Countywide Action Plan Overview
Centre County

Image 1. CAP improved farm in Centre County.

Plan Highlights

The Centre County Countywide Action Plan (CAP) provides a roadmap for the County and its partners to follow to reach the County's clean water goals. The initiatives outlined in the plan are intended to protect the future of Centre County's natural resources while reaching other community goals. Local improvements benefit the community while also assisting Pennsylvania with meeting its Chesapeake Bay obligations.

The Centre County CAP identifies priority initiatives and actions that support the County's goal of meaningful local water quality improvements. The CAP includes four priority initiatives and several dozen goals. Each Priority Initiative is broken down into manageable and measurable goals. These goals will evolve over time based upon the successes of plan implementation and changes in local priorities.

Priority Initiative #1: County Programmatic Initiatives
Decisions about land use have a significant impact on local waters, and those decisions are largely guided by a community's comprehensive plan. Recognizing this, the CAP implementation team works with municipalities and County staff to establish a consistent approach to clean water solutions across the County. In addition, we are identifying gaps in data needs, opportunities for data collection, and ways to track and monitor local clean water projects over time.

Priority Initiative #2: Reporting & Tracking
To measure the results of plan implementation and to track the amount of work that is still needed, the County needs a robust system for monitoring water quality and tracking efforts. This initiative involves adding new volunteer driven monitoring sites and ensuring relevant data is incorporated into the appropriate models and databases. It also involves developing new reporting mechanisms for efforts that are being captured currently.

In support of this initiative, in December of 2021, Centre County was awarded $30,000 to conduct BMP Verification. Centre County elected to use some of the money on the remote sensing analysis focusing on six priority BMPs including: Barnyard Runoff Controls, Animal Waste Management Systems, Forest Buffers, Grassed Waterways, Streambank Exclusion Fencing and wet ponds/detention basins. Remote sensing data analysis performed by the Chesapeake Conservancy was finalized in August of 2022 and results are provided in an online ArcGIS Portal. Qualified 3rd party staff began field verification efforts to verify the remotely identified practices in Fall/Winter 2022/2023. A BMP Verification Quick Guide that will be periodically updated has been provided to the County to assist with field verification efforts. In 2023, a subconsultant, HRG, was hired to run remote sensing methods and field verify grazing and other structural agricultural practices.

Priority Initiative #3: Achieving New Pollutant Reduction Goals
Chesapeake Bay watershed goals are focused on reducing three primary pollutants: nitrogen, phosphorus, and sediment. Municipalities have played a significant role in achieving these goals over the past two decades through wastewater treatment advances and the Municipal Separate Storm Sewer System Program (MS4). Since no new required activities are outlined in the CAP (all initiatives are voluntary), we will coordinate with the MS4 communities so that they remain aware that we are interested in leveraging our efforts when it results in lower cost for the community.

Agricultural lands present another opportunity to reach Centre county's clean water goals. Agricultural land releases nutrients and sediment into local waters like other land uses. Many goals in Priority Initiative #3 focus on determining what steps local farmers can take to reduce nutrients and sediment reaching local waters. They also include efforts to identify necessary funding support.

An example of this initiative in action is the work occurring in the Halfmoon Creek Watershed. Like other watersheds in Centre County, sediment non-point source pollution is prevalent in Halfmoon Creek. CAP partners developed a Watershed Implementation Plan for the watershed which was approved by the U.S. Environmental Protection Agency in 2021. The Halfmoon WIP implementation team is being co-led by the Chesapeake Bay Foundation and Chesapeake Conservancy. In 2022, the Centre County Conservation District applied for Section 319 funding to implement early action projects in the watershed that are not already funded by the non-profit partners to reduce non-point source pollution. In 2023, a farm in the Halfmoon Creek watershed completed a large scale full farm implementation project. The project included wetland and

riparian buffer restoration, streambank regrading and channel protection, 2 livestock stream crossings, a 39' x 47' roofed manure storage facility, a 39' x 104 roofed heavy use area protection, agricultural stormwater management, livestock access roads, livestock water facilities, 3,700 linear feet of streambank fencing, 6,840 linear feet of pasture fencing, and the closure of a 245,700 cubic foot earthen manure lagoon.

