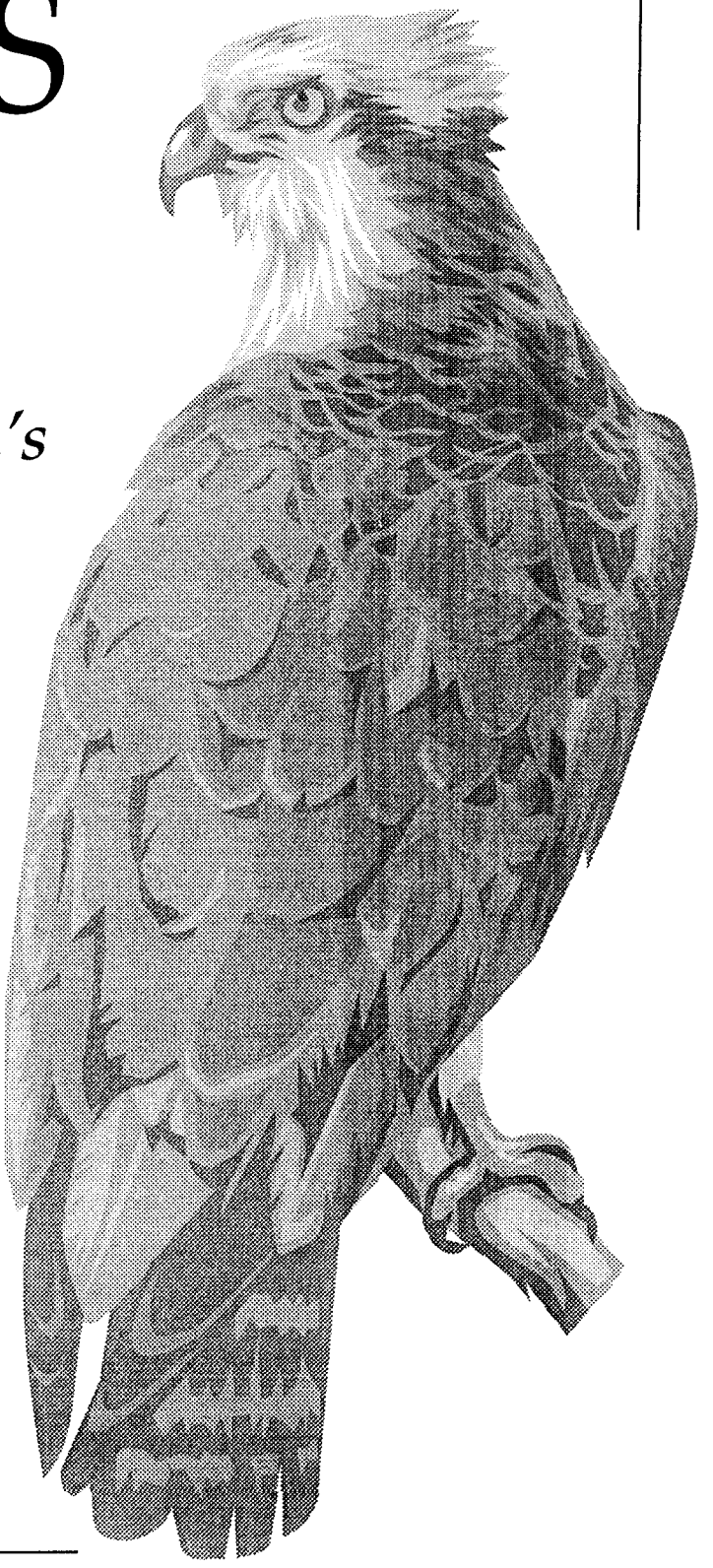
A CITIZEN'S GUIDE

to the
Chesapeake Bay Program's

1999 Executive Council Meeting



CHESAPEAKE 2000
The Renewed Agreement

DECEMBER 8, 1999

Welcome to the Chesapeake Bay Program's 1999 Executive Council Meeting

What is the Chesapeake Bay Program?
Established in 1983 under the historic *Chesapeake Bay Agreement*, the Bay Program is the partnership among Maryland, Virginia, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission, and the U.S. Environmental Protection Agency that's restoring and protecting the Bay.

What is the Chesapeake Executive Council?
The Executive Council is the Bay Program's governing body and includes the top executives from each jurisdiction, the chair of the Bay Commission and the administrator of the E.P.A. The members of the 1999 Executive Council are Maryland Governor Parris N. Glendening, chair; Pennsylvania Governor Tom Ridge; Virginia Governor James Gilmore III; District of Columbia Mayor Anthony A. Williams; Pennsylvania Representative Arthur D. Hershey, chair of the Chesapeake Bay Commission; and E.P.A. Administrator Carol M. Browner. The Executive Council establishes the policy direction for the restoration and protection of the Bay and its living resources, setting goals and policy through agreements, amendments and directives.

What's happening at the 1999 Executive Council Meeting?
This year, the Executive Council is releasing the first public draft of the new *Chesapeake 2000* agreement for review by the citizens of the region. The renewed agreement will define the priority goals and commitments for the Bay effort to take place between 2000 and 2010. This draft is the third in a series of agreements signed since 1983. The first *Chesapeake Bay Agreement* established the Bay Program partnership. The second *Chesapeake Bay Agreement*, adopted in 1987 and amended in 1992, established the overall plan and framework for the restoration and protection of the Bay. In 1998, the Executive Council directed the Bay Program partners to renew the agreement since many of the original goals and commitments were indexed to the year 2000. Also, many of the original restoration milestones have been met.

CHESAPEAKE BAY PROGRAM
www.chesapeakebay.net
1-800-YOUR BAY

Citizen's Guide to the Chesapeake Bay Program's 1999 Executive Council Meeting

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December 8, 1999

Dear Friends:

In 1987, the Chesapeake Bay Program partners accepted a great challenge. We entered into a compact that committed the State of Maryland, the Commonwealths of Virginia and Pennsylvania, the District of Columbia, the United States Environmental Protection Agency and the members of the Chesapeake Bay Commission to one of the most all encompassing environmental restorations ever undertaken. With comprehensive goals, dates and targets, the historic 1987 Chesapeake Bay Agreement set a new worldwide standard for environmental action.

Now, it is time for the Bay Program partners to acknowledge our past successes, reaffirm leadership and recommit to a healthy and productive Chesapeake Bay. In the year 2000, with the signing of a renewed Chesapeake Bay Agreement, the Bay Program will move the cleanup of the Chesapeake into a new age with new goals, new commitments and a new sense of purpose.

Last year, at the annual Executive Council meeting, I observed that the key to successfully restoring the Bay and its tributaries is the commitment of people who live in the Bay watershed. As we meet this year to craft language for the new 2000 Bay Agreement, I am proud to report that we have heard from citizens in every corner of the watershed. We have been given a clear message from the people who call the Bay region home. Be bold. Be decisive. Take action on the land, so that our waters run clean and clear. Make our streams and rivers healthy contributors to a healthy Bay. They also told us not to look back but meet the challenges of the future and manage the Chesapeake for the days of tomorrow.

Speaking for my Executive Council colleagues, I want to assure all who care about the Chesapeake Bay that we have listened to your concerns, we have understood the meaning of your words and we have particular empathy for the depth of your feelings about the future of this most important of all natural resources. So, we ask you to join us in meeting the new challenges of the 21st century and to embrace the renewed spirit of the new Bay Agreement by offering your advice and counsel. The draft Bay Agreement we will release needs your approval. It needs your perspective. It needs the consensus of the people who will be challenged to meet its goals and achieve its commitments.

The new Agreement's drafting process has been specifically designed so that the people who live and work in the Bay watershed will have ample opportunity to tell us what they think. We need to hear from you, so that next June the Bay Program will continue to be the world's model for environmental action, and the people who live in the Bay watershed will continue to be regarded as the truest stewards of one of the world's greatest natural resources.

Sincerely,

Parris N. Glendening

Parris N. Glendening
Governor

Chesapeake Bay Program

A Snapshot of Chesapeake Bay: How's it Doing?

CHESAPEAKE 2000 *The Renewed Agreement*

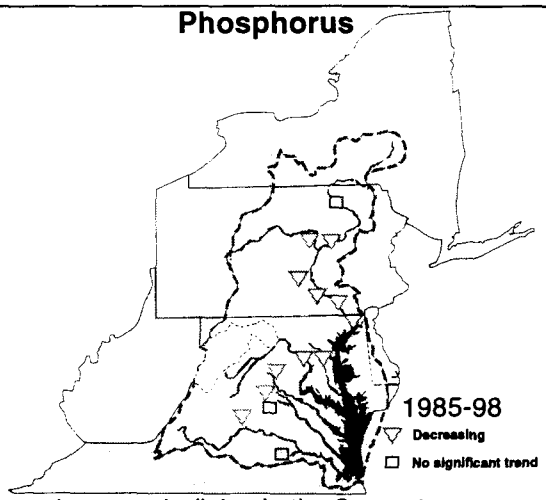
The Bay and its rivers are doing better *than they were when the first Chesapeake Bay Agreement was signed in 1983, but we still have a way to go before we reach our goals for a restored Chesapeake. The "patient" has been stabilized and is showing signs of improvement, but it's not ready to go home yet.*

How do we know the Bay and rivers are getting better?

Nutrient Pollution Levels are Declining in Non-tidal Portions of the Rivers

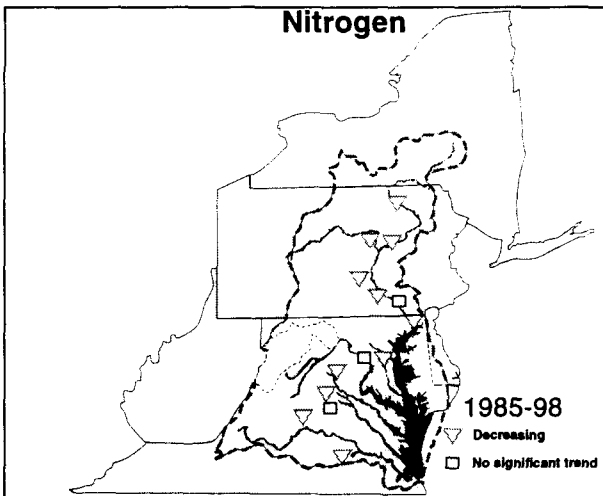
These results measure the success of management programs being implemented throughout the watershed.

Phosphorus



Concentrations are declining in the Susquehanna, Potomac, Patuxent, Rappahannock, Mattaponi (a tributary to the York) and James rivers. The Pamunkey (a tributary to the York) and the Appomattox (a tributary to the James) show no trend.

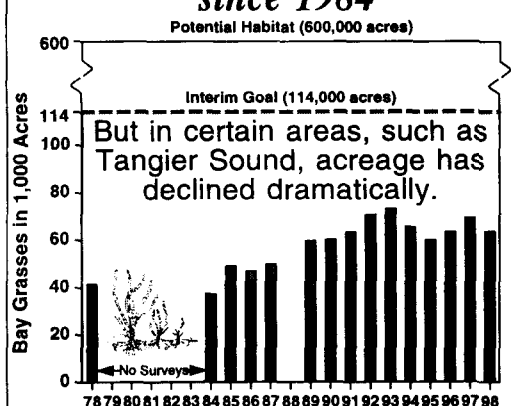
Nitrogen



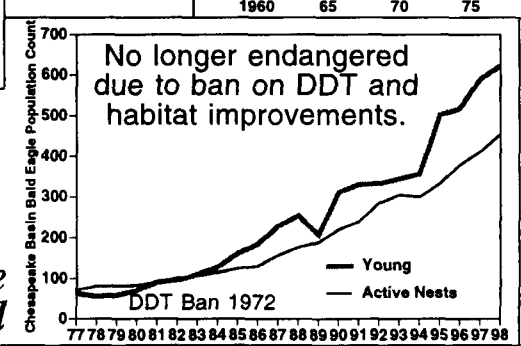
Concentrations are declining in the Susquehanna, Patuxent, Rappahannock, Mattaponi (a tributary to the York), James, and the Appomattox (a tributary to the James) rivers. The Potomac and Pamunkey (a tributary to the York) show no trend.

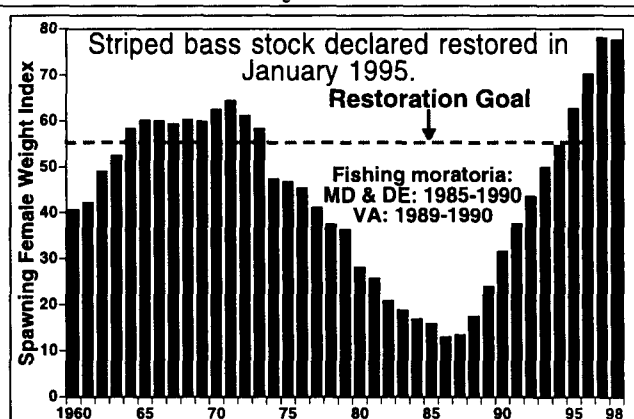
Results are shown for flow adjusted trend analyses of monitoring data using the earliest complete data set collected since 1985 through 1998.

Bay Grasses have Increased since 1984



Bald Eagles are on the Rebound





Striped Bass are Responding to Management Efforts

The Chesapeake Bay Program is the voluntary partnership among the U.S. EPA (representing the federal government), the jurisdictions of MD, VA, PA & DC, the Chesapeake Bay Commission, and participating citizen advisory groups. For more information, call 1-800-662-CRIS or visit the Chesapeake Bay Program website at www.chesapeakebay.net.

12/1/99

Chesapeake Bay Program

Chesapeake Bay Facts

CHESAPEAKE 2000 The Renewed Agreement

• Chesapeake Bay is the largest estuary in the United States, with a 64,000 square mile watershed, or drainage basin, covering parts of six states (DE, MD, NY, PA, VA, WV) and the District of Columbia.

•The Bay has 11,860 miles of tidal shoreline.

•The Bay is fairly shallow. A person six feet tall could wade over 700,000 acres of the Bay without being completely submerged.

•The Bay is one of the country's most valuable natural resources. It provides millions of pounds of seafood, functions as a major hub for shipping and commerce, supplies a huge natural habitat for wildlife, and offers a wide variety of recreational opportunities for residents and visitors.

Chesapeake Bay Watershed

• More than 15 million people live in the Bay watershed and all of them live just a few minutes from one of the more than 100,000 streams and rivers that drain into the Bay.

• Our daily activities and the choices we make have impacts on those streams, rivers and the Bay.

What can you do to help restore the Bay?

Prevent pollution from entering the Bay and rivers by planting trees, especially near streams and shorelines.

Conserve electricity and water and reduce the amount of miles you drive.

Plant native vegetation that requires the use of less fertilizer, pesticides and water.

Limit fertilizer use and apply at appropriate times.

Use safer, nontoxic alternatives for cleaning and for controlling pests and weeds.

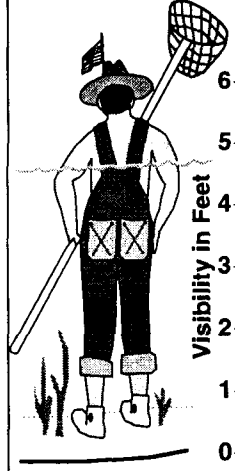
Properly dispose of household hazardous waste, antifreeze, oil and boat waste.

Prevent pollution by reducing, reusing and recycling.

Get involved in local organizations that monitor land management and participate in efforts to manage growth.

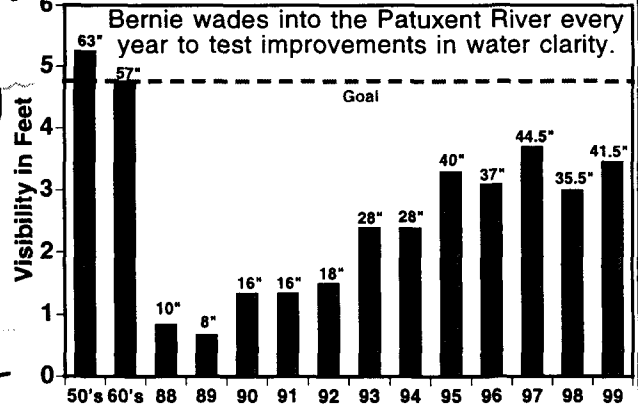
For more ideas, call 1-800-662-CRIS.

Get involved with citizen monitoring efforts that track progress in the Bay cleanup.



Bernie Fowler's Sneaker Index

Bernie wades into the Patuxent River every year to test improvements in water clarity.



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12/1/99

What's new with . . .

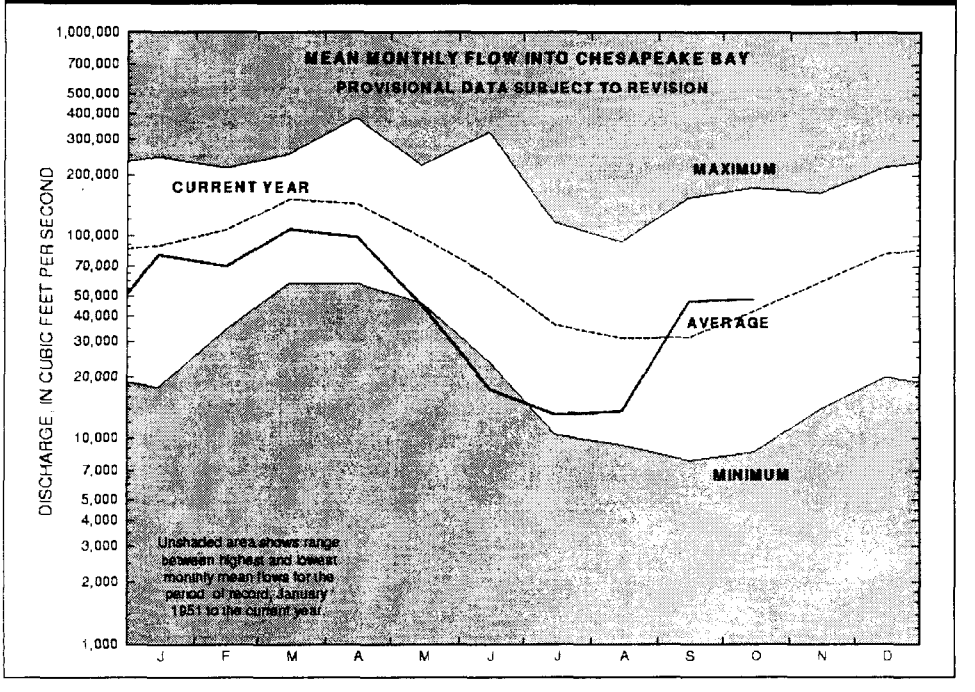
WATER QUALITY IN THE CHESAPEAKE BAY REGION IN 1999

Extremes in Freshwater Flow Affect Bay

Water quality in 1999 was strongly influenced by the weather and, as in most years, the weather was not "normal." The most extreme weather lasted from the beginning of the year through mid-August as a severe drought persisted across most of the watershed. As a result, the cumulative freshwater flow from Bay tributaries was below normal from January through August and set new record lows in May and June.

The year would not end dry, however. Remnants of hurricanes Dennis and Floyd hit the Bay watershed in late August and mid-September, respectively. In some areas, especially close to the Bay, up to 15 inches of rain fell. In the wake of Floyd, some rivers, such as the Choptank, neared record flows. These rains were very helpful in relieving the drought condition. Cumulative flows to the Bay for September and October actually exceeded historical averages during these months when flows typically reach the annual minimum.

Freshwater Flow to the Bay



Drought Affects Salinity Levels Baywide

The drought caused significant seasonal shifts in the salinity of the Chesapeake Bay. Lower freshwater flow permitted saltwater from the ocean to move farther north into the Bay and its tributaries. During June and July, the low-salinity region at the north end of the Bay was 49% smaller than average for that time of year. The mid-salinity region was 27% smaller, and the high-salinity region near the mouth of the Bay was 38% larger. In many rivers, such as the Rappahannock, salinity moved farther up river than in any year since regular monitoring began in 1985.

