

**York County  
Chesapeake Bay Program  
County Implementation Plan**



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## **A. York County Overview**

York County is located in south-central Pennsylvania and lies completely within the Chesapeake Bay Watershed. The County encompasses 911 square miles, and is bordered on the north by the Yellow Breeches Creek and Cumberland County, on the east by the Susquehanna River and Lancaster County, on the west by Adams County, and on the south by Baltimore, Carroll and Harford Counties, Maryland.

Cropland takes in about 42 percent of the land area in the county, woodland 26 percent, and pasture 14 percent. About 18 percent are in urban, industrial, commercial, and other uses.

At the close of the American Revolution, the population of the county in the present limits was about 17,000. The County's population growth in 1910, 1960 and 1980 was 136,405, 238,336 and 312,963, respectively. By 2000, York County's population was 381,751 (22% increase since 1980), with an average population density of 419 persons per square mile.

About 51 percent of the population is urban. Urbanization of farmland is a trend in all parts of the county. Much of the population growth is due to rural development in the northern and southern parts of the county, people moving in from the Baltimore and Harrisburg Metropolitan areas. Urban sprawl into rural areas contributes to the loss of farmlands, floodplains, and wetlands that recharge groundwater, provide wildlife habitat, protect soils, absorb storm water runoff, and filter excess water runoff.

Presently, York County and all 72 local municipalities have comprehensive plans, with various levels of land use zoning and development ordinances. Implementation of effective storm water planning and management, including design, construction and maintenance controls, is critical to minimizing accelerated erosion and sedimentation of lakes, streams and wetlands. Additionally, other non-point sources of pollution concerns include groundwater wells, septic systems, and urban runoff.

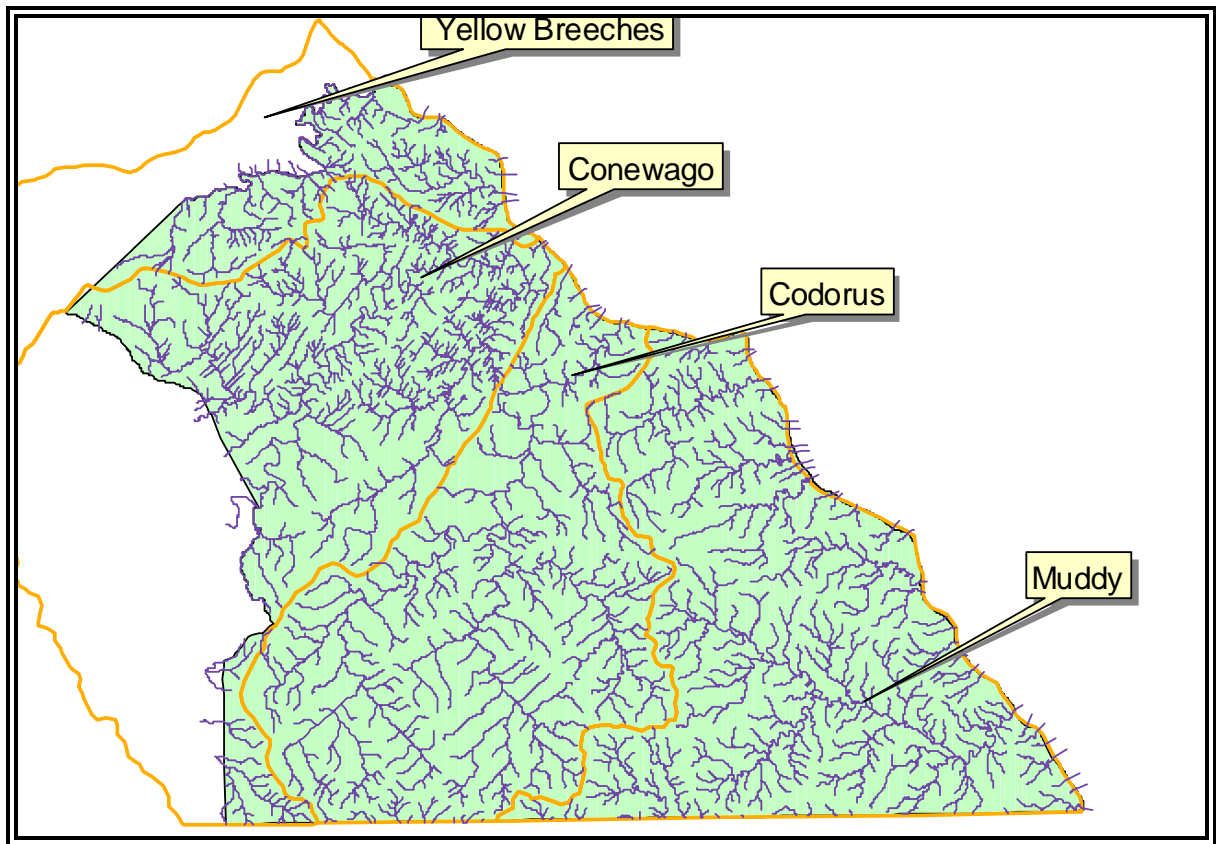
York County is mostly rural, with approximately 50 percent of its working population employed outside the county. Agriculture, mining, and manufacturing are important industries of the county.

Agriculture is a major industry in York County. According to Pennsylvania's Agricultural Statistics 2005 summary York has 2,550 farms totaling 283,000 acres. The county ranks first in acres of wheat and soybeans, second in corn grain acres and third in barley. Significant acres are used for hay, vegetable and orchard production. York has approximately 810 beef farms, 125 dairies, 105 hog farms, 195 sheep operations and 281 poultry farms (2005 numbers). From the recently completed Future of Agriculture Survey in York County, it was determined the average farmer is 54 years of age and that 98 % of the farms are family run operations (individuals, partnerships or corporations).

