Loudoun Wildlife Conservancy
aulland@loudounwildlife.org

Loudoun Watershed Watch
info@loudounwatershedwatch.org

April 18, 2024

Meighan Wisswell
VA Dept. of Environmental Quality
P.O. Box 1105
Richmond, VA. 23218

Sent via E-mail: citizenwater@deq.virginia.gov

Subject: Citizen Nomination for Stream Monitoring

Dear Meighan Wisswell:

Loudoun Wildlife Conservancy and Loudoun Watershed Watch are pleased to provide several nominations for additional stream monitoring locations to be considered for inclusion in DEQ's Water Quality Monitoring plan for calendar year 2025. This year we met virtually as a committee and selected 4 candidate sites from a review of 8 locations. We used a comprehensive interactive map with stream monitoring data and stream impairments, past stream monitoring nominations, and past DEQ stream monitoring plans.

The map includes past stream monitoring results by:

- Citizen stream monitoring groups
- VADEQ
- Other organizations

The map is available to the public at https://tinyurl.com/5e5np2uy

The scoring matrix includes eight criteria for nominations as follows. On March 5, 2024, several committee members from Loudoun Wildlife Conservancy and Loudoun Watershed Watch met and determined scores and made the final nomination list.

Review and prioritize stream selection criteria - scale 0-3, low to high.

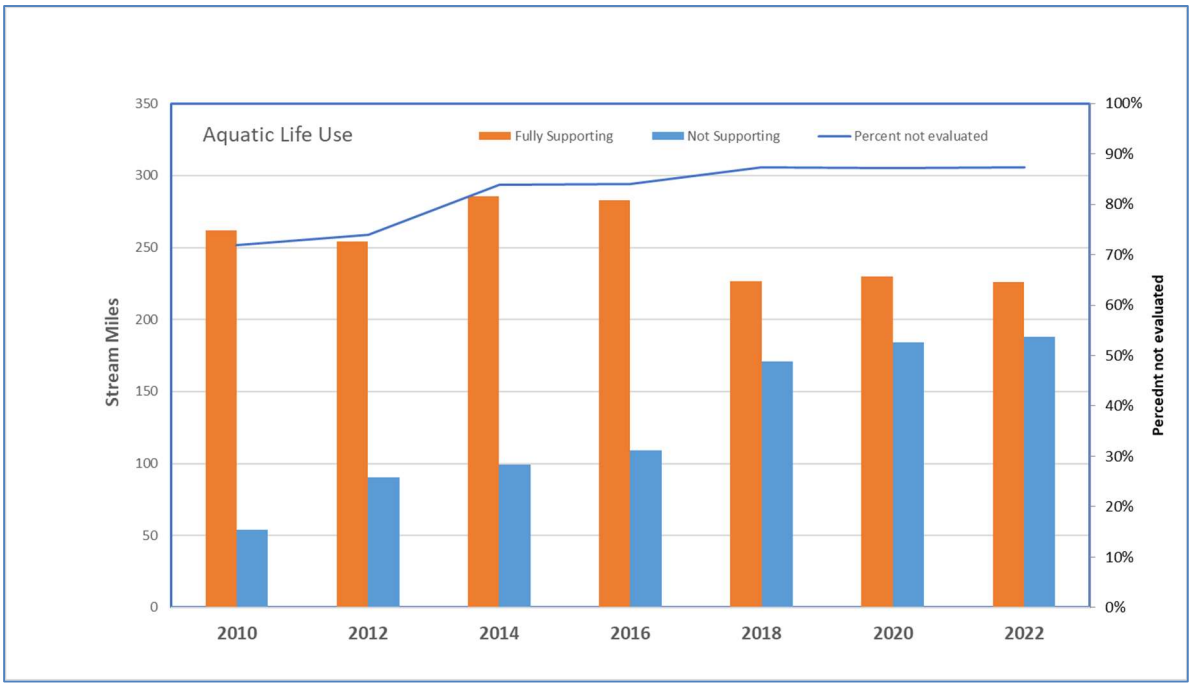
ID	Criteria to Consider for DEQ Nomination	Final Weight (avg)
A	Easy access to the stream site for public events to engage, educate, and raise awareness	2.75
B	Proximity to LWC stream monitors (short drive, central location)	1.5
C	Historic benthic VASOS Stream scores available	2.25
D	Potential for habitat restoration (e.g., location conducive to plantings, riparian buffers)	3.0
E	Currently Impaired for Aquatic Life	2.75
F	Risk of future impairment based on site knowledge (e.g., development plans)	3.0
G	Meets DEQ Nomination Criteria: 1-The nomination shows a need for DEQ sampling 2-Budget and staff availability 3-No recent DEQ sampling has occurred 4-Safe access for staff 5-Sampling is meant to assess water quality	3.0
H	In alignment with Loudoun Wildlife Conservancy stream monitoring goals	1.75