Salinity is important because it defines habitat for many plants and animals. Creatures that survive in low-salinity water, such as yellow perch and largemouth bass and Bay grasses such as wild celery and sago pondweed, had less habitat in the summer of 1999. On the other hand, creatures that need high-salinity water for survival, such as hard clams and blue crab larvae and the Bay grass species widgeon grass and eel grass, had more habitat area. The stinging sea nettle, which requires high salinity, was more abundant than usual in the early summer. Oysters suffered this year because of a greater incidence of the diseases Dermo and MSX, which are favored in high salinity years.

Low Oxygen Leads to Fish Kills

Probably the most severe and obvious effect of the drought was the prevalence of summer fish kills due to low oxygen conditions in creeks, often in combination with elevated water temperatures. The low flow conditions reduced flushing in the upper parts of many Bay tributaries, allowing algae to proliferate in these shallow, nutrient-enriched environments. Normal flows would have flushed nutrients and algae farther downstream where blooms may not have grown as large or caused the same degree of oxygen depletion. As these algal blooms

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decomposed, or consumed oxygen during the night, oxygen concentrations dropped to lethal levels in several areas, such as creeks draining to Baltimore Harbor, the Magothy River and the Pocomoke River. Higher salinity levels added to the problem by forcing many of the freshwater species, such as yellow perch, up into creeks in search of suitable, low-salinity habitats. Unfortunately, these small remaining low-salinity habitats were the same ones experiencing the loss of oxygen and higher water temperatures.

Low Flow May Help Bay Grasses in Some Areas

Preliminary data from the 1999 underwater Bay grasses survey indicate that Bay grass acreage in some areas expanded and that these improvements may have been related to the low freshwater flow this year. Low freshwater flow and precipitation meant that lesser amounts of sediments and nutrients were washed into the Bay from land-based and atmospheric sources in 1999. Both of these pollutants reduce the amount of light available for Bay grasses to grow. One of the areas that has shown an improvement is Tangier Sound, which has experienced marked declines in recent years.

Potomac River Improves

The give and take of biological communities living at the boundary between freshwater and saltwater was evident in the tidal Potomac River during the 1999 summer drought. As record low river flows in May, June, July and August allowed saltier water to move upriver, freshwater organisms were contained in smaller areas of the river while traditional saltwater species—such as blue crab, bluefish, speckled trout and flounder— roamed farther upriver. Drought conditions benefitted some species and hurt others.

Underwater Bay grass beds in parts of the Potomac expanded their coverage and increased their diversity in response to the abundant sunlight, low flows and good water clarity in parts of the river. These same conditions also spur the growth of large algal blooms. A brilliant bluegreen (cyanobacteria) algal bloom formed below the District of Columbia in July and August, and a red tide (dinoflagellate) bloom developed in the middle of the river. Watermen have reported heavy oyster mortality in the lower Potomac. The prolonged drought could have intensified Dermo disease and possibly caused an outbreak of MSX disease in this area. Dermo and MSX are caused by oyster parasites that are not harmful to humans. Offspring of the recovering American shad population, which needs low salinity nursery grounds, did poorly in the Potomac. In contrast, numbers of juvenile striped bass were above their long-term average, possibly because striped bass adults are now so abundant.

One of the major questions concerning the Potomac is how have nutrient reductions in the past three decades improved habitat in the tidal portion of this river? A group of scientists and managers believes they have—up to a point. In a recent report, a team of state, federal and university analysts evaluated long-term Potomac monitoring data and found signs of recovery.

- Summer dissolved oxygen near the District of Columbia no longer drops below five milligrams per liter, the minimum concentration considered acceptable for aquatic life. The exception to this is in slow-flowing, heavily enriched tributaries, such as the Anacostia River.
- Ammonium, a form of nitrogen abundant in poorly treated sewage, rarely reaches concentrations stressful to animals.
- Underwater Bay grasses are returning and continue to thrive despite less-than-ideal water clarity in the tidal portion.
- The diversity of plankton and bottom-dwelling species is increasing in the middle, or low-salinity, portion of the tidal river.
- Algal blooms do not have the intensity, or the magnitude, they once had in the 1970s and 1980s, chiefly because concentrations of phosphorus have been reduced 24% to 95% along the length of the tidal river since 1965.
- Recently implemented Biological Nutrient Removal (BNR) at the Blue Plains Sewage Treatment Plant is expected to reduce nitrogen, the other overabundant nutrient, and further improve water quality.

These signs of improvement are somewhat offset by the recognition that further efforts are needed to restore a vigorous Potomac ecosystem. Those efforts must include reducing sediments suspended in the water, reducing toxics and restoring and protecting healthy oyster, fish and wildlife populations. However, the Potomac is continuing on the path toward recovery.

What's new with . . .

LIVING RESOURCES
IN THE CHESAPEAKE BAY REGION IN 1999

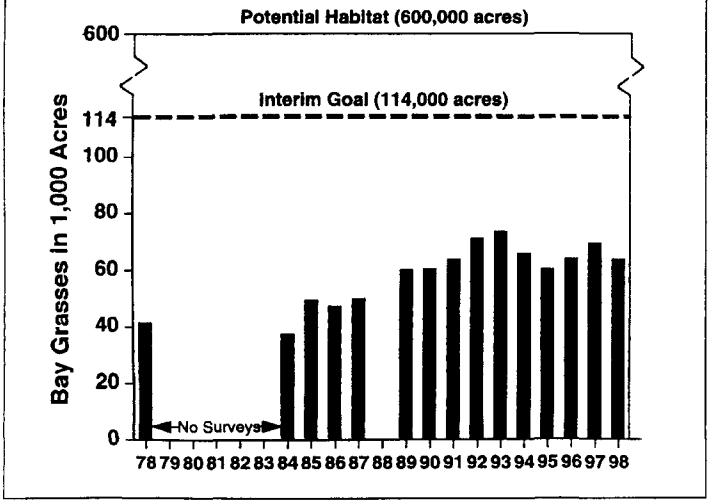
Since its inception in 1983, the Chesapeake Bay Program's highest priority has been the restoration of the Bay's living resources—its finfish, shellfish, Bay grasses and other aquatic life and wildlife. More than 3,000 species of plants and animals inhabit the Chesapeake ecosystem. Many are doing well or are recovering, while others require more attention and targeted restoration efforts.

Annual Grass Survey Shows Decline

Underwater Bay grasses, also called submerged aquatic vegetation or SAV, are ecologically vital to the Bay's other living resources. Bay grasses provide food and habitat for waterfowl and many forms of aquatic life, including fish, crabs and invertebrates. They also reduce erosion and wave action, absorb nutrient pollution and trap sediments. Bay grasses respond to water quality improvements that result from reduced sediment and nutrient pollution. Because they are not harvested like many of the Bay's other living resources, they are excellent indicators of the Bay's overall health and water quality.

Bay grass survey results indicate that total acreage decreased 8% in 1998, following two consecutive years of increases. The total 1998 acreage represents 56% of the Bay Program's interim restoration goal of 114,000 acres in 2005. The latest survey also showed that, for the sixth straight year, grasses declined in Tangier Sound—one of the most productive areas for crabs in the Bay. Scientists are looking at a variety of causes for the decline, including increased suspended sediment, decreased water clarity and excessive nutrients—all of which contribute to conditions that block the light grasses need in order to grow.

Bay Grass Acreage



Wetlands Goal Endorsed

In 1999, the Bay Program developed a wetlands restoration and protection goal for endorsement by the Chesapeake Executive Council and inclusion in the proposed *Chesapeake 2000* agreement. The goal recommits the Bay Program jurisdictions of Maryland, Virginia, Pennsylvania and the District of Columbia to achieving "no net loss" of wetlands. The goal also commits the Bay Program to restore wetlands in the region and to support local efforts to protect existing wetlands.

Key Fish Passage Projects Completed

In 1993, the Executive Council established a five-year goal to reopen 731 miles and a ten-year goal to reopen 1,357 miles of blocked Bay tributary waters to migratory fish, including American and hickory shad, blueback herring, alewives and eels. To date, almost 90 projects have been completed, including the construction of 35 fish ladders and lifts, 45 dam removals and breaches, and reconstructed culverts and dam notches. To date, more than 1,100 miles of Bay tributary waters have been reopened to migratory fish.

In 1999, the Bay Program completed two of its most impressive fish passage projects: one at Bosher's Dam in Virginia and the other at the York Haven Dam in Pennsylvania. The new fishway at Bosher's Dam opened 137 miles of the James River from Richmond to Lynchburg, in addition to more than 200 miles of tributaries. The new fish ladder at York Haven Dam was completed in late 1999 and will be operational by the spring run in 2000. York Haven was the final mainstem blockage to migratory fish on the Susquehanna, the Bay's largest river.

Upcoming high-priority projects include a fishway at the Abutment Dam in Petersburg, Virginia, which will open 121 miles of the Appomattox River, and the removal of the Embrey Dam on the Rappahannock River in Fredericksburg, Virginia, which will open 71 additional miles. This puts the Bay Program on track to exceed the 2003 goal.

Aquatic Reef Restoration & Construction Continue

The massive oyster reefs that used to filter the Bay's water and that once covered the bottom of the Bay so densely that they posed navigational hazards are gone. Many of the three-dimensional reefs that provided habitat for oysters and other aquatic species have been reduced to flat surfaces. Since 1993, however, the Bay Program has focused on creating and restoring aquatic reefs throughout the Bay. These efforts appear to be

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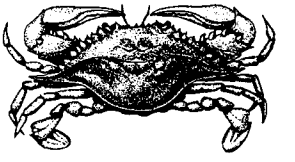
paying off. During the 1998–99 season, oyster harvests throughout the Bay improved: Virginia harvested 50,000 bushels—an increase over last year's harvest—and Maryland harvested 300,000 bushels.

- In 1999, Maryland completed two reef projects, both in the Severn River, which is known for long-term oyster survival. One project restored the ten-acre habitat of an existing natural reef, and the other created 13 small shell piles over a half-acre and flat shell planting over five acres.
- In 1999, Virginia built five reefs: two in Mobjack Bay, one in the York River and two in the Lafayette River. The Virginia reefs contained more groups of newly attached, juvenile oysters (called spat sets) than those on the adjacent flat bottom. In the Piankatank River in Virginia, breeding oysters, or broodstock, that watermen had harvested were relocated, resulting in an improved spat set over approximately 5,000 acres and yielding 50,000 to 100,000 seed oysters. Recent ecological studies indicate that crabs, finfish and clams also are benefitting from the three-dimensional reef habitat.

However, even with the good news of higher spat sets, the drought of 1999 took its toll on the oyster, producing high salinities in Maryland and Virginia waters that increased oyster mortality from MSX and Dermo.

Investment in Habitat Restoration Pays Off

Since 1993, the Bay Program has funded important habitat restoration projects that have resulted in a total of 278 acres of wetland creation and restoration, and approximately 11 miles of stream and riparian forest buffer restoration. In 1998 and 1999, the Bay Program funded proposals that are expected to result in an additional 549 acres of wetland restoration, 18 miles of stream restoration and more than 20 miles of riparian forest buffers. Many of these projects were targeted to specific geographic areas to achieve maximum results for living resources.



OF NOTE:

➤ **More Shad:** In an ongoing effort to rebuild populations of American shad in the rivers of the Bay region, Maryland, Virginia, Pennsylvania, the U.S. Fish and Wildlife Service and two tribal governments (the Mattaponi and Pamunkey) are involved in hatchery and restocking efforts. In 1998 and 1999, more than 65 million American shad were released in Virginia, Maryland and Pennsylvania rivers. Maryland also cultured and stocked more than 30 million hickory shad larvae in several tributaries.

➤ **New Grasses Report:** *The Submerged Aquatic Vegetation Habitat Requirements and Restoration Targets: A Second Technical Synthesis* is available for viewing and downloading from the Bay Program website at www.chesapeakebay.net/temporary/savts2/. This document contains the latest research on Bay grasses and includes a comprehensive list of the species of Bay grasses in the Chesapeake and supporting scientific literature.

hot topics

➤ **Tulloch Ditching Leads to Massive Wetlands Loss:** In 1993, the practice of draining wetlands by digging ditches and carefully removing the excavated material came under the scope of the Army Corps of Engineers wetlands regulations, under what is now known as the *Tulloch Rule*. A federal court overturned the rule, so the practice is again unregulated. Among the Bay Program jurisdictions, Virginia is most vulnerable to losing wetlands to Tulloch ditching, since it does not have a nontidal wetlands regulatory program. As of October 1999, almost 2,500 acres of Virginia wetlands had been drained by Tulloch ditching and 6,500 more acres were at risk.

➤ **Bay's Blue Crabs Fully Exploited:** The Chesapeake Bay Stock Assessment Committee adopted the *1999 Chesapeake Bay Blue Crab Advisory Report*, which concluded that the Baywide stock of blue crabs is fully exploited and that the spawning stock biomass is below the long-term average (1968–1998). According to the report, an increasingly large portion of the spawning stock has been harvested in recent years (1993–1998), and there has been no evident trend in recruitment during this same period. For a copy of the report go to www.noaa.chesapeakebay.net or call 1-800-YOUR Bay (ext. 676).

What's new with . . .

TOXICS REDUCTION
IN THE CHESAPEAKE BAY REGION IN 1999

The Chesapeake Bay Program's toxics goal is ". . . a Chesapeake Bay free of toxics by reducing or eliminating the input of chemical contaminants from all controllable sources to levels that result in no toxic or bioaccumulative impact on the living resources that inhabit the Bay or on human health." The Bay Program continues to take steps toward controlling and reducing inputs of chemical contaminants to the system and toward better defining toxic conditions in the Bay.

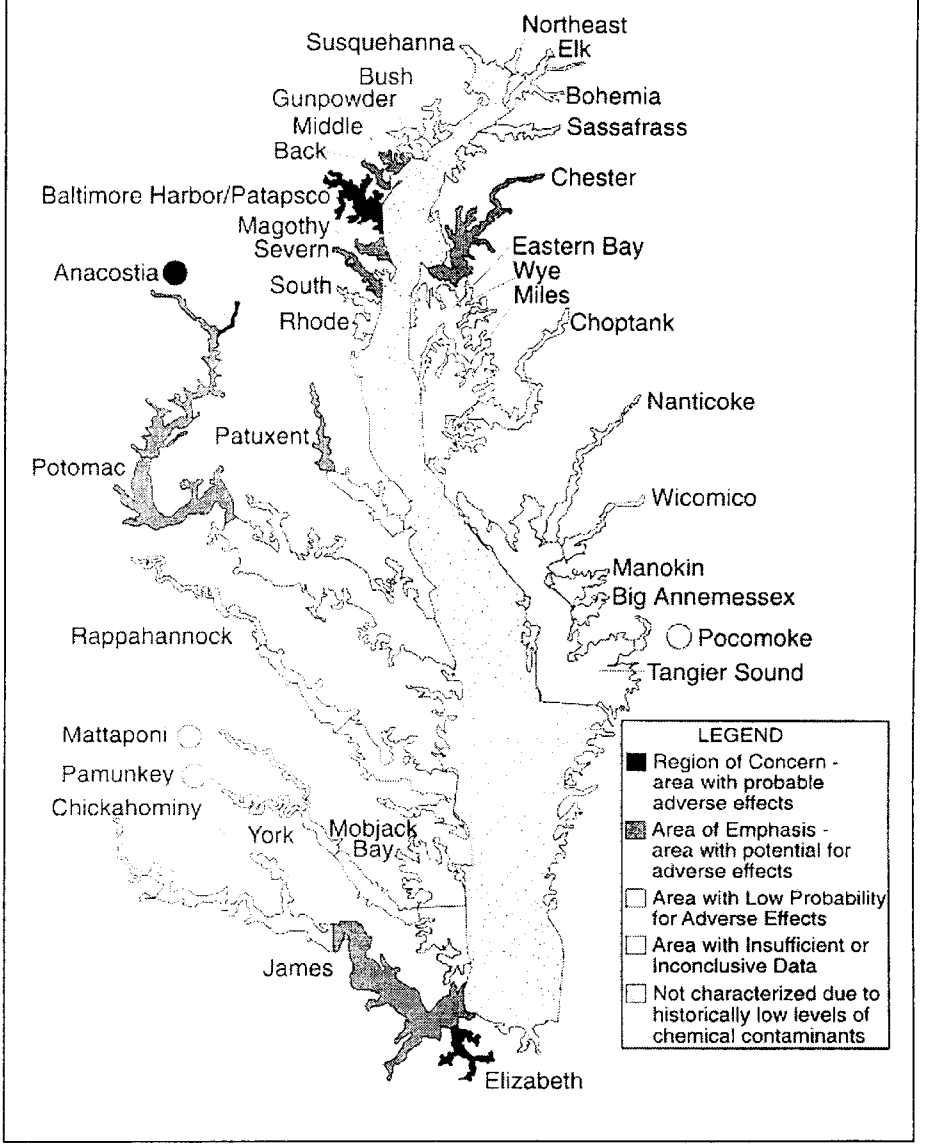
What's The Problem?

The nature, extent and severity of toxic impacts vary widely throughout the Chesapeake system. A few areas called hotspots or Regions of Concern have serious localized problems, and some other regions, previously thought to be free of toxics, have shown some toxic effects. Overall, however, there is no evidence of severe, system wide toxics problems.

Toxics Characterization Report Released

In 1999, the Bay Program released *Targeting Toxics: A Characterization Report—A Tool for Directing Management and Monitoring Actions in the Chesapeake Bay's Tidal Rivers*. This toxics characterization is the most comprehensive assessment to date of the status of chemical contaminant effects on living resources—its fish, shellfish and other creatures—in the tidal rivers of the Bay. The information in the report will help Bay Program decision makers target specific tidal rivers for management and monitoring. Further updates to the characterization will occur as data are collected. For a copy of the report, go to www.chesapeakebay.net or call 1-800-YOUR BAY.

Status of Chemcial Contaminant Effects in Living Resources in the Bay's Tidal Rivers



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Top Findings:

- *No new Regions of Concern.* Three areas were designated in 1993 and still remain. They are the Elizabeth River in Virginia, the Baltimore Harbor/Patapsco River in Maryland, and the Anacostia River in the District of Columbia. These are areas where there are proven toxics effects in living resources.
- *8 Areas with Low Probability for Adverse Effects.* These are areas where living resources are unlikely to be affected by chemical contamination.
- *10 Areas of Emphasis.* These are areas where living resources may be affected by chemical contamination.
- *20 Areas with Insufficient or Inconclusive Data.* Data were inconclusive or insufficient to characterize a region into any of the above categories. These regions will be given high priority for future characterizations and will challenge researchers and managers to determine their status.

The characterization effort was designed to identify areas where chemical contaminant effects to the Bay's living resources occur or have the potential to occur. Human health impacts from contaminated air, soil or water were not addressed. Because potential human health issues are important, state agencies have already looked at human health issues in the tidal rivers of the Bay. Where human health concerns already have been identified, appropriate fish consumption advisories or other warnings have been issued. The results of the report should not alter the current recreational or commercial uses of any of the rivers.

