



# Fact Sheet

Commonwealth of Pennsylvania • Department of Environmental Protection

## Pennsylvania's Chesapeake Bay Tributary Strategy *Frequently Asked Questions*

### ***Why is Pennsylvania revising its Chesapeake Bay Tributary Strategy?***

With the signing of the Chesapeake 2000 Agreement, Pennsylvania made a commitment to help remove the Chesapeake Bay from the federal Clean Water Act's list of impaired waters by 2010. Our partners to this commitment include all the jurisdictions in the Chesapeake watershed, including Delaware, Maryland, New York, Virginia, West Virginia, and the District of Columbia. The U.S. Environmental Protection Agency (EPA) and Chesapeake Bay Commission are also key partners. Pennsylvania is critical to this effort as 50 percent of the fresh water to the Chesapeake Bay flows from the Susquehanna River.

To achieve this goal, the Chesapeake Bay Program partners developed new scientifically based water quality criteria for the Chesapeake Bay. This guidance will assist the Bay tidal water states to adopt revised water quality standards to address nutrient and sediment based pollution in the Chesapeake Bay. Next, new nutrient and sediment reduction goals were developed for each major tributary and jurisdiction to meet the revised water quality criteria. A complete explanation of this process can be viewed at [www.chesapeakebay.net/wqcchesapeake2000.htm](http://www.chesapeakebay.net/wqcchesapeake2000.htm). Following the adoption of the revised state water quality standards in 2005, the Bay Program partners will re-evaluate, and adjust if necessary, the nutrient and sediment goals.

The new goals, agreed to in April 2003, replace the previous nutrient reduction goal established by the 1987 Chesapeake Bay Agreement. The Chesapeake Bay Program partners also agreed to develop revised Nutrient and Sediment Reduction Tributary Strategies within one year, by April 2004, to plan how the goals can be met by 2010.

### ***How do the new reduction goals compare to those under the 1987 Chesapeake Bay Agreement?***

The new nutrient and sediment reduction goals for Pennsylvania are:

- Nitrogen discharges to the Bay must be reduced to no more than 71.9 million pounds. This is referred to as the "cap load." It will require a reduction goal of 37.3 million pounds from the year 2002 watershed model loads. This is about two and a half times the previous goal of 15.5 million pounds.
- Phosphorus discharges to the Bay must be reduced to no more than 2.47 million pounds (cap load). This will require a reduction goal of 1.11 million pounds from the year 2002 watershed model loads. This goal is similar to the previous 1996 goal of 2.46 million pounds.
- Sediment discharges to the Bay must be reduced to no more than 0.995 million tons (cap load). This will require a reduction goal of 116,000 tons from the year 2002 watershed model loads. This is the first time a sediment goal has been agreed to by the Bay Program partners. Efforts to meet the phosphorus goal will most likely result in meeting the sediment goal.

### ***How will this Tributary Strategy be different from earlier efforts?***

Pennsylvania completed its first Nutrient Reduction Tributary Strategy in 1988. Early efforts focused on developing strategies for nutrient reductions in each of the Bay's major tributary basins. In Pennsylvania, these are the Susquehanna and Potomac River basins. For planning purposes, the smaller basins which flow directly to the Chesapeake Bay (Gunpowder Falls River in southern York County, and the Elk and Northeast

Creeks in southern Chester County) were integrated with the major basins.

Previous Tributary Strategies were developed with a "Top Down" approach. The Department of Environmental Protection (DEP) worked in a limited manner with local partners to develop a Nutrient Reduction Tributary Strategy. This approach identified broad pollution categories, primarily agriculture and point sources, to reduce nutrient loadings and relied heavily on state and federal funding sources. Only results tracked through cooperating state and federal programs were quantified.

Pennsylvania's most recent Tributary Strategy was updated in 2002. It identified progress towards the year 2000 nutrient reduction goal established by the 1987 Chesapeake Bay Agreement. It also projected nutrient reductions to be achieved by existing program efforts through the year 2005. This strategy is located on DEP's website at [www.dep.state.pa.us/hosting/pawatersheds/chesapeakebay/](http://www.dep.state.pa.us/hosting/pawatersheds/chesapeakebay/).

New Tributary Strategy planning efforts will take a "Bottom Up" approach, using the **13 DEP Watershed Teams** within Pennsylvania's Chesapeake basin. For the first time, Pennsylvania will sub-allocate the nutrient and sediment cap loads to the Potomac and Susquehanna basins. Nonpoint source loads will be further sub-allocated to smaller basins represented by the Watershed Teams. The new strategies will also allocate other Chesapeake 2000 Agreement goals to the Watershed Teams. These include habitat restoration goals for wetlands, riparian forest buffers, fish passage and watershed management plans.