Final Scores of Streams Nominated for DEQ Monitoring	
1	North Fork Catoctin Creek – At proposed roundabout – Final Weighted Score: 52.5
2	Cattail Branch – East of Leesburg - Final Weighted Score: 47.9
3	South Fork Catoctin Creek – Downstream from Purcellville - Final Weighted Score: 47.4
4	Little Run – Near Aldie - Final Weighted Score: 44.8

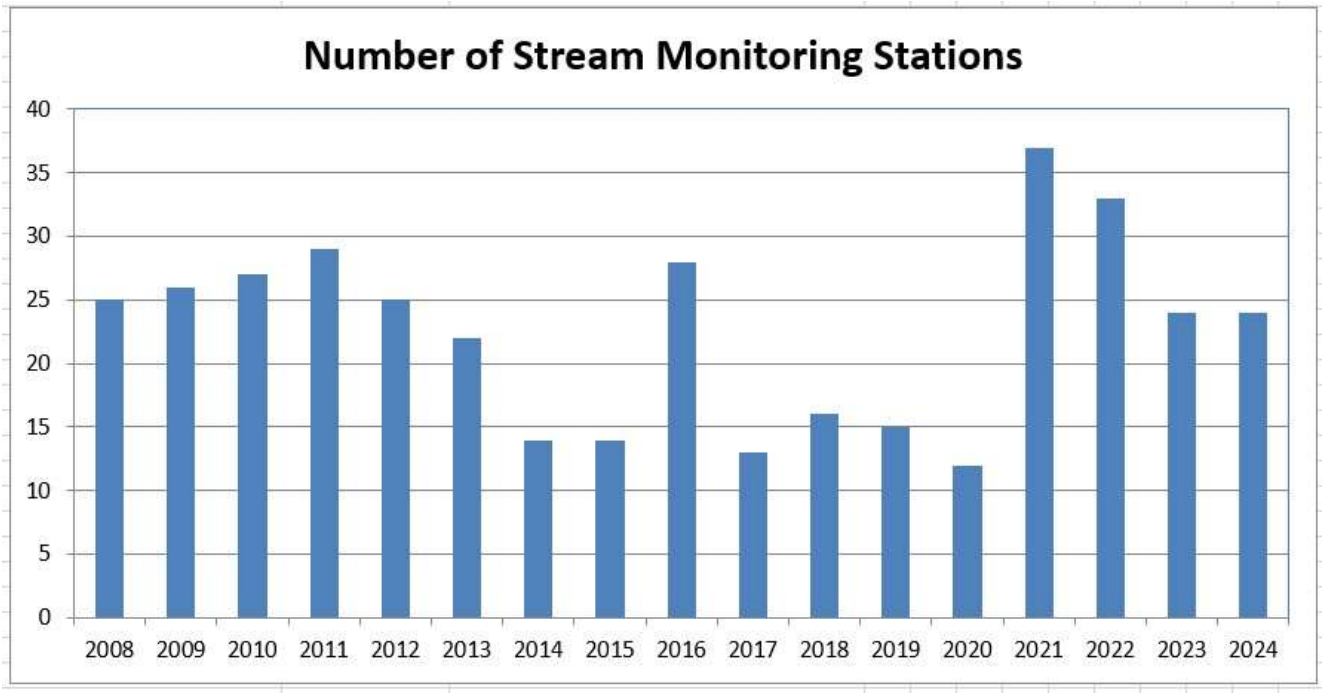
The other four sites reviewed included:

- ✓ Goose Creek near Banshee Reeks
- ✓ Upper Goose Creek
- ✓ Sand Branch where there is active TMDL
- ✓ Sycolin Creek near development area

We understand that only a limited percentage of the stream miles in Loudoun County have been assessed for aquatic life use through benthic monitoring of the macroinvertebrate community in the streams. The percentage changed from 30% to about 13% when DEQ changed to a higher density of streams. We understand that VA DEQ began stream monitoring in Loudoun County in 1994.



Over the years the number of sites has varied in which a site is typically monitored in both the spring and fall as VA DEQ requires that two benthic sampling be conducted to be included in the water quality assessment as shown in this chart.



Based on DEQ's water assessment, we also observe that the number of stream miles in Loudoun County region continues to increase every 2 years.

In our review of available data, we have worked with DEQ's EDAS Family and Genus MS Access "PROBMON" data and constructed six-year data windows of the average SCI scores. We have examined comprehensive DEQ-approved Loudoun County Stream assessment, conducted in the spring of 2009 (https://loudounwatershedwatch.org/Loudoun_County_Reports/2009_Stream_Assessment_Report_FINAL.PDF). The County data provides a one-time comprehensive coverage at 200 locations.

The goal of our site nominations is to suggest stream reaches that in our opinion are strategic to support identification of both "healthy" and potentially "impaired" (for aquatic life use) segments. Based on the 2009 Loudoun County stream assessment, 78% of the streams are statistically under stress or severe stress and would be designated as impaired, however, even with 200 monitoring events from the spring of 2009, this comprehensive survey does not provide sufficient coverage of all streams in Loudoun as the goal of the study was an overall assessment and was not designed to analyze each and every segment. Furthermore, the sampling was a one-time event and VA DEQ requires at least two events during the sampling window of the assessment cycle.