Priority Initiative #4: Research, Education & Training
This initiative is focused on helping people determine the best way to get involved and make a difference in their community's water quality. It includes extensive outreach to communicate and promote program successes as well as the development of values people can use to calculate and compare the effectiveness of BMPs they are considering. It also includes mapping water quality monitoring locations, so that the CAP implementation team has a sense of where the data is coming from and can address any gaps.

Key Findings
The planning team spoke with over a hundred stakeholders in 2020 who identified dozens of actions the County and its partners can take to improve water quality in Centre County. A few common themes emerged from the feedback and included:

- There are individuals and organizations in Centre County that care about clean water. They have led clean water projects in the past, and they are ready to do more. The County should support their efforts by connecting them to people and resources who can help them continue to be successful and effective.
- The County and its partners must focus on documenting existing and future efforts, so all on-the-ground projects count toward Centre County's goals.
- The CAP implementation team should also continue working to increase collaboration among the various stakeholders. This way, they can work together on certain initiatives and accomplish more while cutting costs (due to economies of scale).
- What landowners need most is technical assistance and funding. Many of the initiatives the team discovered in the planning process were slowed or stalled due to lack of timely resources when a landowner is ready to go, and yet there is a desire to increase progress over current levels in many programs. The County and its partners will need funding to support the staff required to execute these initiatives, and funding to incentivize landowners to implement water quality measures (like BMPs, nutrient management plans, and more).

Opportunities for Success
Many opportunities for success in Centre County came out of CAP planning sessions and meetings with stakeholders. The most promising included suggestions that leveraged existing efforts and identified new partnerships. Here are some examples:

- Broadening the scope of existing County plans and programs to elevate water quality as a key co-benefit will leverage current efforts and resources as the County moves forward (e.g. include stormwater BMPs that reduce pollution in the County's Hazard Mitigation Plan).

- Many partners in Centre County are willing to work on clean water initiatives. Building new relationships and solidifying existing partnerships through clean water projects will expand the CAP's impact far beyond what the County could do without such support. The planning team has initiated relationships with numerous organizations interested in conservation, recreation, and land use, and the County hopes to increase collaboration among these groups to amplify implementation efforts.
- The county partners look forward to coordinating with Chesapeake Bay Foundation and friends, who have already created a Watershed Improvement Plan for the Halfmoon Watershed that is being reviewed by the U.S. EPA. Similarly, Chesapeake Conservancy is implementing a rapid delisting strategy focused on small high priority watersheds. We have a great opportunity to learn from the examples they are setting and the paths they are blazing.

Challenges to Implementation

One unique challenge in Centre County is that DEP's data indicate that 30% of our nitrogen comes from natural sources, primarily forest, which covers 77% of the county. The challenge is to address the nitrogen that occurs from human activities, and the same data indicate that non-regulated developed areas and agricultural activities are the greater portion of nitrogen we can try to mitigate.

Our team has ideas regarding how to address this challenge. At the same time, Centre County faces challenges that many counties are facing in implementing their plan:

- Cataloguing and verifying the BMPs that farmers are implementing and narrowing the focus of which farmers to approach for new/additional BMPs.
- Gathering all the different data being collected and incorporating it into the reporting model.
- Identifying additional technical assistance and funding sources.
- Helping farmers understand the funding resources that are available.

Despite these challenges, local stakeholders are motivated to make real ~~progress, and~~progress and have suggested many creative ideas for overcoming obstacles. The Centre County CAP makes real progress possible.

