



Juniata County Conservation District Implementation Plan

Version 3

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Board Chairman

“The mission of the Juniata County Conservation District is to preserve and promote the effective use of the county’s natural resources through the provision of timely, coordinated and professional guidance and technical assistance to the landowners, land managers and residents of Juniata County. In so doing, it is our goal to ensure that Juniata County’s future is characterized by a healthy environment, an informed public, a common sense regulatory climate and a coordinated menu of services, information and regulations.”

Executive Summary

Emphasized by our Mission Statement, the Juniata CCD is concerned first, and foremost, about the natural resources of Juniata County. As the only local unit of government responsible for coordinating the conservation of our soil, water, land, forests and other natural resources, we take pride in the vast array of services provided to the general public. In that same light, we must prioritize those services to ensure we maximize our efforts in protecting those resources and our responsibilities to the Commonwealth of Pennsylvania.

At the direction of the Pennsylvania Department of Environmental Protection, the District has developed the framework of Juniata County’s plan to support the Chesapeake Bay Tributary Reduction Strategy. This County Implementation Plan is intended to be a “tool” used in directing District efforts and resources in support of Pennsylvania’s Tributary Reduction Strategy. The goal of this effort is to provide a sound basis of the current trends in Juniata County that are or will be effecting sediment and nutrient loads to our tributaries.

The report is structured in the prescribed format with the sections and supporting data building to culminate in the Juniata County Implementation Plan. Execution of this comprehensive endeavor will be an on-going effort, resulting in improved water quality in both Juniata County and the Chesapeake Bay.

County Description

Juniata County, located in Central Pennsylvania approximately 45 miles northwest of Harrisburg, encompasses approximately 383 square miles or approximately 250,000 acres. The county is composed of thirteen townships and four boroughs with the county seat centrally located in Mifflintown (Latitude 40 deg. 34 min. 12 sec., Longitude 77 deg. 23 min. 49 sec.). According to standard classification codes, Juniata County is considered a 7th Class County with all townships considered of the 2nd class. See attached [Juniata County Location Map](#).

According to the 2000 U.S. Census, Juniata County's population was 22,821 people, which indicates a 10.2 percent increase from 1990. By comparison, Pennsylvania's population grew 3.2 percent over the same time frame. For 2010, forecasts estimate that the population of Juniata County will be 24,968 representing a 9.4 percent increase from 2000. Again, in comparison, Pennsylvania's population is projected to increase by only 3.1 percent.

Per capita income is often used as an indicator of local economic well-being. In 2000, per capita income in Pennsylvania was \$29,504. By comparison, the county per capita income was \$21,058. Juniata Counties top five industries in 2000 ranked by percent of employment included: manufacturing (21.8%), services (19.4%), retail trade (16.1%), farm/ ag/ forestry/ fish (11.0%) and construction (8.2%). Although direct employment figures place agriculture-related industry as the fourth largest employer in Juniata County its relationship to the local economy is directly linked and vitally important to all sectors of employment.

As would be expected by its rural nature, Juniata County's land use is dominated by agricultural and forest uses. Agricultural related acres (26.9%) and forest acres (64.5%) account for more than ninety percent of the total land use in Juniata County, or approximately 225,000 acres. Residential development accounts for two and half percent of the land use or approximately 6,250 acres. Commercial, industrial and undeveloped land account for one and a half percent of the land use or approximately 3,750 acres. Other lands not classified in the above categories accounts for four percent of the land use or approximately 10,000 acres. Finally, the water resources of Juniata County account for less than one percent of the county's land use, or approximately 1,875 acres. The attached map, [Juniata County Landuse](#), depicts the various land uses and distribution throughout the county.

Agriculture has, and continues to be, a major emphasis in Juniata County. The sizes and types of operations encompass the full spectrum of agricultural production including: dairy, beef, poultry, swine and sheep to grain farms, vegetable operations and orchards. In 2006, gross values of all livestock, poultry

and field crops exceeded \$73 million. Cash receipts from the sale of livestock and livestock products was all but \$67 million, while cash receipts sales of all crops was over \$6.3 million.

There are a total of 645 farms averaging in size of approximately 131 acres (ranking 37th and 35th respectively in the state) including: dairy- 140, cattle- 360, swine- 45, sheep- 30 and poultry- 116. Crop production acres account for over 51,000 acres (approximately 30,000 acres of row crop and 21,000 acres of hay land) of the county's agricultural land use. On hand livestock type, numbers and respective state rankings include: dairy- 7400 head (23rd), total cattle and calves- 19,600 head (31st), swine- 30,300 (8th) and sheep and lambs- 1,800 (19th). On hand numbers for poultry are not as readily attainable and not typically reported as such therefore are included separately as: poultry, layers- approximately 425,000 and poultry, broilers- total produced 12,896,000 (4th).

WATER RESOURCES

The Pennsylvania Department of Environmental Protection reports that approximately 89% of Pennsylvania's contribution to the Chesapeake Bay's excess nutrient and sediment load is from non-point sources such as agriculture and stormwater runoff.

Sediment pollution has been documented as stream impairment in substantial portions of streams within south-central Pennsylvania. According to DEP water quality data from the Unassessed Waters Program, over 67% of impaired stream miles have agriculture listed as the source of impairment in the South-central DEP Region, while over 62% of impaired stream miles have siltation listed as the source of impairment. In addition to the Unassessed Waters program, the multi-state Chesapeake Bay Protection and Restoration Agreement have identified sediment pollution as a significant issue.

Locally, a significant portion of those streams listed as impaired through the Unassessed Waters Program (303d listed) name agricultural sediment and nutrients as the primary impairment. There are over 738 miles of stream within Juniata County, of which over 28 miles have been listed as impaired. The attached map, *303d Listed Streams*, highlights the 303d listed impaired stream segments within the county. In addition to those streams specifically listed as impaired, there are numerous areas of other streams impacted by agricultural sediment and nutrients. Additionally, the Juniata Watershed Management Plan's prioritized issues expressed by watershed residents and gathered through public meetings (one of which was hosted in Juniata County) listed: erosion and sedimentation/ non-point source pollution, nutrient pollution, and agricultural conservation practices as concerns which ranked from high priority to paramount.

As listed by the state watershed code, Juniata County has drainage to portions of watersheds 6C, 12A, 12B, and 12C. The attached map, *Juniata County Watersheds*, illustrates the county broken down by this classification and other sub-watersheds. Watersheds 12A and 12B have direct drainage to the Juniata River, a major tributary to the Susquehanna, while 6C has direct drainage to the Susquehanna and 12C indirect drainage to the Juniata River. All 383 square miles of Juniata County have contributory drainage to the Chesapeake Bay within the last third of the Susquehanna River Basin, as illustrated on the attached map, *Chesapeake Bay Watershed*.

Sediment and nutrient reduction in Juniata County, while first improving water quality in the local watersheds, will ultimately play a role in the overall reduction efforts aimed at the Chesapeake Bay itself. Although no TMDL's have been completed in Juniata County, the Juniata CCD has implemented a GIS based assessment process. The Juniata CCD has completed both the Doe Run/Cedar Springs and Cocolamus Creek watershed assessments. 90% of the assessment work is currently completed in the Lost Creek, Delaware Creek, Locust Run, and Mahantango Creek watersheds. Taking an aggressive approach, preliminary data collection work is now underway for East Licking Creek, Markee Creek, Hunters and Doyle Runs, and Tuscarora Creek.

