



## ADAMS COUNTY PHASE 3 WATERSHED IMPLEMENTATION PLAN OVERVIEW

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### Plan Highlights

Adams County benefits from abundant natural resources, a conservation-minded agricultural community, a thriving tourism industry, and an active stakeholder base with a demonstrated commitment to land and water resource stewardship. This plan includes recommendations for activities that help to achieve local goals like environmental health and economic development as well as Chesapeake Bay water quality goals. The plan's recommendations were developed with input from diverse county stakeholders. County staff would like to thank all of the stakeholders who volunteered their time and expertise as part of this planning process and for their continued participation to maintain a successful pollutant reduction strategy in the future.

The Adams County plan focuses on four key areas; specifically, 1) programmatic recommendations that are needed for any of the goals of this planning effort to be achieved; 2) reporting and tracking improvements; 3) achieving pollutant reductions; and 4) research, education, and training initiatives; Each of these are introduced here in turn. First, programmatic changes are a priority that recommend statewide activities that are needed to facilitate the implementation of this plan's recommendations. Reporting and tracking are essential to understanding what is already on the ground (establishing an accurate baseline) and tracking BMP implementation and water quality conditions during implementation to ensure accuracy. The pollutant reduction section includes recommendations for a series of



*Cover crops are essential to Adams County soil and water quality and are strongly supported by the ag community.*

agricultural and urban Best Management Practices (BMPs). Finally, research, education, and training are essential to understanding the effectiveness and practicality of various BMPs, communicating with and educating stakeholders, and developing needed technology and skills.

### Key Findings

There are many opportunities for expanding existing efforts and developing new programs and practices in the county, as described in detail in the planning template. These opportunities can be associated with numerous benefits and challenges (see sections on these topics below). Some of these opportunities and/or challenges are unique to Adams County. Full implementation of the recommendations described in the plan will not be possible without considerable additional resources or the state's assistance in better utilizing existing resources. Identifying and securing the needed resources will be no small task.

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#### Opportunities for Success

Implementation of the county's plan can help achieve multiple local, state, and bay-wide objectives. It may also have numerous positive outcomes like encouraging and enhancing communication with stakeholders, promoting a think-outside-the-box mindset, implementing pilot studies that promote ingenuity and enhance understanding of the practicality of various practices, streamlining requirements across multiple programs, and removing barriers to on-the-ground implementation.



*The annual Adams County Soil Quality Meeting is always well attended by the conservation-minded ag community.*

Overcoming the challenges will enable the plan's implementation and facilitate the associated improvements in water and land conditions throughout the county.

#### Challenges to Implementation

While Adams County is committed to a sustainable land and water resources future, there are very real challenges to implementation of the plan's recommendations. Existing regulations, programs, and funding need to be streamlined so existing resources can be better utilized. Recommendations should be implemented in a voluntary approach that supports and encourages stakeholders to make environmentally conscious decisions. Funding to achieve these goals should be flexible and uncomplicated particularly for projects correcting existing resource concerns. Technical and staffing resources will be crucial to implement the programs and practices necessary to achieve the desired goals. Additional baseline information should be obtained, that maintains confidentiality as needed, for both BMPs and water quality to evaluate progress over time. Improved data collection and tracking methods are vital to ensure accuracy and will require tremendous staffing and financial resources to achieve. Finally, and possibly most important, soils and weather patterns can severely limit the ability to implement management practices like no-till, cover crops, and crop rotation. The development of gully erosion in fields is common and preparing plans will not locate or treat these issues.

#### Issues Unique to Adams County

There are additional issues and challenges that are unique to Adams County. Adams County has a diverse fruit crop industry. Long known for being the number one producer of apples in the state; Adams County also produces peaches, grapes, berries and other fruits. According to Penn State Extension surveys, there are over 31,000 acres of tree fruit in the Commonwealth with more than 22,000 of those acres found in the Historic South Mountain Fruit Belt of Adams County. The fruit growing industry has many distinctive challenges and unique practices that should be evaluated to allow for use in the bay model. The fact that Penn State University has a research and education facility located in the county to assist with this particular industry does provide some necessary technical resources for the evaluation, but additional technical and

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financial resources may be necessary to adequately provide for this. Additionally, there is currently technology that is unique to Adams County. A sizeable energy and nutrient recovery facility is located in the county that has the ability to process large quantities of poultry manure to provide for substantial nitrogen reductions. This facility and other emerging technologies should continue to be considered, evaluated for approval by the Pennsylvania Department of Environmental Protection; and supported with the technical, legislative, regulatory, and financial resources necessary to activate and maintain operations.