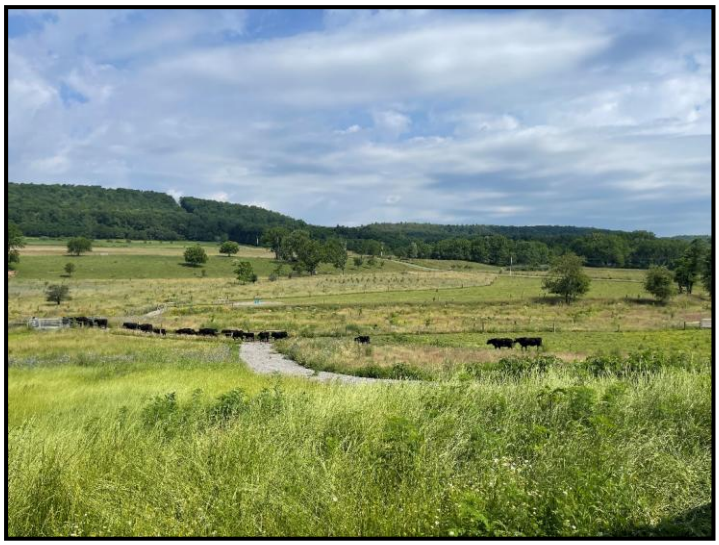

Image 2. Cattle utilizing a new crossing with a newly installed riparian buffer/meadow in the background.

Plan Summary

The implementation of the Centre County CAP centers around four priority initiatives: 1) County programmatic initiatives, 2) reporting and tracking, 3) achieving new pollutant reductions, and 4) research, education, and training. Each action within the four priority initiatives will have a lead coordinating ~~partner as~~partner to streamline the process of determining financial and technical resources and overall feasibility.

The Centre County CAP establishes a framework to guide implementation efforts that follows an iterative process. This structure will allow the CAP implementation team to respond to new opportunities, funding streams, and changing conditions.

Priority Initiative 1: County Programmatic Initiatives

- Action 1.1A Implement County Comprehensive Plan policies and actions (PHASE 1 = 2003, PHASE 2 IMPLEMENTATION = AG, TELECOM, LANDUSE)
    - Centre Regional Growth Boundary Full Implementation as part of Centre Region Comp Plan (2013)
    - Ensure that growth activities address existing water quality impairments through stormwater BMP implementation already required by local ordinance
- Action 1.1B Implement County Comprehensive Plan policies and actions (PHASE 1 = 2003, PHASE 2 IMPLEMENTATION = AG, TELECOM, LANDUSE)
    - Map existing AMD BMPs and address additional impairments in Moshannon Creek and Beech Creek

    - Explore DEP Pilot Project for Chesapeake Bay Program Nutrient Reduction Credit
- Action 1.1C Advance local comprehensive planning efforts: Penns Valley, 2006 – Implement the Source Water Protection Plan
    - An annual review of the document and setting/fulfilling 1 goal.
    - Partner with NRCS to determine eligibility of improvements regarding source water protection and the 2018 Farm Bill
- Action 1.1D Advance local comprehensive planning efforts: Penns Valley, update – Facilitate efforts to minimize flood impacts
    - Not set in comp plan
    - As outreach occurs in Penns Valley, be mindful of this need and be on the lookout for opportunity to advance the effort
- Action 1.1E-1 Advance local comprehensive planning efforts: Nittany Valley, 2004 – Evaluate areas to establish riparian buffers to stabilize stream banks and limit encroachment
    - Not set in comp plan
    - Utilize Chesapeake Conservancy data set to identify buffer gap project opportunities (2021)
- Action 1.1E-2 Advance local comprehensive planning efforts: Nittany Valley, 2004 – Implement a well head/borehole protection for water wells
    - Not set in comp plan
    - Should outreach occur in Nittany Valley, be mindful of this need and be on the lookout for opportunity to advance the effort
- Action 1.1F-1 Advance local comprehensive planning efforts: Milesburg/Boggs, ongoing – Work with respective water authorities to implement Source Water Protection Plans
    - Bi-annual review of plan and joint meeting
- Action 1.1F-2 Advance local comprehensive planning efforts: Milesburg/Boggs, ongoing – Adopt and enforce an on lot sewage management program
    - One-time adoption of ordinance with enforcement contingent upon program cycle of inspection and tank pumping.
- Action 1.2A Implement County Hazard Mitigation Plan (2015, update kickoff JUNE 2020)
    - Improve flood prone areas with BMPs that also enhance water quality
- Action 1.2B Implement County Hazard Mitigation Plan (2015, update 2020-2021)
    - Improve flood prone areas with BMPs that also enhance water quality – address tributaries impaired by ag activities (Little Marsh Creek) and tributaries (Holt Run/Bald Eagle Creek) impaired by pathogens downstream of Milesburg Borough and upstream of Bald Eagle State Park
- Action 1.4 Implement County Farmland Preservation Program with farmland preservation program incentives enhancement
    - Total preservation farm goal (6753 farms in program currently – 10,5638,019 acres, average purchase price $3,2022,291 per acre, add 2-31-2 farms each year on average) Farmland Trust – 175 parcels
    - Preserved farms will implement and maintain pollution control BMPs beyond what is required for compliance