## B. Water Resources/Quality

### Watersheds

Pennsylvania's State Water Plan divides York County into four major and two minor watersheds, as shown in Figure 1. Major watersheds are the Yellow Breeches, Conewago (West), Codorus, and Kreutz-Muddy, and minor watersheds include Deer Creek and Gunpowder Falls (PA-MD). All watersheds drain to the Susquehanna River and Chesapeake Bay. Below, Table 1 summarizes York County's watersheds by drainage area.



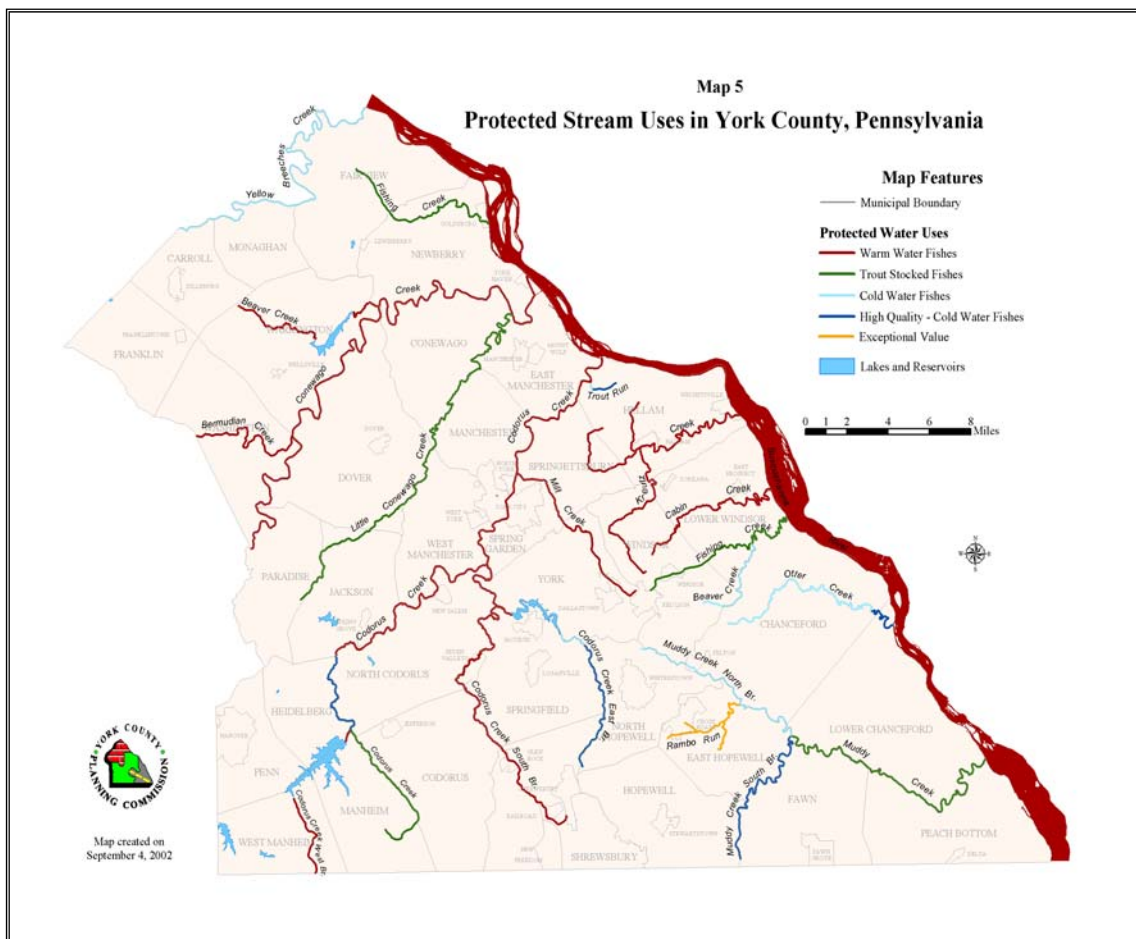
**Figure 1. Watersheds of York County**

**Table 1. Watershed Areas of York County**

Waters of Interest	Total Drainage Area (mi. <sup>2</sup> )	York County Drainage (mi. <sup>2</sup> )	Outlet
Yellow Breeches	237	56	Susquehanna River
Conewago (West)	510	230	Susquehanna River
Codorus	278	278	Susquehanna River
Kreutz-Muddy	301	301	Susquehanna River
Deer	200	36	Susquehanna River
Gunpowder	478	10	Chesapeake Bay
<b>TOTAL</b>	<b>2004</b>	<b>911</b>	

## Surface Waters

York County watersheds encompass 911 square miles (583,053 acres), and lie mostly in the Piedmont Province in Pennsylvania. The landscape is dominantly undulating to rolling terrain, commonly hilly, but has a few large, broad, flat valleys. Figure 1 (page 3) shows the watersheds are highly dissected by over 2,000 miles of streams. The Conewago, Codorus, and Muddy Creeks are major streams and have many tributaries. Elevation in York County ranges from 100 feet at the Susquehanna River in the southeastern corner of the county to 1,412 feet on South Mountain, in the northern corner.



**Figure 2. Protected Stream Uses of York County**

## Water Quality Classifications

The Title 25 Environmental Protection, Chapter 93 Water Quality Standards identify major streams and designate protected uses. Designated uses for protection of aquatic life, from lowest to highest levels, are as follows:

- Warm Water Fishes (WWF) – Maintenance and propagation of fish species and additional flora and fauna which are indigenous to a warm water habitat.
- Trout Stocked Fishes (TSF) – Maintenance of stocked trout from February 15 to July 31, and maintenance and propagation of fish species and additional flora and fauna which are indigenous to a warm water habitat.
- Cold Water Fishes (CWF) – Maintenance or propagation, or both, of fish species including the Salmonidae and additional flora and fauna which are indigenous to a cold water habitat.
- High Quality Cold Water Fishes (HQ-CWF) – High quality commands special protection as noted in Section 93.4b.
- Exceptional Value (EV) – Command special protection for ecological reasons.

York County's drainage basins are listed in Section 93.9. Drainage List O. Figure 2 (page 4) shows protected stream uses of York County.