Regarding bacteria monitoring, we are not nominating any additional sites as we recognize that there is a high probability (80-90 percent) that streams within Loudoun County if sufficiently monitored would probably fail to meet the recreational use criteria established by VA DEQ.

Loudoun Wildlife Conservancy uses the Virginia Save Our Streams (VA SOS) protocol for biological monitoring of stream health, so our data is accepted by DEQ as Level 2 data. Our stream monitoring program coordinator is both a VA SOS certified monitor and certified trainer.

Loudoun Wildlife currently monitors 25 stream sites around the county – five times the number of sites we monitored in 2019. Loudoun Wildlife currently has 24 VA SOS certified monitors on our Stream Team, with 4 more people in training for certification.

Loudoun Wildlife became a partner organization of the Izaak Walton League of America's Salt Watch program

in 2021. Since first collecting baseline data in the fall of 2021, we have collected nearly 100 data points at 13 stream locations around Loudoun County for our 2021-2022 Salt Watch season; 45 volunteers collected 128 data points at 50 stream locations for the 2022-2023 season; 50 volunteers have collected over 500 data points for the 2023-2024 season so far. Salt Watch data collected by Loudoun Wildlife is currently available on the Clean Water Hub and the Izaak Walton League of America's Salt Watch map.

In 2023, Loudoun Wildlife became a partner organization with the Alliance for the Chesapeake Bay's RiverTrends program for monthly chemical monitoring at 6 sites in the Leesburg area. Monitoring parameters include temperature, pH, conductivity, water clarity, dissolved oxygen, orthophosphates, and nitrate (in partnership with Izaak Walton League of America's Nitrate Watch program), Loudoun Wildlife currently has 8 RiverTrends certified monitors on our Chem Crew, with 2 more people in training for certification and we have 6 chemical monitoring stations in the Leesburg area.

Loudoun Wildlife secured a grant to conduct biological and bacterial water quality sampling in the Lucketts area in 2022. We collected and analyzed over 250 E. coli samples from a segment of Clarks Run to the north of Lucketts and on a segment of an unnamed tributary of Limestone Branch between Stumptown Rd and Limestone School Rd, as well as two wastewater treatment facilities that empty into those streams. You can see the data from this study by going to https://loudounwildlife.org/2022/03/lucketts-water-quality-monitoring-sites/. We also submitted this data to DEQ as Level 2 data.

We look forward to your response and continued efforts to evaluate stream health in Loudoun County.

Respectfully submitted,

Amy Ulland, Loudoun Wildlife Conservancy
David Ward, Loudoun Watershed Watch

This letter and others are posted at
https://loudounwatershedwatch.org/subitem6_3.html

