



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

Fax (804) 698-4500 TDD (804) 698-4021

www.deq.virginia.gov

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

L. Preston Bryant, Jr.
Secretary of Natural Resources

DRAFT Month day, 2013 DRAFT

EPA Modification Reviews

US EPA Region III TMDL Coordinator
USEPA REGION 3 – 3WP12
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Total Maximum Daily Load modifications for the wasteload allocations in the bacteria TMDL for the Lower Mattaponi, Lower Pamunkey, and Upper York Rivers in King William, New Kent, and King and Queen Counties and the Town of West Point.

Dear **EPA Reviewer**,

The purpose of this letter is to request **22** modifications of the bacteria TMDLs developed for specific segments of the Lower Mattaponi River (VAP-F25E-01), Lower Pamunkey River (VAP-F14E-03), and the Upper York River (VAP-F26E-05 and VAP-F26E-20). EPA Region III approved the bacteria TMDL addressing shellfish (Upper York River) and primary contact recreational use impairment (Lower Mattaponi, Lower Pamunkey, and Upper York Rivers) for these waterbodies on 7/28/2010. The combined modification submittal provides continuity between affected TMDL equations in the original TMDL report.

Lower Mattaponi River (Enterococci – Recreation Use Impairment) (VAP-F25E-01)

Modification 1: The Mickens domestic discharger is a Single Family Home - General Permit (VAG404212) which discharges ≤ 1000 gallons per day (GPD) to a non-tidal tributary of the Lower Pamunkey River, Un-named Tributary (UT) to Olsson's Pond. This permit was mistakenly given a waste load allocation (WLA) based on 60 GPD (or 0.00006 million gallons per day (MGD)) with a daily load of $2.36E+05$ colony forming units (cfu/100mL) Enterococci, in the Lower Mattaponi River Enterococci (recreational use) TMDL, but should have been allocated in the Lower Pamunkey River Enterococci TMDL. DEQ proposes to correct the Lower Mattaponi TMDL by removing the daily waste load allocation of $2.36E+05$ cfu/day Enterococci. The details regarding the re-allocation of the WLA for this permittee for Enterococci and how the facility will maintain compliance with the Lower Pamunkey River TMDL, are noted below.

Modification 2: The Hampton Roads Sanitation District (HRSD) West Point Sewage Treatment Plant (STP) (VA0075434) is a VPDES minor municipal plant with a design flow of 0.60 MGD which discharges to the Lower Mattaponi River. The WLA in the TMDL was based on the Single Sample Instantaneous Maximum Standard of 104 (cfu/100mL) Enterococci, when it should have been based on

the Geometric Mean (GM) Standard of 35 (cfu/100mL) Enterococci. DEQ proposes to correct the Lower Mattaponi River Enterococci TMDL by revising the facility's daily WLA from 2.36E+09 to 7.95E+08 (cfu/100mL) Enterococci to accommodate this facility at a maximum design flow of 0.60 MGD and an Enterococci concentration of 35 N/mL.

Modification 3: The original Future Growth was equal to five times the daily load of the single municipal discharger, HRSD West Point STP (VA0075434) at the Single Sample Instantaneous Maximum Standard of 104 N/mL Enterococci. This was equal to 0.01% of the TMDL. DEQ proposes to increase the daily Future Growth value to 0.76% of the TMDL, equal to 7.15E+11 cfu/100mL Enterococci.

Modification 4: The revisions noted in 1-3 above, result in an increase in the daily Total WLA from 1.42E+10 to 7.16E+11 (cfu/100mL) Enterococci and a decrease in the daily Load Allocation (LA) value from 9.41E+13 to 9.34E+13 (cfu/100mL) Enterococci.

Modification 5: TMDL tables added to reflect the annual WLA, LA, and TMDL values for the Lower Mattaponi River Enterococci TMDL.

The proposed changes for the Lower Mattaponi River Enterococci TMDL are equal to <1% of the TMDL. Various pages throughout the text and tables have been changed. A list of these changes by page number follows the descriptions of changes below.

Lower Pamunkey River (Enterococci – Recreation Use Impairment) (VAP-F14E-03)

Modification 6: The Mickens domestic discharger is a Single Family Home - General Permit (VAG404212) which discharges ≤ 1000 GPD to a non-tidal tributary of the Lower Pamunkey River, Unnamed Tributary (UT) to Olsson's Pond. This permit was mistakenly given a waste load allocation (WLA) based on 60 GPD (or 0.00006 million gallons per day (MGD)) with a daily load of 2.36E+05 colony forming units (cfu/100mL) Enterococci, in the Lower Mattaponi River Enterococci (recreational use) TMDL, but should have been allocated in the Lower Pamunkey River Enterococci (recreational use) TMDL. DEQ proposes to allocate a daily WLA of 1.32E+06 (cfu/100mL) Enterococci for this facility in the Lower Pamunkey Enterococci TMDL. This is a facility which uses chlorination in a contact tank, followed by dechlorination, meets Virginia's Single Family Home - General Permit limits for discharges to non-tidal freshwater, and the facility outfall is greater than 2.75 miles upstream of the Enterococci (recreational use) impairment. Compliance of this facility with the daily WLA, 1.32E+06 cfu/100 mL for Enterococci will be met through compliance with existing *E. coli* permit limit protections. Compliance of this facility with the existing permit limits will not cause or contribute to the downstream Enterococci bacteria impairment in the Lower Pamunkey River.

