

Upper Rappahannock
River Basin
Total Maximum Daily
Load Study

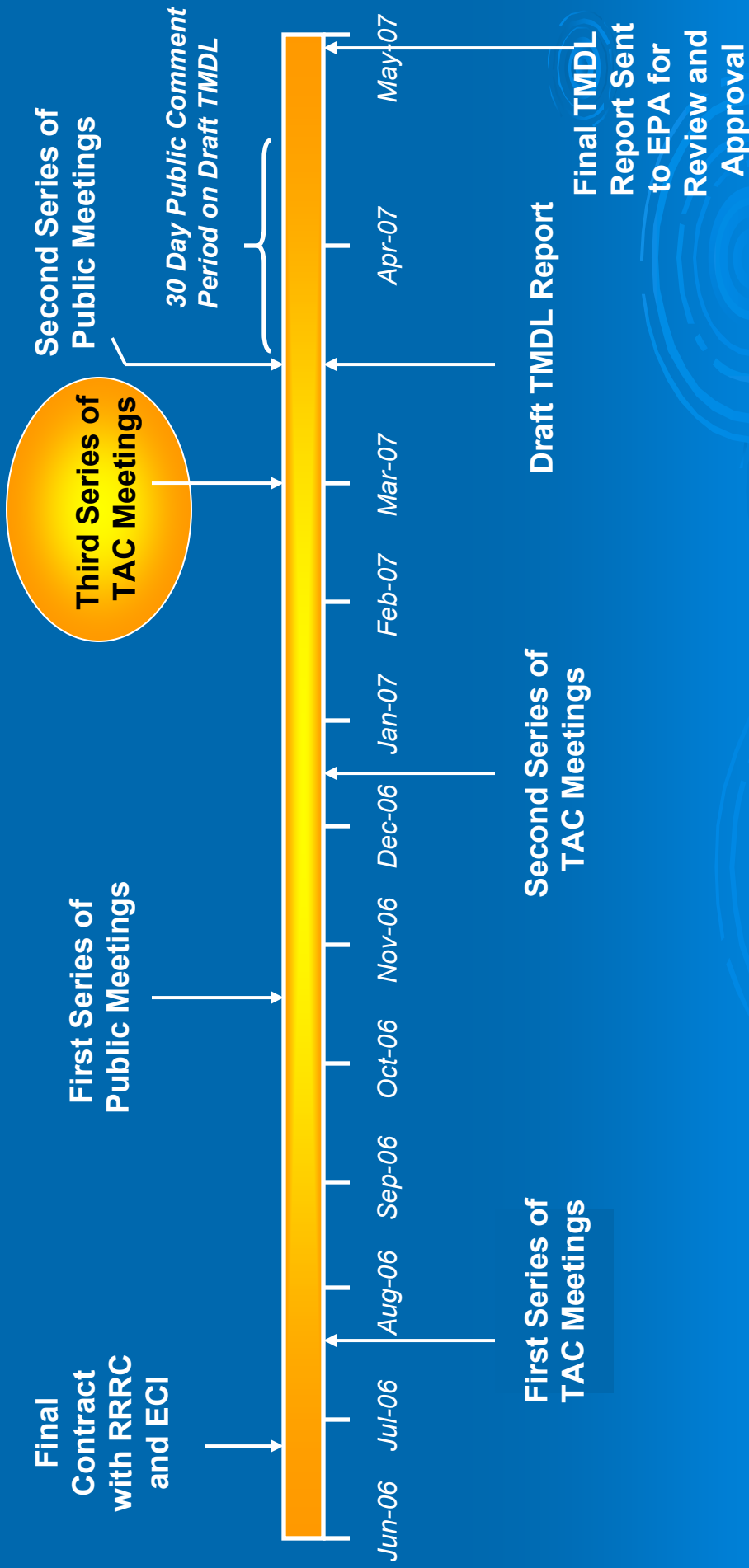
Rappahannock and
Rapidan TAC
Meetings
Culpeper, Virginia
February 27, 2007