Site 1: North Fork Catoctin Creek – At proposed roundabout

REQUEST TO INCLUDE A WATER SEGMENT IN DEQ'S ANNUAL MONITORING PLAN

Name: Amy Ulland **Date:** 4/14/2024

Mailing Address: PO Box 1892

City: Leesburg **State:** VA **Zip:** 20177

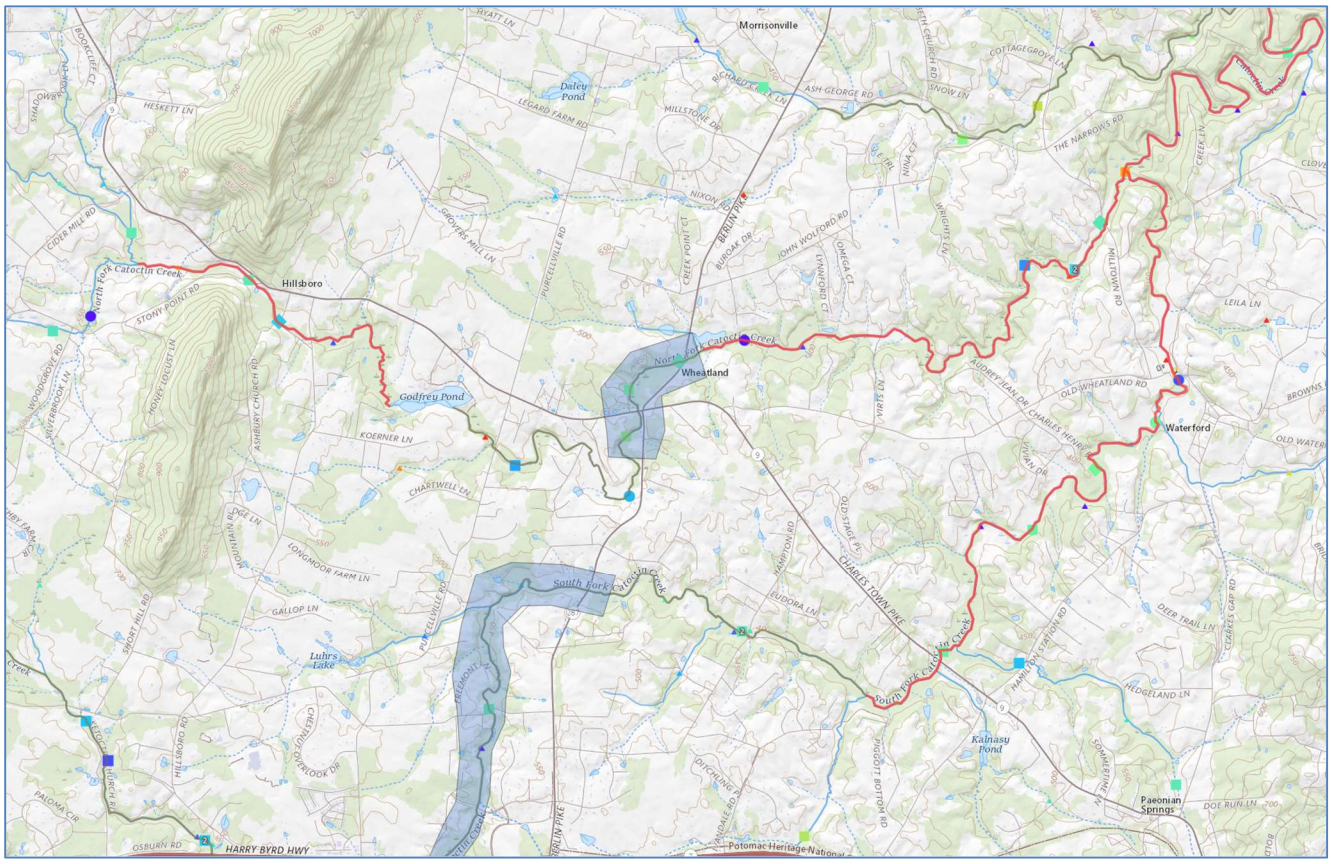
E-mail address: aulland@loudounwildlife.org

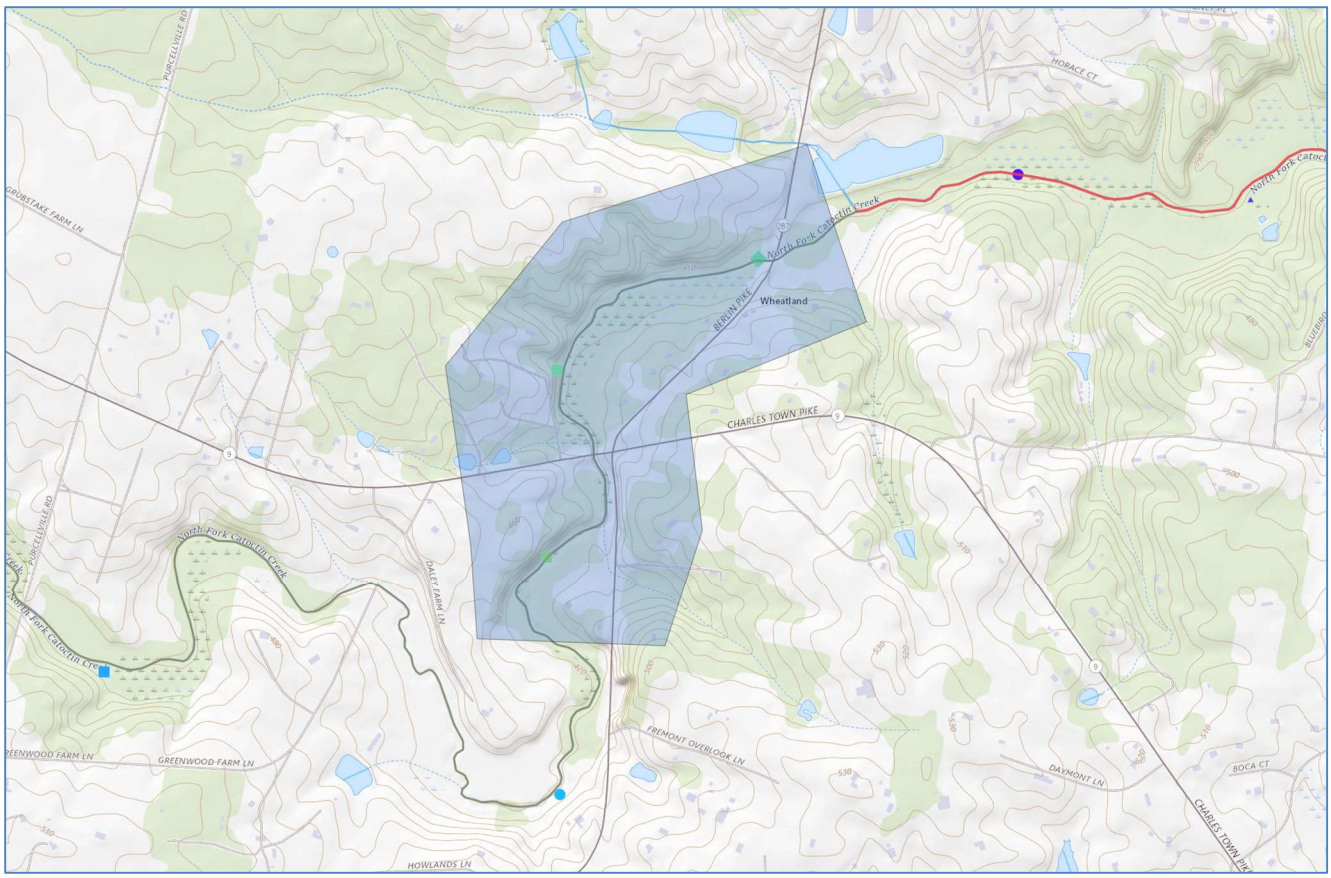
Home telephone: _____ **Business telephone:** (571) 293-1696