- Action 1.5A Establish funding/staff support to assist the Agricultural community (day to day support): 1140 ag parcels in Centre Co
    - 700 farms have their plans, including NRCS plans, might get up to 900 farms as this grant gets finished → focus on BMP implementation for these farms
    - 50,000 acres under manure management plans/nutrient management plans
    - 50,000 acres under ag E&S plans
- Action 1.5B Develop plans
    - 2 plans per month per consultant, assume backlog is complete (ag E&S and manure mgmt. plans)
- Action 1.5C Chesapeake Bay Technical Inspection / Plan Data Gathering
    - Collect data regarding existing farm plans and implementation progress
    - 50 farms per year – 200 farms through 2025
- Action 1.5D Other Plan Data Gathering
    - Collect data regarding existing farm plans and implementation progress
    - ~45 farms per year – 170 farms through 2025
- Action 1.6B LandscapeU Partnership - Implementation
    - Develop graduate students so that they can effectively engage in landowner outreach during implementation years
- Action 1.7 Water quality communication plan, leveraging existing documents and covering topics including Homeowner Guide to protecting Drinking Water, Agricultural Practices and BMPs that reduce pollution, Methods and land use controls that protect groundwater quality and control quantity (Riparian & Forest Buffers, slope control), Proper Turf Management Methods (Natural Landscaping and/or Chemical Application and Treatment Measures), The Homeowner's Guide to Stormwater, Urban/Suburban BMPs
    - Develop messages and audience; execute plan and distribute messaging through staff and partners

Priority Initiative 2: Reporting and Tracking

- Action 2.1A Existing BMP cataloguing (quantity and location) for select BMPs, expanding on general recommendations provided in QAPP. BMPs = forest buffers, urban forest buffers, grass buffers, urban grass buffers, wet ponds and wetlands, fencing.
    - Expand use of existing buffer layer with urban hydrology layer
    - R&D into distinguishing ag, pasture, and turf covers from grassed buffers
    - Manual digitizing where leaf-off <1 ft resolution imagery is available
    - Back check with staff field views where required
    - Add data to Practice Keeper or another batch upload option (FieldDoc)
- ~~Action 2.1B Identify future ag/urban project opportunities using automated means~~
    - ~~BMP opportunity analysis – ag conservation, land retirement, alternative crop, forest conservation, stream restoration~~
    - ~~Back check with staff field views~~
    - ~~Batch upload to FieldDoc to calculate credit opportunity~~

- ~~Action 2.2 Improve continuous data collection on urban structural and non-structural practices~~
    - ~~Add development related BMPs to CAST/FieldDoc so that as land use data sets are updated, there are accompanying BMPs~~