Meeting Agenda

- **Introductions and Background**
Katie Conway, VA DEQ
- **Review of Source Assessment and Presentation of Draft TMDL Allocations**
Byron Petrauskas, Engineering Concepts, Inc.
- **Questions**

Upper Rappahannock River Basin TMDL Project Milestones



Second Round of Public Meetings

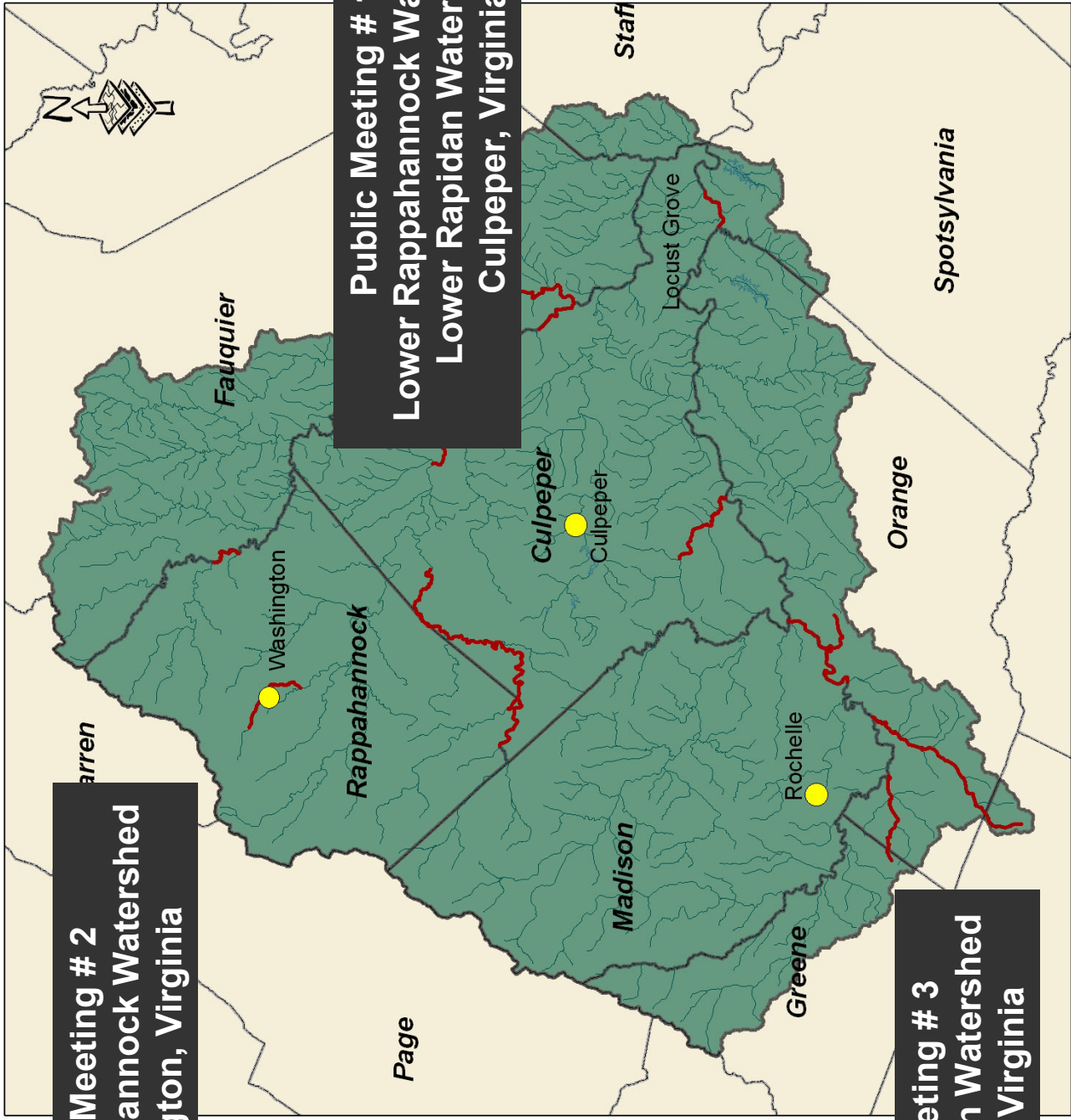
Second Round of Public Meetings will be held in March 2007.

