BEDFORD COUNTYWIDE ACTION PLAN

Protecting the future of Bedford County's natural resources

October 8, 2020

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INTRODUCTION AND BACKGROUND

Plan Purpose

The Pennsylvania Department of Environmental Protection (PADEP) developed the third phase of their Chesapeake Bay Watershed Implementation Plan (Ph. III WIP) in 2018. The plan requires implementation of local water quality improvements by 2025 to meet statewide pollution reduction goals. PADEP's Ph. III WIP is based on a collaborative and bottom-up clean water planning approach between the state and each county in the Chesapeake Bay drainage area. This approach gives each county flexibility to create a plan that meets local needs and is unique to the jurisdiction.

Plan Highlights

The Bedford Countywide Action Plan (Bedford CAP) is a summary of approaches, initiatives, and considerations for existing and proposed water quality improvements in the county. The initiatives are intended to protect the future of Bedford County's natural resources while preserving other community goals and focus areas. Local improvements will benefit the community while assisting the state with meeting its Chesapeake Bay obligations. The Bedford CAP is designed to provide a guiding framework for implementation tasks and activities to achieve meaningful local water quality improvements.

The Bedford CAP in conjunction with state efforts aims to reduce nearly 1.8 million pounds of nitrogen and 111,000 pounds of phosphorus annually to local streams and water resources through BMPs implemented by 2025. Additionally, the proposed BMPs will provide significant reductions in sediment (over 170 million pounds reduced annually). Despite the short time frame for BMP implementation, the Bedford CAP is also intended to serve as a long-term blueprint for improved local water quality beyond 2025.

The Bedford CAP is a dynamic and adaptive plan summarizing approaches and tracking implementation efforts for local water quality improvements. The plan is aspirational but realistic. The CAP will be updated on an annual basis and reports will be provided to both local stakeholders and PADEP through 2025 summarizing progress towards identified long-term goals or adjustments to overall approaches. Key goals and objectives of the Bedford CAP are:

- Capturing and memorializing collaborative and cooperative efforts of the many existing entities that have been working towards water quality improvements in Bedford County.
- Outlining realistic scenarios of Best Management Practices (BMPs) implementation balancing theoretical improvements with actual on-the-ground conditions.
- Development of a Catchment Management Database (CMD) to help guide targeting of BMP types and resources within priority small drainage basins.

- CAP encompasses and considers all areas of the county (developed, agricultural, and forested/natural areas).
- Formation of a Steering Committee with experts and leaders across multiple sectors to help guide CAP development and implementation efforts through Action Teams.
- Organization of Action Teams focused on preservation of natural areas, agriculture, riparian buffers, point source pollution, stormwater, and education.

Key Findings

Success of the Bedford CAP implementation process will be dependent upon a combination of funding, regulatory flexibility, innovative techniques, and political will coming together. Key actions and considerations for that led CAP development and proposed for successful implementation include:

- Formation of a steering committee and action teams to guide CAP development and monitor implementation efforts.
- Creative and long-term funding streams.
- Well-organized and monitored set of long-term verification processes ensuring implemented BMPs continue to perform.
- A significant amount of both agricultural and stormwater BMPs currently implemented have not been captured in reductions.
- A significant portion of land use in Bedford County is natural and forested areas, and CAP implementation requires an elevated effort to preserve and/or or expand these areas.
- There are no MS4 permitted municipalities located in Bedford County.

Opportunities for Success

CAP development included the identification of appropriate collaborations, priority areas, and funding needs specific to Bedford County that would improve implementation success while providing extended benefits to the community. Opportunities and considerations that will improve success of CAP implementation include:

- Collaboration with the established groups currently leading strong initiatives in the county (e.g. Western Pennsylvania Conservancy, Trout Unlimited, Ridge Valley Streamkeepers, and so on).
- Potential National Fish and Wildlife Foundation (NFWF) grant program specific to Bedford County for project implementation.
- Coordinated and county-wide riparian buffers implementation and maintenance program.
- Tie stream de-listing efforts to overall CAP implementation efforts.
- Additional reductions immediately realized due to uncaptured implemented BMPs.

- New and innovative stormwater management approaches that achieve both economic development improvements and protect local natural resources.
- Re-imagined education and outreach approach to increase public knowledge and buy-in.
- Foster collaborative arenas focusing on agricultural and urban area boundaries.
- Focus on wastewater treatment facilities, small package systems, and on-lot septic systems across the county.
- Alignment of data management platforms to ensure decision points and approaches by multiple groups complement each other in lieu of competing with one another or duplicating efforts.
- Combine considerations for aquifer protection, source water protection, and sinkhole remediation along with economic development opportunities, transportation initiatives, and agricultural preservation for a more fully integrated approach.
- Alignment of CAP implementation efforts with the Strategic Plan's goals and objectives of the Interstate Commission of the Potomac River Basin.

Challenges

Several opportunities for success and overall Bedford CAP implementation will inherently encounter challenges. How these challenges unfold will determine the level of successful implementation by 2025. Primary hurdles and challenges anticipated or known include:

- Funding for BMP implementation and limited resources in general.
- Continued engagement restrictions as a result of COVID-19.
- Efficient and effective long-term verification processes.
- Adoption of the fertilizer legislation at the state level.
- Public buy-in and extent of local landowner willingness to participate.
- Conflicting and/or inconsistent regulatory requirements.
- Relative short timeframe for BMP implementation to achieve significant nutrient reductions.
- Significant number of on-lot septic systems and/or small flow facilities.
- Enough resources for the capture of ag-related plans into PracticeKeeper.

INITIATIVES

Summary

The Bedford County Clean Water Action Plan includes actions and goals guide the county's clean water efforts for the next several years. These are included in the Bedford County Planning and Progress Templates and the State Programmatic Recommendations. For ease of review, the Priority Initiatives and Action Items they include are summarized below.

Priority Initiative 1: Preservation of Natural Areas

- Action 1.1 Limit future development in current natural areas.
- Action 1.2 Promote and assist implementation of Wood and Pollinator habitat in priority areas
    - Conservation Landscaping – 150 new acres
    - Urban Forest Planting – 200 new acres
- Action 1.3 Promote and assist implementation of Urban Tree Canopy in priority areas
    - Urban Tree Canopy – 5 new acres
- Action 1.4 Promote and assist implementation of Forest, Farm, and Wetland Conservation BMPs in priority areas
    - Farmland Conservation – 3,900 total acres
    - Forest Conservation – 4,000 total acres
    - Wetland Conservation – 160 total acres
- Action 1.5 Explore potential for Bedford-county based preservation and conservation program

Priority Initiative 2: Agriculture

- Action 2.1 Develop a game plan for potential increased efficiencies or nutrient reductions with fertilizer applications
- Action 2.2 Implement and/or capture developed conservation plans into PracticeKeeper
- Action 2.3 Promote and assist implementation of Agricultural Compliance practices in priority areas
    - Soil Conservation and Water Quality Plans (90,000 total acres)
    - Core Nitrogen Nutrient Management (76,000 total acres)
    - Core Phosphorus Nutrient Management (22,000 total acres)
    - Barnyard Runoff Controls (9 new acres)
- Action 2.4 Promote and assist implementation of Soil Health practices in priority areas
    - High Residue Tillage Management (26,000 acres/year)
    - Conservation Tillage Management (10,000 acres/year)
    - Traditional Cover Crops (13,000 acres/year)
    - Traditional Cover Crops with Fall Nutrients (17,000 acres/year)
    - Commodity Cover Crops (1,200 acres/year)
    - Prescribed Grazing (12,000 total acres)
- Action 2.5 Promote and assist implementation of expanded nutrient management practices in priority areas
    - Core Nitrogen Nutrient Management (13,000 acres)
    - Core Phosphorus Nutrient Management (3,500 acres)
    - Nutrient Management-Nitrogen Rate (10,000 acres)
    - Nutrient Management-Phosphorus Rate (10,000 acres)
    - Nutrient Management-Nitrogen Placement (13,000 acres)
    - Nutrient Management-Phosphorus Placement (10,000 acres)
    - Nutrient Management-Nitrogen Timing (14,000 acres)
    - Nutrient Management-Phosphorus Timing (10,000 acres)
- Action 2.6 Promote and assist implementation of improved animal unit practices in priority areas

    - Manure Storage Facilities – 30,000 AUs
    - Dairy Precision Feeding – 14,000 Dairy Cow AUs
    - Manure Transport out of Bedford County – 2,000 dry tons/year
- Action 2.7 Promote and assist implementation of land retirement BMPs
    - Retirement to Ag Open Space – 1,200 acres
- Action 2.8 Assist Riparian Buffers AT with implementation of buffers in agricultural riparian zones in priority areas
- Action 2.9 Expand implementation of cover crops (specific focus on alternative approaches that may count as reductions)

Priority Initiative 3: Riparian Buffers

- Action 3.1 Promote and assist implementation of buffers in agricultural riparian zones in priority areas
    - Forest Buffer (2,300 new acres)
    - Forest Buffer with Streamside Exclusion Fencing (2,000 new acres)
    - Grass Buffer (1,400 new acres)
    - Grass Buffer with Streamside Exclusion Fencing (900 new acres)
- Action 3.2 Promote and assist implementation of buffers in non-agricultural riparian zones in priority areas
    - MS4 Riparian Forest Buffers (40 new acres)
    - Non-MS4 Forest Buffers (140 new acres)
- Action 3.3 Explore model ordinance language for requiring buffers in development projects

Priority Initiative 4: Point Source Pollution

- Action 4.1 Develop or acquire more comprehensive inventory of septic systems in the county
- Action 4.2 Ascertain status of wastewater treatment facilities (including small treatment plants) and corresponding needs for improvements
- Action 4.3 Promote and assist the implementation of septic system improvements
    - Septic Denitrification, Conventional – 100 systems

Priority Initiative 5 Developed/Urban Stormwater

- Action 5.1 Develop model ordinances focused on water quality and stormwater management
- Action 5.2 Develop model ordinances focused on water quality and stormwater management
- Action 5.3 Identify regional project opportunities in select watersheds
- Action 5.4 Fertilizer legislation
- Action 5.5 Pursue regional stream and wetland restoration projects that provide significant additional benefits and reductions
    - Urban Stream Restoration (30,000 new linear feet)
    - Non-urban Stream Restoration (48,000 new linear feet)
    - Wetland Restoration (150 acres)

- Action 5.6 Promote and assist implementation of urban/suburban sector controls for nutrient and sediment reductions
    - Advanced Grey Infrastructure for IDD&E Control (250 acres treated)
    - Impervious Surface Reduction (1 acre)
    - Urban Nutrient Management (3,400 acres)
- Action 5.7 Promote and assist implementation of stormwater control measures that incorporate Low Impact Development (LID) approaches
    - Wet Ponds and Wetlands (40 acres treated)
    - Stormwater Performance Standards-Runoff Reduction (350 acres treated)
    - Bioretention/Raingardens (15 acres treated)
    - Vegetated Open Channels (10 acres treated)
    - Filtering Practices (5 acres treated)
- Action 5.8 Promote and assist implementation BMPs tied to the Dirt & Gravel Road program
    - Outlets only – 5,500 linear feet
    - Driving Surface + Outlets – 8,000 linear feet
    - Driving Surface + Raising the Roadbed – 54,000 linear feet

Priority Initiative 6: Education and Outreach

- Action 6.1 Provide support to other action teams with development of supporting education and outreach materials
- Action 6.2 Develop, implement, and manage a website with CAP supporting information specific to Bedford County
- Action 6.3 Provide oversight and guidance for the Bedford CAP Communications Plan

Programmatic/Policy Recommendations

Bedford County stakeholders identified a set of initial actions necessary to reduce policy and programmatic hurdles for implementation of certain BMPs or supporting activities identified in the CAP:

- Action 1.1 Expand the definition for cover crops to include other successful approaches accepted and working in Bedford County
- Action 1.2 Act 537 Plan funding
- Action 1.3 Watershed/regional permitting approaches

Priority Initiatives Detail

The Bedford CAP Priority Initiatives are centered around a set of considerations, focus areas, and actions intended to directly and indirectly support the implementation of BMPs across the county. The current slate of proposed BMPs captured by these initiatives fall approximately 5% short of planned overall reduction goals. However, the Bedford CAP is a dynamic and adaptive plan over the long run. After an approximate year of implementation activities, the action teams and steering committee will have a greater understanding of which BMPs are more

readily accepted and effective for achieving reductions. In turn, adjustments to proposed BMP implementation rates will be completed to help ensure long-term implementation matches or exceeds the current reduction goal.

The Bedford CAP includes a Catchment Management Database (CMD) found in the appendix. The intent of the CMD is to help all entities involved directly or indirectly with CAP implementation activities with a reference document of known or assumed conditions in catchments to assist with BMP type, amount, and/or location decision points (placement of BMPs where problems truly exist). The current CMD provides a baseline understanding of conditions; and the CMD will continue to be updated, modified, and so on to help all stakeholders.

Development of the Bedford CAP was guided by a Steering Committee with administrative support from the CAP Management Team. An organizational chart is provided in the appendix. The steering committee will provide over-arching guidance for CAP implementation. Additionally, the Steering Committee and/or the CAP Management Team will provide oversight and management of related CAP considerations and functions including, but not limited to:

- Coordination and collaboration arenas for stakeholders
- Programmatic and policy change needs
- "Boots on the ground" in gap areas to identify opportunities for BMP implementation, initiate engagement activities, and ascertain field conditions
- Ensuring or assisting implementation of existing proposed projects and initiatives
- Management of direct implementation funding
- Action Team technical support activities
- CAP and related tools administration and quality control

PRESERVATION OF NATURAL AREAS

- Description
    - An abundance of natural open spaces, forests, and parks can be found across Bedford County. Preservation, conservation, and/or expansion of these areas is a primary objective identified by stakeholders from multiple sectors.
    - Implementation of conservation related BMPs is captured by this initiative.
    - The Preservation of Natural Areas Initiative will be managed by the Preservation of Natural Areas Action Team.
- Focus Areas
    - Existing natural spaces and forest areas across the county
    - Potential development of county-wide preservation program based on successful models and state requirements/allowances
    - Tailoring the recommendations and strategies for preserving PA's natural heritage outlined in a report by PennEnvironment to Bedford County
- Proposed BMPs (Wood and Pollinator Habitat)
    - *Conservation Landscaping (150 new acres)*

        - *The conversion of managed turf into actively maintained perennial meadows, using species that are native to the Chesapeake Bay region.*
    - *Urban Forest Planting (200 new acres)*
        - *Urban forest planning includes any tree planting except those used to establish riparian forest buffers. Trees are planted on pervious areas, and farther than 30'-80' from non-road impervious surfaces and forming contiguous patches greater than one-acre in extent.*
- Proposed BMPs (Urban Tree Canopy)
    - *MS4 Urban Tree Canopy (5 new acres)*
        - *Includes trees over roads and non-road impervious surfaces such as buildings and parking lots; and includes trees within 30'-80' of non-road impervious surfaces where the understory is assumed to be turf grass or otherwise altered through compaction, removal of surface organic material and/or fertilization.*
- Proposed BMPs (Forest, Farm, and Natural Areas Conservation)
    - *Farmland Conservation (3,900 total acres)*
        - *Land use change that simulates rate of farmland conservation based on participation in state programs and land trust activities.*
    - *Forest Conservation (4,000 total acres)*
        - *Land use change that simulates rate of forest conservation based on participation in state programs and land trust activities.*
    - *Wetland Conservation (160 total acres)*
        - *Conserves wetlands based on participation in state programs and land trust activities.*
- Implementation Considerations
    - Challenges
        - Need for flexible preservation approaches in lieu of one size fits all approaches
        - Funding streams
        - Willing landowners to participate
    - Opportunities for Success
        - Baseline interest in expanded preservation and conservation of natural and forested areas already exists in the county
        - Significant presence of existing forests and state parks
    - Resources for Implementation
        - Local and county agencies and governments (BCCD, BCPC, etc.)
        - Non-profit partners (WPC, ACB, etc.)
        - State agencies (DCNR, DEP, etc.)
        - State and national experts/consultants

AGRICULTURE

- Description

  - The agricultural sector will be a key driving factor for significant BMP implementation and long-term success of pollutant reductions.
  - Implementation of agricultural sector BMPs is captured by this initiative.
  - The Agriculture Priority Initiative will be managed by the Agriculture Action Team.
- Focus Areas
  - Contiguous agriculture land use areas, with initial focus on red-coded catchment areas.
  - Reconcile and/or increased understanding of ag-specific Bay model loadings and BMP reductions with on the ground real conditions.
  - Expansion or inclusion of alternative approaches for cover crops.
  - Conservation plan and/or ag-related BMP reductions capture across platforms into PracticeKeeper
  - Explore increased efficiencies with fertilizer applications
  - Long-term verification processes for implemented agricultural BMPs
- Proposed BMPs (Agriculture Compliance)
  - *Soil Conservation and Water Quality Plans (90,000 total acres)*
    - *Plans are a combination of agronomic, management and engineered practices that protect and improve soil productivity and water quality, and to prevent deterioration of natural resources on all or part of a farm. Plans must meet technical standards.*
  - *Core Nitrogen Nutrient Management (76,000 total acres)*
    - *Applications of nitrogen are made in accordance with certain elements as applicable (e.g. land-grant university recommendations, spreader calibration, manure analysis, etc.)*
  - *Core Phosphorus Nutrient Management (22,000 total acres)*
    - *Applications of phosphorus are made in accordance with certain elements as applicable (e.g. land-grant university recommendations, spreader calibration, manure analysis, etc.)*
  - *Barnyard Runoff Controls (9 new acres)*
    - *This includes practices such as roof runoff control, diversion of clean water from entering the barnyard and control of runoff from barnyard areas.*
- Proposed BMPs (Soil Health)
  - *High Residue Tillage Management (26,000 acres/year)*
    - *A conservation tillage routine that involves the planting, growing and harvesting of crops with minimal disturbance to the soil in an effort to maintain at least 60 percent crop residue coverage immediately after planting each crop.*
  - *Conservation Tillage Management (10,000 acres/year)*
    - *A conservation tillage routine that involves the planting, growing and harvesting of crops with minimal disturbance to the soil in an effort to*

maintain 30 to 59 percent crop residue coverage immediately after planting each crop.

- *Traditional Cover Crops (13,000 acres/year)*
  - *A short-term crop grown after the main cropping season to reduce nutrient losses to ground and surface water by sequestering nutrients. This type of cover crop may not receive nutrients in the fall, and may not be harvested in the spring.*
- *Traditional Cover Crops with Fall Nutrients (17,000 acres/year)*
  - *A short-term crop grown after the main cropping season to reduce nutrient losses to ground and surface water by sequestering nutrients. This type of cover crop is planted upon cropland where manure is applied following the harvest of a summer crop and prior to cover crop planting. The crop may not be harvested in the spring.*
- *Commodity Cover Crops (1,200 acres/year)*
  - *A winter cereal crop planted for harvest in the spring which does not receive nutrient applications in the fall. Any winter cereal crop which did receive applications in the fall is not eligible for nutrient reductions.*
- *Prescribed Grazing (12,000 total acres)*
  - *This practice utilizes a range of pasture management and grazing techniques to improve the quality and quantity of the forages grown on pastures and reduce the impact of animal travel lanes, animal concentration areas or other degraded areas.*

- Proposed BMPs (Expanded Nutrient Management)
  - *Core Nitrogen Nutrient Management (13,000 acres)*
    - *Applications of nitrogen are made in accordance with certain elements as applicable (e.g. land-grant university recommendations, spreader calibration, manure analysis, etc.)*
  - *Core Phosphorus Nutrient Management (3,500 acres)*
    - *Applications of phosphorus are made in accordance with certain elements as applicable (e.g. land-grant university recommendations, spreader calibration, manure analysis, etc.)*
  - *Nutrient Management-Nitrogen Rate (10,000 acres)*
    - *Applications of nitrogen are made in accordance to all elements of the Nitrogen Core practice and an additional element from a list of options (e.g. Nitrogen applications are made using variable rate goals)*
  - *Nutrient Management-Phosphorus Rate (10,000 acres)*
    - *Applications of phosphorus are made in accordance to all elements of the Phosphorus Core practice and an additional element from a list of options (e.g. Phosphorus applications are made using variable rate goals)*
  - *Nutrient Management-Nitrogen Placement (13,000 acres)*
    - *Applications of nitrogen are made in accordance to all elements of the Nitrogen Core practice and an additional element from a list of options (e.g. Applications of inorganic nitrogen are injected into the subsurface or incorporated into the soil)*

  - *Nutrient Management-Phosphorus Placement (10,000 acres)*
    - *Applications of phosphorus are made in accordance to all elements of the Phosphorus Core practice and an additional element from a list of options (e.g. Applications of inorganic phosphorus are injected into the subsurface or incorporated into the soil)*
  - *Nutrient Management-Nitrogen Timing (14,000 acres)*
    - *Applications of nitrogen are made in accordance to all elements of the Nitrogen Core practice, and are split across the growing season into multiple applications*
  - *Nutrient Management-Phosphorus Timing (10,000 acres)*
    - *Applications of phosphorus are made in accordance to all elements of the Phosphorus Core practice, and are split across the growing season into multiple applications*
- Proposed BMPs (Manure Storage)
  - *Manure Storage Facilities (30,000 New Animal Units (AUs))*
    - *Any structure designed for collection, transfer and storage of manures and associated wastes generated from the confined portion of animal operations and complies with NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon) practice standards.*
- Proposed BMPs (Dairy Precision Feeding)
  - *Dairy Cow Precision Feed Management (14,000 Dairy Cow Animal Units (AUs))*
    - *Dairy Precision Feeding reduces the quantity of phosphorus and nitrogen fed to livestock by formulating diets within 110% of Nutritional Research Council recommended level in order to minimize the excretion of nutrients without negatively affecting milk production.*

- Proposed BMPs (Integrated System for Elimination of Excess)
  - *Manure Transport out of Bedford County (2,000 dry tons/year)*
    - *Transport of excess manure in or out of a county. Manure may be of any type—poultry, dairy, or any of the animal categories. Transport should only be reported for county to county transport.*
- Proposed BMPs (Land Retirement)
  - *Retirement to Ag Open Space (1,200 acres)*
    - *Converts land area to hay without nutrients. Agricultural land retirement takes marginal and highly erosive cropland out of production by planting permanent vegetative cover such as shrubs, grasses, and/or trees.*
- Implementation Considerations
  - Challenges
    - Farmer buy-in or resistance
    - BMP implementation funding
    - Conservation Plan capture and long-term verification processes
    - Limited technical staff resources
  - Opportunities for Success

        - Transect survey modifications to capture additional information
        - One-on-one farmer engagements
        - Engagement with the National Fish and Wildlife Foundation (NFWF) for a grant program specific to Bedford County for project implementation
    - Resources for Implementation
        - Conservation District staff
        - Local NRCS staff
        - Penn State Extension
        - Farm Bureau
        - Non-profit entities (WPC, ACB, CBF, etc.)
        - Private consultants
        - State and federal agencies

RIPARIAN BUFFERS

- Description
    - The Riparian Buffers Priority Initiative will be managed by the Riparian Buffer Action Team.
    - Riparian buffers in multiple sectors (urban, agricultural, etc.) are captured by this initiative.
- Focus Areas
    - Model ordinance language or modifications to require buffers in new development and re-development projects.
    - Prioritize specific catchments/watersheds and headwaters for BMP implementation (along with agricultural areas).
    - Collaboration and coordination of multiple entities on the ground working to implement buffers across Bedford County.
- Proposed BMPs (Agriculture Riparian Zone)
    - *Forest Buffer (2,300 new acres)*
        - *Linear wooded areas that help filter nutrients, sediments and other pollutants from runoff as well as remove nutrients from groundwater. The recommended buffer width is 100 feet, with a 35 feet minimum width required.*
    - *Forest Buffer with Streamside Exclusion Fencing (2,000 new acres)*
        - *Linear wooded areas with fencing installed to prevent livestock from grazing and trampling the buffer or entering the stream and that helps filter nutrients, sediments and other pollutants from runoff as well as remove nutrients from groundwater. The recommended buffer width is 100 feet, with a 35 feet minimum width required.*
    - *Grass Buffer (1,400 new acres)*
        - *Linear strips of grass or other non-woody vegetation maintained to help filter nutrients, sediment and other pollutants from runoff. The recommended buffer width for buffers is 100 feet, with a 35 feet minimum width required.*

  - *Grass Buffer with Streamside Exclusion Fencing (900 new acres)*
    - *Linear strips of grass or other non-woody vegetation with fencing installed to prevent livestock from grazing and trampling the buffer or entering the stream and is maintained to help filter nutrients, sediment and other pollutants from runoff. The recommended buffer width for buffers is 100 feet, with a 35 feet minimum width required.*
- Proposed BMPs (Urban/Developed Areas Riparian Zone)
  - *MS4 Riparian Forest Buffers (40 new acres)*
    - *Linear wooded areas within MS4 areas that help filter nutrients, sediments and other pollutants from runoff to streams as well as remove nutrients from groundwater. The recommended buffer width is 100 feet, with a 35 feet minimum width required.*
  - *Non-MS4 Forest Buffers (140 new acres)*
    - *Linear wooded areas that help filter nutrients, sediments and other pollutants from runoff to streams as well as remove nutrients from groundwater. The recommended buffer width is 100 feet, with a 35 feet minimum width required.*
- Implementation Considerations
  - Challenges
    - Public buy-in and extent of local landowner willingness to participate.
    - Not enough boots on the ground for outreach and maintenance
    - BMP implementation funding
    - Municipal participation
  - Opportunities for Success
    - Buy-in for buffers on all public and semi-public lands
    - Tie incentives with buffer implementation and maintenance.
    - A growing emphasis on buffers from multiple funding sources
    - CBF's K10 campaign
  - Resources for Implementation
    - Non-profit partners (ACB, CBF, NFWF, etc.)
    - Conservancy partners (Western Pennsylvania Conservancy, etc.)
    - Local and state agencies (BCCD, DCNR, etc.)
    - Penn State Extension
    - Groundwater and sourcewater collaboratives
    - Extensive and compassionate volunteers

POINT SOURCE POLLUTION

- Description
  - There are a significant number of septic systems across Bedford County. Improving operational efficiencies, designs, maintenance activities, etc. would lead to improved conditions and appropriate nutrient reductions.
  - The Point Source Pollution initiative will be managed by the Point Source Pollution Action Team

- Focus Areas
  - Wastewater treatment plants (including small package plants)
  - Expanding the understanding of the extent of septic systems across the county.
- Proposed BMPs (Septic Systems)
  - *Septic Denitrification-Conventional (100 systems)*
    - *The septic system should employ a 50% denitrification unit for pre-treatment of waste with no enhanced in situ treatment system within the soil treatment unit. This BMP should be used only for systems that employ recirculating media filters (RMF) or integrated fixed-film activated sludge (IFAS) pre-treatment technologies, but do not employ enhanced in situ treatment systems.*
- Implementation Considerations
  - Challenges
    - Non-centralized inventory of septic systems
    - Landowner buy-in for system improvements
    - Extent of OLDS enforcement or implementation
  - Opportunities for Success
    - Targeted outreach and subsequent improvements once extent of number of systems in small regions is understood
  - Resources for Implementation
    - Municipal partners
    - Local and state agencies (BCPC, DEP, etc.)
    - Local engineers/consultants

STORMWATER

- Description
  - Bedford County includes urban/suburban, rural, forested, industrial/commercial, and open spaces not related to agricultural operations.
  - Implementation of most non-agricultural sector or non-agricultural related operations BMPs is captured by this initiative.
  - The Stormwater Priority Initiative will be managed by the Stormwater Action Team.
- Focus Areas
  - Developed or suburban areas across the county
  - Potential model ordinance(s)
  - Regional improvements
  - Coordination with other planning efforts (e.g. Hazard Mitigation Plan update)
  - Capture of unreported land development BMPs
  - Dirt & Gravel Roads opportunities
- Proposed BMPs (Stream and Wetland Restoration)
  - *Urban Stream Restoration (30,000 new linear feet)*
    - *Refers to any Natural Channel Design (NCD), Regenerative Stream Channel (RSC), Legacy Sediment Removal (LSR), or other restoration*

project in an urban/suburban environment that meets the qualifying conditions for credits, including environmental limitations and stream functional improvements.

- *Non-urban Stream Restoration (48,000 new linear feet)*
  - *Refers to any Natural Channel Design (NCD), Regenerative Stream Channel (RSC), Legacy Sediment Removal (LSR), or other restoration project in non-urban/suburban environments that meets the qualifying conditions for credits, including environmental limitations and stream functional improvements.*
- *Wetland Restoration (150 acres)*
  - *The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former wetland.*

- Proposed BMPs (Control Measures for Illicit Discharges)
  - *Advanced Grey Infrastructure for IDD&E Control (250 acres treated)*
    - *Illicit discharge detection and elimination credits are only available to localities that show empirical monitoring for each eligible individual discharge.*
- Proposed BMPs (Industrial Stormwater)
  - *Impervious Surface Reduction (1 acre)*
    - *Reducing impervious surfaces to promote infiltration and percolation of storm water runoff.*
- Proposed BMPs (Fertilizer Legislation)
  - *Urban Nutrient Management (3,400 acres)*
    - *The proper management of major nutrients for turf and landscape plants on a property to best protect water quality.*
- Proposed BMPs (Stormwater Control Measures)
  - *Wet Ponds and Wetlands (40 acres treated)*
    - *A water impoundment structure that intercepts stormwater runoff then releases it to an open water system at a specified flow rate. These structures retain a permanent pool and usually have retention times sufficient to allow settlement of some portion of the intercepted sediments and attached nutrients/toxics. There is little or no vegetation living within the pooled area. Outfalls are not directed through vegetated areas prior to open water release.*
  - *Stormwater Performance Standards-Runoff Reduction (350 acres treated)*
    - *The total post-development runoff volume that is reduced through canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration or evapo-transpiration.*
  - *Bioretention/Raingardens (15 acres treated)*
    - *An excavated pit backfilled with engineered media, topsoil, mulch, and vegetation. These are planting areas installed in shallow basins in which the storm water runoff is temporarily ponded and then treated by filtering*

through the bed components, and through biological and biochemical reactions within the soil matrix and around the root zones of the plants.

- *Vegetated Open Channels (10 acres treated)*
  - *Open channels are practices that convey stormwater runoff and provide treatment as the water is conveyed. Runoff passes through either vegetation in the channel, subsoil matrix, and/or is infiltrated into the underlying soils.*
- *Filtering Practices (5 acres treated)*
  - *Practices that capture and temporarily store runoff and pass it through a filter bed of either sand or an organic media. There are various sand filter designs, such as above ground, below ground, perimeter, etc. An organic media filter uses another medium besides sand to enhance pollutant removal for many compounds due to the increased cation exchange capacity achieved by increasing the organic matter.*

- Proposed BMPs (Dirt & Gravel Road Program)
  - *Outlets only (5,500 linear feet)*
    - *Reduce the amount of sediment runoff from dirt and gravel roads through the use of additional Drainage Outlets (creating new outlets in ditchline to reduce channelized flow)*
  - *Driving Surface + Outlets (8,000 linear feet)*
    - *Reduce the amount of sediment runoff from dirt and gravel roads through the use of driving surface aggregates (DSA) such as durable and erosion resistant road surface and through the use of additional Drainage Outlets (creating new outlets in ditchline to reduce channelized flow).*
  - *Driving Surface + Raising the Roadbed (54,000 linear feet)*
    - *Reduce the amount of sediment runoff from dirt and gravel roads through the use of driving surface aggregates (DSA) such as durable and erosion resistant road surface and raising road elevation to restore natural drainage patterns.*
- Implementation Considerations
  - Challenges
    - Municipal buy-in for BMP implementation
    - BMP funding streams
  - Opportunities for Success
    - Large regional stream/floodplain restoration projects providing significant reductions while providing other benefits important to the community (e.g. flood reduction).
  - Resources for Implementation
    - Local engineers/consultants
    - Local and state agencies (BCCD, BCPC, DEP, etc.)
    - Local developers and businesses
    - Non-profit partners (NFWF, TU, etc.)