TRENDS

The identification of trends can, and often do, point to current areas of significance and potential problems in the future. The question is whether we can we positively identify those trends and can we have an impact on the outcome. While one cannot see into the future, we can make some hypotheses based on past and present data. Throughout this process, the most disturbing issue has been the data available, or, in many cases, the lack of data.

Upon analyzing overall farm numbers data from Pennsylvania Agricultural Statistics over the previous five years (2000-2004 - length of term believed to be reflective of potential results over the next five years) it has been found (numbers in parenthesis indicate farm numbers): over all farm numbers has declined 17.3% (780-645), dairy farm numbers have stayed relatively constant (140), cattle farm numbers have declined 6.3% (380-360), swine farm numbers have stayed relatively constant (45), sheep farm numbers have declined 25% (40-30), poultry farm numbers have declined 46.6% (170-116) and overall acres in farms has declined 7.6% (92,500-85,500). As a cross check, cropland acreage (based on 1 year numbers from FSA reports – 2003-2004) declined 2% or slightly more than the five-year average (49,066-48,026). This data would indicate that general farm numbers are dropping or staying relatively stable.

Upon analyzing overall animal numbers data from Pennsylvania Agricultural Statistics over the previous five years (2000-2004 - length of term believed to be reflective of potential results over the next five years) it has been found (numbers in parenthesis indicate animal numbers): dairy animal numbers have declined 9.8% (8,200-7400), total cattle and calves numbers have declined 4.4% (20,500-19,600), swine animal numbers have increased 12% (27,100-30,300) and sheep and lambs numbers have increased 20.0% (1,500-1,800). On hand numbers for poultry are not as readily attainable and not typically reported as such therefore are included separately as: poultry, layers numbers have increased 17.1% (approximately 362,800-425,000) and poultry, broilers numbers have increased 11% (11,700,000-13,023,000 total produced). This data would indicate that other than dairy and cattle / calves numbers, which decreased, all other animal numbers have increased.

Current trends indicate that fewer farms have increased numbers of animals / production creating greater animal densities further compounded by a decrease in available acres. The net result is the potential for increased nutrient loading rates on available cropland acres. This trend is supported by the fact that Juniata County has the fifth highest workload in administering Pennsylvania's Nutrient Management Regulations with an average 2.16 AEU / Ac for CAO plans.

It should be noted that the increase in swine and poultry numbers / densities occur with confinement operations, therefore the concern is primarily nutrient related not sediment. However, the cattle and calves operations (inclusive of dairy) affect both sediment and nutrient loading potentials. Although the number of head decreased, it did not decrease at a rate consistent with the decrease in the number of farms thus resulting in a net increase in the number of head per operation. Again, the current trend is that fewer farms have increased numbers of animals / production creating greater animal densities further compounded by a decrease in available acres. The net result, in this case, is the potential for both increased nutrient-loading rates on available cropland acres and increased sediment loading due to more concentrated confinement areas.

Again, on the outset, when looking primarily at cropland acreage (based on 1 year numbers from FSA reports) one only sees a decline of 2% in available acres. However, if the numbers are more closely examined, hay land acres can be extrapolated out (total acres minus cropland acres) to realize a reduction of 1%. This means that additional acres have been taken out of hay land and placed into row crop production increasing the potential for both increased nutrient loading rates and sediment loading rates due to increased erosion factors.

The Juniata CCD is conducting GIS based assessments of watersheds in the county utilizing its extensive GIS database, developed solely for these assessments, with information present in various formats from cooperating agencies. While trend analysis utilizing this system is almost infinite, only three such trends will be highlighted for this purpose. Research was conducted in 2006 in the two watershed assessments completed at that time: it is apparent that 22% of the farms did not have a conservation plan, approximately 50% of any individual plan was implemented, and approximately 59% of the plans were more than 10 years old. All of these factors play significant roles in the potential for both increased nutrient loading rates and sediment loading rates due to increased erosion factors. Coincidentally, as depicted on the attached maps, *Juniata County Watershed Assessments – No Conservation Plans – Plans older than 10 years*, one such area lacking conservation planning was also adjacent to a 303d impaired stream segment.

As previously stated, both the animal densities and workload of the related Nutrient Management Act are consistent with one another. The additional factor to add to this scenario is that of the workload in the District administered Chapter 102 / Erosion and Sedimentation Program. Using the demographic information as a guide, County population growth indicates a potential 10% increase in housing, and most likely, a similar increase in light industry. Simply stated, the fastest growing programs which the District is currently administering are the Nutrient Management Act and Chapter 102- increasing animal operations / densities and increasing development / person density

SEDIMENT AND NUTRIENT / SOURCE REDUCTIONS

Through the pursuit of its mission, the Juniata CCD seeks to ensure all programmatic endeavors aim to preserve and promote the effective use of the county's natural resources. These endeavors are accomplished through the provision of timely, coordinated and professional guidance and technical assistance to the landowners, land managers and residents of Juniata County. The net result, whether directly quantifiable or not, is reduced sediment and nutrient loading to the local tributaries which ultimately assists in Pennsylvania's efforts in meeting its obligations to the Chesapeake Bay.

Underlying the assembly of this strategy was data, data that many times was lacking or not in a readily usable format. Quality data to make decisions based on sound analysis will improve efforts by "targeting" needs and prioritize spending of increasingly more competitive funding avenues. Much of the background data provided to districts to assemble this report was, at times, hypothetical at best. Collectively we must do more to track and account for our accomplishments. The Juniata CCD, utilizing the GIS tool, has completed "assessments" in two watersheds bringing together many "pieces" of data that

otherwise would not be available for comparison. Close similarities in the data, allow us to feel confident that they are representative of the County, as a whole, and point to the need for a better system. See attached map, *Juniata County Watersheds – Assessments Completed or Nearly Completed*.

JUNIATA COUNTY IMPLEMENTATION PLAN – 2008 Summary

Using the GIS-based Watershed Assessments, both completed and in-progress, as a primary tool, we have identified two areas of specific concern that we feel will most directly impact improvements to water quality in both local streams and the Chesapeake Bay: Conservation Planning/Implementation and Nutrient Management (Crop and Nutrient Balance).

Juniata CCD has implemented targeted watershed priorities based on the GIS-based assessments. Priority 1 projects are those located in a 303d watershed within completed or near-completed assessment areas. Priority 2 projects are located in non-303d watersheds within completed or near-completed assessment areas. Priority 3 projects are those located in a 303d watershed outside of the completed assessment, and Priority 4 projects are those located in non-303d watersheds outside of the assessed areas. Please refer to the attached map *Juniata County CBP Priority Watersheds*.

CONSERVATION PLANNING AND IMPLEMENTATION

Upon analyzing the data collected from the completed GIS Watershed Assessments relating to Conservation Plans (or lack thereof), percentages of existing Plans implemented, and Plans more than ten years old, we identified a definite need for comprehensive conservation planning in Juniata County. An additional point to be made is that almost none of the existing NRCS derived Conservation Plans included non-HEL soils planning and would not meet the PA Chapter 102 E&S standards.

Juniata CCD has realized both success and, admittedly, failure since our first Special Project request for Conservation Plan Implementation in 2005. Success in that we have made great strides towards District personnel becoming qualified to develop Conservation Plans. Failure in not understanding the level of work and time involved in fully implementing a Conservation Plan, and thus setting unattainable goals

Our initial request in 2005 received \$10,000 of cost share funding to implement Best Management Practices (BMP's) with a goal of 825 acres. The concept was that we would develop Conservation Plans and install any corrective field practices deemed necessary to implement the Plan. Although we successfully

accomplished several very worthwhile projects, and did complete Plan implementation on 104 acres, we fell far short of our projected goal, both in acres planned and acres implemented, due in part to a decrease in NRCS planning assistance and the realization that implementing a field practice only treats that portion of the operation, not all of the acres on the plan.