## Water Quality Impairment

Under Section 303(d) of the federal Clean Water Act, Pennsylvania is required to assess and maintain a list of "impaired" waters that do not meet water quality standards for protecting aquatic life, human health, fish consumption, and other uses. In order for a water body to be included on this list, it must be determined that required technology-based treatment measures for pollution sources (point and nonpoint) will not be adequate to attain/maintain water quality standards. Once any water is identified as impaired and listed on 303(d), DEP must determine conditions that would return the quality of the impaired waters to acceptable standards.

A "Total Maximum Daily Load (TMDL)" is required to be established for each impaired water body to identify the total allowable pollutant load, from both point and nonpoint sources, of the water that will prevent violation of the existing water quality standard.

Pennsylvania's 303(d) list is divided into sections according to major sources of impairments and protected uses. Table 2 and Figure 3 (page 8) show the impaired waters of York County.

## Relevance to Bay

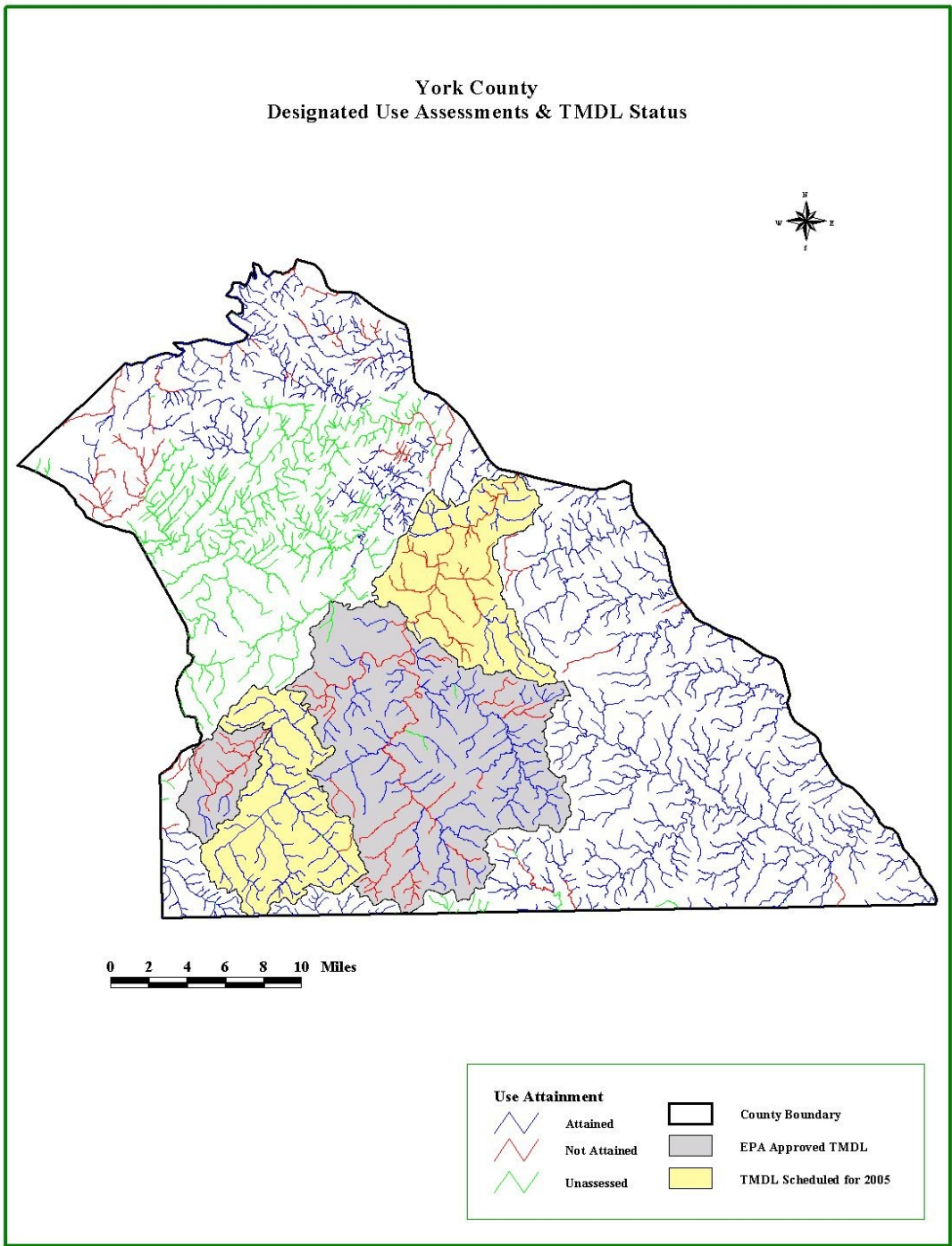
In June 2000, the Chesapeake Bay Program partners adopted the Chesapeake 2000 agreement, a strategic plan to achieve a vision for the future of the Chesapeake Bay. A vision that includes abundant, diverse populations of living resources, fed by healthy streams and rivers, sustaining strong local and regional economies, and our unique quality of life.

To restore an ecosystem as complex as the Chesapeake Bay will require everyone to address numerous and extremely unique issues. The agreement details nearly one hundred commitments important to Bay restoration, organized into five strategic focus areas:

- *Protecting and Restoring Living Resources* - Chesapeake 2000 aims to restore, enhance and protect the finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem.
- *Protecting and Restoring Vital Habitats* - The Bay Program aims to preserve, protect and restore those habitats and natural areas that are vital to the survival and diversity of the living resources of the Bay and its rivers.
- *Improving Water Quality* - Improving water quality in the Bay and its rivers is the most critical element in ensuring the future health of Chesapeake Bay.
- *Managing Lands Soundly* - Because pollutants on land are easily washed into streams and rivers, our actions on land ultimately affect the Bay.
- *Engaging Individuals and Local Communities* - To contribute to Bay restoration, we have to first be concerned about resource stewardship in our own communities, homes and backyards.