Priority Initiative 3: Achieve New Pollutant Reductions

- Action 3.1 Implement BMPs from Growing Greener plan development farms
    - Design and install four manure management systems and AHUAs per year (20 systems total)
    - 13 acres of treated area, assuming we build 20 more loafing lots (5 farms per year)
- Action 3.2 Implement Halfmoon WIP
    - WIP approval – 2021
    - Implementation – 2022 – see plan (when approved) for BMP specifics
    - Partial implementation – 2023-2025
    - Implement land retirement to pasture - 178 acres. BMP verification will support the goal.
- Action 3.3 Accelerated implementation of Rapid Delisting Catchment Strategy through the Precision Conservation Partnership
    - Implement 9 ~~previously scoped~~previously scoped projects resulting in 29 acres of forest buffer, 9.4 acres of fencing with buffer, 11 acres of wetland restoration, 5,000 LF of stream restoration
- Action 3.4 Fish Hatchery Nitrogen Reduction
    - Address nitrogen discharges associated with fish hatchery locations – amend how they are viewed in CAST, collect environmental monitoring information to confirm/refute that they are elevated nitrogen producers, plan/design/construction nitrogen-reducing treatment system
- Action 3.5 4R Practice Education and Implementation
    - Transition manure management plans to nutrient management plans and incentivize implementation
    - Increase existing 4R practice adoption ~~by:~~by 3,000 acres of N Rate, 5,250~~2,800~~ acres of P Rate, N/P Timing and N/P Placement by 1,400 acres
- Action 3.6 Low and no-till cover crop and tillage BMPs
    - Determine feasibility of having a county cost share program to enhance adoption of the annual practice
    - On an annual basis implement conservation tillage of 8,000 acres and high residue/no-till of 42,000 acres.
    - On an annual ~~basis~~basis, implement 12,000 acres of traditional cover crops and 15,000 acres of cover crops with fall nutrients.
    - On an annual basis implement low residue tillage on 8.000 acres.
- Action 3.7 Implement more pasture management BMPs
    - Off stream watering without fencing – 1,460 acres/10 farms
    - Pasture Alternative Watering – 2,600 acres Prescribed grazing – 4,000 acres (50% by reporting)

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    - Horse pasture management – 50 acres/3 farms
    - Forest buffers on fenced pasture corridor – 100 acres (50% by reporting)
    - Grass buffers on fenced pasture corridor – 286 acres (50% by reporting)
- Action 3.8 Riparian buffer and re-forestation BMPs (not downstream from animal activities)
    - Partner with Chesapeake Bay Foundation to plant 100,000 trees (portion of 500,000 trees that will be RFPed for growers)
    - 2,500~~292~~ riparian forest buffer acres – new buffer; assume 1100 acres are reported through aerial photo analysis
    - 1,175 riparian grass buffer acres – new buffer; assume 800 acres are reported through aerial photo analysis
    - 8 acres – urban forest buffer
    - 3 acres – urban tree planting – target one landowner in urbanized area
    - 25 acres – urban forest planting – target one large landowner in urbanized area
- Action 3.9A Wetland restoration implementation on marginal production ag land
    - 35 acres
- Action 3.9B Wet Pond/Wetland Installation
    - Identify 1 large property owner from University of Vermont restorable wetland layer to install a 350-acres-treated wetland
- Action 3.10 Non-urban stream restoration
    - 37,600 feet (7 miles) installed/inventoried
    - Assume two project installs per year per contractor team
    - 22,200 LF in TU planned projects
- Action 3.11 Implement more barnyard runoff control/loafing lot management/ag stormwater management
    - 110 acres of treated area, 59 acres to reach that goal.
- Action 3.12 Animal waste management BMP implementation for livestock
    - 11,430~~7,400~~ AUs managed through BMPs
    - Manure Transport out of area- 1,300 dry tons per year.
- Action 3.14 Runoff Reduction Performance Standard and Storm Water Treatment Performance Standard Implementation
    - Implement existing ordinances at local municipal level
    - Catalogue existing BMPs that fit into this category and newly built ones
    - Runoff Reduction - 1,640 acres treated, stormwater treatment - 341 acres treated
- Action 3.15 MS4-related Pollutant Reduction Plan Implementation
    - Plan implementation by end of current permit term
    - Implement bioretention (7 AT), buffers, stream restoration (4,800 LF), street sweeping (151 miles), etc.
- Action 3.16 Conservation Landscape/Turf to Meadow Conversion/Watershed Forestry Initiative
    - Promote new program and enable one large tract landowners' participation (20 acres of conversion)
- Action 3.18 Continue dirt and gravel road program
    - 200,000 feet overall restored through past projects and future projects

