



2019

National Water Quality Initiative



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Boone County Conservation District &
Natural Resources Conservation Service

3/19/2019



The Boone County Conservation District
&
Natural Resources Conservation Service



Gunpowder Creek's
National Water Quality Initiative

Final Report

March 19, 2019

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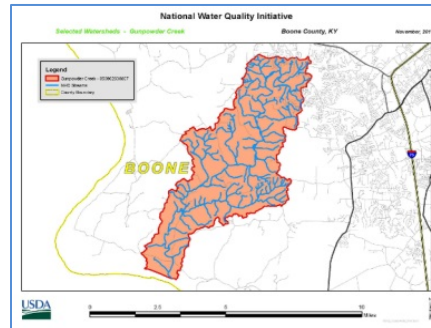
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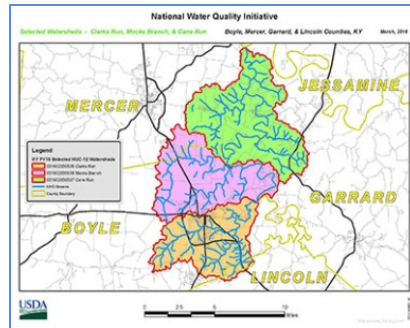
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Introduction

Thanks in large part to the development of the EPA-approved Gunpowder Creek Watershed Plan, the Boone County Conservation District (BCCDKY) was awarded a grant by the Natural Resources Conservation Service (NRCS) to implement the 2017 National Water Quality Initiative (NWQI) pilot project for Gunpowder Creek, one of only four projects in the state (see Appendix A). J.T. McMullen was hired as the NWQI Regional Coordinator and began reaching out to landowners in the watershed to inform them about the opportunities available through state and federal cost share programs. These opportunities range in scope and scale, and cover a diverse range of interest, from conservation to agriculture.



Gunpowder Creek Watershed



Lower Kentucky River Watershed

State and Federal Cost Share Programs

- **Environmental Quality Incentives Program (EQIP)** – EQIP is the main cost share program offered by NRCS and has several programs covering hundreds of common agricultural and wildlife conservation practices.
- **State Cost Share Program (SCS)** - Administered by the Kentucky Division of Conservation (DOC), SCS provides similar opportunities as the federal program with slightly less stringent ranking criteria but a lower payment cap.
- **County Agricultural Improvement Program (CAIP)** - Run through the Cooperative Extension Agency, CAIP mirrors SCS in many ways and can cover some practices not covered under the other programs, mainly assistance with barns and other structures, but it has the lowest payment cap.

All of the programs available are application-based and are assessed and ranked by their corresponding agencies in regards to the natural resource concerns that are being addressed. These programs have varied ranking periods (one to four rankings per year, depending on budget) but accept applications year-round. The main intent of the NWQI effort in Gunpowder Creek has been to address the natural resource concerns that have led to the watershed's impaired designation (primarily the result of sediment loading from increasing erosion and agricultural runoff) by increasing awareness of the available cost share programs and by adding weight to the applications submitted within the watershed. As of March 2019, there have been four approved EQIP plans for landowners in the focus area, with an additional five applicants waiting on NRCS' next ranking. An additional two landowners have received approval on applications submitted through the SCS program. (See Appendix B)



Boone County Watershed Map

Methods and Implementation

BCCDKY and the NWQI Regional Coordinator began their efforts by working with Boone County GIS to identify properties meeting the following criteria:

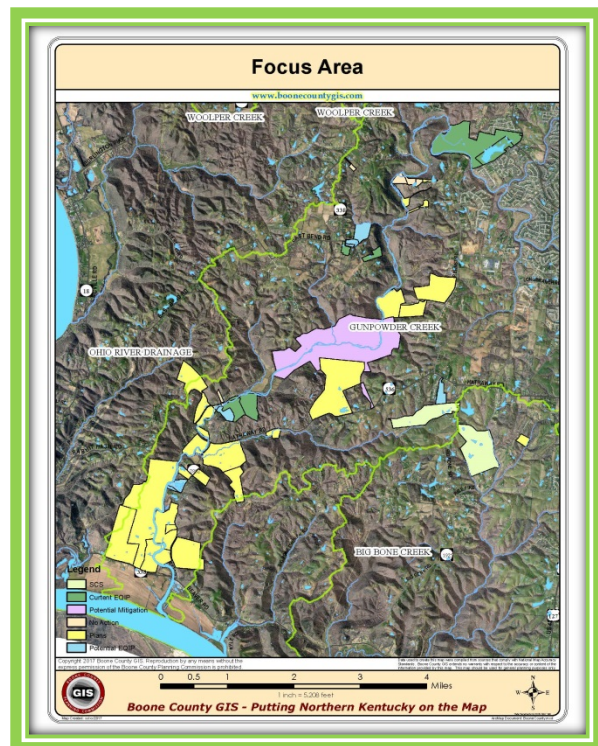
- Agriculturally-zoned to target agricultural waste producers. These properties are typically leading contributors to erosion in the focus area.
- Greater than 10 acres. These properties are most likely to meet NRCS criteria for having the greatest impacts.
- Located in identified focus area: properties downstream of the Camp Ernst bridge, south of Camp Ernst Lake.
 - ❖ Properties above this area in the watershed are mostly non-agricultural, industrial, or suburban. BCCDKY, along with SD1, and other partners, are working to address storm water infrastructure in efforts to reduce erosion in these areas in accordance with their Mission and Annual Plan of Work.

This information provided a good starting point and produced a list of approximately 250 landowners for consideration.

Within the first few months of the program, hundreds of landowners were contacted through a number of marketing and outreach techniques. Several series of directed mail-outs were conducted for a broad scale awareness campaign and several articles were submitted to the County's quarterly newsletter, *What's Happening*. Efforts were also made to identify local agricultural organizations, such as the Northern Kentucky Horse Network and the Boone County Cattlemen's Association; -the NWQI Regional Coordinator participated in several tradeshows and conferences. These events have proven to be been the most productive in terms of landowners seeking field visits and conservation plans and led to a number of the applications received.

BCCDKY was also vital in letting landowners know that the NWQI program was in effect and several of the initial contacts were with landowners already working with the District. Word of mouth is a big part of farming communities and the connections that the District had made prior to the NWQI program proved integral in helping to get things underway.

The NWQI Regional Coordinator conducted field visits to assess landowner objectives and natural resource concerns and documented any necessary information needed to complete a landowner's goal. Most of these field visits pertained to an interest in cost share programs but sometimes just involved landowners looking for simple suggestions. For landowners wishing to apply for cost share programs, the information collected was used to complete a conservation plan. These plans were developed either in conjunction with NRCS, when a landowner wished to pursue a cost share application, or by BCCDKY in cases where recommendations were requested that had no options through cost share programs or no wish to pursue them. The plans included maps and job sheets that detailed all of the relevant technical specifications for the practices in question. Cost share plans also include a cost



Focus Area Map

estimator to show the landowner the up-front dollar amount the program would cover to help them assess the feasibility of what they were proposing to do.

Progress and Results

From these efforts the program has been able to conduct almost 100 field visits, provided conservation planning or recommendations for over 50 landowners, four of which are currently now enrolled in the EQIP program under NWQI, with an additional five awaiting ranking. We also have two landowners with accepted SCS applications we were able to assist with their planning and application submission.

Current NWQI Program Figures

- Total program payout for 2017 contracts: \$26,867
- Potential program payout for 2018 contracts assuming applications are approved: \$39,330
- Riparian area to be reforested: 5.7 acres
- Native grasses to be planted: 3.6 acres
- Pollinator habitat to be planted: 1.2 acres
- Invasive species to be removed: 5.4 acres
- Fence to be installed: 1,950 feet
- Watering facilities to be installed: 2 units
- Livestock pipeline to be installed: 1,725'
- Heavy use area constructed for watering facilities: 2,500 square feet

These numbers do not include the pending applications, but most figures would double, or better, if approved.

Conclusions and Suggestions

The NWQI program has met its goals of making itself known and assisting Boone County's residents in protecting their lands and those downstream. Its promotions have led to an increased interest in cost share programs available across all of the County's and State's watersheds. The goal to inform landowners about the efforts in Gunpowder showed those around them that they had options as well.

Within the focus area, the program has planned for landowners holding cumulatively thousands of acres and miles of stream frontage, with several approved practices being employed to directly affect riparian areas and streambank stability. The agricultural producers implementing new best management practices through the program will address nutrient and bacterial levels as well. The efforts of these landowners and those like them, along with the continued efforts of BCCDKY and NRCS, will lead to accomplishing the ultimate goal of the NWQI program for Gunpowder and declaring the stream no longer impaired.