- **Public Meeting # 1, Monday, March 19, 2007**
7:00 p.m. to 9:00 p.m. – Culpeper Train Depot
109 S. Commerce Street, Culpeper, Virginia, 22701
Alternative meeting date in case of inclement weather:
Wednesday, March 21, 2007. Same time, same place.
- **Public Meeting # 2, Thursday, March 22, 2007**
7:00 p.m. to 9:00 p.m. – Rappahannock County Library
4 Library Road, Washington, Virginia, 22747
Alternative meeting date in case of inclement weather:
Monday, March 26, 2007. Same time, same place.
- **Public Meeting # 3, Tuesday, March 27, 2007**
7:00 p.m. to 9:00 p.m. – Mt. Nebo Church
3890 Jacks Shop Road, Rochelle, Virginia, 22738
Alternative meeting date in case of inclement weather:
Wednesday March 28, 2007. Same time, same place.

**Public Meeting # 2
Upper Rappahannock Watershed
Washington, Virginia**

**Public Meeting # 1
Lower Rappahannock Watershed
Lower Rapidan Watershed
Culpeper, Virginia**

**Public Meeting # 3
Upper Rapidan Watershed
Rochelle, Virginia**



— Impaired Segments Included in the Rappahannock TMDL

— Rivers and Streams

■ Rappahannock Watershed

■ Rapidan Watershed

Advertisement of Public Meetings

- Publish notice in the Virginia Register.
- Notify local newspapers.
- Post meeting information on Rappahannock Rapidan Regional Commission's website and the DEQ website.
- Notified several environmental organizations about the meetings. Requested that they post the meeting announcement on their website.
- Notified TAC via email. Included a flyer that could be distributed at the discretion of TAC members.
- Postcard Mailings:
 - 1,600 postcards (addresses randomly selected, but covered each geographic area of the project).

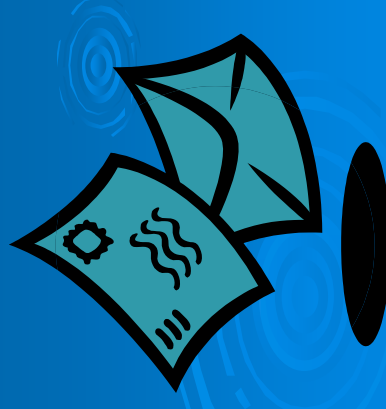


Public Comment Period

- Public Comment Period for TAC Meeting – Comments on draft allocation scenarios and materials presented at TAC Meeting:
February 27, 2007 to March 29, 2007
- Public Comment Period for Public Meetings – Comments on the Draft TMDL Report and materials presented at the public meetings:
March 19, 2007 to April 18, 2007
- DEQ accepts written comments by e-mail, fax, or postal mail. Written comments should include the name, address, and telephone number of the person commenting, and be received by DEQ during the comment period.

- Send all comments to Katie Conaway:

Virginia Department of Environmental Quality
13901 Crown Court, Woodbridge, Virginia, 22193
E-mail: mkconaway@deq.virginia.gov
Fax: (703) 583-3841



Thank you!

CONTACTS

Katie Conway
Virginia Department of Environmental Quality
Regional TMDL Coordinator
Phone: (703) 583-3804
E-mail: mkconaway@deq.virginia.gov

Bryant Thomas
Virginia Department of Environmental Quality
Water Quality Programs
Phone: (703) 583-3843
E-mail: bhthomas@deq.virginia.gov

Byron Petrauskas
Engineering Concepts, Inc.
Phone: (540) 473-1253
Email: bpetrauskas@engineeringconcepts.com

Chris Conti
Rappahannock-Rapidan Regional Commission
Phone: (540) 829-7450
Email: clconti@rrregion.org