***How will the Watershed Teams engage the Public to develop Tributary Strategies?***

DEP Watershed Teams, with help from local governments and citizens, will develop Tributary Strategies from the "Bottom Up". As a first step, the DEP Water Planning Office will prepare a draft strategy for each of the 13 Watershed Teams to address their allocated nutrient and sediment cap load, and other habitat restoration goals. The Chesapeake Bay Program's Watershed Model is the basis for the draft strategies. The real planning begins when the Watershed Teams engage local stakeholders to review the draft strategies and

enhance their further development with local on-the-ground knowledge.

This approach will identify pollution sources at the local level, and open up more responsible avenues from citizens to the federal government to address pollution sources. With local resident and government commitment, there is opportunity for more funding sources and management options to achieve reductions. Identifiable results beyond current state and federal programs will be quantified. Past Tributary Strategies focused almost exclusively on agricultural practices and upgrades to wastewater treatment plants. While these practices will remain key, the new strategies will look at a host of additional practices including urban stormwater management. Not only will this mean identifying new best management practices, but being able to track their reductions as well. How to cap the pollution load once reduction goals are achieved will also be addressed at the local level during Tributary Strategy development.

These Tributary Strategies concern us all because they are intended to improve local water quality by removing nutrients and sediments from local streams and rivers. Obviously, this also has a cumulative effect on the Chesapeake Bay. These reductions will need to come from diverse sources such as agricultural operations, sewage treatment plants, and urban and suburban land uses. If we are to meet the goals of these new strategies, virtually everyone will need to become involved.

***How much will all this cost and who will pay for it?***

The Chesapeake Bay Commission estimates that it will take about \$3 billion to achieve the water quality improvements to be outlined in Pennsylvania's Tributary Strategies. This money will need to come from federal, state, and local governments, as well as the private sector. Given current economic conditions, it is clear that extra money for this effort does not exist at this time. The Tributary Strategies, however, will provide a detailed implementation plan which will allow us to determine where new investments should be directed and the data to support funding needs.

The Commission is advancing a Congressional Chesapeake Bay Legislative Package designed to enhance federal funding in support of our Chesapeake Bay restoration objectives. A keystone of this package is the proposed

Chesapeake Bay Watershed Nutrient Removal Assistance Act. If enacted, the statute would establish a federal nutrient removal technology grants program in the six-state Chesapeake Bay watershed. The program would provide grants for 55 percent of the capital cost of upgrading publicly owned wastewater treatment plants of at least 0.5 million gallons per day with nutrient removal technologies to remove nitrogen down to 4 mg/liter. Another proposal would amend the Water Resources Development Act to establish a new small grant program for local governments and nonprofit organizations to carry out small-scale restoration and protection projects in the Chesapeake Bay watershed.

***Are Tributary Strategies comparable to Total Maximum Daily Loads (TMDLs)?***

Yes. Both TMDLs and Tributary Strategies are developed to assist in cleaning up impaired waters. From there, they start to differ.

A TMDL sets a ceiling on the pollutant loads that can enter a waterbody so that it will meet water quality standards. The federal Clean Water Act requires states to list all waters that do not meet their water quality standards. For those waters, the state must calculate how much of a substance can be put in the water without violating the standards, and then distribute that quantity to all the sources of the pollutant on that water body. A TMDL plan includes waste load allocations for point sources, load allocations for nonpoint sources, and a margin of safety. The TMDL must be submitted to EPA for approval. Point source waste load allocations are implemented through existing state regulations under the National Pollutant Discharge Elimination System (NPDES) permit program. These permits set limits on the amount of pollutant that can be discharged. Nonpoint source load allocations are implemented through a combination of federal, state, and local programs that include regulatory, nonregulatory and voluntary efforts.

Tributary Strategies are similar to the TMDL process in that the jurisdictions receive a cap nutrient and sediment load for their tributaries. There are differences, as well. The Watershed Team nitrogen allocations to address the cap loads are likely to be more limiting than that required by individual local TMDL's. This is because some nutrient loadings do not cause impairment until they reach the Chesapeake Bay. In addition, the Chesapeake Bay Program is a voluntary,

cooperative restoration process at this time. If sufficient progress is not made to reduce nutrients and sediments to remove the Chesapeake Bay from the federal Clean Water Act list of impaired waters by 2010, the U.S. Environmental Protection Agency will require that a TMDL be developed for the Bay by 2011. At that time, regulatory allocations will be made for point source waste loads to wastewater treatment plants or industrial facilities and for nonpoint source loads to sub-basin watersheds.

***Is there a possibility that point source facility permit limits will be imposed prior to 2011 and the development of a Bay TMDL?***

The Bay tidal states (Delaware, District of Columbia, Maryland and Virginia) are scheduled to adopt new water quality standards by 2005. These standards will implement the water quality criteria published by EPA, and be sufficient to support the living resources of the Bay. The Clean Water Act establishes an obligation on an "upstream" state to ensure that the standards of a "downstream" state can be met. DEP will develop an implementation strategy for point source permitting to address how downstream water quality standards for the Bay will be met.

