

## EXECUTIVE SUMMARY

The 2004 303(d) List and Integrated Assessment of Water Quality in Maryland represents the State's continuing efforts to assess, track and improve water quality conditions in Maryland. Water bodies designated as impaired may require regulatory controls to achieve compliance with Maryland's Water Quality Standards. The regulatory nature of this effort demands that the State use the highest quality information available. To this end and starting in the 2002 List, the Maryland Department of the Environment (MDE) made substantial changes in its 303(d) program to standardize the decision-making processes by which water bodies are listed and in order to provide supporting data for all new listing decisions. MDE has also revised the List to be consistent with the most current federal guidance and to better coordinate with other Clean Water Act provisions.

Minor revisions to the State's bacterial and mercury Listing Methodologies have been presented for public review in the current List. Furthermore, a new draft Listing Methodology for tidal segments with impaired benthic macroinvertebrate communities is available for public review. These Listing Methodologies set forth the practical application of Maryland's Water Quality Standards and establish guidelines for listing decisions. This documentation provides clear guidance to the public on the 303(d) decision making process and offers a chance for interested stakeholders to comment on Maryland's approach assessing water quality. Future improvements to the Listing Methodologies may be proposed with changes in field sampling techniques, analytical methods, statistical approaches, risk assessment data, etc.

As a result of these cooperative efforts between MDE and the Maryland Department of Natural Resources (MDNR), a total of 122 new listings were added in 2004. All 122 new impairments augment historical watershed listings and no previously unimpaired watersheds were added to the 2004 list. A total of 946 listings are on the current 2004 Integrated List. Only 659 of these may require a TMDL. Of these 659, 102 are bacteriological (15.5%), 296 are biological (44.9%), 35 are for metals (5.3%), 96 are for nutrients (14.6%), 10 are pH listings (1.5%), 99 are for sediment (15.0%), and 21 are for toxics (3.2%). The remaining water bodies fall into other categories that do not require TMDL development and are as follows: 62 are in Category 2 (7%), 8 in Category 3 (1%), 78 in Category 3a (8%), 47 in Category 4a (5%), 7 in Category 4b (1%), and 85 in Category 6 (9%). They include, 12 fecal coliform, 2 metals, 2 low pH, and 106 biological impairments. For both new listings and in revising older impairments, MDE has made efforts to more specifically identify the region of impairment. Where possible, waters have been listed at the 12-digit basin scale (approximately 11 square mile watershed scale).

The Department looks forward to making continued improvements to the 303(d) program by creating better working relationships with local jurisdictions, improving coordination with interested stakeholders, and using the most accurate tools and techniques to determine water quality standards attainment. Using data from diverse sources and achieving wider input on future listing decisions will foster a more coordinated approach to assessing and restoring impaired waters throughout the State. This process will provide a constant feedback loop where better coordination and information will result in a more effective use of limited monitoring resources that improves the State's ability to identify data gaps and develop a targeted monitoring framework for future listing decisions and TMDL development.

## ACKNOWLEDGEMENTS

The compilation of the “2004 List of Impaired Surface Waters [303(d) List] and Integrated Assessment of Water Quality in Maryland” would not have been possible without the support of many individuals and agencies both within and outside of the State of Maryland. First and foremost, the Maryland Department of the Environment (MDE) would like to thank our sister agency, the Department of Natural Resources (MDNR), for its assistance and cooperation in the development of the current list. MDNR provided monitoring data and technical expertise on the status of water quality in Maryland and was invaluable during publication of the current list. Within MDNR, special thanks go to Mr. Sherm Garrison for his expertise in identifying and clarifying water body impairments across the State, as well as his assistance with statewide data solicitation and listing methodology development. The entire MDNR staff involved in the Maryland Biological Stream Survey (MBSS) deserves special recognition for providing high quality aquatic resource information for use in watershed assessments. Dr. Ron Klauda, Mr. Paul Kayzak, Mr. Dan Boward and Mr. Marty Hurd have been invaluable and tireless resources in championing the use of these data and assisting with results interpretation. MDE would also like to thank our colleagues Dr. Mark Southerland and Ms. Nancy Roth at Versar, Inc. for their assistance in analyzing the MBSS data. MDE would also like to thank the local jurisdictions throughout the State, particularly Mr. Bill Stack of Baltimore City, who provided monitoring data and gave helpful comments and suggestions on the format and content of the 2002 303(d) List. Furthermore, MDE appreciates the insights and contributions from the many collaborative bodies throughout the State that work tirelessly to improve water quality in Maryland, including the Maryland Water Monitoring Council, Maryland’s Tributary Teams, Total Maximum Daily Load (TMDL) stakeholders and workgroups, volunteer water quality monitoring groups, grassroots environmental organizations, professional associations, and the many more that are cannot be individually named here.