- Action 3.19 Operation and Maintenance Performance
    - Cultivate a partnership(s) with volunteer groups or contractors who we can direct landowners to ~~who~~whoever have interest in assistance with O&M of practices that we facilitate
- Action 3.20A Private Funding
    - Identify some private funding sources that may be able to supplement public funding sources/existing sources utilized for stakeholders
- Action 3.20B Public/Non-profit Funding
    - ~~Fill out~~Fill out our public/non-profit source list
- Action 3.20C Public/private Farm BMP sponsorship program
    - Utilize REAP program to leverage funding, sponsor farmers who perform BMPs and pay them cash from tax rebates that corporation receives from funding the program

Priority Initiative 4: Research, Education, and Training

- Action 4.1A Incorporate existing water quality monitoring data into Chesapeake Data Explorer / Chesapeake Monitoring Cooperative database
    - Successful data input/acceptance by ALLARM program by end of 2021
- Action 4.1B Initiate additional water quality monitoring sites that promote long-term trend evaluation at key locations in Centre County
    - Location identification, financial and volunteer budget analysis, and initial landowner communication by end of 2021
    - CAST-21 acknowledgement of our data
    - Map existing monitoring locations
    - Expand monitoring based on Corridors of Opportunity area monitoring gaps
- Action 4.2 Enhance the capacity of local watershed associations for short-term success and long-term sustainability
    - Share each other's social media content
    - When developing water quality projects, include them in the scoping/funding process
    - When we utilize/obtain funding for outreach, ~~reserve~~we reserve some for partner promotional items (hats, shirts, etc.)
    - Encourage project implementation on the watershed level so that these partners enhance their relationships with non-peers with a co-benefit of diversifying their membership

Programmatic Initiative: Recommendations for State Programmatic Changes

- Action 1.1 Retain funding and technical support for the Chesapeake Bay Office to spearhead implementation of the County-recommended programmatic changes and support County-led initiatives.
    - Continued operation of Chesapeake Bay Office and DEP Regional Support Teams through Phase 3 WIP Implementation

- Action 1.2 While three models continue to be utilized for Bay and other State regulatory water quality goals, complete a CAST/Model My Watershed/FieldDoc water quality credit prediction analysis
    - Develop BMP reduction values that can be reported by MMW so that local WQ improvements can be calculated, and municipalities have a better understanding of the value of ag BMP WQ improvements in their landscape
    - Integrate MMW spreadsheet watershed model with mapping module so that site specific reductions can be calculated on the fly, or work with FieldDoc Planning Module
    - User confidence that no ~~matter~~matter what the tool, BMP credits are consistently applied across programs
- Action 1.3 Continue to support improvements and training programs for FieldDoc and Practice Keeper
    - Maintain a standardized centralized data collection and reporting system
    - Since two systems are currently used, continue to explore one consolidated system option and its interaction with CAST
- Action 1.4 Provide data transparency for practitioners who use Practice Keeper
    - Add DEP data inputs to Practice Keeper so that, spatially, Conservation District staff can see the plans and BMPs that are in the system above and beyond those that they input in-house
- Action 1.5 Institute a bi-annual remote sensing program for BMP verification
    - Fly counties on odd years and process data on even years to verify installation of BMPs
    - Utilize existing BMP location data to verify those BMPs and ID BMPs that should be visited (indications of O&M issues).
- Action 1.6 Develop a method/model/template to capture and report non-manure nutrient management
    - A method developed to encourage, perform, capture, and report the 4R program
- Action 1.8 Utilize Bay Model to establish assigned MS4 Permit baseloads/reduction requirements/BMP credits to eliminate the need for permittee calculations, justifications, and rationale
    - Permit assignment issued directly to permittees based on Bay ~~Model~~Model, so all Chesapeake Bay efforts are based on uniform criteria
    - Identify and improve data sets that limit the CAST model to run at local scales
- Action 1.9 Countywide WQ Credit Offset Pilot
    - Demonstrate measurable success of a pilot project area where MS4-regulated areas and non-regulated areas can benefit from achieving sediment and nutrient goals
- Action 1.10 Enforce Act 167
    - All municipal SWM Ordinances consistent with County Stormwater Management Plan and being enforced.
- Action 1.11 Create/establish incentives (positive – economic/water quality; negative – non-compliance penalties) for all stakeholders to comply with State law