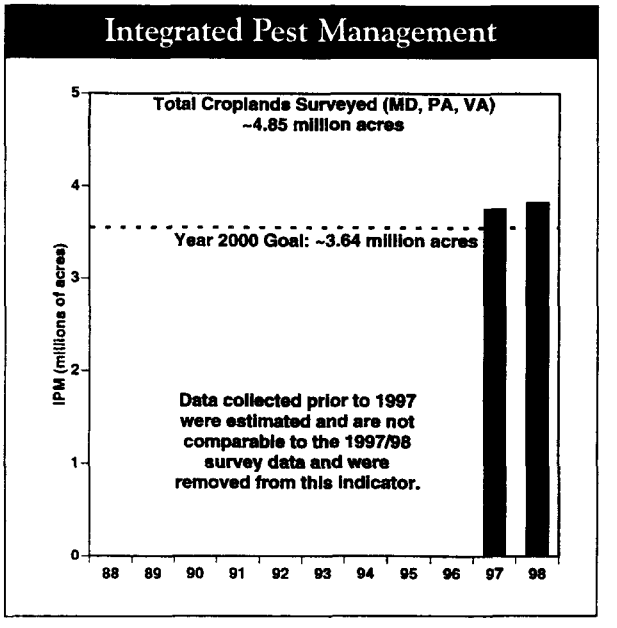
Loading and Release Inventory Released

Also released this year, the 1999 Chesapeake Bay Basinwide Toxics Loading and Release Inventory (TLRI) reports the chemical contaminant loadings to the Bay and its major tributaries. This inventory represents the most comprehensive accounting of loadings from point sources from urban runoff, atmospheric deposition, shipping and boating, acid mine drainage and upstream sources. The loadings inventory, coupled with the toxics characterization, will enable managers, scientists and stakeholders to target toxics reduction and prevention activities toward specific sources and chemicals in impacted areas of the Bay. Major findings from the TLRI include:

- Upstream point and nonpoint sources provide substantial loads of metals to the Bay and tidal rivers.
- Urban runoff below the fall line is a substantial source of select organic contaminants (PAHs) to the Bay and tidal rivers.

Of Note:

➤ **Bay Program Meets IPM Goal:** Integrated Pest Management, or IPM, is a pollution prevention technique that can help the agriculture industry and other pesticide users to reduce their reliance on potentially harmful chemicals. According to a recent agronomic crop survey, the current Bay Program goal that calls for 75% of agricultural land within the basin to be under IPM by 2000 has been met. The survey reported IPM was practiced on nearly 3.9 million acres or 79% of the surveyed acreage. The goal also calls for IPM on 75% of recreational and public lands, 50% of commercial land, and 25% of residential land. Based on IPM requirements on recreational and public lands, this goal also has been met. Bay Program partners now are concentrating on meeting the IPM goal on residential and commercial lands.



➤ **Reevaluation and Revision Under Way:** The Bay Program is reevaluating and revising the 1994 Toxics Strategy. The process, called the Toxics Reevaluation and Revision, will lead to the drafting of a new basinwide toxics strategy for the Chesapeake Executive Council's endorsement in 2000. So far, input from more than 250 stakeholders from all levels of government; environmental and public interest groups; research institutions; and industries have been included in the Reevaluation and Revision.

For more information on toxics reduction, go to
www.chesapeakebay.net/toxics1.htm
on the Bay Program website.

Chesapeake Bay Program

CHESAPEAKE 2000
The Renewed Agreement

What's new with . . .

AIR QUALITY
IN THE CHESAPEAKE BAY REGION IN 1999

When the Federal *Clean Air Act* and *Clean Water Act* became laws in the early 1970s, air pollution and water pollution were considered two separate problems. In recent years, research has provided us with a better understanding of the link between these environmental threats. There is strong evidence that cleaning up the air will also lead to cleaner water. Since 1993, the Chesapeake Bay Program has evaluated the effectiveness of air pollution controls as a part of the overall effort to protect the Bay from its number one pollution problem: an overabundance of the nutrients nitrogen and phosphorus. The following is an overview of the latest scientific findings related to nitrogen emissions and deposition in the Chesapeake Bay region.

New Info on Airshed Emerges

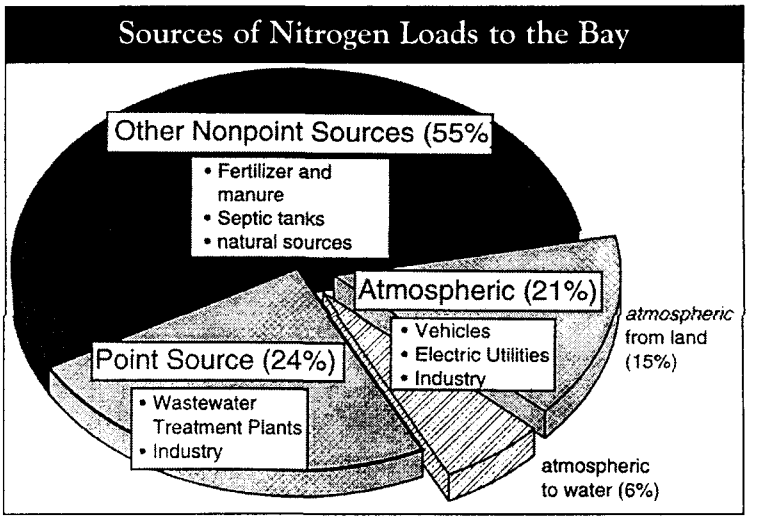
The Bay Program is regularly updating air-related data and information to help managers better assess and target pollution control measures. To assist in this effort in 1999, experts reevaluated the nitrogen oxide, or NOx, airshed for the Chesapeake Bay region. The reevaluation concluded that the airshed is 418,000 square miles, or roughly 15% larger than previously estimated. Gauging the size of the airshed is important for Bay managers because air pollution has local and long-range impacts. Depending on the source and chemical make-up, air pollution can be carried by the wind for hundreds of miles before depositing on the earth. Almost everything that burns emits NOx. Some of the primary sources include industries, electric utilities, and automobiles. These sources, and others, contribute to the nitrogen-rich air pollution that affects the Bay and its rivers.

Interest in Ammonia Emissions on the Rise

Ammonia is another form of nitrogen emitted into the air by natural and man-made sources. The primary sources of ammonia emissions include agricultural activities and urban influences. More than 90% of the ammonia emissions in the Bay region are generated by agricultural activities, including confined and unconfined animal operations and fertilizers. Urban influences include wastewater treatment facilities and fossil fuel combustion from engines. Experts agree that the impact of ammonia emissions in the Bay region are an important emerging issue that will receive further study in 2000. Computer modeling experts plan to have an estimated ammonia airshed for the Chesapeake Bay region and the results from several ammonia research studies ready by the fall. Gauging the size of this airshed is important for Bay managers because ammonia emissions—like NOx emissions—also have local and long-range impacts.

How Much Nutrient Pollution Comes From Air?

When scientists and other experts measure the amount of atmospheric nitrogen that reaches the Bay, they evaluate two aspects: deposition and loading. Deposition is the process by which air pollutants deposit to the Earth's surface. Loading is the amount of pollution that is delivered directly to the Bay and tributaries. When nitrogen-rich air pollution lands directly on the water, the deposition amount equals the loading amount. But, when air pollution is deposited on land, the nitrogen can be used up as it is carried by surface runoff or through groundwater flow before it reaches the waters of the Bay. For example, in a forested ecosystem, experts believe that roughly 90% of the airborne nitrogen deposited is absorbed by the vegetation. This means that for every ten pounds of nitrogen deposited, one pound will become a loading to the Bay. The difference between deposition and loading makes characterizing the contribution of atmospheric nitrogen pollution a challenge. However, experts agree that the amount of nitrogen pollution from the air is significant. In fact, about one quarter of the total nitrogen delivered to the Bay comes from the air. Up-to-date information on loading and deposition is key for Bay Program managers because, as other nutrient source controls reach their limit of technology, controlling air-deposited nitrogen will become even more important to restore and protect the Bay.



Source: Chesapeake Bay Program Phase IV Watershed Model, 1985 Reference Scenario.

For more information on air quaility, go to
www.chesapeakebay.net/air_pollution.htm
on the Bay Program website.

Chesapeake Bay Program

What's new with . . .

FORESTS
IN THE CHESAPEAKE BAY REGION IN 1999

Forests: A Key to the Bay's Health

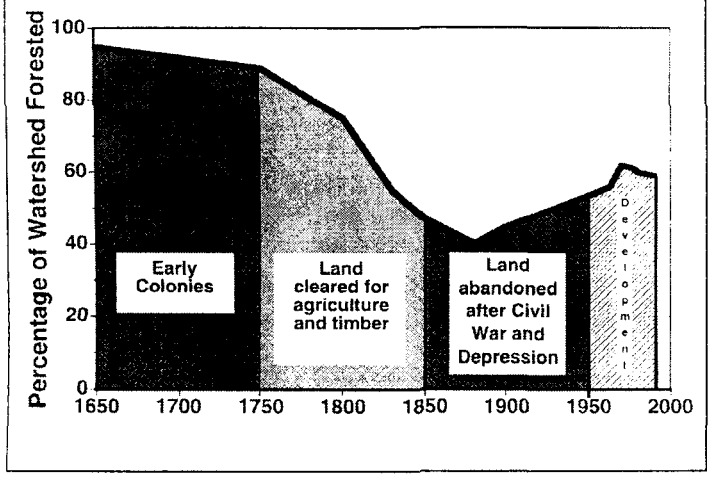
The health of streams and rivers and the resilience of the Chesapeake Bay watershed is linked to trees. Forests perform important environmental functions that we sometimes take for granted. Forests protect our streams and soil; clean our air and water; provide opportunities for outdoor recreation; supply habitat and food important to the survival of many Bay species; and supply raw materials for the fuel, lumber and paper that we use every day. Scientific findings clearly show that, as living filters, forests are the most beneficial land use for clean water.

Losses Offset Gains

Forests make up nearly 60% of the land in the Bay watershed or approximately 24 million acres. The U.S. Forest Service estimates that more than 100 acres of forest are lost every day, with the most rapid declines in areas closest to the Bay. Reforestation has generated some gains in the headwater regions of the watershed, though other areas have seen more than 85% of forest cover converted to agriculture or urban development.

A major cause of forest loss today is the way we develop land. Forests are cleared to make room for new homes, shopping malls, roads and other types of development. We now develop land at a rate much faster than our population is growing, sprawling across the landscape and requiring more forests and farms to be cleared. By 2020, new homes could consume more than 600,000 acres of forests and farmland. Planning to retain forests as we grow will be one of the big challenges of the next millennium.

Forest Acreage Declining



Defining Impacts of Forest Fragmentation

When large tracts of forest are carved up into smaller and more isolated patches, *forest fragmentation* is the result. Fragmentation is most serious when forests are converted to urban development or agriculture because those types of land use affect water quality and quantity, fish and wildlife populations, and the biological health and diversity of the forest itself.

Fragmentation can disrupt animal travel corridors, increase flooding, increase the invasion of non-native vegetation, expose forest interiors and create conflicts between people and wildlife. Experts have found that even small habitat losses occurring over time have a combined effect and may prove as dramatic as one large loss. The Chesapeake Bay Program highlighted forest fragmentation as an important issue in 1999. The following are highlights from some of the programs and projects recently completed:

- In 1999, the Bay Program's Forestry Workgroup, the U.S. Forest Service and the Society of American Foresters conducted a professional roundtable series. Its primary objective was to hear from scientists and experts in the field about how forest fragmentation and land ownership parcelization may be affecting our forests ecologically and economically. The results of the series are available by calling 1-800-YOUR BAY (ext. 706).
- The Bay Program Geographic Information System team completed a spatial assessment of forest fragmentation in the Chesapeake watershed. The analysis quantifies fragmentation in the Bay states on a watershed basis and helps to define and characterize the extent and location of fragmentation in the entire basin. For more information, call 1-800-YOUR BAY (ext. 706).
- In November 1999, the Bay Program and the U.S. Forest Service sponsored a regional conference designed to share the latest science and information on the ecological, economic, and policy and law impacts and issues related to fragmentation. The conference, *Balancing the Landscape: Retaining Forests in the Chesapeake Bay Watershed,* helped initiate the development of a strategy to address the issues. For more information, call 1-800-YOUR BAY (ext. 706).

Buffer Miles Adding Up

As more people in the Bay region are discovering the importance of trees and forests, citizens have made significant strides in focusing on forest issues in their efforts to protect and restore the Bay system. Much of this effort was sparked by the 1996

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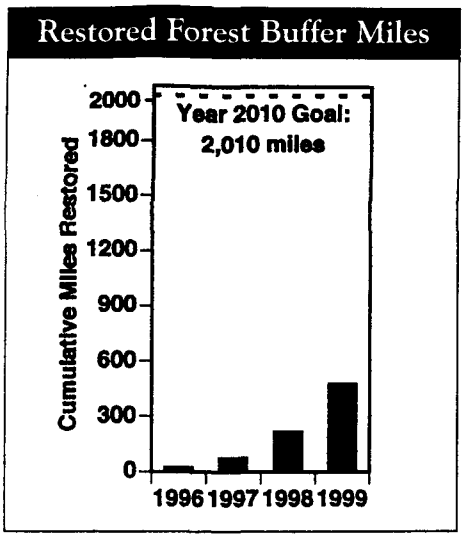


Bay Program goal that called for the restoration of 2,010 miles of streamside, or riparian, forest buffers by the year 2010. This initiative, known as the *Chesapeake Bay Riparian Forest Buffer Initiative*, is in full swing. From January through September 1999, nearly 203 miles of forest buffers had been planted. That brought the cumulative total to 476 miles since 1996. To highlight the effort, each jurisdiction increased awareness and outreach, expanded incentives to landowners and worked to permanently protect riparian forests.

OF NOTE:

➤ **New Report:** The Bay Program released a new forest buffer report in 1999: *Riparian Forest Buffers Linking Land and Water*. This publication explains the crafting of the initiative, including policy goals recommendations. It's available on the Bay Program website at www.chesapeakebay.net or by calling 1-800-YOUR BAY.

➤ The Bay Program partners distributed more than 8,000 copies of the *Chesapeake Bay Forests Matter* poster in 1999. For a free copy, call 1-800-YOUR BAY.

Partner Highlights from the Forest Buffer Initiative:

MARYLAND

- Completed a pilot project to monitor forest buffer survival and success
- Conducted field work for a water quality model being developed by the University of Maryland
- Conducted a study examining the effectiveness of incentive and regulatory programs
- Completed outreach programs and marketing materials to expand participation in the Conservation Reserve Enhancement Program, a national effort that offers incentives to protect and restore riparian and wetland areas

PENNSYLVANIA

- Co-sponsored two workshops for riparian forest restoration and trained 110 people
- Provided $64,000 to the Stewardship Incentive Program for cost-share of riparian forest buffer restoration

VIRGINIA

- Applied to the U.S. Forest Service Legacy Program to secure conservation easements and purchases of unique and valuable forest habitat
- Approved, through the Virginia legislature, $1.75 million for the Land Conservation Foundation

Partnership Project Kicks Off

The U.S. Forest Service and the private, nonprofit organization Ducks Unlimited teamed up in 1999 with forestry agencies in Maryland and Virginia to focus on the restoration of riparian areas and wetlands in several tributaries to the Potomac River. The project, one of 12 chosen from a nationwide pool of 48, will focus on Maryland's portion of the Monocacy and Antietam River watersheds and on the north and south forks of Virginia's Shenendoah River. The project will result in the restoration of more than 150 acres of wetlands and more than 200 miles of riparian forest buffers.

What's new with . . .

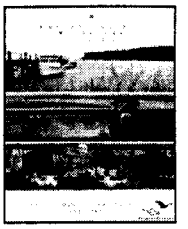
LAND, GROWTH AND STEWARDSHIP
IN THE CHESAPEAKE BAY REGION IN 1999

The Chesapeake Bay Program's Land, Growth and Stewardship effort works to identify Baywide land use and growth issues and to forge alliances with other organizations working to preserve the health of the Bay system, including its natural landscapes. The Bay Program effort keys on three areas: sound land management decisions, the impacts of existing growth, and public and private actions to reduce the impact of growth on the Bay system. In 1996, the Bay Program adopted the *Priorities for Action for Land, Growth and Stewardship in the Chesapeake Bay Region* as a way to address population growth and land development. The goal is to encourage sustainable development patterns that integrate economic health, resource protection and community participation. The *Priorities for Action* represent the first step in meeting this challenge in a manner that is sensitive to local issues and autonomy and that emphasizes the desire to help communities in the Bay region help themselves. In 1999, the Bay Program continued to develop its crosscutting program to promote sustainable development in the Bay region. The following highlights touch on some of those efforts.

Workshops Help Local Communities Grow Responsibly

As part of the effort to encourage livable communities, the Bay Program continues to sponsor workshops for local officials that highlight effective ways to reduce the impacts of growth. One series of workshops—the Better Site Design and Watershed Planning Workshops—focuses on teaching municipal officials how to prepare small watershed plans and how to implement innovative land development principles, such as green parking lots, stream buffers, cluster development, narrow streets and pollution prevention programs. The workshops also help local officials identify ways to change existing codes and ordinances to reduce impervious cover, conserve natural areas and reduce storm water runoff. Participants get hands-on experience using real-world site plans. For example, officials from Frederick County, Maryland, participated in one of the first workshops. They are working to implement innovative practices by reviewing their local codes and ordinances to allow for better development patterns. The Bay Program is expanding this program to include a "train the trainers" program designed to instruct local planners to train others to review local codes and ordinances. A similar training program is under way in Pennsylvania through the Growing Greener initiative. Growing Greener focuses on how communities can conserve open space and natural resources while accommodating some growth. For more information on the Bay Program workshops or on Growing Greener, call 1-800-YOUR-BAY, ext 847.

Bay Program Issues New Report on Growth and Development



As part of its effort to inform and educate the public and specific stakeholder groups on the role they can play in improving the health of the Bay and its rivers, the Bay Program continued to develop a broad range of Environmental Indicators throughout 1999. Environmental Indicators use the most recent data and information to illustrate the status and trends for a variety of issues from water quality to human impacts on the Bay system. In June 1999, the Bay Program issued a new publication featuring Environmental Indicators and interpretive text related to population and growth issues in the Bay region. For a free copy of *Chesapeake Bay Watershed: Its Land and People*, go to the Bay Program website at www.chesapeakebay.net and click on publications or call 1-800-YOUR BAY.

Stay Tuned

- A handbook for local communities illustrating techniques for designing environmentally friendly residential, commercial and industrial sites will be available through the Bay Program in 2000. The techniques focus on reducing the impact of development on existing natural features and comparing conventional site design to environmentally friendly site design.
- The updated *Chesapeake Bay Public Access Guide* will be available in 2000. This popular map highlights specific locations in the Bay region where the public can access waters of the Bay and its tributaries from boat ramps, parks, fishing piers, hiking trails and recreational areas.
- The *Chesapeake Bay Area Public Access Technical Assistance Report* is being revised and reprinted. This report, designed for local governments, provides technical guidance on the acquisition and development of public access sites.
- A literature synthesis on the environmental and economic effects and costs of septic systems is being conducted by the Bay Program. The purpose of the study is to identify the hidden costs of septic systems and the relationship between growth patterns and septic systems.
- In addition to its other web-based activities, the Bay Program sponsored the development of a web-based database that offers references on alternative development practices. It includes nutrient removal information, economic and cost considerations, model ordinances or case studies, and other social and environmental considerations. The site provides summaries of each reference, plus information on how to obtain copies. The database will be available in early 2000.

For more information on Land, Growth and Stewardship, go to
www.chesapeakebay.net/landscape.htm
on the Bay Program website.

Chesapeake Bay Program

What's new with the . . .

COMMUNITY WATERSHED INITIATIVE IN THE CHESAPEAKE BAY REGION IN 1999

The Chesapeake Bay Program officially recognized the importance of community watershed organizations to the restoration of the Bay and its living resources in 1997 when the Chesapeake Executive Council signed the Community Watershed Initiative. The Bay Program fleshed out the initiative in 1998 with adoption of the Community Watershed Initiative Strategy.

New Community Watershed Task Force Established

In 1999, the Bay Program further committed itself to partnering with and supporting community-based efforts to protect and restore the Bay system by forming the Community Watershed Task Force. The role of the task force is to implement the strategy. Currently, the task force includes representatives from eight regional and local watershed groups, as well as federal, state and local government representatives from throughout the Bay watershed.