EDUCATION AND OUTREACH

- Description
  - The overall approach for education and outreach needs to be reimagined with a more effective methodology. General public and farmer buy-in is a consistent hurdle that will need to be overcome to realize long-term success of CAP implementation.
  - Education and outreach efforts compliment the efforts of the other action teams
  - No BMPs for implementation are considered by this initiative.
- Focus Areas
  - Countywide
- Implementation Considerations
  - Challenges
    - Public buy-in and extent of local landowner willingness to participate.
    - Implementation fatigue, "spinning wheels", or loss of interest by the general public or stakeholders.
    - Apathy
  - Opportunities for Success
    - Re-imagined education and outreach approach to increase public knowledge and buy-in.
  - Resources for Implementation
    - Secured website platform.
    - PADEP, NRCS, DCNR, Penn State Extension, etc. provided tools and materials.
    - Existing county-based support materials

REPORTING AND SUPPORT DOCUMENTS

Reporting and support documents included in the CAP are:

- Proposed BMPs for Implementation
    - Outlines specific BMPs and total quantities proposed for implementation and delineated between the agricultural and non-agricultural (developed/other) sectors
- Initiatives Tracking Document(s) (PADEP Planning Template)
    - Summarizes Priority Initiatives in a tracking spreadsheet
    - Tracking documents include:
        - *Preservation of Natural Areas*
        - *Agriculture*
        - *Riparian Buffers*
        - *Point Source Pollution*
        - *Stormwater*
        - *Education & Outreach*
- Programmatic Recommendations Document (PADEP Programmatic Template)
    - Summarizes programmatic and/or policy change recommendations that would reduce challenges or hurdles for successful CAP implementation
- Bedford County Snapshot
    - Executive summary document for the CAP updated periodically to reflect progress, CAP modifications, and so on

Bedford County Agriculture Best Management Practices (BMPs)
Proposed CAP Implementation Rates

Best Management Practice	Amount	Units of Measure	Percent of Total Available Acres
Agriculture Compliance			
Soil Conservation and Water Quality Plans	102,000	Total Acres	78%
Nutrient Management Core N	76,000	Total Acres	63%
Nutrient Management Core P	22,000	Total Acres	17%
Barnyard Runoff Control	9	New Acres	68%
Soil Health			
Tillage Management-High Residue	26,000	Acres/Year	51%
Tillage Management-Conservation	10,000	Acres/Year	19%
Cover Crop Traditional	13,000	Acres/Year	26%
Cover Crop Traditional with Fall Nutrients	17,000	Acres/Year	33%
Cover Crop Commodity	1,200	Acres/Year	N/A
Prescribed Grazing	12,000	Total Acres	50%
Expanded Nutrient Management			
Nutrient Management Core N	13,000	Acres	17%
Nutrient Management Core P	3,500	Acres	7%
Nutrient Management N Rate	10,000	Acres	8%
Nutrient Management P Rate	10,000	Acres	8%
Nutrient Management N Placement	13,000	Acres	10%
Nutrient Management P Placement	10,000	Acres	8%
Nutrient Management N Timing	14,000	Acres	12%
Nutrient Management P Timing	10,000	Acres	8%
Manure Storage Facilities			
Manure Storage Facilities	30,000	New AU's	80%
Dairy Precision Feeding			
Dairy Cow Precision Feed Management	14,000	Dairy Cow AU's	70%
Integrated System for Elimination of Excess			
Manure Transport out of Bedford County	2,000	Dry Tons/Year	N/A
Agriculture Riparian Zone			
Forest Buffer	2,300	New Acres	20%
Forest Buffer-Streamside with Exclusion Fencing	2,000	New Acres	17%
Grass Buffer	1,400	New Acres	13%
Grass Buffer-Streamside with Exclusion Fencing	900	New Acres	3%
Land Retirements			
Retirement to Ag Open Space	1,200	Acres	N/A

The agriculture BMP implementation rates provided above are based on a combination of the state recommendations identified in the Chesapeake Bay Phase 3 Watershed Implementation Plan (WIP) and the Bedford Countywide Action Plan (CAP) Steering Committee. The BMPs and rates will serve as a guide during the implementation phase and may be adjusted or changed based on new opportunities, success rates, and measured progress.

Bedford County Stormwater Best Management Practices (BMPs)
Proposed CAP Implementation Rates

Best Management Practice	Amount	Units of Measure	Percent of Total Available Acres
Urban/Developed Areas Riparian Zone			
MS4 Riparian Forest Buffers	40	New Acres	1%
Non-MS4 Forest Buffers	220	New Acres	3%
Woods and Pollinator Habitat			
Conservation Landscaping	150	New Acres	N/A
Urban Forest Planting	200	New Acres	N/A
Urban Tree Canopy			
MS4 Urban Tree Canopy	5	New Acres	N/A
Forest, Farm, and Natural Areas Conservation			
Farmland Conservation	3,900	Total Acres	N/A
Forest Conservation	4,000	Total Acres	N/A
Wetland Conservation	160	Total Acres	N/A
Stream and Wetland Restoration			
Urban Stream Restoration	30,000	New Linear Feet	N/A
Non-urban Stream Restoration	48,000	New Linear Feet	N/A
Wetland Restoration	150	Acres	N/A
Control Measures for Illicit Discharges			
Advanced Grey Infrastructure IDD&E Control	250	Acres Treated	<1%
Industrial Stormwater			
Impervious Surface Reduction	1	Acres	N/A
Fertilizer Legislation			
Urban Nutrient Management	3,400	Acres	9%
Septic Systems			
Conventional Septic Denitrification	100	Systems	N/A
Stormwater Control Measures			
Wet Ponds and Wetlands	40	Acres Treated	N/A
Stormwater Performance Standard-Runoff Reduction	350	Acres Treated	N/A
Bioretention/Raingardens	15	Acres Treated	N/A
Vegetated Open Channels	10	Acres Treated	N/A
Filtering Practices	5	Acres Treated	N/A
Dirt & Gravel Road Program			
Outlets Only	5,500	Linear Feet	N/A
Driving Surface + Outlets	8,000	Linear Feet	N/A
Driving Surface + Raising the Roadbed	54,000	Linear Feet	N/A

The stormwater BMP implementation rates provided above are based on a combination of the state recommendations identified in the Chesapeake Bay Phase 3 Watershed Implementation Plan (WIP) and the Bedford Countywide Action Plan (CAP) Steering Committee. The BMPs and rates will serve as a guide during the implementation phase and may be adjusted or changed based on new opportunities, success rates, and measured progress.

Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template

Green - action has been completed or is moving forward as planned **Yellow - action has encountered minor obstacles** **Red - action has not been taken or has encountered a serious barrier**

Action #	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available				Resources Needed			
							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 1: Preservation of Natural Areas														
1.1	Limit future development in current natural areas		County, Municipalities, PNA Action Team	Countywide	Late 2020 and beyond	Municipal buy-in								
1.2	Promote and assist implementation of Wood and Pollinator Habitat in priority areas	*Conservation Landscaping – 150 new acres* *Urban Forest Planting – 200 new acres*	BCCD, BCPC, non-profits	Countywide with initial focus on priority catchments	Late 2020 – 2025 (and beyond)	Tight timeframe for significant BMP implementation Long-term verification processes	Local consultants/ engineers Municipalities BCCD Non-profits (WPC, etc.)		NFWF, GG(DEP), EPA, DCNR Municipal.				Full BMP implementation dollars (~$225,000)	
1.3	Promote and assist implementation of Urban Tree Canopy in priority areas	*Urban Tree Canopy – 5 new acres*	Municipalities	Countywide with initial focus on priority catchments	Late 2020 – 2025 (and beyond)	Build on existing urban forest areas	Local consultants/ engineers Municipalities		NFWF, GG(DEP), EPA, DCNR Municipal					
1.4	Promote and assist implementation of Forest, Farm, and Wetland Conservation BMPs in priority areas	*Farmland Conservation – 3,900 total acres* *Forest Conservation – 4,000 total acres* *Wetland Conservation – 160 total acres*	County, BCCD, Municipalities, PNA Action Team, non-profits (WPC, etc.)	Countywide with initial focus on priority catchments	Late 2020 – 2025 (and beyond)	Tight timeframe for significant BMP implementation	Local consultants/ engineers Municipalities BCCD Non-profits (WPC, etc.) County		NFWF, GG(DEP), EPA, DCNR Municipal				Full BMP implementation dollars (~$725,000)	

1.5	Explore potential for Bedford County-based preservation and conservation program		PNA Action Team, BCPC	Countywide	Game plan by late 2020 (with imp. to follow)	Resistance and/or lack of centralized program	State and local agencies and reports				Legal considerations			

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3. Outputs and outcomes – both short and long-term. These are the priority initiatives identified by each county. The performance targets are the intermediate indicators that will measure progress.

4. Implementation challenges – any potential issues or roadblocks to implementation that could impede outputs and outcomes.

Asterisk: Place an asterisk next to the action number(s) for action items that appear in both the County Planning and Progress Template and the Programmatic Recommendations Template.

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Description = What. This may include programs that address prevention, education, or as specific as planned BMP installations that will address the Priority Initiative. A programmatic or policy effort will require some ability to quantify the anticipated benefits which will allow calculation of the associated nutrient reductions.

Performance Target = How. This is an extension of the Description above. The Performance Target details the unique BMPs that will result from implementation of the Priority Initiative and serves as a benchmark to track progress in addressing the Priority Initiative. Performance Targets may be spread across multiple Responsible Parties, Geographies, and Timelines based on the specifics of the Initiative.

Responsible Party(ies) = Who. This is/are the key partner(s) who will implement the action items though outreach, assistance or funding, and who will be responsible for delivering the identified programs or practices.

Geographic Location = Where. This field identifies the geographic range of the planned implementation. This could extend to the entire county or down to a small watershed, based on the scale of the Priority Initiative, range of the Responsible Party, or planned funding/resources. *NOTE: Resource limitations alone should not limit potential implementation as additional funding may become available in the future.*

Expected Timeline = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

Resources Available: Technical & Funding = This field will note technical and financial resources secured/available to implement the program (Description). This is the total of the resources identified in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if available, to each action.

Resources Needed: Technical & Funding = This field will note technical and financial resources needed/outstanding to implement the program (Description). This is the total of the additional resources projected and identified as needed in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if possible, to each action.

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Action #	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available				Resources Needed			
							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 2: Agriculture														
2.1	Develop a game plan for potential increased efficiencies or nutrient reductions with fertilizer applications		Ag Action Team, local dealers, farmers	Countywide	Game plan by early 2021	Per the county technical toolbox, the majority of nitrogen applied to agricultural land is via fertilizers (70%)	Local dealers Penn State, BCCD							
2.2	Implement and/or capture developed conservation plans into PracticeKeeper		BCCD, NRCS	Countywide	Plan developed by end of 2020; initial imp. In 2021	Ensures capture of implemented BMPs for long-term verification processes Potential time and resource limitations for plan entry	Local agencies	BCCD, NRCS			Staff for plan entry		Funding for staff for plan entry	
2.3	Promote and assist implementation of Agricultural Compliance practices in priority areas	*Soil Conservation and Water Quality Plans (90,000 total acres)* *Core Nitrogen Nutrient Management (76,000 total acres)* *Core Phosphorus Nutrient Management (22,000 total acres)* *Barnyard Runoff Controls (9 new acres)*	Ag Action Team, BCCD, NRCS, Penn State, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas (or where current initiatives are underway)	2021 – 2025 (and beyond)	Farmer resistance or buy-in Resources to write plans	Local experts and agencies	BCCD, NRCS, consultants	EQIP State Reimb Program	NRCS DEP			Full BMP implementation dollars (~$2.0 million)	

2.4	Promote and assist implementation of Soil Health practices in priority areas	*High Residue Tillage Management (26,000 acres/year)* *Conservation Tillage Management (10,000 acres/year)* *Traditional Cover Crops (13,000 acres/year)* *Traditional Cover Crops with Fall Nutrients (17,000 acres/year)* *Commodity Cover Crops (1,200 acres/year)* *Prescribed Grazing (12,000 total acres)*	Ag Action Team, BCCD, NRCS, Penn State, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas (or where current initiatives are underway)	2021 – 2025 (and beyond)	Farmer resistance or buy-in Modification of official definitions would be helpful	Local experts and agencies	BCCD, NRCS, consultants	EQIP	NRCS			Full BMP implementation dollars (~$1.89 million)	
2.5	Promote and assist implementation of expanded nutrient management practices in priority areas	*Core Nitrogen Nutrient Management (13,000 acres)* *Core Phosphorus Nutrient Management (3,500 acres)* *Nutrient Management-Nitrogen Rate (10,000 acres)* *Nutrient Management-Phosphorus Rate (10,000 acres)* *Nutrient Management-Nitrogen Placement (13,000 acres)* *Nutrient Management-Phosphorus Placement (10,000 acres)* *Nutrient Management-Nitrogen Timing (14,000 acres)* *Nutrient Management-Phosphorus Timing (10,000 acres)*	Ag Action Team, BCCD, NRCS, Penn State, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas	2021 – 2025 (and beyond)	Farmer resistance or buy-in	Local experts and agencies	BCCD, NRCS, consultants	EQIP	NRCS			Full BMP implementation dollars (~$2.92 million)	

2.6	Promote and assist implementation of improved animal unit practices in priority areas	*Manure Storage Facilities – 30,000 AUs* *Dairy Precision Feeding – 14,000 Dairy Cow AUs* *Manure Transport out of Bedford County – 2,000 dry tons/year*	Ag Action Team, BCCD, NRCS, Penn State, farmers, manure haulers/ brokers, ag retail entities	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas	2021 – 2025 (and beyond)	Farmer resistance or buy-in	Local experts and agencies	BCCD, NRCS, consultants, haulers, contractors	EQIP	NRCS			Full BMP implementation dollars (~$3.6 million)	
2.7	Promote and assist implementation of land retirement BMPs	*Retirement to Ag Open Space – 1,200 acres*	County, BCCD, landowners	Countywide (where appropriate)	2021 - 2025	Capture lands already retired							Full BMP implementation dollars (~$203,000)	
2.8	Assist Riparian Buffers AT with implementation of buffers in agricultural riparian zones in priority areas		RB Action Team, Ag Action Team	Countywide	2021- 2025 (and beyond)									
2.8	Expand implementation of cover crops (specific focus on alternative approaches that may count as reductions)		Ag Action Team	Countywide	Late 2020 – mid 2021	Limited definition of cover crops and what would count as a reduction	BMP Quick Reference Guide Local experts and agencies	BCCD, NRCS, consultants, Penn State, DEP, Capital RC&D			Alternative approaches validation	Penn State, NRCS, Capital RC&D		

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Expected Timeline = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 3: Riparian Buffers														
3.1	Promote and assist implementation of buffers in agricultural riparian zones in priority areas	*Forest Buffer (2,300 new acres)* *Forest Buffer with Streamside Exclusion Fencing (2,000 new acres)* *Grass Buffer (1,400 new acres)* *Grass Buffer with Streamside Exclusion Fencing (900 new acres)*	RB Action Team, BCCD, non-profit partners, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas	2021 – 2025 (and beyond)	Farmer resistance or buy-in	Local experts and agencies, non-profit partners (WPC, etc.)	BCCD, NRCS, consultants, non-profits	EQIP NFWF	NRCS			Full BMP implementation dollars (~$2.07 million)	
3.2	Promote and assist implementation of buffers in non-agricultural riparian zones in priority areas	*MS4 Riparian Forest Buffers (40 new acres)* *Non-MS4 Forest Buffers (140 new acres)*	BCCD, non-profits, municipalities	Countywide with initial focus on priority catchments	Late 2020 – 2025 (and beyond)	Tight timeframe for significant BMP implementation Long-term verification processes	Local consultants/ engineers Municipalities BCPC Non-profits (WPC, ACB, etc.)		NFWF, GG(DEP), EPA, DCNR Municipal.				Full BMP implementation dollars (~$75,000)	
3.3	Explore model ordinance language for requiring buffers in development projects		BCPC, RB Action Team	countywide	Game plan by late 2020 (followed by imp.)									

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Expected Timeline = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 4: Point Source Pollution														
4.1	Develop or acquire more comprehensive inventory of septic systems in the county		PSP Action Team, BCPC, municipalities	Countywide	Game plan by early 2021 (followed by imp.)	Scattered information and data may take time to centralize								
4.2	Ascertain status of wastewater treatment facilities (including small treatment plants) and corresponding needs for improvements		PSP Action Team, BCPC, municipalities	Countywide	Game plan by late 2020 (followed by imp.)	Additionally determine Act 537 plan update needs	Local consultants/ engineers WWTP operators						537 plan update funds	
4.3	Promote and assist the implementation of septic system improvements	*Septic Denitrification, Conventional – 100 systems*	PSP Action Team, BCPC, municipalities	Countywide with initial focus on priority catchments	Mid 2021-2025 (and beyond)	Funding for improvements, homeowner resistance	Local consultants/ engineers						BMP implementation dollars (~$120,000)	

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Expected Timeline = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

Resources Available: Technical & Funding = This field will note technical and financial resources secured/available to implement the program (Description). This is the total of the resources identified in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if available, to each action.

Resources Needed: Technical & Funding = This field will note technical and financial resources needed/outstanding to implement the program (Description). This is the total of the additional resources projected and identified as needed in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if possible, to each action.

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Action #	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available				Resources Needed			
							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 5: Developed/Urban Stormwater														
5.1	Develop model ordinances focused on water quality and stormwater management		SW Action Team, BCPC, municipalities	Countywide	Game plan by early 2021 (followed by imp.)	Focus on preservation and long-term maintenance of implemented BMPs Updated SWMO(s) Floodplain management Municipal resistance	Local consultants/ engineers BCPC						Ordinance development funding	
5.2	Capture unreported land development BMPs		PADEP	Countywide	On-going	Reconciliation of toolbox quantities with on-the-ground conditions								
5.3	Identify regional project opportunities in select watersheds		LSI, BCCD	NFWF priority watersheds	Late 2020-mid-2021	Focus on stream restoration, streambank stabilization, dirt & gravel roads opps.	BCCD, LSI		Awarded grant (~$47k)	NFWF				
5.4	Fertilizer legislation		State			For turf grass areas								
5.5	Pursue regional stream and wetland restoration projects that provide significant additional benefits and reductions	*Urban Stream Restoration (30,000 new linear feet)* *Non-urban Stream Restoration (48,000 new linear feet)* *Wetland Restoration (150 acres)*	TU, BCCD, WPC, watershed groups, non-profits, municipalities	Countywide	Current – 2025 (and beyond)	TU project (in Bedford) WPC projects (*RB AT mostly)* Tie into planned Hazard Mitigation Plan update efforts	Local consultants/ engineers Non-profits (TU, etc.)		NFWF, GG, EPA, DCNR				Full BMP implementation dollars (~$23.5 million)	

5.6	Promote and assist implementation of urban/suburban sector controls for nutrient and sediment reductions	*Advanced Grey Infrastructure for IDD&E Control (250 acres treated)* *Impervious Surface Reduction (1 acre)* *Urban Nutrient Management (3,400 acres)*	Municipalities	Countywide with initial focus on urban communities and priority catchments	Late 2020 – 2025 (and beyond)	Urban nutrient management is dependent on fertilizer legislation Tight timeframe for significant BMP implementation Long-term verification processes No MS4 communities in Bedford County	Local consultants/ engineers Municipalities		NFWF, GG, EPA, munic.				Full BMP implementation dollars (~$17,000)	
5.7	Promote and assist implementation of stormwater control measures that incorporate Low Impact Development (LID) approaches	*Wet Ponds and Wetlands (40 acres treated)* *Stormwater Performance Standards-Runoff Reduction (350 acres treated)* *Bioretention/Raingardens (15 acres treated)* *Vegetated Open Channels (10 acres treated)* *Filtering Practices (5 acres treated)*	SW Action Team, BCPC, municipalities	Countywide with initial focus on priority catchments	Late 2020 – 2025 (and beyond)	Tight timeframe for significant BMP implementation Long-term verification processes Partially tied to capture of unreported BMPs	Local consultants/ engineers		NFWF, GG(DEP), EPA, DCNR, developers				Full BMP implementation dollars (~$600,000)	
5.8	Promote and assist implementation BMPs tied to the Dirt & Gravel Road program	*Outlets only – 300 linear feet* *Driving Surface + Outlets – 1,000 linear feet*	BCCD, BCPC, SW Action Team, municipalities	Countywide	2021 – 2025 (and beyond)	Stabilization of rural areas with WQ improvements	BCCD Local engineers		Full BMP imp. dollars (~$1,000)	D&GR program				

Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template

Each county-based local area will use this template to identify:

1. Inputs – These are both existing and needed resources, public and private, to implement the identified priority initiative. These include both technical and financial resources, such as personnel, supplies, equipment and funding.
2. Process – what is each partner able to do where and by when. These are the action items listed under each priority initiative.
3. Outputs and outcomes – both short and long-term. These are the priority initiatives identified by each county. The performance targets are the intermediate indicators that will measure progress.
4. Implementation challenges – any potential issues or roadblocks to implementation that could impede outputs and outcomes.

Asterisk: Place an asterisk next to the action number(s) for action items that appear in both the County Planning and Progress Template and the Programmatic Recommendations Template.

For each Priority Initiative or Program Element: Use the fields, as defined below, to identify the inputs and the process that will be followed to achieve each priority initiative. This is the “who, what, where, when and how” of the plan:

Description = What. This may include programs that address prevention, education, or as specific as planned BMP installations that will address the Priority Initiative. A programmatic or policy effort will require some ability to quantify the anticipated benefits which will allow calculation of the associated nutrient reductions.

Performance Target = How. This is an extension of the Description above. The Performance Target details the unique BMPs that will result from implementation of the Priority Initiative and serves as a benchmark to track progress in addressing the Priority Initiative. Performance Targets may be spread across multiple Responsible Parties, Geographies, and Timelines based on the specifics of the Initiative.

Responsible Party(ies) = Who. This is/are the key partner(s) who will implement the action items though outreach, assistance or funding, and who will be responsible for delivering the identified programs or practices.

Geographic Location = Where. This field identifies the geographic range of the planned implementation. This could extend to the entire county or down to a small watershed, based on the scale of the Priority Initiative, range of the Responsible Party, or planned funding/resources. *NOTE: Resource limitations alone should not limit potential implementation as additional funding may become available in the future.*

Expected Timeline = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

Resources Available: Technical & Funding = This field will note technical and financial resources secured/available to implement the program (Description). This is the total of the resources identified in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if available, to each action.

Resources Needed: Technical & Funding = This field will note technical and financial resources needed/outstanding to implement the program (Description). This is the total of the additional resources projected and identified as needed in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if possible, to each action.

Potential Implementation Challenges/Issues = This field will note challenges and issues that may delay program implementation (Description).

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Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template

Green - action has been completed or is moving forward as planned **Yellow - action has encountered minor obstacles** **Red - action has not been taken or has encountered a serious barrier**

Action #	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available				Resources Needed			
							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 6: Education and Outreach														
6.1	Provide support to other action teams with development of supporting education and outreach materials		Educ. Action Team	Countywide	On-going	Consolidate existing materials (incl. CAP-specific materials developed by DEP) Build coalitions with existing partners and entities (WPC, ACB, etc.)								
6.2	Develop, implement, and manage a website with CAP supporting information specific to Bedford County		Educ. Action Team, CAP Coord.	Countywide	Late 2021 and beyond		Website secured							
6.3	Provide oversight and guidance for the Bedford CAP Communications Plan		Educ. Action Team, CAP Coord.	Countywide	Game plan by early 2021 (followed by imp.)	Develop "re-imagined" outreach approaches and messages Determine additional needs, focus areas, etc. for improved messaging								

Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template

Each county-based local area will use this template to identify:

1. Inputs – These are both existing and needed resources, public and private, to implement the identified priority initiative. These include both technical and financial resources, such as personnel, supplies, equipment and funding.
2. Process – what is each partner able to do where and by when. These are the action items listed under each priority initiative.
3. Outputs and outcomes – both short and long-term. These are the priority initiatives identified by each county. The performance targets are the intermediate indicators that will measure progress.
4. Implementation challenges – any potential issues or roadblocks to implementation that could impede outputs and outcomes.

Asterisk: Place an asterisk next to the action number(s) for action items that appear in both the County Planning and Progress Template and the Programmatic Recommendations Template.

For each Priority Initiative or Program Element: Use the fields, as defined below, to identify the inputs and the process that will be followed to achieve each priority initiative. This is the "who, what, where, when and how" of the plan:

Description = What. This may include programs that address prevention, education, or as specific as planned BMP installations that will address the Priority Initiative. A programmatic or policy effort will require some ability to quantify the anticipated benefits which will allow calculation of the associated nutrient reductions.

Performance Target = How. This is an extension of the Description above. The Performance Target details the unique BMPs that will result from implementation of the Priority Initiative and serves as a benchmark to track progress in addressing the Priority Initiative. Performance Targets may be spread across multiple Responsible Parties, Geographies, and Timelines based on the specifics of the Initiative.

Responsible Party(ies) = Who. This is/are the key partner(s) who will implement the action items though outreach, assistance or funding, and who will be responsible for delivering the identified programs or practices.

Geographic Location = Where. This field identifies the geographic range of the planned implementation. This could extend to the entire county or down to a small watershed, based on the scale of the Priority Initiative, range of the Responsible Party, or planned funding/resources. *NOTE: Resource limitations alone should not limit potential implementation as additional funding may become available in the future.*

Expected Timeline = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

Resources Available: Technical & Funding = This field will note technical and financial resources secured/available to implement the program (Description). This is the total of the resources identified in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if available, to each action.

Resources Needed: Technical & Funding = This field will note technical and financial resources needed/outstanding to implement the program (Description). This is the total of the additional resources projected and identified as needed in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if possible, to each action.

Potential Implementation Challenges/Issues = This field will note challenges and issues that may delay program implementation (Description).

Phase 3 Watershed Implementation Plan (WIP) Programmatic Recommendations Template									
Action #	**Description**	**Performance Target(s)**	**Expected Timeline**	**Potential Implementation Challenges**	**Potential Recommendations on Improvement**	**Resources Needed**			
						Technical	**Suggested Source**	**Financial**	**Suggested Source**
Programmatic/Policy Recommendations: Bedford County									
1.1	Expand the definition for cover crops to include other successful approaches accepted and working in Bedford County		2021	Limited definitions for cover crops approaches	Ability to expand the definition(s) and conditions for cover crop timing, harvesting methods, etc. to encompass additional approaches observed that work at the local level and should count as reductions				
1.2	Act 537 Plan funding		2021 and beyond		Dedicated funding stream for continuous 537 plan updates			$$$	
1.3	Watershed/regional permitting approaches		Immediate		Alleviates administrative hurdles for implementation of similar projects or projects in a confined area				

Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template

Each county-based local area will use this template to identify:

1. **Inputs** – The statewide and/or federal policies, regulations, initiatives, programs, funding and resources that will help your county meet its goal.
2. **Process** – What are the changes that need to occur for the county to be successful in the process? These are the action items listed under each priority recommendation.
3. **Outputs and outcomes** – Both short and long-term. These are the programmatic recommendations identified by each county. Performance targets identify your county's needed change in order to meet your county goal.
4. **Implementation challenges** – Any potential issues or roadblocks to implementation that could impede outputs and outcomes

Asterisk: Place an asterisk next to the action number(s) for action items that appear in both the County Planning and Progress Template and the Programmatic Recommendations Template.

For each Programmatic Recommendation: Use the fields, as defined below, to identify the inputs and the process that will be followed to achieve each priority initiative. This is the "who, what, where, when and how" of the plan:

Description = What. This may include programs that address prevention, education, or changes to the current policy and regulation. A programmatic or policy effort will allow for the completion of cation items listed in the Planning and Progress Template.

Performance Target = How. This is an extension of the Description above. The performance target details the programmatic change that will enable you to complete the action items identified in the Planning and Progress Template. This can be a further description of the challenge to implementation from the Planning and Progress Template.

Expected Timeline = When. Provide the needed completion date for the programmatic recommendation that will assist your county in meeting its goal. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

Potential Implementation Challenges = This field will note challenges and issues that may delay program implementation (Description). Potential challenges may relate to your county Planning and Progress Template.

Potential Recommendations on Improvement = This field will note recommendations on how to change or improve the program (Description).

Resources Needed: Technical & Funding = This field will note technical and financial resources needed/outstanding to implement the program (Description).

APPENDIX

Bedford CAP Organizational Chart
Projects and Initiatives Highlights
Catchment Management Database

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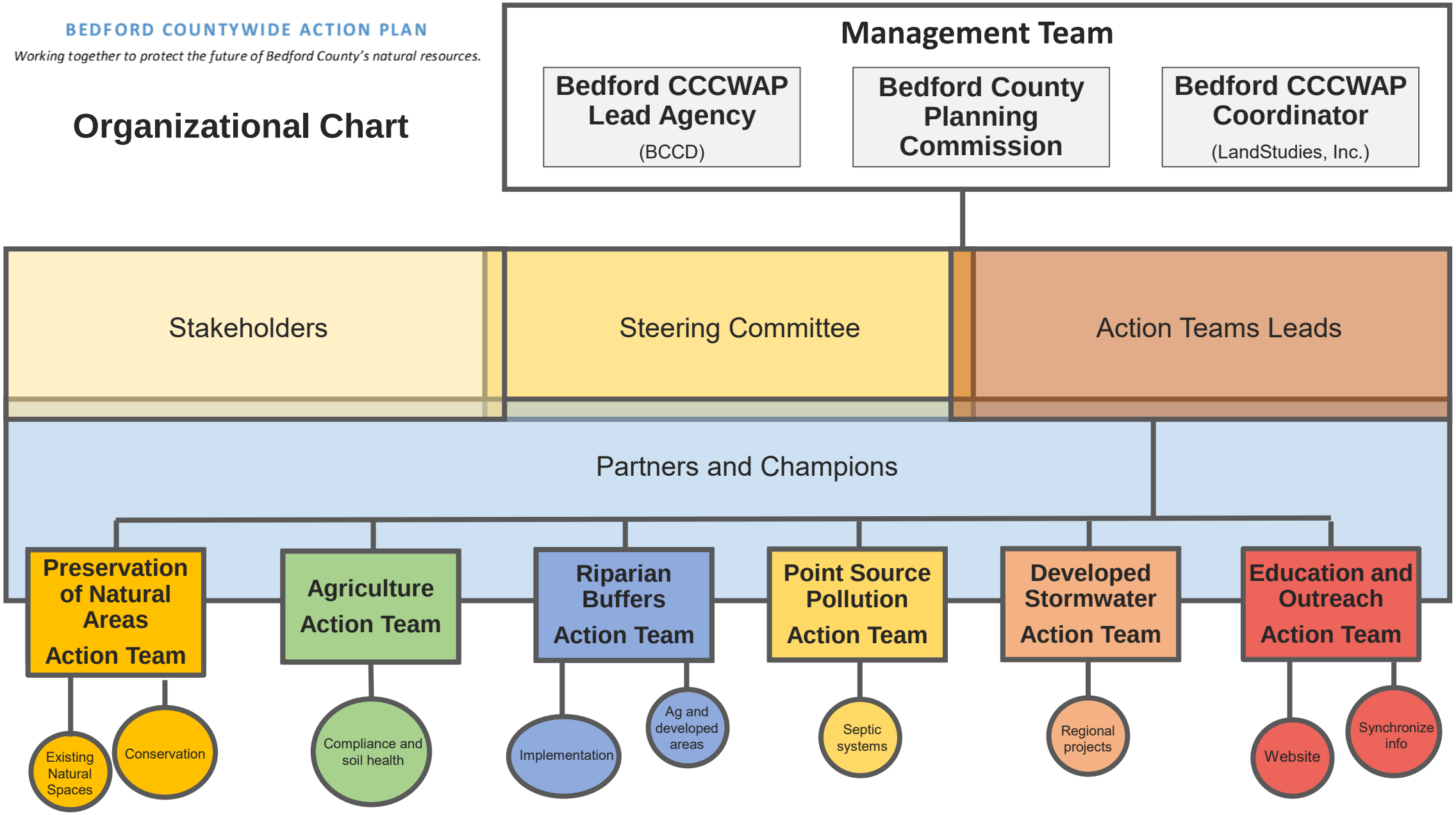
BEDFORD COUNTYWIDE ACTION PLAN

Working together to protect the future of Bedford County's natural resources.

Organizational Chart



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PROJECTS AND INITATIVES HIGHLIGHTS

- ***Bedford County Watershed Action Plan Development***
  - National Fish & Wildlife Foundation (NFWF) funded project (Small Watershed Grant) to conduct sub-watershed assessments of Spicer Brook ("Headwaters Raystown Branch Juniata River), Cumberland Valley Run (Raystown Branch Juniata River), and Beaverdam Creek and their related tributaries in Bedford County, PA to determine excessive sources of nutrients and sediment and provide recommendations for restoration or improvements within the sub-watersheds with the goal of identifying Best Management Practices (BMPs) for implementation to help achieve goals and objectives of the Bedford CAP. Project deliverables will include Watershed Action Plans (WAPs) that will identify priority restoration sites and the associated concept master plans for those sites.
  - Project includes "boots-on-the-ground" assessments for large regional stream/floodplain restoration projects.

- ***Trout Unlimited Streambank Stabilization and Restoration regional project***
  - Significant planned stream restoration and streambank stabilization project encompassing Bedford Borough and Bedford Township

- ***Western PA Conservancy (WPC) Riparian Plantings, Instream Habitat & Stabilization, and Agricultural Riparian Zone Fencing/Crossings Initiative***
  - Continued efforts across Bedford County to build upon implemented BMPs through working with local landowners and local groups.
  - To date, WPC has spearheaded efforts resulting in nearly 80,000 linear feet of riparian zone fencing, nearly 50 crossings, improved habitat and stabilization of over 5,400 linear feet of stream, over 9 acres of new riparian buffers, and miscellaneous agriculture improvements (manure storage facilities, barnyard controls, etc.).

