

FAQ from 2012 Integrated Report Webinar

Hosted by John Kennedy

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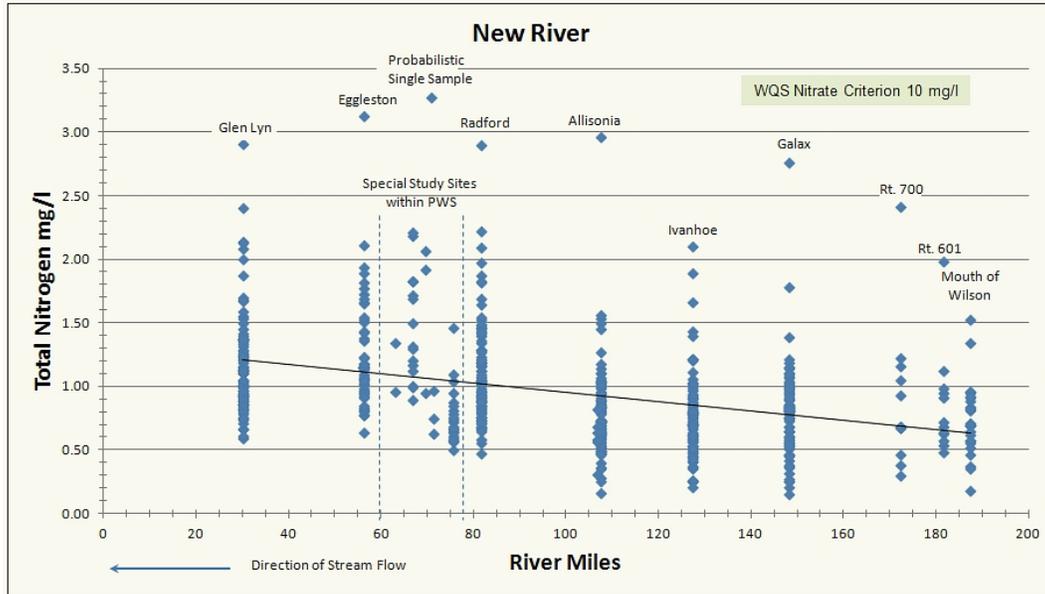
1. Q: The New River is now the third most contaminated waterway in the United States, according to the Toxics Release Inventory. What is DEQ's strategy for addressing this problem, including the 12 million plus pounds of nitrates released by the Radford Army Ammunition Plant last year alone?

A: The Toxics Release Inventory documents discharges to surface waters, air emissions and transfers to offsite storage or disposal sites of certain chemicals that can be toxic. It does not measure or indicate contamination levels nor document that toxicity actually results from the discharge. Although the quantity of nitrates released to the New River is sizable, the river supports the drinking water designated use and meets water quality standards for nitrates. The Radford Arsenal has been and is continuing to voluntarily undertake pilot projects devoted to reducing discharges of nitrates, and DEQ encourages these efforts. Moreover, DEQ will continue to regulate effluent limitations for the protection of all designated uses in the New River, as required by the Code of Virginia and the federal Clean Water Act.

2. Q: The trend for toxins released to our American Heritage River, the New River is up this year. How is DEQ addressing this unique problem of increasing releases?

A: Virginia Pollution Discharge Elimination System (VPDES) permits are issued to protect the designated uses as described in the Commonwealth's Water Quality Standards (WQS). The permittee has complied with the nitrate effluent limitations contained in their permit and has not exceeded the nitrate limitation. The data presented below demonstrate designated uses are maintained as described for parts of the New River that are designated as public water supply (PWS). Please note the criterion for nitrate only applies in PWS waters.

DEQ maintains eight ambient monitoring stations along the mainstem New River from the mouth of Wilson downstream to Glen Lyn. Additional sample collections have been made from special studies and probabilistic sites. Total nitrogen (TN) data illustrated in the graph below include recent data outside the 2012 assessment data window of 2005 to 2010. The graph incorporates sample collections made from 2000 to 2012. TN accounts for not only nitrates but also Total Kjeldahl Nitrogen (TKN; organic-N + ammonia-N). The Arsenal discharges at river mile 71; Peppers Ferry WWTP at 73; and Christiansburg WWTP at 76. Stations located below the Arsenal do show an increase in TN. Downstream of the Arsenal the maximum TN concentration (3.27 mg/l; 10/05/2011) was detected at probabilistic site 9-NEW070.80, which is within a PWS segment. The ambient station 9-NEW056.22 located at Eggleston (not within a PWS segment), records a TN maximum of 3.13 mg/l (3/15/2001). However, neither of these values exceed the WQS nitrate criterion of 10 mg/l.