The task force identified several initial priorities, including:

- Assessing the needs of community groups and the needs and interests of other Bay Program partners in working with community groups;
- Packaging existing Bay Program tools and resources for communities;
- Conducting outreach to communities about Bay Program goals and how they translate to local rivers and streams, as well as about the resources available to protect rivers and streams; and
- Promoting opportunities for collaboration and coordination among the Bay Program's subcommittees and partners as they work in communities.

Survey Names Top Concerns

In July, the Bay Program's Community Watershed Task Force issued a survey to more than 290 organizations in the Bay watershed. The purpose of the survey was to assess the needs and interests of the growing number of community watershed groups and to identify their top concerns. The survey attracted 84 responses or a 29% response rate. Overall, the survey showed that these groups are active in restoration, pollution prevention and planning activities. The top two issues identified as concerns were protecting drinking water quality (81%) and conserving/restoring rivers and streams (74%). Respondents also said that while they are very concerned about the quality of their local rivers and streams, they are less concerned with the overall health of the Bay (46%).

Top 5 Issues Identified by Organizations

Issue	% of Orgs
1. Protecting drinking water quality	81%
2. Conserving/restoring rivers and streams	74%
3. Preventing natural disasters (e.g., flood control)	65%
4. Protecting/restoring wildlife and habitat	63%
5. Maintaining/restoring commercial and/or recreational fisheries	60%

Funding is the type of assistance most sought after by these organizations, according to the survey. However, the groups also identified needs for:

- Technical assistance and guidance, especially with pollution prevention and restoration projects;
- Assistance with the production of outreach materials;
- Training for outreach and organizational development; and
- Equipment and materials, especially plants, trees and seeds for riparian buffers and stream bank restoration projects.

Bay Program Responds with Clearinghouse

The survey results will help to shape the work of the task force by identifying gaps and generating interest in the goals and commitments of the Bay Program. As a result of the survey, the Bay Program is creating a clearinghouse to facilitate partnerships and mentoring among watershed groups and among Bay Program partners and watershed groups. The clearinghouse will be designed to connect those local watershed groups with specific needs and interest areas to those groups with expertise and resources in those areas. This web-based clearinghouse will be available in 2000. For more information, contact Amanda Bassow, (410) 267-5723.

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Small Watershed Grants Program Under Way

The Chesapeake Bay Small Watershed Grants Program completed its first full year in 1999. The program provides small grants to organizations working at the local level to protect and improve watersheds. The purpose of the grants program, which is funded through the U.S. Environmental Protection Agency, is to demonstrate effective techniques and partnership building to achieve Chesapeake Bay objectives at the small watershed scale. In 1998, the program awarded $650,000 in grants to 37 community groups and local governments throughout the Bay watershed. Projects ranged from creating a greenways plan for the Tunkhannock Creek watershed in northeastern Pennsylvania, to developing tools to educate landowners about soil erosion in Annapolis, Maryland, to demonstrating the benefits of a constructed wetland in a low income community in Norfolk, Virginia. For more information on Small Watershed Grants, call Karen Hester Abrams of the National Fish and Wildlife Foundation, (202) 857-0166.

Website Highlights Communities

The new Bay Program website, www.chesapeakebay.net, features information on the entire Bay watershed, as well as the local watersheds that help to support the region. It also has several resources that will assist community-based organizations. Those resources include:

- Bay Atlas: Allows users to customize maps of their watershed using various data available through the Bay Program, including land cover, submerged aquatic vegetation, and some water quality data.
- My Watershed: Uses Bay Program data to generate profiles of watersheds at a range of scales, from large to small. The profiles include a map of the watershed and graphs depicting population trends, land cover and nutrient and sediment pollution information. The profiles also help users find Bay Program-funded restoration projects in their watershed; the local public access sites to the Bay, rivers and streams; local businesses that are pollution prevention partners in the *Businesses for the Bay* program; and local watershed groups that are active in the area.
- Community Resources: An annotated listing of resources available through the Bay Program and its partners, including specific contact information.

What's new with the . . .

CITIZENS ADVISORY COMMITTEE IN THE CHESAPEAKE BAY REGION IN 1999

The 25-member Citizens Advisory Committee, formally established in 1985, provides advice and guidance on Chesapeake Bay restoration and protection activities to the policy-making body of the Chesapeake Bay Program—the Chesapeake Executive Council. The committee's other responsibilities include assisting Bay Program partners in implementing the *1987 Chesapeake Bay Agreement*, its amendments and the directives signed by the Executive Council. The committee members also work with their constituencies to increase understanding and implementation of the agreement and the variety of programs in place to restore and protect the Bay and its rivers. The members come from a broad cross section of the public and include environmentalists, farmers, fishermen, representatives of business and industry, developers, academia, scientists and representatives of local and state government.

OF NOTE:

➤ Citizens Advisory Committee members participated on the Bay Program's Nutrient Trading Negotiations Team; the Living Resources Subcommittee; the Toxics Subcommittee; the Budget Steering Committee; the Communications and Education Subcommittee; the Education Workgroup; and the Nutrient Subcommittee.

➤ The committee rounded out its membership in 1999 with the addition of the following members: Gary Baise of Virginia, a partner in the law firm of Baise, Miller & Freer; Jim Elliott of the District of Columbia, an attorney with Hunton and Williams; Kurt Erickson of Virginia, the Executive Director of the Washington Regional Alcohol Program and immediate past president of the Virginia Conservation Network; Victor Funk, a retired chief of Pennsylvania's Department of Environmental Protection; Larry Herman, a regulatory policy specialist currently on leave of absence from Virginia's Office of the Attorney General on assignment with the Consumer Product Safety Commission; Ted Jackson of Virginia, who supervises six wastewater treatment plants in Loudon County; and John (Neil) Wilkie of the District of Columbia, a retired vice chairman of Morgan Guaranty Bank International.

Chesapeake 2000 is Top Priority

During the past year, the Citizens Advisory Committee placed a high priority on the development of the renewed *Chesapeake Bay Agreement* through active participation on the renewal committees. The new agreement—*Chesapeake 2000*—is scheduled to be put in place by the Executive Council in mid-2000. The agreement will guide the Bay Program over the next ten to 15 years. As a participant in the year-long process, the committee conveyed the priorities that the public felt should be included in the agreement. To underscore its point, the committee released its statement of priorities for the new agreement in May. Those priorities, delivered to key decision makers throughout the region, included:

- Achieving and maintaining the 40% nutrient cap agreed to in the *1992 Amendments* to the *Chesapeake Bay Agreement;*
- Addressing in a meaningful manner growth management and the challenges posed by increasing population trends and transportation needs in the Bay watershed; and
- Effectively engaging the public in Bay restoration efforts.

In order to enhance its knowledge of the public's priorities for the new agreement, the committee also participated in the Alliance for the Chesapeake Bay's Renewal Project. As the Renewal Project and the agreement drafting process continue through 2000, the committee will make the development and implementation of the *Chesapeake 2000* agreement a high priority.

Final Land Use Forum Held

In 1999, the Citizens Advisory Committee conducted the third in its series of successful land use forums held throughout the Bay region. The forums were designed to bring together professionals from the development and building communities to address issues, obstacles and problems that they face in moving toward more Bay-friendly development practices. The results of all three forums provide specific starting points for the committee and the Bay Program partners as they begin to work with local and state officials to remove obstacles to Bay-friendly development practices.

For more information on the Citizens Advisory Committee, go to
www.chesapeakebay.net/committee.htm
on the Bay Program website.

Chesapeake Bay Program

What's new with . . .

BUSINESS FOR THE BAY
IN THE CHESAPEAKE BAY REGION IN 1999

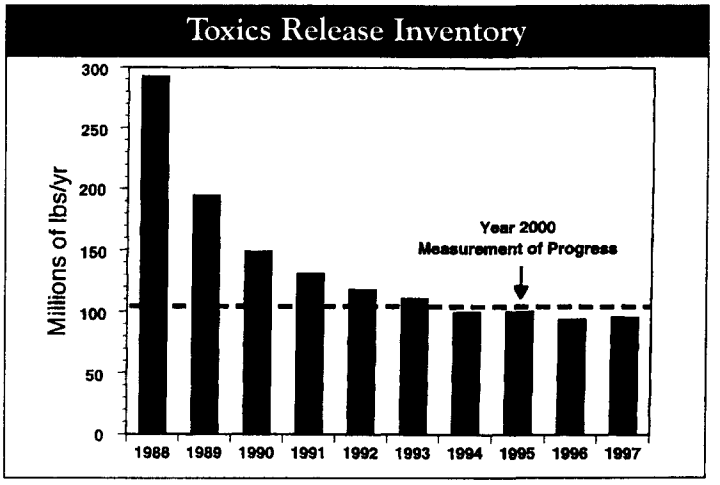
Businesses for the Bay is the Chesapeake Bay Program's voluntary pollution prevention program for businesses, government facilities and other organizations within the Bay watershed. Since the program began in 1996, more than 250 facilities have committed to preventing pollution by joining *Businesses for the Bay*. In addition, 90 individuals from those participating facilities have volunteered to serve as Business-to-Business Mentors, providing their pollution prevention expertise to others in need of technical assistance. *Businesses for the Bay* also has a group of Partners, which are organizations that help to promote *Businesses for the Bay* and pollution prevention to their members.

Making Great Progress

Each year, *Businesses for the Bay* participants report on the progress they make in preventing pollution. Participants reporting this year said that they reduced or recycled almost 877 million pounds of wastes in 1998. These wastes ranged from specific chemicals to air emissions to solid waste. Several facilities also volunteered to report their cost savings. As a result of their efforts, more than $3.9 million was saved. These results are up significantly from 1997, when 222 million pounds were reduced or recycled and $1.4 million was saved. In addition, many facilities reported that they trained employees on pollution prevention techniques. In 1998, more than 4,600 employees in the Bay watershed were trained.

Businesses Report Chemical Releases

Another indicator of the progress businesses are making in reducing their releases of chemicals to the Bay watershed is contained in the U.S. Environmental Protection Agency's national Toxic Release Inventory or TRI. According to the most recent inventory, facilities that report to the TRI cut their chemical releases by 67% between 1988 and 1997. This remains steady compared to the 1996 information. However, these reductions still exceed the Bay Program's goal for industry, which is a 65% reduction by 2000.



And the Winners Are . . .

Congratulations to the recipients of the *Businesses for the Bay* 1999 Excellence Awards and to the 1999 Mentor of the Year:

- Small Business, Outstanding Achievement—Parker's Exxon, District of Columbia
- Medium Business, Outstanding Achievement—Uniroyal Goodrich, Scottsville, Virginia
- Medium Business, Significant Achievement—DAP, Inc., Baltimore, Maryland
- Large Business, Outstanding Achievement —Siemens Automotive Corporation, Newport News, Virginia
- Large Business, Significant Achievement—Procter & Gamble Cosmetics, Hunt Valley, Maryland
- Mentor of the Year—Denise Jeffries, City of Newport News, Newport News, Virginia

OF NOTE:

➤ Articles about *Businesses for the Bay* and its participants were featured in national publications such as *Water Environment & Technology* and *Coastlines* and regionally in newspapers such as *The Washington Post*, *Baltimore Business Journal*, *Richmond Times-Dispatch*, and the *Bay Journal* in 1999. The program also was featured at national and regional conferences.

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First-Ever Annual Meeting

Businesses for the Bay members gathered on December 3 in Annapolis, Maryland, for the first- ever *Businesses for the Bay* Annual Meeting.

- Participants networked and shared pollution prevention ideas.
- Participants received tips on implementing Environmental Management Systems, getting employees and their CEOs to understand the importance pollution prevention, and identifying the hidden cost savings of preventing pollution.
- *Businesses for the Bay* 1999 Excellence Awards winners and the 1999 Mentor of the Year were honored.

Providing Technical Assistance

One way *Businesses for the Bay* helps facilities learn how to prevent pollution is through technical assistance workshops. In 1999, *Businesses for the Bay* partnered with several organizations, including the Maryland Rural Development Corporation and the Virginia Department of Environmental Quality, to teach printers, fleet maintenance personnel, educators, and others how to implement various pollution prevention activities. *Businesses for the Bay* also relies on its Mentors to provide free, technical assistance by sharing their experiences in preventing pollution.

For more information on *Businessess for the Bay*, go to
www.chesapeakebay.net/b4bay.htm
on the Bay Program website.

Chesapeake Bay Program

What's new with the . . .

LOCAL GOVERNMENT ADVISORY COMMITTEE

IN THE CHESAPEAKE BAY REGION IN 1999

There are more than 1,650 local governments in the Bay region, including cities, counties, towns, townships and boroughs. Local governments play a vital role in the protection and restoration of the Chesapeake Bay system because they have statutory authority to decide how the land in their jurisdiction will be used and, ultimately, the way that the thousands of streams and rivers that drain into the Bay will be protected. The Bay Program recognized from the start the important role local governments have in the regional clean-up effort. In 1988, the top policy-making body of the Bay Program, the six-member Chesapeake Executive Council, established the Local Government Advisory Committee. The committee is the collective voice of locally elected officials throughout the region. Since 1996, the committee has been charged with overseeing the implementation of the Local Government Participation Action Plan. The Action Plan identifies three theme areas in which local governments have a substantial role in protecting and restoring the Chesapeake Bay: land use management and stewardship; stream corridor protection and restoration; and infrastructure improvements. In 1999, the committee continued to implement the Action Plan. The following highlights touch on some of those efforts.

13 Bay Partner Communities Recognized

In 1999, the Bay Program recognized 13 communities for their efforts to protect and restore the Bay as part of the Chesapeake Bay Partner Communities program. The communities include an existing Bay Partner Community that will upgrade its status from silver to gold. This year's nominees bring the total number of Bay Partner Communities to 52. Initiated in 1996, the Chesapeake Bay Partner Communities program recognizes communities that implement and sustain a broad range of activities that protect both local resources and the Bay. For more information on the program, call the International City/County Management Association, (202) 962-3589.

Team Conducts Two Environmental Reviews

The committee's Community Environmental Review Program was completed in two communities in 1999: Warrenton, Virginia, and Hampstead, Maryland. The review held in Warrenton focused on low impact development techniques and infill development. The Hampstead review focused on innovative site planning for a proposed 400 acre industrial site and revitalization of its downtown. An ongoing program, each review brings a team of technical experts together with community officials to help address local concerns with a focus on protecting the Bay system. Only communities that have applied to be Chesapeake Bay Partner Communities are eligible for participation in the Community Environmental Review Program. This requirement encourages participation in the program. For more information, call the International City/County Management Association, (202) 962-3589.

Workgroup Organizes

Metropolitan areas in the Chesapeake watershed have organized a workgroup to provide more input into the Bay Program decision making process. The workgroup is focusing its efforts on urban watershed management and the potential fiscal effects of Bay Program policies on metropolitan areas. For more information on the program, call the Metropolitan Washington Council of Governments, (202) 962-3200.

Local Governments Receive Funding for Small Watershed Projects

The Chesapeake Bay Small Watershed Grants Program completed its first year in 1999 by awarding $650,000 in grants to 37 organizations and local governments. The program, which provides grants to organizations or local governments working

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OF NOTE:

➤ LGAC continued to communicate with all local governments in the watershed through its newsletter *Bay Currents*.

➤ William Rumsey, Jr. of the District of Columbia, was elected as the committee's new chair. State vice-chairs are Gloria Fisher, Virginia; George O'Donnell, Maryland; B. Kenneth Greider, Pennsylvania; and Cheryl Amisial, the District of Columbia.

➤ LGAC was one of the sponsors of the Summit Toward a Sustainable Chesapeake, a two-day conference designed to challenge local governments to develop sustainable initiatives in the Bay watershed. The conference attracted more than 300 participants.

to protect and improve watersheds, is funded through the U.S. Environmental Protection Agency. Its purpose is to demonstrate effective techniques and partnership building that will help achieve Chesapeake Bay restoration objectives at the small watershed scale. Local government-based projects included a trout nursery raceway on an Amish farm in Lancaster, Pennsylvania; a shoreline erosion education project for landowners in Prince Frederick, Maryland; and the development of a nature center for schools in Fauquier County, Virginia. For more information on Small Watershed Grants, call Karen Hester Abrams of the National Fish and Wildlife Foundation, (202) 857-0166.

ICMA to Coordinate Committee

The International City/County Management Association (ICMA) was selected to receive a grant to provide services to local governments in the Chesapeake Bay region. The association's responsibilities include staffing the committee, implementing the Bay Partner Communities program, conducting Community Environmental Reviews, providing technical assistance to local governments and improving communication between the Bay Program and the local governments in the watershed.

1999 Chesapeake Bay Partner Communities

MARYLAND
Anne Arundel County, *Gold*
Chesapeake City, *Gold*
City of Gaithersburg, *Bronze*
Takoma Park, *Gold*
Town of Princess Anne, *Silver*

PENNSYLVANIA
Adams County, *Silver*
Annville Township, *Bronze*
Lewisburg Borough, *Bronze*

VIRGINIA
City of Alexandria, *Gold*
City of Norfolk, *Silver*
Fauquier County, *Bronze*
Gloucester County, *Bronze*
Isle of Wight County, *Bronze*

For more information on the Local Government Advisory Committee, go to www.chesapeakebay.net/committee.htm on the Bay Program website.

Chesapeake Bay Program

MARYLAND
1999 BAY PROGRAM HIGHLIGHTS

The annual Executive Council meeting is an excellent time to review and highlight the accomplishments of the state of Maryland as it works, under the leadership of Governor Parris N. Glendening, to meet the goals and commitments of the Chesapeake Bay Program partnership. As a partner in the Chesapeake Bay Program since the signing of the historic *1983 Chesapeake Bay Agreement*, Maryland has worked hard in many areas including nutrient and toxic reduction, habitat restoration, growth management, education, land preservation and public outreach and participation. The hard work of the citizens of Maryland is paying off. The Bay and its tributaries are generally cleaner and healthier than they were just 16 years ago when the first Bay agreement was signed. Today, we would like to take a few minutes to give you an overview of how we have been working to insure a cleaner, healthier more resilient Chesapeake Bay system.

OVERVIEW

In most areas our Bay restoration effort evidenced continued progress. However, 1999 was a year that put additional stress on the Chesapeake Bay in Maryland. A severe drought, the worst in decades, afflicted the region. While this brought some short-term benefits to the Bay, especially in terms of less nutrient and sediment pollution due to reduced runoff, there were also negative consequences: Less fresh water flowing into the Bay raised salinities in tidal tributaries, which stressed living resources who call these water bodies home; low oxygen conditions related to the drought caused several fish kills in tidal creeks; trees, grasses and other vegetation were adversely affected by the lack of rainfall; and the drought inflicted considerable economic hardship on Maryland's farmers (more than $70 million in damages).

In areas of resource protection, outreach, education and citizen participation, Maryland continued to set a strong pace. The second year of the state's Rural Legacy Program put additional acres of the most ecologically valuable land under increased protection; the more than 350 members of the Tributary Teams continued to demonstrate their value in developing new ideas and implementing current plans; and more than 210 miles of riparian forest buffer have been established, putting the state well ahead of its timetable to achieve 600 miles of new buffer by 2010. Another important milestone in 1999 included national recognition for Maryland's unique Bay Game.

MARYLAND PROGRAM SPECIFICS

- ***Smart Growth and Neighborhood Conservation*** – Maryland continued implementing its first-in-the-nation "Smart Growth" program to control sprawl and change the patterns of development which have destroyed habitat, degraded water quality, and adversely affected the state's communities through the use of:

Rural Legacy -- Maryland redirects existing State funds into a focused and dedicated land preservation program specifically designed to limit the adverse impacts of sprawl on our agricultural lands and natural resources. The program creates "Greenbelts" - green spaces that generally define where a community or developed area ends and where the countryside begins. The program reallocates State funds to purchase conservation easements for large contiguous tracts of agricultural, forest and natural areas subject to development pressure, and fee interests in open space where public access and use is needed. Over the next five years, the program will commit approximately $163 million to preserve nearly 90,000 acres of farms, forests and open spaces.