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CATCHMENT MANAGEMENT DATABASE (CMD)

Bedford Countywide Action Plan (Bedford CAP)

Purpose: Organized database of captured information and data delineated by USGS catchments across Bedford County to assist with stakeholder guidance, prioritization, and BMP identification with the intent to balance theoretical nutrient and sediment reductions with real-world improvements addressing legitimate and localized water quality related problems.

Database Organization: Excel-based spreadsheet with the following information:

- Identifier (HUC-10 watershed-HUC-12 watershed-unique number assignment)
- Name (general reference based on geographic locale)
- Predominant Land Use (ag vs developed vs natural)
- Impaired Streams (Yes or No)
- General Geologic Classifications (freestone vs limestone)
- Hydrogeomorphic Classifications (ML, VRC, etc.)
- Urbanized Area (Yes or No)
- Sediment Loading Categorization (Red-Yellow-Green light rating system)
- Nitrogen Loading Categorization (Red-Yellow-Green light rating system)
- Phosphorus Loading Categorization (Red-Yellow-Green light rating system)
- WQ Data (Yes or No)
- WQ Data Adjustment Factor (TBD)
- Qualitative Adjustment Note (Varies)
- Qualitative Adjustment Factor (TBD)
- Catchment Score (*weighted system based on categorization and adjustment factors)*
    - Lower score equates to poor conditions relative to other catchments and higher prioritization for BMP implementation

Red-Yellow-Green Light Rating System (scoring)

- Red = significantly impaired; Yellow = vulnerable, fair; Green = optimal conditions
- Scoring:
    - Green: 4.50 – 5.00
    - Yellow: 2.51 – 4.49
    - Red: 0.00 – 2.50

Incremental Loadings vs. Mass Loadings

- Most recent USGS SPARROW incremental and mass loading data used to generate maps and score catchments.
- Mass Loading refers to the pollutant load “moving through” the stream reaches of the catchment (influenced by immediate and upstream areas)
- Incremental Loading refers to pollutant loadings from immediate areas in the catchment

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BEDFORD COUNTY CATCHMENT MANAGEMENT DATABASE

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Bobs Creek	Bobs Creek-Dunning Creek (20503030202)	030202-1	Headwaters Bobs Creek	Bobs Creek, and unnamed tributaries	Forest	No	Shale, siltstone	APS, VRS	No													
		030202-2	Rhodes Run	Ciana Run, Rhodes Run	Forest	No	Siltstone	VRS	No													
		030202-3	Wallacks Branch	Wallacks Branch and unnamed tributaries	Forest	No	Shale, siltstone	APS, VRS	No													
		030202-4	Wallacks Branch-Bobs Creek	Bobs Creek, and unnamed tributaries	Forest	No	Siltstone	VRS	No													
		030202-5	Deep Hollow Run-Pavia Run	Deep Hollow Run, Pavia Run	Forest	No	Siltstone	VRS	No													
		030202-6	Bobs Creek - Upper middle watershed	Bobs Creek, and unnamed tributaries	Forest	No	Siltstone	VRS	No													
		030202-7	Bobs Creek - Upper middle watershed	Bobs Creek, and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS	No													
		030202-8	Bobs Creek - Upper middle watershed	UNT Mud Run	Forest, Agriculture	No	Shale, sandstone, siltstone	VRC, VRS	No													
		030202-9	Bobs Creek - Lower watershed	Scrubgrass Creek	Forest, Agriculture	No	Shale	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Sideling Hill Creek	Crooked Run - Sideling Hill Creek (20700030404)	030404-1	Headwaters Sideling Hill Creek	Sideling Hill Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, shale	VRS	No													
		030404-2	Sideling Hill Creek	Sideling Hill Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS	No													
		030404-3	Headwaters to Crooked Run	Crooked Run and unnamed tributaries	Forest, Agriculture	No	Sandstone	VRS	No													
		030404-4	Lower Crooked Creek	Crooked Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Wills Creek	Shaffers Run - Wills Creek (20700020506)		Somerset County - Headwaters Shaffers Run 1	Noin Bedford County	Forest	N/A	Siltstone	VRS	No													
			Somerset County - Headwaters Shaffers Run 2	Noin Bedford County	Forest	N/A	Siltstone, conglomerate	VRS / APS	No													
			Somerset County - Headwaters Wills Creek 1	Noin Bedford County	Forest	N/A	Shale, conglomerate	APS	No													
			Somerset County - Headwaters Wills Creek 2	Noin Bedford County	Forest	N/A	Shale, conglomerate	APS	No													
		020506-1	Gooseberry Run - Headwaters Wills Creek	Gooseberry Run, Wills Creek and unnamed tributaries	Forest	No	Shale, siltstone, conglomerate	VRS/ APS	No													
		020506-2	Headwaters - Unnamed Tributaries to Wills Creek	Unnamed tributaries to Wills Creek	Forest, AgricultureDeveloped	No	Shale, siltstone, sandstone	VRS/ VRC	No													
		020506-3	Headwaters - Mainstem Wills Creek	Wills Creek and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS/ VRC	No													
		020506-4	Thompson Run	Thompson Run and unnnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS/ VRC	No													
		020506-5	Middle Mainstem Wills Creek	Wills Creek and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS/ VRC	No													
		020506-6	Lower Wills Creek	Wills Creek and unnamed tributaries	Forest, AgricultureDeveloped	No	Shale, siltstone, sandstone	VRS/ VRC	Yes, portions													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Evitts Creek	Rocky Gap Run - Evitts Creek (20700020602)	020602-1	Headwaters - Rocky Gap Run	Rocky Gap Run and unnnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS/ VRC	No													
		020602-2	Headwaters - Evitts Creek	Evitts Creek and unnnamed tributaries	Forest	Yes, unnamed tributary	Shale, siltstone, sandstone	VRS/ VRC	No													
		020602-3	Western Headwaters - Evitts Creek	Unnamed tributaries to Evitts Creek	Forest	No	Shale, siltstone, sandstone	VRS/ VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Town Creek	Flintstone Creek (20700030102)	030102-1	Headwaters - Flinstone Creek	Flintstone Creek, Little Pigeonroost Run, Pigeionroost Run, Wildcat Run	Forest	Yes	Siltstone, sandstone	VRS/ VRC	No													
		030102-2	Lost Run	Lost Run and unnamed tributaries	Forest, Agriculture	Yes, Lost Run	Siltstone, sandstone	VRS/ VRC	No													
		030102-3	Flinstone Creek - Twigg Hollow Run	Flinstone Creek and unnamed tributaries, Twigg Hollow Run	Forest, Agriculture	Yes, Twiggs Hollow Run	Siltstone, sandstone	VRS/ VRC	No													
		030102-4	Laurel Branch	Laurel Branch	Forest	Yes	Sandstone	VRS/ VRC	No													
		030102-5	Eastern Headwaters Flintstone Creek	Unnamed tributaries to Flinstone Creek	Forest	No	Sandstone	VRS/ VRC	No													
		030102-6	Lower Flintstone Creek	Flintstone Creek and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS/ VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Town Creek	Sweet Root Creek- Town Creek (20700030104)	030105-1	Headwaters - Sweet Root Creek	Sweet Root Creek, Sweet Root Run, unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS	No													
		030105-2	Headwaters - Town Creek	Town Creek. Georgetown Branch, Blue Gap Run, unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS	No													
		030105-3	Headwaters - Black Valley Branch	Black Valley Branch, unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS	No													
		030105-4	Tributary to Pond Branch - Towns Creek	Unnamed tributaries to Pond Branch	Forest	No	Shale, siltstone, sandstone	VRS	No													
		030105-5	Lower Town Creek	Pond Branch, Town Creek, unnamed tributaries	Forest	No	Sandstone, shale	VRS	No													
		030105-6	Headwaters - Amorine Branch	Amorine Branch and unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Fifteenmile Creek	Upper Fifteenmile Creek (20700030301)	030301-1	Headwaters - Upper Fifteenmile Creek	Fifteenmile Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS	No													
		030301-2	Headwaters - Bear Camp Branch	Bear Camp Branch and unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Lower Frankstown Branch Juniata River	Clover Creek (20503020304)	020304-1	Headwaters - Clover Creek	Clover Creek and unnamed tributaries	Forest, Agricultur	No	Shale, siltstone, sandstone, limestone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Upper Frankstown Branch Juniata Rive	Halter Creek (20503020104)	020104-1	Headwaters - Halter Creek	Halter Creek and unnamed tributaries	Forest, Agricultur	No	Shale, siltstone, sandstone, limestone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Upper Raystown Branch Juniata River	Shawnee Branch - Shawnee Lake (20503030101)	030101-1	Headwaters - Kegg Run	Negro Hollow, Kegg Run and unnamed tributaries	Forest	No	Shale, siltstone, sandstone, conglomerate	APS, VRS	No													
		030101-2	Kegg Run - Shawnee Branch	Kegg Run, Shawnee Branch and unnamed tributaries	Forest, Agriculture	No	Shale	VRS, VRC	No													
		030101-3	Headwaters - Shawnee Branch	Burns Creek, Shawnee Branch, Bentz Run	Forest, Agriculture	No	Shale, siltstone, sandstone, conglomerate	APS, VRS	No													
		030101-4	Middle Shawnee Branch	Shawnee Branch and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030101-5	Lower Shawnee Branch	Shawnee Branch and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Raystown Branch Juniata River	Headwaters Raystown Branch Juniata River (20503030102)	030102-1	Breastwork Run	Breastwork Run	Forest	No	Siltstone, conglomerate	APS	No													
		030102-2	Headwaters - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS	No													
		030102-3	Northern Headwaters - Raystown Branch Juniata River	Unnamed tributaries to Raystown Branch Juniata River	Forest, Agriculture	No	Shale	VRS	No													
		030102-4	Raystown Branch Juniata River North	Unnamed tributaries to Raystown Branch Juniata River	Agriculture	No	Shale	VRS	No													
		030102-5	Spicer Brook	Spicer Brook and unnamed tributaries	Forest, Agriculture	Yes	Shale, siltstone, sandstone	VRS	No													

Upper		030102-6	Southern Headwaters Raystown Branch Juniata River	Unnamed tributaries to Raystown Branch Juniata River	Forest, Agriculture	No	Shale, sandstone	VRS	No													
		030102-7	Raystown Branch Juniata River South	Unnamed tributaries to Raystown Branch Juniata River	Forest, Agriculture	No	Shale, sandstone	VRS	No													
		030102-8	Maintem Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Upper Raystown Branch Juniata River	Buffalo Run (20503030103)	030103-1	Headwaters - Buffalo Run	Milligan Run, Buffalo Run, Small Springs Branch and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030103-2	Suphur Springs Creek	Sulphur Springs Creek and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030103-3	Mainstem Buffalo Run	Buffalo Run and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Upper Raystown Branch Juniata R	Shobers Run (20503030104)	030104-1	Headwaters - Shobers Run	Shobers Run and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030104-2	Middle Shobers Run	Shobers Run and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030104-3	Lower Shobers Run	Shobers Run and unnamed tributaries	Forest, AgricultureDeveloped	No	Shale, siltstone, sandstone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Upper Raystown Branch Juniata River	Cumberland Valley Run- Raystown Branch Juniata River (20503030105)	030105-1	East Tributaries to Raystown Branch Juniata River	Unnamed tributaries to Raystown Branch Juniata River	Forest	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030105-2	Upper Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030105-3	Middle Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030105-4	Northwest Tributaries to Raystown Branch Juniata River	Unnamed tributaries to Raystown Branch Juniata River	Forest	Yes	Shale, siltstone, sandstone	VRS, VRC	No													
		030105-5	North Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030105-6	Middle Mainstem Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Developed	No	Shale, siltstone, sandstone	VRS, VRC	Yes													
		030105-7	Cumberland Valley Run	Cumberland Valley Run and unnamed tributaries	Forest	Yes	Shale, siltstone, sandstone	VRS, VRC	No													
		030105-8	Middle Mainstem Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Developed	Yes, tributaries	Shale, siltstone, sandstone	VRS	Yes													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Bobs Creek	Scrubgrass Creek (20503030201)	030201-1	Headwaters - Scrubgrass Creek	Scrubgrass Creek and unnamed tributaries	Forest	No	Shale, siltstone, sandstone, conglomerate	VRS	No													
		030201-2	Middle Scrubgrass Creek	Scrubgrass Creek and unnamed tributaries	Forest, Agriculture	No	Shale	VRS	No													
		030201-3	Mud Run	Mud Run and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone, sandstone	VRS, VRC	No													
		030201-4	Lower Scrubgrass Creek	Scrubgrass Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Dunning Creek	Upper Dunning Creek (20503030301)	030301-1	Headwaters - Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030301-2	Headwaters East - Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030301-3	Lower Headwaters East -Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030301-4	Rocklick Creek	Rocklick Creek and unnamed tributaries	Forest	No	Shale, siltstone	VRS, APS	No													
		030301-5	Middle Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030301-6	Lower Middle Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030301-7	Upper Ryot Run	Ryot Run and unnamed tributaries	Forest	No	Shale, siltstone	VRS, APS	No													
		030301-8	Lower Ryot Run	Ryot Run and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone	VRS, APS	No													
		030301-9	Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone	VRS, APS	No													
		030301-10	Headwaters - Barefoot Run	Barefoot Run and unnamed tributaries	Forest	No	Shale, siltstone	VRS, APS	No													
		030301-11	Barefoot Run	Barefoot Run and unnamed tributaries	Forest, Agriculture	No	Shale, siltstone	VRS, APS	No													
		030301-12	Lower Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Dunning Creek	Georges Creek- Dunning Creek (20503030302)	030302-1	Headwaters - Georges Creek and West Branch Georges Creek	Georges Creek, West Branch Georges Creek and unnamed tributaries	Forest	No	Shale, siltstone, sandstone	VRS, APS	No													
		030302-2	Headwaters - Mainstem Georges Creek	Georges Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030302-3	Stone Creek	Stone Creek and unnamed tributaries	Forest, Agriculture	Yes	Shale, siltstone	VRS, VRC	No													
		030302-4	Upper Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale	VRC	No													
		030302-5	Headwaters - Adams Run	Adams Run and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030302-6	Middle Adams Run	Adams Run and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030302-7	Lower Middle Adams Run	Adams Run and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030302-8	Tributary to Adams Run	Unnamed tributaries to Adams Run	Forest, Agriculture	No	Shale, sandstone	VRS, VRC	No													
		030302-9	Lower Adams Run	Adams Run and unnamed tributaries	Forest, Agriculture	No	Shale	VRC	No													
		030302-10	Lower Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale	VRC	No													

		030302-11	Eastern Tributary to Lower Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRC	No												
		030302-12	Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone	VRC	No												

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Dunning Creek	Lower Dunning Creek (20503030303)	030303-1	Oppenheimer Run	Oppenheimer Run and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone, siltstone	VRS, VRC	No													
		030303-2	Headwaters - Dunning Creek	Dunning Creek and unnamed tributaries	Agriculture	No	Shale, sandstone, siltstone	VRS, VRC	No													
		030303-3	Middle Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone, siltstone	VRS, VRC	No													
		030303-4	Imlertown Run	Imlertown Run and unnamed tributaries	Forest, Agriculture	Yes	Shale, sandstone, siltstone	VRS, VRC	No													
		030303-5	Pleasant Valley Run	Pleasant Valley Run and unnamed tributaries	Forest, Agriculture	Yes	Shale, sandstone, siltstone	VRS, VRC	No													
		030303-6	Pleasant Valley Run Imlertown Run	Pleasant Valley Run, Imlertown Run and unnamed tributaries	Forest, Agriculture	Yes	Shale, sandstone, siltstone	VRS, VRC	No													
		030303-7	Lower Dunning Creek	Dunning Creek and unnamed tributaries	Forest, Agriculture	No	Shale, sandstone, siltstone	VRS, VRC	Yes													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Brush Creek	Shaffer Creek (20503030402)	030402-1	Brush Creek	Brush Creek, Chapman Run, Weimer Run, and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No													
		030402-2	Headwaters - Shaffer Creek	Shaffer Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No													
		030402-3	Middle Shaffer Creek	Shaffer Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No													
		030402-4	Tributaries to Shaffer Creek	Unnamed tributaries to Shaffer Creek	Forest, Agriculture	No	Siltstone	VRS	No													
		030402-5	Lower Shaffer Creek	Shaffer Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Brush Creek	Brush Creek- Raystown Branch Juniata River (20503030403)	030403-1	Headwaters - Brush Creek	Brush Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS	No													
		030403-2	Middle Brush Creek	Brush Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone	VRS	No													
		030403-3	Lower Brush Creek	Brush Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS	No													

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										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Middle Raystown Branch Juniata River	Cove Creek (20503030501)	030501-1	Headwaters - Cover Creek	Cove Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, shale	VRS, VRC	No													
		030501-2	Swamp Run - Cove Creek	Swamp Run, Cove Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS, VRC	No													
		030501-3	Lower Cove Creek	Cove Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS, VRC	No													

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										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						

Middle Raystown Branch Juniata River	Clear Creek (20503030503)	030503-1	Gander Run - Clear Creek	Gander Run, Clear Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No												
		030503-2	Tributaries to Clear Creek	Unnamed tributaries to Clear Creek	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No												
		030503-3	Milk and Water Run - Deep Hollow Run	Milk and Water Run, Deep Hollow Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No												
		030503-4	Deer Lick Hollow Run - Clear Creek	Deer Lick Hollow Run, Clear Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No												
		030503-5	Clear Creek	Clear Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS	Yes												

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										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Middle Raystown Branch Juniata River	Tub Mill Run- Raystown Branch Juniata River (20503030504)	030504-1	Headwaters West - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture, Developed	No	Siltstone, sandstone, shale,limestone, dolomite	VRS, VRC	No												
		030504-2	Lower Headwaters West - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture, Developed	No	Siltstone, sandstone, shale,limestone, dolomite	VRS, VRC	No												
		030504-3	Middle West - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture, Developed	No	Limestone, sandstone	VRS, VRC	Yes												
		030504-4	Lower West - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale,limestone	VRS, VRC	No												
		030504-5	Black Valley Creek - Bloody Run	Black Valley Creek, Bloody Run, Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture, Developed	Yes	Siltstone, sandstone, shale	VRS	Yes												
		030504-6	Lower Central - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture, Developed	No	Siltstone, sandstone, shale	VRS	No												
		030504-7	Greys Run	Greys Run and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS	No												
		030504-8	Central - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Siltstone	VRS	No												
		030504-9	Tub Mill Run	Tub Mill Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS	No												
		030504-10	Headwaters East - Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Siltstone, shale	VRS	No												
		030504-11	Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No												

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										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
anch Juniata River	Sandy Run- Raystown Branch Juniata	030505-1	French Run	French Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No												
		030505-2	Johns Branch	Johns Branch and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	Yes												
		030505-3	Sherman Valley Run	Sherman Valley Run and unnamed tributaries	Forest	No	Siltstone, shale, conglomerate	VRS	No												
		030505-4	Pipers Run	Pipers Run and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, sandstone, shale	VRS, VRC	No												

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										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Middle Raystown Br	Sandy Run-Raystown Branch Juniata River(20503030505)	030505-5	Upper Raystown Branch	Raystown Branch Juniata River and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS	No													
		030505-6	Sandy Run - Longs Run	Sandy Run, Longs Run and unnamed tributaries	Forest	Yes	Siltstone, sandstone, shale	VRS	No													
		030505-7	Lower Raystown Branch	Raystown Branch Juniata River and unnamed tributaries	Forest	No	Siltstone, sandstone, shale, conglomerate	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Yellow Creek	Beaver Creek (20503030601)	030601-1	Headwaters - Beaver Creek	Beaver Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, shale, limestone	VRS, VRC	No													
		030601-2	Middle Beaver Creek	Beaver Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, shale, limestone	VRS, VRC	No													
		030601-3	Lower Beaver Creek	Beaver Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, shale, limestone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Yellow Creek	Upper Yellow Creek (20503030602)	030602-1	Headwaters - Yellow Creek	Yellow Creek and unnamed tributaries	Forest, Agriculture	Yes	Limestone	VRC	No													
		030602-2	Lower Headwaters - Yellow Creek	Yellow Creek and unnamed tributaries	Forest, Agriculture	Yes	Limestone	VRC	No													
		030602-3	Hickory Bottom Creek	Hickory Bottom Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, shale, limestone	VRS, VRC	No													
		030602-4	Middle Yellow Creek	Yellow Creek and unnamed tributaries	Forest, Agriculture	Yes	Limestone	VRC	No													
		030602-5	Potter Creek	Potter Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, shale, limestone, dolomite	VRS, VRC	No													
		030602-6	Three Springs Run	Three Springs Run and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, shale, limestone, dolomite	VRS, VRC	No													
		030602-7	Lower Yellow Creek	Yellow Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, shale, limestone	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Yellow Creek	Lower Yellow Creek (20503030603)	030603-1	Bear Run-Maple Run	Bear Run, Maple Run and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030603-2	Headwaters - Yellow Creek	Unnamed tributaries to Yellow Creek	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030603-3	Middle Yellow Creek	Unnamed tributaries to Yellow Creek	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030603-4	Bank Run	Bank Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030603-5	Lower Yellow Creek	Yellow Creek and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Great Trough Creek	Great Trough Creek (20503030702)	030702-1	Great Trough Creek	Great Trough Creek and unnamed tributaries	Forest, open	Yes	Siltstone, shale	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
uniata River		030502-1	Upper Snake Spring Valley Run	Snake Spring Valley Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													

Middle Raystown Branch J	Snake Spring Valley Run (20503030502)	030502-2	Tributaries to Snake Spring Valley Run	Unnamed tributaries to Snake Spring Valley Run and	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030502-3	Lower Snake Spring Valley Run	Snake Spring Valley Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Brush Creek	Little Brush Creek (20503030401)	The acreage of the Little Brush Creek HUC-12 subwatershed within Bedford County is very minimal and therefore, details on the subwatershed and associated loading scores were not evaluated for this small segment.																				

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Upper Frankstown Branch Juniata Rive	South Poplar Run-Frankstown Branch Juniata River (20503020102)	020102-1	Big Lick Branch and South Poplar Run	Big Lick Branch and South Poplar Run and unnamed tributaries	Forest	No	Siltstone, shale, conglomerate	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Upper Frankstown Branch Juniata River	Beaverdam Creek (20503020101)	020101-1	Little Beaverdam Creek	Little Beaverdam Creek, Beaverdam Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale, conglomerate	VRS, VRC	No													
		020101-2	Beaverdam Creek	Beaverdam Creek and unnamed tributaries	Forest, Agriculture	No	Sandstone, shale	VRS, VRC	Yes													
		020101-3	Tributaries to Beaverdam Creek	Unnamed tributaries to Beaverdam Creek	Forest, Agriculture	No	Siltstone, sandstone, shale, conglomerate	VRS	No													
		020101-4	Boiling Spring Run	Boiling Spring Run and unnamed tributaries	Forest, Agriculture, Developed	No	Sandstone, shale	VRS, VRC	Yes													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
South Fork Little Conemaugh	Beaverdam Run - South Fork Little Conemaugh (50100070401)	The acreage of the Beaverdam Run - South Fork Little Conemaugh HUC-12 subwatershed within Bedford County is very minimal and therefore, details on the subwatershed and associated loading scores were not evaluated for this small segment.																				

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Shade Creek	Dark Shade Creek (50100070201)	The acreage of the Dark Shade Creek HUC-12 subwatershed within Bedford County is very minimal and therefore, details on the subwatershed and associated loading scores were not evaluated for this small segment.																				

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Clear Shade Creek	Clear Shade Creek (50100070202)	The acreage of the Clear Shade Creek HUC-12 subwatershed within Bedford County is very minimal and therefore, details on the subwatershed and associated loading scores were not evaluated for this small segment.																				

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										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Lower Raystown Branch Juniata Rive	Shoup Run (20503030801)	030801-1	Headwaters - Coal Bank Run	Coal Bank Run and unnamed tributaries	Forest	Yes	Siltstone, shale, conglomerate	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Lower Raystown Branch Juniata River	Sixmile Run- Raystown Branch Juniata River (20503030802)	030802-1	Shreves Run- Sixmile Run	Shreves Run, Sixmile Run, Raystown Branch Juniata River and unnamed tributaries	Forest	Yes	Siltstone, shale	VRS	No													
		030802-2	Ravers Run- Dry Run	Raystown Branch Juniata River, Ravers Run, Dry Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030802-3	Tributaries to Raystown Branch Juniata River	Unnamed tributaries to Raystown Branch Juniata River	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030802-4	Sugar Camp Run	Sugar Camp Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030802-5	Lower Raystown Branch Juniata River	Raystown Branch Juniata River and unnamed tributaries	Forest, Developed	No	Siltstone, sandstone, shale	VRS, VRC	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Lower Raystown Branch Juniata River	Shy Beaver Creek - Raystown Branch Juniata River (20503030803)	030803-1	Headwaters - Shy Beaver Creek	Shy Beaver Creek and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRS, VRC	No													
		030803-2	Raystown Lake	Raystown Branch Juniata River	Forest	No	Siltstone	VRS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Sideling Hill Creek	Upper Sideling Hill Creek (20503040201)	The acreage of the Shy Beaver Creek- Raystown Lake HUC-12 subwatershed within Bedford County is very minimal and therefore, details on the subwatershed and associated loading scores were not evaluated for this small segment.																				

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Hill Creek	West Branch Sideling Hill Creek	030402-1	Headwaters - West Branch Sideling Hill Creek	West Branch Sideling Hill Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No													
		030402-2	Tributaries to West Branch Sideling Hill Creek	Unnamed tributaries to West Branch Sideling Hill Creek	Forest	No	Siltstone, sandstone	VRS	No													

Sideling I	(20700030402)	030402-3	Middle West Branch Sideling Hill Creek	West Branch Sideling Hill Creek and unnamed tributaries	Forest, Agriculture	No	Sandstone	VRS	No												
		030402-4	Lower West Branch Sideling Hill Creek	West Branch Sideling Hill Creek and unnamed tributaries	Forest	No	Siltstone, sandstone	VRS	No												

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Sideling Hill Creek	East Branch Sideling Hill Creek (20700030401)	030401-1	Headwaters - East Branch Sideling Hill Creek	East Branch Sideling Hill Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, shale	VRS	No												
		030401-2	East Branch Sideling Hill Creek	East Branch Sideling Hill Creek and unnamed tributaries	Forest	No	Siltstone, shale	VRS	No												

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Sideling Hill Creek	Piney Creek (20700030403)	030403-1	Headwaters - Piney Creek	Piney Creek, Blackberry Lick Run and unnamed tributaries	Forest	No	Siltstone, sandstone	VRS	No												
		030403-2	Johnson Branch	Johnson Branch and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No												
		030403-3	Piney Creek	Piney Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No												

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Tonoloway Creek	Little Tonoloway Creek (20700040101)	The acreage of the Little Tonoloway Creek HUC-12 subwatershed within Bedford County is very minimal and therefore, details on the subwatershed and associated loading scores were not evaluated for this small segment.																				

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Wills Creek	Little Wills Creek (20700020503)	020503-1	Headwaters - Little Wills Creek	Little Wills Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRS	No												
		020503-2	Lower Headwaters - Little Wills Creek	Little Wills Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS	No												
		020503-3	Wolf Camp Run	Wolf Camp Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, shale	VRS	No												
		020503-4	Tar Water Creek	Tar Water Creek and unnamed tributaries	Forest	No	Siltstone, shale	VRS	No												
		020503-5	Littles Wills Creek - Mill Run	Little Wills Creek, Mill Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS	No												
		020503-6	Littles Wills Creek - Grim Run	Little Wills Creek, Grim Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS	No												
		020503-7	Littles Wills Creek - Tiger Run	Little Wills Creek, Tiger Run and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRS	No												

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
s Creek	Gladdens Run (20700020504)	020504-1	Headwaters - Gladdens Run	Gladdens Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale, conglomerate	VRS, VRC, APS	No												

Wills		020504-2	Gladdens Run	Gladdens Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale, conglomerate	VRS, VRC, APS	No													

HUC-10	HUC-12	CATCHMENT GROUPING ID	CATCHMENT GROUP NAME	STREAMS	PRIMARY LAND USE	IMPAIRED STREAMS	GEO. CLASS.	HGMR CLASS.	URBANIZED AREA	INCREMENTAL LOADING SCORING			INC LDG SUB-SCORE	MASS LOADING SCORING			MASS LDG SUB-SCORE	WQ DATA	WQ DATA ADJ FACTOR	QUALITATIVE NOTES	QUAL ADJ FACTOR	TOTAL CATCHMENT SCORE
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Evitts Creek	Upper Evitts Creek (20700020601)	020601-1	Headwaters - Evitts Creek	Evitts Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		020601-2	Sand Spring Run	Sand Spring Run and unnamed tributaries	Forest	Yes	Siltstone, sandstone	VRS, VRC	No													
		020601-3	Lower Headwaters - Evitts Creek	Evitts Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		020601-4	Middle Evitts Creek	Evitts Creek and unnamed tributaries	Forest, Agriculture	Yes	Siltstone, sandstone, shale	VRS, VRC	No													
		020601-5	Eastern Tributaries to Evitts Creek	Unnamed tributaries to Evitts Creek	Forest	No	Siltstone, sandstone, shale	VRS, VRC	No													
		020601-6	Lower Middle Evitts Creek	Evitts Creek and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		020601-7	Lower Evitts Creek	Evitts Creek and unnamed tributaries	Forest	No	Sandstone, shale	VRS, VRC	No													
		020601-8	Growden Run	Growden Run and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRS, VRC	No													
		020601-9	Oster Run	Oster Run and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone, shale	VRS, VRC	No													
		020601-10	Mainstem Evitts Creek	Evitts Creek and unnamed tributaries	Forest	No	Sandstone, shale	VRS, VRC	No													

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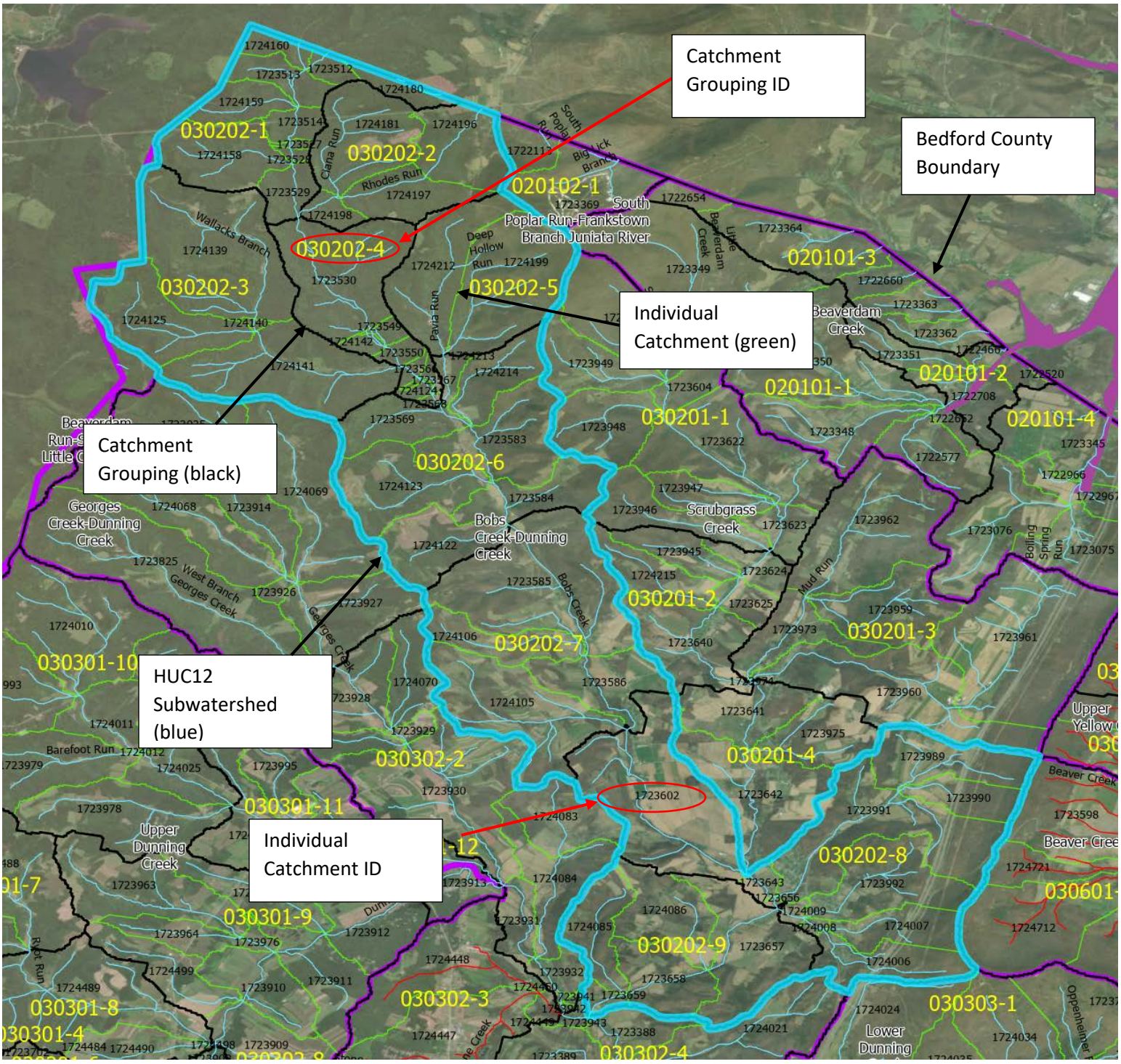
										SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS		SEDIMENT	TOTAL NITROGEN	TOTAL PHOSPHORUS						
Town Creek	Wilson Run- Elk Lick Creek (20700030101)	020601-1	Wilson Run	Wilson Run and unnamed tributaries	Forest	No	Siltstone, sandstone	VRC	No													
		020601-2	Bushy Fork	Bushy Fork and unnamed tributaries	Forest, Agriculture	No	Siltstone, sandstone	VRC	No													
		020601-3	Headwaters - Elk Lick Creek	Elk Lick Creek and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRC	No													
		020601-4	Middle Elk Lick Creek	Elk Lick Creek and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRC	No													
		020601-5	Lower Elk Lick Creek	Elk Lick Creek and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRC	No													
		020601-6	Elk Lick Creek - Wilson Run	Elk Lick Creek, Wilson Run and unnamed tributaries	Forest	No	Siltstone, sandstone, shale	VRC	No													