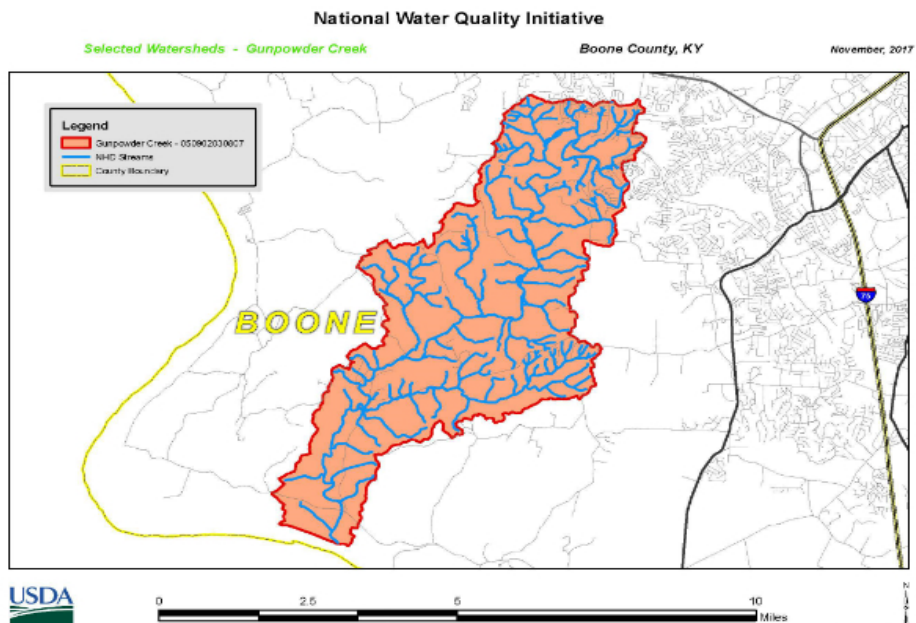
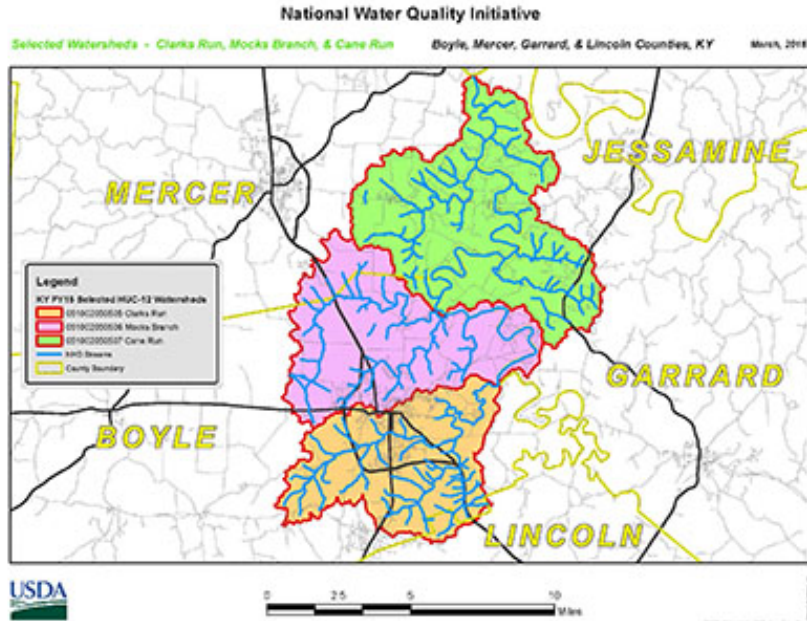
As Boone County continues to develop and move forward, the eventual de-listing of Gunpowder Creek should act as a catalyst to show that the practices recommended and employed work for the landowners, those around them and the county as a whole. Less eroding streambanks

equates to fewer roads and other infrastructure being jeopardized, meaning tax dollars are being spent on new projects and not relegated to fixing recurrent ones. Less nutrient levels and bacterial concentrations unburden water treatment facilities and over time can lead to cleaner water at lower cost.

BCCDKY is currently working to develop a 'One-Stop' portal for the conservation efforts of the County and its residents. This could potentially be a site for landowners to see all options available to them in one place and could help to expedite the process, while easing burden on the agencies associated with the programs involved. It could eventually have application deadlines and parameters for all of the programs available, ways to schedule field visits, and ways to track the progress of submitted applications.