The 2012 flow-adjusted trend analysis from 20 years of data (not illustrated in the above graph) also reveals an increasing trend for TN at Glen Lyn (9-NEW030.15) as well as upstream of Claytor Lake at Allisonia (9-NEW107.51) and Ivanhoe (9-NEW148.23). These data indicate that nonpoint source contributions cannot be discounted. While DEQ is not currently conducting a study on nitrogen sources in the New River, analysis of available data shows that all PWS-designated segments are meeting the nitrate WQS criterion despite increases in nitrogen in both the lower and upper portions of the river.

3. Q: How does the TRI data figure into budget decisions when allocating resources for fish tissue studies, etc?

A: DEQ uses Toxics Release Inventory data to target facilities for voluntary pollution control measures. DEQ's Environmental Excellence Program uses incentives and assistance efforts to promote environmental stewardship beyond regulatory compliance. The goal of this initiative is to help develop more efficient technologies and business operations by reducing the amount of toxic chemicals released to the environment, as well as improving how these chemicals are managed. TRI data are not used to direct monitoring strategies by DEQ.

4. Q: Will this presentation be emailed to recipients?

A: The summary presentation of the draft 2012 Integrated Report is available on the water quality assessment webpage:

http://www.deq.virginia.gov/Portals/0/DEQ/ir12_Draft_WQA_Summary_revised.pdf.

5. Q: DEQ cited the Radford Army Ammunition Plant for operating an Open Burning Ground too close to a navigable waterway in 1995. That OBG is still operating. What action has DEQ taken regarding the location of the OBG adjacent to a drinking water source?

A: The Open Burning Ground unit is permitted under a Resource Conservation and Recovery Act Part B Hazardous Waste Permit. As part of the permit requirements:

- The facility has constructed berms around the unit to control run-on/run-off – on both the river side and opposite the river side. The berms are to protect the unit from flooding.
- The 16 pans, on which the burning takes place, are sitting on raised soil and gravel pads. These pads are above the flood plain elevation. During an extreme storm event when flooding is predicted, the facility removes the pans from the unit to higher ground.
- The unit is constructed with a subgrade drainage trench that conveys water to a stormwater pond, which in turn discharges through a VPDES outfall 017.
- The facility is subject to an extensive soil and groundwater monitoring program. The results of the soil and groundwater monitoring program are reported, at a minimum of semi-annually, to the DEQ's HW permitting and groundwater staff.

6. Q: Is the New River one of those TMDL plans in progress?

A: Yes, the DEQ-Blue Ridge Regional Office (Roanoke) is the lead on the TMDL study for PCBs. This study will consist of additional PCB monitoring and fish tissue sampling this summer to provide additional data.

To date, DEQ has completed PCB TMDLs for the multi-jurisdictional Potomac River (Virginia embayments) and the Roanoke River. Currently, DEQ is developing a PCB TMDL for the tidal James River (including the Elizabeth River) and initiated a source investigation study for the New River (below Claytor lake dam to the West Virginia state-line). The New River TMDL is projected to be completed in the 2014-2015 timeframe.

DEQ has learned a great deal in our PCBs source investigation work performed during TMDL development. While PCBs are a legacy contaminant, we have discovered that on-going loadings of these contaminants are continuously released through point sources and upland contaminated sites. There is also an atmospheric component. The goal of the TMDL is to find the on-going sources and then through TMDL implementation, reduce the PCB loadings to levels that are no longer problematic to the fish. For those contaminants already in the system (i.e., found in sediment), there is nothing that can realistically be accomplished other than cutting the on-going sources and waiting for burial with naturally transported clean sediment to occur.

The TMDL component known as a source investigation study has been initiated on the New River. DEQ will likely “kick off” the official TMDL process within the next year. This means DEQ will hold public meetings where an overview of the TMDL process will be presented as well all available information related to PCB contamination. Examples of the PCB TMDL development process can be found on DEQ's website:
<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/PCBTMDLs.aspx>

7. Q: Was the New River listed for PCB, DDT, DDE, heptachlor epoxide and other contaminants in fish tissue?

A: A 32-mile segment from the NC line downstream to the Reed Creek confluence is listed for mercury in fish tissue; VDH has issued no consumption restriction.