Priority Funding Areas -- State investment in local jurisdictions is focused to "smart growth"areas. State funds for roads and highways, business development financing and economic development, water and sewer improvements, and most housing programs are targeted to areas that meet select density and growth criteria. The Priority Funding Area program discourages new development in open spaces and aims to prevent problems associated with sprawl such as water pollution from stormwater and construction runoff, additional air pollution from increased commuting miles, and loss of wildlife habitat. Priority Funding Areas include all municipalities, all areas inside the Baltimore and Washington beltways, and designated revitalization areas, enterprise zones and empowerment zones.

"Brownfields" Redevelopment -- This program spurs redevelopment of properties that are contaminated, or even perceived to be contaminated, while ensuring that the environment and public health will continue to be protected. Since the program began, the Maryland Department of the Environment has received 49 applications for the voluntary cleanup program, covering more than 1,100 acres.

- ***Biological Nutrient Removal (BNR) Program*** – One of Maryland's tactics for implementing the Chesapeake Bay Agreement's nutrient reduction strategy for point source discharges is though cost-share funding of biological nutrient removal of nitrogen and chemical phosphorus removal at all wastewater treatment plants that have a design flow equal to or greater than 500,000 gallons per day. Of Maryland's 65 treatment plants, 61 have either installed or have signed cost-share agreements for implementation of BNR. This represents a 94 percent voluntary participation rate. This year, $ 12.2 million has been authorized to fund 19 projects, bringing total spending for BNR to $418 million.

- ***Watershed Pollution Limits*** -- Maryland continues work to establish pollution limits for Priority State watersheds, a commitment matched by few states in the country. These limits, called Total Maximum Daily Loads (TMDLs), effectively build upon the 40 percent nutrient reduction commitments made in 1987 by establishing numeric commitments for other pollutants. During the past three years, Maryland assessed the status of water quality throughout the state, and identified those waters that are currently not meeting designated uses. The state will establish a TMDL for the substances causing the impairment of the waterways and the source of the substance (both point and nonpoint). Priority water bodies include the Chesapeake Bay Tributary Strategy watersheds, the Maryland Coastal Bays watershed, the Baltimore Harbor watershed, and water bodies impaired by toxic chemicals.

- ***Tributary Teams*** -- Maryland's innovative Tributary Teams continued to play an increasingly important role in environmental management, more thoroughly involving people and local governments in cleanup activities, testifying before special commissions, and helping achieve the 40 percent nutrient reductions we have been working towards since 1987. Their third annual meeting brought together team members from across the state to meet with the Governor and other state officials to help chart the course for the coming year. In June, in cooperation with the Sunpapers, the Chesapeake Bay Trust, US EPA, and USDA a special booklet, ***"Fragile, Handle with Care,"*** was inserted into the Baltimore Sun. This booklet provided Marylanders with a comprehensive guide to both cleaning up the Bay and protecting the land and water in each citizen's own back yard. In September, a Tributary Team led Task Force completed recommendations to address problems from septic systems and promote the use of advanced technologies.

- ***Maryland Bay and Mountain Games*** – Created for children 3 years and up, Maryland's Bay and Mountain Games help parents avoid the eternal question, "Are we there yet?" The Maryland Bay and Mountain Games are an interactive educational activity designed for children, played during car/bus trips between the Chesapeake Bay Bridge and the Ocean City coast, and to Western Maryland. The games were designed to help young people identify Bay-related objects, features and items (e.g., osprey nests, wetlands, farm fields, watermen's boats) as they travel to Ocean City. The Maryland Bay Game was designated as one of the Top 100 Innovations in American Government by Harvard University and won the Water Environment Federation's prestigious Public Education Award.

- ***Bay Grasses in Classes*** – This educational program teaches students in 70 Maryland schools about Bay grasses and their importance as habitat. Through a partnership between the Department of Natural Resources, the Chesapeake Bay Trust, and the Chesapeake Bay Foundation, students study Bay grasses, obtain various Bay grass seeds, grow them in the classroom and then assist DNR biologists in planting them.

- ***Chesapeake Lands*** – In order to protect Maryland's natural resources, Maryland acquired all of the land formerly owned by Chesapeake Forest Products, over 58,000 acres on the state's Eastern Shore. In partnership with The Conservation Fund and the Richard King Mellon Foundation, the state will pay $16.5 million for the property, which is the largest land acquisition in State history. The settlement will enable Maryland to protect some of the State's most environmentally sensitive land, including thousands of acres of wetlands and wildlife habitats.

- ***Chesapeake Bay Bridge Repainting*** – As part of the continual upgrading of the 4.5 mile Bay Bridge, Maryland launched a $70 million project to repaint the structure. Even though this is almost double the original $45 million construction cost, the money is well spent. Special procedures have been put in place to prevent lead paint chips, dust and spray from polluting the waters of the Bay. These materials are being collected and disposed of in a safe and environmental manner, instead of being dropped into the Bay.

- ***Chesapeake Bay Education Initiative*** – As part of Maryland's Chesapeake Bay Education Initiative, two school teachers traveled to Turkey as active participants in the fourth international conference on Environmental Management of Enclosed Coastal Seas. Ann Williams (Northern Middle School, Calvert County) presented a paper, and Patricia Chambers (Stephen Decatur Middle School, Worcester County) contributed a poster. Both showed how they were using authentic coastal research projects developed during summer internships with the University of Maryland Center for Environmental Science to enrich their school curricula. They made many networking contacts among the very interested delegates from 50 countries, and Ms. Chambers received first prize for best poster at the conference.

- ***Green School Awards*** – A new initiative in Maryland recognizing schools for achievement in environmental stewardship. Honored schools were chosen for projects that included: natural restoration on school grounds, wetland restoration in the community, outdoor trail development or responsible school transportation initiatives. No special curriculum was needed to meet the criteria and the program was designed to support Maryland's education goals. All public and non-public schools were eligible. Thirty four schools were selected as Governor's Green Schools from more than 60 applications.

- ***Invasive Species Controlled*** – To help protect public safety and preserve native living resources in Chesapeake Bay tributaries, the Maryland Department of Natural Resources led an intensive effort to remove dense populations of water chestnut from parts of the Sassafras River and Bird Creek. (Water chestnut, native to Asia, is an aquatic plant that endangers water resources and the safety of those who enjoy recreating in and around the water.) In consultation with national experts, other state agencies, interest groups, federal agencies, counties, and Maryland's Tributary Teams, the state attacked the potentially dangerous plant with mechanical removal and a massive volunteer effort to manually remove plants.

- ***Worked with Farmers*** – Maryland Department of Agriculture provided $4.6 million to assist farmers in installing over 900 projects to improve water quality. This funding will prevent an additional 35,000 tons of soil from reaching Maryland waterways annually and manage an additional 1,700 tons of animal waste daily. In addition, Maryland supported local soil conservation districts, providing additional technical staff to install more than 7,000 best management practices on farms and develop over 1,200 Soil Conservation and Water Quality plans encompassing 99,000 acres. The state also established the Poultry Litter Transportation Pilot Project to assist farmers in redistributing excess poultry litter. These were funded with matching funds from poultry companies, and provides up to $20 per ton to move poultry litter to areas that need additional fertilizers. Finally, MDA developed the Nutrient Management Plan Cost Share Program to provide 50% of the cost of developing certain nutrient management plans, up to $3 per acre.

As we head into the new millennium, Maryland's place in the natural world is a vital one. The state embraces the largest and most productive estuary in North America, the Chesapeake Bay, and much work and effort has been dedicated to its restoration. Every Marylander should continue to give unyielding support to the cleanliness of our state's waters, the vitality of its living resources, the purity of Maryland's air and the protection for future generations of a quality of life unmatched anywhere in the United States.

THE COMMONWEALTH OF VIRGINIA'S 1999 BAY PROGRAM ACCOMPLISHMENTS

With Governor Gilmore's commitment to improve water quality, unprecedented funding for that purpose, continuing efforts to develop tributary strategies, the initiation of a major oyster restoration program, and other activities, 1999 proved a banner year for Virginia as a partner in the overall Chesapeake Bay Program effort. Here is a partial listing of Virginia's accomplishments in 1999.

The Virginia Oyster Heritage Program: The Virginia Dept. Of Environmental Quality's Coastal Management Program and the Virginia Marine Resources Commission are partnering with state and federal agencies, non-profits and business to launch a large-scale oyster restoration effort. Beginning in the spring of 2000, phase one of the Virginia Oyster Heritage Program will include the construction of eight, one-acre 3 dimensional broodstock sanctuary reefs in the Rappahannock River. Each reef will be surrounded by 25 acres of restored shell bottom for enhanced harvest to provide a sustainable fishery for Virginia watermen who will also be contracted to clean and prepare each 26 acre site. The reefs will be monitored to determine their success in increasing oysters, water clarity, and biodiversity; educational materials will be prepared and volunteers will be trained for restocking efforts. The Virginia Oyster Reef Heritage Foundation has been established as a nonprofit organization to raise private funds to match private challenge grants and public agency grants.

Water Quality Improvement Fund and Legislative Actions: Commitment to achieving Chesapeake Bay and tributary nutrient reduction goals remains strong in Virginia. A key incentive aiding implementation of point and nonpoint source control actions continues to be the Water Quality Improvement Fund (WQIF), created by the 1997 Water Quality Improvement Act (WQIA). Cost-share provided by the WQIF has supported ongoing progress made under the Shenandoah-Potomac Tributary Strategy, and the Commonwealth is poised to make significant funding available to the lower tributaries (Rappahannock, York, James and small coastal basins) in the current grant cycle.

In 1999, Governor Gilmore and the General Assembly approved a $39.06 million deposit into the WQIF. Of that, $9.83 million is for nonpoint source projects and $24 million is for point source projects during fiscal year 2000. The balance of these new funds either is designated for specific Department of Environmental Quality (DEQ) and Department of Conservation and Recreation (DCR) activities in support of nutrient reduction actions and tributary strategy implementation ($1.68 million), or is interest credited to the WQIF plus non-specific appropriations (total of $3.55 million). That amount will be allocated by the Secretary of Natural Resources between point and nonpoint source programs after receipt of grant applications. The Appropriations Act also specified that the additional point source program funds were to be used for nutrient removal facilities in the James, Rappahannock, York and small coastal basins. Ongoing point source projects in the Shenandoah-Potomac basin will continue to be funded with grant monies provided by the 1997 and 1998 Appropriation Acts.

THE COMMONWEALTH OF VIRGINIA'S 1999 BAY PROGRAM ACCOMPLISHMENTS

The following items represent recent accomplishments made under the WQIF:

◆Thirty-two special projects totaling $3.325 million were made available by DCR with WQIA funds. The Shenandoah-Potomac river basin was granted $1.85 million of the funds for 17 projects, and the state's lower bay tributary basins received $975,000 for nine projects. The projects, which address NPS pollution, are being managed through soil and water conservation districts, resource conservation and development councils, state colleges and universities, local governments and agribusiness partners.

◆In July 1999, WQIA funding of about $9.45 million was added to the Virginia Agricultural Best Management Practices (BMPs) Cost-Share Program's bay area efforts. Another $1.5 million was earmarked for rivers not draining into the bay. This additional funding was prompted by the success of the program, which is administered by DCR through the state's soil and water conservation districts. 1999 saw more farmers put more acres into BMPs using state cost-share funds than ever before. Reductions included more than 2.6 million pounds of nitrogen, 543,146 pounds of phosphorus and 470,205 tons of soil. More than 1,200 farmers participated and installed more than 1,300 practices covering 90,000 acres.

◆In 1999, for the first time, DCR helped farmers in the Shenandoah-Potomac river basin by sharing the cost of nutrient management plans written by certified consultants. Nutrient management planning and the implementation of nutrient management BMPs have been identified as key factors in meeting nutrient reduction goals of the basin's tributary strategies.

◆Progress continues on point source nutrient reduction projects under 15 signed WQIF grant agreements in the Shenandoah-Potomac river basin. These active projects account for approximately $57.84 million in 50 percent cost-share for the design and installation of nutrient reduction systems. To date, nearly $12.3 million has been provided in reimbursement payments to these grantees for work accomplished. Once operational, these systems will remove about 6.7 million pounds of nitrogen and 91,000 pounds of phosphorus per year.

◆Two grant agreements were signed with Dale Service Corp. for projects involving privately owned sewage treatment plants serving residential areas in the Shenandoah-Potomac river basin. These projects will use about $4.1 million of the $6 million appropriated by the General Assembly for this type of project. The balance, $1.9 million, is the subject of current grant negotiations with Sheaffer International Ltd. Clean Water for a proposed project in the Shenandoah Valley. It will serve two towns and two poultry producers.

◆The town of Purcellville signed a $1.6 million grant agreement to include nutrient reduction in a new 1.0 MGD wastewater plant to replace their old facility. DEQ continues to seek participation in the WQIF cost-share program by all significant (larger than 0.5 MGD) municipal wastewater facilities in the Shenandoah-Potomac basin. Not all facilities eligible under the WQIF have applied for a grant, and some owners were not targeted in the tributary strategy for nutrient reduction during the initial stages of implementation. While smaller in size compared with those of many earlier grant projects, these plants can play an important role in achieving the 40 percent reduction goal.

◆Negotiations continue with the District of Columbia Water and Sewer Authority to purchase additional nutrient reduction at the Blue Plains facility through a WQIF grant. The 1998 General Assembly authorized use of up to $3.35 million for this purpose. Because several of the large plant retrofits underway in Virginia will not be on-line by 2000, one interim measure is to take advantage of the cost-effective opportunity presented by this major Washington, D.C., facility. Blue Plains has the potential to reduce greater amounts of nutrients by operating at higher removal efficiencies. Through a contractual agreement between Virginia and Washington, D.C., there is a much greater chance of meeting the 40 percent goal for the Potomac through enhanced removals at Blue Plains.

THE COMMONWEALTH OF VIRGINIA'S 1999 BAY PROGRAM ACCOMPLISHMENTS

Development of Strategies for Virginia's Lower Bay Tributaries: Staff from state natural resources agencies worked this past year with local governments, SWCDs and other interests to develop nutrient reduction goals for Virginia's lower bay tributaries. These are also the first tributary strategies in the bay watershed to include sediment, as well as nutrient, reduction goals. Strategies for the four tributary regions are either complete or nearly so. Development of the strategies relied heavily on CBP monitoring and modeling data.

◆Nonpoint sources contribute 80 percent of the controllable nutrient load in the ***York's*** watershed. Point sources account for the rest. The York team called for reductions of 2.3 million lbs of nitrogen, 60,000 lbs of phosphorus and 9,000 tons of sediment by the year 2010, using 1996 as the base. Costs for implementing strategies needed to achieve these goals are estimated at $45 million over 10 years.

◆The ***Eastern Shore's*** strategy goal focuses mainly on restoring SAV acreage to historical levels. Shore region interests agreed to work towards year 2003 targets, which, if implemented, would result in additional NPS reductions of 120,700 lbs of nitrogen, 14,000 lbs of phosphorus and 3,000 tons of sediment, using 1985 as the base year. (These numbers are beyond 1997 estimated reductions.) Costs for implementing the 2003 target reductions are estimated at $2.8 million.

◆The bay water quality model projects needed load reductions of 33 percent for nitrogen, 29 percent for phosphorus and 20 percent for sediment to meet the ***Rappahannock*** basin's strategy goals. Those three goals, set for 2010, are meant to reduce by 50 percent the river's annual volume of anoxic water and to increase by 50 percent the density of SAV. Planning level cost estimates over the next 11 years for implementing practices to achieve such reductions run about $8.79 million for point sources and $39.4 million for nonpoint sources. Both figures assume state cost-sharing (50 percent for point sources and 75 percent for NPS). A re-evaluation of this strategy will be undertaken in 2002.

◆Regarding the ***James***, while numerous water quality and living resources issues were identified during eight meetings, the technical review committee has yet to reach consensus on nutrient and sediment goals. A document further exploring establishment of James River goals will soon be available, and the document will undergo a public review and comment period beginning this month and running through the first of the year

The Chesapeake Bay Preservation Act: Those implementing Virginia's Chesapeake Bay Preservation Act continue to work with Tidewater Virginia localities, soil and water conservation districts (SWCDs) and planning district commissions (PDCs) to protect the water quality of the Chesapeake Bay and its tributaries. This is done by managing impacts from the use and development of land. The goal of the act is to achieve no net increase in nonpoint source pollution as development in Tidewater occurs. Eighty-four units of local government, with land draining to the Chesapeake Bay, are subject to the provisions of the act. During 1999, the following was accomplished:

◆Fifty-four localities had various program review and approvals undertaken by the Chesapeake Bay Local Assistance Board. All 84 local governments now have ordinances incorporating into local law the act's requirements. Of these, 66 have had comprehensive plans, which are reviewed by the board, that provide protection to environmentally sensitive areas. The remaining 18 have either an active review underway or a deadline established for such plan review.

◆The Chesapeake Bay Local Assistance Department (CBLAD) began evaluating local government implementation of water quality performance standards through the investigation of complaints. More than 150 complaints have been reviewed.

THE COMMONWEALTH OF VIRGINIA'S 1999 BAY PROGRAM ACCOMPLISHMENTS

◆In fiscal years 1999 and 2000, CBLAD provided 45 grants totaling $943,224 to local governments and PDCs within Virginia's lower tributary basins, and grants amounting to $206,428 were made to those within the Shenandoah-Potomac Tributary basins. The grants are for land use and water quality planning projects.

◆CBLAD in 1999 commented on approximately 125 federal, state, local site plans and environmental impact reviews (EIRs), assuring compliance with the act.

◆In FY 1999, CBLAD provided $450,500 in grants to 11 Tidewater Virginia SWCDs. This resulted in bringing another 30,377 acres of farmland under conservation plans and added 59 miles of buffer areas to Virginia's waterways.

Virginia's Riparian Buffer Initiative: In 1996 the Executive Council adopted a goal of 2,010 additional miles of riparian forest buffer Baywide by 2010 with the Virginia portion being 610 miles. Under the Virginia Riparian Buffer Initiative we have restored more than 140 miles of forest buffer in the bay's watershed and 162 miles statewide. Governor Gilmore signed an executive order in August 1999 which outlines state agency commitments to this initiative, sets up a Riparian Working Group chaired by the State Forester, and describes efforts to meet the goals of the bay adoption agreement.

Citizen Monitoring Agreement: The 1998 Letters of Agreement signed by DCR, DEQ and the Virginia Save Our Streams Program were a great success. The items in the agreement were accomplished and, as a result, water quality data collected by citizens will be used in the 2000 305(b) Water Quality Report. Based on the success of the two 1998 agreements, the same partners on October 29, 1999, signed an agreement to continue building Virginia's citizen monitoring program.

Adopt-a-Stream Program: This Gilmore Administration supported water quality initiative came out of the 1998 General Assembly. 1999 marks the first active year of the program, which has seen 99 groups sign up. They have adopted 284 miles of streams statewide. Sixty seven of the groups adopted 202 miles that are in the bay watershed

Fish Passage
Recent completion of a vertical slot fishway at Boshers Dam in Richmond reopened approximately 337 miles of historical spawning habitat for migratory fishes in the James River and its tributaries from the Richmond fall line to Lynchburg. This fish passage has reopened the most miles of historic spawning habitat of any single facility anywhere in the United States.

