

Chesapeake Bay Policy Committee

Date: Friday, September 17 2004

Time: 10:00 a.m. – 12 noon*

**Place: Third Floor Board Room
777 North Capitol Street, NE
Washington, DC 20002**

**Lunch will be available for committee members and alternates after the meeting.*

Meeting Agenda

- 10:00 1. **Welcome, Introductions, Announcements
and Remarks of New Chair** Hon. Vincent Orange
Chair, District of Columbia
- 10:10 2. **Approval of Meeting Summary
for July 14, 2004** Chair Orange

Recommended action: Approve DRAFT Meeting Summary (*Att. 2*).

- 10:15 3. **Bay Program Perspective on Tributary Strategies** Rebecca Hanmer, Director
EPA Chesapeake Bay
Program Office

EPA's Chesapeake Bay Program Office coordinates the actions of the Bay Program partners as they translate their published tributary strategies into implementation plans for the next phase of the restoration effort. Ms. Hanmer has been asked to share EPA's perspective on progress in several key areas, including the Chesapeake Bay Blue Ribbon Funding Panel and efforts to integrate air and water quality improvement measures. She also will share EPA's response to a COG request for cooperation on a regional approach to tributary strategies.

Recommended action: Receive briefing

- 10:50 4. **Response to Proposed Urban Stormwater Targets** Cameron Wiegand
Montgomery County Dept.
of Environmental Protection

As part of its effort to produce an implementation plan for its tributary strategies, Maryland Department of Natural Resources officials have allocated how much nutrient reduction local jurisdictions would have to accomplish to meet an overall goal for Maryland's portion of the Potomac basin and proposed a set of targets for the implementation of various urban stormwater BMPs. Mr. Wiegand will provide Montgomery County's perspective on these targets.

Recommended action: Receive briefing.

- 11:10 5. **Review of the Chesapeake Bay Commission’s BMP Cost Effectiveness Report** Pat Stuntz, MD Director
Chesapeake Bay Commission

Steve Bieber, COG staff

At its May 21 meeting, the committee asked COG staff to prepare an analysis of the cost effectiveness and applicability of the various measures for further reduction of nutrients and sediment from nonpoint sources outlined in the tributary strategies, commonly known as “best management practices.”

Recently, the Chesapeake Bay Commission has prepared a similar analysis. Ms. Stuntz, Maryland Director of the Commission, will present preliminary findings from its report. Steve Bieber will explain COG staff’s next moves in regard to its report.

Recommended Action: Receive briefing; provide guidance to staff on direction of COG report

- 11:35 6. **WRTC Report: Permitting and Point Source Policy Developments; A Local Perspective on the Controversy over Bay Program Progress**..... Uwe Kirste, WRTC Chair
Prince William County DPW

Steve Bieber, COG staff

Mr. Kirste will discuss the Water Resources Technical Committee’s review of several recent developments advancing a regulatory program for achieving the Bay Program’s water quality goals and provide the committee with several recommendations for comment or other actions.

Mr. Bieber will summarize recent concerns raised about the Bay Program’s use of models to track progress and the various outside evaluations the issue has sparked, including a recent hearing of the House Government Affairs Committee in Virginia. He will present a draft fact sheet (*Att. 6*) prepared by COG staff with WRTC input that is designed to demonstrate the progress made to date by local governments in reducing nutrients from their wastewater plants.

Recommended Action: Respond to WRTC’s recommendations; provide input on the draft fact sheet.

- 11:50 7. **Changes in Regional Water Fund Budget Process** Ted Graham, COG Water
Resources Program Director

Mr. Graham will note COG staff plans to involve the committee in the oversight of the Regional Water Fund work program and budget as a result of a decision to terminate the Environment and Public Works Directors Committee. Staff will note potential changes in membership and bylaws it is recommending as an aspect of the changes.

Recommended action: Refer item to Water Resources Technical Committee to prepare a recommendation on changes to the membership and bylaws of the Chesapeake Bay Policy Committee.