Modification 7: Parham Landing Waste Water Treatment Plant (WWTP) (VA0088331) is a VPDES major municipal plant with a design flow of 2 MGD. However, the daily WLA in the Lower Pamunkey River Enterococci TMDL was based on the Single Sample Instantaneous Maximum Standard of 104 (cfu/100mL) Enterococci, when it should have been based on the GM Standard of 35 (cfu/100mL) Enterococci. The WLA was also allocated at the incorrect design flow of 0.568 MGD. DEQ proposes to revise the Lower Pamunkey Enterococci TMDL by correcting the facility's daily WLA from 2.24E+09 to 2.65E+09 (cfu/100mL) Enterococci to accommodate this facility at a maximum design flow of 2 MGD and an Enterococci concentration of 35 cfu/100mL.

Modification 8: The original Future Growth allocated was equal to five times the daily load of the single municipal discharger, Parham Landing WWTP (VA0088331) at the Single Sample Instantaneous Maximum Standard of 104 N/mL Enterococci. DEQ proposes to increase the daily Future Growth to 0.74% of the TMDL, equal to 1.21E+12 cfu/100mL Enterococci.

Modification 9: The revisions noted in 6-8 above, result in a increase in the daily Total WLA from 1.34E+10 to 1.21E+12 (cfu/100mL) Enterococci and a decrease in the daily Load Allocation (LA) from 1.63E+14 to 1.62E+14 (cfu/100mL) Enterococci.

Modification 10: TMDL tables added to reflect the annual WLA, LA, and TMDL values for the Lower Pamunkey River Enterococci TMDL.

The proposed changes for the Lower Pamunkey River Enterococci TMDL are <1% of the TMDL. Various pages throughout the text and tables have been changed. A list of these changes by page number follows the descriptions of changes below.

Upper York River (Enterococci – Recreation Use Impairment) (VAP-F26E-05)

Modification 11: The Mickens domestic discharger is a Single Family Home - General Permit (VAG404212) which discharges ≤ 1000 GPD to a non-tidal tributary of the Lower Pamunkey River, Unnamed Tributary (UT) to Olsson's Pond. The facility should have received a WLA in the Upper York River Enterococci TMDL. DEQ proposes to allocate a daily WLA of 1.32E+06 (cfu/100mL) Enterococci for this facility in the Upper York Enterococci TMDL. This is a facility which uses chlorination in a contact tank, followed by dechlorination, meets Virginia's Single Family Home - General Permit limits for discharges to non-tidal freshwater, and the facility outfall is greater than 5 miles upstream of the Upper York River Enterococci (recreational use) impairment. Compliance of this facility with the daily WLA, 1.32E+06_cfu/100 mL for Enterococci will be met through compliance with existing *E. coli* permit limit protections. Compliance of this facility with the existing permit limits will not cause or contribute to the downstream Enterococci bacteria impairment in the Upper York River.

Modification 12: The HRSD West Point STP (VA0075434) is a VPDES minor municipal plant with a design flow of 0.60 MGD which discharges to the Lower Mattaponi River. The WLA in the TMDL was based on the Single Sample Instantaneous Maximum Standard of 104 (cfu/100mL) Enterococci, when it should have been based on the GM Standard of 35 (cfu/100mL) Enterococci. DEQ proposes to correct the Upper York River Enterococci TMDL by revising the facility's daily WLA from 2.36E+09 to 7.95E+08 (cfu/100mL) Enterococci to accommodate this facility at a maximum design flow of 0.60 MGD and an Enterococci concentration of 35 cfu/100mL.

Modification 13: Parham Landing WWTP (VA0088331) is a VPDES major municipal plant with a design flow of 2 MGD. However, the daily WLA in the Upper York River Enterococci TMDL was based on the Single Sample Instantaneous Maximum Standard of 104 (cfu/100mL) Enterococci, when it should have been based on the GM Standard of 35 (cfu/100mL) Enterococci. The WLA was also allocated at the incorrect design flow of 0.568 MGD. DEQ proposes to correct the Upper York River Enterococci TMDL by revising the facility's daily WLA from 2.24E+09 to 2.65E+09 (cfu/100mL) Enterococci to accommodate this facility at a maximum design flow of 2 MGD and an Enterococci concentration of 35 cfu/100mL.