Appendix A

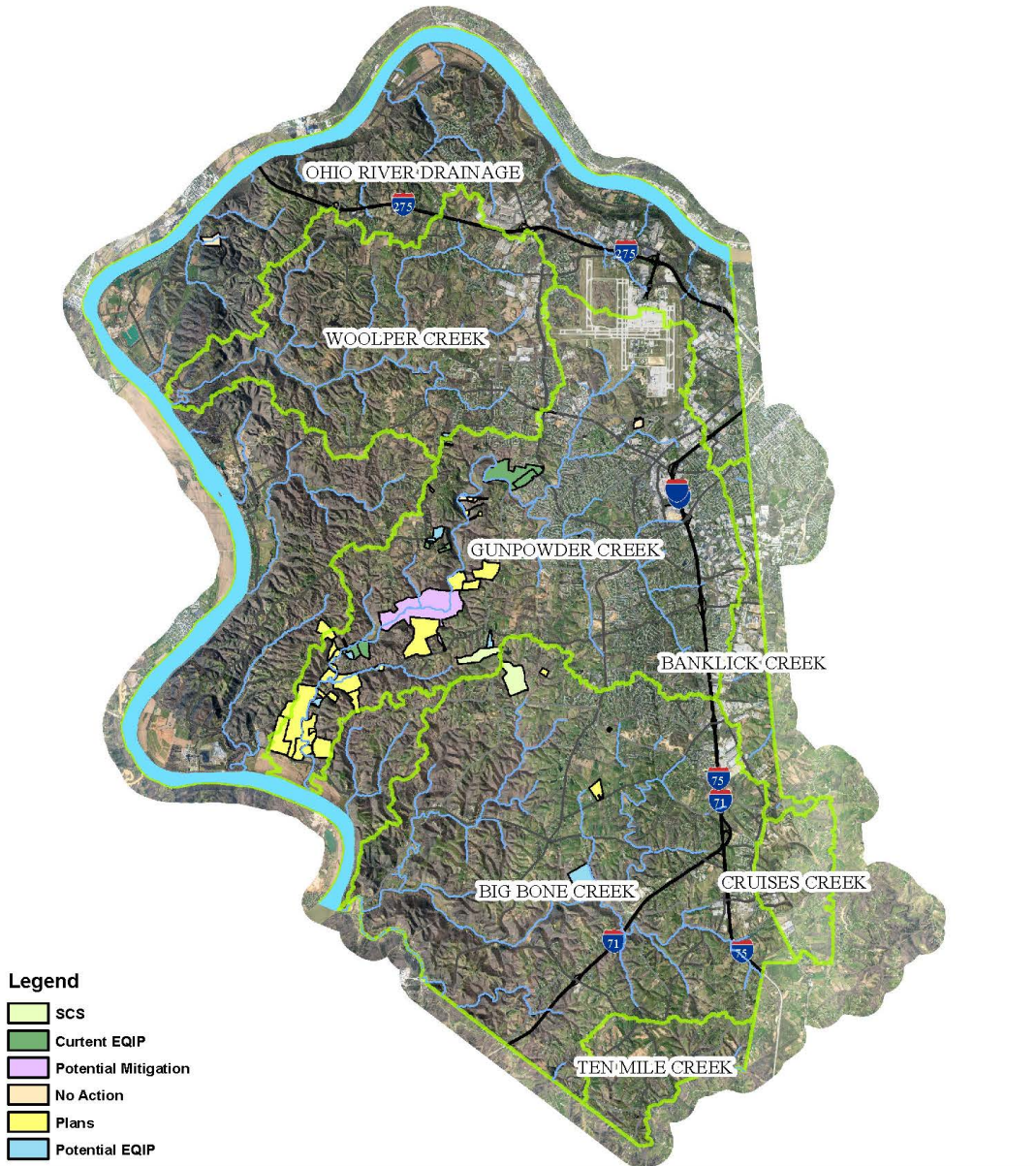
Name of 8-Digit Hydrologic Unit Code (HUC)	Name of 12-Digit HUC	Number 12-Digit HUC
Lower Kentucky	Mocks Branch	051002050506
Lower Kentucky	Clarks Run	051002050505
Lower Kentucky	Cane Run	051002050507
Ohio River	Gunpowder Creek	050902030807



Appendix B

County Overview

www.boonecountygis.com



Legend

-  SCS
-  Current EQIP
-  Potential Mitigation
-  No Action
-  Plans
-  Potential EQIP