11:55 **8. New Business** Members

12:00 **9. Adjourn**

The next meeting is scheduled for Friday, November 19, 2004, 10:00 a.m. - 12:00 noon.

(Remember: COG will reimburse members and alternates for Metro fares.)

Enclosures:

- Item 2 DRAFT Meeting Summary of July 14, 2004
- Item 6 DRAFT fact sheet on wastewater treatment plant achievements in the Washington metropolitan region

CHESAPEAKE BAY POLICY COMMITTEE
777 North Capitol Street, N.E.
Washington, D.C. 20002

DRAFT MINUTES OF JULY 14, 2004, MEETING

ATTENDANCE:

Members and alternates:

Penelope Gross, Fairfax County, CBPC Vice Chair
Martin Nohe, Prince William County
Andy Fellows, College Park
Hamid Karimi, District of Columbia
Bruce Williams, City of Takoma Park
J Davis, City of Greenbelt
Uwe Kirste, Prince William County
Sherry Conway Appel, Prince George's County
Beverly Warfield, Prince George's County
Chris Akinbubola, Prince George's County

Interested parties:

J. L. Hearn, WSSC

Guests:

Theresa Pierno, Chesapeake Bay Foundation
Chris Conner, EPA Chesapeake Bay Program
Holly Franz, Fairfax County
Eric Grabowsky, Arlington County

Staff:

Stuart Freudberg, DEP
Ted Graham, DEP
Steve Bieber, DEP
Brian Rustia, DEP
Karl Berger, DEP

1. Welcome, Introductions and Announcements

Vice Chair Gross opened the meeting at 10:10 a.m. She noted that Peter Shapiro of Prince George's County had announced his resignation from the county council and his COG committee posts.

Ms. Gross asked Mr. Bieber of COG staff to briefly report the status of the Chesapeake Bay Commission's request to have federal officials designate the Bay as a "national treasure." Responding to concerns raised by members at the May 21 meeting, Mr. Bieber noted that there is no precedent for such a designation. He also noted the rationale behind a related request made by the Commission for the federal government to raise its commitment to fund the restoration effort to \$1 billion. COG staff will continue to track the progress of this effort, he said.

2. Approval of Meeting Summary for May 21, 2004

The meeting summary was approved.

3. The CBF Perspective on Restoration Progress

Ms. Pierno, a vice president of the Chesapeake Bay Foundation, outlined CBF's views on the progress being made toward achievement of the water quality goals of the Chesapeake 2000 Agreement and the actions being pursued by the foundation.

Speaking from notes, Ms. Pierno criticized the new tributary strategies recently released by the Bay Program states and the District of Columbia as exceedingly delayed and lacking realistic plans for implementation. As a result, she said, CBF is seeking more vigorous EPA action – she described it as a “hammer approach” – toward encouraging the states and other parties to act. CBF officials recently met with officials from EPA III to press for such action, she noted.

In addition, CBF is seeking to enhance its ability to take legal action, Ms. Pierno said. It is using a \$1.25 million grant to set up a litigation department and it is possible, she said, that CBF may soon sue EPA and some specific point source dischargers to force some actions.

During a dialogue with committee members, Mr. Karimi questioned the effectiveness of a continued focus on reducing nutrient discharges from wastewater plants when pollution from nonpoint sources comprises the major share of the total. Ms. Pierno said that CBF does also focus on nonpoint sources, citing a soon-to-be-released report on the problems caused by excess manure in certain areas of the watershed. She added that current BMPs aimed at farming practices do not go far enough and that CBF will pursue both legislative and legal action to achieve greater results in this area.

Responding to an earlier comment by Ms. Pierno that CBF is lobbying for Virginia legislators to approve a statewide fee to pay for further nutrient reduction efforts by wastewater plants along the lines of the legislation passed this year in Maryland, Mr. Nohe said his county does not want to send funds it may collect to Richmond for use in a state-run program. If further wastewater improvements at the county-run wastewater plant are needed, he said, the county would prefer to raise its own rates to accomplish this. In reply, Ms. Pierno said that the logic of a statewide program is that it will enable communities that would otherwise be without the financial ability to make such improvements and would spread the costs over the widest possible base.