Modification 14: The original Future Growth allocated was equal to the sum of five times the daily load of the municipal dischargers HRSD West Point STP (VA0075434) and Parham Landing WWTP (VA0088331) at the Single Sample Instantaneous Maximum Standard of 104 N/mL Enterococci. DEQ proposes to increase the daily Future Growth to 0.75% of the TMDL, equal to 1.82E+12 cfu/100mL Enterococci.

Modification 15: The revisions noted in 11-14 above, result in a increase in the daily Total WLA from 1.76E+10 to 1.82E+12 (cfu/100mL) Enterococci and a decrease in the daily Load Allocation (LA) from 2.42E+14 to 2.40E+14 (cfu/100mL) Enterococci.

Modification 16: TMDL tables added to reflect the annual WLA, LA, and TMDL values for the Upper York River Enterococci TMDL.

The proposed changes for the Upper York Enterococci TMDL are <1% of the TMDL. Various pages throughout the text and tables have been changed. A list of these changes by page number follows the descriptions of changes below.

Upper York River (Fecal Coliform – Shellfish Use Impairment) (VAP-F26E-20)

Modification 17: The Mickens domestic discharger is a Single Family Home - General Permit (VAG404212) which discharges ≤ 1000 GPD to a non-tidal tributary of the Lower Pamunkey River, Unnamed Tributary (UT) to Olsson's Pond. The facility received a WLA in the Upper York River Fecal Coliform (Shellfish) TMDL based on the 90th Percentile Fecal Coliform Standard of 49 Most Probable Number (MPN) per 100mL, when it should have been based on 200 MPN/100mL, which is the standard used to model protective areas below dischargers to shellfish growing areas by the Virginia Department of Health. The WLA was also based on the incorrect design flow of the facility 60 GPD (or 0.00006 million MGD). DEQ proposes to correct the Upper York River Fecal Coliform TMDL by revising the daily WLA of 1.12E+05 (MPN/100mL) Fecal Coliform to 7.57E+06 (MPN/100mL) Fecal Coliform at a design flow of 1000 GPD and a Fecal Coliform concentration of 200 MPN/100mL. This is a facility which uses chlorination in a contact tank, followed by dechlorination, meets Virginia's Single Family Home - General Permit limits for discharges to non-tidal freshwater, and the facility outfall is greater than 5 miles upstream of the Upper York River Fecal Coliform impairment. Compliance of this facility with the daily WLA, 7.57E+06 MPN/100mL for Fecal Coliform will be met through compliance with existing *E. coli* permit limit protections. Compliance of this facility with the existing permit limits will not cause or contribute to the downstream Fecal Coliform impairment in the Upper York River.

Modification 18: The HRSD West Point STP (VA0075434) is a VPDES minor municipal plant with a design flow of 0.60 MGD which discharges to the Lower Mattaponi River. The facility should have received a WLA for Fecal Coliform based on 200 MPN/100mL, which is the standard used to model protective areas below dischargers to shellfish growing areas by the Virginia Department of Health. DEQ proposes to correct the Upper York River Fecal Coliform TMDL by allocating a daily WLA of 4.54E+09 MPN/100mL Fecal Coliform to accommodate this facility at a maximum design flow of 0.60 MGD and a Fecal Coliform concentration of 200 MPN/100mL.

Modification 19: Parham Landing WWTP (VA0088331) is a VPDES major municipal plant with a design flow of 2 MGD which discharges to the Lower Pamunkey River. The facility should have received a WLA for Fecal Coliform based on 200 MPN/100mL, which is the standard used to model protective areas below dischargers to shellfish growing areas by the Virginia Department of Health. DEQ proposes to correct the Upper York River Fecal Coliform TMDL by allocating a daily WLA of 1.51E+10 MPN/100mL Fecal Coliform to accommodate this facility at a maximum design flow of 2 MGD and a Fecal Coliform concentration of 200 MPN/100mL. The facility discharges treated effluent and has an existing permit limit for Enterococci to meet the current Water Quality Standard and a daily WLA of 2.65E+09 cfu/100mL Enterococci (see Lower Pamunkey Enterococci TMDL modification details above). Due to the protectiveness of the Enterococci discharge limits and the outfall location over 5.5 miles upstream, compliance of this facility with the Fecal Coliform daily WLA of 1.51E+10 MPN/100 mL, will be met through compliance of the existing Enterococci permit limit protections. Compliance of this facility with the existing permit limits will not cause or contribute to the downstream Fecal Coliform bacteria impairment in the Upper York River.

