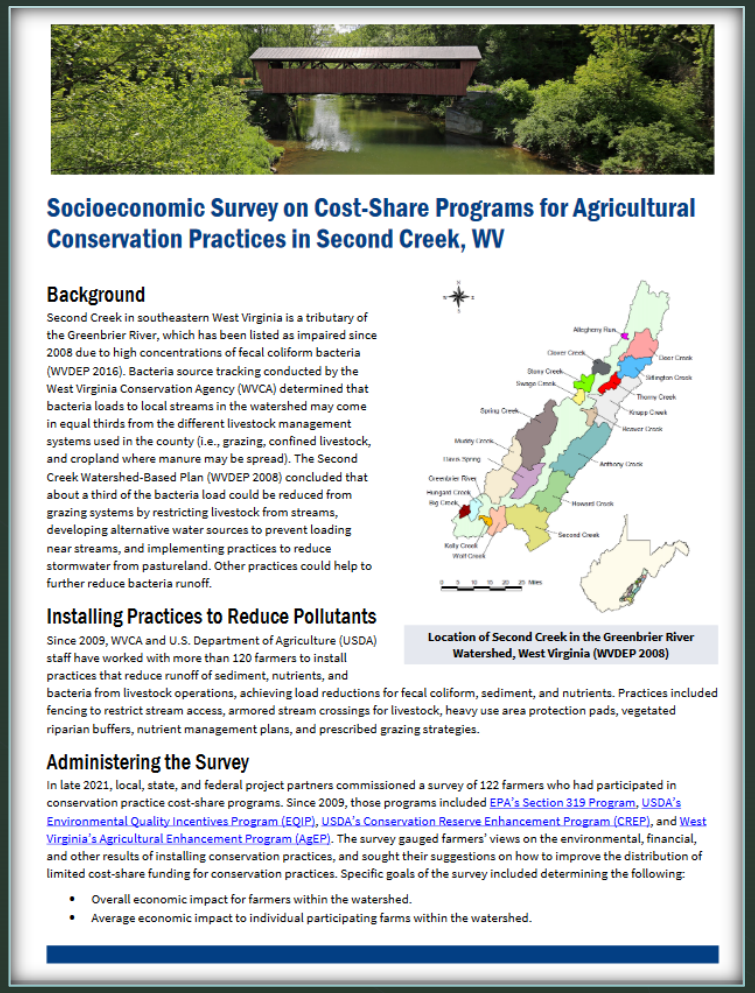
Takeaways

- Financial and Production
- Environmental
- Educational
- Agency/Partner Perspectives



Future

- Publication
  - https://www.wvca.us/NPSP/
  - Journals
- Statewide survey for program participants
- Support for budget
- Use data and feedback to influence outreach strategies for programs



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.

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

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 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.

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.



Thank You!

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