## 6. Priority Ranking and TMDL Completion Scheduling

### 6.1 Overview

Priority ranking and scheduling are two separate management activities for the Integrated 303(d) List. First, states are required to identify a priority ranking for each of the listed waters. EPA regulations require that these priorities take into account the severity of the pollution and the uses made of such waters. The priority ranking approach adopted by Maryland results in the establishment of a **high, medium or low** priority designation. Second, the state is required by federal regulations §130.7(b)(4) to identify those "waters targeted for TMDL development in the next two years". In the current 2002 List, inclusive of the 1996 and 1998 listings, all waters targeted as a **high** priority will have TMDL development initiated over the next two years (i.e., from the date of EPA approval of Maryland's 2002 Integrated 303(d) List).

TMDL scheduling considers both the priority designations, which are determined in the first step, and other programmatic and technical factors. Programmatic factors considered in this process include, but are not limited to, the efficient and effective use and allocation of resources, the use of basin planning cycles in support of watershed-based permitting and other relevant factors. Technical factors include, but are not limited to, data availability, problem complexity, and availability of the appropriate technical tools.

Because of these technical and programmatic issues, TMDLs may not be completed in priority order from the highest to the lowest designations. For example, some of the high-priority TMDLs are also the most complex, and may take longer to complete. However, TMDL development work will begin on the high-priority waterbodies within two years even though they might not be completed in two years. Alternatively, the alignment of technical and programmatic considerations may allow the Department to both target and complete TMDL development for lower priority waters within two years.

In addition to the federal requirements for setting priorities and identifying waters targeted for TMDL development in the next two years, EPA guidance (August 8, 1997, memorandum from Robert Perciasepe, Assistant Administrator for Water) requests that states establish a long-term schedule for completing TMDLs for all waters on the most recent 303(d) list. It is MDE's intent to target completion of TMDLs for all water quality limited segments in 8-13 years, consistent with current EPA guidance.

Several key considerations need to be contemplated in ranking WQLS priorities and TMDL scheduling. The overall process for establishing WQLS priorities and TMDL completion schedules is set forth in Figure 9. The general approach is consistent with *EPA Region III Guidance for Listing of Waters and Total Maximum Daily Load Development Under the Clean Water Act Sections 303(d) and 303(e)*.