During 2005/2006 we also received a Supplemental Allocation of \$10,000 for Conservation Plan Implementation. With another self-imposed goal of 825 acres, we fell far short again by implementing Plans on 38.8 acres due to the same issues listed in the previous paragraph.

Juniata CCD received a late (March 27, 2007) second Supplemental Allocation with the condition that all funds be expended by June 30, 2007. The allocation was \$19,837 for implementing three milk house waste systems. We had on hand an updated list of approximately 10 Operators that had previously inquired at the District for assistance with milk house waste issues. We quickly selected the top three candidates using the Assessment criteria previously identified, completed Inventory and Evaluations (I&E), and requested the estimated funding necessary. All three projects were successfully completed, with time to spare. This Special Project was a valuable learning experience and has led to a "re-thinking" of procedures: plan and then implement.

In the interim, Juniata CCD requested and received an additional Special Project allocation for \$30,000 in 2006 for Conservation Plan Implementation (goal of 600 acres with 53.1 acres completed to date, with a balance of \$24,284 remaining) and Conservation Planning (goal of 300 acres). In 2007, Juniata CCD also received a fourth allocation for Conservation Plan Implementation in the amount of \$25,000 (goal of 600 acres) and Conservation Planning (goal of 300 acres).

District personnel have been working closely with new staff in USDA NRCS Field Team 5, working towards gaining the necessary training to develop "whole farm" Conservation Plans, as opposed to "compliance" plans. Juniata CCD has come to the conclusion that the development of Resource Management System (RMS) level or whole farm planning is in the best interest of our farming community. RMS level planning meets the requirements of PA Chapter 102 E&S, USDA Farm Service Agency (FSA), and USDA NRCS cost share programs (i.e. EQIP). It appears that most State and Federal programs are now requiring a current Conservation Plan as a pre-requisite to program participation (i.e. REAP). Development of whole-farm RMS Conservation Plans will allow us to identify erosion issues on all areas of the farm and, most importantly, assist in the planning of corrective actions deemed necessary to reduce nutrient and/or sediment loading. The District has developed a Conservation Plan Writing template which includes all the components included in a USDA NRCS Conservation Plan. Because of the complexities of USDA's Toolkit and ProTracts

systems, Juniata CCD has come to an agreement with NRCS Field Team 5 management. District personnel will develop Conservation Plans, have the Juniata County District Conservationist review the Plan, and NRCS administrative assistance will enter the Plan into the Toolkit and ProTracts systems. NRCS Mifflintown field office currently has a backlog of over 3000 acres waiting for conservation planning assistance.

Juniata CCD is planning on using 2008 as a “step-and-a-half” year. Our first priority will be to develop Conservation Plans, using the GIS-based Watershed Assessments to prioritize individual requests, and design and install field practices necessary to implement the Plan using existing Special Project cost share funding.

Our second priority will be to develop Conservation Plans using the “whole farm” planning criteria. The District goal is to develop the Plan, identify any necessary BMPs for the operation, and base future Special Project requests on the estimated costs of those BMPs. This view is based upon the positive experience gained from the Supplemental Allocation received for milk house waste systems. Pre-planning pays off. We believe that by having Conservation Plans written prior to the Special Project application period, we can accurately use a precision approach to estimate the amount of cost share funds needed to implement a Plan, or series of Plans, and request that amount for Special Project acquisition. This would also allow us to significantly increase accuracy in estimating the number of reportable acres implemented under each Special Project allocation.

Most assuredly this “whole farm planning” will identify the need for an additional series of BMPs. Due to limited program funding, the Juniata CCD will not be funding manure storages or large concrete barnyard projects. Future Special Project request will expand the number and types of eligible BMPs to include those listed on [Appendix 1](#).

Initially, when a Conservation Plan is written and finalized by the Landowner/Operator, the District, and approved by the NRCS District Conservationist, the Plan will be reported as “Acres Planned.” Each of the potential BMPs identified on [Appendix 1](#) is listed with specific reporting criteria and reporting units. Upon final certification, the installed BMP or system of BMP's will be reported, along with acres treated. When a Conservation Plan is deemed fully implemented, the total acres of the Plan will be reported as “Conservation Plan Implemented.”

Adopting a concise approach to Conservation Planning, using the aforementioned prioritization format, will not only address precision application in Chesapeake Bay Program Special Projects implementation, but will greatly aid in the pursuit of cost share availability from other sources.

NUTRIENT MANAGEMENT (CROP AND NUTRIENT BALANCE PROGRAM)

Since initiating the Nutrient Management (Crop and Nutrient Balance) Special Project program with the first allocation in 2005, farm sector interest has steadily grown. Future demand prospects appear to be extremely good. Please refer to the attached map, [*Juniata County Act 38 & CNB Coverage*](#).

The initial allocation consisted of \$3,000 for materials and \$7,000 for supplies/equipment. Materials purchased included PSU soil test kits and PSU Agronomy Guides. A set of four heavy-duty weigh scales, soil testing equipment, crop moisture testing equipment, manure testing thermometers, and a chlorophyll meter were purchased with the supplies/equipment funds.

A supplemental allocation was received in 2006, with \$3,000 for materials and \$500 for supplies/equipment. A third allocation for 2007 includes \$1,750 for materials and \$1,750 for supplies/equipment.

The Crop and Nutrient Balance Special Project consists of the development of Nutrient Balance sheets for a given operation. Targeted farms are those outside of the PA Act 38 requirements (non-CAO). Applications are accepted throughout the year, with two application prioritization/acceptance periods per year (Spring, Fall). Soil testing is completed by District Technicians (two sets of soil test kits are purchased at the time of contracting; one used to establish initial nutrient recommendations, the second to complete a follow-up test during year four of the contract). Manure tests are taken, where applicable. Manure spreader calibrations are done, and equipment used to transport/move manure or poultry litter are weighed and measured to accurately estimate volumes produced. GIS farm maps are developed to show contracted fields. Field data collection is conducted to determine the current use of nutrients, with both manure application and commercial fertilizer usage evaluated. Nutrient Balance sheets are then developed for each operation. District Technicians then meet one-on-one with the Operator to review and discuss any nutrient over-application and/or nutrient deficiencies. Each participant receives a PSU Agronomy Guide, a detailed GIS farm map for future planning, and assistance with yield checks. Operators are contracted for four years; year one is initial development, with follow-up on actual nutrient application and crop yields in years two and three. In year four, a second set of soil tests are taken to assist the Operator with monitoring soil nutrient levels and yield results.

To date, twelve operations have been contracted. Seven manure tests have been taken, 983.4 acres of crop/hayland have been soil tested, and 724.3 acres have Nutrient Balance sheets completed. Balance sheets are currently being developed for the remaining 259.1 acres.

All nutrient application is considered through the crop rotation. Should each Operator reduce nutrient application to zero over-application, a net reduction of annual application of 3.1 tons of Nitrogen (N), 11.4 tons of Phosphorous (P₂O₅), and 8.1 tons Potash (K₂O) can be realized. Realistically, we understand that not every Operator will reduce over-application by 100%. However, through the learning process, several of the contracted Operators have stated that they will most likely apply their nutrient reduction process to additional acreage not contracted.