**Table 2. Impaired Waters of York County**

Water body	Impaired Use	Source	Cause
Dogwood Run (7E)	Aquatic Life Recreation	Unknown Municipal Source Agriculture	Pathogens, Organic Enrichment, Low DO, Suspended Solids, Siltation
Fishers Run (7E)	Aquatic Life	Agriculture Construction	Organic Enrichment, Low DO, Siltation
Fishing Creek (7E)	Aquatic Life	Agriculture Construction Habitat Modification Hydromodification	Siltation, Nutrients, Unknown Toxics,
Stony Run (7E)	Aquatic Life	Agriculture Unknown Source	Siltation, Organic Enrichment, Low DO
Yellow Breeches (7E)	Aquatic Life	Agriculture Construction Industrial Source Urban Runoff	Pathogens, PCB, Siltation, Organic Enrichment, Low DO, Nutrients
Bennett Run (7H)	Aquatic Life	Impoundment	Siltation
Conewago Creek	Human Health	Unknown	Mercury
Musser Run (7F)	Aquatic Life	Agriculture Other	Suspended Solids
North Branch Bermudian Creek (7F)	Aquatic Life	Agriculture	Siltation, Nutrients
Plum Creek (7F)	Aquatic Life	Agriculture Urban Runoff	Siltation
South Branch Conewago Creek (7F)	Aquatic Life	Agriculture	Siltation
Codorus Creek (7H)	Aquatic Life	Agriculture Construction Industrial Source Storm Sewers Urban Runoff	Algae, Siltation, Suspended Solids, Temperature, DO, BOD, Color, Unknown Toxicity
Gitts Run (7H)	Aquatic Life	Agriculture	Siltation
Mill Creek (7H)	Aquatic Life	Urban Runoff	Siltation
Oil Creek (7H)	Aquatic Life	Agriculture Storm Sewers Urban Runoff	Siltation
Big Branch (7I)	Aquatic Life	Unknown	Unknown
Bull Run (7I)	Aquatic Life	Habitat Modification	Siltation
Deer Creek (7I)	Aquatic Life	Agriculture	Suspended Solids, Siltation
Ebaughs Creek (7I)	Aquatic Life	Municipal Source	Chlorine
Falling Branch (7I)	Aquatic Life	Agriculture	Suspended Solids
Fishing Creek (7I)	Aquatic Life	Storm Sewers Urban Runoff	Channelization, Siltation
Kreutz Creek (7I)	Aquatic Life	Habitat Modification Road Runoff Urban Runoff	Siltation
Scott Creek (7I)	Aquatic Life	Municipal Source Storm Sewers Urban Runoff	Chlorine Nutrients Siltation



**Figure 3. Designated Use Assessments and TMDL Status**

## C. Water Quality Trends

### Agriculture

Agriculturally related land uses have had a significant effect on water quality in York County. Sediment from erosion of cropland, pastures, stream corridors and nutrient runoff from barnlots and animal concentration areas are the main nonpoint sources of pollutants.



Agriculture's contribution to water quality has changed in the last 25 years. We have less farmers and acreage in farmland. The number of animal operations has decreased and the acreage in cash grain farming has increased. Many of these grain farmers have converted to or in the process of converting to no-till and conservation tillage systems. This is mainly for economical reasons (the ability to farm more acreage in a shorter time frame) but also to reduce soil erosion and nutrient loss.

Since 1999 corn, soybean, and wheat acres have stayed fairly constant. Hay crops, barley, and oats have decreased in acreage with some shifting from alfalfa to grass hays. We are seeing an increase in acreages of vegetables as more people look to local sources of produce. With animals we are seeing less dairy, more beef cattle, sheep and horses, less chickens, more turkeys and little change in the number of hogs. New and revised state and federal regulations and negative perceptions in the local community of large animal operations will continue to keep animal numbers from increasing.

York County has seen an increase in farms operated by part-time farmers/landowners with small beef, sheep and horse operations. These farms tend to use older facilities, which are renovated for housing but not manure controls. These barns also tend to be sited near streams and water sources. These farms tend to have overgrazed pasture, no manure handling practices and animals in or near the streams. Many new horse facilities are in place with high numbers of horses on small acres. They also tend to have manure with no place to spread when they convert these farms to all pasture and hay.

The Amish community has moved to southeastern York County in the last 25 years and has grown to nearly 70 families. They tend to use conventional tillage practices and have manure runoff and handling problems. They tend to stay within their own community and have had limited interaction with the District and NRCS. We have had some success with a few individuals, but not the community as a whole.

Stream corridors are changing with the land use changes. Many old pastures have been abandoned and natural riparian areas are returning, especially on our major streams.

However, with increased development pressures the streams are eroding from higher flows of storm water runoff. We are losing tremendous amounts of stream bank adding to the sediment load in the stream. The buffers help treat surface flow to the streams but not within the stream itself. Tree roots where forested buffers exist also help to stabilize stream banks.

### Other Sources

York County has seen a tremendous increase in population, and loss of land to housing, commercial and business interests. The biggest growth is in the southern half of the County with people moving north from Maryland. The northeast section of the County has seen substantial growth in housing, and the I-83 corridor shows increasing growth in commercial properties and businesses that want access to highways and roads.

The District is convinced through numerous studies, field observation and workload volume related to development pressure on the Erosion & Sediment (E&S) Pollution Control program, that non-Ag related non-point source pollution is a significant contributor to degraded water quality and sediment load in our watersheds.