***Do Tributary Strategies impact existing TMDLs on Pennsylvania tributaries to the Bay?***

No, but TMDL implementation plans may be incorporated into Tributary Strategies. Best Management Practices (BMPs) to reduce nutrient and sediment loads included in TMDL implementation plans should be incorporated into the larger Tributary Strategy for that river basin. Similarly, all Watershed Management Plans should be identified in the Tributary Strategy and BMPs incorporated. This is an opportunity for a local watershed planning organization to determine whether it has adequately addressed the nutrient, sediment or other habitat goals, and modify its plan if needed.

***Who is responsible for implementing the Tributary Strategies?***

There is no one entity responsible for implementing the strategies. Like most efforts to protect our valuable local natural resources, this is a shared responsibility. Each state has a coordinating and funding role to implement the Tributary Strategies, as well as its ongoing responsibility to implement

water quality laws and regulations. The federal government provides funding through such programs as the Chesapeake Bay Program, State Implementation Grants, Farm Bill, and the Clean Water Act State Revolving Loan Fund.

Many of the necessary actions to implement Tributary Strategies will need to be taken at the local level. These may include wastewater treatment plant upgrades, storm water management infrastructure, and better erosion and sediment control enforcement. The private sector must also participate through agricultural, forestry and industrial best management practices. These local actions can be captured in local watershed management plans. The average citizen also has a role to play in actions taken daily such as fertilizing the yard, conserving water and energy, maintaining

septic systems or even relying more on public transportation.

***How can I get additional information?***

Watershed Teams are being set up in each of Pennsylvania's major Chesapeake Bay tributary basins. See the attached Table 1 for the name and contact information of the Tributary Strategy Leader in your area. Watershed Managers for the Teams are also identified.

For information regarding Pennsylvania's Tributary Strategies and other Chesapeake Bay restoration initiatives visit the DEP website at [www.dep.state.pa.us](http://www.dep.state.pa.us) (Subject: Chesapeake Bay) or the EPA Chesapeake Bay website at [www.chesapeakebay.net](http://www.chesapeakebay.net).

**Table 1. Pennsylvania Chesapeake Basin Watershed Team Leaders and Watershed Managers**

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#	Watershed Planning Team	Team Leader	Office	Phone #	E-mail Address	Watershed Manager
1	Central Penn	Mike Welch	Northcentral Region	570-321-6518	<a href="mailto:mwelch@state.pa.us">mwelch@state.pa.us</a>	Joan Sattler
2	Upper West Branch	Michael W. Smith	Northcentral Region	814-342-8200	<a href="mailto:michaesmit@state.pa.us">michaesmit@state.pa.us</a>	Corey Cram
3	Susquehannock	Dan Alters	Northcentral Region	570-327-0530	<a href="mailto:dalters@state.pa.us">dalters@state.pa.us</a>	Jennifer Means
4	Lower North Branch Susquehanna	Jim Miller (Rich Adams–Coordinator)	Northcentral Region	570-327-3431 570-327-3666	<a href="mailto:jamesmill@state.pa.us">jamesmill@state.pa.us</a> <a href="mailto:lyadams@state.pa.us">lyadams@state.pa.us</a>	Joan Sattler
5	Big Bend	Dave Aldenderfer	Northcentral Region	570-327-3648	<a href="mailto:daldenderf@state.pa.us">daldenderf@state.pa.us</a>	Joan Sattler
6	Bradford/Tioga	Dick Bittle	Northcentral Region	570-327-3650	<a href="mailto:rbittle@state.pa.us">rbittle@state.pa.us</a>	Jennifer Means
7	Upper Susquehanna	Kate Crowley	Northeast Region	570-826-2511	<a href="mailto:kacrowley@state.pa.us">kacrowley@state.pa.us</a>	Ron Yablonsky
8	Wyoming Valley	Jody Brogna	Northeast Region	570-826-2511	<a href="mailto:Jbrogna@state.pa.us">Jbrogna@state.pa.us</a>	Ron Yablonsky
9	Lackawanna	Bill Tomayko	Northeast Region	570-826-2511	<a href="mailto:wtomayko@state.pa.us">wtomayko@state.pa.us</a>	Ron Yablonsky
23	Lower Susquehanna East	Tony Rathfon	Southcentral Region	717-705-4860	<a href="mailto:arathfon@state.pa.us">arathfon@state.pa.us</a>	Jineen Boyle
24	Lower Susquehanna West	Leif Ericson	Southcentral Region	717-705-4868	<a href="mailto:lericson@state.pa.us">lericson@state.pa.us</a>	Mary Golab
25	Juniata	Mike Sokolow	Southcentral Region	717-787-8790	<a href="mailto:msokolow@state.pa.us">msokolow@state.pa.us</a>	Mark Mathews
26	Potomac	Bob Zaccano	Southcentral Region	717-705-4797	<a href="mailto:rzaccano@state.pa.us">rzaccano@state.pa.us</a>	Rick Devore

Watershed Teams in the Chesapeake Bay Watershed

