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Sent via e-mail to John.Kennedy@deq.virginia.gov

Subject: Comments on **Draft 2012 305(b)/303(d) Water Quality Assessment Integrated Report**

Loudoun Watershed Watch is pleased to submit comment on the DRAFT 2012 Water Quality Assessment Integrated Report appearing at

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityAssessments/2012305b303dIntegratedReport.aspx>

Specifically, we wish to comment on the "Delisting" in Loudoun County appearing in Appendix B

(http://www.deq.virginia.gov/Portals/0/DEQ/Water/WaterQualityAssessments/IntegratedReport/2012/ir12_Appendix3_Waters_Identified_for_Delist.pdf)

There are four proposed delistings for recreational use (bacteria) in Loudoun County. We do not believe that VA DEQ should delist these streams for the following reasons:

1. Several samples in 2006 failed to pass Quality Assurance. The results for the four events that year suggest that the 10% threshold could have been exceeded for the 5-year data window.
2. Examining data beyond the data window indicate that the period 2005 to 2010 is a temporary low and that recent 2011 and 2012 results suggest that future data windows will show impairments. There is a strong likelihood that these segments will need to be "relisted" in 2014.
3. Given the very limited number of samples collected, the variability is significant and that one sample can easily change the results when evaluating the 10.5% threshold. We suggest caution in delisting simply because, say 10.3% is less than 10.5%. Recall that 10.5 percent was selected as a number greater than 10 percent and one could strictly speaking have selected 10.000001% as the threshold above 10 percent.

The text for the four delistings is copied below with specific comments on each river segment.

Potomac and Shenandoah River Basins

VAN-A01R_PIA01A00 Piney Run 3.51 Miles

Delisting Summary: Recreation

DELIST 2012 - E. coli - A01R-01-BAC, VAN-A01R-01, 00023 (CFL 1998 as fecal coliform)

During the 2010 cycle, this segment was assessed as not supporting the recreation use because of excursions from the maximum E. coli bacteria criterion (6 of 31 samples - 19.4%) recorded at DEQ's ambient water quality monitoring station 1aPIA001.80 at the Route 671 bridge crossing. Additional bacteria monitoring has been conducted and found that a total of 3 of 29 samples (10.3%) exceed the maximum E. coli bacteria criterion. It has been determined that this segment should be delisted for E. coli based upon an acceptable exceedance rate.

In 2006 four samples failed QC. Of these there were two exceedances. If the two failed exceedances were to be counted, then 5 (3 passed, 2 failed QC) of the 34 (29 passed, 4 failed QC) would results in 14.7%. It is argued that delisting is premature.

VAN-A07R_BEC01A00 Beaverdam Creek 6.33 Miles

Delisting Summary: Recreation

DELIST 2012 - E. coli - A07R-01-BAC, VAN-A07R-01, 00065 (CFL 1998 - fecal coliform)

During the 2010 cycle, this segment was assessed as not supporting the recreation use because of excursions from the maximum E. coli bacteria criterion (8 of 26 samples - 30.8%) recorded at DEQ's ambient water quality monitoring station laBEC004.76 at the Route 734 bridge.

Additional bacteria monitoring has been conducted and found that a total of 2 of 24 samples (8.3%) exceed the maximum E. coli bacteria criterion. It has been determined that this segment should be delisted for E. coli based upon an acceptable exceedance rate.

In 2006 four samples failed QC. Of these there were two exceedances. If the two failed exceedances were to be counted then 4 (2 passed, 2 failed QC) of the 28 (24 passed, 4 failed QC) would results in $4/28=14.2\%$. It is argued that delisting is premature.

VAN-A08R_GOO01A00 Goose Creek 4.76 Miles

Delisting Summary: Recreation

PARTIAL DELIST 2012 - E. coli - A08R-01-BAC, 00062 (CFL 2006)

During the 2010 cycle, this segment was assessed as not supporting the recreation use because of excursions from the maximum E. coli bacteria criterion (6 of 30 samples - 20.0%) recorded at DEQ's ambient water quality monitoring station laGOO002.38 at the Route 7 bridge.

Additional bacteria monitoring has been conducted and found that a total of 3 of 29 samples (10.3%) exceed the maximum E. coli bacteria criterion. It has been determined that this segment should be delisted for E. coli based upon an acceptable exceedance rate.

In 2006 four samples failed QC. Of these there was one exceedances. If the one failed exceedances were to be counted then 4 (3 passed, 1 failed QC) of the of 34 (29 passed, 4 failed QC) would results in $4/34=11.7\%$ It is argued that delisting is premature.