Mr. Hearn criticized CBF's approach for concentrating too much on point sources and urban resources. Ms. Pierno again cited the upcoming manure report and summarized several of the recommendations it makes to enhance progress in this sector.

Ms. Conway Appel said that the cost of efforts to reduce nutrients from wastewater plants had been lower than expected because the plants could experiment in the absence of rigid permit requirements. Pursuing legal action could jeopardize this cost saving she said, by resulting in strict permit limits. Ms. Pierno replied that CBF is only seeking to have annual permit limits for nutrients imposed.

Ms. Gross took exception to an earlier comment by Ms. Pierno, in which she cited the work of former Virginia Tech engineer Cliff Randle, who claims that further progress to reduce nutrients by wastewater plants can be achieved for much less than current cost estimates. Members of the Blue Ribbon Financing Panel, on which Ms. Gross serves, were not impressed by Mr. Randle's recent report on this topic.

4. Report on Proposed Bay Program Media Campaign

Mr. Conner, Director of Communications for the Chesapeake Bay Program, outlined plans for launching a media advertising campaign in the Washington metropolitan region to encourage the public to take actions to reduce the amount of nutrient pollution arising from lawn care practices. This pilot effort would be funded by about \$620,000 that has been pledged by three sponsors: EPA, the state of Virginia and the District of Columbia. It will use radio ads and several related means to distribute its message. Based on modeling results that show that lawns within the region contribute about 14.7 million pounds of nitrogen and 560,000 pounds of phosphorus annually, the campaign's goal is to reduce nitrogen discharge by about 800,000 pounds and phosphorus, by 120,000 pounds.

The campaign has been carefully designed by professional marketers to provide something other than a negative message and to give participants something in the form of signs and other notification that will hopefully inspire them to change their current practices, Conner said. Based on the outcome, the campaign could be expanded to other areas within the watershed or to target other forms of pollution in future years, he added.

The Bay Program would like to establish a number of local partners to enhance the campaign, including local governments in the region, Conner said. The current schedule calls for the campaign to be launched in February 2005.

Members cited several potential challenges they foresaw, including the interest of retailers in selling lawn care products such as fertilizers, but they also expressed enthusiasm in the effort. Several members said they would look into whether the campaign could tie into existing outreach efforts by local governments in this area. Ms. Conway Appel said that efforts should be made to coordinate the Bay Program's campaign with existing outreach efforts aimed at air quality improvement and drinking water conservation.

Action Item: COG staff will explore opportunities for coordinating the Bay Program campaign with existing stormwater outreach programs among local governments in the region.

5. Report from Institute for Regional Excellence

Ms. Franz, a staffer with the Fairfax County Department of Community and Recreation Services and a member of the Institute for Regional Excellences' Environmental Project Team at COG, accompanied by team member Mr. Grabowsky of Arlington County, presented the results of its report on increasing public participation in achieving the Bay Program's water quality goals. The team concluded that local governments in the region should contribute to a coordinated public relations campaign to raise public awareness and change behavior in certain key areas, such as lawn care practice.

6. Tributary Strategy Update

With no time left on the agenda, Mr. Graham very briefly described the status of tributary strategy efforts in

CBPC minutes of July 14, 2004

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Maryland, Virginia and the District of Columbia as they affect local governments in the region. Ms. Gross, noting the importance of these efforts to the requirements likely to be imposed on local governments, asked staff to put tributary strategy at the top of the agenda for the next meeting.

7. New Business

Under new business, staff noted that the Blue Ribbon Funding Panel expects to hold its final meeting on Sept. 14-15, just before the next scheduled meeting of the committee. It was agreed that a major report on the panel and its findings should be scheduled for the November CBPC meeting.

8. Adjourn

The meeting was adjourned at 12:00 noon.