Modification 20: The original Future Growth allocated was equal to 1% of the TMDL. DEQ proposes to increase the daily Future Growth to 1.6% of the TMDL, equal to 1.80E+12 MPN/100mL Fecal Coliform.

Modification 21: The revisions noted in 17-20 above, result in an increase in the daily Total WLA from 1.14E+12 to 1.82E+12 MPN/100mL Fecal Coliform and a decrease in the daily Load Allocation (LA) from 1.13E+14 to 1.12E+14 MPN/100mL Fecal Coliform.

Modification 22: TMDL tables added to reflect the annual WLA, LA, and TMDL values for the Upper York River Fecal Coliform (shellfish) TMDL.

The proposed changes for the Upper York Fecal Coliform TMDL are <1% of the TMDL. Various pages throughout the text and tables have been changed. A list of these changes by page number follows the descriptions of changes below.

The changes noted above to the Lower Mattaponi Enterococci, Lower Pamunkey Enterococci, York Enterococci and Shellfish TMDLs are less than <1% of respective TMDLs. Various pages throughout the text and tables have been changed. A list of these changes by page number follows the descriptions of changes below.

Public Notice of the Modification

DEQ provided a public notice and a 30-day comment period in August 2012 for the TMDL modifications and 11 comments were received. Due to the number of comments received, DEQ provided an additional 30-day comment period in October 2012 to allow interested persons more time to comment and review proposed modifications. One additional comment was received. **Following this comment period, there were additional revisions to the TMDL to reflect the Rock Tenn permit WLA removal in the Lower Pamunkey and Upper York TMDLs, which were joint-public noticed with the permit in March 2013. XX comments were received. DEQ has included a copy of the comments and DEQ responses for your review.** DEQ is submitting this request for modification of the Upper York River, Lower Pamunkey River, and Lower Mattaponi TMDLs for approval and have enclosed one printed copy of modified tables for this request.

Permit Details

The current permit for the Rock Tenn West Point Facility (VA0003115) expired July 27, 2010 and is operating on an administrative continuance, Parham Landing WWTP (VA0088331) expires 10/17/2015, HRSD Town of West Point STP (VA0075434) expires 3/30/2017, and Mickens Domestic Single Family Home Discharger permit expires 5/14/2017. DEQ humbly requests EPA's expeditious review of these TMDL modifications in order to reissue these permits on schedule.

TMDL Revisions

The following tables and text from the TMDL report were affected by the described changes, as follows:

P i - ii; Updated page numbers for Section 2.5 Bacteria Source Assessment and Section 4.0 TMDL Allocation.

P iii: Updated title of Figure 2-5 and page number.

P iv; Updated page numbers for Tables 2-22 to 2-35.

P v; Updated titles and page numbers for Tables 4-1 to 4-18.

P E-3; first paragraph updated to reflect permitted facilities present in the watershed.

P E-4 – E-5; text updated to clarify discharger information per TMDL segment.

P E-6 – E-7; Tables E-1 to E-4 updated to correct discharger flow, concentration, allocated load, future growth, current allocated waste load, and total allocated waste load values.

P E-8 – E-9; Tables E-5 to E-8 updated to correct allocated load values.

P E-10; Table E-9 to E-12 updated to correct WLA and LA values.

P 2-26; text updated to clarify discharger information.

P 2-27 – 2.-28; Table 2-21 updated to indicate which facilities are permitted to discharge bacteria.
P 2-28; Figure 2-5 updated to reflect correct location of domestic residence VAG404212.
P 4-2 – 4-3; text updated to clarify discharger information per TMDL segment.
P 4-5; Table 4-2 updated to correct required reductions for Lower Pamunkey and Lower Mattaponi River segments.
P 4-5; text updated to reflect correct number of bacteria dischargers and to indicate revised computation method for future growth.
P 4-6 – 4-7; Tables 4-3 to 4-6 updated to correct discharger flow, concentration, allocated load, future growth, current allocated waste load, and total allocated waste load values.
P 4-9 – 4-10; Tables 4-7 to 4-10 updated to correct allocated load values.
P 4-10; Tables 4-11 to 4-18 updated to correct WLA and LA daily values and to add annual TMDL tables.

These changes are included in the attached modified Lower Mattaponi River Enterococci TMDL, Lower Pamunkey River Enterococci TMDL, and Upper York River Enterococci and Fecal Coliform TMDL report pages.

In accordance with EPA's August 2003 letter to VADEQ, VADEQ hereby requests EPA approval of the proposed modification. If you or your staff has any questions, please contact Craig Lott at (804) 698-4240.

Sincerely,

Liz McKercher
Watershed Programs Manager

Attachments

Replacement page(s)

cc: Charles Lunsford, VADCR
Sandra Mueller, VADEQ
Margaret Smigo, PRO TMDL coordinator
File CO