The \$10,102.20 expended thus far to develop basic Nutrient Management planning tools on 983.4 acres equates to a cost of \$10.27 per acre. Future average cost per acre will drop dramatically, since nearly all re-usable equipment costs were incurred during the initial twelve contracts.

ADDITIONAL JUNIATA CCD IMPLEMENTATION ACTIVITIES

District staff turnover issues of the last three years appear to be stabilized. All positions have been filled, and the current staff is quickly gaining experience.

Chapter 102 Erosion and Sedimentation (E&S) workload is steadily increasing. There were 10 E&S Plans reviewed in 2007, which addressed 114.45 acres. Estimated E&S Plans for 2008 are 12, with 230 acres projected. This projection does not include the Technical assistance and complaint response workload. In addition, Chapter 102 training geared towards Township Supervisory staff being able to identify when and to what level of E&S planning is required by law, is ongoing. As Township staff becomes increasingly aware of their obligation, small-scale E&S technical assistance and review work is expected to rapidly intensify.

Two Dirt and Gravel Roads projects, St. Paul's Road and Oxbow Road, were completed in 2007. These projects encompassed 8,184 feet of BMP implementation. Applications and current funding levels indicate another two projects for 2008, estimated at 10,000 feet of BMP implementation.

GIS Watershed Assessments will be completed in the Lost Creek, Delaware Creek, Locust Run, and Mahantango Creek watersheds in early 2008. These watersheds, along with previously completed watersheds, encompass 72,719 acres of Juniata County. Preliminary work has begun in the East Licking Creek, Markee Creek, Warble Run, Hunters Run, and Tuscarora Creek. Water testing sites have been selected, and sampling has been ongoing since April 2007. Additional funding is being sought to complete these assessments.

Nutrient Management (PA Act 38) saw another increase in workload in 2007. Much of the upsurge in plan review was due to the initial round of plans needing upgrading to reflect "P" indexing. District staff reviewed 18 Nutrient Management Plans (NMPs), with 5 of those being plans from either new operations or recently designated as CAOs and required to obtain a NMP. The 18 plans place 1,748.5 acres under manure management, and account for 1,885 Animal Equivalent Units (AEU's). One additional NMP for 26.4 acres was written by a staff member for credit towards final certification. In addition, 32 status reviews were conducted. Juniata CCD currently has 33 Volunteer plans and 54 CAO plans on file, for a total of 87 NMPs under management. Similar numbers are projected for 2008.

Juniata CCD received a Growing Greener Grant in 2005 for Poultry Manure Management. Contracts are signed, design work is completed, and contractor selection is underway. Construction of a 40 foot by 120 foot Manure Stacking Facility will begin in early Spring 2008.

District personnel actively assist NRCS staff with implementation of the USDA Environmental Quality Incentives Program (EQIP). 2008 contracts will provide \$309,074 in cost share to Juniata County operations. District staff will assist with both design and BMP installation. Proposed projects include a large row crop to rotational grazing system, one Heavy Use Area Protection project (roofed concrete feed lot), one Manure Storage Facility, and the development of two USDA Comprehensive Nutrient Management Plans (CNMPs). Additional contracts are pending and are awaiting the release of Federal funding.

2008 JUNIATA CCD GOALS AND OBJECTIVES

Conservation Planning	500 acres
BMP Installation	200 acres protected
Conservation Plan Implementation	250 acres
Nutrient Balance Development	400 acres
E&S Controls	230 acres
Dirt and Gravel Roads Projects	2 (10,000 feet)
Grazing Systems Implementation	2 (150 acres)
Manure Storage Facilities	3 (505 AEU's or 3.48 manure acres)

SUMMARY

In order to meet this Implementation Plan, the District will need to concentrate on the pursuit of its mission through the provision of timely, coordinated and professional guidance and technical assistance to the landowners, land managers and residents of Juniata County. It cannot be done alone - there must be cooperation and a common vested interest between county, state and federal agencies. Additionally, the District will continue to aggressively seek alternatives to traditional funding but financial assistance through the Bay Program must remain viable to move BMP implementation and "new" technologies forward. Finally, it is acknowledged that this strategy must be tested and revised to continue forward with sediment and nutrient reduction goals in Juniata County.

ACKNOWLEDGEMENTS

The Juniata CCD would like to acknowledge the following persons, agencies and sources in the development of this Strategy.

- Juniata CCD Board of Directors
- Juniata CCD Staff
- Juniata GIS (supported by Juniata CCD)
- Commissioners of Juniata County
- An Economic & Demographic Profile of Juniata County
- PA Agriculture Statistics, 2006-2007
- Juniata County F.S.A.
- Juniata County Penn State Cooperative Extension
- Juniata County N.R.C.S.
- Juniata County Planning Commission
- JCWP- Juniata River Management Plan

Appendix 1

Appendix 1

No.	Units	Practice	Reporting Criteria
CP	Ac.	Conservation Planning	Report acres planned
CPI	Ac.	Conservation Plan Implemented	Report acres of Plan when fully implemented
317	Ea.	Composting Facility	Report facilities constructed to NRCS specifications
322	Ft.	Channel Vegetation	Report total length of channel stabilized, include banks stabilized.
324	Ac.	Deep Tillage	Total actual acres
327	Ac.	Conservation Cover	Total actual acres
328	Ac.	Conservation Cropping System	Total actual acres implemented
329	Ac.	Conservation Tillage System	Total actual acres
330	Ac.	Contour Farming	Total actual acres implemented
332	Ac.	Contour Buffer Strips	Total actual acres implemented
340	Ac.	Cover Crop	Total actual acres implemented
327	Ac.	Conservation Cover	Total actual acres
328	Ac.	Conservation Cropping System	Total actual acres implemented
329	Ac.	Conservation Tillage System	Total actual acres
330	Ac.	Contour Farming	Total actual acres implemented
332	Ac.	Contour Buffer Strips	Total actual acres implemented
340	Ac.	Cover Crop	Total actual acres implemented
342	Ac.	Critical Area Planting	Total actual acres planted
344	Ac.	Residue Management	Total acres which have crop residue maintained
350	No.	Sediment Basin	Report acres contributing runoff to the basin. If the basin is an outlet (i.e. for a diversion), do not double count acres
357	No.	Barnyard Runoff Control	Report each system as one unit.
362	Ft.	Diversion	Report feet of diversion installed; acres treated are acres which contribute runoff to the diversion; if diversion is preventing erosion to downslope acreage, these acres are also reportable
380	Ft.	Windbreak/Shelterbelt Establishment	Report when implemented as part of Air & Odor management system
382	Ft.	Fencing	Report feet installed; report acres where animals are excluded from areas needing protection i.e. stream bank
386	Ft.	Field Border	Report actual acres planted
393	Ac.	Filter Strip	Report acres contributing runoff to the filter strip. If the filter strip is an outlet (i.e. for a diversion), do not double count acres
410	No.	Grade Stabilization Structure	Report total acres protected by structure
412	Ac.	Grassed Waterway	Actual area of waterway; acres treated are watershed acres below beginning point of erosion being addressed
442	Ea.	Irrigation System (Waste Water)	Report systems installed to NRCS specifications when used to eliminate point-source discharge
468	Ft.	Lined Waterway	Actual length of waterway; acres treated are watershed acres below beginning point of erosion being addressed
472	Ac.	Use Exclusion	Report acres where livestock is permanently excluded
511	Ac.	Forage Harvest Management	Report actual acres planted
512	Ac.	Pasture and Hayland Planting	Report acres planted to correct erosion problems
516	Ft.	Pipeline	Report as units installed only
528A	Ac.	Prescribed Grazing	Report acres converted from conventional cropping to permanent grass for managed grazing
558	No.	Roof Runoff Management	Report as units installed only
560	Ft.	Access Road	Agricultural use only, when correcting erosion discharging to a water conveyance
561	Ac.	Heavy Use Area Protection	Report actual acres installed (does not include concrete barn yards)