- Funding to implement BMPs and funding for regulatory agencies to meet responsibilities under established laws/regulations

The following Actions have either been completed or are no longer a priority between now and 2025. For details regarding the status of these Actions, see the detailed Progress and Milestone Template.

Centre County CAP Initiatives:

- Action 1.1E-3 Advance local comprehensive planning efforts: Nittany Valley, 2004 – Participate in source water protection planning
  - Complete a SWP for Walker Twp. Water Association
  - 2021 – meet with Walker Township and Water Association to facilitate discussion and identify if a feasibility study should be conducted
- Action 1.1E-4 Advance Centre Region Climate Action and Adaptation Plan
  - Participate in the development of "Clean Healthy Water" goals
- Action 1.3 Update Countywide Act 167 Plan
  - Address climate change storm intensities and enhanced water quality needs with respect to development and agriculture
  - Create new model stormwater ordinance that would require/incentivize additional protections for streams (high quality and impaired)
- Action 1.6A LandscapeU Partnership - Planning
  - Receive project opportunity/prioritization deliverable to assist with 2021 implementation steps
- Action 1.6C Quantify Land/BMPs Managed by Penn State University
  - Work with office of physical plant and other PSU groups to ensure that water quality improvements that they manage are captured in CAST/FieldDoc
- Action 1.6D Leverage Ag Progress Days as an opportunity to educate more farmers on local water quality issues and solutions
  - Have a booth and class(es) at Ag Progress Days 2021
- Action 1.8 Countywide WQ Credit Offset Pilot Variables to consider:
  - # of Farms/Forest preserved within the Corridors of Opportunity (COO)
  - Miles of riparian buffer created within COOs.
  - # of Ag. BMPs established within COOs.
  - Miles of Stream stabilization and restoration within COOs.
  - Spring Creek Watershed Resource Monitoring Quarterly Progress
  - # SWM facilities maintained within municipal park systems
  - Acres of Preserved Open Space and Environmentally Sensitive Areas
  - Demonstrate measurable success of a pilot project area where MS4-regulated areas and non-regulated areas can benefit from achieving sediment and nutrient goals
- Action 2.1B Identify future ag/urban project opportunities using automated means
  - BMP opportunity analysis – ag conservation, land retirement, alternative crop, forest conservation, stream restoration
  - Back check with staff field views

- Batch upload to FieldDoc to calculate credit opportunity
- Action 2.2 Improve continuous data collection on urban structural and non-structural practices
  - Add development-related BMPs to CAST/FieldDoc so that as land use data sets are updated, there are accompanying BMPs
- Action 2.3 Implement a documentation program for commercial and homeowner nutrient applications in developed lands
  - Support fertilizer legislation – where legislation requires reporting, be the data clearinghouse

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- Action 3.13 Mitigation Banking Pilot Project
  - Floodplain restoration and/or wetland restoration project that achieves future MS4 permit sediment compliance for a currently waived Township while yielding nitrogen reductions for UAJA's benefit
- Action 3.17 Impervious surface reduction project
  - Identify a blighted/flood prone area that could be converted to a park (8 ac area)
- Action 4.3 Farm decision maker trips to showcase BMPs that work
  - Two trips per year, increase participation by 10% each year

State Programmatic Recommendations:

- Action 1.7 Implement a documentation program for commercial and homeowner nutrient applications in developed lands
  - Support fertilizer legislation – where legislation requires reporting, be the data clearinghouse