Additional Information

1. Overview of the TMDL Process
2. List of all the Impaired Stream Segments addressed in this TMDL Study.
3. List of DEQ Monitoring Stations that were used to list the segments in the Upper Rappahannock TMDL Study as impaired.
4. Feedback from the first round of public meetings

How a TMDL Project is Managed

- DEQ is the Project Lead for the TMDL Development Phase (DCR provides assistance).
- DEQ subcontracts out the modeling and technical work involved in TMDL Development.
- Stakeholder and public participation:
 - Other VA Agencies, Local Governments, Community Groups, etc. are invited to participate in Technical Advisory Committee meetings.
 - The general public and interested stakeholders are invited to public information meetings.
- Once the study has been approved by the State Water Control Board, the Implementation Plan process is begun.
- DCR is the lead for Implementation Plan Development (DEQ provides assistance).

What is a TMDL ?

Total Maximum Daily Load

A TMDL is a pollution budget:

$$\text{TMDL} = \text{Sum of WLA} + \text{Sum of LA} + \text{MOS}$$

Where:

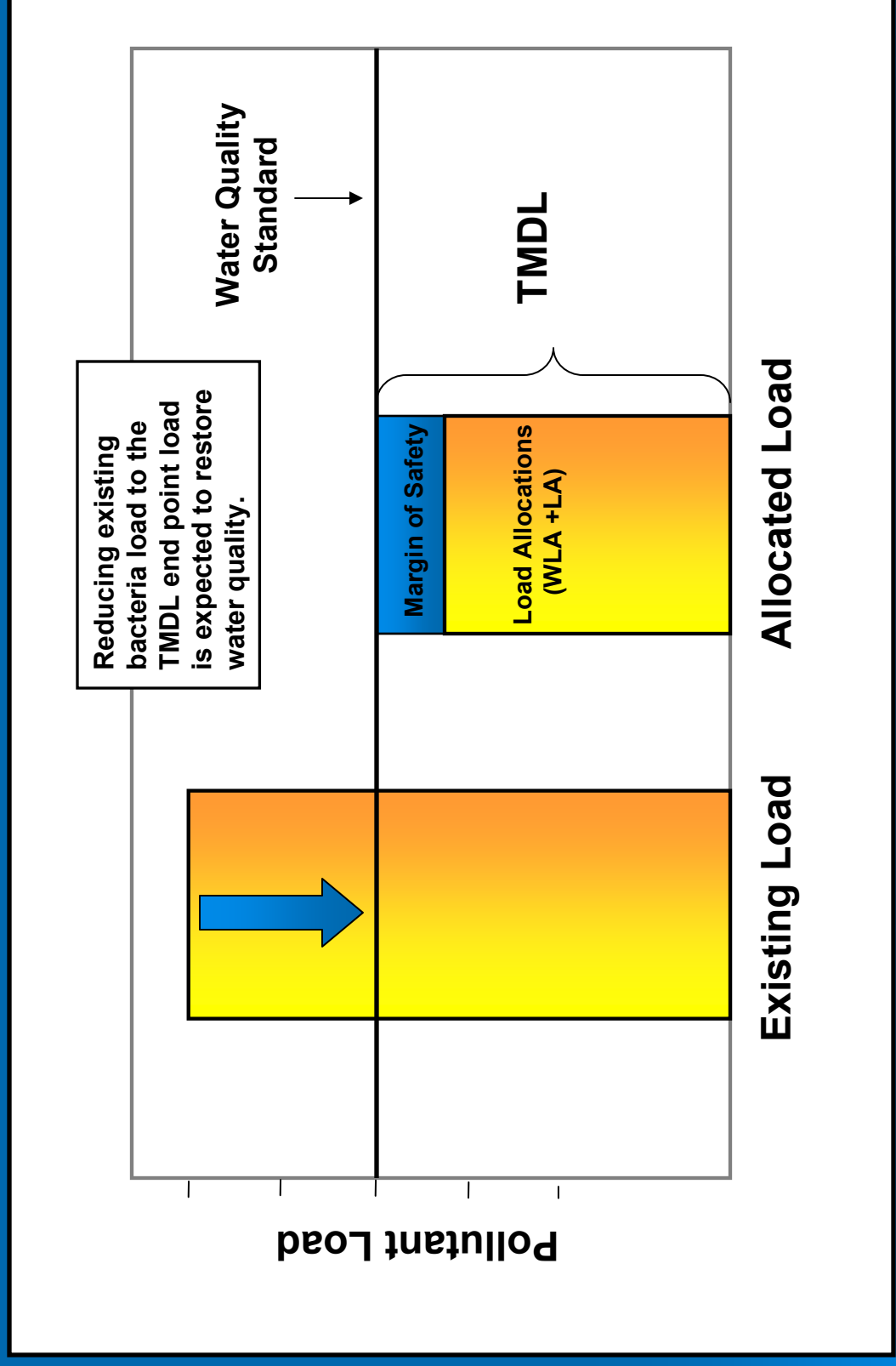
TMDL = Total Maximum Daily Load

WLA = Waste Load Allocation (point sources)

LA = Load Allocation (nonpoint sources)

MOS = Margin of Safety

An Example TMDL



Required Elements of a TMDL

A TMDL must:

- Be developed to meet Water Quality Standards.
- Be developed for critical stream conditions.
- Consider seasonal variations.
- Consider impacts of background contributions.
- Include wasteload and load allocations (WLA, LA).