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1 inch = 16,667 feet



Boone County GIS - Putting Northern Kentucky on the Map

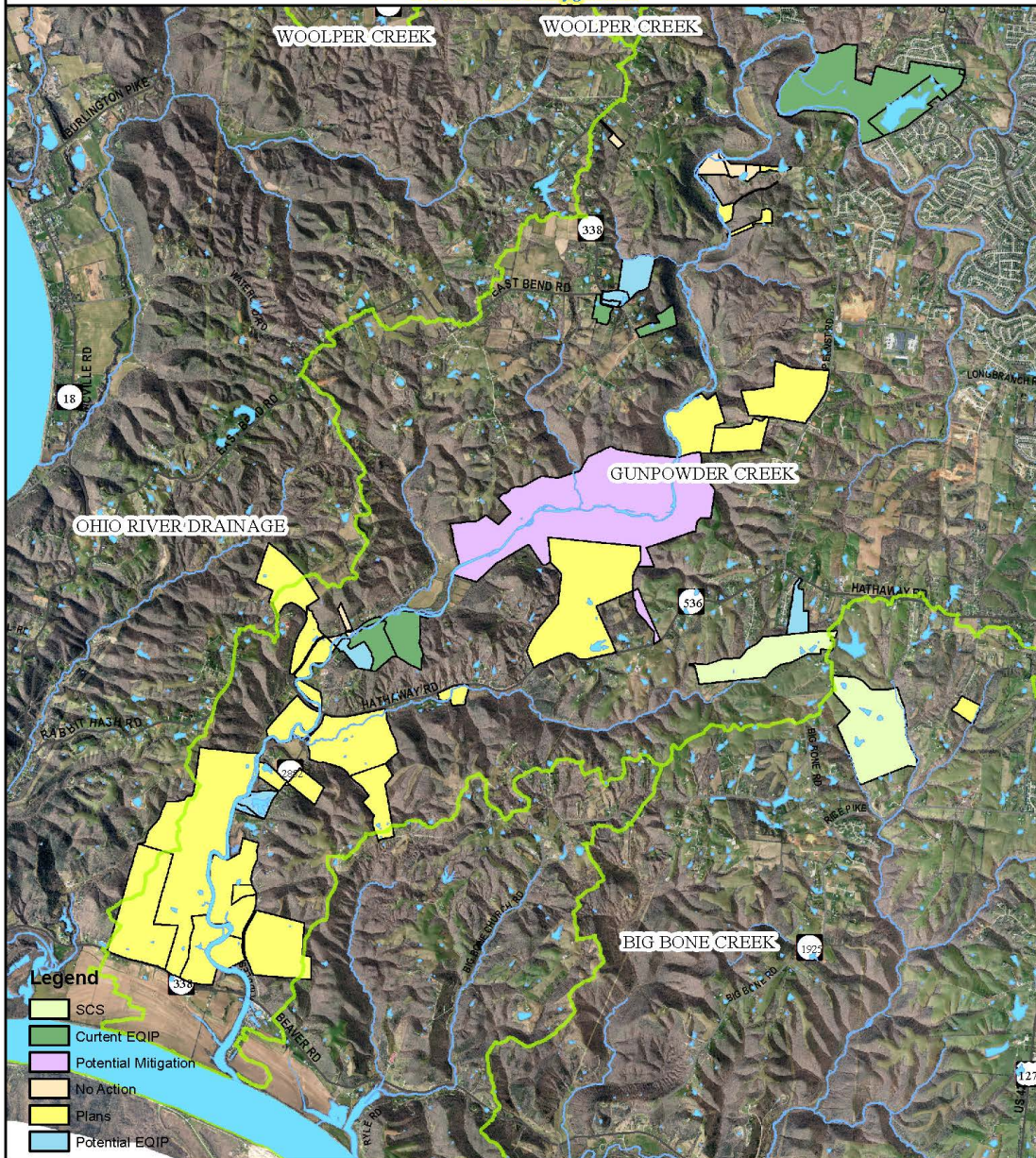
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ArcMap Document: BooneCounty.mxd

Appendix C

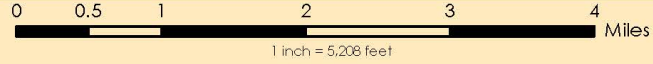
Focus Area

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Boone County GIS - Putting Northern Kentucky on the Map

Map Created: 10/10/2017

ArcMap Document: BooneCounty.mxd