(1) Name of the water body or water bodies proposed for monitoring:

North Fork Catoctin Creek – At proposed roundabout

(2) Site maps





(3) Monitoring objective.

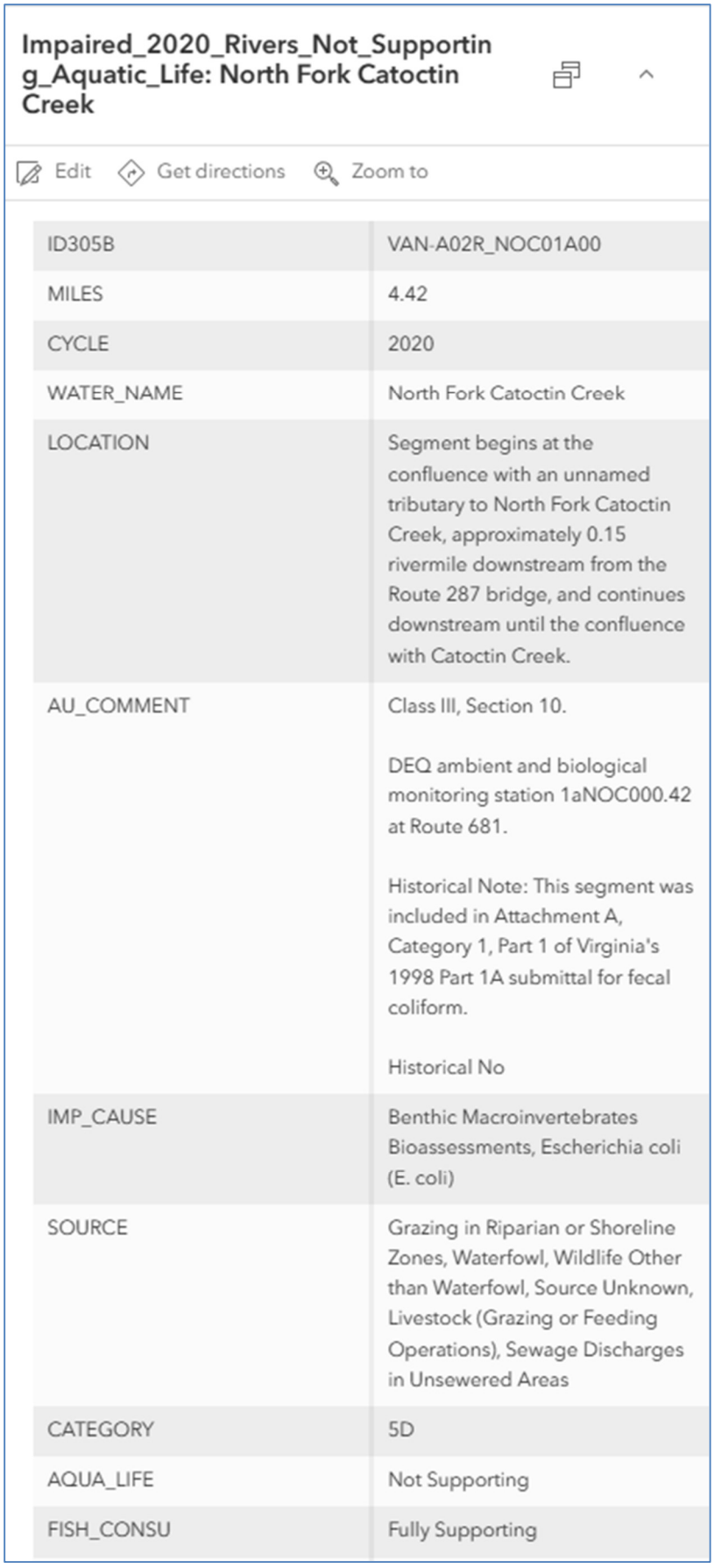
The site is subject to development pressure from construction of VDOT roundabout on RT 9 and RT 287.

