



Virginia Department of Environmental Quality 2004 Water Quality Assessment Summary of Findings for Loudoun County

Purpose of Report – The (305(b)/303(d) Integrated Report is required under the Federal Clean Water Act, and provides the Environmental Protection Agency and the public an update on the status of water quality in Virginia waters. The report reflects a tremendous amount of work done by regional DEQ officials to compile water quality and stream health information. It does a good job incorporating citizen data from Loudoun County submitted to DEQ, and it reflects changes in assessments based upon these citizen data.

Data Used for Assessment –

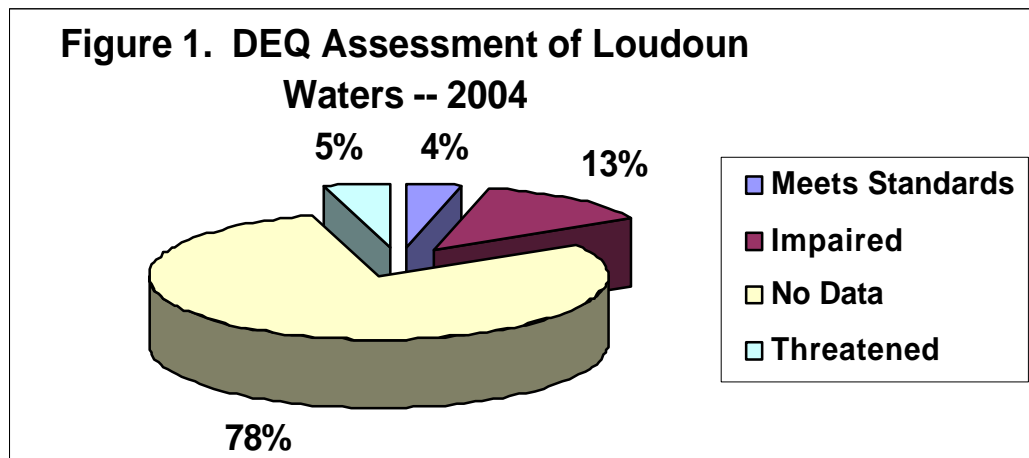
1. DEQ used their monitoring data for the period 1998-2002 to assess water quality. The sampling stations and number of samples used for the assessment are provided in **Table 1**. DEQ data are approved data.
2. DEQ used Loudoun Wildlife Conservancy and North Fork Goose Creek Watershed Committee data to identify waters that are threatened (having observed effects). These data are “unapproved” and are used by DEQ to identify waters that require follow-up monitoring by DEQ.

Assessment Findings –

1. **New Impaired Waters** – There are new impairments in the following watersheds:
 - a. North Fork Catoctin – Fecal Coliform
 - b. South Fork Catoctin – Benthic
 - c. Middle Goose Creek – Fecal Coliform
 - d. Little River – Fecal Coliform
 - e. Sycolin Creek – Fecal Coliform
 - f. Tuscarora Creek – Fecal Coliform
 - g. Broad Run – Fecal Coliform
2. **Summary of Findings** – The assessment findings for each monitoring station are provided in **Table 2**. The blue highlighted stations are impaired and the pink highlighted stations are threatened (observed effects). Changes from the 2002 Assessment Report are labeled as “new.”
3. **Implications –**
 - a. **Benthic Impairment in Catoctin Creek Watershed** – There is now a benthic impairment in a segment of the South Fork Catoctin Creek that includes waters in Purcellville. In addition, there are waters in the mainstem of Catoctin Creek, the North Fork Catoctin Creek, and in Milltown Branch that are considered

threatened (observed effects). These aquatic life impacts should be considered in the context of the Catoctin Creek TMDL Implementation Plan.