Municipal Wastewater Treatment in the National Capital Region

August 27, 2004

Volume 1, Number 1

About COG

The Metropolitan Washington Council of Governments (COG) is a regional organization composed of 19 local governments surrounding our nation's capital, plus area members of the Maryland and Virginia legislatures, the U.S. Senate, and the U.S. House of Representatives.

COG provides a focus for action and develops sound regional responses to such issues as the environment, affordable housing, economic development, health and family concerns, human services, population growth, public safety, and transportation.

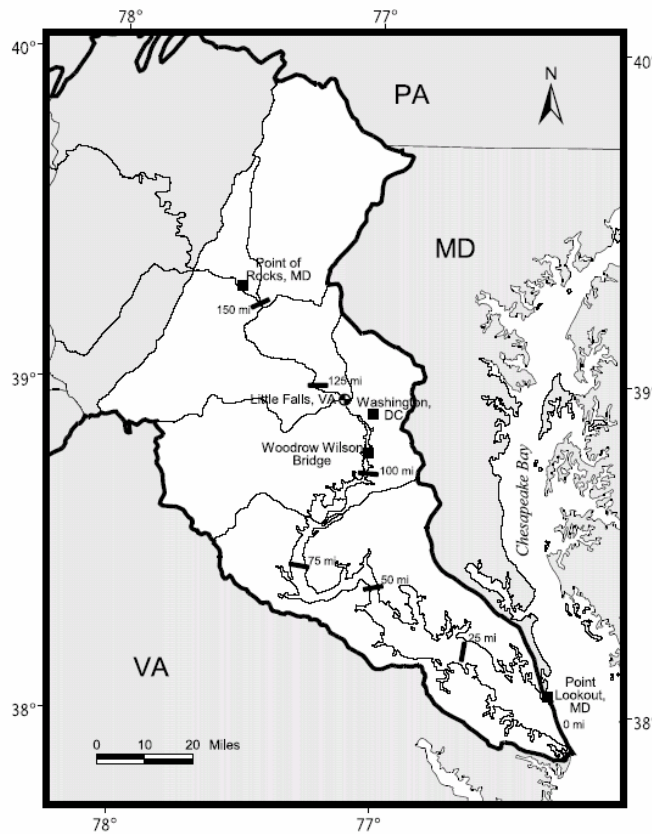
Founded in 1957, COG is an independent, nonprofit association. It is supported by financial contributions from its participating local governments, federal and state grants and contracts, and donations from foundations and the private sector. Policies are set by the full membership acting through its board of directors, which meets monthly to discuss area issues.

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The Potomac Basin

With a length of 340 miles and a drainage area of 14,670 square miles, the Potomac River basin is the second largest watershed in the entire Middle Atlantic region. The freshwater Upper Potomac River runs over 220 miles from its headwaters in the eastern Appalachian Mountains to the fall line at Little Falls, Virginia. The tidal portion of the river extends another 117 miles from the fall line to the confluence with Chesapeake Bay at Point Lookout, Virginia.



The tidal section of the Potomac River is affected by many sources of pollution, primarily from nonpoint source runoff at the fall line and effluent discharges from municipal wastewater treatment plants in the National Capital Region. With rapid population growth in the National Capital Region over the past century, the Potomac River has faced water quality problems such as bacterial contamination, low dissolved oxygen, and nuisance algal blooms. The implementation of secondary and

advanced wastewater treatment in the National Capital Region has resulted in significant improvements in water quality and ecological conditions in the Potomac Estuary, including healthy dissolved oxygen levels, reduced nuisance algal blooms, and the return of important living resources such as large mouth bass and submerged aquatic vegetation (SAV). The reductions in wastewater pollutant loadings and improvements in water quality and ecological conditions in the Potomac Estuary represent a major environmental success story.