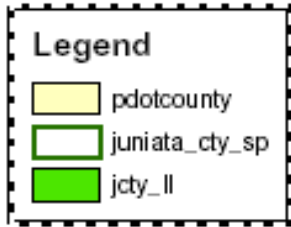
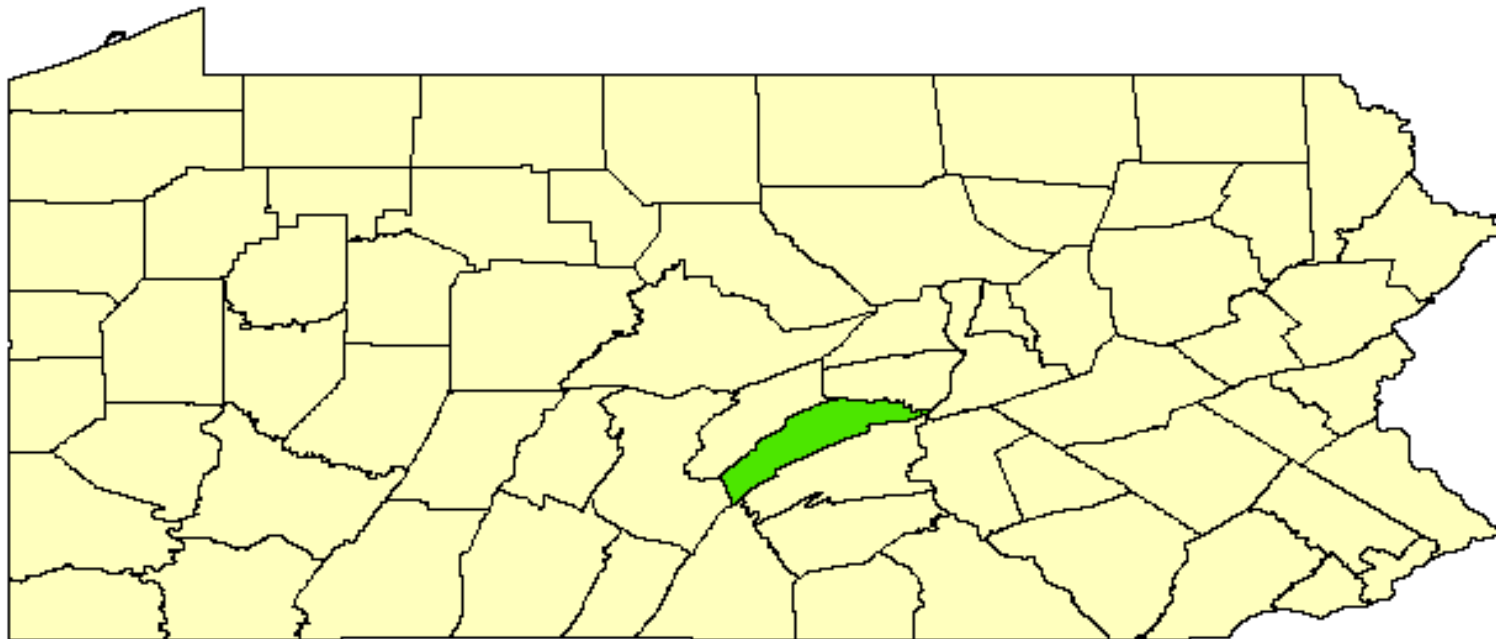
Appendix 1 (continued)

574	No.	Spring Development	Report when installed as alternative watering facility as part of Use Exclusion system
575	Ft.	Animal Trails & Walkways	Agricultural use only, when correcting erosion discharging to a water conveyance
578	Ea.	Stream Crossing	Report as part of Use Exclusion system
580	Ft.	Streambank/Shoreline Protection	Report total lengths of bank protected
585	Ac.	Stripcropping, Contour	Total actual acres implemented
586	Ac.	Stripcropping, Field	Total actual acres implemented
587	No.	Structure for Water Control	N/A
590	Ac.	Nutrient Management	Report acres implemented as USDA 590, PA Act 38, or DEP Manure Management Plan
596	Ea.	Agri-Chemical Handling Facility	Report facilities constructed to NRCS specifications when used to correct potential surface or sub-surface water pollution
600	Ft.	Terrace	Report feet of terrace installed; acres treated are acres which contribute runoff to the terrace; if terrace is preventing erosion to downslope acreage, these acres are also reportable
606	Ft.	Subsurface Drain	Report acres controlled by drain to prevent sheet/rill erosion when used to collect drainage water discharged to another BMP
614	Ea.	Watering Facility	Report as part of Use Exclusion system
620	Ft.	Underground Outlet	N/A
634	No.	Manure Transfer	Report as units installed only
635	Ac.	Wastewater Treatment Strip	Total actual acres implemented
638	No.	Water and Sediment Control Basin	Report each basin installed; acres treated are acres which contribute runoff to the basin; if basin is preventing erosion to downslope acreage, these acres are also reportable
N991	Ac.	Record Keeping	Total actual acres implemented