(4) Water quality data are integrated into map application.

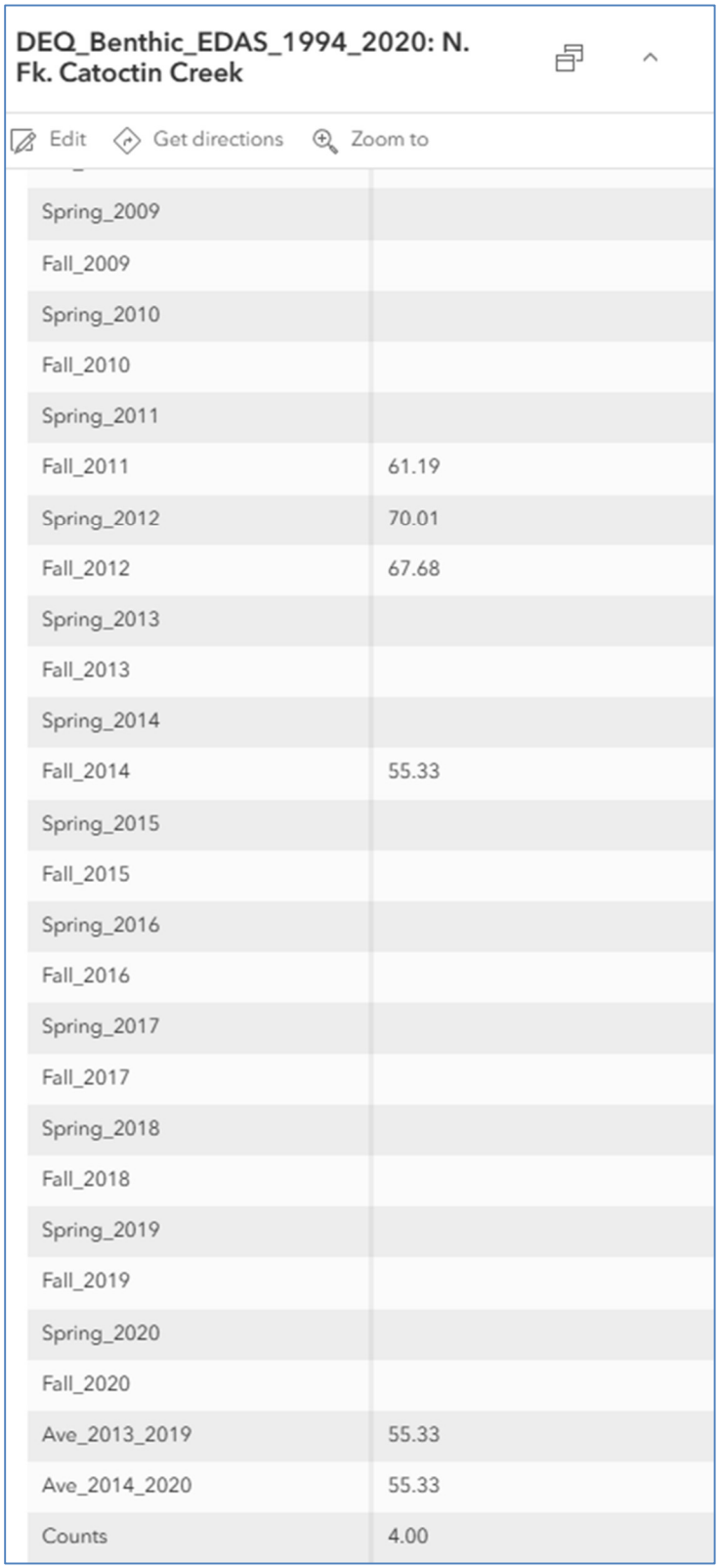
The reach is just upstream of the Aquatic Life Use (benthic) impairment VAN-A02R_NOC01A00 and also a Recreational Use (bacteria) impairment.

NFCC-308 (Upstream)
2009 Benthic: Stress
2009 Habitat: Suboptimal

NFCC-303 (Downstream)
2009 Benthic: Stress
2009 Habitat: Suboptimal



ID305B	VAN-A02R_NOC01A00
MILES	4.42
CYCLE	2020
WATER_NAME	North Fork Catoctin Creek
LOCATION	Segment begins at the confluence with an unnamed tributary to North Fork Catoctin Creek, approximately 0.15 rivermile downstream from the Route 287 bridge, and continues downstream until the confluence with Catoctin Creek.
AU_COMMENT	Class III, Section 10. DEQ ambient and biological monitoring station 1aNOC000.42 at Route 681. Historical Note: This segment was included in Attachment A, Category 1, Part 1 of Virginia's 1998 Part 1A submittal for fecal coliform. Historical No
IMP_CAUSE	Benthic Macroinvertebrates Bioassessments, Escherichia coli (E. coli)
SOURCE	Grazing in Riparian or Shoreline Zones, Waterfowl, Wildlife Other than Waterfowl, Source Unknown, Livestock (Grazing or Feeding Operations), Sewage Discharges in Unsewered Areas
CATEGORY	5D
AQUA_LIFE	Not Supporting
FISH_CONSU	Fully Supporting