While reviewing data in response to this question, it was determined that the decision to place the New River on the 2004 Impaired Waters List for DDT, DDE and heptachlor epoxide was made in error. DEQ Assessment guidance requires that two edible fish fillets of the same or different species be used for listing decisions. The original listing was based on two fillets taken from a single carp (quality assurance/quality control duplicates) in 2001. These fillets had been incorrectly assessed as independent samples. A second sampling event in 2002 found no exceeding values for DDT/DDE and heptachlor epoxide. Per DEQ assessment protocols, the 2001 carp should have been assessed as an 'Observed Effect' (single fish/single species) rather than as an indicator of impaired water quality. Justification to delist the New River for DDT/DDE and heptachlor epoxide will be submitted for EPA's approval prior to the release of the final 2012 Integrated Report. However, the river will continue to be listed for PCBs in fish tissue. You can view fish tissue data on the DEQ website:

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityMonitoring/FishTissueMonitoring/FishTissueResults.aspx>.

8. Q: Was the New River placed on the TMDL list in 2004?

A: Yes, segments were listed for bacteria in 2004 and additional segments have been added since then.

9. Q: Where's the money for those of us out west?

A: DEQ has expended resources in the development of the TMDL for PCBs in the New River basin and will continue to devote funding to this effort. Additionally, targeted fish tissue and sediment monitoring for the New and James (tidal) Rivers is scheduled for the summer 2012. The regional office in your area can provide you with more information about local DEQ initiatives and projects: <http://www.deq.virginia.gov/AboutUs/Contacts.aspx>.

10. Q: I thought there was a fish tissue advisory in place for PCB's in the New River. Has it been withdrawn?

A: A fish consumption advisory recommending no more than two meals per month remains in effect on New River from the I-77 bridge downstream to the West Virginia State Line, including a portion of Reed Creek and a portion of Peak Creek. (No consumption for carp in a portion of this) The specifics of the advisory can be found on the Virginia Department of Health website: <http://www.vdh.state.va.us/Epidemiology/DEE/publichealthtoxicology/Advisories/NewRiver.htm>

11. Q: Was the New River assessed as a drinking water source?

A: Public Water Supply (PWS) Use segments are defined in the Commonwealth's Water Quality Standards (9VAC25-260-540. New River Basin page 140). PWS designations extend from the downstream most water intake at the Arsenal upstream to approximately the mouth of Connellys Run in Radford to include the Blacksburg/Christiansburg/VPI Water Authority's intake; and from the Radford City intake upstream to Claytor Dam. PWS designations include tributaries from within 5 miles of each water intake. These segments are assessed as supporting the public water supply use based on applicable data available from the data window of 2005-2010. You can view

and/or download the WQS at this link:

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityStandards.aspx>.

12. Q: Is the New River impaired below the Radford Army Ammunition Plant, which was recognized in the latest TRI report as the largest discharger of toxics in the state?

A: The New River is impaired for polychlorinated biphenyls (PCBs) found in fish tissue.

13. Q: Are there Use Attainment studies underway for other than Gilley's Creek?

A: No.

14. Q: Aside from benthics, which I believe have a numeric value assigned, are there waters listed for violation of narrative standards?

A: For the current assessment, only benthic communities were assessed using a narrative standard.

15. Q: Are water temperatures measured and have there been any changes noted?

A: Of the 401 stations monitored for long term temperature changes over the last 20 years, 11% had statistically significant increases in temperature and 4% showed declines, which is close to what would be considered random at the 90% confidence level. Temperature trends over the shorter period of the last ten years, 2001 to 2010, revealed even fewer statistically significant trends with 3.3% increasing and 1.7% decreasing.

16. Q: How many of the delistings are due to the TMDLs vs. changes in standards (i.e. swamp water standard changes)?

A: DEQ delists waters found to be meeting standards that they previously failed, regardless of TMDL status. The majority of proposed delists are based on new monitoring data. Waters can also be delisted due to technical corrections to either standards or assessment methodology. For the current assessment, there are three proposed delists for waters that had been listed based on non-attainment of temperature standards that were later deemed to be inappropriate. Additionally, there is one proposed delist for a water where Use Attainability Analysis resulted in adjusted criteria that new monitoring data now meet, and one proposed delist for a water incorrectly assessed as tidal in a previous cycle. Lastly, there are parts of the Chesapeake Bay (including tributaries) that were incorrectly listed for insufficient submerged aquatic vegetation and degraded benthics in the 2010 Integrated Report and are now being delisted for these causes.

17. Q: When will the GIS files be available?

A: DEQ Water Quality Assessment GIS data are not made available to the public during the draft period. Every assessment report requires minor changes and discussion with EPA. Once DEQ receives EPA approval of the assessment, the GIS files will be finalized and posted to the DEQ website where they will be available for download.