MAPS

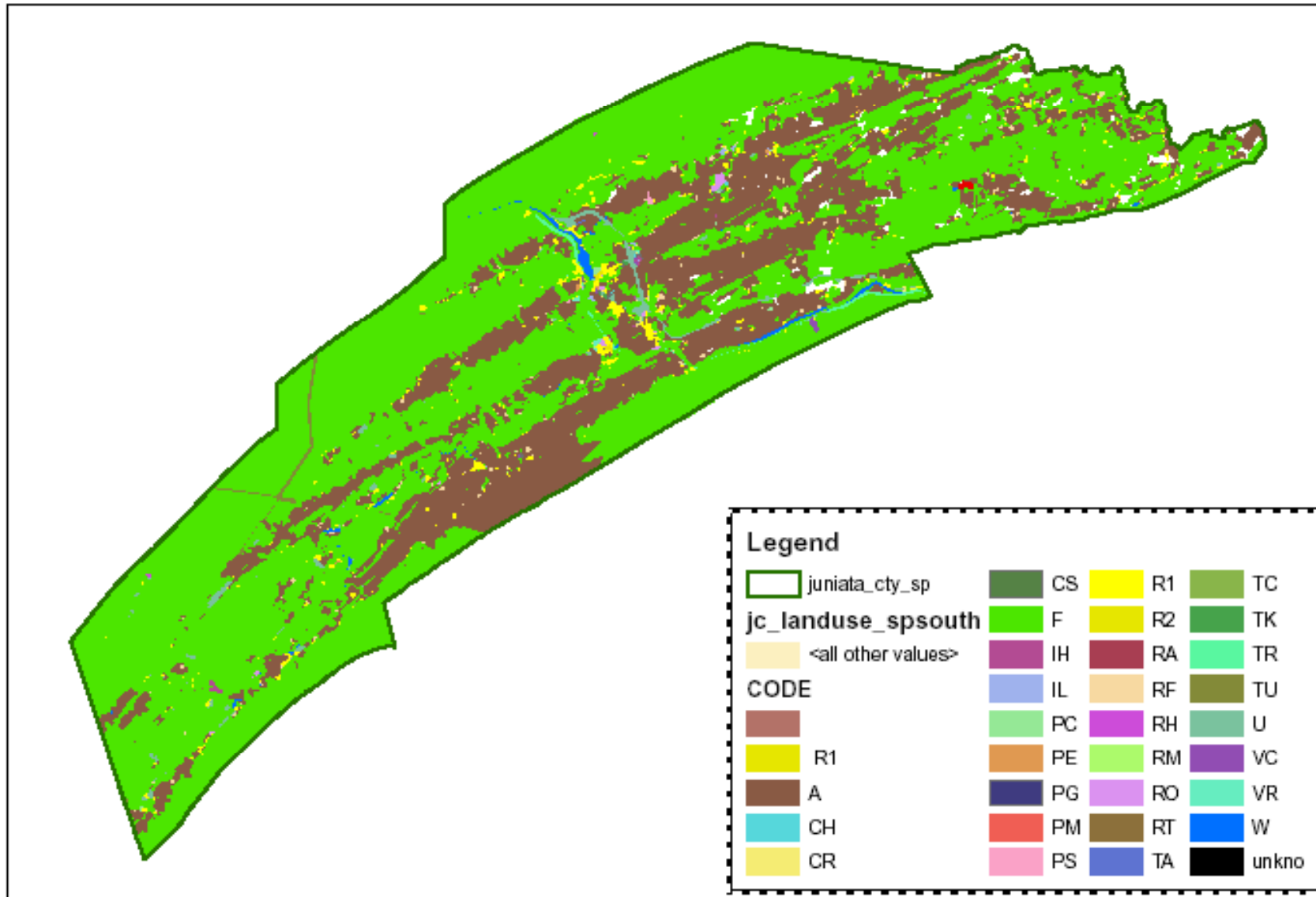
Juniata County Location Map

This Information is for visual representation only.
The Juniata CCD makes no claims to its accuracy
nor does it guarantee desired potential outcome.



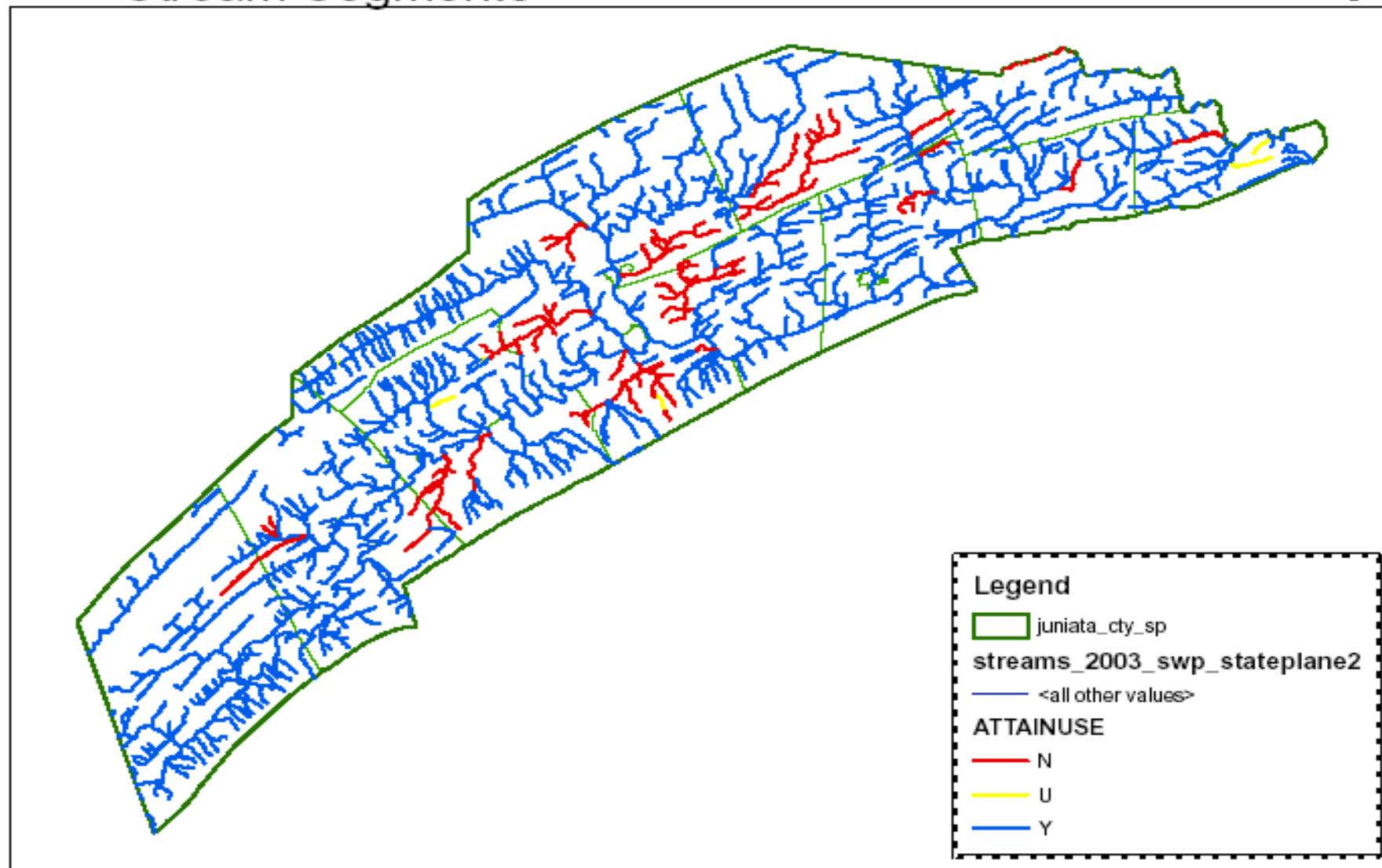
Juniata County Landuse Map

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nor does it guarantee desired potential outcome.