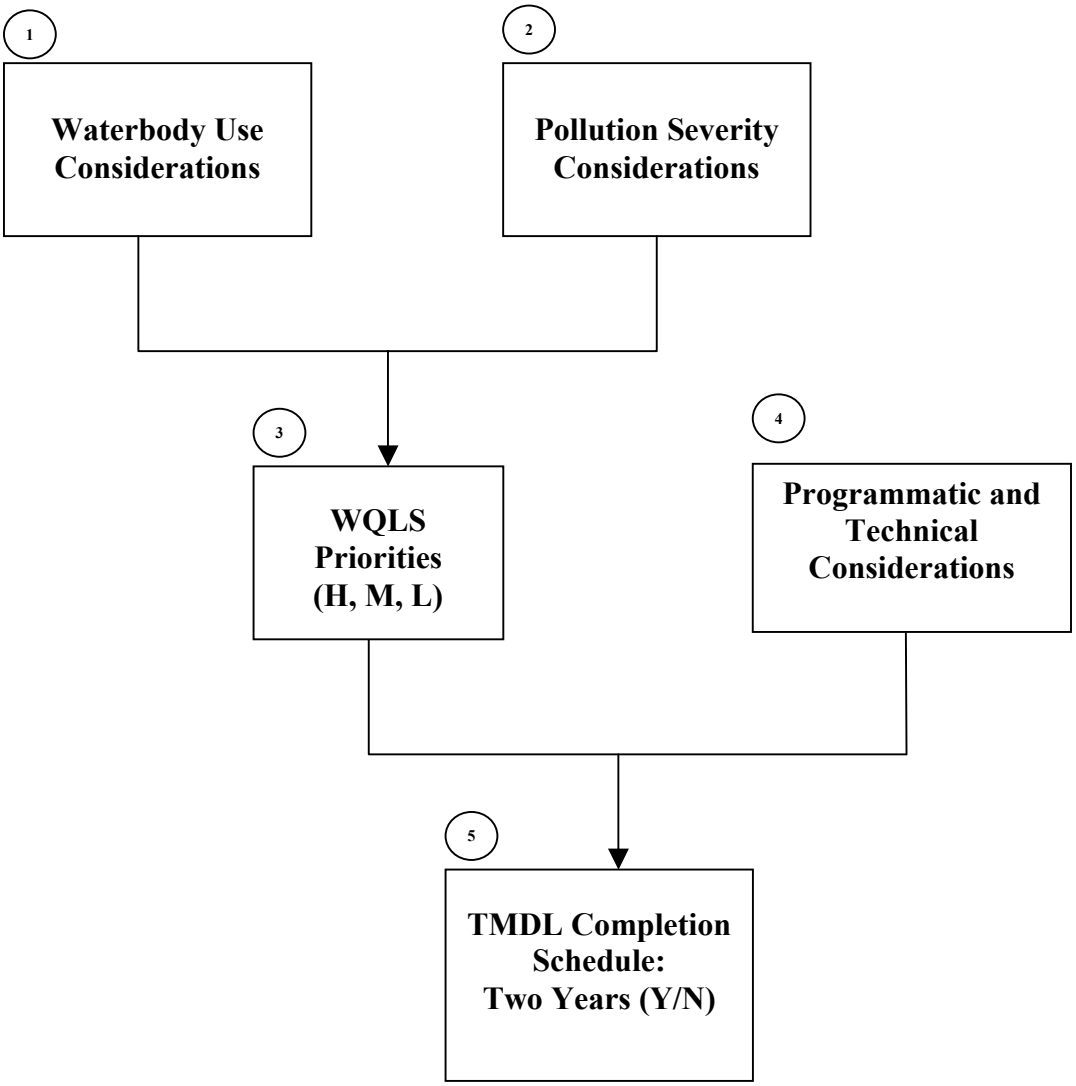



**Figure 9: WQLS Priorities and TMDL Completion Scheduling. Information types (1) and (2) are used to determine the priority designation for each water quality limited segment (WQLS), (3). The priorities, (3), and other management factors, (4), serve as inputs to determine the TMDL completion schedule.**

## 6.2 WQLS Priority-setting

In general, criteria that affect human health or have an extreme effect on natural resources will rank **high**. Criteria that indicate a continuing downward trend in the loss of a significant resource, create a serious nuisance, or constitute a significant loss of a natural resource will rank **medium**. The remaining cases will rank **low**.

### 6.2.1 WATERBODY USE CONSIDERATION

The following uses are considered in establishing the priority.

| Drinking Water [9] | Commercial |
|---|---|
| Drinking water source. | Fishery<br>Tourism |
| **Recreational** | **Environmental** |
| Direct Contact<br>Sport Fishing<br>Boating | Threatened/Endangered/Rare Species or Habitats<br>Critical Areas<br>Avian and Aquatic Migration Pathways<br>Aquatic Life Use Support<br>(See other Pollution Severity Considerations) |

#### 6.2.1.1 Pollution Severity Considerations

- Potential Human Health Risk (with waterbody uses)
- Endangered/Threatened/Rare Species
- Relative Degree of Impact (e.g., info. from 319 listing, various indicators, etc.) (High, Medium, or Low)
- A continuing trend in natural resource loss that could be addressed by a TMDL.

## 6.3 TMDL Scheduling and Completion

The purpose of this step is to predict which TMDLs are most likely to be completed in the five-year period following submittal of 2002 Integrated 303(d) Lists to EPA. This scheduling process will incorporate the WQLS priority designations and other management factors.

[9] Human health concerns of this nature are normally addressed under MDE's Source Water Assessment and Protection under the Water Supply Program. If the 303(d) listing process were to find a new impairment that posed a public health concern, immediate action would be taken to address that concern outside of the TMDL development process. If, however, a public health concern could not be completely addressed through source protection, this would elevate the WQLS to a high priority for TMDL development.

## 6.4 Consideration of Priority Designations

In response to the tight schedule recommended by the FACA, the State will focus its resources first on high-priority WQLSs. All other WQLSs will be targeted for TMDL development in 8-13 years consistent with current EPA guidance

## 6.5 Programmatic and Technical Considerations

The following is a list of the key considerations that affect the scheduling of TMDLs for completion. The main goal is to complete a TMDL within the allotted time frame without introducing major inefficiencies, which would prolong the overall schedule. It should be noted that there is no mechanical formula for achieving this goal. The factors considered to help ensure that consistent sets of criteria are used to assure that this goal is achieved are discussed below in sections 6.5.1 – 6.5.6:

### 6.5.1 BASIN PLANNING CYCLE

Maryland uses a watershed-based permitting approach to manage its waters and integrate all of its water quality based programs. For this purpose, the State has been divided into five regions, and water quality management activities including water quality based permitting are performed in five-year cycles for each region (Figure 10 and Appendix E). The cycle begins with intensive monitoring, followed by computer modeling, and eventually discharge permit development. The five-year watershed cycling strategy is dictated in large part by the federal law, which establishes a five-year period for discharge permits. Because much of the State's water quality resources will be focused in specific regions according to this five-year cycle, only a limited amount of resources will be available to conduct activities outside of the designated regions. Although the basin planning cycle and resource constraints will impose a practical limitation on the rate at which high-priority WQLSs are completed, the State will give preferential consideration to making progress on all high-priority WQLSs across the State.

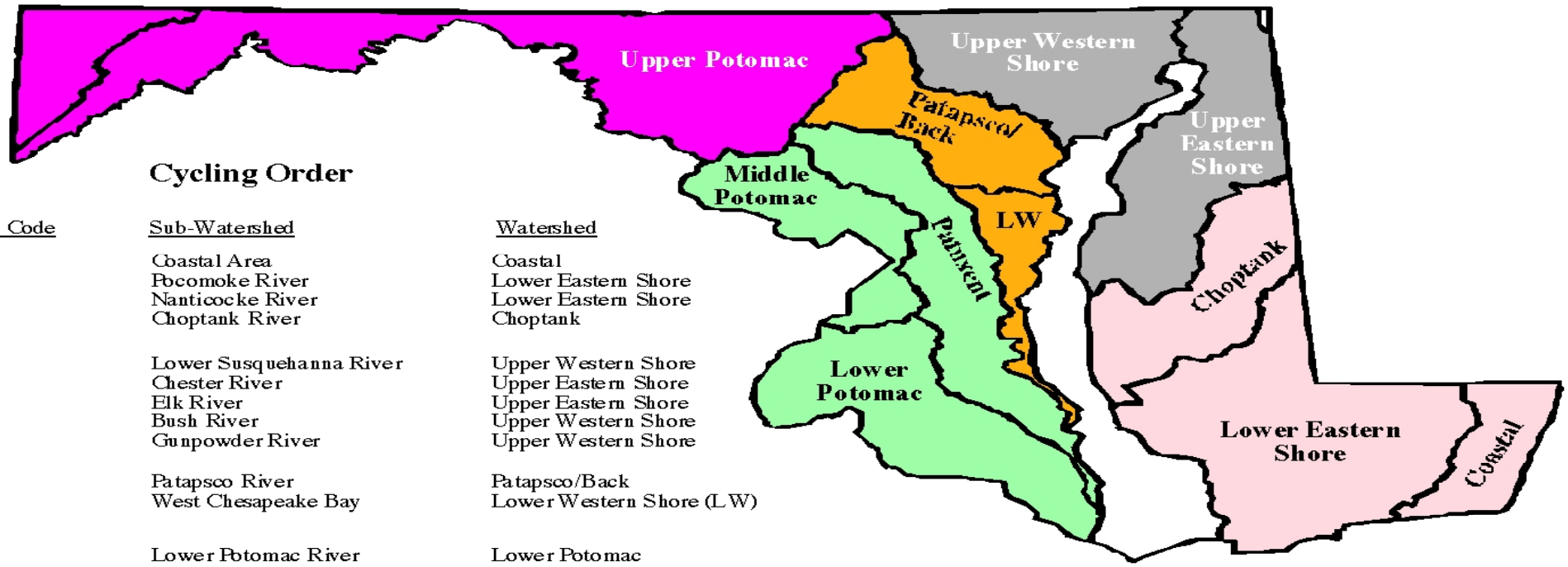
### 6.5.2 AVAILABILITY OF RESOURCES TO ENSURE ADEQUACY OF DATA AND TECHNICAL TOOLS

In some cases, due to grant requirements, and other administrative constraints, funding availability might not conform to WQLS priorities. If funds become readily available for lower-priority WQLSs, the State will be obliged to capitalize on the opportunity and schedule its work accordingly. This might occur despite the potential incongruence of WQLS priorities.

### 6.5.3 TECHNICAL COMPLEXITY

At times, regardless of resources, the technical complexity of TMDL development can create a barrier to rapid progress on the completion of a TMDL for a high-priority WQLS. To the extent that such technical issues arise, or are known when prioritizing TMDLs, it will be factored into the process.