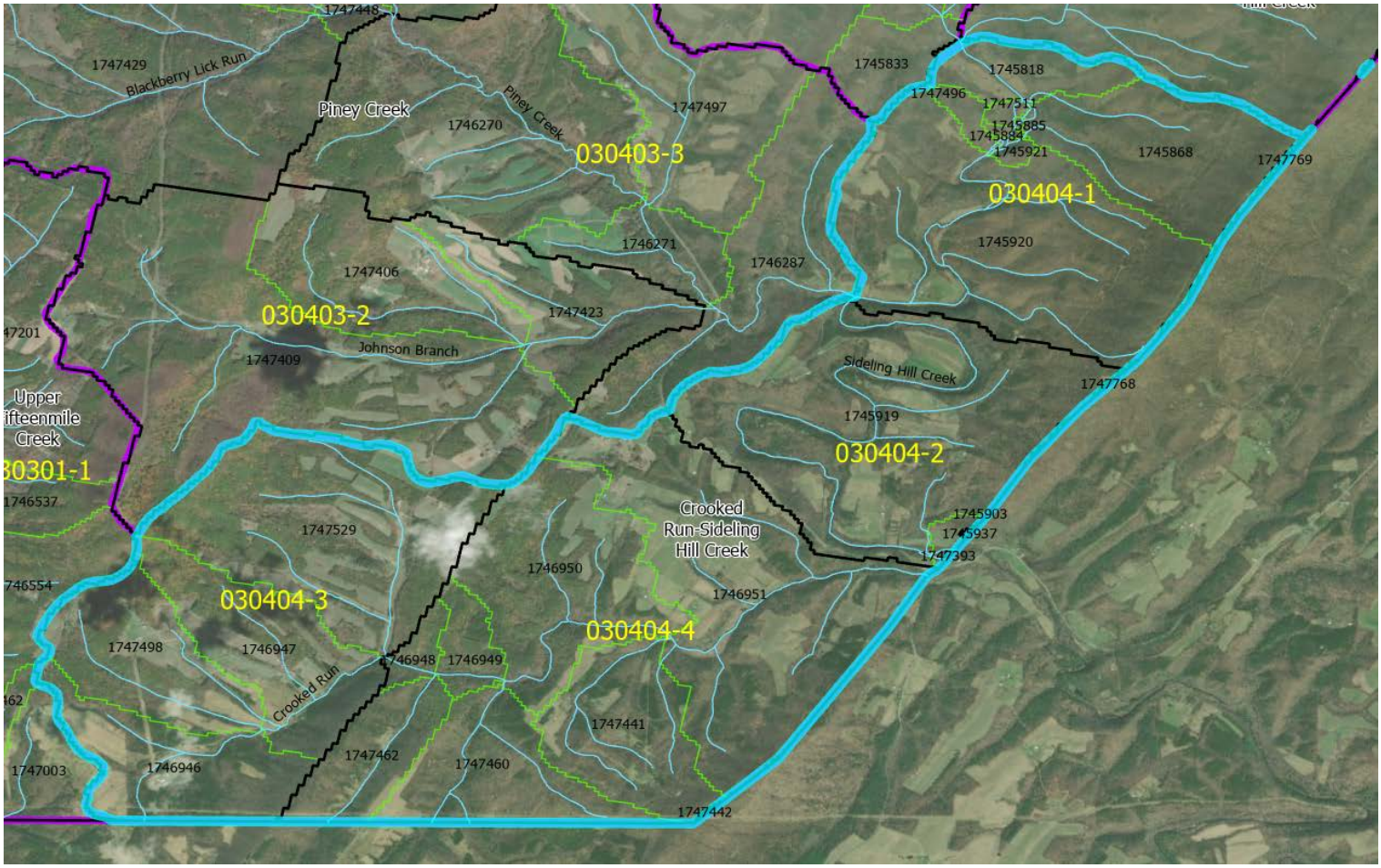
Bedford County Catchment Groupings

Individual Catchment ID Numbers per Catchment Grouping ID per HUC12:

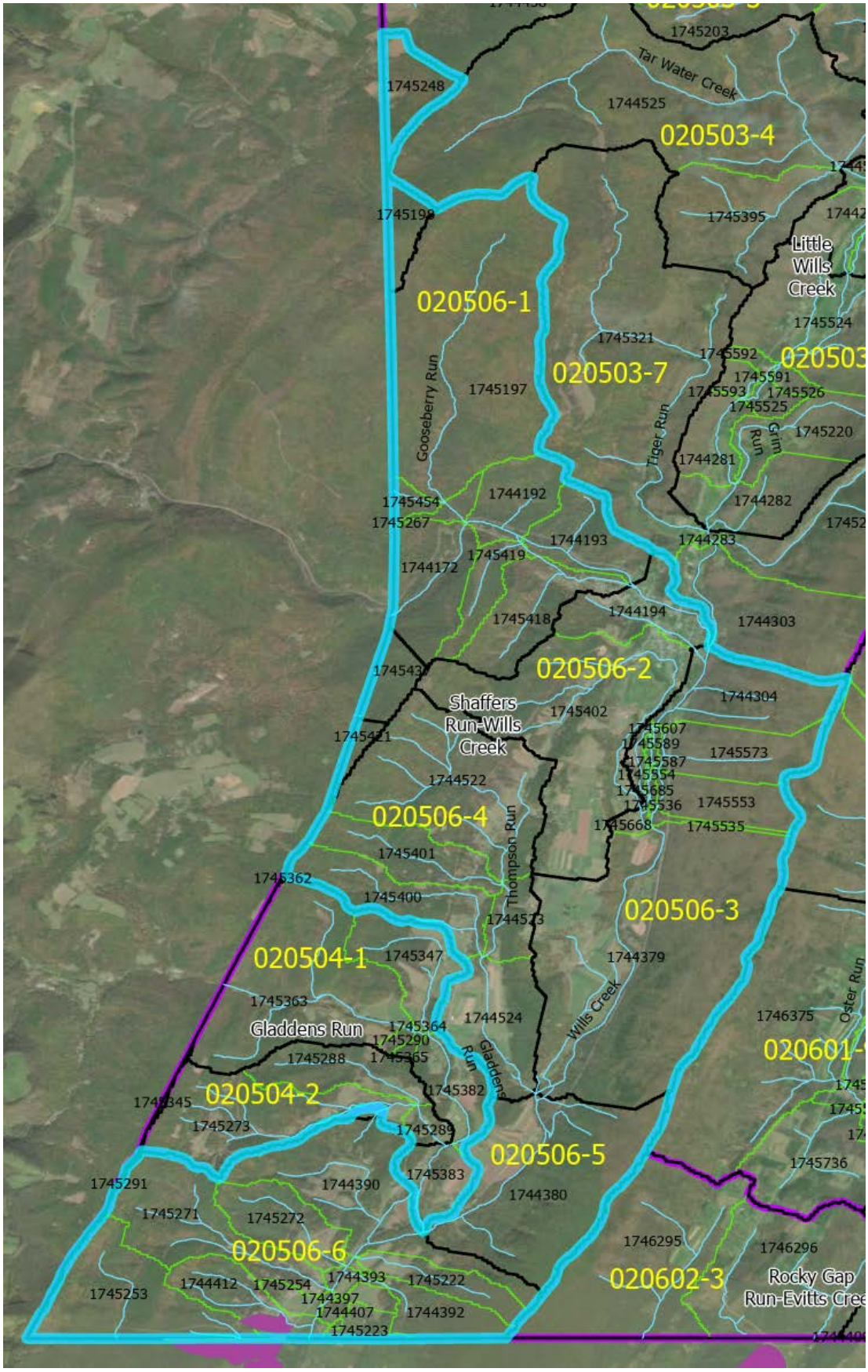
Bobs Creek-Dunning Creek



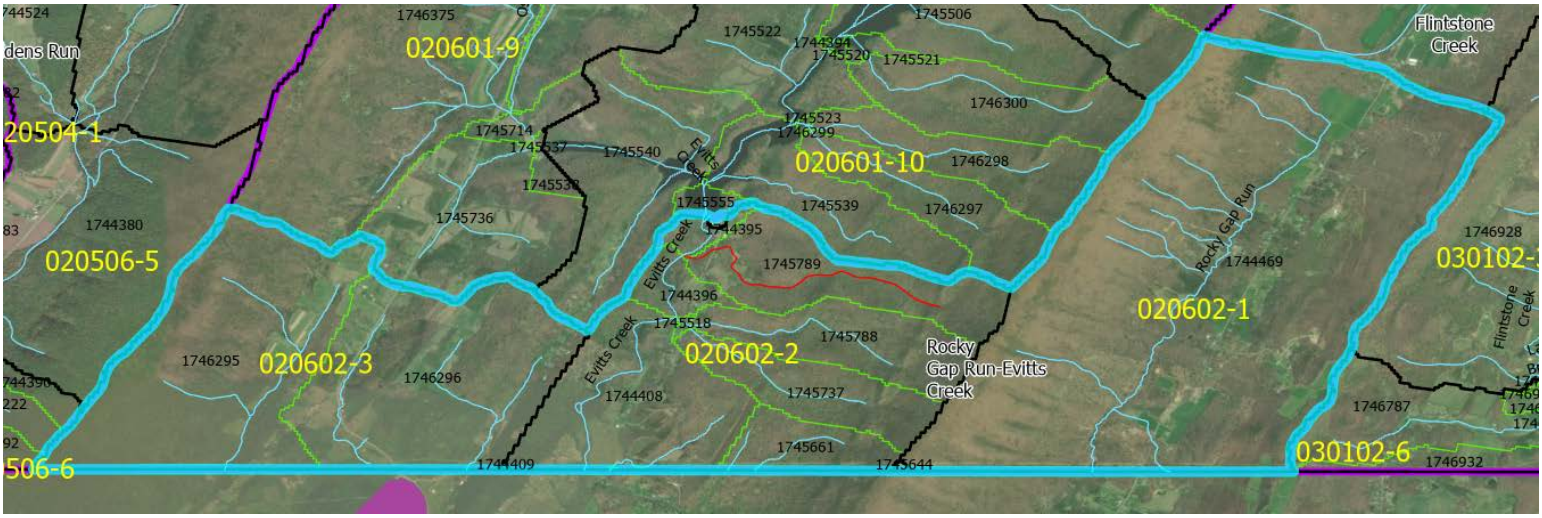
Crooked Run-Sideling Hill Creek



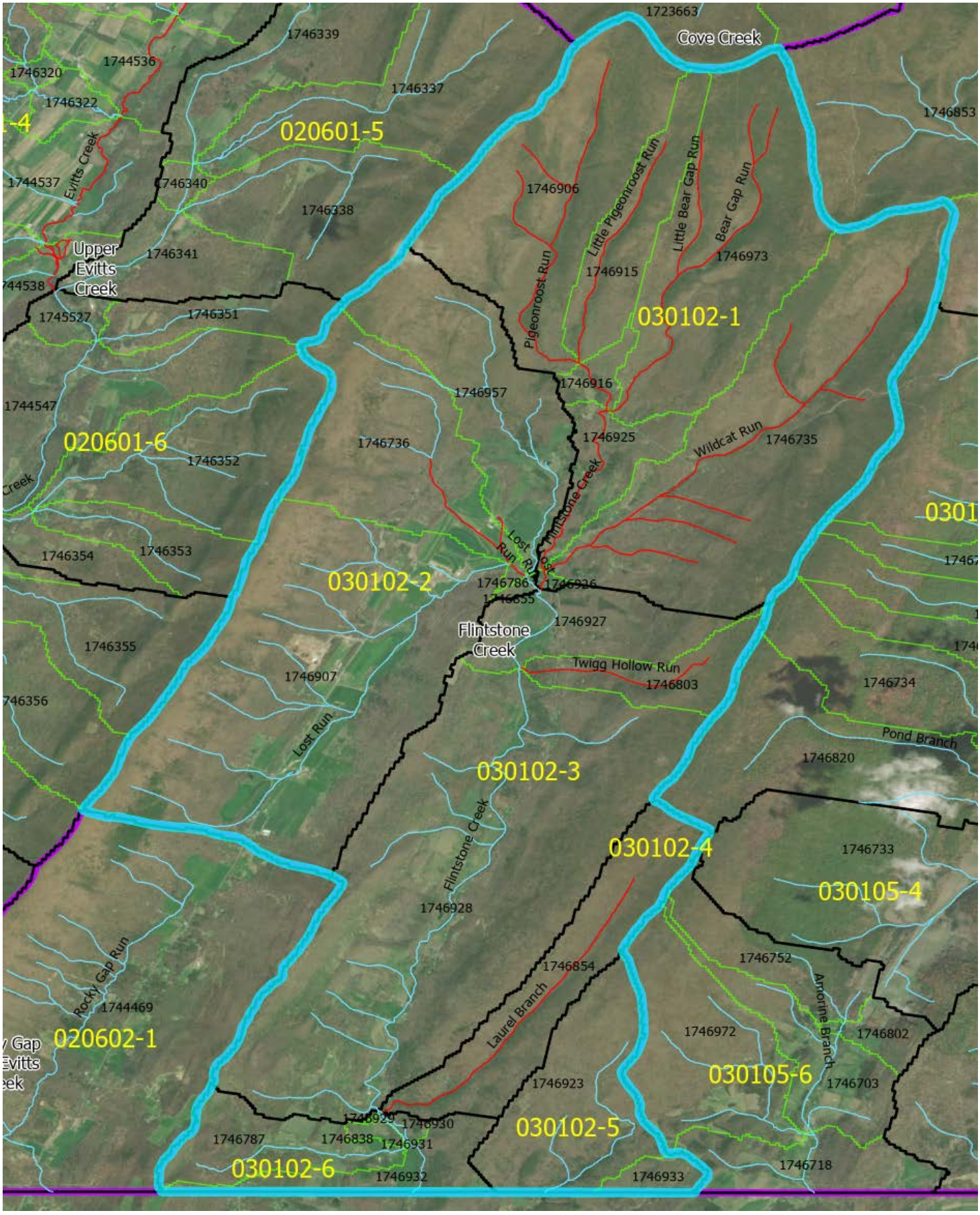
Shaffers Run-Wills Creek



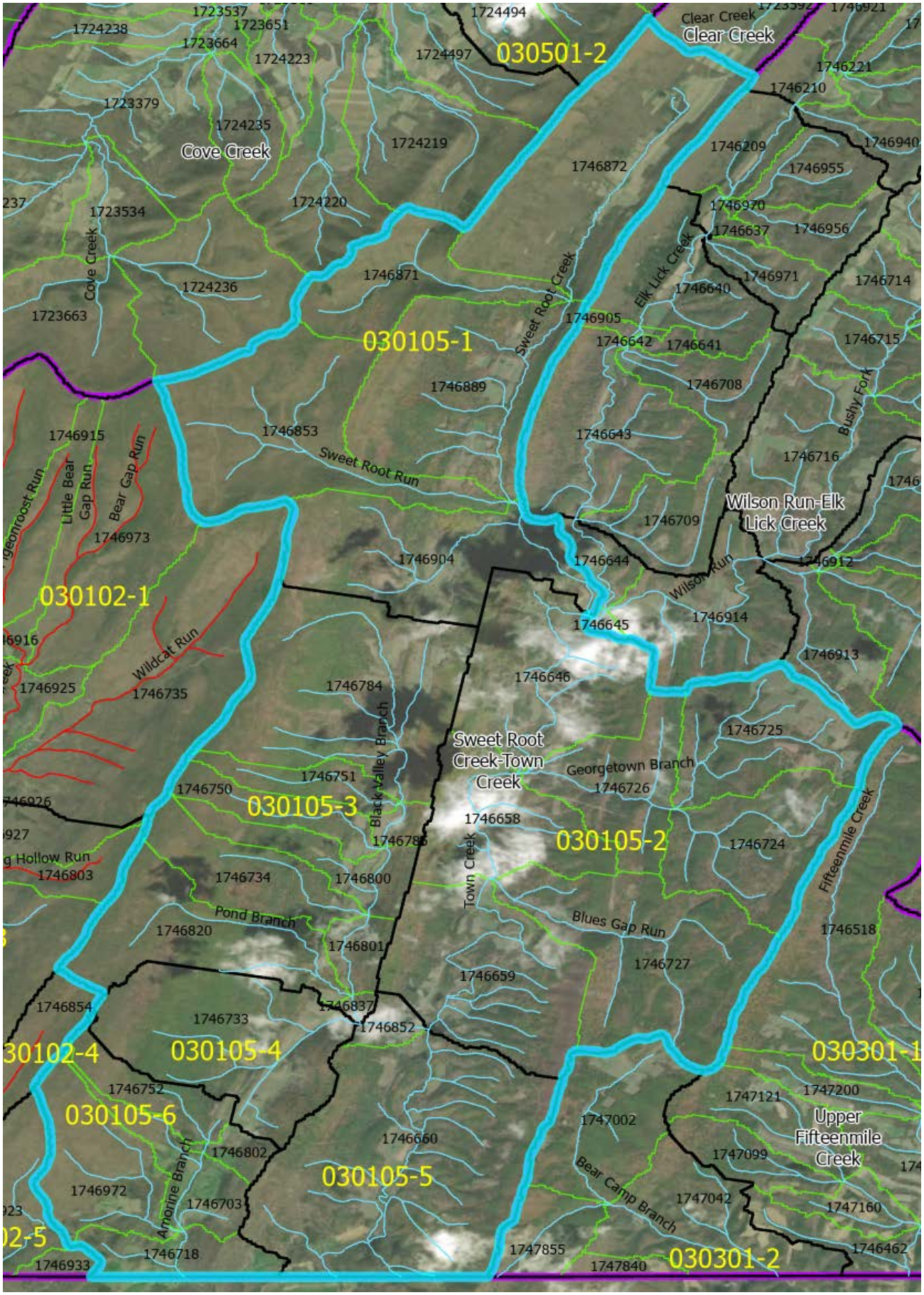
Rocky Gap Run-Evitts Creek



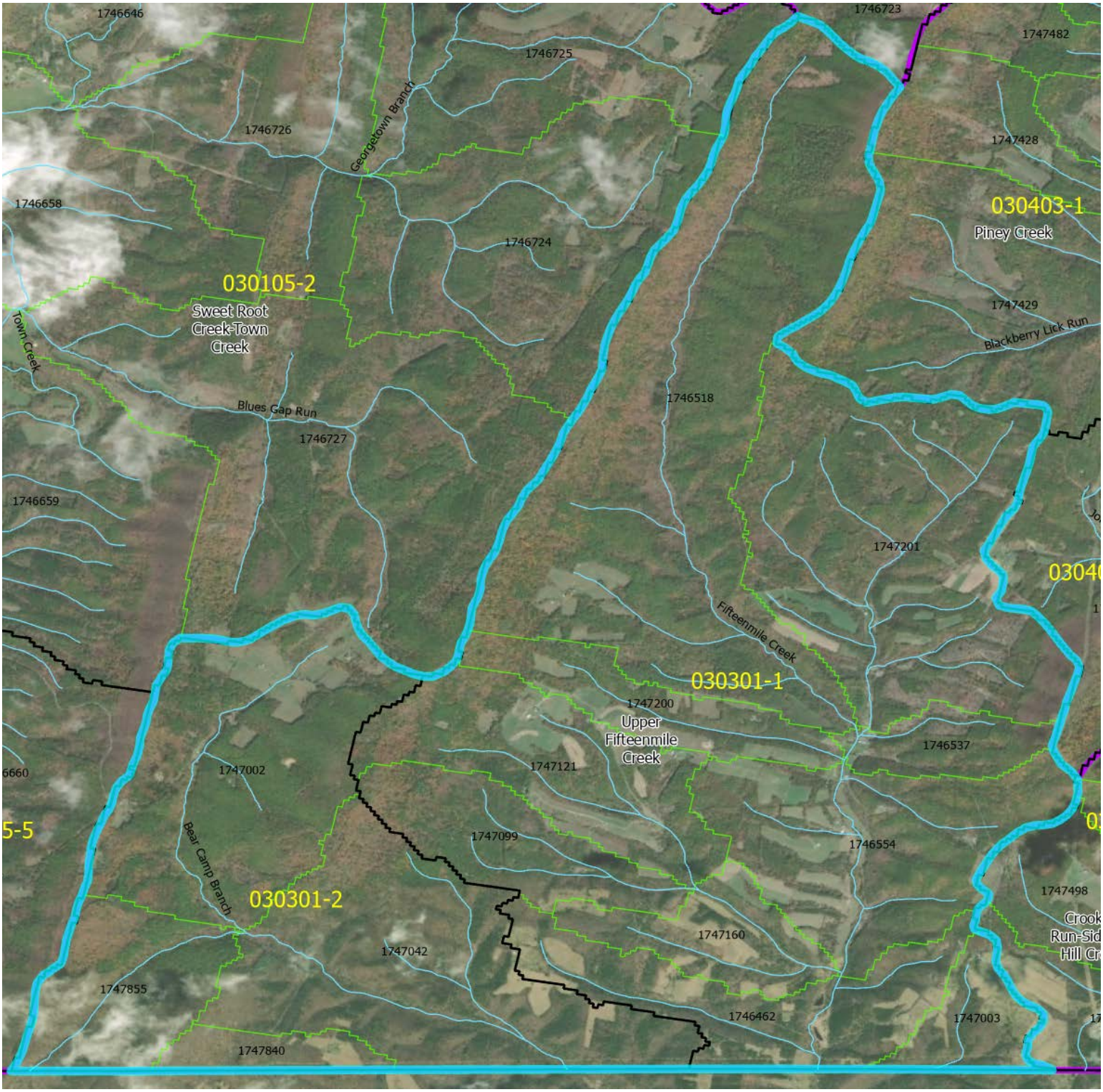
Flintstone Creek



Sweet Root Creek-Town Creek

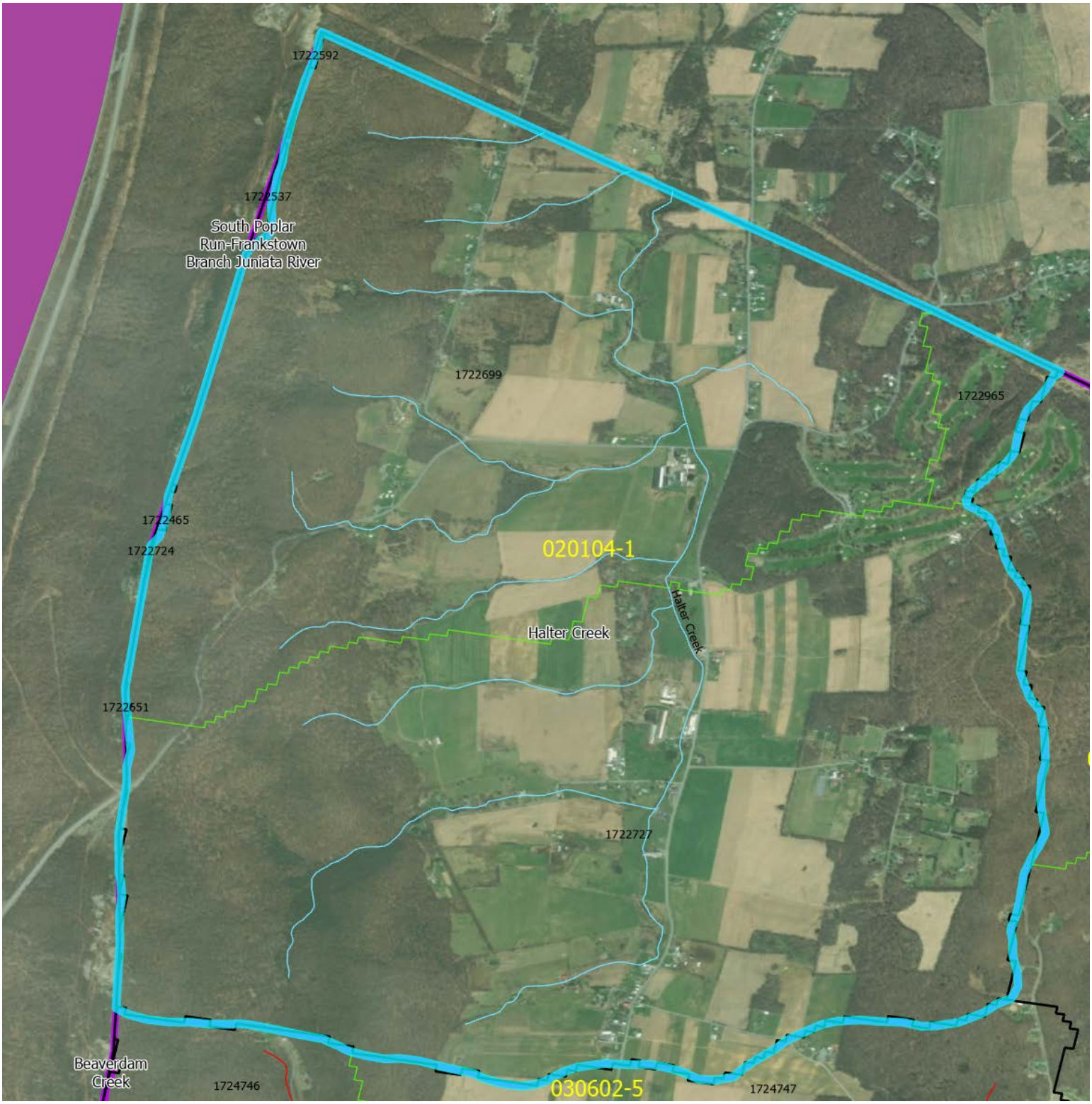


Upper Fifteenmile Creek

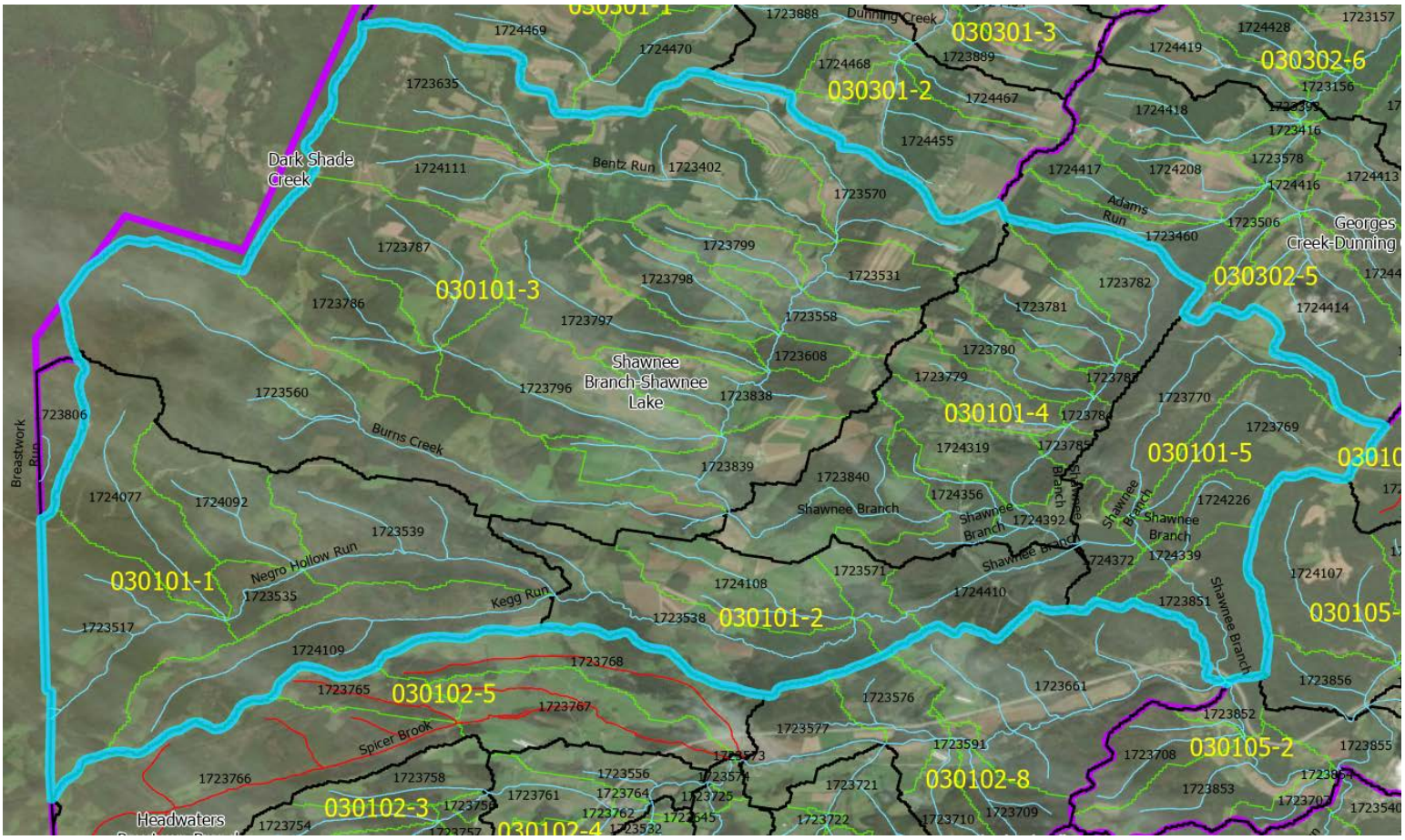


Clover Creek

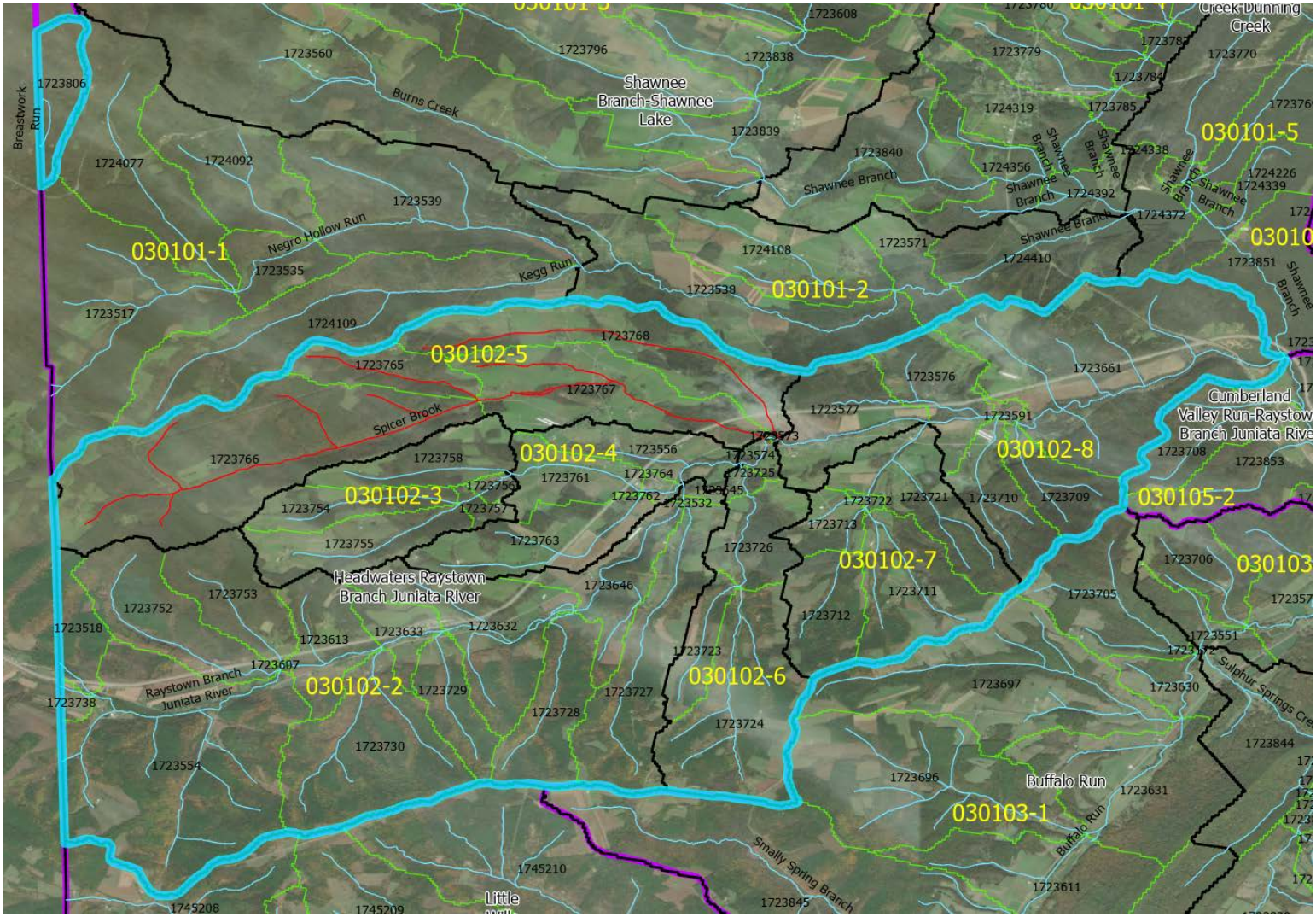
Halter Creek



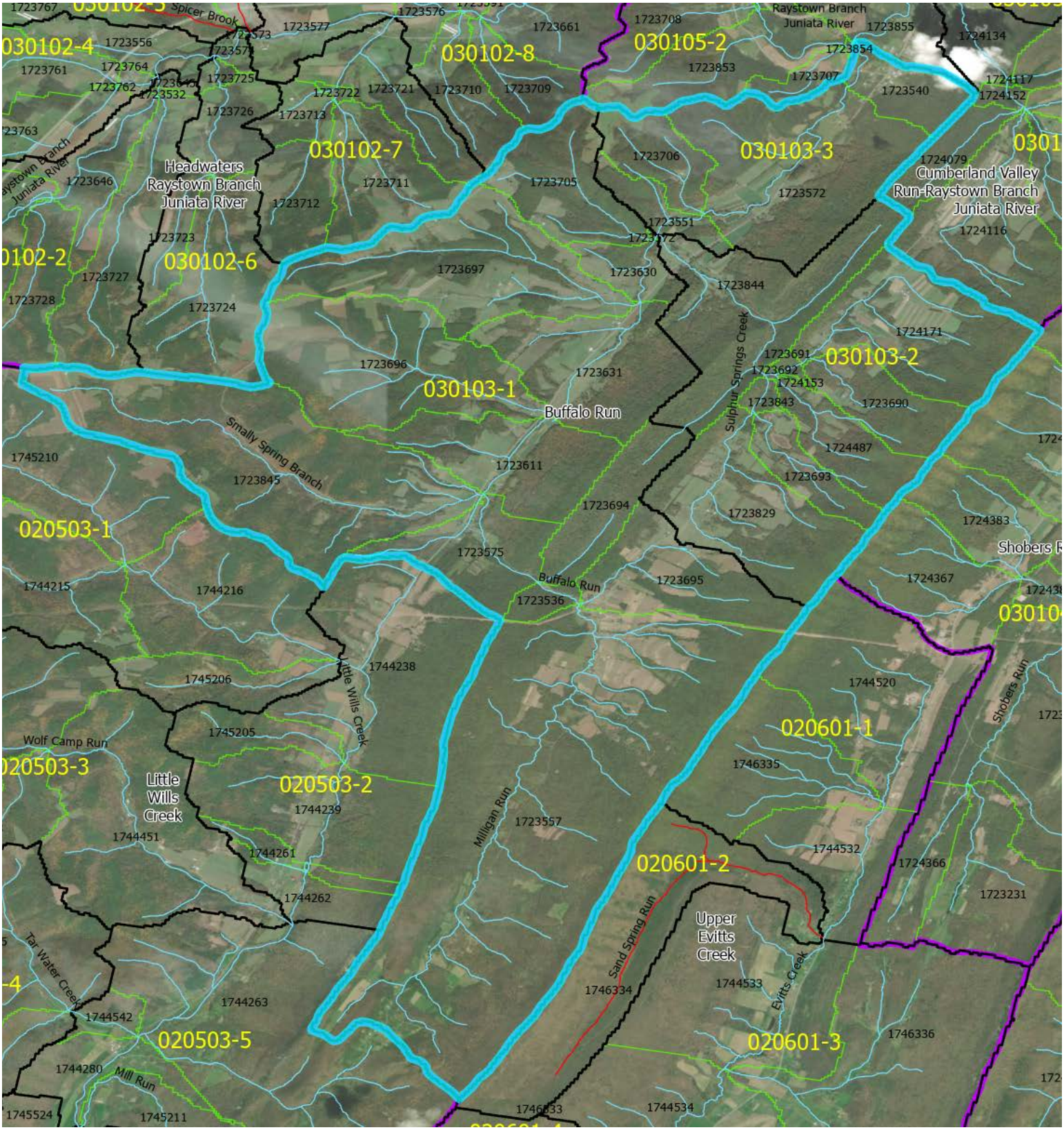
Shawnee Branch-Shawnee Lake



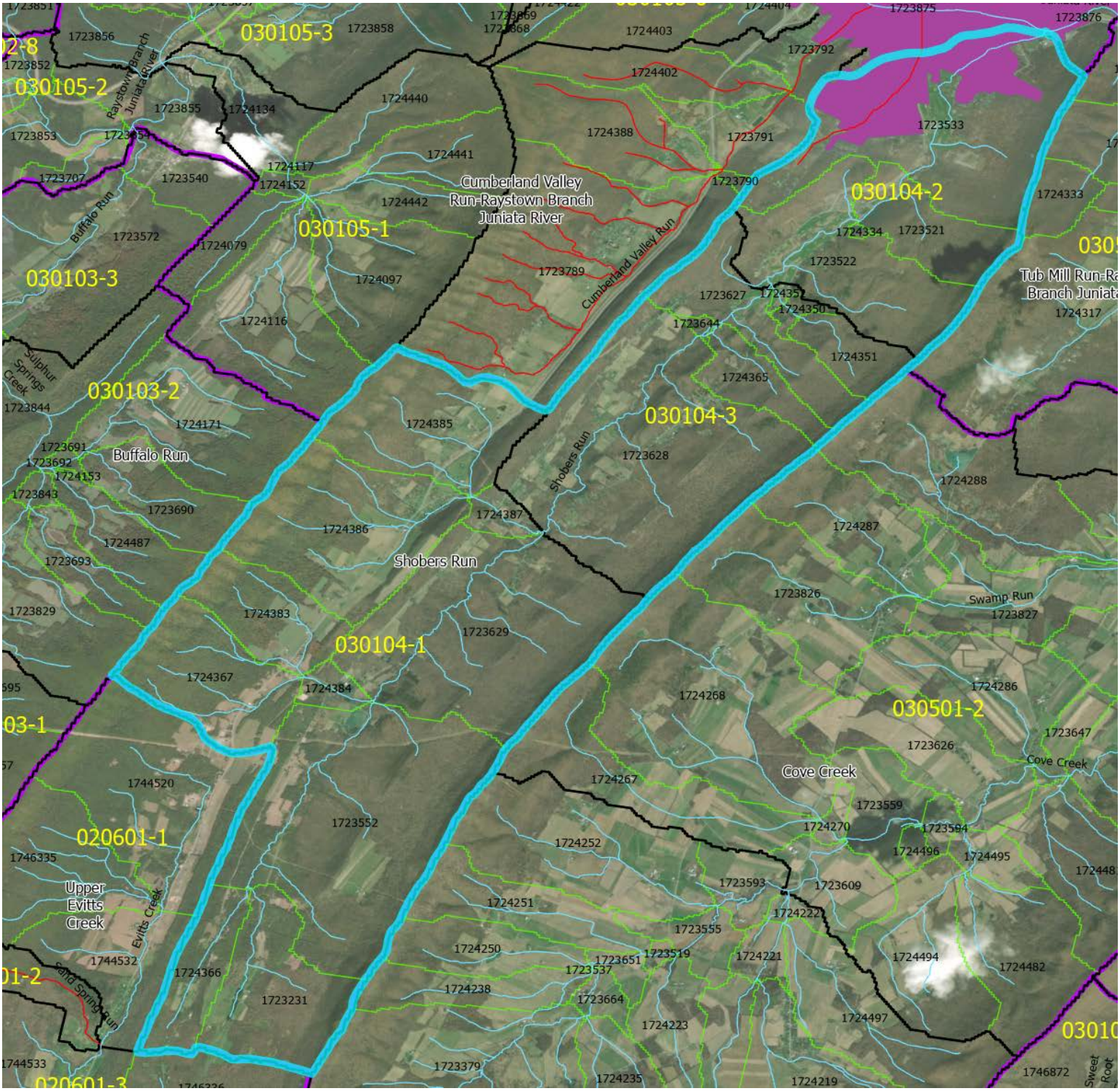
Headwaters Raystown Branch Juniata River



Buffalo Run


030102-4
030102-8
030105-2
030102-7
030103-3
Headwaters
Raystown Branch
Juniata River
Cumberland Valley
Run-Raystown Branch
Juniata River
030102-6
030103-1
030103-2
Buffalo Run
Smally Spring Branch
Sulphur Springs Creek
020503-1
020503-2
020503-3
020503-5
020601-1
020601-2
020601-3
Little
Wills
Creek
Little Wills Creek
Wolf Camp Run
Milligan Run
Sand Spring Run
Upper
Evitts
Creek
Evitts Creek
Tar Water Creek
Mill Run
Shobers Run
Spicer Brook
Raystown Branch
Juniata River

Shobers Run


030105-3
030105-2
030105-1
030104-2
030104-3
030104-1
030103-3
030103-2
030501-2
020601-1
Cumberland Valley Run-Raystown Branch Juniata River
Cumberland Valley Run
Shobers Run
Buffalo Run
Cove Creek
Swamp Run
Upper Evitts Creek
Evitts Creek
Sand Spring Run
Sulphur Springs Creek
Tub Mill Run-Ra Branch Juniata
Raystown Branch Juniata River
1723858
1724403
1723792
1724402
1724440
1723855
1724134
1723853
1724388
1723791
1723533
1724441
1724117
1723707
1723540
1724152
1723790
1724333
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1723521
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1723522
1724097
1723627
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1724350
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1723644
1724351
1724365
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1724385
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1723692
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1724287
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1724487
1723693
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1723827
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1724367
1724384
1724268
1724286
1723647
1723626
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1724267
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1723552
1724270
1723594
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1724495
1746335
1723593
1723609
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1724222
1723555
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1724221
1724494
1724482
1724366
1723537
1724238
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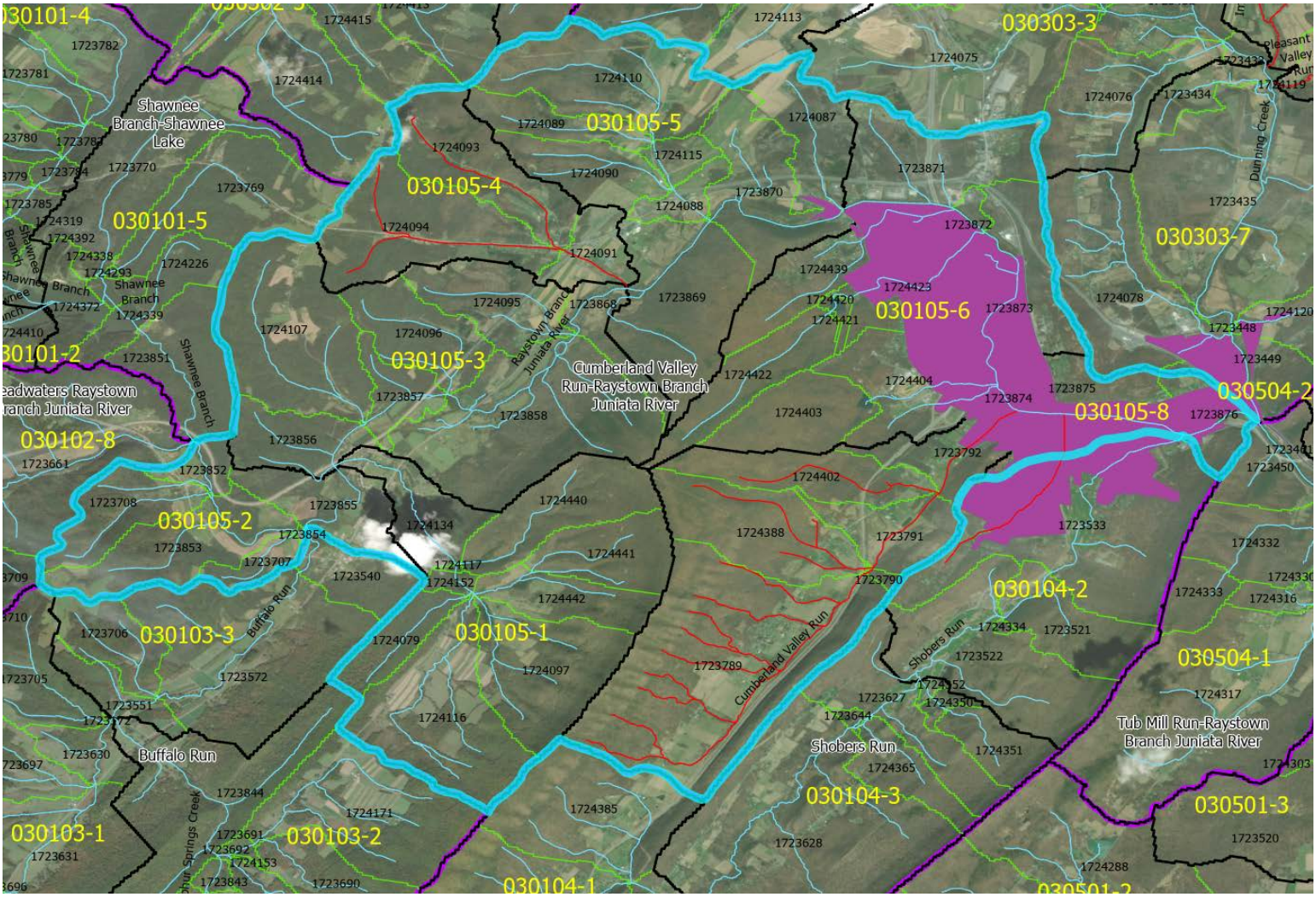
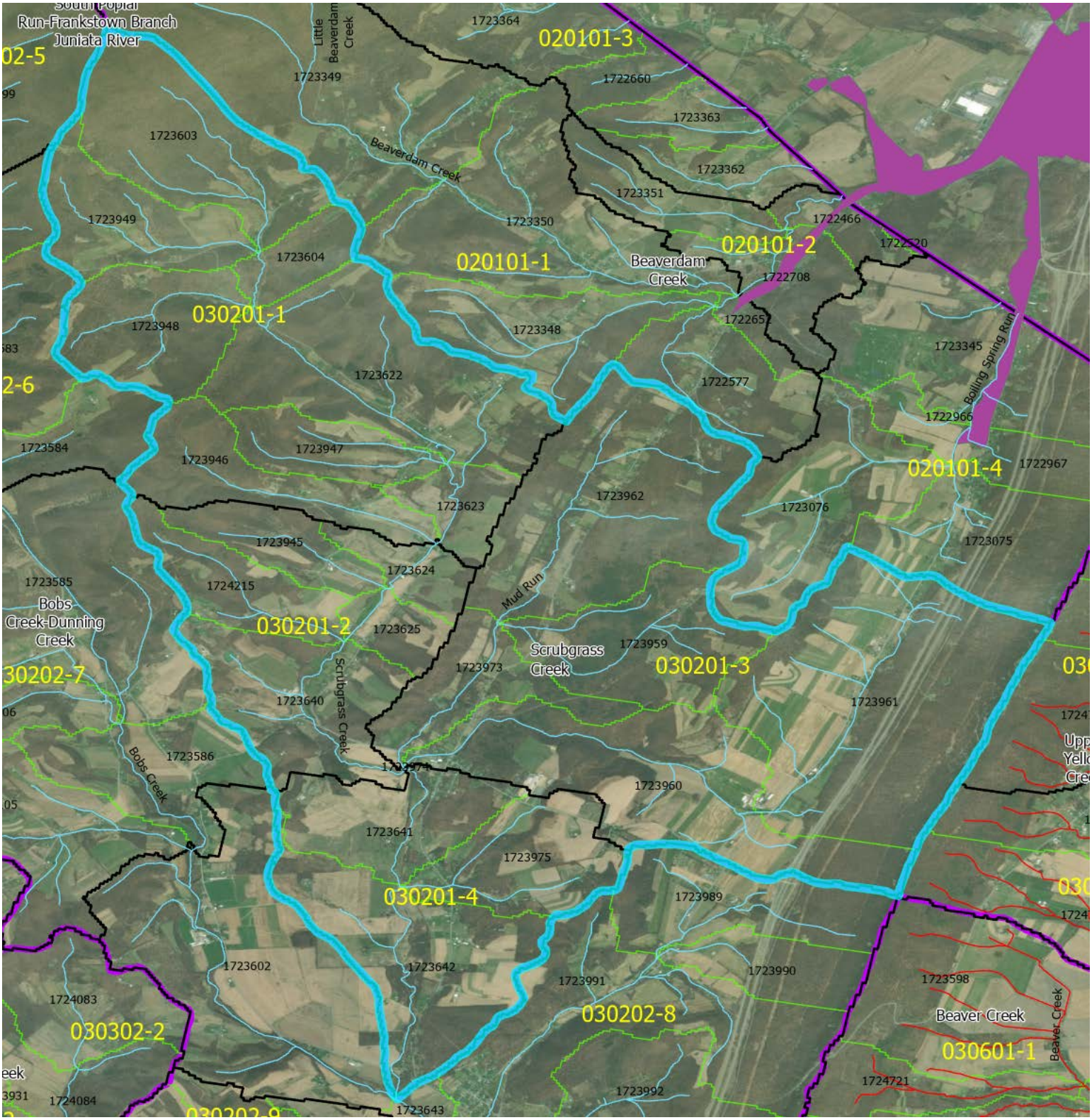
1724219
1746872

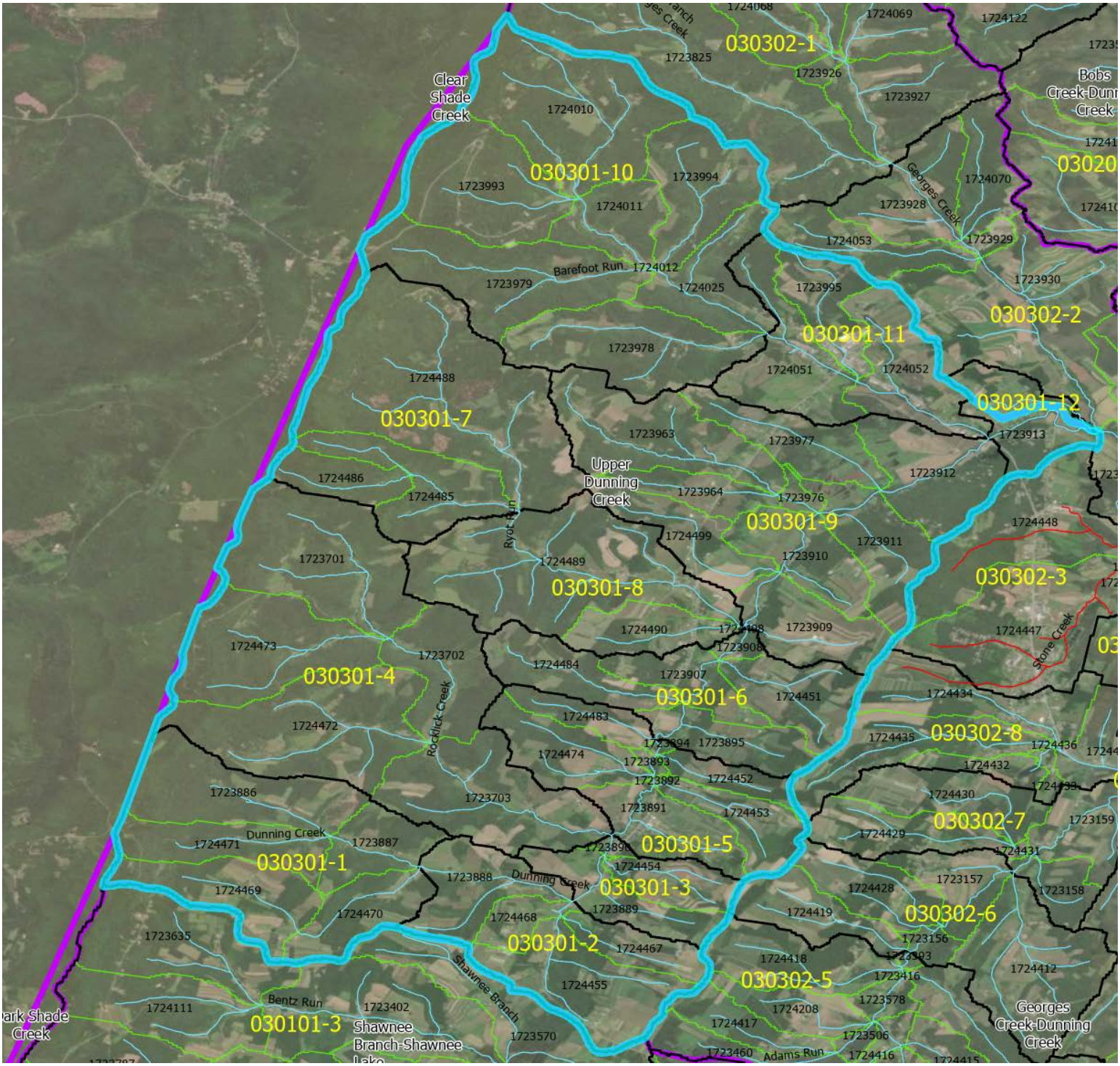
Cumberland Valley Run-Raystown Branch Juniata River