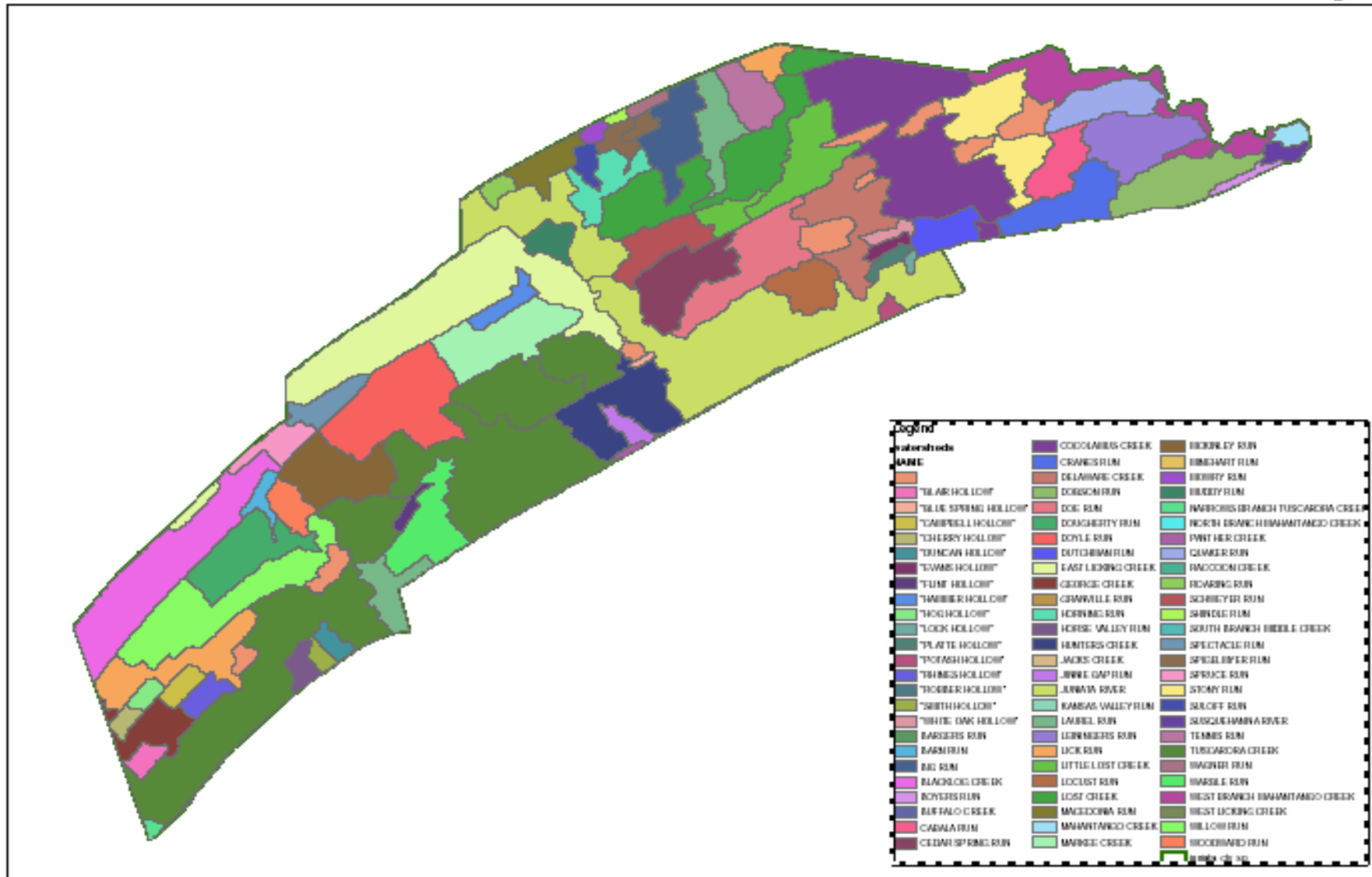
Juniata County 303d Listed Stream Segments

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nor does it guarantee desired potential outcome.



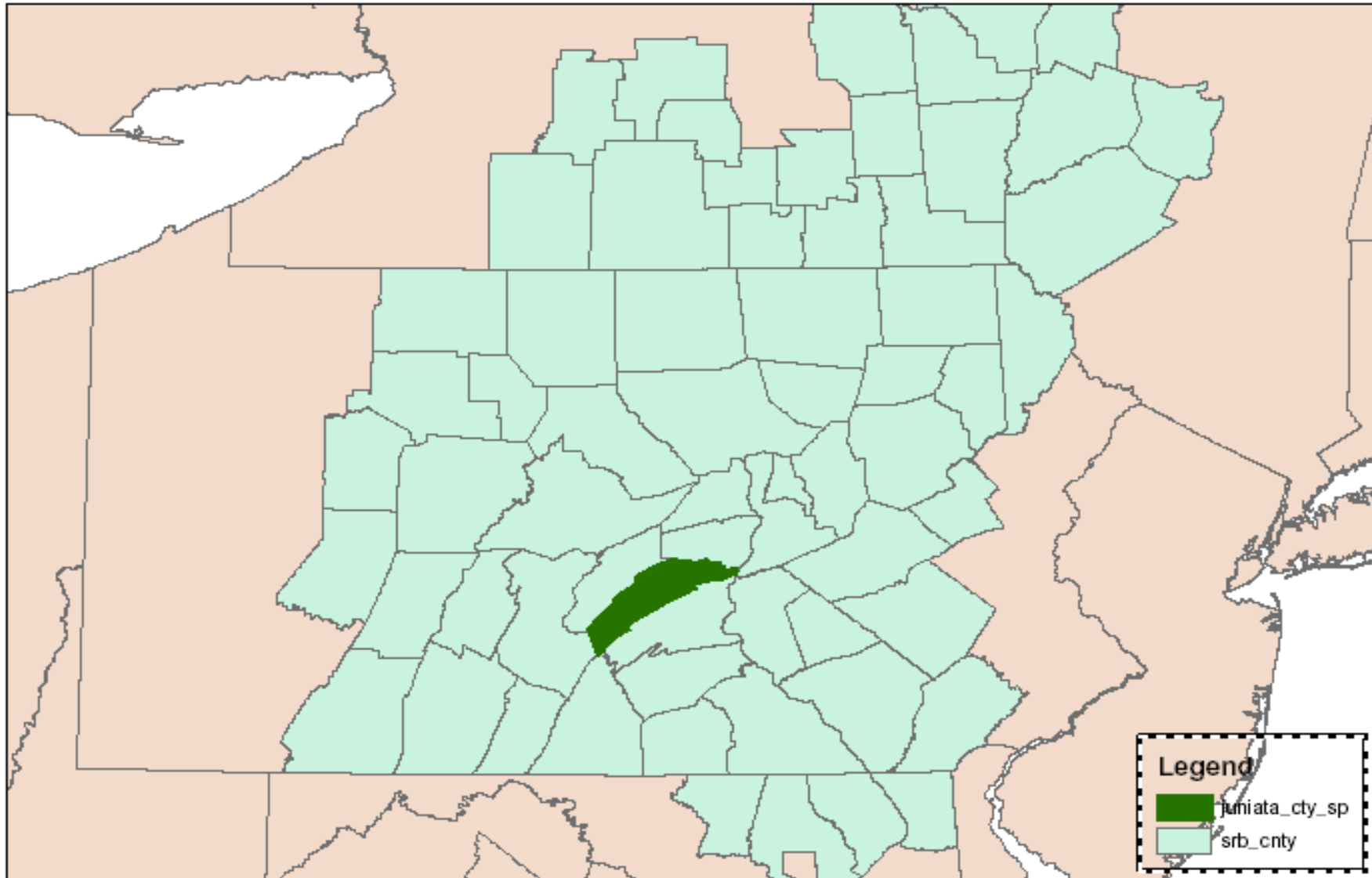
Juniata County Watersheds

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SRBC Chesapeake Bay Watershed Counties

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**Juniata County
Watershed Assessments
No Conservation Plans
Plans older than 10 years**