DEQ_Benthic_EDAS_1994_2020: N. Fk. Catoctin Creek

Edit | Get directions | Zoom to

Spring_2009	
Fall_2009	
Spring_2010	
Fall_2010	
Spring_2011	
Fall_2011	61.19
Spring_2012	70.01
Fall_2012	67.68
Spring_2013	
Fall_2013	
Spring_2014	
Fall_2014	55.33
Spring_2015	
Fall_2015	
Spring_2016	
Fall_2016	
Spring_2017	
Fall_2017	
Spring_2018	
Fall_2018	
Spring_2019	
Fall_2019	
Spring_2020	
Fall_2020	
Ave_2013_2019	55.33
Ave_2014_2020	55.33
Counts	4.00

Just upstream is VASOS site

VASOS 2023 6yr Averages3

Edit | Get directions | Zoom to

Aver_2011_2017	
Avg_2012_2018	
Avg_2013_2019	
Avg_2014_2020	
Avg_2015_2021	10.00
Avg_2016_2022	9.50
Avg_2017_2023	9.00
Description	Jackson property
F2008	
F2009	
F2010	
F2011	
F2012	
F2013	
F2014	
F2015	
F2016	
F2017	
F2018	
F2019	
F2020	
F2021	10.00
F2022	9.00
F2023	8.00
LatitudeDD	39.18
LongitudeD	-77.68
Note	New in 2021
Notes	New in 2021

Site 2: Cattail Branch – East of Leesburg

REQUEST TO INCLUDE A WATER SEGMENT IN DEQ'S ANNUAL MONITORING PLAN

Name: Amy Ulland **Date:** 4/14/2024

Mailing Address: PO Box 1892

City: Leesburg **State:** VA **Zip:** 20177

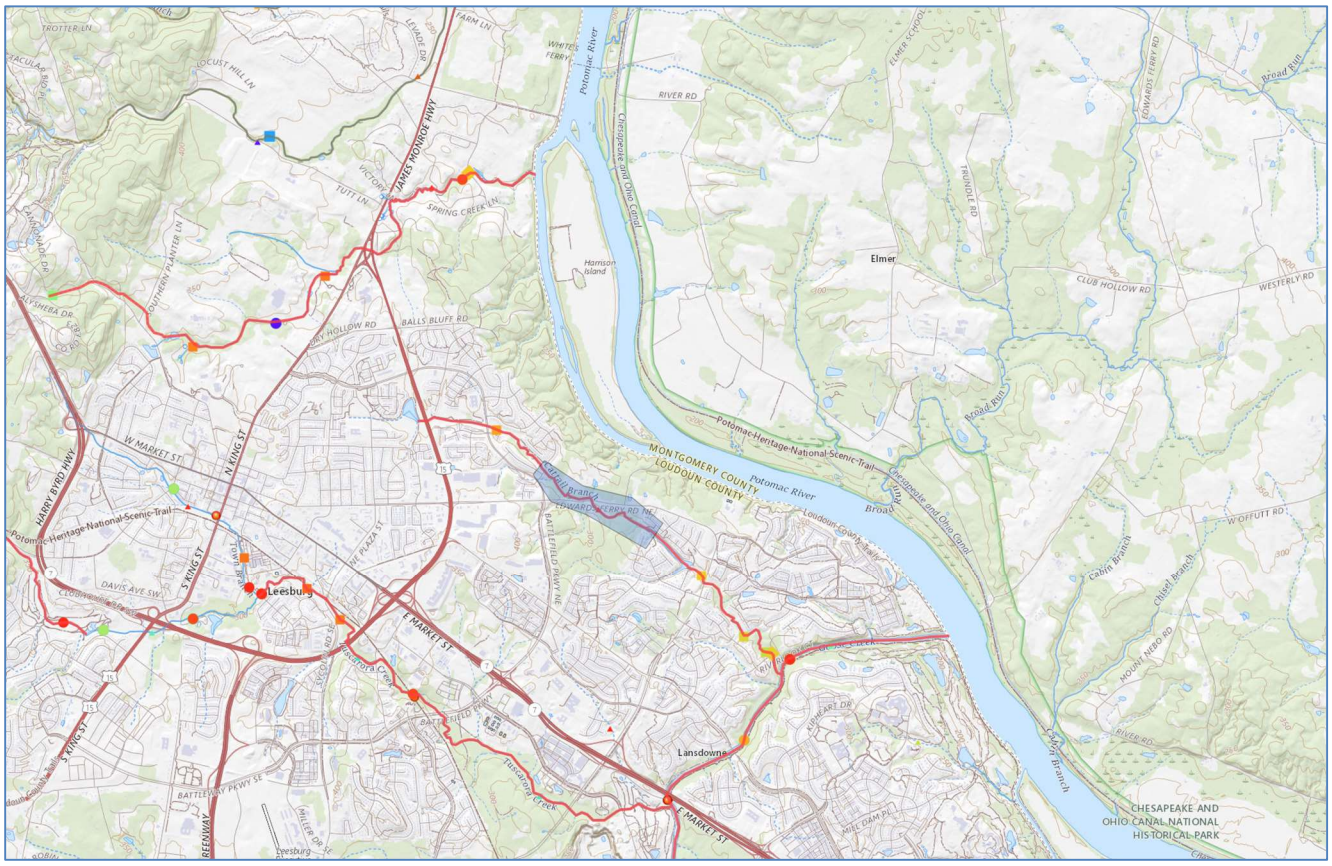
E-mail address: aulland@loudounwildlife.org