- Include a margin of safety (MOS).
- Be subject to public participation.
- Provide reasonable assurance of implementation.

Rappahannock Watershed Technical Advisory Committee						
Stream Name	Locality	Impairment	Length (miles)	Upstream Limit	Downstream Limit	
Hughes River	Culpeper Rappahannock	Bacteria	3.68	Kilbys Run	Hazel River	
Hazel River	Culpeper	Bacteria	16.67	Rt. 707 Bridge	Unnamed Tributary	
Hazel River	Culpeper	Bacteria	3.32	Indian Run	Muddy Run	
Rush River	Rappahannock	Bacteria	4.55	Unnamed Tributary	Big Branch	
Rappahannock River	Fauquier Rappahannock	Bacteria	2.17	Jordan River	UT	
Marsh Run	Fauquier	Bacteria	8.35	Craig Run	Rappahannock River	
Browns Run	Fauquier	Bacteria	2.39	Unnamed Tributary	Marsh Run	
Craig Run	Fauquier	Bacteria	3.61	Headwaters of Craig Run	Marsh Run	
Rappahannock River	Culpeper Fauquier	Bacteria	2.02	Ruffans Run	Tinpot Run	
Rappahannock River	Culpeper Fauquier	Bacteria	2.85	Unnamed Tributary	Marsh Run	

Rapidan Watershed Technical Advisory Committee

Stream Name	Locality	Impairment	Length (miles)	Upstream Limit	Downstream Limit
Blue Run	Orange Albemarle	Bacteria	11.61	Headwaters of Blue Run	Rapidan River
Rapidan River	Culpeper Madison Orange	Bacteria	7.5	Poplar Run	Robinson River
Marsh Run	Greene Madison Orange	Bacteria	5.19	Headwaters of Marsh Run	Rapidan River
Unnamed Tributary to Rapidan River	Madison Orange	Bacteria	2.57	Headwaters of Unnamed Tributary	Rapidan River
Cedar Run	Culpeper	Bacteria	5.4	Buck Run	Rapidan River
Rapidan River	Culpeper Spotsylvania	Bacteria	2.68	Wilderness Run	Middle Run