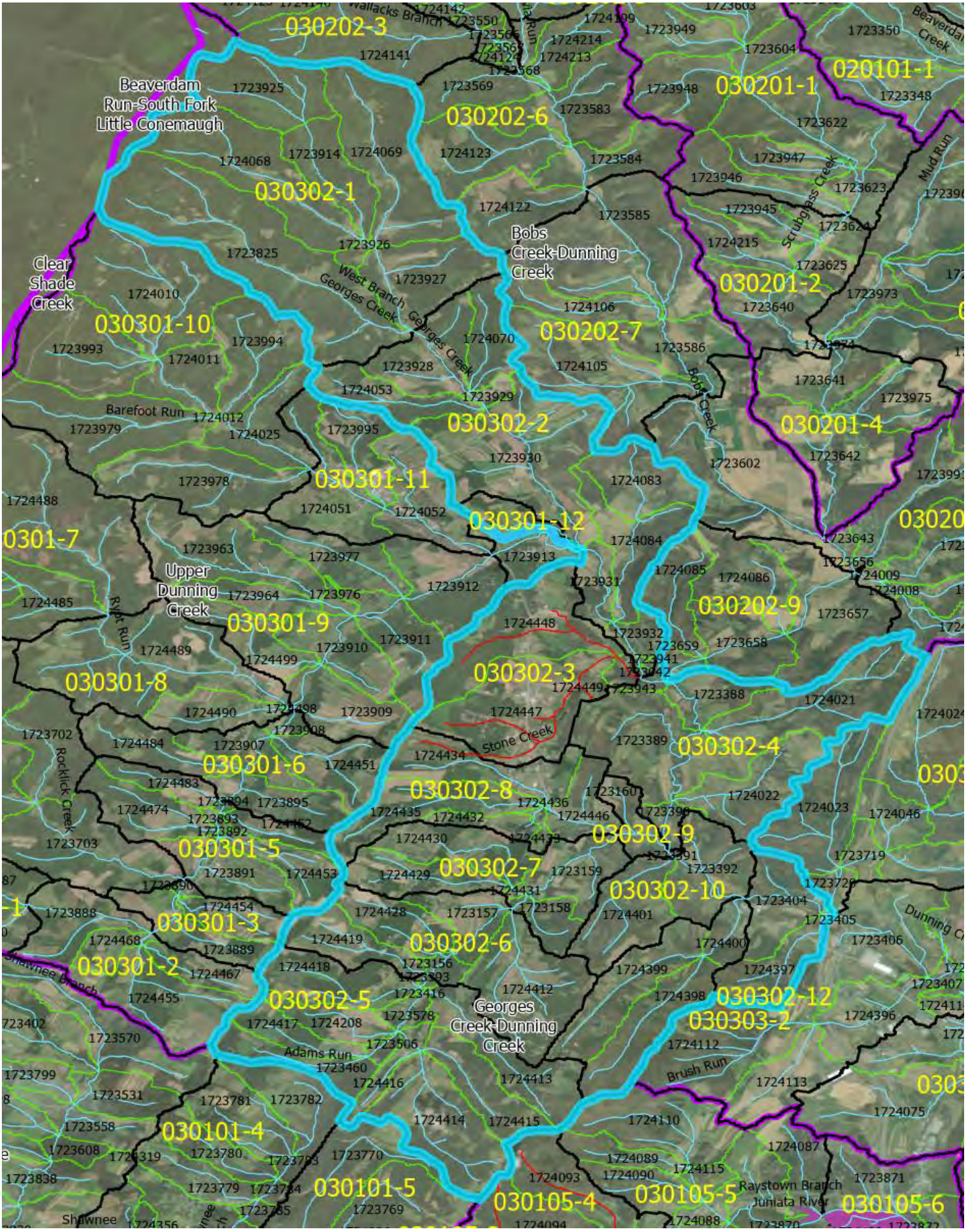
Scrubgrass Creek



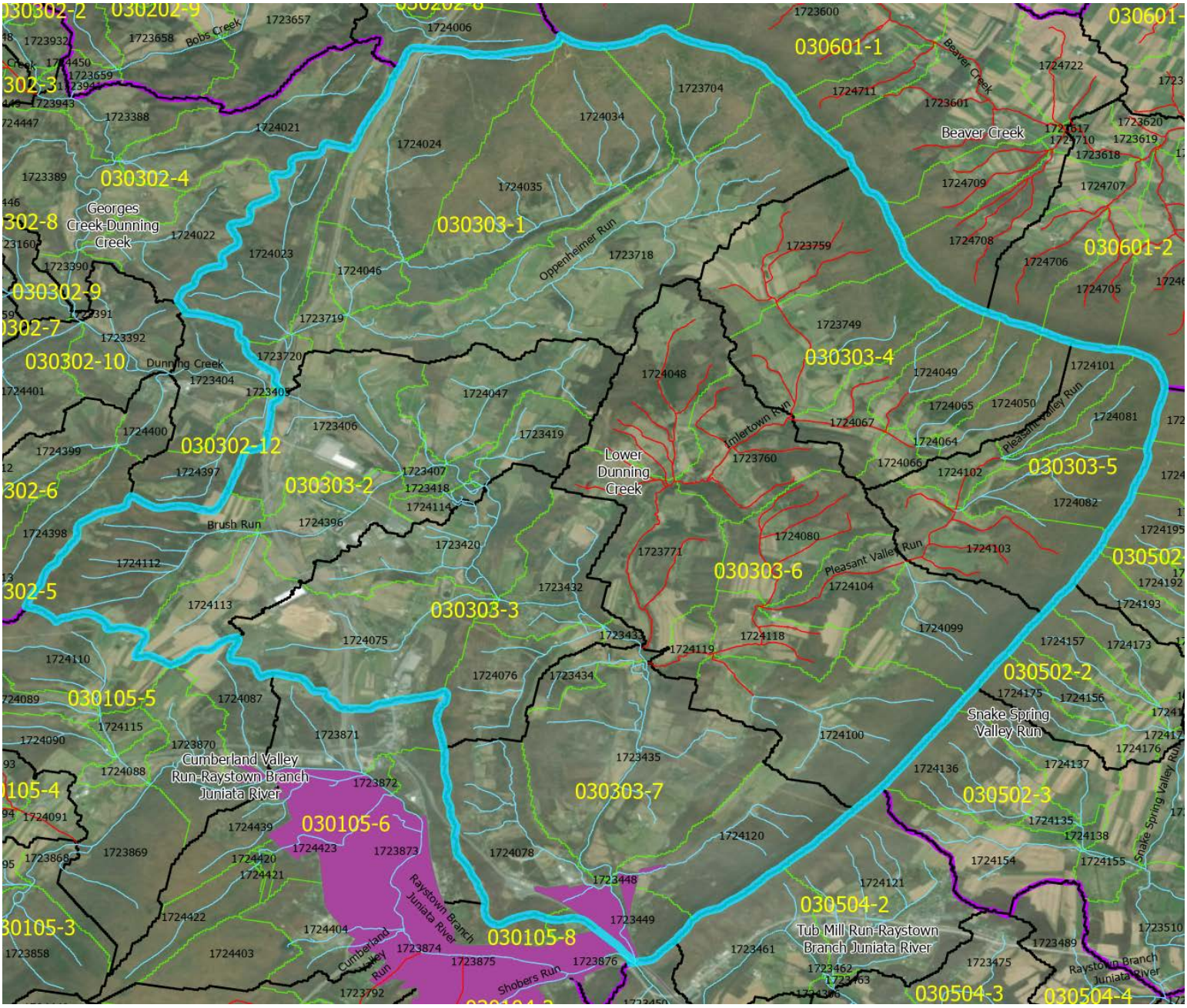
Upper Dunning Creek



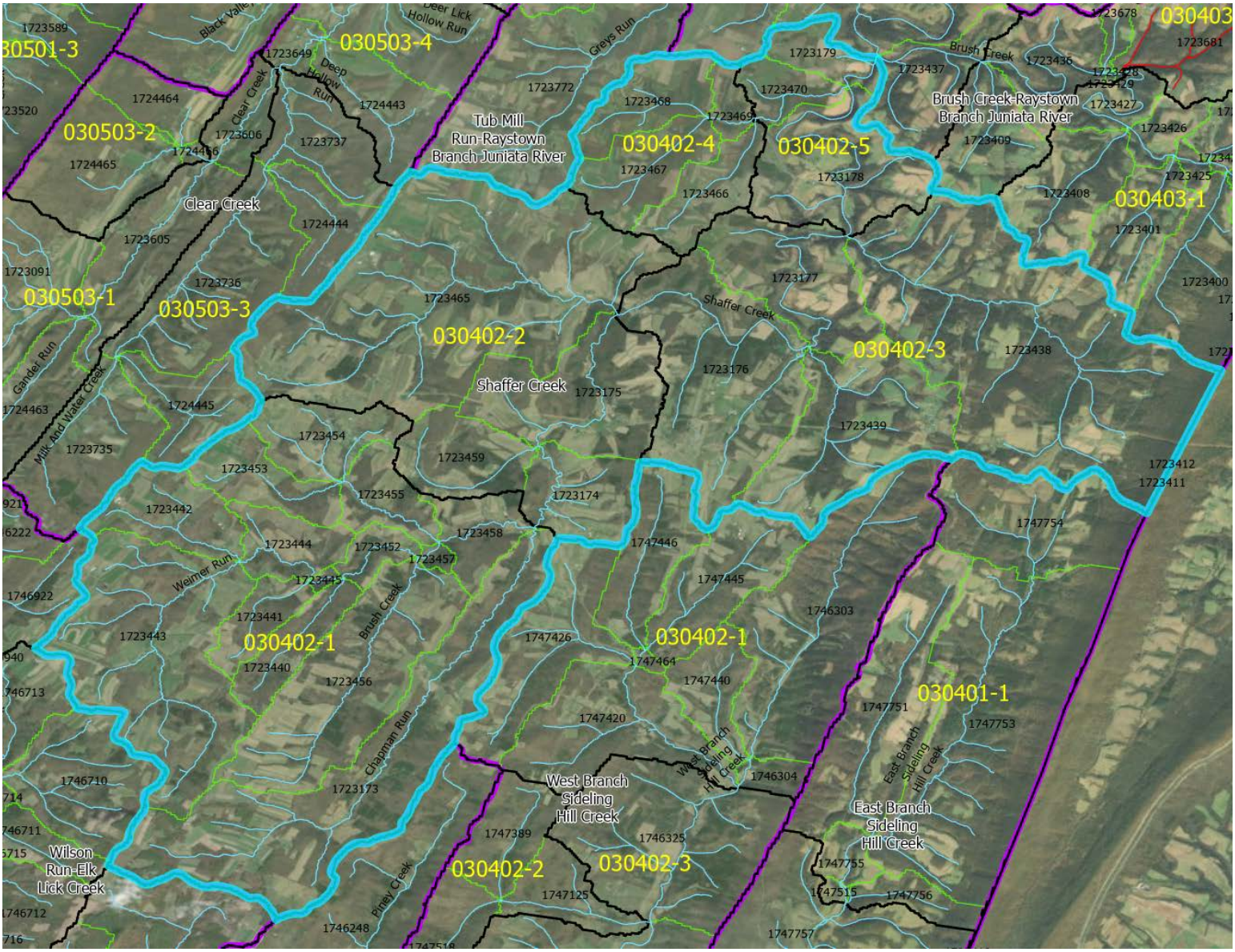
Georges Creek-Dunning Creek



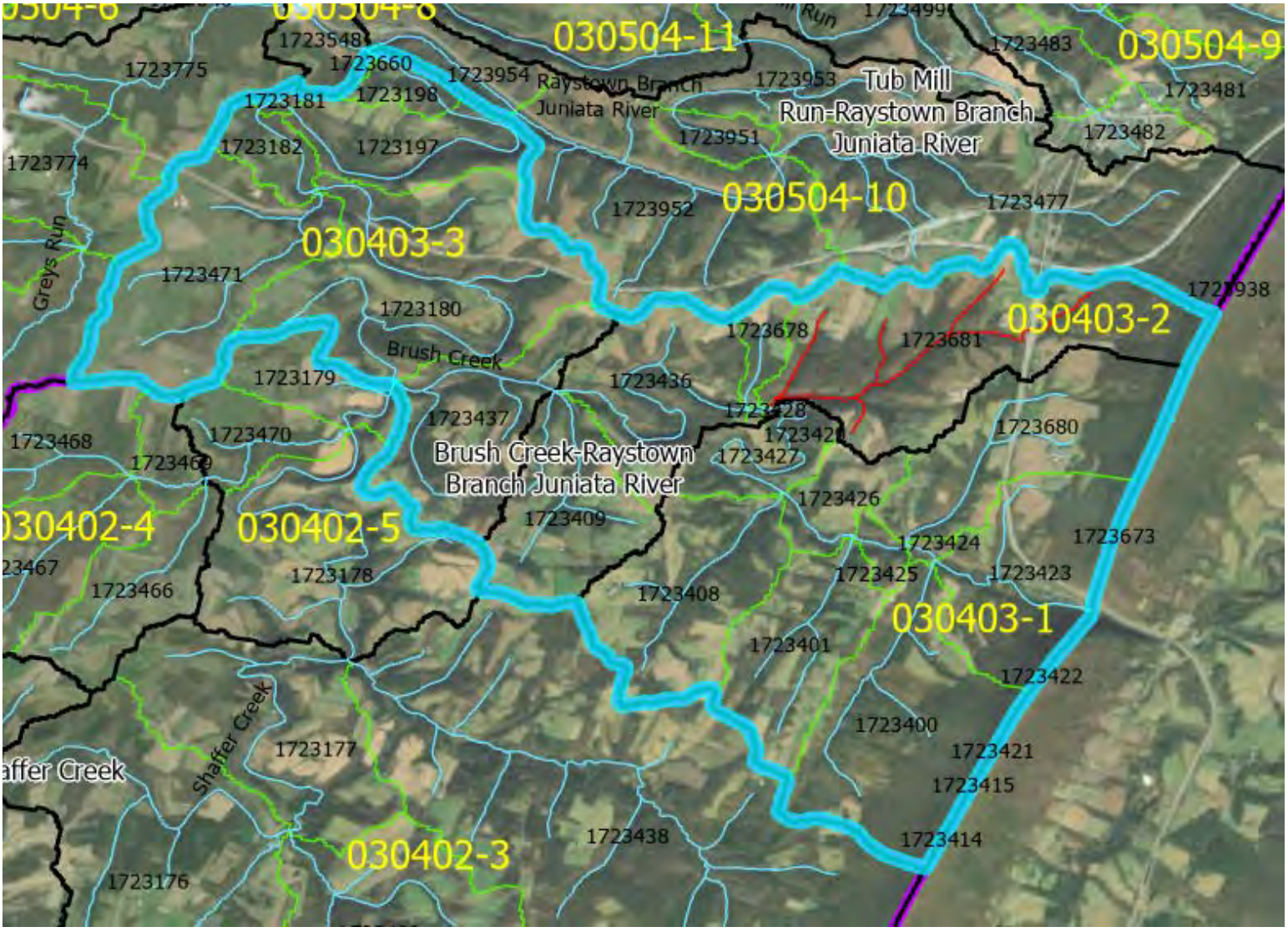
Lower Dunning Creek



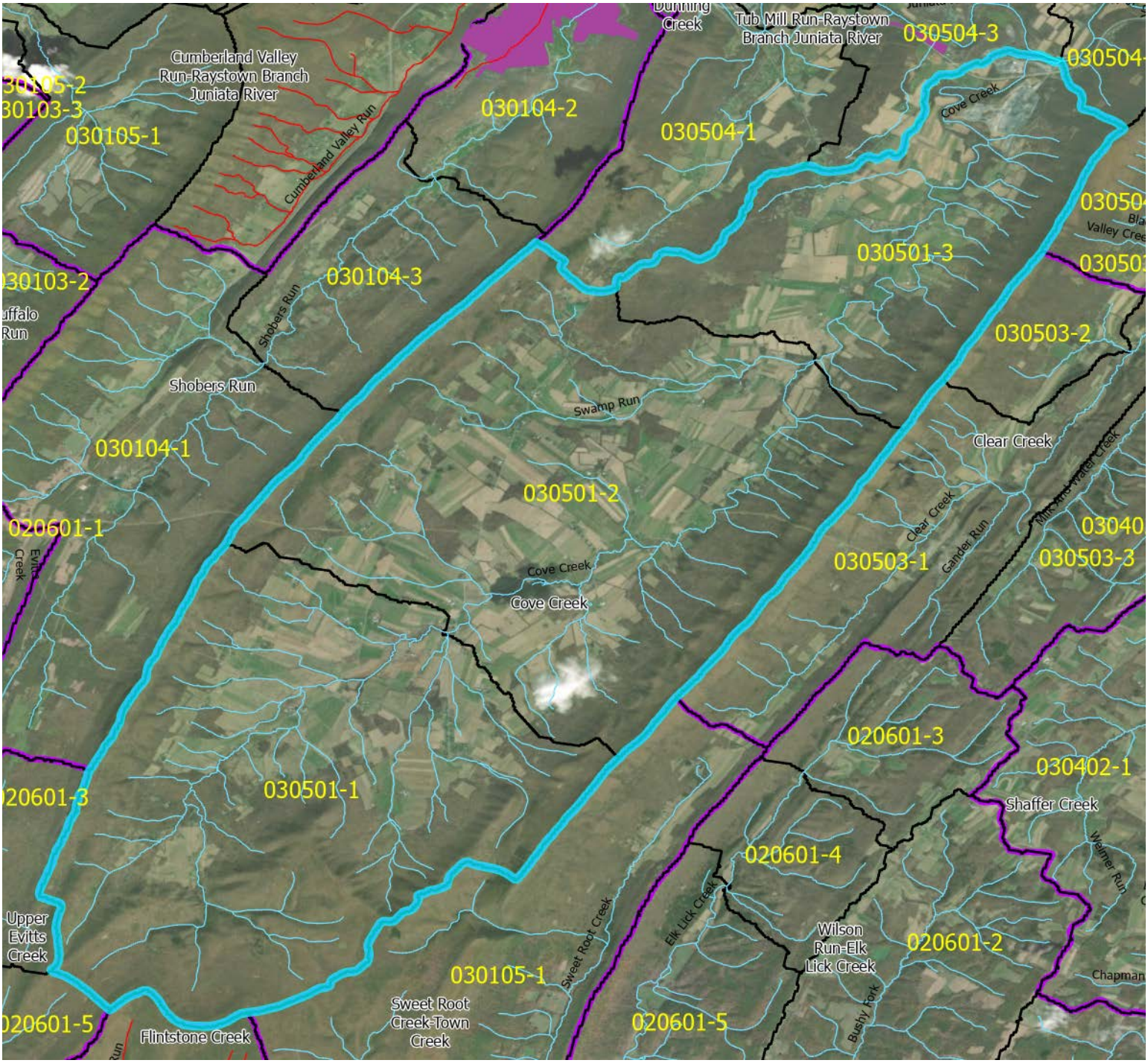
Shaffer Creek



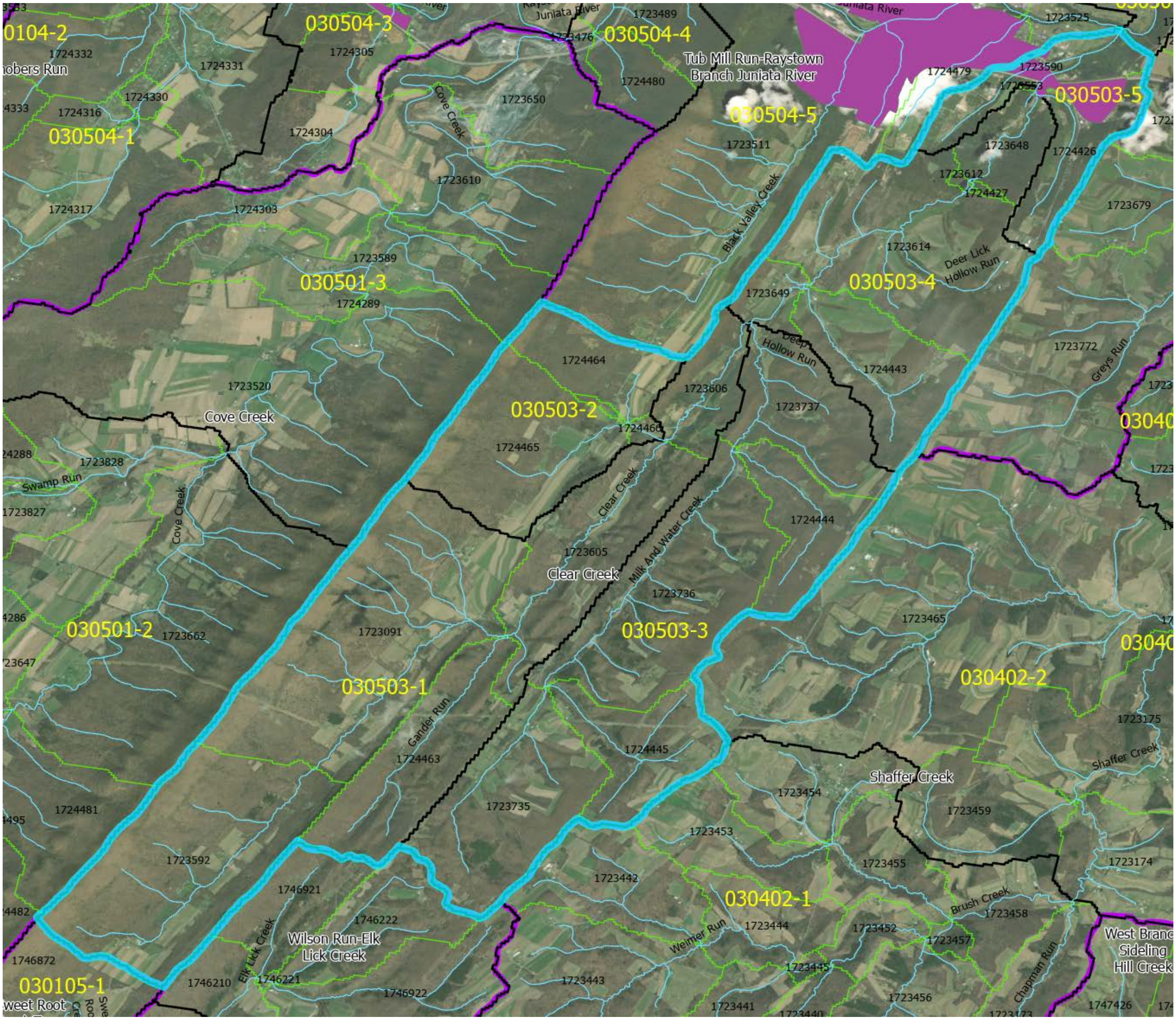
Brush Creek-Raystown Branch Juniata River



Cove Creek


Cumberland Valley Run-Raystown Branch Juniata River
Dunning Creek
Tub Mill Run-Raystown Branch Juniata River
030504-3
030504-
Cove Creek
030105-2
030103-3
030105-1
030104-2
030504-1
Cumberland Valley Run
030501-3
030503-2
030103-2
030104-3
Shobers Run
Shobers Run
Swamp Run
030104-1
Clear Creek
030501-2
020601-1
Clear Creek
Gander Run
030503-1
030503-3
Cove Creek
Cove Creek
020601-3
030402-1
030501-1
020601-3
Shaffer Creek
020601-4
Upper Evitts Creek
Elk Lick Creek
Sweet Root Creek
Wilson Run-Elk Lick Creek
020601-2
030105-1
Sweet Root Creek-Town Creek
020601-5
020601-5
Flintstone Creek
Buskey Fork

Clear Creek



030504-3
030504-4
Juniata River
1723489
1723476
1724305
1724331
1724332
1724330
1724316
030504-1
1724304
1723650
Cove Creek
1724480
Tub Mill Run-Raystown Branch Juniata River
030504-5
1723511
1724479
1723525
1723590
030503-5
1723648
1724426
1723612
1724427
1723679
1723610
1724317
1724303
Black Valley Creek
1723614
Deer Lick Hollow Run
1723589
030501-3
1724289
1723649
030503-4
Deep Hollow Run
1724464
1724443
1723772
Greys Run
1723520
1723606
1723737
030503-2
Cove Creek
1724466
1724465
1724288
1723828
Swamp Run
1723827
Cove Creek
Clear Creek
Milk And Water Creek
1724444
1723605
Clear Creek
1723736
030501-2
1723662
1723091
030503-3
1723465
1723647
030503-1
030402-2
Gander Run
1723175
1724463
1724445
Shaffer Creek
Shaffer Creek
1723454
1724481
1723459
1723735
1723453
1723592
1723455
1723174
1723442
1746921
030402-1
Brush Creek
1723458
1746222
1723444
1723452
Weimer Run
Wilson Run-Elk Lick Creek
1723457
Elk Lick Creek
1746872
1746221
1723445
Chapman Run
West Branch Sideling Hill Creek
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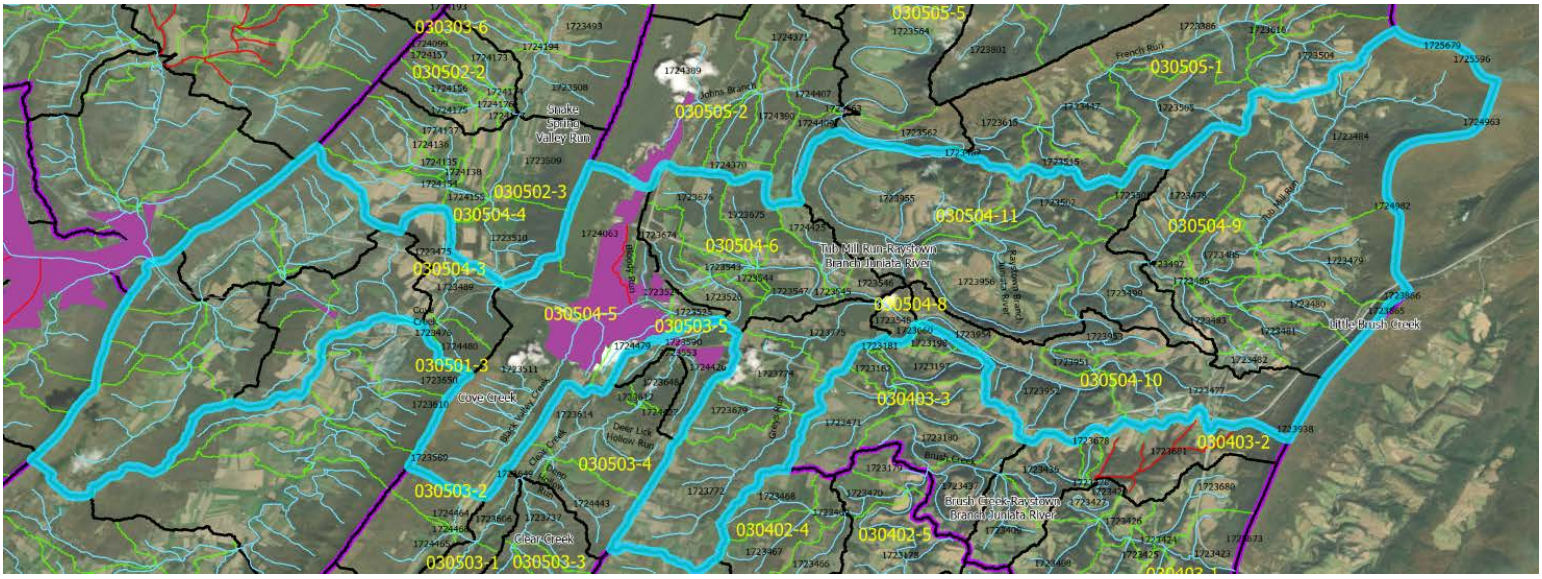
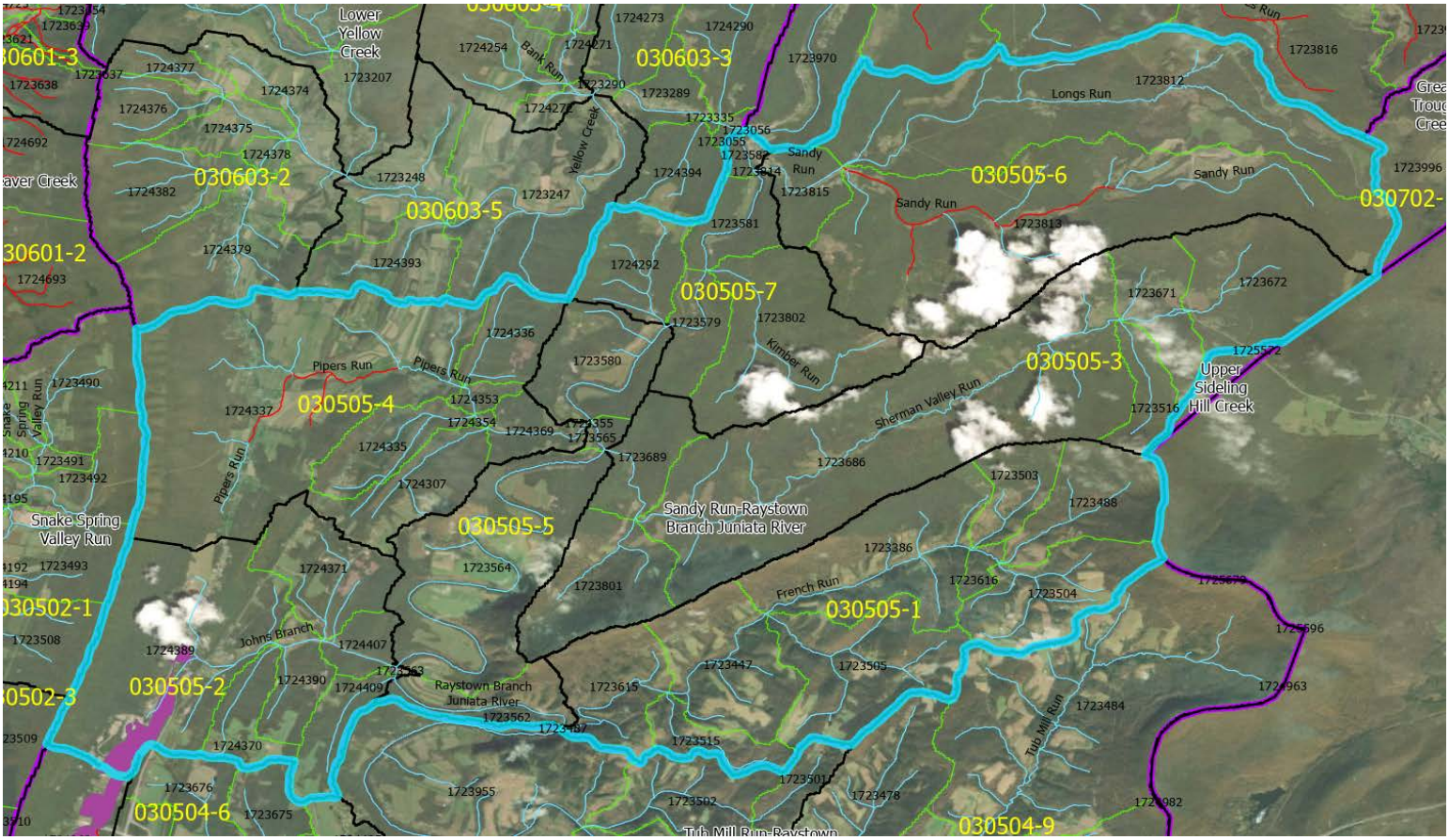
1723443
030105-1
1746922
1723456
1723441
1747426

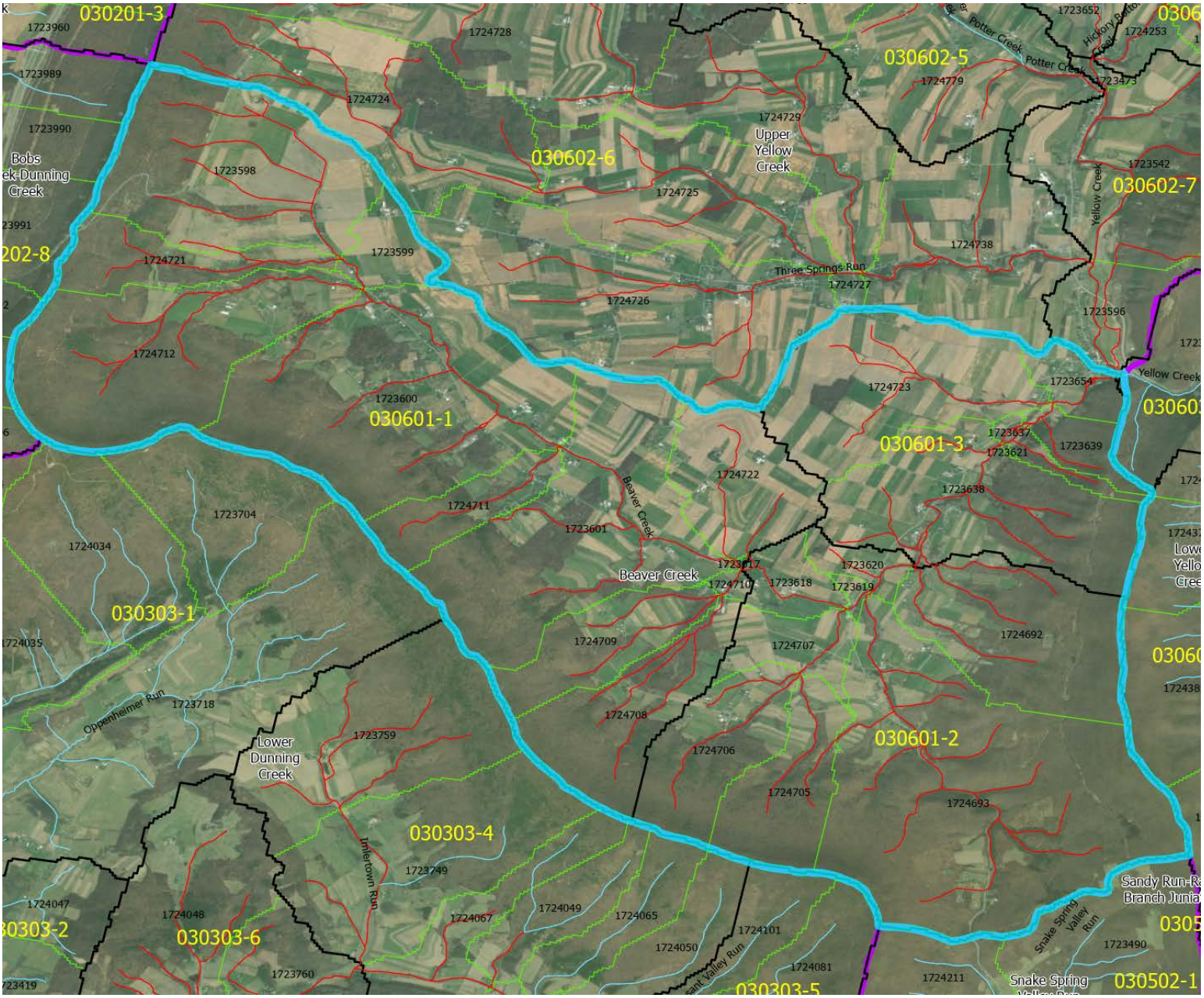
Tub Mill Run-Raystown Branch Juniata River