Shad Restoration
Since 1992, the Department of Game and Inland Fisheries has conducted an American shad restoration effort in cooperation with other state and federal natural resource agencies, the Mattaponi and Pamunkey tribal governments, and the private sector. This effort has focused on reestablishment of American shad in the upper James River and is being conducted in conjunction with fish passage initiatives. Initial results indicate that the stocking program is beginning to recruit adult shad to the James River ecosystem.

Dameron Marsh Natural Area Preserve: The 316-acre Dameron Marsh was recently purchased by the state with funding assistance from the Nature Conservancy, the U.S. Fish and Wildlife Service, the Army Corps of Engineers, the Northern Neck Audubon Foundation and the 1992 Virginia Parks and Natural Areas general obligation bond. The property is managed by DCR. About 90 acres of the preserve had been farmed; that land was reforested using native species. The plantings increased habitat and bring Virginia closer to its goal of planting 610 miles of forested buffers along streams in the Chesapeake Bay watershed.

COMMONWEALTH OF PENNSYLVANIA
1999 BAY PROGRAM HIGHLIGHTS

Our concerns about the state of the Chesapeake Bay more than 10 years ago led us to a unique agreement to solve pollution problems on a watershed basis. Pennsylvania recognized that the activities in our own neighborhoods were having an environmental impact on the bay. The Commonwealth understands the importance of being a good upstream neighbor. Over the past two years we've made great strides in identifying our environmental priorities for the Commonwealth for the next century, including our work on the protection and restoration of watersheds. The following are highlights:

21st Century Environment Commission: Gov. Tom Ridge created the 21st Century Environment Commission in 1997 to establish Pennsylvania's environmental priorities for the next century. The commission also developed criteria by which to measure progress toward those goals, involving the public throughout the process. Among the more than 240 recommendations and priorities mentioned in its 1998 final report, the commission's 40 members identified land use as the single most important environmental issue for the 21st Century.

Over the past year, we have begun to reinvent Pennsylvania's environmental future. In 1999, Gov. Tom Ridge signed an executive order that set up more than 50 forums throughout the Commonwealth to share land-use success stories and concerns. The Pennsylvania Center for Local Government Services is compiling recommendations from those forums and will issue a report in January, along with a catalogue of best land use practices.

Growing Greener Budget Initiative: To address the critical environmental issues of the 21st century, Gov. Tom Ridge in 1999 proposed the "Growing Greener" budget initiative to provide $500 million dollars over the next five years to priority environmental programs. Growing Greener will help Pennsylvania clean up abandoned mines and restore watersheds, protect open space and provide opportunities for recreation, eliminate the maintenance backlog in our State Parks and provide new and upgraded water and sewer systems. The proposal shifts funding priorities from the state to communities, county conservation districts, watershed groups and authorities across the Commonwealth.

Pollution Prevention: 1999 marked the four-year anniversary of the Department of Environmental Protection (DEP) Office of Pollution Prevention and Compliance Assistance. The office is the cornerstone of DEP's coordinated and user-friendly approach to environmentalPage 1 of 5

protection. The goal for the future is to further enhance pollution prevention and energy efficiency thinking in all that DEP does. It's also the second year for the Governor's Green Government Council, created to assist all state agencies in adopting environmentally sustainable practices. Hundreds of projects are underway.

Our best examples that a healthy environment, a dynamic economy and the well being of our communities are directly linked are the winners of our Governor's Award for Environmental Excellence. Over the last three years, award winners have reduced electricity use by more than 21 million kilowatt-hours; solid waste by 27 million tons; air pollution by 24 million tons; and wastewater by more than 1.6 billion gallons. At the same time, they saved more than $142 million in annual operating costs.

Environmental Protection Compliance Tracking System: For more than a year, DEP has been working on new performance measurements that focus on compliance rates rather than enforcement activities, on outcomes, impacts and results rather than traditional counts, such as the number of permits issued, number of inspections performed, number of enforcement actions taken or the total fines and penalties collected. This approach provides compliance data not only in traditional program specific formats, but also in a new facility-wide format. DEP is the first environmental protection agency in the country that is able to show air, water, waste and other program activities in a single integrated compliance view. Compliance data is available to the public on the DEP website at www.dep.state.pa.us (choose Compliance Reporting).

Nutrient Management: One of Pennsylvania's major initiatives to help control runoff into the Chesapeake Bay is the Nutrient Management Act. The act requires farms that meet the definition of Concentrated Animal Operation (CAO) to develop and implement a nutrient management plan. Five to 10 percent of Pennsylvania farms fall into this category, with more than half of these in Southcentral Pennsylvania.

Since the program went into effect in October 1997, more than 700 regulated farmers are developing nutrient management plans that must be implemented within three years of their final approval by a conservation district or the State Conservation Commission. Financial assistance to develop plans is available. The Agriculture Linked Investment Program offers $25 million in low interest loans of up to $75,000, and efforts are underway to establish a grant program for financially distressed operations. A new training and certification program for nutrient management specialists was established in 1996, and 279 specialists have received certification. More than 125 farmers have received individual certification to develop nutrient management plans for their own operations.

In 1999, DEP finalized environmental standards to protect ground and surface water from the impacts of large animal feeding operations. Pennsylvania is the first state to comprehensively address the water-quality impacts of the design, construction and operation of large-scale animal2 feeding facilities; manure storage structures; and the application of manure from these operations to farm fields.

The most stringent requirements are reserved for concentrated animal feeding operations of 1,000 or more animal equivalent units that are of most concern to the public. Farmers with smaller operations are covered by the same environmental performance standards, but have simplified, less expensive paperwork.

Watershed Protection and Restoration: DEP has been working with a network of volunteers to help them meet their own goals in collecting data on Pennsylvania's thousands of miles of streams. Citizen monitors collect water quality data on at least 3,000 sampling stations in watersheds throughout the state. They also participate in the annual springtime Water Quality Snapshot collecting information about physical, chemical and biological indicators of water quality. In 1999, more than 200 groups participated in the event. DEP also is preparing a technical handbook for community-based monitoring, publishes a quarterly newsletter and holds numerous training workshops for volunteers to give them the latest information about monitoring and data collection techniques.

In 1999, DEP gave more than $1.1 million to 61 groups under the department's Watershed Restoration and Assistance Program. These grants were established in 1998 to assist locally managed watershed restoration and protection projects that focus on nonpoint source pollution. Watershed associations and other nonprofit groups, local governments and county conservation districts are eligible.

Also in 1999, the Department of Conservation and Natural Resources (DCNR) awarded $1 million in Rivers Conservation grants. Twelve of these grants help communities develop river conservation plans. The plans outline local strategies that municipalities, residents and river support groups can use to effectively implement river conservation initiatives such as streambank stabilization and Stream ReLeaf riparian forest buffers; acid mine remediation; water-quality monitoring; public accessibility for recreational opportunities; and citizen participation. Seven river conservation implementation grants also were approved. The grants help accomplish the projects outlined in approved rivers conservation plans.

Protecting Stream Banks: To improve water quality by reducing soil erosion and nutrient deposition caused by livestock, the DEP Stream Bank Fencing Program manages livestock access to streams by erecting fences and crossings or ramps. More than 54 miles of streams has been fenced controlling 7,800 cattle on 123 farms in 32 counties, while simultaneously improving and protecting about 400 acres of valuable riparian habitat. Between 1989 and 1996, Pennsylvania funded a stream bank fencing program in cooperation with the state Game Commission. More than 145 miles of streams were fenced. By 1999, more than 70 miles of streamside buffers were restored under Pennsylvania Stream ReLeaf. Stream ReLeaf was begun in 1997 to coordinate and promote stream buffer efforts statewide, as well as private initiatives.

Community Conservation Partnership: Launched in 1995, the Ridge administration's Community Conservation Partnership initiative provides funding and technical assistance to help communities

and non-profit organizations conserve natural and cultural resources, provide outdoor recreation, enhance tourism and foster community and economic development. Highlights of the program include grants for community recreation, rivers conservation, rails-trails, open space protection and recreational trails. In 1999, more than $21 million was awarded for projects that protected precious open space and critical natural habitat, built trails and greenways, established parks and playgrounds and conserved river resources.

Fish Passage and Shad Restoration: Fish passage and shad restoration have been the focal points of Pennsylvania's commitments under the living resources goals. All four major hydroelectric dams on the Susquehanna River between Conowingo, Md., and Middletown, Pa., have installed fish ladders at a cost of $59 million; 435 miles of the Susquehanna River are reopened to natural runs of shad and herring for the first time in almost 100 years.

Pennsylvania also has re-opened spawning habitat on tributaries that are blocked by small to mid-sized water supply dams. Many of these dams once supplied water for mills, industrial needs, small water systems and recreation and are now in disrepair or have been abandoned. DEP and the Fish and Boat Commission are working to either breach or remove non-beneficial dams -- more than 200 dams have been identified for possible removal in the Susquehanna basin. Since 1995, 18 low-head dams have been removed on tributaries to the Susquehanna River and one fish ladder has been constructed, providing access to more than 75 miles of tributary streams.

Forest Protection and Beautification: Pennsylvania launched an aggressive program to clean up illegal pdumpsites on state forest and park lands in 1999. The five-year, $7.5 million effort hopes to eliminate the thousands of tons of appliances, tires, furniture, building materials, household hazardous waste, car parts and other garbage that is illegally dumped on these remote state lands. Some of the waste is undoubtedly leaching into the groundwater and affecting local water quality.

Environmental Education: Gov. Tom Ridge began a new chapter in Pennsylvania's efforts to promote environmental education by launching the Pennsylvania Center for Environmental Education. The center is a partnership of 11 state agencies set up to identify unmet environmental education needs and develop programs to meet those needs.

Pennsylvania also provides an Environmental Education Grant Program. The program is funded through 5 percent of the fines and penalties collected by DEP. In 1999, 34 grants totaling $302,064 were distributed to promote environmental stewardship and awareness across the Commonwealth. More than $2 million has been provided for the expansion and support of environmental education over the past five years.

Land Recycling: Pennsylvania's Land Recycling Program marked its fourth anniversary in 1999 by celebrating the clean up of its 500th site. In the four years since its inception, the program has grown to be a national leader in turning old sites into new opportunities for economic growth and

environmental progress. More than 15,000 people now work on old industrial sites in the Commonwealth.

Air Quality: Gov. Tom Ridge has been leading an effort since 1995 to get states from the Midwest and South to reduce the nitrogen oxides into the Commonwealth and Northeast. In 1997, he was joined by seven other Northeastern states in petitioning EPA to reduce transported emissions. Although the issue is currently under litigation, Pennsylvania will continue its efforts to get all states to do their fair share.

As part of the state's fair share plan, in May 1999, Pennsylvania implemented an air pollution control program that reduces nitrogen oxide emissions from power plants by 55 to 65 percent. In 1997, Pennsylvania implemented an annual enhanced vehicle emissions inspection program in the Philadelphia and Pittsburgh metropolitan areas. In the program's first six months, emissions were reduced by the equivalent of removing 600,000 vehicles from the road. Through Stakeholder Working Groups, Pennsylvania is currently exploring reducing more air emissions from the Southcentral region and the Lehigh Valley.

DISTRICT OF COLUMBIA'S
1999 BAY PROGRAM HIGHLIGHTS

The annual Executive Council meeting is an excellent time to review and highlight the accomplishments of the District of Columbia as it strives to meet the goals and commitments of the Chesapeake Bay Program partnership. As a partner in the Chesapeake Bay Program since the signing of the historic *1983 Chesapeake Bay Agreement*, the District of Columbia has worked hard in may areas including sustainable development, nutrient and toxic reduction, habitat restoration, and education. The hard work of the citizens of the District is paying off. The Potomac and Anacostia Rivers are cleaner and healthier than they were just 15 years ago. Progress has been steady in other areas as well. Today, we would like to take a few minutes to give you an overview of what we've been working on the behalf of a cleaner, healthier more resilient Chesapeake system.

We have made significant progress in the following areas:

SUSTAINABLE DEVELOPMENT IN THE DISTRICT OF COLUMBIA

A strong diversified economy, and a clean, healthy environment are the goals of an extensive community reinvestment and economic revitalization.

- **Brownfields Program**
  This is a strategic plan developed to remediate contaminated sites that will be redeveloped.
- **First Time Home Buyers Tax Credit**
  This tax incentive provides up to $5,000 for individuals purchasing their first home in the District.
- **Home Purchase Assistance Program**
  This program offers loans to low and moderate income families seeking to purchase a home in the District.
- **Rehabilitation and Reoccupation of Abandon Properties**
  The District is using financial incentives to promote the rehabilitation and reoccupation of abandoned properties.
- **Public Transportation**
  The District has always been in full support of public transportation, and has invested in an extensive bus and subway system.

DISTRICT OF COLUMBIA'S 1999 BAY PROGRAM HIGHLIGHTS

PUBLIC EDUCATION AND OUTREACH

- Education curriculum are planned to prevent additional increases in nonpoint source pollution nutrients to the rivers.
- Educators, students and community groups are the targeted audiences for pollution prevention/environmental education efforts.

40 % NUTRIENT REDUCTION GOAL

- The District is confidant that it will reach the 40% Chesapeake Bay Program nutrient reduction goal.
- This will be accomplished using innovative technology at Blue Plains wastewater treatment plant.
- Further reductions will be achieved by targeting controllable sources of nonpoint source pollution.

HABITAT RESTORATION

- The District has partnered with the US Army Corps of Engineers (USACE) to restore 40 acres of tidal wetland in Kingman Lake, on the Anacostia River.
- The District has partnered with the US Army Corps of Engineers (USACE) to restore 32 acres of tidal fringe wetland on the banks of the tidal portion of the Anacostia River.
- The District is using a comprehensive approach to Anacostia River restoration by restoring stream habitat and stream side forests upstream in non tidal tributaries such as Fort Chaplin, Fort Dupont, Hickey Run and Watts Branch.

ANACOSTIA RESTORATION

Mayor Anthony Williams has made restoration of the Anacostia River a top priority of his administration. The goal is to make the river fishable and swimable without health concerns.

- Restoration efforts include restoring tidal wetlands, stream side forests and naturalizing streams that have been hydrologically engineered, and daylighting streams that were contained in pipes.

- Innovative technology is being used to filter storm water before it enters the river.

- The District is increasing public access to the Anacostia river through the restoration and conservation of Kingman Island.

- Restoration of the Watts Branch, a tributary to the Anacostia is a model for watershed planning that combines community participation and partnerships with habitat restorations,

pollution prevention education, and modifications of District services that work to the benefit of the watershed.

- The District is imparting ideals of environmental stewardship through education and outreach efforts such as the annual Anacostia Park Environmental Fair, Project Wet and Project Wild.

As we head into 2000 we are on the edge of change. As water quality increases and living resources rebound, citizens will place a renewed importance on the Bay and its tributaries as a site for recreation, a source of serenity, and a place of beauty. The work that has gone into restoring the Bay and its tributaries up to this point has created strong working partnerships, identified the myriad actions we must take to reach our goals, and laid the groundwork for us to reach the increasingly tough goals that we will set for ourselves for the next twenty years.

CHESAPEAKE BAY COMMISSION
1999 BAY PROGRAM HIGHLIGHTS

The Chesapeake Bay Commission is a legislative body created to advise the members of the General Assemblies of Maryland, Virginia and Pennsylvania on matters of Bay-wide concern. Since 1980, the tri-state commission has provided advice, support and leadership in environmental policy to the region's lawmakers. Issues considered by its members are as wide-ranging and complex as the Bay itself, delving into matters of air, land, water, living resources, and the integrated management of all of them.

As a member of the Chesapeake Executive Council, the Commission brings to the Chesapeake Bay Program an inter-jurisdictional perspective on policy issues that balances the more specific interests of the jurisdiction's executive agencies. Its broad-based nature makes it an excellent forum for generating discussions and building consensus on regional policy issues. The Commission periodically sponsors legislation through its members which supports the policy matters acted upon by the Bay Program.

Twenty-one members from three states define the Commission's identity and its workload. Fifteen are legislators, five each from Maryland, Virginia and Pennsylvania, who are responsible for identifying the environmental needs in the watershed, hearing the wishes of their constituents, and determining actions that make better stewards of us all. Completing their ranks are the governors of each state, represented by their cabinet members who are directly responsible for managing their states' natural resources, as well as three citizen representatives who bring with them a unique perspective and expertise.

In the 19 years since its inception, the Chesapeake Bay Commission has made remarkable strides in learning the complex workings of an enormous estuary, determining federal and state actions that are needed to sustain its living resources, and persuading their colleagues in the General Assemblies and Executive Branch to take actions.

Laws heralded nationwide for their environmental foresight are products of the Commission's work — the phosphate detergent bans, commercial and recreational fishing licenses, nutrient management planning, land-use legislation, ballast water management, and bans on the use of tributyltin, to name a few.

The Commission also serves at the national level, acting as a unified voice to advise Congress on national legislation and budget initiatives that will benefit the Bay region, and the nation as a whole. On numerous occasions, the Chesapeake Bay Commission has coordinated the input of Maryland, Virginia, Pennsylvania and the District of Columbia in order to secure passage of federal legislation integral to the Bay restoration effort.

THE DRAFTING OF *CHESAPEAKE 2000*

In 1999, the Commission concentrated its efforts on the drafting of *Chesapeake 2000.* Serving as Chair of the Drafting Team for the Chesapeake Bay Program, the Commission worked along with its Bay Program partners to identify initiatives that needed to be carried forward from the past, current programs that must be continued and future projects to pursue. The interests of the states, the District of Columbia, the EPA and other federal partners and the broad range of stakeholders involved were all considered as we coordinated the multi-jurisdictional drafting process.

The Commission served both as writer and policy analyst, always attempting to identify initiatives that would lead us further along in our efforts to promote the Bay's protection and long-term restoration.

The restoration of water quality, the protection of living resources and the improved management of growth have been central to the Commission's focus. The members have strongly promoted the protection of submerged aquatic vegetation, the reduction of sediment, the encouragement of community watershed initiatives, the management of blue crabs, while all the while working to reduce nutrient pollution.

The members have been retrospective in their consideration of a new Bay Agreement. The Commission has analyzed progress in implementing the 1987 Chesapeake Bay Agreement in order to identify those actions needed beyond the year 2000. It has examined what has been accomplished and determined that more must be done. When gaps have been identified, the Commission has sought for solutions for inclusion in the draft Agreement.

Over the coming months, the Commission, along with its partners in the Chesapeake Bay Program, will seek public comment on *Chesapeake 2000.* It will be critical to hear from both its supporters and its opponents so that a document can be crafted that reflects the interests of the people.

It is only with the support of our 15 million "neighbors" within the Chesapeake Bay basin that we can guarantee a better Bay. The health of our local waters, like the quality and character of our neighborhoods, depends on our continued stewardship.