Lastly, there were many key individuals within MDE without whom the 303(d) List would never have been possible. Dr. Rich Eskin, Acting Director of MDE’s Technical and Regulatory Services Administration (TARSA) and Mr. George Harman, Program Manager for the Environmental Planning and Analysis Program in TARSA, were instrumental in providing guidance and direction in the development of Maryland’s 2004 303(d) List. Mr. Nauth Panday, Dr. Jim George, Mr. Tim Rule, Mr. Lee Currey and Dr. Miao-Li Chang provided essential insights from the perspective of the TMDL program. Ms. Elaine Dietz and Ms. Melissa Chatham provided vital assistance in public outreach and external coordination efforts and Mr. Joseph Beaman brought in perspective from water quality standards review and development. Mr. Charles Poukish and Mr. Matthew Rowe, also of TARSA, were responsible for implementing the 303(d) program at MDE and trying to make the Integrated Report an accurate and valuable regulatory tool for improving water quality conditions in Maryland. Several colleagues from MDE’s Water Management Administration, including Dr. Robert Summers, Director, Mr. Jim Dieter, Mr. Edwal Stone, Mr. Jeff Rein and Mr. Steve Luckman provided valuable input in the 303(d) listing process. Finally, special thanks to Ms. Jennifer Wazenski in MDE’s Office of the Attorney General for providing legal guidance and interpretation.

## PREFACE

The federal Clean Water Act (CWA) requires that states, territories, and authorized tribes assess water quality every two years and publish a list of those waters failing to meet water quality standards. This list of impaired waters is called the “303(d) List”. Water bodies listed as impaired may require a detailed analysis of pollution sources known as a Total Maximum Daily Load (TMDLs). In compliance with this important federal law, Maryland’s draft 2004 Integrated 303(d) List is presented here for public review.

In October of 2002, Maryland submitted its last 303(d) List to the Environmental Protection Agency (EPA). Final EPA approval of the 2002 Integrated List was received by the Maryland Department of the Environment (MDE) on April 30<sup>th</sup>, 2003. In their approval letter, EPA commended MDE for its efforts to improve the list and incorporate the latest EPA guidance. In the timeframe available between lists, MDE has attempted to build upon these past successes. Current use of the multiple listing categories (categories 1-5) recommended by EPA go beyond what was reported in the 2002 List. MDE has also added new subcategories under Category 3 to help clarify water body attainment status, and MDE is working closely with the Maryland Department of Natural Resources (MDNR) to fully integrate the 303(d) List with the 305(b) report (i.e., Maryland’s report on the water quality status of surface waters throughout the State, also required by the Clean Water Act). Geographic coordinates and station names have been made available in the current List for new listings. Furthermore, the Department has implemented the Environmental Protection Agency’s (EPA) STORET database system to help centralize data used for 303(d) listings and other regulatory decision making. These and other improvements are discussed in greater detail throughout this document.

Although jurisdictions typically have two years to complete their 303(d) Lists, several factors have resulted in a six month interval between approval of Maryland’s 2002 List and public notice of the current Draft 2004 Integrated List. Some of these factors include: (1) extension of the final submittal date for the 2002 List to October 2002, which shortened the overall timeframe available for the 2004 report; (2) delayed final approval of 2002 Integrated List; (3) providing adequate time for formal public meetings and a 45-day public review period for the draft List; and, (4) allowing sufficient time for the Department to respond to all stakeholder questions and concerns prior to final list submittal to EPA in April 2004. Even though the current Integrated List includes assessment results for both impaired (i.e., Category 5 waters) and unimpaired waters (i.e., Categories 2, 3, 4 and 6 waters), MDE did not have sufficient time to fully combine the 2004 List with the 2004 305(b) Report. However, and consistent with EPA’s “*Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act*”, MDE expects to combine these two CWA reporting requirements into a single document for joint final submission to EPA in April 2004.

Combining these two separate reports [i.e., 303(d) and 305(b)] will not require any changes to the current List and will result in a more complete assessment of water quality conditions throughout the State. Integration of these two closely related elements of the CWA will provide a more useful tool to water resource managers, regulatory decision makers and the public for prioritizing watershed restoration efforts, evaluating watershed status and trends, as well as gauging the success of water quality programs throughout the State of Maryland.

In the future, the Department will work to enhance stakeholder relationships , better utilize the data and expertise of local governments and volunteer partners for 303(d) decisions, and better coordinate internal programs related to the federal CWA. The continued success of the State's water quality programs will ultimately depend upon greater inclusion of concerned citizens and stakeholders throughout both the State and the larger Chesapeake Bay region.