COG's Members

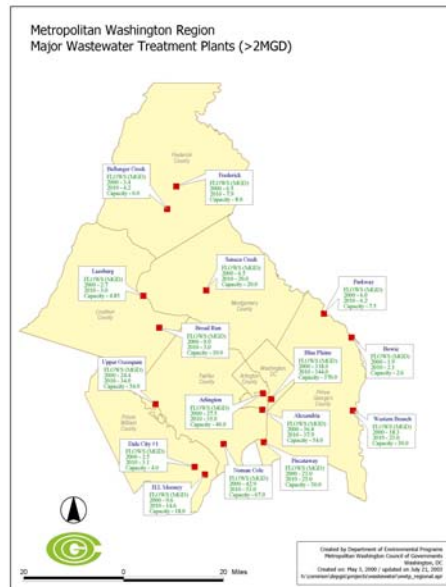
District of Columbia
 Bowie
 College Park
 Frederick County
 Gaithersburg
 Greenbelt
 Montgomery County
 Prince George's County
 Rockville
 Takoma Park
 Alexandria
 Arlington County
 Fairfax
 Fairfax County
 Falls Church
 Loudoun County
 Manassas
 Manassas Park
 Prince William County

COG Region Wastewater Capacity (mgd)

Alexandria – 54 mgd
 Arlington – 40 mgd
 Blue Plains – 370 mgd
 Ballenger Creek – 6 mgd
 Broad Run – 10 mgd
 Dale City – 4 mgd
 Frederick – 8 mgd
 H.L. Mooney – 18 mgd
 Leesburg – 5 mgd
 Noman Cole – 67 mgd
 Piscataway – 30 mgd
 Seneca Creek – 20 mgd
 UOSA – 54 mgd
TOTAL – 686 mgd

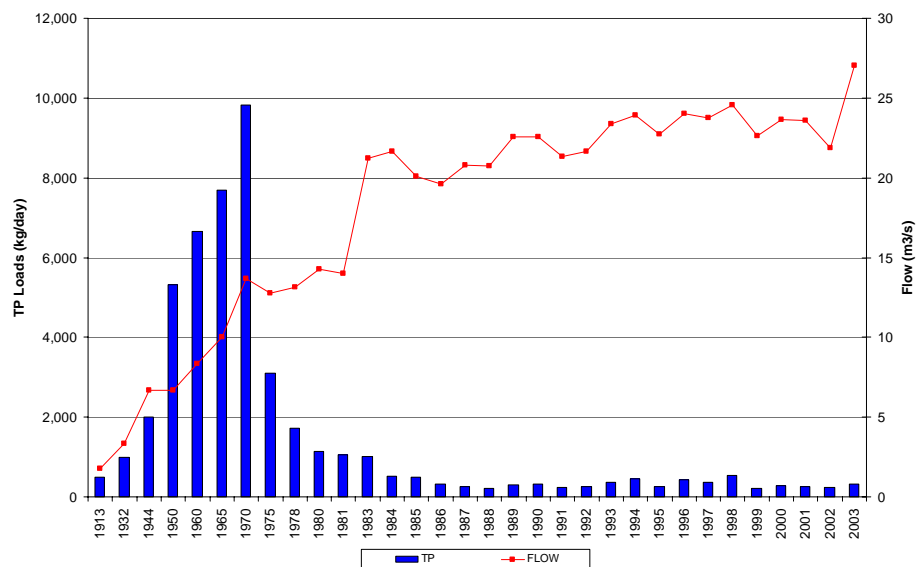
Wastewater Treatment Leads the Way

In the National Capital Region, 13 major wastewater treatment plants presently discharge effluent into the Potomac Estuary. Those facilities serve more than 4 million people and discharge a total of about 680 million gallons per day of treated wastewater. The 370 MGD Blue Plains wastewater treatment plant is the largest advanced WWTP in the world and comprises a majority of the total effluent discharged to the Potomac Estuary.



Major pollution reduction efforts began in 1959 with the implementation of secondary treatment at Blue Plains and at other facilities from 1960 to 1980. Since the early 1970s, WWTP phosphorus loadings have been reduced approximately 96% as limit of technology phosphorus controls were implemented at all of the major wastewater facilities in the region to reduce nuisance algal blooms, increase oxygen levels, and alleviate other eutrophication problems in the Potomac estuary. Since the 1990s, advanced biological nutrient removal has also been implemented, reducing WWTP total nitrogen loads by about 44%.