*Adams County is home to the Historic South Mountain Fruit Belt produces more apples than any county in the Commonwealth.*

#### **Plan Summary**

The Adams County plan focuses on essential programmatic recommendations necessary for the achievement of any of the pollutant reduction goals in this plan as well as planning and progress activities that focus on three priority initiatives 1) reporting and tracking; 2) pollutant reductions; and 3) research, education, and training. Each of these is associated with a number of recommended actions, listed below. More details on each of these actions are provided in the attached templates and technical appendix.

#### **Programmatic Recommendations**

Programmatic changes are recommended for statewide activities necessary for achieving the plan objectives.

- Action 1 Improve statewide tracking;
- Action 2: Enhance local water quality monitoring;
- Action 3: Improve funding program requirements and enhance funding resources;
- Action 4: Allow for work outside of current MS4 designated jurisdiction to increase nitrogen reductions;
- Action 5: Improve permitting processes at the state level;
- Action 6: Evaluate current system of incentives/implementation for agricultural practices and define enhanced incentive program for BMPs with greatest impact on nutrient loads to obtain landowner cooperation;
- Action 7: Evaluate current practices in the fruit growing industry for inclusion in the CAST model;
- Action 8: Expand staffing resources to conduct additional activities described in this plan; and
- Action 9: Expand state agricultural workgroup representation.

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### Planning and Progress Activities

#### 1) Reporting and Tracking

Reporting and tracking are important to establishing an accurate baseline and evaluating implementation progress for both BMP installments and water quality conditions.

- Action 1: Initiate additional water quality monitoring sites that promote long-term trend evaluation at key locations in Adams County Establish baseline of current practices for comparison with future implementation;
- Action 2: Improve data collection on urban non-structural practices;
- Action 3: Implement a documentation program for commercial and homeowner nutrient applications in developed lands; and
- Action 4: Establish baseline of current practices for comparison with future implementation.

#### 2) Achieve Pollutant Reductions

Agricultural and urban BMPs are described in the eighteen action items in this initiative. A list of specific BMP types and amounts are provided in the technical appendix.

#### *General*

- Action 1: Establish a set of BMPs that will achieve desired pollutant reductions in an efficient and cost-effective manner;
- Action 2: Identify key areas for installation of BMPs with greatest net effect on nutrients;
- Action 3: Evaluate technologies to enhance nutrient reductions;
- Action 4: Conduct pilot studies to identify and/or confirm efficiency of practices; and
- Action 5: Provide support for necessary legislation and regulatory changes.

#### *Agricultural Sector*

- Action 6: Reduce challenges with BMP implementation;
- Action 7: Improve Soil Health;
- Action 8: Enhance nutrient management;
- Action 9: Install riparian buffers; and
- Action 10: Provide for other Ag BMP's;



*Local volunteers planting riparian buffers.*

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#### *Urban Sector*

- Action 11: Seek creative solutions to focus on the problem (pollution), not the geography (MS4 and urban areas);
- Action 12: Create a documentation program for urban nutrient management;
- Action 13: Install riparian buffers on public lands;
- Action 14: Create additional natural areas
- Action 15: Establish more Shade Tree Commissions;
- Action 16: Implement other urban initiatives, i.e. stream restorations, etc.
- Action 17: Promote creation of additional sewage management districts at the municipal level; and
- Action 18: Evaluate the formation of a Countywide Stormwater Management Authority.

#### 3) Research, Education, and Training

Research, education, and training are essential to understanding the effectiveness and practicality of BMPs, communicating with and educating stakeholders, and developing needed technical skills.

- Action 1: Develop a strategy to communicate parallel goals of the WIP3 and local goals such as public and environmental health, economic development, and provide necessary education and training;
- Action 2: Conduct 20-acre pilot studies of agricultural BMPs to assess impacts to profitability; and
- Conduct education of commercial landscape industry/golf courses/homeowners regarding urban nutrient management.



*Ultimately, while planning is vital for progress; it is the community, whether it be agricultural or urban, that recognizes and addresses resource concerns as they arise that is essential for this or any project to succeed.*