# Regions for the 5-Year Watershed Cycling Strategy




## Cycling Order

| Watershed Code | Sub-Watershed | Watershed |
|---|---|---|
| 02-13-01 | Coastal Area | Coastal |
| 02-13-02 | Pocomoke River | Lower Eastern Shore |
| 02-13-03 | Nanticocke River | Lower Eastern Shore |
| 02-13-04 | Choptank River | Choptank |
| 02-12-02 | Lower Susquehanna River | Upper Western Shore |
| 02-13-05 | Chester River | Upper Eastern Shore |
| 05-13-06 | Elk River | Upper Eastern Shore |
| 02-13-07 | Bush River | Upper Western Shore |
| 02-13-08 | Gunpowder River | Upper Western Shore |
| 02-13-09 | Patapsco River | Patapsco/Back |
| 02-13-10 | West Chesapeake Bay | Lower Western Shore (LW) |
| 02-14-01 | Lower Potomac River | Lower Potomac |
| 02-14-02 | Washington Metro Area | Middle Potomac |
| 02-13-11 | Patuxent River | Patuxent |
| 05-02-02 | Youghiogheny | Youghiogheny |
| 02-05-03 | Conewago River Creek | Upper Potomac |
| 02-14-03 | Middle Potomac River | Upper Potomac |
| 02-14-05 | Upper Potomac River | Upper Potomac |
| 02-14-10 | North Branch Potomac River | Upper Potomac |

Maryland Department of the Environment

**Figure 10: Five different regions in Maryland's designated for the Watershed Cycling Strategy.**

### 6.5.4 COORDINATION WITH OTHER PROGRAMS' NEEDS

At times, the WQLS priorities of Maryland will come into scheduling conflicts with the activities of other programs such as permitting, interstate efforts (e.g., the Potomac River) and other programs (e.g., the Coastal Bays Program). The State will make efforts to minimize these conflicts, by seeking additional resources to accelerate activities in support of these efforts, or factoring these other interests into future WQLS priorities.

### 6.5.5 COOPERATION OF EFFECTED PARTIES

Maryland is committed to an open and thorough public involvement process in the development of TMDLs. This process ensures that TMDLs are scientifically and technically supported while balancing the interests and impacts upon all affected parties. It is recognized, however, that this process can affect the completion date of high-priority TMDLs. To the fullest extent possible, the State will attempt to anticipate such delays in establishing the schedule for TMDL completion. The State recognizes that considerable public dialogue is vital to augmenting the process of TMDL development and will seek adequate resources to ensure a timely and effective public involvement process.

### 6.5.6 OTHER FACTORS

In some instances, other factors can affect the scheduling of TMDL completion and are beyond the control of the State. When these factors conflict with schedules previously established on high-priority WQLSs, the State will be compelled to establish the TMDL on a revised schedule. To the extent practicable, the State will make efforts to minimize the impact of such barriers.

## 6.6 Discussion of Priority Ranking and Scheduling for Maryland's 2002 303(d) List

Waters impaired by toxic substances have been designated as high priority because of the environmental concerns and potential human health risks associated with these impairments. Such waters have not been targeted for completion of TMDLs in the next two years due to complexities of the TMDL methodology development, intensive data requirements, model development, and the level of public participation, which is anticipated in the TMDL process. According to the long-term schedule described above, TMDLs for these waters are targeted for TMDL completion in 5 years, consistent with Federal Advisory Committee on TMDLs (FACA) recommendations.

The priorities for the lake listings were established primarily on the basis of their uses. Lakes that serve as drinking water sources, or are subject to significant direct contact recreation, were classified as medium priority for development of TMDLs. Lakes not meeting these criteria were classified as low priority. Some of the larger drinking water reservoirs, which are given a medium priority but have not been targeted for TMDL development in the next two years, will require more complex modeling. For example, because of the tendency of some lakes to have naturally occurring low dissolved oxygen due to stratification, additional studies might be required. In addition, the process might

take longer for those reservoirs due to the anticipated involvement of many interested parties.

Where biological impairments occur in watersheds already listed for an impairing substance such as sediments or nutrients, the priority for completion of TMDLs is low because: (1) The Department believes that in many cases relief from the sediment or nutrient stress will allow partial or complete recovery of the biological communities; and, (2) if there is another impairing substance responsible for the biological degradation it is probably not discernable until the other impairing substances are evaluated. Biological impairments found in otherwise unimpaired watersheds will receive a medium priority for TMDL development.