- b. **Unassessed Waters** – Over 75% of the waters in Loudoun County have not been assessed by DEQ because of the scarcity of monitoring stations and resources. The distribution of unsampled, impaired, threatened, and waters that meet standards is shown in **Figure 1**. We know from the TMDL reports on Catoctin Creek and Goose Creek that most of the waters in these watersheds do not meet fecal coliform standards. This highlights the need for a coordinated effort to provide comprehensive monitoring in the county. These data are needed to develop watershed management plans, to protect clean waters, to set priorities to restore unhealthy waters, and monitor progress in meeting TMDL Implementation Plan goals.
- c. **Decisions to Delist Impaired Waters** – DEQ's decisions to delist an impairment will in many instances be based upon as few as 12 samples taken over two year period with no resampling scheduled for another 7 years. This contrasts with decisions in the past that were consistently based upon 30-50 samples. Delisting based upon 12 samples is allowed under Proactive Delisting Approach adopted by DEQ in 2003. Thus, the assessments for many of our waters will be based upon very truncated databases and the validity of the process will be greatly diminished. The validity of the 305(b)/303(d) assessment process is also challenged because in many instances the same 12 samples will be used for three consecutive assessment periods.



1. Table 1. Analysis of the Number of Samples Used in the 305(b)/03(d) Integrated Report by DEQ for Loudoun County Waters – 2000 through 2008.

Watershed Monitoring Station	Type of Station	Number of Samples Used for Assessment					Comments
		2000	2002	2004	2006 (Projected)	2008 (Projected)	
Piney Run/Dutchman Creek A01							
1APIA001.80	Trend	20	22	17	24		
Catoctin Creek A02							
1ACAX004.57	Trend	49	51	38	35		
North Fork Catoctin Creek A02							
1ANOC000.42	Ambient	19	22	16	10		
1ANOC004.38	Ambient		11	11	12		
1ANOC009.13	Ambient		11	13	13		
South Fork Catoctin Creek A02							
1ASOC001.66	Ambient	20	22	17	11		
1ASOC007.06	Ambient		11	11	11		
1ASOC0012.38	Ambient		12	12	12		
Limestone Branch A03							
1ALIM001.16	Trend	16	22	18	22		
Middle Goose Creek/Panther Skin A05							
1AGOO022.44	Ambient	48	50	47	33		
North Fork Goose Creek/Crooked Run A06							
1ANOG005.69	Trend	17	18	24	31		
Beaverdam Creek A07							
1ABEC004.76	Trend	19	21	28	32		
1ABEC011.19	Ambient			5	9		
1ANOB005.49	Ambient			5	9		
Lower Goose Creek A08							
1AGOO002.38	Trend	51	51	48	42		
1AGOO011.23	Trend			11	20		
Little River A08							
1ALIV001.70	TMDL			11	11		
1ALIV004.78	TMDL	20	24	29	22		
Sycolin Creek A08							
1ASYC002.03	TMDL	20	22	28	23		
1ASYC004.93	Ambient		10	10	12		
1ASYC007.43	Ambient		12	12	13		
1ASFS000.28	Ambient		11	11	12		
Tuscarora Creek A08							
1ATUS000.37	Trend	20	22	28	25		
Broad Run/Horsepen Run A09							
1ABRB002.15	Trend	49	50	36	31		
1AHPR003.87	Ambient	20	21	16	11		
1ASOR002.99				4	4		
Sugarland Run A10							
1ASUR004.42	Trend	17	18	19	20		

Table 2. DEQ's Station by Station Assessment of Loudoun Waters (Blue= Impaired; Pink=Threatened/Observed Effects; Italics=new in category since 2002 Assessment; NA=river segment overlaps with another)

