

**Comment Response Document
Regarding the Water Quality Analysis of Eutrophication for Bynum Run, Harford County,
Maryland**

The Maryland Department of the Environment (MDE) has conducted a public review of the proposed Water Quality Analysis (WQA) of Eutrophication in Bynum Run. The public comment period was open from June 30, 2006 through July 31, 2006. MDE received three sets of written comments.

Below is a list of commentors, their affiliation, the date comments were submitted, and the numbered references to the comments submitted. In the pages that follow, comments are summarized and listed with MDE's response.

List of Commentors

Author	Affiliation	Date	Comment Number
Randolph C. Robertson	Director of Public Works, Town of Bel Air	June 30, 2006	1 through 2
Elizabeth A. Weisengoff	Harford County Government Department of Public Works Division of Engineering and Construction	July 12, 2006	3 through 8
Frederic J. Faulkner, R.S.	Harford County Health Department	August 1, 2006	9 through 12

Comments and Responses

1. The commentor states it is encouraging that the recent sampling in the stream shows the dissolved oxygen (DO) concentrations are above the impaired level. The commentor continues that he did notice however, in comparing the March 1999 readings with March 2004 readings, the average DO detected is several milligrams/liter (mg/l) lower in the most recent samples. The commentor suggests that the monitoring continue (on an annual basis, if possible) to assure there is not a trend that may be leading us back to an impaired status.

Response: Maryland uses a five-year watershed cycling strategy to manage its waters. Pursuant to this strategy, the State is divided into five regions and management activities will cycle through those regions over a five-year period. The cycle begins with intensive monitoring, followed by computer modeling, TMDL development, implementation activities, and follow-up evaluation. The choice of a five-year cycle is motivated by the five-year federal NPDES permit cycle. This continuing cycle ensures that every five years intensive follow-up monitoring will be performed.

2. The commentor states the Town of Bel Air is concerned about the protection of Bynum Run and will continue working with Harford County, the State and other organizations to develop a Source Water Protection Plan for the watershed.

Response: MDE appreciates the Town's concern and looks forward to working with the Town of Bel Air on future projects.

3. The commentor states that on page 2 the total drainage area acreage is correct, but asks to check the land use breakdown. The commentor points out that the % water is very high when compared to other estimates.

Response: The land use breakdown information has been corrected.

4. The commentor would like to know what is the white area within the watershed boundary displayed on Figure 2?

Response: The map has been updated to clearly show the different land use distribution.

5. The commentor recommends revising the 1st sentence on page 6, Section 3.1 and proposes the following text: "During the October 1998 through September 1999 sampling period and in March 2004, DO concentrations..."

Response: The report has been corrected to include the commentor's edits.

6. According to the commentor, the text on page 6, Section 3.3. states that the chlorophyll *a* concentrations do not reach higher than 9 µg/l, but the graph in Figure 3 shows two points greater than 9 µg/l.

Response: The text in the paragraph has been changed to better reflect the information presented in the graph.

7. The commentor would like to find out what is the criterion for "low" level of chlorophyll *a*?

Response: Although Maryland does not have numeric water quality criteria for chlorophyll *a*, the narrative standards (COMAR§26.08.02.03B) apply, especially to eutrophic conditions. Narrative criteria are designed for exactly this purpose. Threshold values of chlorophyll *a* have been used for over a decade under authority of the State's narrative criteria to evaluate eutrophic conditions and set water quality endpoints consistent with the designated uses of a waterbody. This has allowed the State to make water quality management decisions that support the mandatory water quality standards and are consistent among the regulated community. MDE must ensure that point and nonpoint source loads to waters of the State do not impair the existing uses of that waterbody.

8. The commentor suggests creating two graphs for DO on page 8, Figure 3, one for the 1998 sampling period and one for the 2004 sampling period. This would allow for a visual comparison between DO and the other parameters during the 1998 sampling period.

Response: The graph has been edited to reflect the comment. The five MBSS data points of 2004 are not included in the DO plot but the values are referenced in the text and presented in the Appendix.

9. The commentor states that it is their understanding that Bynum Run was originally listed on the 303d list for nutrient impairment based on limited sampling, and now it has been recommended that it be removed from the 303d list, again based on limited base flow sampling. The commentor continues that if this is the case, it may be premature to recommend the removal at this time. The commentor finishes with delisting should be considered only after numerous sampling events over several years.

Response: MDE develops TMDLs or WQAs for listed waterbodies based on available data collected by MDE for analysis purposes (covering high flow and low flow conditions), as well as any supplemental data from other agencies or any other sources. Based on available data, the analysis shows no evidence of DO violation or elevated chlorophyll *a* levels. Barring any contradictory future data, this information provides sufficient justification to revise Maryland's 303(d) list to remove nutrients as an impairing substance in relation to Bynum Run. However, if any contradictory data exist in the future indicating violation of water quality standards, the 303(d) listings can be revised.

10. The commentor states that Bynum Run is a very urbanized watershed, where nutrients from nonpoint sources are probably responsible for a large percentage of the nutrient load into this waterway. Pet waste, fertilizers, and other sources of contamination are often washed into the waterways with storm events, impacting water quality in streams during these periods of elevated flows. The impact to nutrient levels in base flow may not be high enough to be limiting, but the total nutrient load moving through the system is elevated. Total nutrient loads moving through the system must be part of the equation, especially for urban streams, which are heavily developed. The commentor maintains that much of the development along Bynum Run was constructed before the requirement for stormwater management, especially the water quality component.

Response: See the Response to Comment #9.

11. The commentor states that by delisting Bynum Run, funding for water quality improvement projects will be less available; impairment will be more than likely continue to exist, resulting in an unimpeded nutrient impact to the water quality.

Response: See the Response to Comment #9.

12. The commentor also states that by delisting Bynum Run, elected officials, citizens, and regulators are less likely to take the steps necessary to maintain or improve the current nutrient levels. The commentor continues that it conveys a false level of accomplishment, when in fact; additional future development is going to occur in this watershed that will continue to impact water quality. Future development projects must be required to implement the best available technology and existing impairments must be upgraded,

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otherwise, the combined impact from new and existing development will degrade water quality even if base flow levels do not require listing on the 303d list.

Response: See the Response to Comments 9 and 11.