*Typical Streambank Erosion*

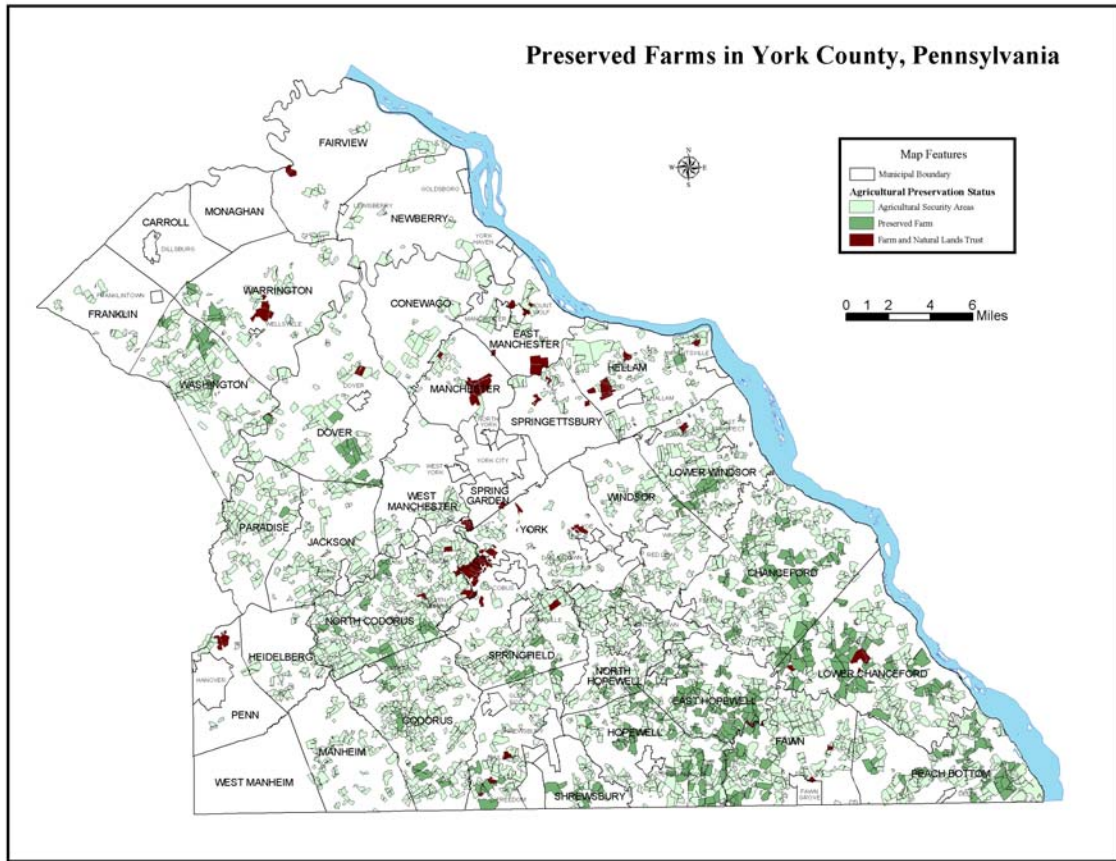
Storm water runoff tops the list of causes related to impacts from non-Ag non-point source pollution. The impact to our watercourses is evident in nearly every watershed where development has been occurring. With our rolling topography compounding the impact of poorly managed runoff, the sediment load being generated within the riparian system is a significant contributor to our overall sediment and nutrient load.

We have one of the most aggressive and active E&S programs in the state. With the addition of (2) positions for the E&S program team in 2005, we have (5) Field positions and (2) support staff dedicating nearly all of their time to soil erosion control related to earth disturbance activities. We emphasize both a thorough plan review before construction begins as well as an active field presence to ensure that controls are not only on paper but implemented in the field. Further, the district watershed specialist spends a great deal of his time dealing with impacts relating to stormwater runoff.

It is our opinion that previously completed TMDL's for watersheds in York County have been in error in defining the major cause of degradation as agricultural activities. We find it interesting to note that the streams defined by DEP (using the York County Designated Use Assessments & TMDL Status map) to have impaired waters, coincides with the areas under heaviest development pressure. Conversely, the water courses mapped as attaining water quality goals appear to be found in our areas where land use is predominantly

agriculture and will most likely be our last areas to stave off development and hang on to agriculture as a primary land use ( Figure 4, page 11).

Further, many of our Ag related erosion control complaints are a result of increased runoff from development and or concentrated flows from state and local highway culverts, that outlet onto a farm field and cause excessive erosion.



**Figure 4. Preserved Farmland in York County, Pennsylvania.**

### Water Quality

Water quality baseline information collected in 2003 suggests that York County's watersheds are generally in good condition. Water quality varies both spatially between and among watersheds and temporally, seasonally. Land use affected water quality the most, especially in the Codorus Watershed.

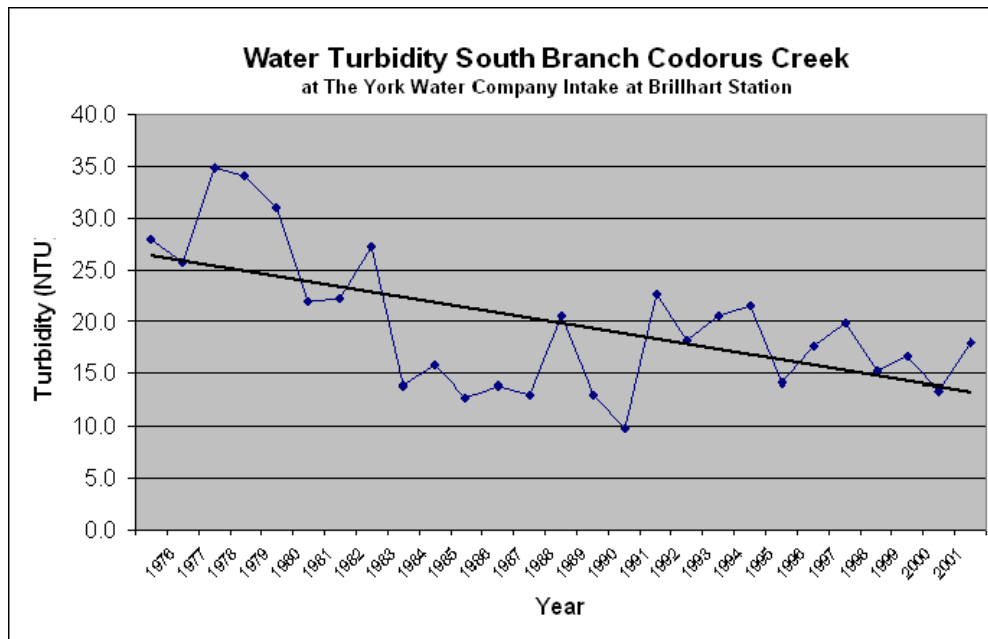
Significantly high concentrations of sediment and nutrients (nitrate-nitrogen and ortho-phosphate) were found in rural watersheds where agriculture was the predominant land use. However, urbanizing upland areas also contributed significantly to increasing

stormwater runoff and stream bank/channel erosion and sedimentation downstream, in all watersheds.