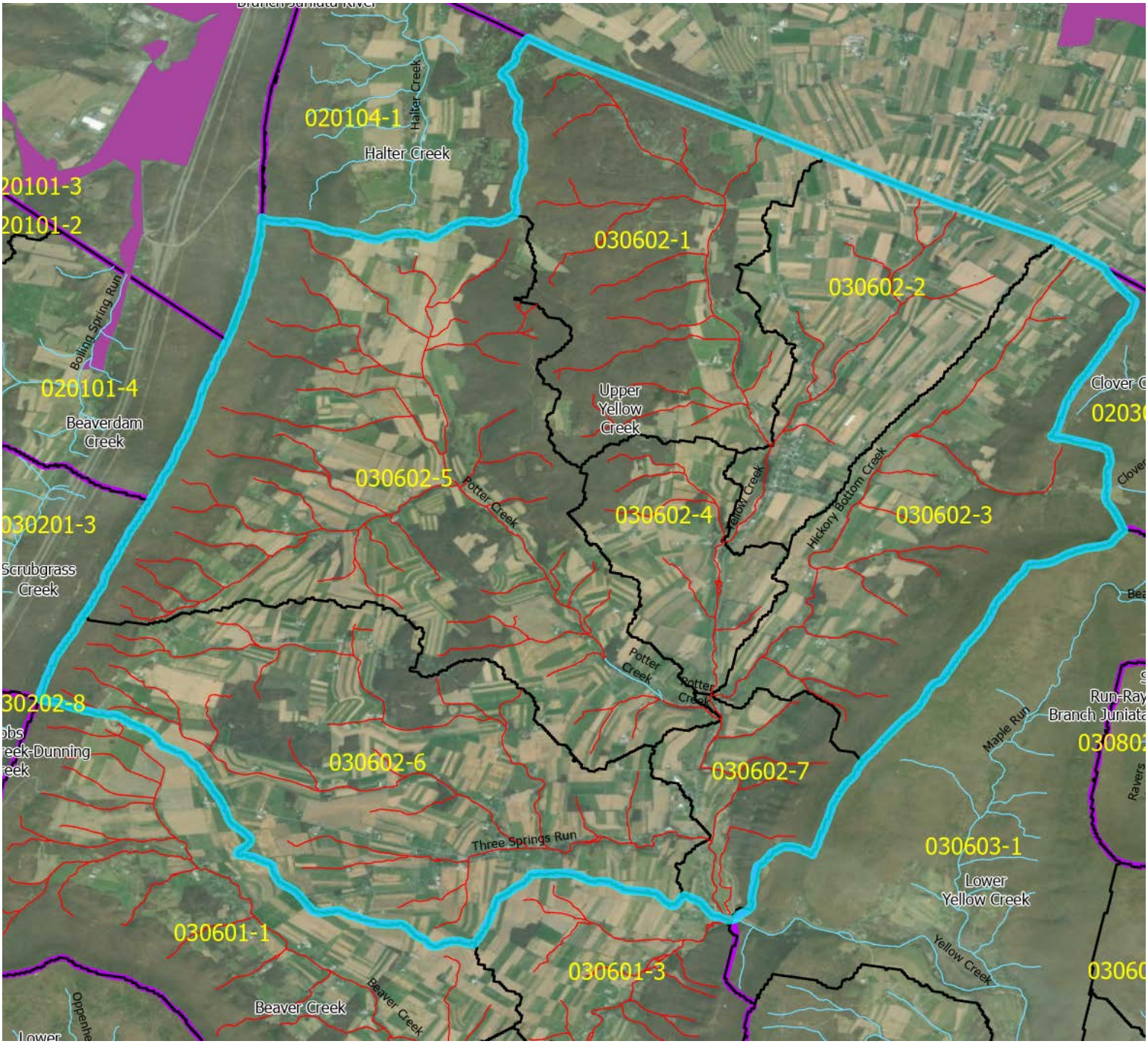
Sandy Run-Raystown Branch Juniata River



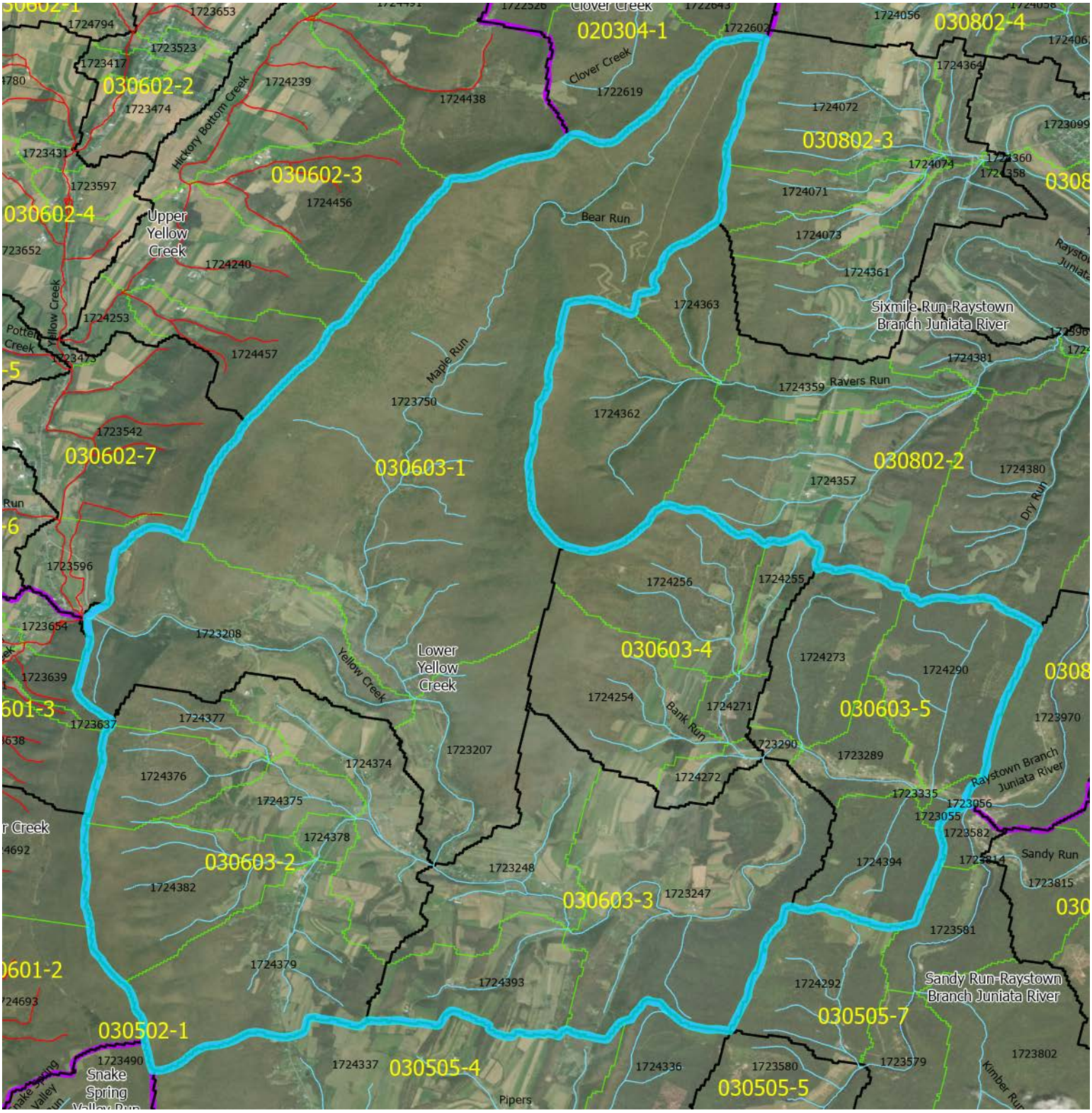
Beaver Creek



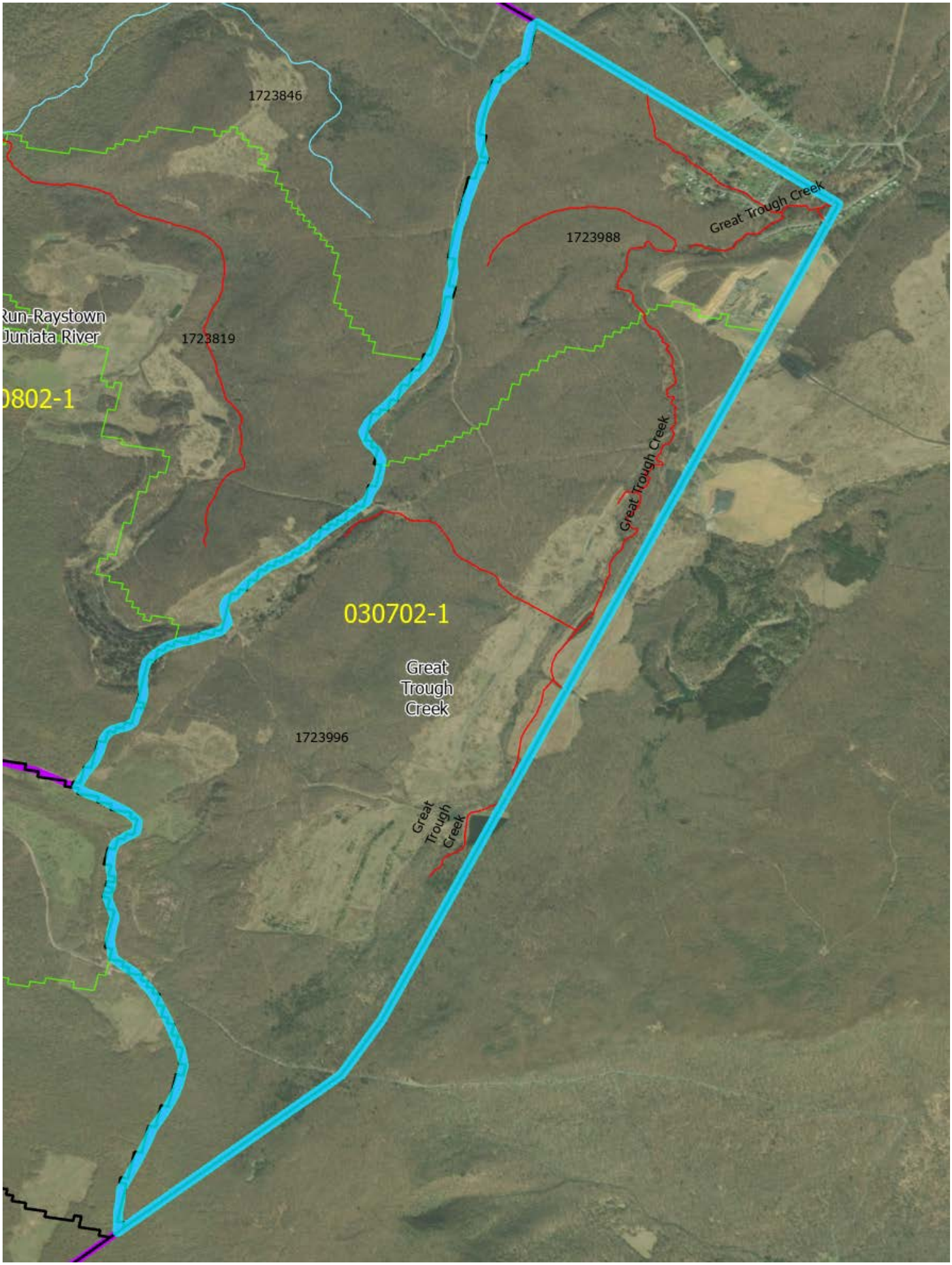
Upper Yellow Creek



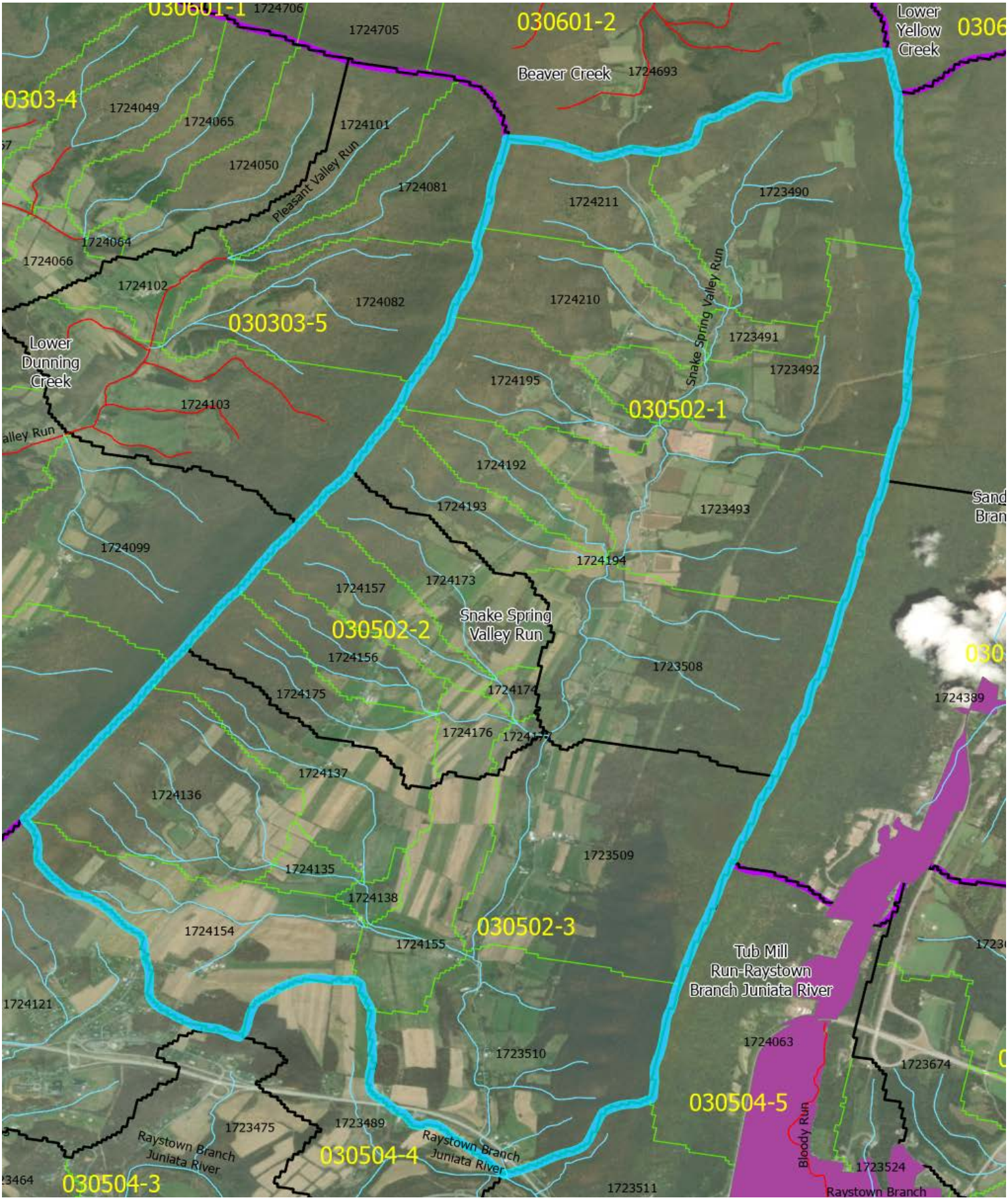
Lower Yellow Creek



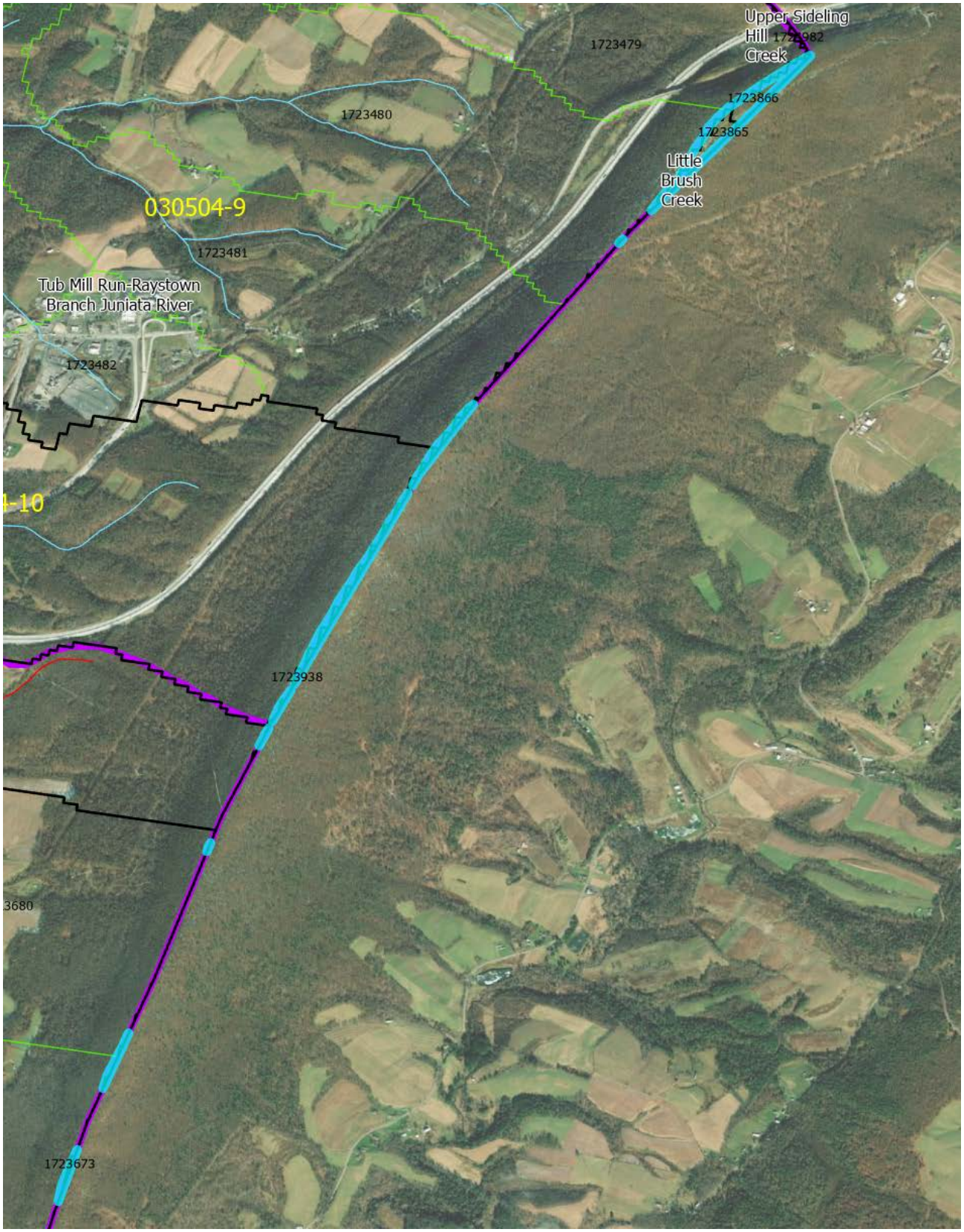
Great Trough Creek



Snake Spring Valley Run

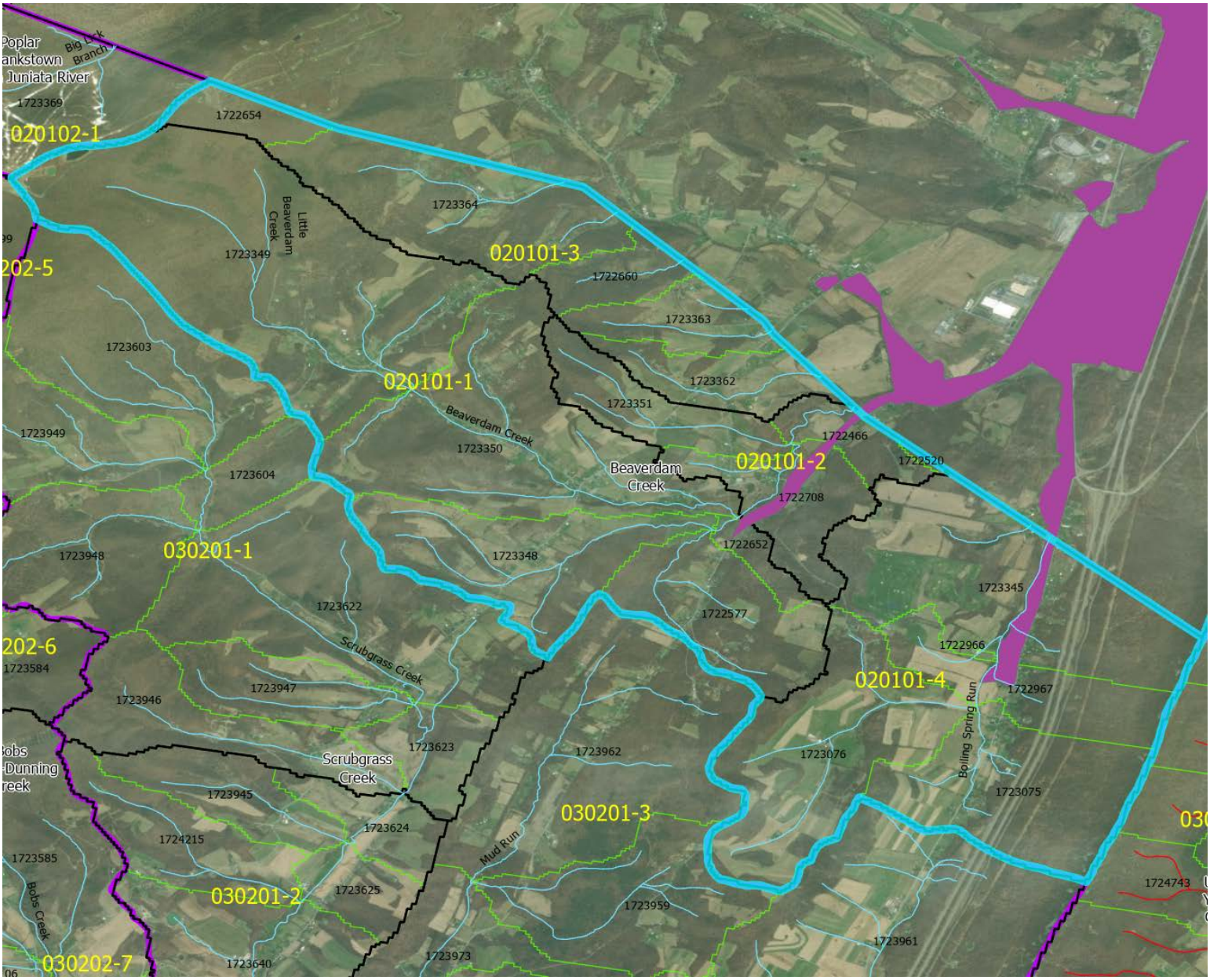


Little Brush Creek

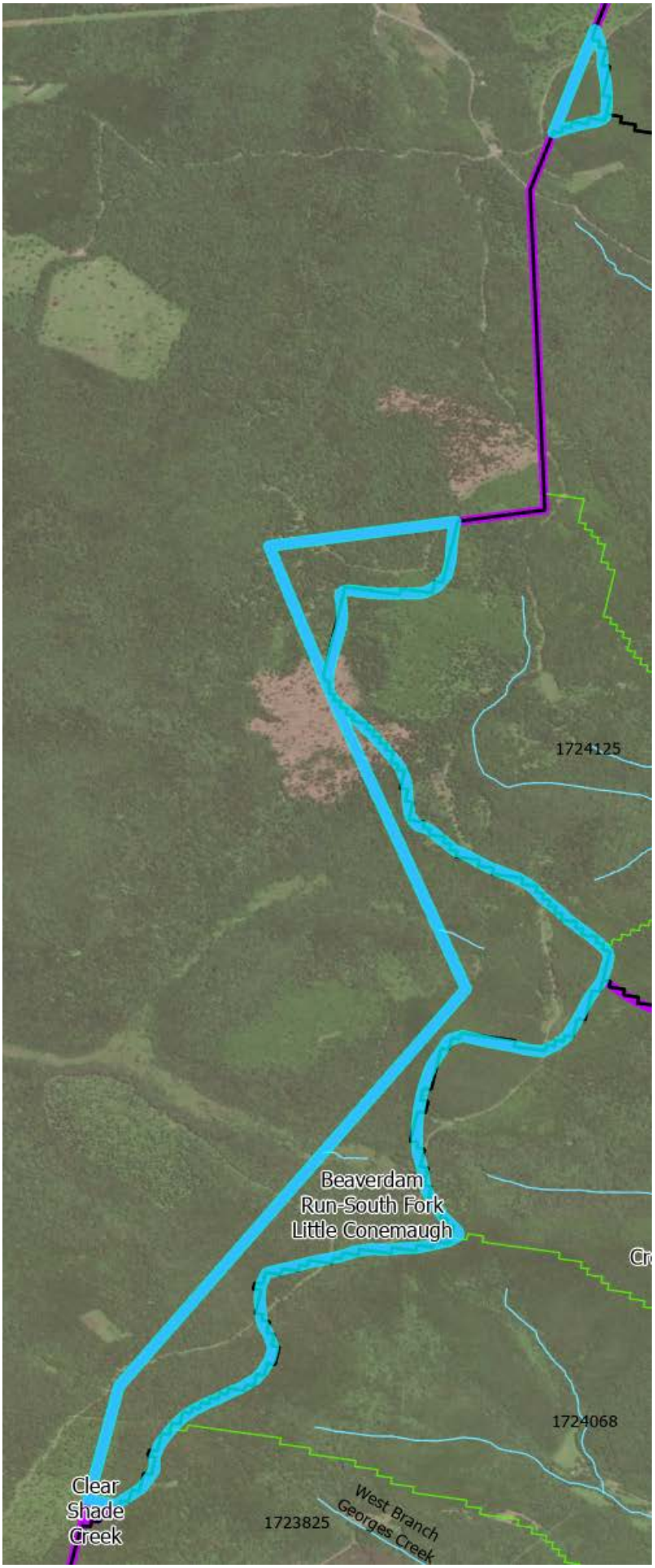


South Poplar Run-Frankstown Branch Juniata River

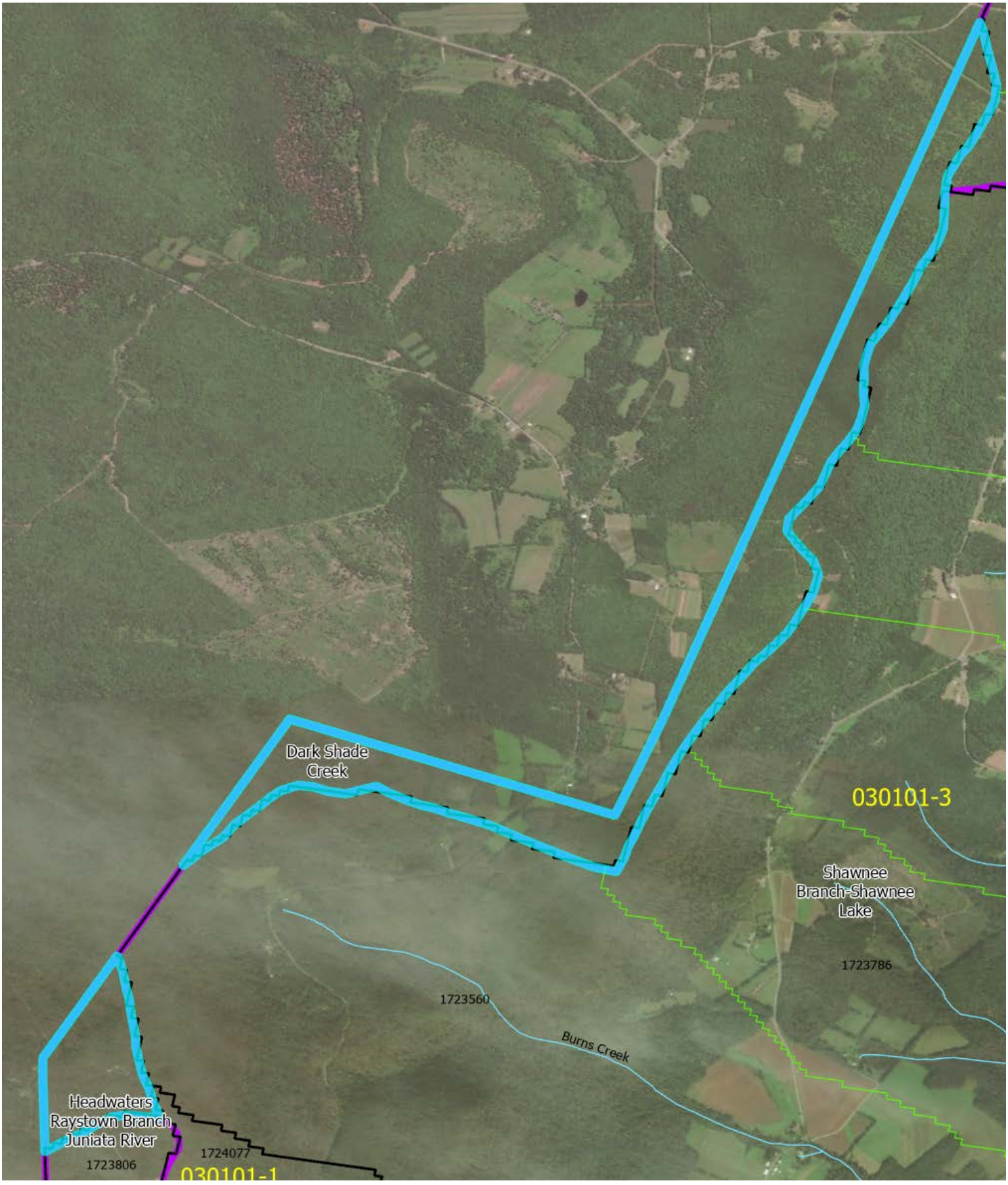
Beaverdam Creek



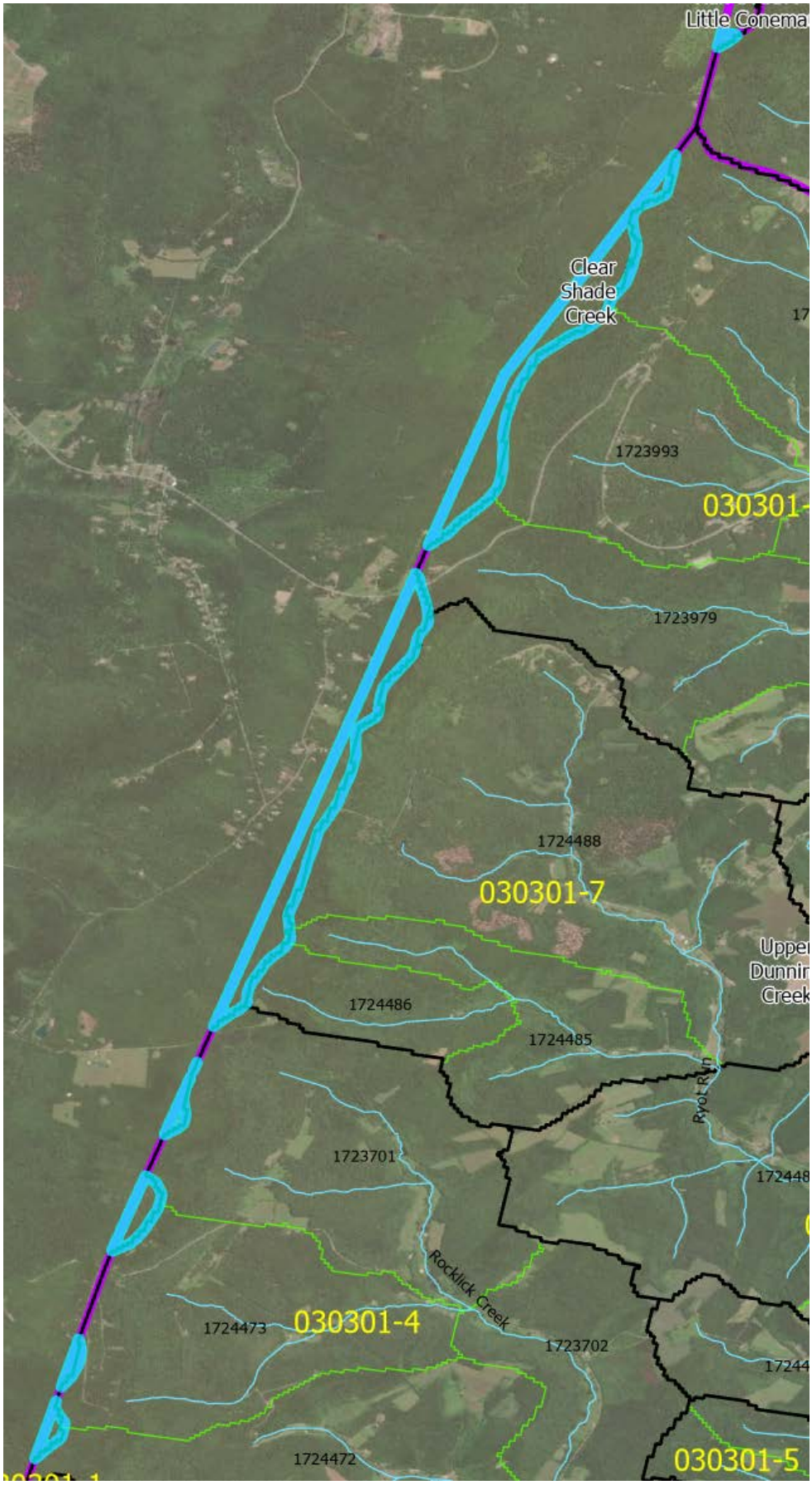
Beaverdam Run-South Fork Little Conemaugh