Watershed Monitoring Station	Monitoring Location	Type Data	River Miles	Categories (Number of River Miles)								
				2A – Meet Stnds	2B-Exceed Screening Value	3A – No Data	3B- Insufficient DEQ Data	3C- Citizen Data Show Problems	3D- Citizen Data Show No Problems	4A- Impaired with TMDL	5A- Impaired TMDL Needed	5D- TMDL Needed for Benthic
Piney Run/Dutchman Creek A01			38.98			31.90						
1APIA001.80	Rt. 671	DEQ									3.52	
1ASDH-15-LWC	Unnamed Tributary	Citizen						3.56				
Catoctin Creek A02			132.91			96.67						
1ACAX004.57	Rt. 663	DEQ								7.20		
New IACAX-3-LWC		Citizen						(NA)				
North Fork Catoctin Creek A02												
1ANOC000.42	Rt. 681	DEQ								4.12		
1ANOC004.38	Rt. 287	DEQ		3.16								
New IANOC009.13	Rt. 812	DEQ								2.45		
New IANOC-1-LWC		Citizen						(NA)				
South Fork Catoctin Creek A02												
1ASOC001.66	Rt. 698	DEQ								5.77		
1ASOC007.06	Rt. 738	DEQ								2.97		
New IASOC0011.98	Rt. 611	DEQ										3.40
1ASOC0012.38										5.17		
New IASOC012.60	Rt. 690	DEQ										(NA)
1ASOC013.05										(NA)		
1ACSOC-4-LWC	Rt. 611	Citizen										(NA)
Milltown Creek A02												
New IAMIH-11-LWC		Citizen						2.00				
Limestone Branch A03			61.33			49.71						
1ALIM001.16	Rt. 15	DEQ									4.75	
New IAXAQ-5-LWC	Rt. 661	Citizen						1.90				
New IAXGJ-16-LWC	Tutt Lane	Citizen						4.97				
Middle Goose Creek/Panther Skin A05			120.52			102.78						
New IAGOO022.44	Rt. 734	DEQ								7.20		

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<i>New IAPAE-12-LWC</i>	Rt. 623	Citizen						3.71				
Non-Loudoun Waters		DEQ		3.22						3.61		
North Fork Goose Creek/Crooked Run A06			60.43			41.29						
IANOG005.69	Rt. 722	DEQ								4.29		
<i>New IACRF-6-LWC</i>	Rt. 727	Citizen						2.08				
IANOG-7-LWC	Rt. 762	Citizen						2.56				
IANOG-1-NFGC		Citizen							(NA)			
IAJAC-2-NFGC		Citizen							2.89			
IACRF-3-NFGC		Citizen							(NA)			
<i>New IANOG-4-NFGC</i>		Citizen						2.47				
<i>New IANOG-5-NFGC</i>		Citizen						(NA)				
IANOG-6-NFGC		Citizen							3.82			
IASIM-8-NFGC		Citizen							1.03			
Beaverdam Creek A07			73.08			54.54						
IABEC004.76	Rt. 734	DEQ								6.32		
IABEC011.19	Rt. 626	DEQ		1.17								
IANOB005.49	Rt. 719	DEQ		2.45								
IANOB007.97	Rt. 831	DEQ			4.60							
<i>New IABUS-10-LWC</i>	Rt. 779	Citizen						1.11				
IANOB-9-LWC	Rt. 630	Citizen						2.89				
Lower Goose Creek A08			161.58			121.54						
IAGOO002.38	Rt. 7	DEQ								4.77		(NA)
IAGOO003.18		DEQ										(NA)
IAGOO011.23	Rt. 621	DEQ		3.00								
1644000.00		USGS			3.20							
Little River A08												
<i>New IALIV001.70</i>	Rt. 15	DEQ								6.13		6.13
IALIV004.78	Rt. 50	DEQ										(NA)

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Sycolin Creek A08												
New 1ASYC002.03	Rt. 653	DEQ								2.85		
1ASYC004.93	Rt. 621	DEQ								3.51		
1ASYC007.43	Rt. 797	DEQ								3.59		
1ASFS000.28	Rt. 15	DEQ								3.31		
Tuscarora Creek A08												
New 1ATUS000.37	Rt. 653	DEQ								3.55		
1ATUS-2-LWC		Citizen						(NA)				
Broad Run/Horsepen Run A09			128.54			113.87						
New 1ABRB002.15	Rt. 7	DEQ									2.88	
1AHPR003.87	Dulles Rd	DEQ		6.38								
1ASOR002.99	Rt. 616	DEQ		4.96								
New 1ABEM-13-LWC	Rt. 641	Citizen						0.45				
Sugarland Run A10			33.94			24.69						
1ASUR004.42	Rt. 7	DEQ									5.75	
New ASUG-14-LWC		Citizen						3.50				
County Totals			811.31	24.34	7.80	636.99	0.00	31.20	7.74	76.81	16.90	9.53