Point sources affect water quality for nutrients in the Codorus Watershed. Specifically, higher levels of nutrients and lower levels of dissolved oxygen were positively correlated with reduced water quality downstream of existing point sources.

Geology influences water quality in the Codorus Watershed also. Specifically, total alkalinity is higher in the West Branch and Main Stem of Codorus Creek which flows through a limestone valley. Higher alkalinity of the West Branch improves its natural buffering capacity.

Figure 5 is a graph showing the raw water turbidity in the South Branch at the location of York Water Company’s Brillhart Pumping Station. The number representing each year is an average of the daily raw water turbidity measurements for that year. This trend shows the positive effects of the Conservation District’s implementation of Best Management Practices in agriculture and improvements in the South Branch and East Branch of the Codorus Creek. The annual average turbidity is greatly affected by the amount and timing of rainfall for each year.



**Figure 5. Water Turbidity South Branch Codorus Creek**

## D. Nutrient and Sediment Reduction Efforts

The York County Conservation District has a long history of assisting cooperators with implementing conservation practices. A scenic ride around the county will show contour farming and strips, grass waterways, manure management facilities, stream fencing and pasture management systems that have been installed and maintained. This would not have been accomplished without the cooperation of many partners and agencies including the NRCS, the Farm Services Agency, Cooperative Extension, Ag Preservation, local watershed groups and organizations, Ducks Unlimited, the Chesapeake Bay Foundation, PA-DEP and the State Conservation Commission.

### Conservation District Programs

*Chesapeake Bay Program*- From 1985 to 2004 the District assisted 99 cooperators through contracts on over 14,000 acres of land, to install various practices to control soil erosion, manage and collect manure and implement nutrient management plans. We allocated and spent nearly 2.2 million cost share dollars with nearly another 1 million dollars spent by the cooperators. Practices installed include grass waterways, diversions, terraces and contours on cropland, manure storages and manure runoff controls at the buildings and stream fencing, crossings and watering systems in the pastures. All contracts have a nutrient management plan developed and later updated after the manure systems are installed.

In 2005 the Bay Program changed to a Special Project funding system, whereby Districts could do projects in addition to BMP's. The York District decided to continue funding BMP's but went away from a total farm funding system. Cooperators could apply for limited practices at a time as long as part of an overall conservation plan. The District has received funding from the National Fish and Wildlife Foundation as well as the Bay program. We have assisted five cooperators with funds through the end of 2006.



*Barnlot & Grazing System*

*Nutrient Management Act* – The District is currently administering the State Nutrient Management regulations on 30 CAO's (Concentrated Animal Operations) with 1,484 acres available to spread and 12,911 AEU's and 6 voluntary plans with 1,675 acres and 1,164 AEU's. The CAO's are inspected annually and plans are updated every three years. The Act 38 regulations went into effect in October 2006.

*Project Grass* – With funding from the Mid State Resource Conservation & Development council we are implementing grazing practices on three farms in the county. The funding (\$45,100 from three different grant phases) is being used to install interior and exterior

fencing for conversion to pasture, watering systems, stable cattle walkways, stream fencing and stable access to streams. This funding will be available until used or by June 2008.

*Conservation Planning and Technical Assistance* – The District and NRCS provide assistance to any landowner who becomes a District cooperator. We currently have approximately 1,000 cooperators in the system. The assistance includes developing conservation plans and then implementing the planned practices. We assist the Ag Preservation program and NRCS with writing and implementing conservation plans on all program applicants and preserved farms. Ag Preserve currently has 178 preserved farms with about 30,900 acres and 68 pending applications for 2007.

*Biosolids Land Application* – The District assists the DEP and the York County Solid Waste and Refuse Authority manage the land application of biosolids program. The District monitors the implementation of conservation plans on all permitted acres and provides conservation planning and technical assistance as needed. Currently there are 46 permitted farms on 4,092 acres of land in the county.

*Chapter 102* – The District administers the 102 program. With the tremendous growth they have a substantial workload in reviewing plans, performing site inspections and addressing complaints. In 2006 the staff reviewed 445 plans on 7,827 acres, performed 1,118 site inspections and handled 313 complaints related to erosion and other activities. They also implement the National Pollution Discharge Elimination Program permit program for DEP.

*Dirt and Gravel Roads* – Since 1999, the District has assisted local municipalities to install 15 Environmentally Sensitive Maintenance of Dirt and Gravel Road projects on 837,862 square feet of roadway (approximately 9.92 miles averaging 16 feet wide) using \$ 440,339.50 of cost share funds.

*Watershed Programs* – The District's Watershed Specialist provides technical assistance which will improve watershed organization development and the quality and quantity of the County's surface and groundwater resources. The focus of this work relates to watershed assessment, procurement of funding, technical assistance, and the creation of work plans and strategies to restore and protect groundwater and surface water resources. The Watershed Specialist is a resource to both the public and private sectors.



*Citizen Volunteer Watershed Weekend  
Riparian Buffer Planting*

The Watershed Alliance of York (WAY) is a coalition of stakeholders committed to being innovative leaders encouraging watershed planning, restoration and protection. The Alliance consists of 25 local watershed organizations that collectively have leveraged

over \$5.2 million dollars to fund locally led watershed conservation initiatives including 6 watershed assessments, 6 watershed management plans, 1 watershed implementation plan, 23 major restoration projects, since 2001. Numerous other environmental stewardship and watershed protection projects including educational programs, stream cleanups, riparian buffer plantings, Sustainability conference, water quality monitoring network, Codorus Restoration Efficacy Program, Rivers Conservation Planning, Recapture the Riverfront, and the annual Watershed Weekend, across York County. To date, over 55,000 linear feet of stream corridors have been restored and protected including riparian buffers. Additionally, WAY effectively provides education and outreach to over 500,000 stakeholders locally and regionally, annually.