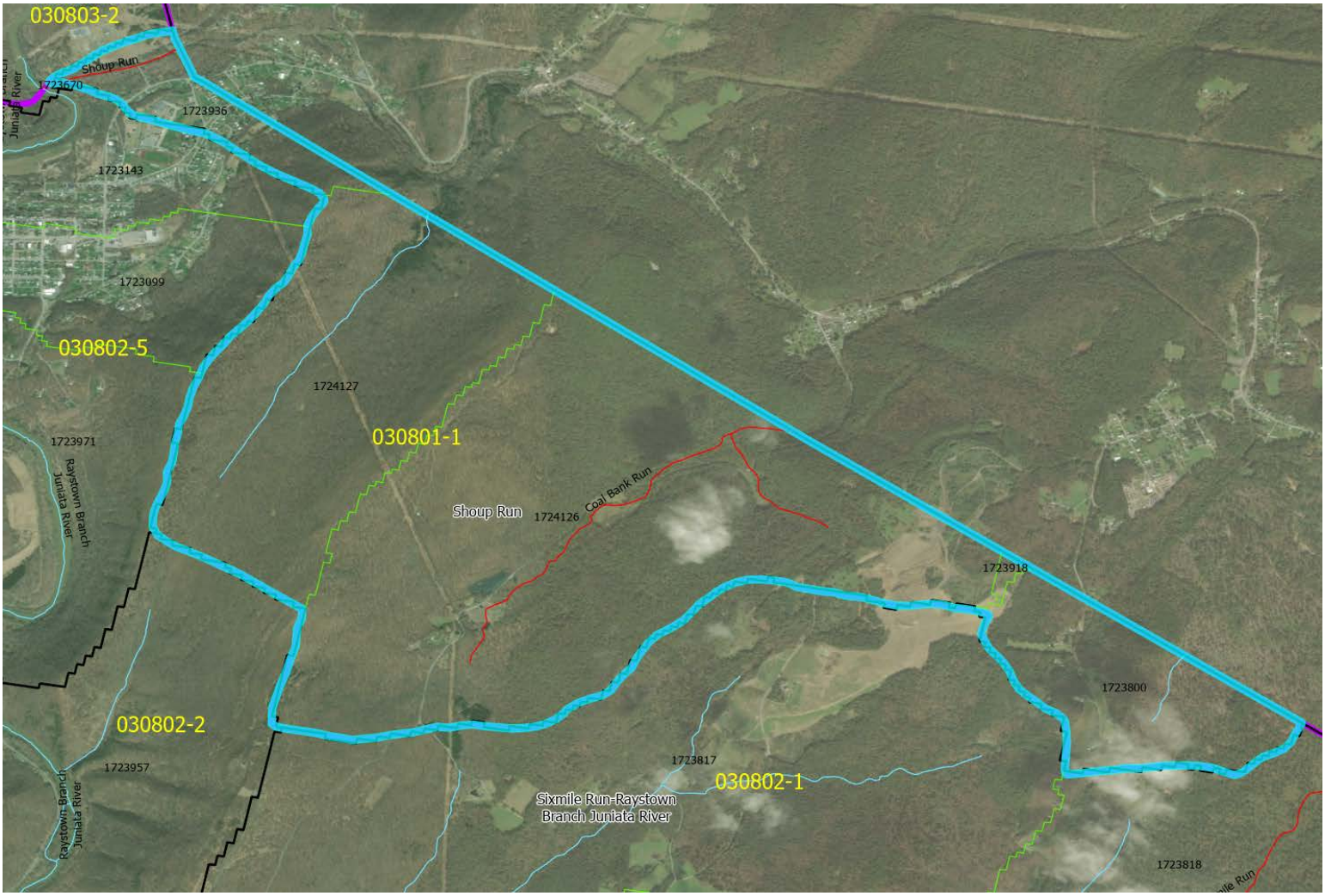
Dark Shade Creek



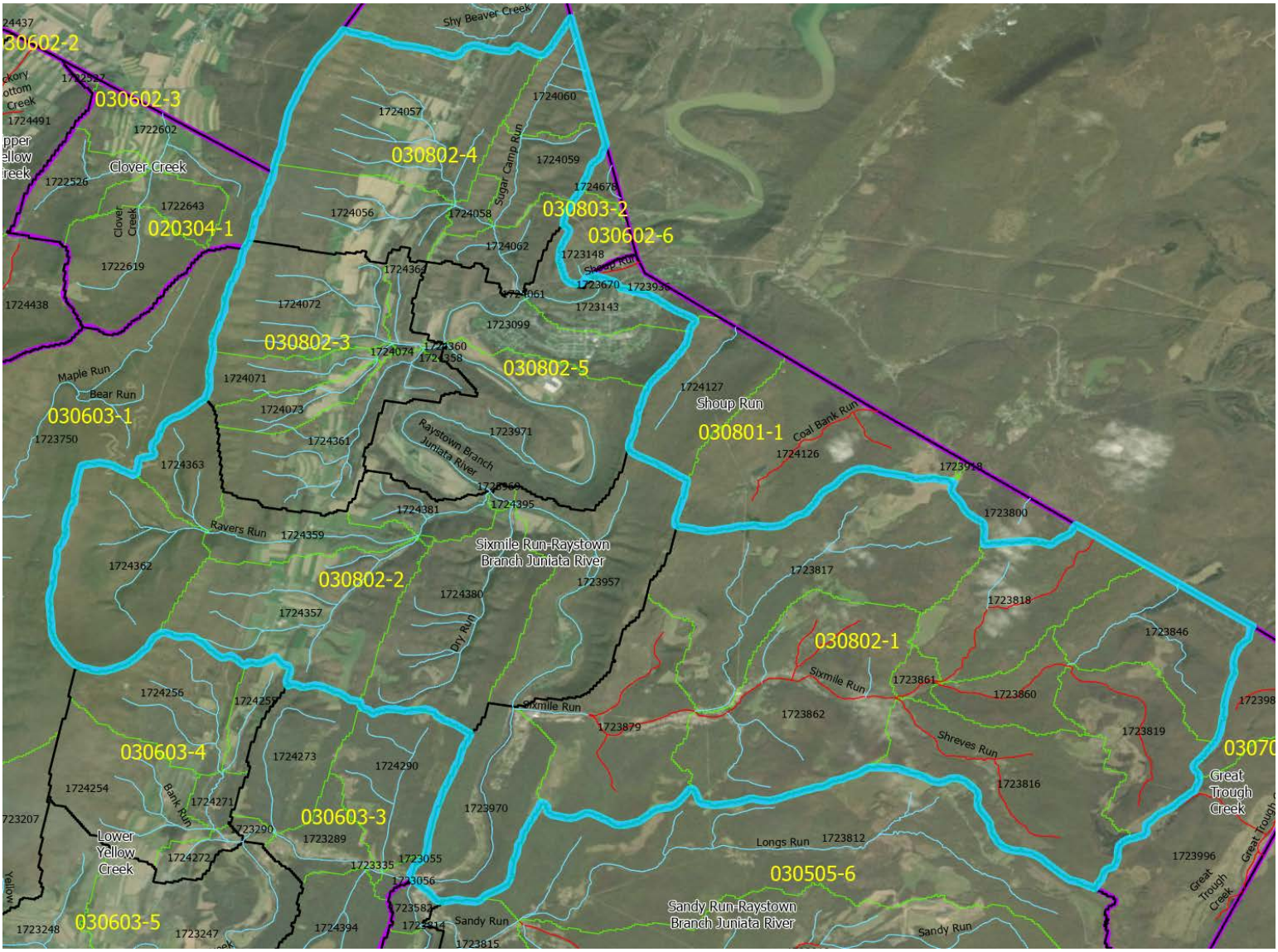
Clear Shade Creek



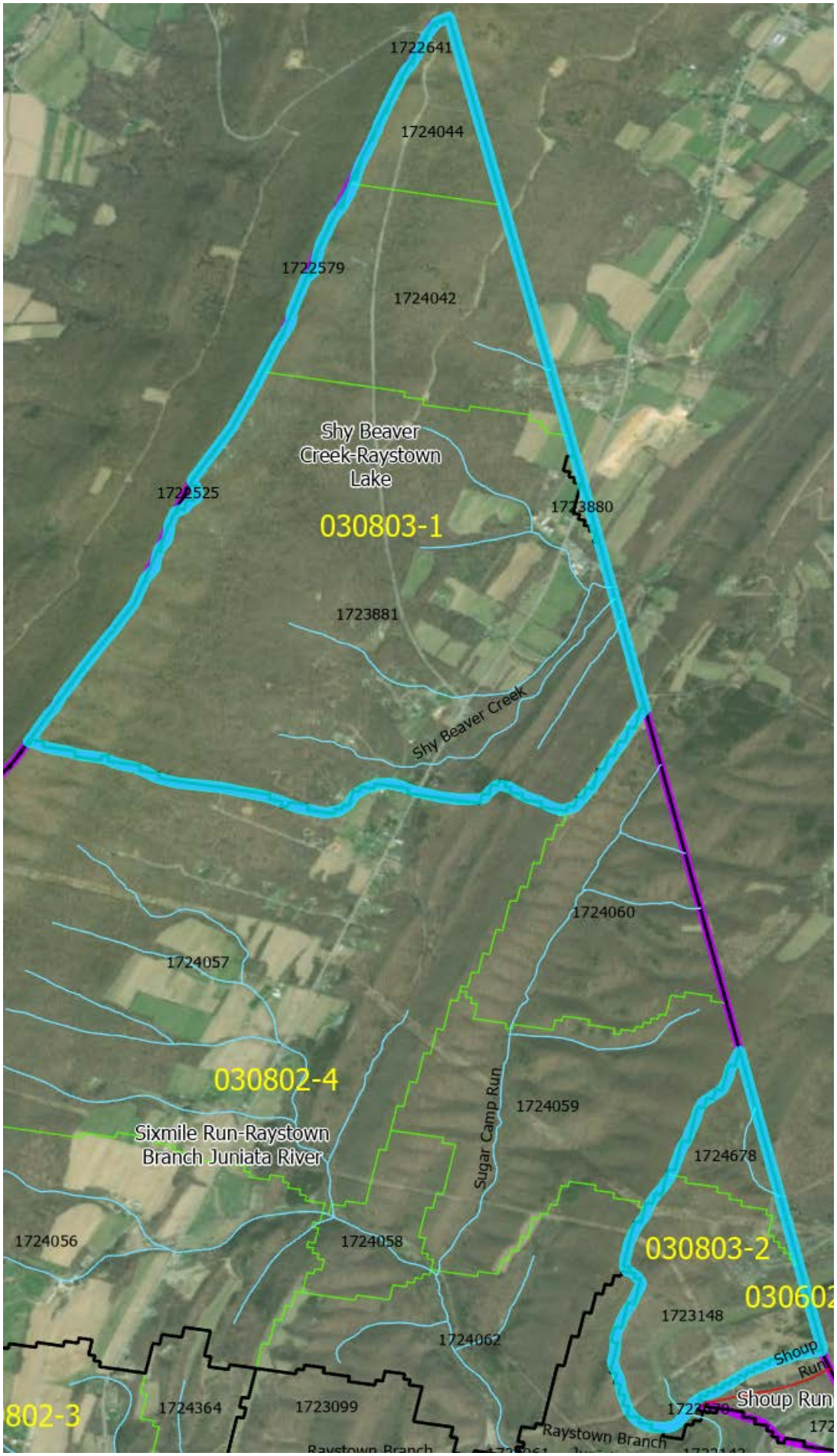
Shoup Run


030803-2
Shoup Run
1723670
1723936
1723143
1723099
030802-5
1724127
030801-1
1723971
Raystown Branch Juniata River
Shoup Run
1724126
Coal Bank Run
1723918
1723800
030802-2
1723957
1723817
030802-1
Sixmile Run-Raystown Branch Juniata River
1723818

Sixmile Run-Raystown Branch Juniata River

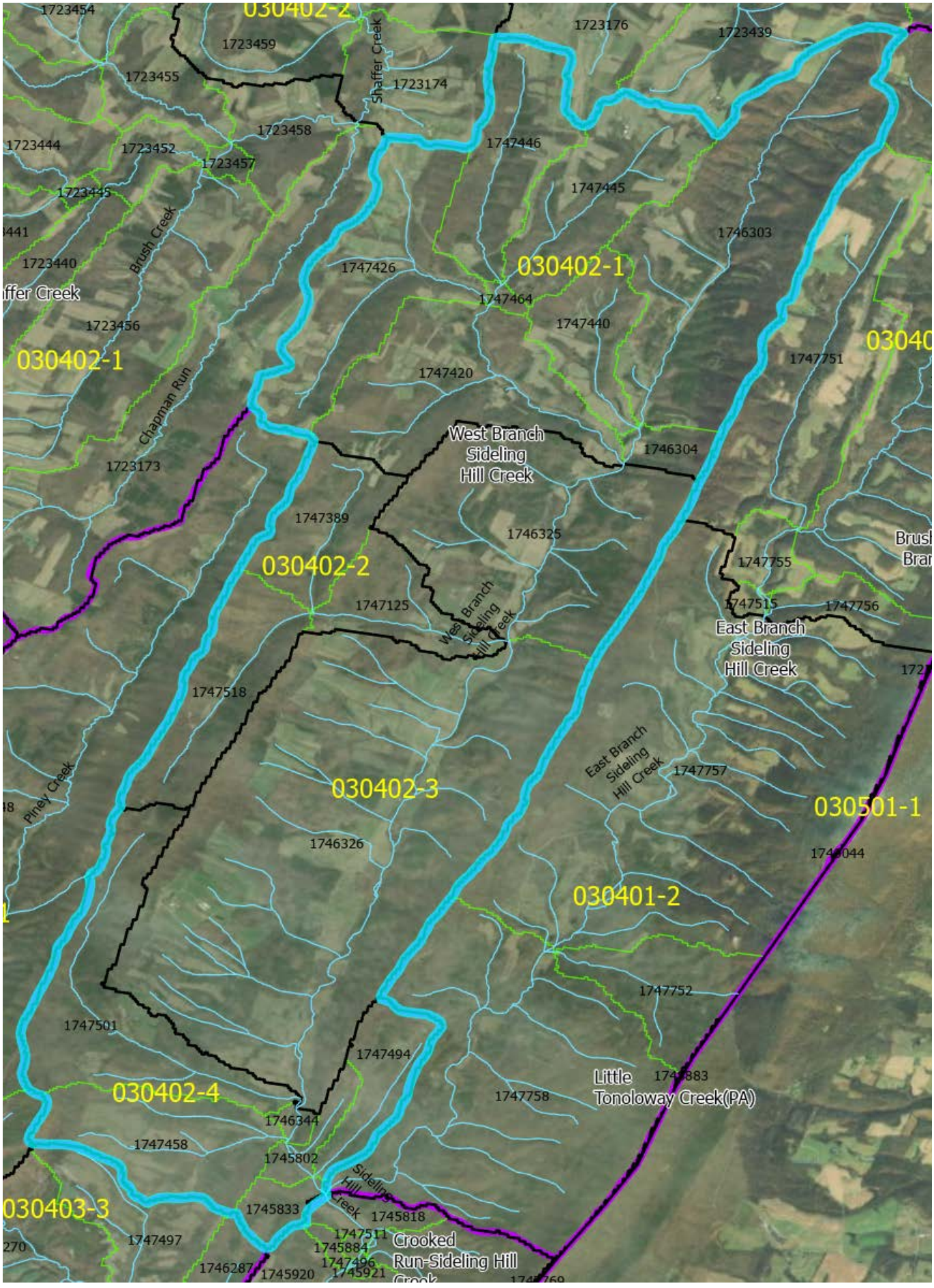


Shy Beaver Creek-Raystown Lake

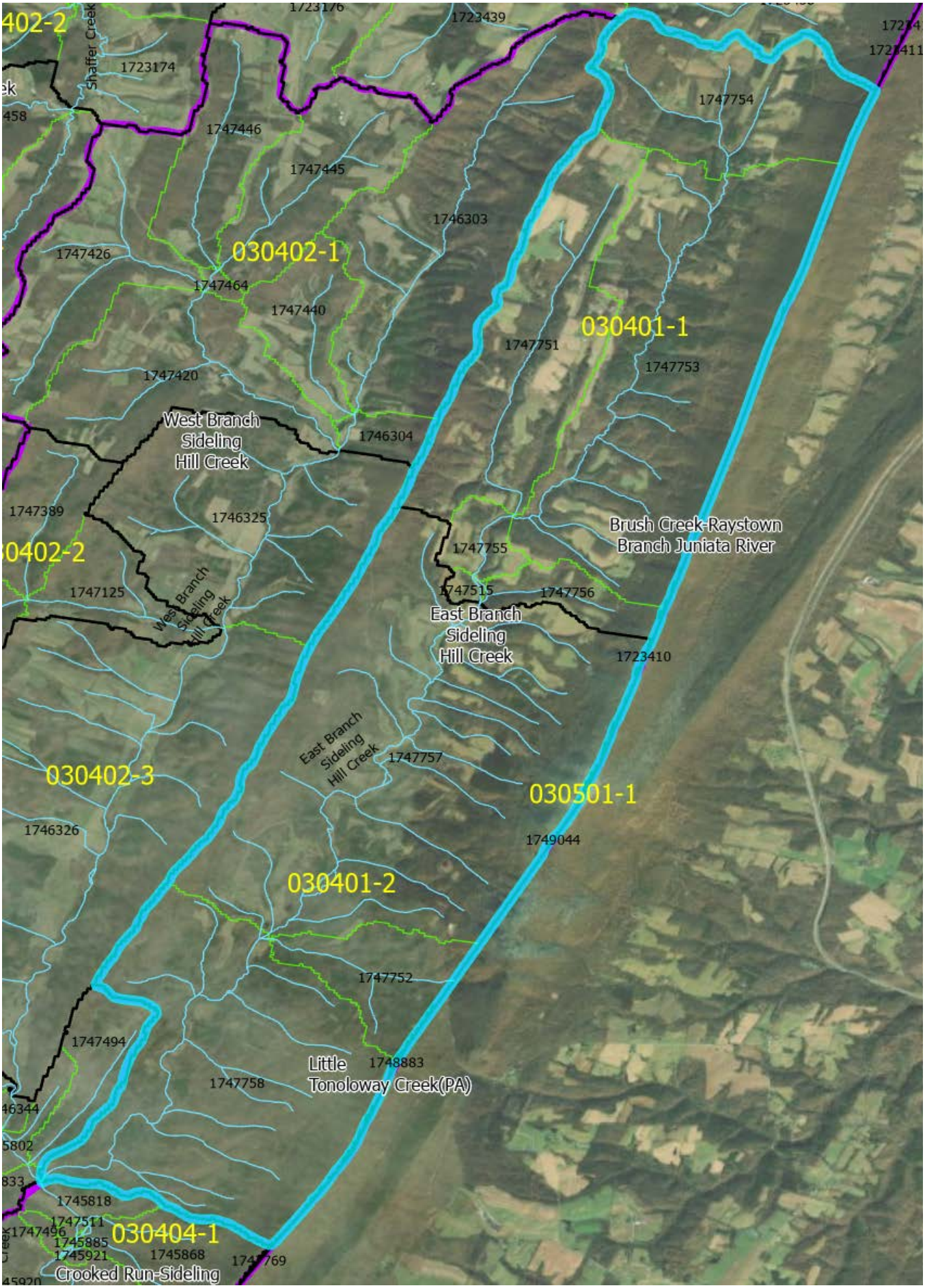


Upper Sideling Hill Creek

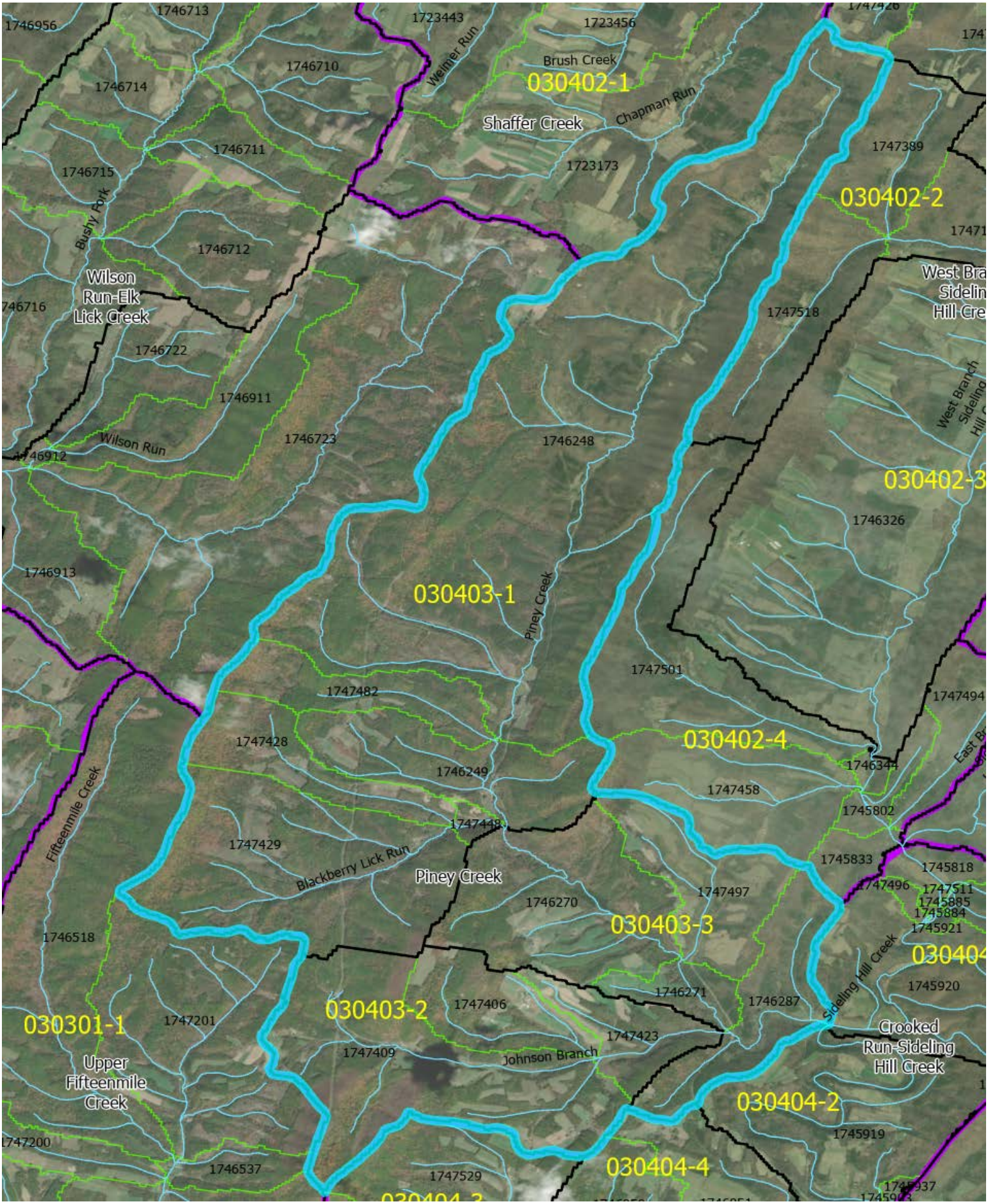
West Branch Sideling Hill Creek



East Branch Sideling Hill Creek



Piney Creek


1746956
1746713
1723443
1723456
Weimer Run
Brush Creek
030402-1
1746710
1746714
Shaffer Creek
Chapman Run
1747389
1746711
1723173
1746715
030402-2
Bushy Fork
1746712
Wilson Run-Elk Lick Creek
1746716
1747518
1746722
West Branch Sideling Hill Creek
1746911
1746723
1746248
Wilson Run
1746912
030402-3
1746326
1746913
030403-1
Piney Creek
1747501
1747482
1747494
030402-4
1747428
1746249
1746344
1747458
Fifteenmile Creek
1745802
1747448
1747429
Blackberry Lick Run
1745833
1745818
Piney Creek
1747496
1747511
1747497
1745885
1746270
1745884
030403-3
1746518
1745921
030404
1745920
1746271
1746287
030403-2
1747406
Sideling Hill Creek
030301-1
1747201
1747423
Crooked Run-Sideling Hill Creek
1747409
Johnson Branch
Upper Fifteenmile Creek
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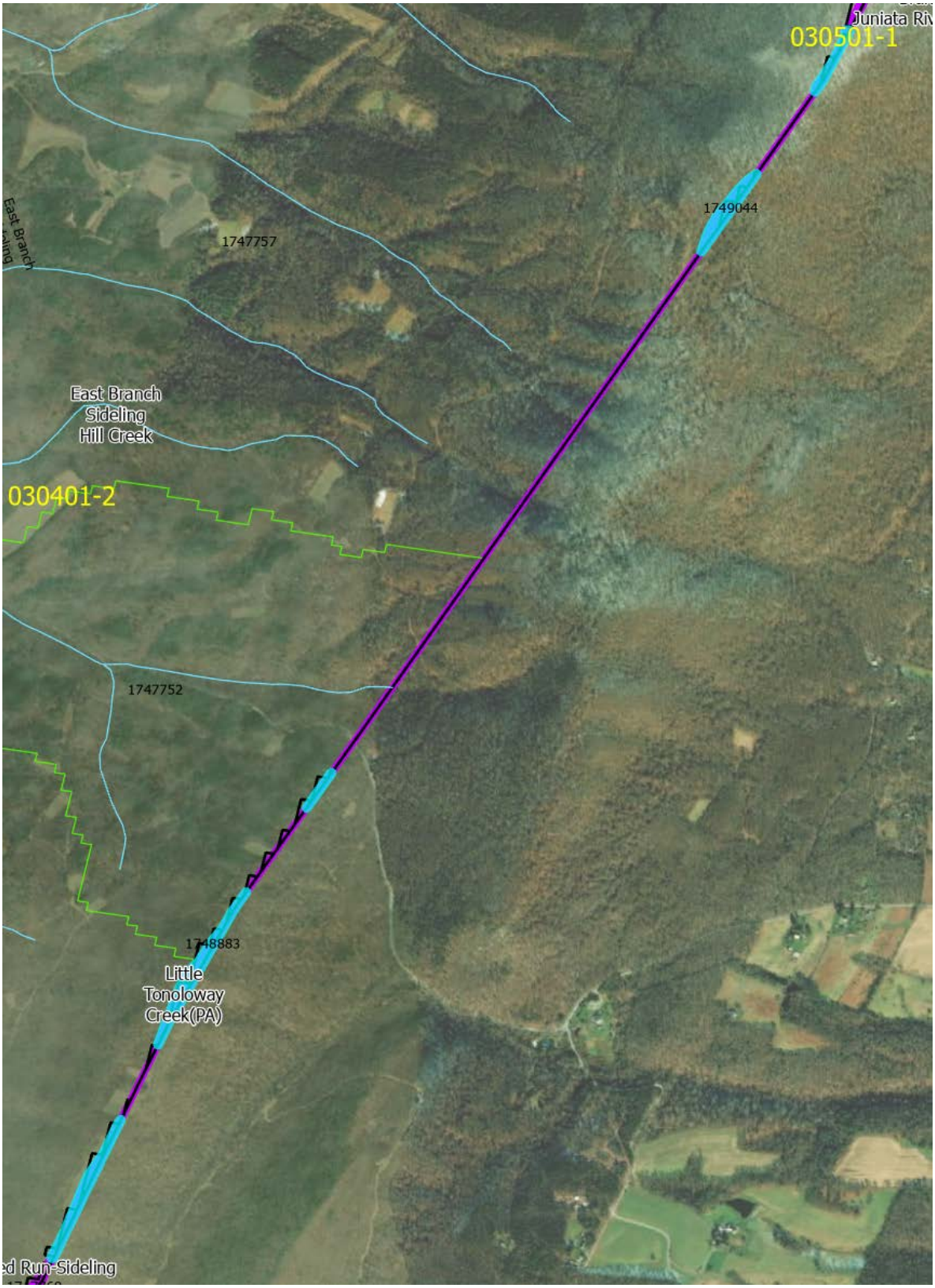
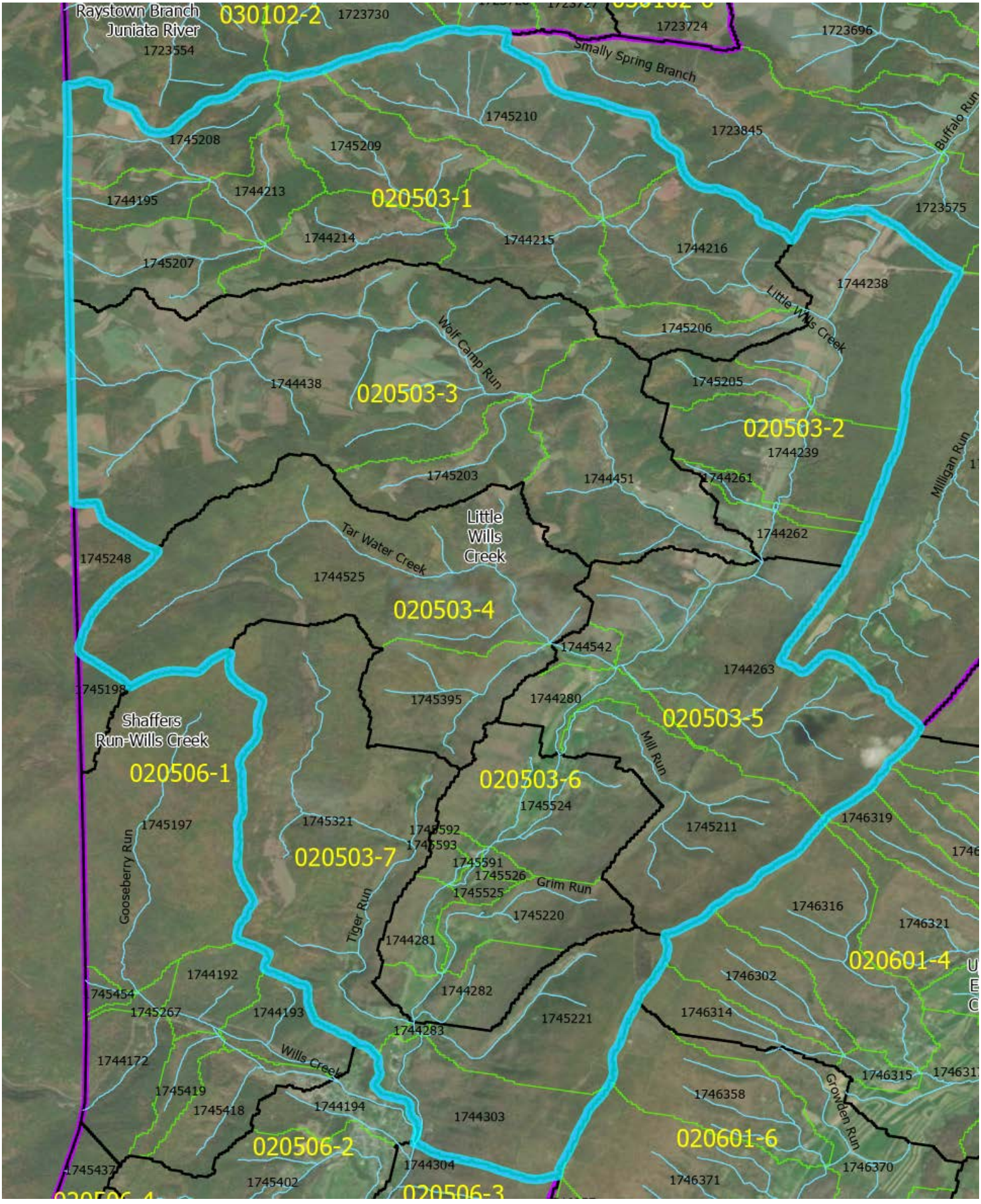
030404-4
1745937

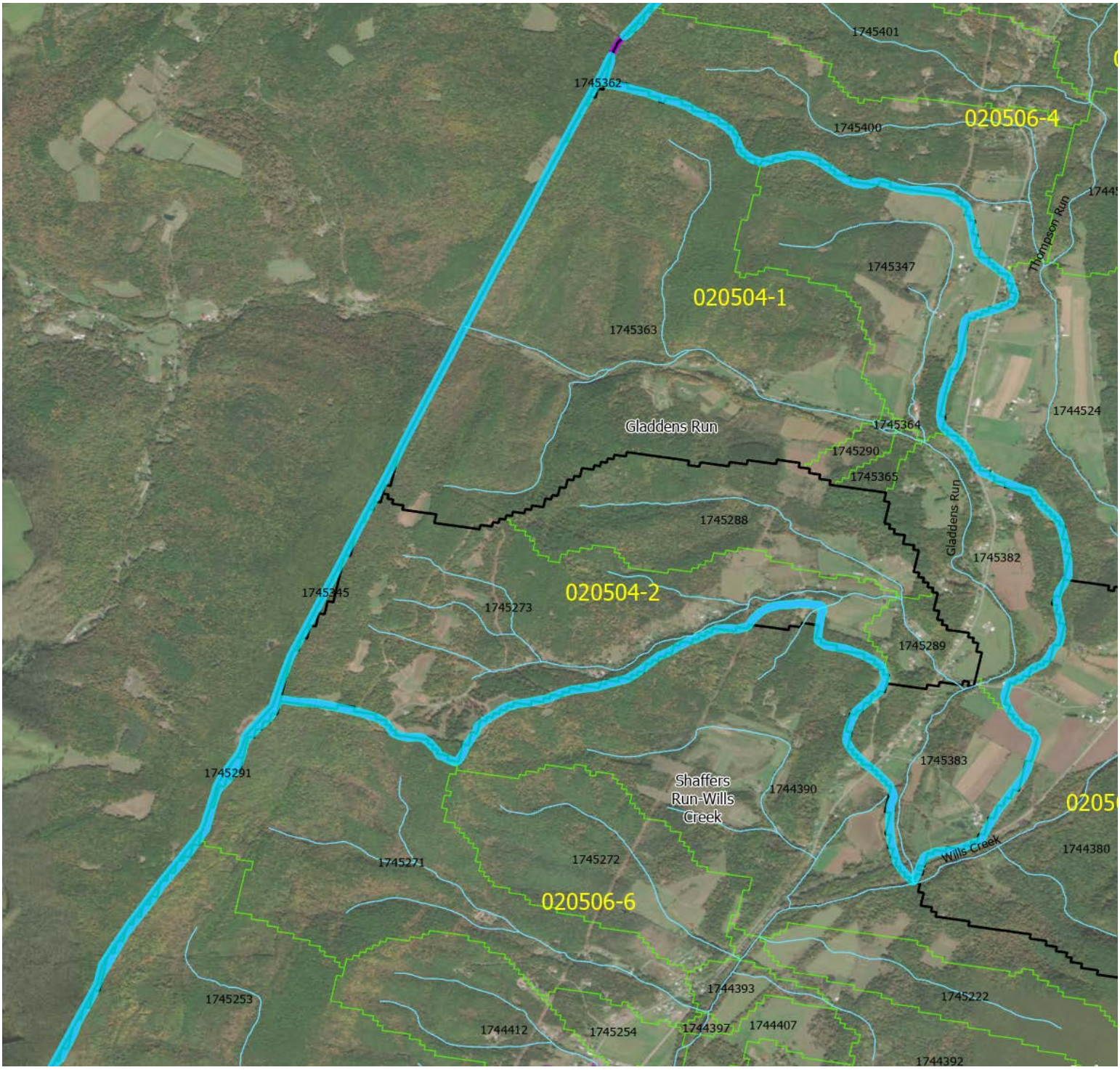
Little Tonoloway Creek (PA)



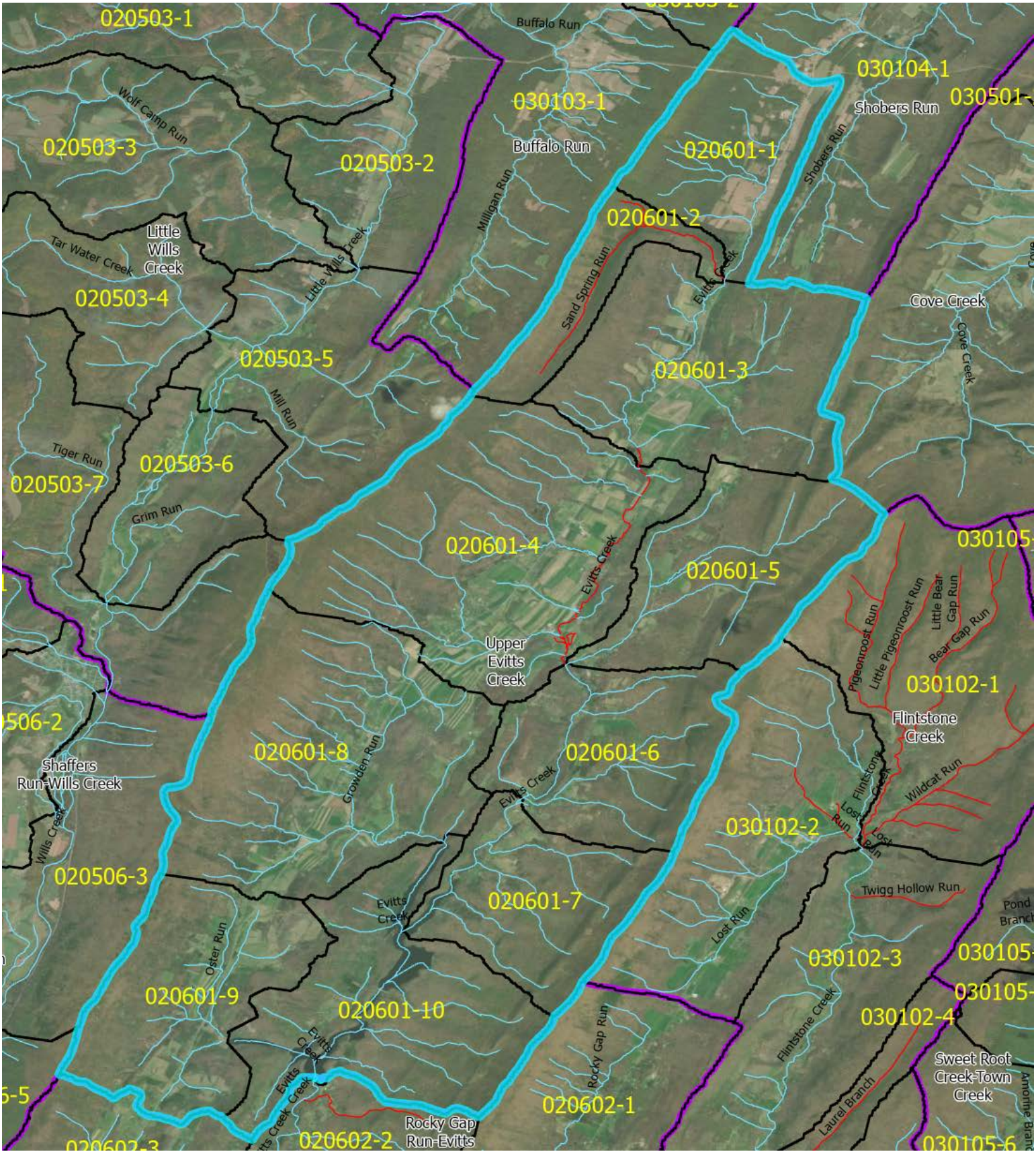
Little Wills Creek



Gladdens Run



Upper Evitts Creek



Wilson Run-Elk Lick Creek