DEQ Listing Stations for Upper Rappahannock

TMDL ID	Stream Name	Monitoring Station	Station Location	Year First Listed as Impaired	2004 Exceedance Rate Fecal Coliform Standard	2006 Exceedance Rate	
						Fecal Coliform Standard	E. Coli Standard
VAN-E08R-02	Browns Run	3-BOS000.72	Route 653	2002	57% (4 of 7)	100% (3 of 3)	N/A
VAN-E08R-03	Craig Run	3-CRA000.82	Route 656	2004	43% (3 of 7)	100% (3 of 3)	N/A
VAN-E04R-01	Hazel River	3-HAZ018.29	Route 729	2002	20% (4 of 20)	15% (3 of 20)	33% (3 of 9)
		3-HAZ026.16	Route 522	2006	N/A	33% (2 of 6)	33% (2 of 6)
60076	Hazel River	3-HAZ032.54	Route 644	2006	N/A	21% (3 of 14)	N/A
		3-HAZ005.98	Route 625	2006	N/A	36% (5 of 14)	50% (5 of 10)
VAN-E03R-01	Hughes River	3-HUE000.20	Route 644	2004	12% (2 of 17)	16% (3 of 19)	36% (4 of 11)
VAN-E08R-01	Marsh Run	3-MAH000.19	Route 651	1996	21% (3 of 14)	N/A	29% (2 of 7)
		3-MAH004.18	Route 668	1996	44% (4 of 9)	75% (3 of 4)	N/A
VAN-E08R-04	Rappahannock River	3-RPP147.10	Route 15/29	2004	22% (8 of 37)	N/A	39% (5 of 13)
VAN-E01R-03	Rappahannock River	3-RPP175.51	Route 647	2002	16% (3 of 19)	N/A	29% (4 of 14)
60081	Rappahannock River	3-RPP142.36	Route 620	2006	N/A	N/A	29% (2 of 7)
VAN-E05R-01	Rush River	3-RUS005.66	Route 683, upstream of Route 211/522	2002	24% (4 of 17)	22% (4 of 18)	44% (4 of 9)

DEQ Listing Stations for the Rapidan River

TMDL ID	Stream Name	Monitoring Station	Station Location	Year First Listed as Impaired	2004 Exceedance Rate Fecal Coliform Standard	2006 Exceedance Rate	
						Fecal Coliform Standard	E. Coli Standard
VAN-E13R-01	Blue Run	3-BLU002.60	Route 20	2002	40% (8 of 20)	35% (7 of 20)	50% (3 of 6)
		3-BLU006.44	Bridge for an unnamed road through Tibbstown	2006	N/A	40% (2 of 5)	N/A
VAN-E16R-01	Cedar Run	3-CED000.59	Route 522	2004	25% (5 of 20)	15% (2 of 13)	N/A
		3-CED003.52	Route 652	N/A	N/A	38% (3 of 8)	100% (3 of 3)
VAN-E13R-03	Marsh Run	3-MAS001.55	Route 644	2004	67% (2 of 3)	31% (4 of 13)	N/A
VAN-E13R-02	Rapidan River	3-RAP045.08	Route 15	2002	29% (10 of 35)	N/A	43% (6 of 14)
VAN-E18R-01	Rapidan River	3-RAP006.53	Route 610	2002	32% (12 of 38)	N/A	58% (7 of 12)
VAN-E13R-04	Unnamed Tributary to Rapidan River	3-XEZ000.12	Route 634	2004	100% (2 of 2)	43% (3 of 7)	40% (2 of 5)

* In order for a waterbody to be listed as impaired:

1. There must be at least two exceedances of the water quality criterion
2. Greater than 10.5% of the total samples must be exceedances.

Summary of Changes in Primary Contact Criteria

Indicator	Status	Instantaneous Maximum (cfu/100mL)	Geometric Mean (cfu/100 mL)
Fecal Coliform	Old	1,000	200
<i>E. coli</i>	New	235	126
Fecal Coliform	Interim	400	200

- Changes went into effect on January 15, 2003
- Both New *E. coli* and Interim Fecal Coliform criteria apply
- Fecal coliform criteria will be phased out entirely once 12 *E. coli* samples have been collected or after June 30, 2008

Public Feedback Concerning Public Meetings

- Advertise public meetings on the following websites:
 - <http://www.rappflow.org/>
 - <http://www.rappnet.org/>
 - <http://rappvoice.com/>
 - <http://www.rlep.org/>

(Rappahannock League of Environmental Protection)
- Provide more advance notice of the meetings