In 2003, the District initiated a new program titled HELP-Streams (Headwaters Environmental Legacy Program for Small Streams) with a \$5,000 grant from the York Foundation which allowed 3 demonstration site projects to be completed. The purpose of the HELP-Streams Program is to educate landowners about environmental Stewardship and Watershed Protection and provide financial and technical assistance on a cost-share basis. Since then, the District has secured an additional 33,000 and installed 4 additional projects under General Permits for private, nonagricultural landowners.



Additionally, in 2003 the U.S. Army Corps of Engineers-Baltimore District initiated two feasibility studies under Sections 206 and 1135 of the Water Resources Development

Act to assess the Codorus watershed for ecological and flood mitigation improvements. The goal of this project is to restore and protect the Codorus watershed and the City of York. The Section 206 Watershed Restoration Study was completed in 2006 by the Corps, and will be presented to the County Commissioner's for consideration in 2007.

### USDA Programs

*Environmental Quality Incentives Program (EQIP)* – EQIP offers an incentive payment to install BMP's to solve resource concerns. Since 1997 the NRCS has been managing the EQIP cost share program. There have been 102 contracts written on 11,740 acres with \$1,621,091 obligated and being spent. Many of these contracts were in the Codorus watershed when it was considered a priority area. Since 2003 the funding has been on a countywide basis. EQIP helps to solve resource concerns related to sediment and nutrient loss, improve manure handling and application, and implement grazing systems. Improving wildlife habitat is also an important goal of the program. Major practices installed include grass waterways, ag waste systems, stream fencing and crossings, riparian buffers, roof water and surface water controls, filter strips, upland wildlife habitat and watering systems for livestock.

*Conservation Reserve Enhancement Program (CREP)* – NRCS has completed 306 contracts with 4,362 acres of practices planned. As of 3/16/07 2,817 acres of practices have been installed. Applications are still being accepted to install Riparian Buffers. The major practices include seeding of cool and warm season grasses, installing riparian buffers and establishing permanent wildlife habitat.

*Conservation Compliance* – All farmers and operators that receive federal government funds must be using an approved conservation systems on all cropland. The NRCS and District workload includes planning new and revising old plans for these operators.

### State and Private Organizations

*DEP Stream Fencing Program* – DEP has installed stream bank fencing systems on 6 farms in York County. All the systems included two strand fencing and stable crossings or access for cattle. Practices were installed on dairy and beef farms.

*Chesapeake Bay Foundation and Ducks Unlimited* – Five streambank fencing and buffer projects have been installed with the CBF Farm Stewardship Program and one with Ducks Unlimited program since 1997.

### 2006 Accomplishments

The District developed a new cost share program in 2005 to assist cooperators install planned practices from a conservation, grazing or agricultural waste plan. The program combines the various funding sources into one process for the landowner. To date we received \$40,000 from the National Fish and Wildlife Foundation Chesapeake Bay Small Watershed grants program for implementing grazing practices, \$76,515 from Chesapeake Bay Special Project funding to install any planned practices and \$91,693 from a settlement between DEP and PPL Brunner Island. In 2005 and 2006 we spent \$ 76,242 with five cooperators installing BMP's. We have five planned projects for 2007 and plan to use all funds by summer 2008.

We also obtained funding to promote usage of Chlorophyll meters to assist farmers who apply manure on corn do a better job with nitrogen management. We received \$1,700 from Bay Special Project funds to purchase a meter and \$2,112 from The PACD Chesapeake Bay Educational Mini Grant to purchase a meter and provide educational sessions on nitrogen management and how to use the meter. The District is partnering with Cooperative Extension to provide the training and then the meter distribution in 2006 and 2007.

### Current Status of Workloads and Concerns

Looking at the listed numbers and accomplishments it would seem that we have done a significant amount of work to improve water quality with landowners and farmers in York County. However, we still have a lot of farms and acreage that have not either

developed and/or implemented conservation plans. From the 2003 Ag Statistics survey there are 283,000 acres of farmland in York County. Our best estimate is that 60% (170,000) of this farm acreage has some type of conservation plan written but only 25% (70,000) of the acreage has an implemented conservation system that would meet current standards.

The ability to develop and implement plans and practices is limited by many factors but is mainly related to funding and economic issues. Conservation District and NRCS staffs are stretched to the limit handling current programs and initiatives. In York we have a backlog of conservation plan requests of 25,000 acres. These requests include District cooperators, Ag Preserve, conservation compliance, Biosolids application, grazing systems, erosion complaints and conservation for nutrient plans.

The District staff continues to administer contracts with the original Bay program, including the completion of outstanding contracts and to monitor and spot check these contracts for ten years until they meet obligations of the program. Nutrient Management workloads will increase when the revised CAO and CAFO regulations are approved and go into affect in 2006. All plans will need updated to the new regulations and more farms will need plans. Also, inspections and complaint follow up will be more time consuming under the new regulations.

We also have our continuing obligation to assist the Ag Preservation and Biosolids programs with conservation planning and implementation. The District Ag staff will also be handling erosion and manure complaints on agricultural operations.

Funding options for landowners and farmers have not kept pace with the demand and need to install practices. Our requests for assistance far exceed the funds we receive and the District and NRCS staff ability to implement. Without cost share dollars landowners will usually delay installing practices as they do not have the funds to fully pay for the practice. The other problem is that many of the program requirements are becoming too restrictive and cumbersome and the landowner just decides they do not want to get involved.

The major issues with agriculture are soil erosion from cropland and pastures, manure runoff and nutrient loss from barnyards and animal concentration areas and streambank and stream corridor erosion from stormwater runoff and animal access. Horse operations are also a growing concern because of high stocking rates contributing to erosion and runoff from bare pastures.