Annual Total Phosphorus Loads From Regional WWTPs



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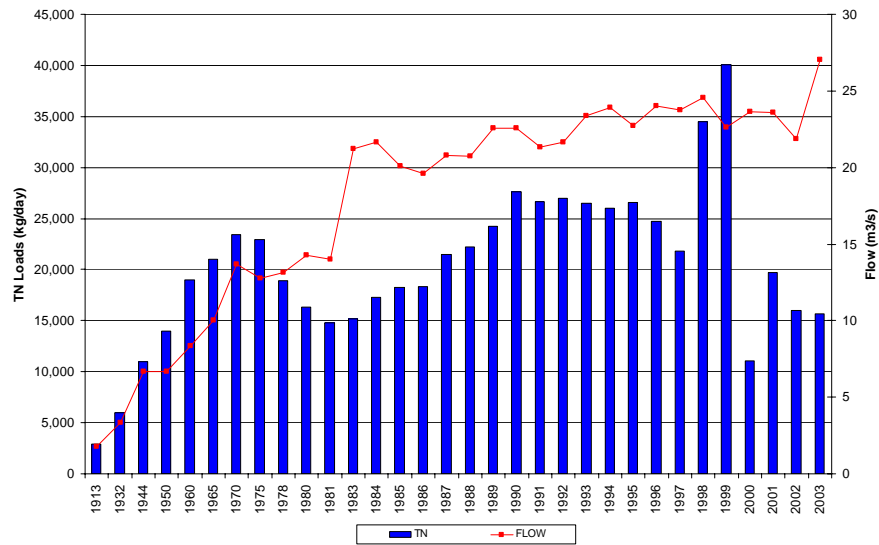
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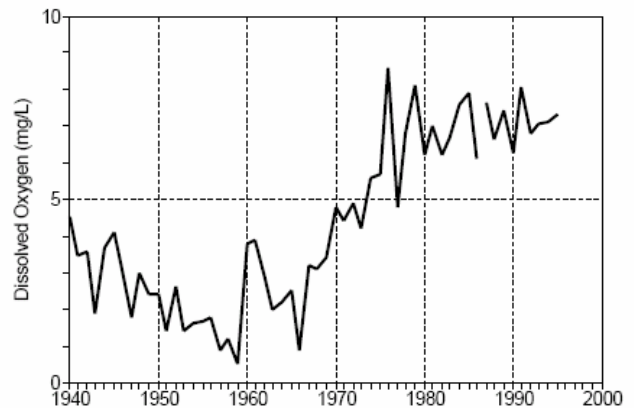
Annual Total Nitrogen Loads From Regional WWTPs



Ecological Benefits of Advanced Treatment

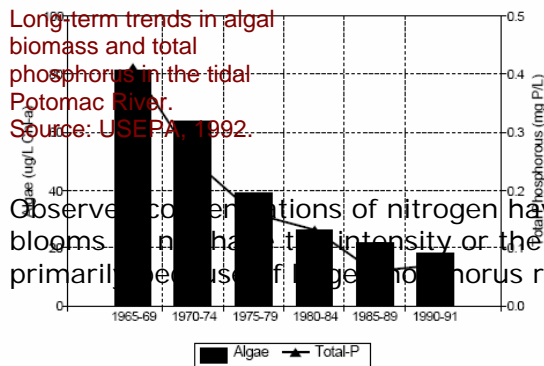
Water quality and biological resource data from the Potomac Estuary clearly show a link between significant reductions in wastewater loadings of nutrients and other pollutants and improvements in the river. Dissolved oxygen, needed by fish and crabs to survive, has historically been depleted by excess nutrients. However, as pollutant loads from regional wastewater treatment plants have declined, dissolved oxygen levels in the river have increased to levels that allow the Potomac's aquatic creatures to thrive. For example, the Potomac Estuary now supports one of the top largemouth bass fisheries in the country.