CHESAPEAKE BAY COMMISSION 1999 BAY PROGRAM HIGHLIGHTS

1999 COMMISSION MEMBERSHIP

Chairman

Hon. Arthur D. Hershey
PA House of Representatives

Vice-Chairmen

Hon. Jerrauld C. Jones
Virginia House of Delegates

Hon. Brian E. Frosh
Maryland State Senate

■

Hon. Robert S. Bloxom
Virginia House of Delegates

Hon. Bill Bolling
Senate of Virginia

Hon. Russ Fairchild
Pennsylvania House of Representatives

Hon. Bernie Fowler
Maryland Citizen Representative

Hon. Joseph V. Gartlan, Jr.
Senate of Virginia

Hon. John R. Griffin
Secretary, Maryland Department of Natural Resources

Hon. Irvine B. Hill
Virginia Citizen Representative

Hon. Charles A. McClenahan
Maryland House of Delegates

Hon. W. Tayloe Murphy, Jr.
Virginia House of Delegates

Hon. James M. Seif
Secretary, Pennsylvania Department of Environmental Protection

CHESAPEAKE BAY COMMISSION 1999 BAY PROGRAM HIGHLIGHTS

Hon. J. Lowell Stoltzfus
Senate of Maryland

Hon. Richard A. Tilghman
Senate of Pennsylvania

Hon. Michael H. Weir
Maryland House of Delegates

Hon. Noah W. Wenger
Senate of Pennsylvania

Hon. George B. Wolff
Pennsylvania Citizen Representative

Hon. John F. Wood, Jr.
Maryland House of Delegates

Hon. John Paul Woodley, Jr.
Secretary, Virginia Natural Resources

Hon. Peter J. Zug
Pennsylvania House of Representatives

THE CHESAPEAKE BAY PROGRAM RECOGNIZES AND CONGRATULATES THE *BUSINESSES FOR THE BAY* AWARD WINNERS

1999 EXCELLENCE AWARDS

Parker's Exxon, Washington, D.C.
Recipient of the Outstanding Achievement Award for Small Business

Uniroyal Goodrich Tire Manufacturing, Scottsville, Virginia
Recipient of the Outstanding Achievement Award for Medium Business

DAP, Inc., Baltimore, Maryland
Recipient of the Significant Achievement Award for Medium Business

Siemens Automotive Corporation, Newport News, Virginia
Recipient of the Outstanding Achievement Award for Large Business

Procter & Gamble Cosmetics, Hunt Valley, Maryland
Recipient of the Significant Achievement Award for Large Business

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1999 MENTOR OF THE YEAR

Denise Jeffries
Commercial Recycling Coordinator, City of Newport News, Virginia

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SPECIAL RECOGNITION

Fauquier County Resource Management, Fauquier County, Virginia

City of Newport News, Virginia

BUSINESSES FOR THE BAY

Chesapeake Bay Program

Winner Profiles

Businesses for the Bay Excellence Awards

The Chesapeake Executive Council's *Businesses for the Bay* Excellence Awards recognize *Businesses for the Bay* participants for their outstanding and significant work in implementing pollution prevention activities at their facilities. Award applications for the Small, Medium and Large Business categories were reviewed by a group of judges based on the following criteria: pollution prevention activities; environmental and social significance; technical value and transferability to other sectors or facilities; degree of commitment to pollution prevention; and originality and innovation.

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Parker's Exxon
Washington, D.C.

Recipient of the Outstanding Achievement Award for Small Business

Parker's Exxon, a 17-employee automotive service station located in the District of Columbia has shown continual improvement toward reducing its releases and protecting the Chesapeake Bay. Since it won the 1998 *Businesses for the Bay* Excellence Award for Small Business, Parker's Exxon has implemented a variety of new pollution prevention activities. The station worked with Exxon Corporation, USA to install a special area designated solely for recycling that has helped to delineate exact methods for the proper storage and handling of pollutants and recyclable wastes. In addition, the installation of a covered storage shelter for used batteries has helped Parker's Exxon to eliminate the possibility of contaminating stormwater runoff. To further prevent contaminated runoff from entering the Potomac River and eventually the Bay, Parker's Exxon recycles the oily water it collects from cleaning its automotive service bays. To ensure that its pollution prevention programs are effective, Parker's Exxon trains its employees about the practices and requests that they sign a "contract" stating that they recognize their responsibility to prevent pollution. Parker's Exxon has been a member of *Businesses for the Bay* since 1997. For more information, contact Lynn Cook at (202) 337-3144.

Winner Profiles

Businesses for the Bay Excellence Awards

Uniroyal Goodrich Tire Manufacturing
Scottsville, Virginia

Recipient of the Outstanding Achievement Award for Medium Business

Uniroyal Goodrich Tire Manufacturing employs 225 people at its plant in Scottsville, Virginia, where they manufacture treated tire cord fabric for Michelin North America's tire plants. Part of their manufacturing process requires heat to facilitate a necessary chemical reaction. This process causes the emissions of gasses, such as phenol and volatile organic compounds. In 1998, Uniroyal Goodrich installed equipment to prevent the releases of those compounds to the environment. As a result, the facility was able to cut more than 95% of its emissions of odors, phenol and volatile organic compounds. In addition, the manufacturing processes were able to run more efficiently. Their line speeds increased by 10%, which created higher machine yields, higher labor efficiency and a better product for its customers, all of which help to increase Michelin's competitive edge. This was the first time a tire cord manufacturing facility had installed this type of pollution prevention equipment and Uniroyal Goodrich has shown that this technology can be used with great results throughout the industry sector. Uniroyal Goodrich Tire Manufacturing has been a member of *Businesses for the Bay* since 1997. For more information, contact Stan McIlvain at 804-286-1821.

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DAP, Inc.
Baltimore, Maryland

Recipient of the Significant Achievement Award for Medium Business

A recent addition to *Businesses for the Bay*, DAP, Inc., located in Baltimore, Maryland, employs 170 people in the manufacture of caulks and sealants. To prevent pollution at their facility, DAP, Inc. switched from the use of solvents for cleaning parts to a high-pressure wash system. This new system uses hot water rather than chemicals for cleaning. As a result, DAP, Inc. reduced its overall use of acetone by 16% and reduced its employees' exposure to the solvent. In addition, DAP, Inc. changed the way it stores its caulks - from small, plastic lined drums to large hoppers. The small, plastic lined drums created waste, not only of the plastic liners that had to be disposed, but of the raw product that remained on the plastic. The use of the large hoppers eliminated these waste streams and saved more than $31,000. DAP, Inc. also implements an active preventative maintenance program for its liquid tanks and piping systems and recycles plastic, wood and metal scraps. For more information about DAP, Inc., contact Chris Cool at 410-388-1500.

Winner Profiles
Businesses for the Bay Excellence Awards

Siemens Automotive Corporation
Newport News, Virginia
Recipient of the Outstanding Achievement Award for Large Business

Siemens Automotive Corporation, located in Newport News, Virginia, employs 1,100 people in the design, development and manufacture of automotive fuel system components, including gasoline fuel injectors, pressure regulators and fuel rail assemblies. The facility's strong commitment to protecting the Chesapeake Bay and preventing pollution is evident by its consideration of the environmental impacts of its products and the processes to manufacture them. One example is found in their new Deka IV fuel injector. By designing the Deka IV to be much lighter and smaller than the product it replaces, Siemens Automotive was able to cut scrap wastes from the manufacturing operation by 80%, reducing raw material usage by 1.5 million pounds. Alternative materials of construction improved the product's overall corrosion resistance and minimized or eliminated hazardous wastes. It also will facilitate end-of-life recycling of the product. Siemens Automotive Corporation also utilizes employee teams to identify pollution prevention opportunities at the facility. In 1998, one team helped the company to reduce its usage of a cleaning solvent by 82%, saving $93,300. Despite a significant increase in production, Siemens Automotive reduced its disposal of hazardous waste by 53% in 1998. Siemens Automotive is one of the original members of *Businesses for the Bay,* joining in 1996, and actively participates in its Mentor Program. For more information, contact Barry Marten at 757-875-7303.

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Procter & Gamble Cosmetics
Hunt Valley, Maryland
Recipient of the Significant Achievement Award for Large Business

A recent member of *Businesses for the Bay*, Procter & Gamble Cosmetics has 800 consumer manufacturing employees in Hunt Valley, Maryland. Procter & Gamble Cosmetic's commitment to continual improvement and pollution prevention is evident in its development of teams consisting of employees from various disciplines whose roles are to identify pollution prevention opportunities at the facility. As a result of this teamwork approach, improvements were made to several of Noxell's batch cosmetics processes. By improving manufacturing scheduling, Procter & Gamble Cosmetics could run batches of cosmetics beginning with light colors and progressing to dark colors without having to stop the manufacturing process. As a result, waste from unused products was reduced, less raw materials were required, product yields and the number batches that could be manufactured increased, and there was improvement in the reliability of the products. Procter & Gamble Cosmetics also replaced equipment with more efficient models and modified existing equipment to run more effectively, which helped to decrease wastes and the amount of raw material required. Procter & Gamble Cosmetics maintains active recycling programs and provides Environmental Awareness training for all of its employees. For more information, contact Curtis Elliott at 410-785-4482.

Winner Profiles

Businesses for the Bay 1999 Mentor of the Year

Denise Jeffries

City of Newport News
Newport News, Virginia

The Mentor of the Year Award is presented annually to an individual who has shown strong leadership, provided valuable technical assistance to others and recruited new *Businesses for the Bay* participants.

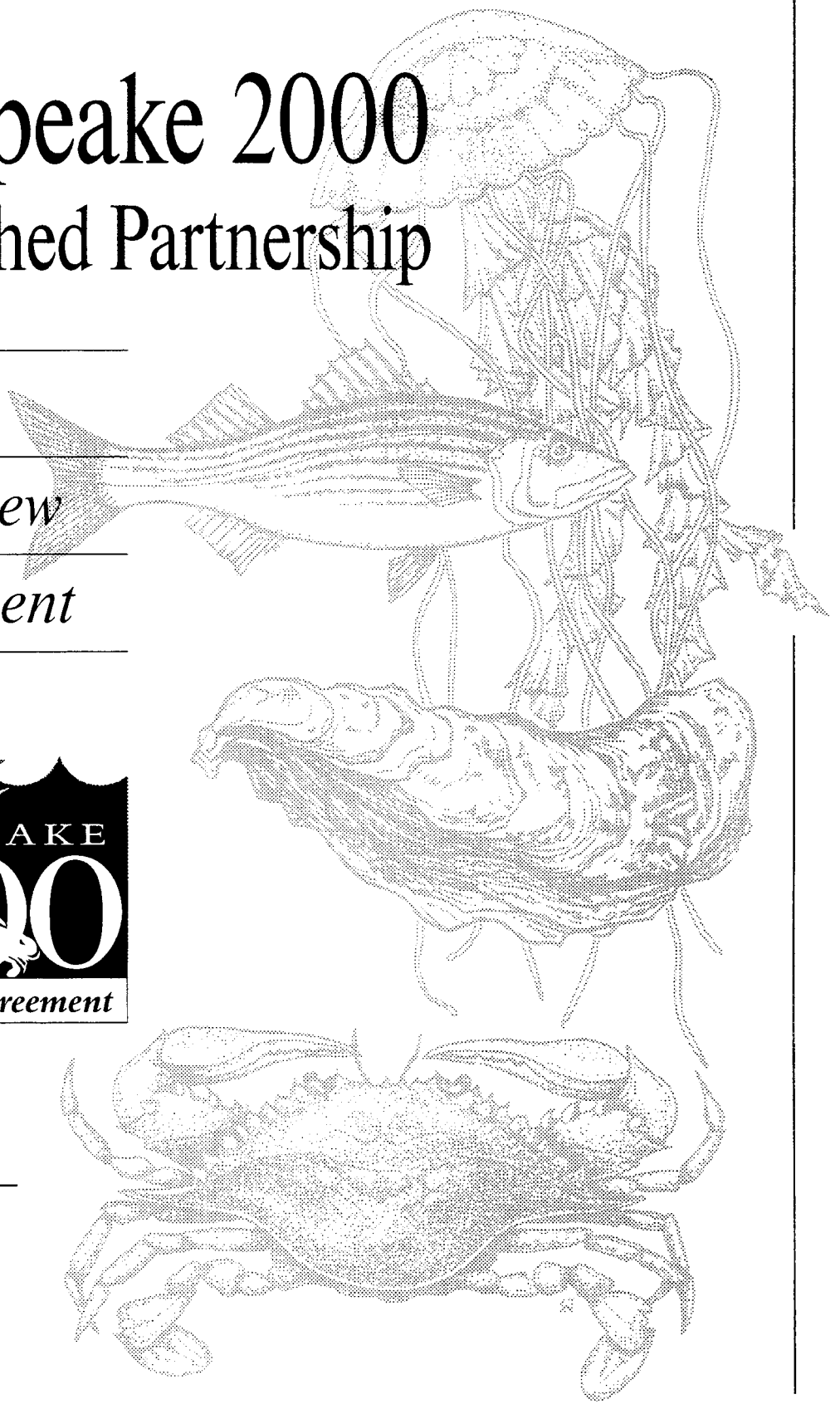
Denise Jeffries of the City of Newport News, Virginia has been selected as the 1999 Mentor of the Year. As the City's Commercial Recycling Coordinator, Ms. Jeffries is working to develop a waste exchange program among the city's and state's business community and to implement the City of Newport News Environmentally Preferable Procurement Policy. Ms. Jeffries has provided outstanding leadership and support to the *Businesses for the Bay* Mentor Program since she volunteered as a Mentor in 1997. Although Ms. Jeffries works primarily in the recycling field, she fully understands the importance and profitability of preventing pollution at the source and promotes pollution prevention techniques to the many businesses in her community by performing waste assessments and employee training. Her work is not limited by the city's borders, however, as she makes herself available as a resource to businesses and local governments throughout Virginia and the Chesapeake Bay watershed. Ms. Jeffries recruits new participants, promotes *Businesses for the Bay* through articles in newsletters and the local newspaper, hands out brochures, and includes information about the program in her presentations and training sessions. She also encourages larger businesses to work cooperatively with smaller businesses to realize the successes of preventing pollution. For more information about Ms. Jeffries' involvement in the Mentor Program, contact her at 757-269-2873.

Chesapeake 2000
A Watershed Partnership

Draft for

Public Review

and Comment



CHESAPEAKE 2000

The Renewed Agreement

DECEMBER 8, 1999

Public Comment Preamble

We are releasing this draft document to solicit your comments. It has been developed by the Chesapeake Bay Program partners with the assistance of thousands of citizens, scientists and policy makers from throughout the Chesapeake Bay region. It contains commitments that are far reaching and that address issues of the waters and living resources of the Bay and its rivers, and the land and air that surround them. It is intended to take us well into the next decade and beyond.

For the most part, the document represents issues that the signatories believe must be addressed. In order to finalize our decisions, we must hear from you. Have we addressed your concerns? Will the Bay and its rivers be better off as a result of the commitments proposed? We need to hear from you.

Public comment will be received through March 31, 2000. If you would like to assist us in our consideration of this document, please send us your comments online at www.chesapeakebay.net or write to:

Chesapeake Bay Program Office
410 Severn Avenue, Suite 109
Annapolis, Maryland 21403
1-800-YOUR-BAY (968-7229)

CHESAPEAKE 2000
A Watershed Partnership

Preamble

The Chesapeake Bay is North America's largest and most biologically diverse estuary, home to more than 3,600 species of plants, fish and animals. For more than 300 years, the Bay and its tributaries have sustained the region's economy and defined its traditions and culture. It is a resource of extraordinary productivity, worthy of the highest levels of protection and restoration.

Accordingly, in 1983 and 1987, the states of Virginia, Maryland, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission and the U.S. Environmental Protection Agency signed historic agreements that established the Chesapeake Bay Program partnership to protect and restore the Chesapeake Bay's ecosystem.

For almost two decades, we, the signatories to these agreements, have worked together as stewards to ensure the public's right to clean water and a healthy and productive resource. We have sought to protect the health of the public that uses the Bay and consumes its bounty. The initiatives we have pursued have been deliberate and have produced significant results in the health and productivity of the Bay's main stem, the tributaries, and the natural land and water ecosystems that compose the Chesapeake Bay watershed.

While the individual and collective accomplishments of our efforts have been significant, even greater effort will be required to address the enormous challenges that lie ahead. Increased population and expanded development within the watershed have created ever-greater challenges for us in the Bay's restoration. These challenges are further complicated by the dynamic nature of the Bay and the ever-changing global ecosystem within which it interacts.

In order to achieve our existing goals and meet the challenges that lie ahead, we must reaffirm our partnership and recommit to fulfilling the public responsibility we undertook almost two decades ago. We must manage for the future. We must have a vision for our desired destiny and put programs into place that will secure it.

To do this, there can be no greater goal in this recommitment than to engage everyone — individuals, businesses, communities and governments — in our effort; to commit all citizens of the Chesapeake Bay watershed in a shared vision — a system with abundant, diverse populations of living resources, fed by healthy streams and rivers, sustaining strong local and regional economies, and our unique quality of life.

In affirming our recommitment through this new Chesapeake 2000, we recognize the importance of viewing this document in its entirety with no single part taken in isolation of the others. This Agreement reflects the Bay's complexity in that each action we take, like the elements of the Bay itself, is connected to all the others. This Agreement responds to the problems facing this magnificent ecosystem in a comprehensive, multi-faceted way.

By this Agreement, we commit ourselves to nurture and sustain a Chesapeake Bay Watershed Partnership and to achieve the goals set forth in the subsequent sections. Without such a partnership, future challenges will not be met. With it, the restoration and protection of the Chesapeake Bay will be ensured for generations to come.

WE COMMIT TO:

LIVING RESOURCE PROTECTION AND RESTORATION

The health and vitality of the Chesapeake Bay's living resources provide the ultimate indicator of our success in the restoration and protection effort. The Bay's fisheries and the other living resources that sustain them and provide habitat for them are central to the initiatives we undertake in this Agreement.

We recognize the interconnectedness of the Bay's living resources and the importance of protecting the entire natural system and therefore, commit to identify the essential elements of habitat and environmental quality necessary to support the living resources of the Bay. In protecting commercially valuable species, we will manage harvest levels through practices that maintain their health and stability and protect the ecosystem as a whole. We will restore passage for migratory fish and work to ensure that suitable water quality conditions exist in the upstream spawning habitats upon which they depend.

Our actions must be conducted in an integrated and coordinated manner. They must be continually monitored, evaluated and revised to adjust to the dynamic nature and complexities of the Chesapeake Bay and changes in global ecosystems. To advance this ecosystem approach, we will broaden our management perspective from single-system to ecosystem functions and will expand our protection efforts from single-species to multi-species management. We will also undertake efforts to determine how future conditions and changes in the chemical, physical and biological attributes of the Bay will affect living resources over time.

GOAL: 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.

Oysters

- ☐ By 2010, achieve, at a minimum, a tenfold increase in oysters in the Chesapeake Bay, based upon a 1994 baseline. By 2002, develop and implement a strategy to achieve this increase by using sanctuaries sufficient in size and distribution, aquaculture and other management approaches necessary to achieve this objective.

Exotic Species

- ☐ By 2002, identify exotic species which are producing significant negative impacts to the Bay's aquatic ecosystem or have the potential to yield such impacts. By 2004, develop and implement management plans for those exotic species that are deemed problematic to the restoration and integrity of the Bay's ecosystem.

☐ In 2000, establish a Chesapeake Bay Program Task Force to:

1) Work cooperatively with the U.S. Coast Guard, the ports, the shipping industry and environmental interests at the national level to help establish and implement a national program designed to substantially reduce and, where possible, eliminate the introduction of exotic species carried in ballast water; and

2) By 2002, develop and implement an interim voluntary ballast water management program for the waters of the Bay and its tributaries.

Fish Passage and Migratory Fish and Resident Fish

☐ By June 2002, identify the final initiatives necessary to achieve our existing goal of restoring fish passage for migratory fish to more than 1,357 miles of blocked river by 2003.

☐ By 2004, set a new goal with implementation schedules to achieve restoration of additional passage for migratory and resident fish.

☐ For priority migratory fish species, by 2002, assess trends in populations, determine tributary-specific target population sizes based on projected fish passage and available habitat, and provide recommendations to achieve those targets.

☐ By 2003, revise fish management plans to include strategies to achieve tributary-specific migratory fish target population sizes.

Multi-species Management

☐ By 2005, develop multi-species management plans for targeted species.

☐ By 2007, revise and implement existing fisheries management plans to incorporate ecological, social and economic considerations, multi-species fisheries management and ecosystem approaches.

Crabs

☐ Manage the blue crab population to restore a healthy spawning biomass, size and age structure. By 2001, establish a harvest target and implement state fisheries management strategies that are complementary Baywide.