Erosion and nutrient runoff from non agricultural sources are also a major concern of the District. These include erosion from construction sites, storm water runoff, non agricultural fertilizer uses and erosion from improper logging practices.

## Resource Needs, Options and Alternatives

- We need to maintain current trained and experienced staff to provide planning and technical services. Current funding sources need to be maintained and new dedicated sources found to fund technicians. With the fragmented systems Districts work under, it is hard to pay staff adequate salaries and avoid constant turnover. It takes 2-4 years to develop a fully independent planner or technician. We also need to secure funding for an additional agricultural staff person in York County dedicated to conservation planning and implementation to help reach our goals.
- Dedicated funding sources for practice installation and plan implementation need to be developed. Districts must be allocated funding up front to have funds on hand, when the landowner is ready to do the work. The approach of writing plans and requesting funds does not work in the real world. Our best opportunity for getting practices implemented is to do it as soon as possible after the plan is completed. When working with those in agriculture we are assisting the one business that does not set the price they receive for their products. When a farmer needs to install practices he cannot pass the cost on to the buyers of his grain, cattle or crops. If society declares agriculture must do its part then society must assist with part of the cost. Without cost share funding, we can write, plan and develop all the plans we want but not many will be implemented.
- We need to review our system of providing engineering assistance to Districts. We currently have three sources; Chesapeake Bay engineers, PACD TAG technicians, and NRCS engineering staff. District technicians currently can do technical work under the Job Approval system provided by NRCS. This gives us technical oversight and protection in the field. If Districts ever lose NRCS engineering support and job approval authority, we will have no protection in the field when problems occur. However, the availability of these sources is threatened by current funding situations. We strongly recommend a state funded and supported system of engineers to assist Districts.
- Nutrient Trading programs should continue to be explored. There is an opportunity for industries or businesses to fund implementation of practices on farms and with landowners. It seems like a great fit. A business (with the ability to pass on costs) that needs to implement pollution controls could assist a farmer (without that ability to pass on the costs) to put in practices, thereby helping him get into compliance and improving water quality for everyone. We need to proceed with caution so we develop the best program possible. Our primary concern with trading is that at the end of the day we can demonstrate measurable results to improving water quality.

## **E. York County Implementation Plan**

The York County Conservation District's plan will be to implement the following items which are listed in order of priority. These items will be completed in all watersheds as the entire county is part of the Chesapeake Bay watershed. A summary table listing District accomplishments and current Tributary strategy numerical goals is attached as part of the Tributary Strategy.

### Conservation Planning

The Ag staff will continue to write new and update existing conservation plans for farmers and cooperators. These plans will include erosion control for cropland, grazing plans for pastures, agricultural waste management systems for handling manure and stream corridor systems. All plans will be written to the current standards of Chapter 102, and the Pa Technical Guide. All planners will get certified by NRCS to meet their planning standards. Conservation plans are the basis for all other work we do. Implementation cannot occur without a good plan and design process.

### Installing Planned Conservation Practices

The District will continue to assist landowners with the design, layout and installation of planned practices. District staff will have Engineering Job approval from NRCS for this work. All practices will be done to Pa Tech Guide specifications. Most practices will be installed with cost share funds received but will also include non cost shared practices.

### Funding Requests for 2007-2008 – Installation of Best Management Practices

The District will continue to promote the installation of Best Management Practices on farms with sediment and nutrient resource concerns and with approved conservation plans. We will continue to look at various sources of dollars to assist landowners. All funding will be through our York Cost Share Program. The funding would apply to any farm in the county as the whole county is in the Bay watershed. Some fund sources may be watershed or practice specific but we are trying to be as flexible as possible with our funds. Practices will be installed to Pa Tech Guide standards and specifications. Cooperators can apply for single or multiple practice installation. All cost-share funding will be at 75% not to exceed table rates approved by the District.

We plan to apply for one grant of \$50,000 from the National Fish and Wildlife Foundation Chesapeake Bay Small Watershed Grants Program. The grant will be to install practices in the Kreutz/Muddy and Susquehanna Tributaries watershed. We estimate that these funds would assist landowners in installing 10-15 practices on nearly 200 acres.

We are requesting \$ 75,000 from Bay Special Project funding to support our initiative to assist landowners in implementing conservation plans and practices. We estimate that this funding would assist landowners install about 30 best management practices on 500

acres. We are not limiting the eligible practices or the watersheds eligible as the whole county is in the Chesapeake Bay watershed.

#### Promotion of No-Till, Conservation Tillage and Use of Cover Crops

The District will continue educational efforts to foster acceptance and implementation of no-till, conservation tillage and cover crop practices to reduce sediment and nutrient losses. We will do this in partnership with NRCS, Extension and the proposed No-Till Alliance organization. Most of our effort will be one on one with landowners as we develop plans, but will also use newsletter articles and fact sheets at various educational events. We will also support the efforts of the Capital RC&D Park the Plow initiative.

#### Nutrient Management Planning

The District staff will write nutrient management plans for existing Bay contracts and those seeking voluntary plans with the Nutrient management act regulations. All planners will be certified to Act 38 standards.

#### Erosion Control and Manure Management Compliance

The District will continue to address erosion and manure complaints as we receive them. We will follow our current procedures for handling erosion complaints which include working with the landowner and operator to achieve voluntary compliance. We will assist in developing and implementing the needed conservation practices. If voluntary compliance cannot be achieved the District Board will then decide on referral to DEP for enforcement.

Manure complaints will also be handled with the goal of voluntary compliance. Our current procedure needs to be updated to match the changes to Act 38. If the farm is a CAFO or CAO we will follow the appropriate procedures. If not we will assist the operator in reaching voluntary compliance with the Manure manual. If voluntary compliance cannot be achieved the District Board will then decide on referral to DEP for enforcement.

The District will continue educational efforts to inform the agricultural community about Chapter 102 and 91 compliance through newsletter articles, partnering in other educational events and one on one education of farmers and landowners.

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