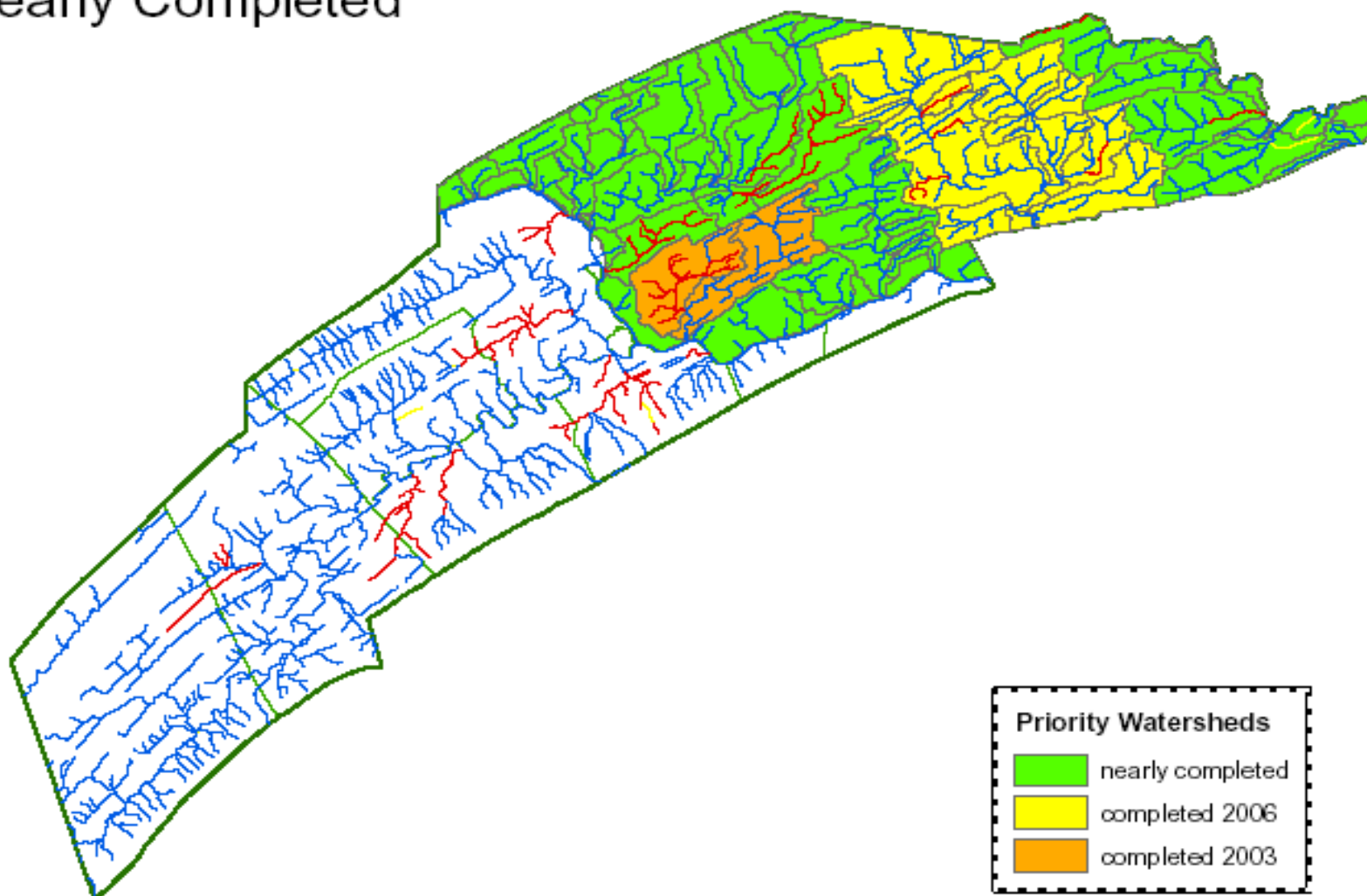
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0 470 940 1,880 Feet

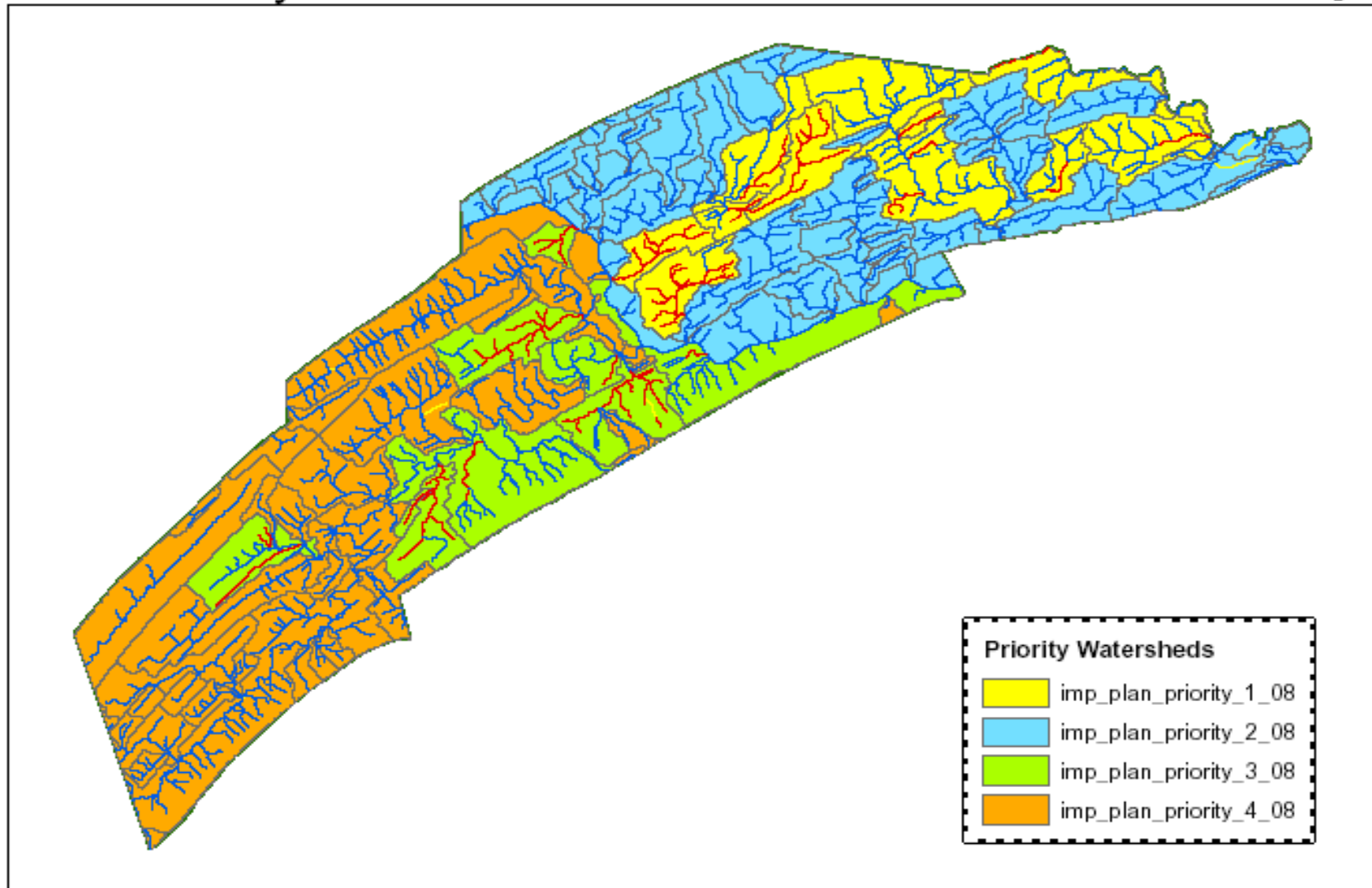
Juniata County Watersheds Assessments Completed or Nearly Completed

This Information is for visual representation only. The Juniata CCD makes no claims to its accuracy nor does it guarantee desired potential outcome.



Juniata County CBP Priority Watersheds

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Juniata County Act-38 & CBP CNB Coverage

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