Long-term trends in summer DO levels on the Potomac River near the Wilson Bridge (mile 95). (Data for 1940-1986 from MWCOG averaged from June-September, data for 1987-1995 from STORET averaged from July-September.) Source: MWCOG, 1989; USEPA (STORET).



Long-term trends in algal biomass and total phosphorus in the tidal Potomac River. Source: USEPA, 1992.

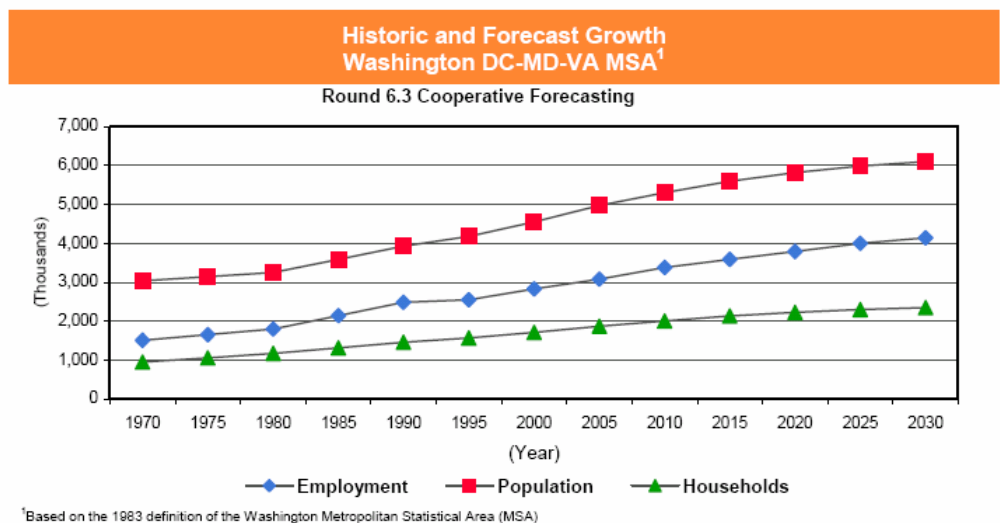
Observed concentrations of nitrogen have decreased significantly and algal blooms in the river have lost intensity or the magnitude they once had, primarily because of nitrogen reductions. A resurgence of



phosphorus reductions. A resurgence of submerged aquatic vegetation in the Potomac starting in the 1980s has been directly related to improvements in water clarity resulting from reductions in nutrient and suspended solids loadings from regional wastewater treatment plants, and subsequent reductions in ambient algae, phosphorus, and nitrogen (Carter and Rybicki, 1990 and 1994).

Population Trends

From the 1940s to 2000, the region's population nearly quadrupled with the population reaching nearly 4.6 million residents. Regional forecasts reveal dramatic increases in employment, households, and population by 2030, the end of the forecast period. Under the intermediate scenario, regional employment would total more than 4.1 million jobs by 2030, a 46 percent increase over the 2000 employment base of 2.8 million jobs. Also, under this scenario, households would reach nearly 2.4 million, a 37 percent increase. Regional population is forecast to increase by 34 percent during the forecast period, reaching nearly 6.1 million in 2030. This will add about the same number of people as during the previous 30-year period. As the region's population grows, wastewater flows will increase, placing an even greater demand on regional treatment plants to reduce pollution and maintain water quality.



Enhanced Nutrient Removal

Presently, all of the major wastewater treatment plants in the National Capital Region use a process called Biological Nutrient Removal (BNR) to remove nitrogen. The BNR process removes more than 90% of pollutants and achieves concentrations below 8 mg/l total nitrogen. Recognizing that more needs to be done, both Maryland and Virginia are planning to require additional upgrades to the region's major wastewater treatment plants with enhanced nutrient removal (ENR) technologies. Using ENR technologies, these plants are expected to reduce nitrogen and phosphorus in their wastewater down to 3 mg/l total nitrogen and 0.1 mg/l total phosphorus, approximately a 50% reduction in already low discharge levels. Other pollutants will continue to be reduced by more than 90%. The cost of these upgrades is estimated to be \$1.5 billion.