VAN-A08R_GOO03A02 Goose Creek 2.52 Miles

Delisting Summary: Recreation

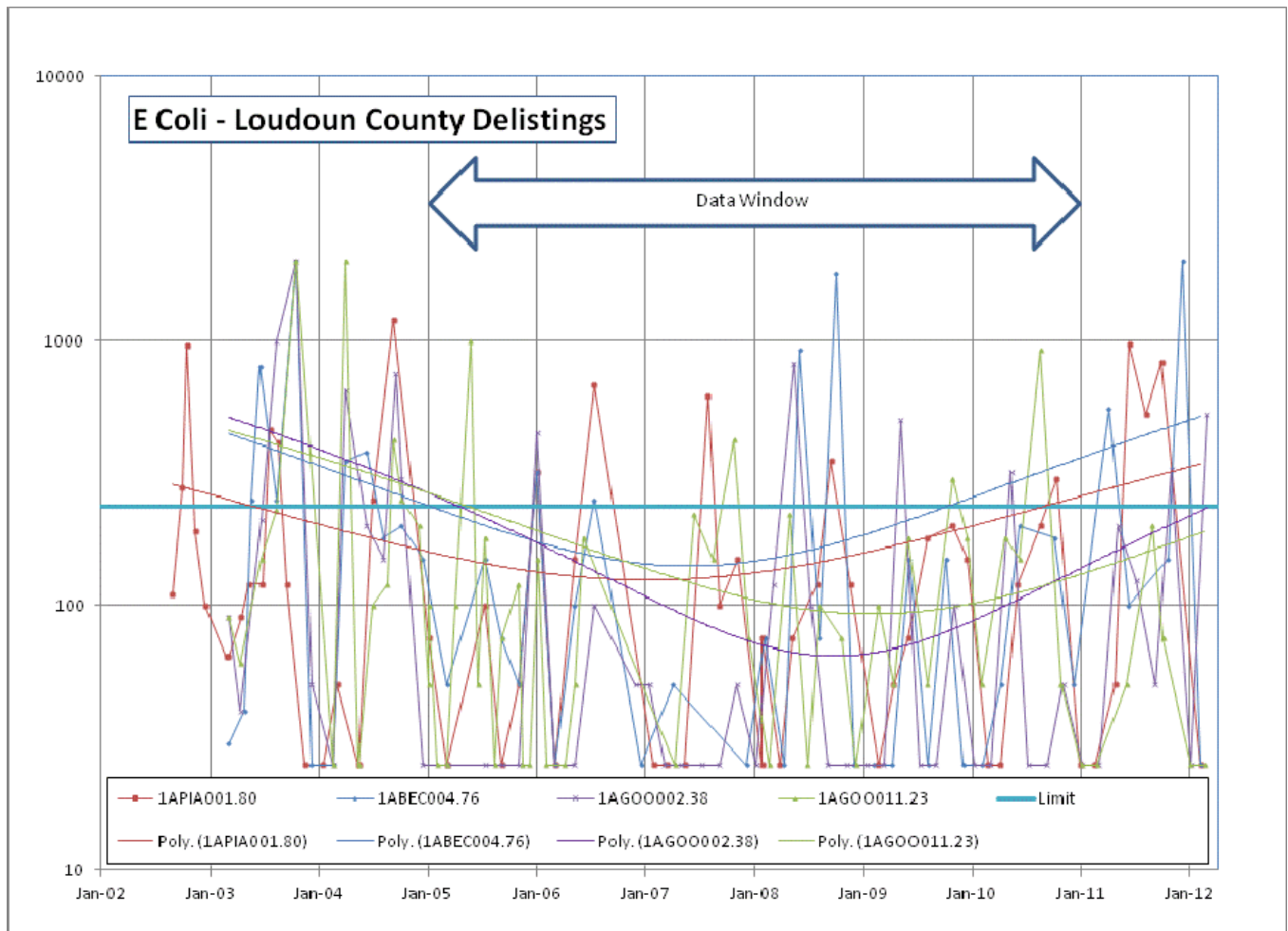
DELIST 2012 - E. coli - A08R-06-BAC, 60011 (CFL 2006)

During the 2010 cycle, this segment was assessed as not supporting the recreation use because of excursions from the maximum E. coli bacteria criterion (6 of 41 samples - 14.6%) recorded at DEQ's ambient water quality monitoring station laGOO011.23 at the Route 621 bridge.

Additional bacteria monitoring has been conducted and found that a total of 4 of 39 samples (10.3%) exceed the maximum E. coli bacteria criterion. It has been determined that this segment should be delisted for E. coli based upon an acceptable exceedance rate.

During the data window (2005-2010) there were no samples that failed QC. During 2006 there were not exceedances, although two measurements did exceed 125 CU/100 ml. While the percentage of 10.3 is calculated from 39 samples, this is just under the limit of 10.5% (a legal interpretation of a number greater than 10). It is argued that delisting is premature.

When data from 2002 to 2012 were examined and a second-order polynomial curve fit (including those with failed QC), each site demonstrated a declines from 2002 to 2006 and then an upward trend such that by mid-2011, levels were approaching 2002 conditions.



We appreciate the opportunity to comment on the water quality assessment and look forward to your response.

Sincerely,

David Ward
Loudoun Watershed Watch