VITAL HABITAT PROTECTION AND RESTORATION

The Chesapeake Bay's natural infrastructure is an intricate system of terrestrial and aquatic habitats, linked to the landscapes and the environmental quality of the watershed. It is composed of the thousands of miles of river and stream habitat that interconnect the land, water, living resources and human communities of the Bay watershed. These vital habitats — including open water, underwater grasses, marshes, wetlands, streams and forests — support living resource abundance by providing key food and habitat for a variety of species. Submerged aquatic vegetation reduces shoreline erosion while forests and wetlands protect water quality by naturally processing the pollutants before they enter the water. Long-term protection of this natural infrastructure is essential.

In managing the Bay as a whole ecosystem, we recognize the need to focus on the individuality of each river, stream and creek and to secure their protection in concert with the communities and individuals that reside within these small watersheds. We also recognize that we must continue to refine and share information regarding the importance of these vital habitats to the Bay's fish, shellfish and waterfowl. Our efforts to preserve the integrity of this natural infrastructure will protect the Bay's waters and living resources and will ensure the viability of human economies and communities that are dependent upon those resources for sustenance, reverence and posterity.

GOAL: PRESERVE, PROTECT AND RESTORE THOSE HABITATS AND NATURAL AREAS VITAL TO THE SURVIVAL AND DIVERSITY OF THE LIVING RESOURCES OF THE BAY AND ITS RIVERS.

Submerged Aquatic Vegetation (SAV)

- ☐ Recommit to the existing SAV Restoration Goal of 114,000 acres.

- ☐ By 2002, revise SAV restoration goals to reflect historic abundance, measured as acreage and density from 1930s to present. The revised goals will include specific levels of water clarity which are to be met in 2010. Strategies to achieve these goals will address water clarity, water quality and bottom disturbance.

- ☐ By 2002, implement a strategy to accelerate restoration of SAV beds in areas of critical importance to the Bay's living resources.

Wetlands

- ☐ Achieve a no-net loss of jurisdictional wetlands acreage and function through regulatory programs.

- ☐ Achieve a net resource gain by restoring 25,000 acres of tidal and non-tidal wetlands by 2010. To do this, we commit to achieve and maintain an average restoration rate of 2,500 acres per year basin wide by 2005 and beyond. We will evaluate our success in 2005.

- ☐ Provide information and assistance to local governments and communities groups for the development and implementation of locally generated community or watershed-based wetlands preservation plans. The goal is to have such plans implemented in 25 percent of the land area of each state's Bay watershed by 2010. The plans would preserve key wetlands that are locally identified and address surrounding land use so as to preserve wetland functions.

- ☐ Continue to evaluate the potential impact of climate change on the Chesapeake Bay watershed, particularly its wetlands.

Forests

- ☐ By 2003, ensure that measures are in place to meet our riparian forest buffer restoration goal of 2,010 miles by 2010 and determine the potential to significantly expand this goal.

- ☐ Promote the expansion and further linking of contiguous forests through conservation easements, greenways, fee simple purchase and other land conservation mechanisms.

- ☐ Work in partnership with local governments and communities to encourage the adoption of local stream corridor protection plans that include provisions for riparian forest conservation and restoration, with a goal of 50 percent local government and community participation by 2010.

Stream Corridors

- ☐ By 2001, each jurisdiction will work with local governments and communities to select pilot projects that promote stream corridor protection, restoration and the maintenance of minimum flows.

- ☐ By 2003, include in the "State of the Bay Report" and make available to the public, local governments and communities information concerning the aquatic health of stream corridors in the watershed, including the minimum freshwater stream flows needed to maintain or restore aquatic health.

- ☐ Work with watershed organizations and local governments to develop a watershed management plan, that addresses, among other things, the protection of forest buffers and local stream corridors with a goal of 50 percent local government participation by 2010.

- ☐ Continually improve monitoring programs for evaluating the aquatic health of stream corridors and the success of protection and restoration efforts. Ensure that the monitoring networks address the critical impact of ground water on surface water flow and quality.

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WATER QUALITY RESTORATION AND PROTECTION

Improving water quality is the most critical element in the overall restoration and protection of the Chesapeake Bay and its tributaries. In 1987, we committed to achieving a 40 percent reduction in controllable nutrient loads to the Bay. In 1992, we committed to tributary-specific reduction strategies to achieve this reduction and agreed to stay at or below these nutrient loads once attained. We have made measurable reductions in pollution loading despite continuing growth and development. Still, more will have to be done.

Recent actions taken under the Clean Water Act resulted in listing portions of the Chesapeake Bay and its tidal rivers as "impaired waters." These actions have emphasized the regulatory framework of the Act along with the ongoing cooperative efforts of the Bay Program as the means to address the nutrient enrichment problems within the Bay and its rivers. In response, we have developed, and are implementing, a process for integrating the cooperative and statutory programs of the Chesapeake Bay and its tributaries. We have agreed to the goal of improving water quality in the Bay and its tributaries so that these waters may be removed from the impaired waters list prior to the time when regulatory mechanisms under Section 303(d) of the Clean Water Act would be applied.

We commit to achieve the water quality conditions necessary to support living resources throughout the Chesapeake Bay ecosystem. In addition, we will make the prevention of pollution a central theme in the protection of water quality. Where we have failed to achieve established water quality goals, we will take actions necessary to reach and maintain those goals. We will complement these efforts with actions that are protective of freshwater flow regimes for riverine and estuarine habitats. In pursuing the restoration of vital habitats, we will work to improve water clarity in order to meet light requirements necessary to support SAV. We will develop and implement improved plans and strategies necessary to reach and maintain those goals. We will also expand our efforts to reduce sediments and airborne pollution, and ensure that the Bay is free

from the effects of toxics on living resources and human health. We will continue our cooperative intergovernmental approach to achieve and maintain water quality goals through cost-effective and equitable means within the framework of federal and state law. We will evaluate the potential impacts of emerging issues, including airborne ammonia and nonpoint sources of chemical contaminants. Finally, we will continue to monitor water quality conditions and adjust our strategies accordingly.

GOAL: ACHIEVE AND MAINTAIN THE WATER QUALITY NECESSARY TO SUPPORT THE AQUATIC LIVING RESOURCES OF THE BAY AND ITS TRIBUTARIES AND TO PROTECT HUMAN HEALTH.

Nutrients

- ☐ Continue efforts to achieve and maintain the 40 percent nutrient reduction goal agreed to in 1987, as well as the goals being adopted for the tributaries south of the Potomac River.

- ☐ By 2010, correct all nutrient-related problems in the Chesapeake Bay and its tidal tributaries sufficient to remove the Bay and the tidal portions of its tributaries from the list of impaired waters under the Clean Water Act. In order to achieve this:

  1) By 2001, define the water quality conditions necessary to protect aquatic living resources; and then, assign load reductions for nitrogen and phosphorus to each major tributary;

  2) By 2002, complete a public process to develop and begin implementation of revised Tributary Strategies to achieve and maintain the assigned loading goals; and,

  3) By 2003, the jurisdictions with tidal waters will use their best efforts to adopt new or revised water quality standards consistent with the defined water quality conditions. Once adopted by the jurisdictions, the EPA will work expeditiously to review the new or revised standards, which will then be used as the basis for removing the Bay and its tidal rivers from the list of impaired waters.

Sediment

- ☐ By 2010, correct all sediment-related problems in the Chesapeake Bay and the tidal portion of its tributaries sufficient to remove the Bay and the tidal portions of its tributaries from the list of impaired waters under the Clean Water Act. In order achieve this:

1) Using a process parallel to that established for nutrients, determine the load reductions to achieve the water quality conditions necessary to protect aquatic living resources and assign load reductions for sediment to each major tributary by 2001; complete tributary strategies to achieve the reductions by 2002; integrate sediment reductions in order to develop water quality standards for tidal waters by 2003, based upon the defined water quality conditions; and

2) By 2003, work with the Susquehanna River Basin Commission and others to adopt and begin implementing strategies that prevent the loss of the sediment retention capabilities of the lower Susquehanna River dams.

Chemical Contaminants

- ☐ We commit to fulfilling the 1994 goal of a Chesapeake Bay free of toxics by reducing or eliminating the input of chemical contaminants from all controllable sources to levels that result in no toxic or bioaccumulative impact on the living resources that inhabit the Bay or on human health.

- ☐ By Fall of 2000, reevaluate and revise, as necessary, the *Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy*, focusing on:

  1) Complementing state and federal regulatory programs to go beyond traditional point source controls, including nonpoint sources such as groundwater discharge and atmospheric deposition by using a watershed-based approach.

  2) Understanding the effects and impacts of chemical contaminants to increase the effectiveness of management actions.

- ☐ Through continual improvement, strive for zero release of chemical contaminants from point sources (including air sources) using voluntary pollution prevention measures, with particular emphasis on problem chemicals in regions identified to have probable or potential toxic impacts to living resources.

- ☐ Reduce the potential risk of pesticides to the Bay by targeting education, outreach and implementation of Integrated Pest Management and specific Best Management Practices on agricultural, urban, suburban and resource lands that have higher potential for contributing pesticide loads to the Bay.

Priority Urban Waters

- ☐ Support the restoration of the Anacostia River, Baltimore Harbor, and Elizabeth River and their watersheds as models for urban river restoration in the Bay basin.

1) By 2010, the District of Columbia, working with its watershed partners, will reduce pollution loads to the Anacostia River in order to eliminate public health concerns and achieve the living resource, water quality and habitat goals of this and past Agreements.

Air Pollution

- ☐ By 2003, assess the effects of airborne nitrogen compounds and chemical contaminants on the Bay ecosystem and develop a plan for strengthening air emission pollution prevention programs throughout the airshed.

Boat Discharge

- ☐ By 2003, establish appropriate areas within the Chesapeake Bay and its tributaries as "no discharge zones" for human waste from boats. By 2010, expand by 50 percent the number and availability of waste pump-out facilities.

- ☐ By 2006, reassess our progress in reducing the impact of boat waste on the Bay and its tributaries.

SOUND LAND USE

In 1987, the signatories agreed that "there is a clear correlation between population growth and associated development and environmental degradation in the Chesapeake Bay system." This Agreement reaffirms that concept and recognizes that more must be done.

Enhancing, or even maintaining, the quality of the Bay while accommodating growth will frequently involve difficult choices. It will require a renewed commitment to appropriate development standards. The states and the federal government will assert the full measure of their authority to mitigate the potential adverse effects of continued growth. Local jurisdictions have been delegated authority over many decisions regarding growth and development which have both direct and indirect effects on the Chesapeake Bay system and its living resources. The role of local governments in the Bay's restoration and protection effort will be given proper recognition and support through state and federal resources. States will also engage in active partnerships with local governments in managing growth and development in ways that support the following goal.

We acknowledge that future development will be sustainable only if we protect our natural and rural resource land, limit impervious surfaces and concentrate new growth in existing population centers or suitable areas served by appropriate infrastructure. We will work to integrate environmental, community and economic goals by promoting more concentrated forms of development, consistent with our historic urban, village and rural settlement patterns. We will also strive to coordinate land-use, transportation and infrastructure planning so that funding and policies at all levels of government do not contribute to poorly planned growth and development or degrade local habitat. We will advance these policies by creating partnerships with local governments to protect our communities and to discharge our duties as trustees in the stewardship of the Chesapeake Bay. Finally, we will report on our progress in achieving our commitments to promote sound land use every two years.

GOAL: DEVELOP, PROMOTE AND ACHIEVE SOUND LAND USE PRACTICES WHICH PROTECT AND RESTORE WATERSHED RESOURCES AND WATER QUALITY, MAINTAIN REDUCED POLLUTANT LOADINGS FOR THE BAY AND ITS TRIBUTARIES, AND RESTORE AND PRESERVE AQUATIC LIVING RESOURCES.

Land Conservation

- ☐ By 2002, expand the use of voluntary and market-based mechanisms such as easements, purchase or transfer of development rights and other approaches to protect and preserve natural resources lands.

- ☐ Strengthen programs for land acquisition and preservation within each state that are supported by funding and target the most valued lands for protection.

- ☐ By 2001, complete an assessment of the Bay's resource lands including forests and farms, emphasizing their role in the protection of water quality and critical habitats, as well as cultural and economic viability.

- ☐ Provide technical and financial assistance to local governments to plan for or revise plans, ordinances and subdivision regulations to provide for the conservation and sustainable use of the forest and agriculture lands.

- ☐ Develop and maintain in each jurisdiction a strong GIS system fully accessible to local governments to promote sound land use practices.

Public Access

- ☐ By 2010, expand the system of public access points to the Bay, its tributaries and related resource sites by 30 percent by working with state and federal agencies, local governments and stakeholder organizations.

- ☐ Encourage and support localities in their effort to enhance public access to the Bay and its tributaries.

- ☐ By 2005, increase the number of designated water trails in the Chesapeake Bay region by 500 miles.

- ☐ Enhance outreach materials and opportunities that promote public access to natural, recreational, historical and cultural resources within the Chesapeake Bay while also conveying its value.

Development, Redevelopment and Revitalization

- * ☐ By 2010, reduce in each state the rate of conversion of forest and agricultural lands to development by at least 30 percent, with progress reported regularly to the Chesapeake Executive Council.

- ☐ Identify and remove state and local impediments to low impact development designs to encourage the use of such approaches to minimize water quality impacts.

- ☐ Work with communities and local governments to encourage sound land use planning and practices that address the impacts of growth, development and transportation on the watershed.

- ☐ Review current tax policies to identify elements which discourage sustainable development practices or encourage undesirable growth patterns. Promote the modification of such policies and the creation of new tax incentives which encourage investments consistent with sound growth management principles.

- ☐ The jurisdictions will promote redevelopment and remove barriers to investment in underutilized urban, suburban and rural communities by working with localities and development interests.

- ☐ Provide analytical tools to local governments and communities for watershed-based assessment of the impacts of growth, development and transportation decisions. Make available information to encourage the development community and others to champion the application of sound use practices.

- ☐ By 2002, develop information and guidelines to assist local governments and communities to limit impervious cover on undeveloped and moderately watersheds and reduce the impact in highly developed watersheds.

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* Five of the six Bay Program Partnership signatories agree that this commitment should be part of the Chesapeake 2000 Agreement

- ☐ By 2003, work with local governments and communities to develop land-use management and water resource protection approaches that encourage the concentration of new residential development in areas supported by adequate water resources and infrastructure to minimize impacts on water quality.

- ☐ The jurisdictions will evaluate local implementation of stormwater, erosion control and other locally-implemented water quality protection programs that affect the Bay system and ensure that these programs are being coordinated and applied effectively in order to minimize the impacts of development.

- ☐ *Develop and promote wastewater treatment options, such as nutrient reducing septic* systems, which protect public health and minimize impacts to the Bay's resources.

- ☐ Strengthen brownfield redevelopment. By 2010, rehabilitate and restore 1,050 brownfield sites to productive use.

Transportation

- ☐ By 2002, the signatory jurisdictions will promote coordination of transportation and land use planning to encourage compact development patterns, revitalization in existing communities and transportation strategies that minimize adverse effects on the Bay and its tributaries.

- ☐ By 2002, each state will coordinate its transportation policies and programs to reduce the dependence on automobiles by incorporating travel alternatives such as telework, pedestrian, bicycle and transit options, as appropriate, in the design of projects so as to increase the availability of alternative modes of travel as measured by increased use of those alternatives.

- ☐ Establish policies and incentives which encourage the use of clean vehicle technologies.

INDIVIDUAL RESPONSIBILITY AND COMMUNITY ENGAGEMENT

The Chesapeake Bay is dependent upon the actions of every citizen in the watershed, both today and in the future. We recognize that the cumulative benefit derived from community-based watershed programs is essential for continued progress toward a healthier Chesapeake Bay.

Therefore, we commit ourselves to engage our citizens by promoting a broad conservation ethic throughout the fabric of community life, and foster within all citizens a deeper understanding of their roles as trustees of their own local environments. Through their actions, each individual can contribute to the health and well-being of their neighborhood streams, rivers and the land that surrounds them, not only as ecological stewards of the Bay but also as members of watershed-wide communities. By focusing individuals on local resources, we will advance Baywide restoration as well.

We recognize that the future of the Bay also depends on the actions of generations to follow. Therefore, we commit to provide opportunities for cooperative learning and action so that communities can promote local environmental quality for the benefit and enjoyment of residents and visitors. We will assist communities throughout the watershed in improving quality of life, thereby strengthening local economies and connecting individuals to the Bay through their shared sense of responsibility. We will seek to increase the financial and human resources available to localities to meet the challenges of restoring the Chesapeake Bay.

GOAL: PROMOTE INDIVIDUAL STEWARDSHIP AND ASSIST INDIVIDUALS, COMMUNITY-BASED ORGANIZATIONS, LOCAL GOVERNMENTS AND SCHOOLS TO UNDERTAKE INITIATIVES TO ACHIEVE THE GOALS AND COMMITMENTS OF THIS AGREEMENT.

Public Outreach and Education

- ☐ Make public outreach and citizen interaction a priority in order to achieve public awareness and personal involvement on behalf of the Bay and local watersheds.

- ☐ Use the latest communications technologies to provide a comprehensive and interactive source of information on the Chesapeake Bay and its watershed for use by public and technical audiences.

- ☐ Continue to forge a partnership with the Departments of Education in each jurisdiction to integrate core messages about the Chesapeake Bay and its watershed into school curricula.

- ☐ Provide students and teachers alike with opportunities to directly participate in local restoration and protection projects, and to recognize stewardship efforts in schools and on school property.

- ☐ By 2002, expand citizen outreach efforts to incorporate minority populations by highlighting their cultural and historical ties to the Bay. Emphasis will be placed on providing multi-lingual educational materials on stewardship activities and Bay information.

Community Engagement

- ☐ Jurisdictions will identify small watersheds where community-based actions are essential to meeting Bay restoration goals – in particular wetlands, forested buffers, stream corridors and public access and work with local governments and community organizations to bring the appropriate range of Bay Program resources to these communities.

- ☐ Seek to enhance funding for community-based programs that pursue restoration and protection projects that will assist in the achievement of the goals of this and past agreements.

- ☐ By 2001, develop and maintain a clearing house for information on local watershed restoration efforts, including financial and technical assistance.

- ☐ By 2002, each signatory jurisdiction will offer easily-accessible information suitable for analyzing environmental conditions at a small watershed scale.

- ☐ By 2002, complete a reevaluation of the Local Government Participation Action Plan and make necessary changes in Bay Program and jurisdictional functions based upon the reevaluation.

- ☐ Improve methods of communications with and among local governments on Bay issues and provide adequate opportunities for discussion of key issues.

Government by Example

- ☐ Ensure that all properties owned, managed or leased by the signatories are developed and used in a manner consistent with all relevant goals, commitments and guidance of this Agreement.

- ☐ Ensure that the development, redevelopment, lease and use of signatory jurisdictional properties and structures are consistent with this Agreement's goals.

- ☐ Ensure that the design and construction of signatory-funded development and redevelopment projects are consistent with all relevant goals, commitments and guidance of this Agreement.

- ☐ Expand the use of clean vehicle technologies and fuels on the basis of emission reductions, so that a significantly greater percentage of each signatory government's fleet of vehicles use some form of clean technology.

- ☐ Build partnerships with Delaware, New York and West Virginia by promoting communication and by seeking agreements on issues of mutual concern.

BY THIS AGREEMENT, we rededicate ourselves to the restoration and protection of the ecological integrity, productivity and beneficial uses of the Chesapeake Bay system. We reaffirm our commitment to previously-adopted Chesapeake Bay Agreements and their supporting policies. We agree to report annually to the citizens on the state of the Bay and consider any additional actions necessary.

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(Date)

FOR THE CHESAPEAKE BAY COMMISSION _____

FOR THE STATE OF MARYLAND _____

FOR THE COMMONWEALTH OF PENNSYLVANIA _____

FOR THE COMMONWEALTH OF VIRGINIA _____

FOR THE DISTRICT OF COLUMBIA _____

FOR THE UNITED STATES OF AMERICA _____