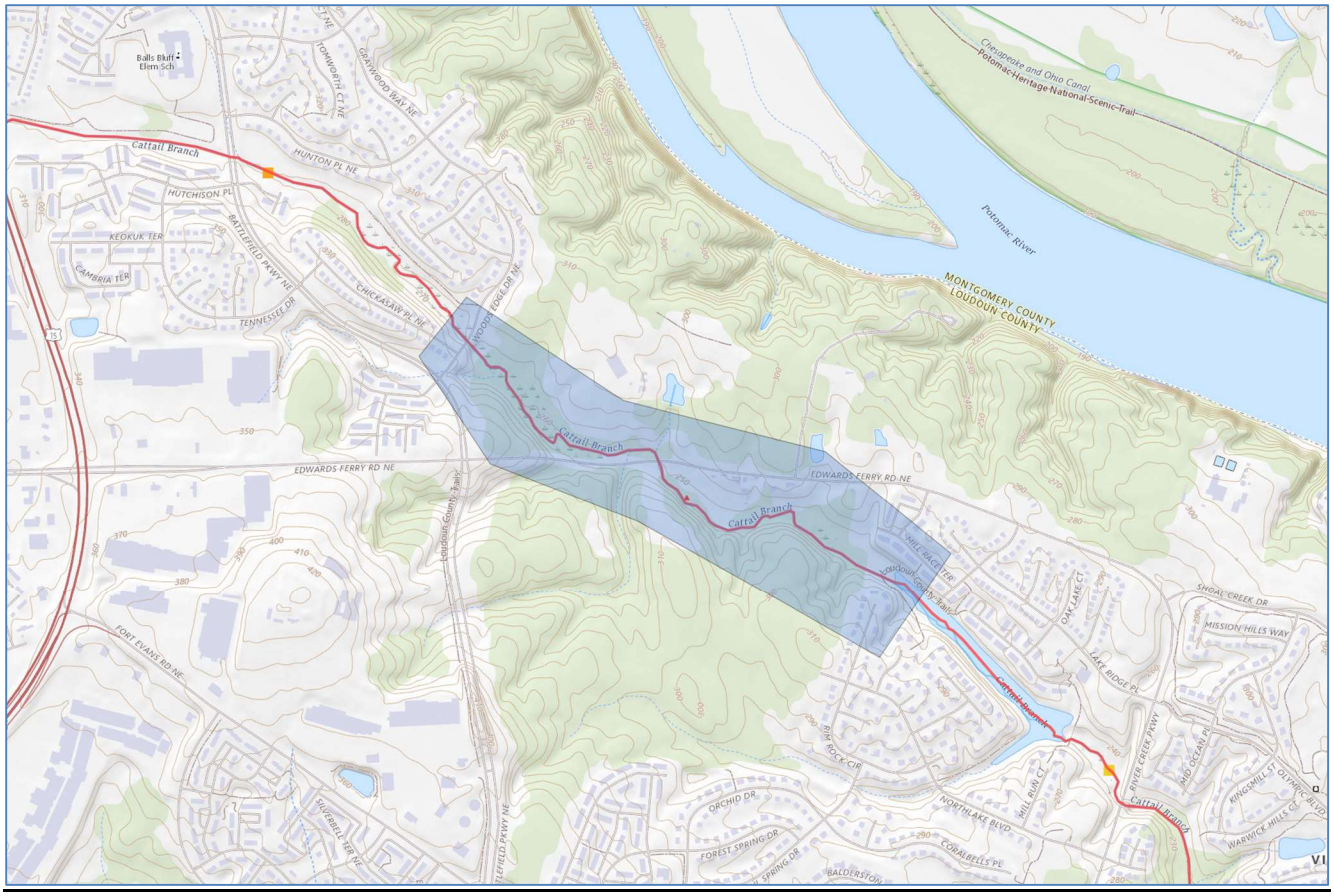
Home telephone: _____ **Business telephone:** (571) 293-1696

(1) Name of the water body or water bodies proposed for monitoring:

Cattail Branch – East of Leesburg

(2) Site maps



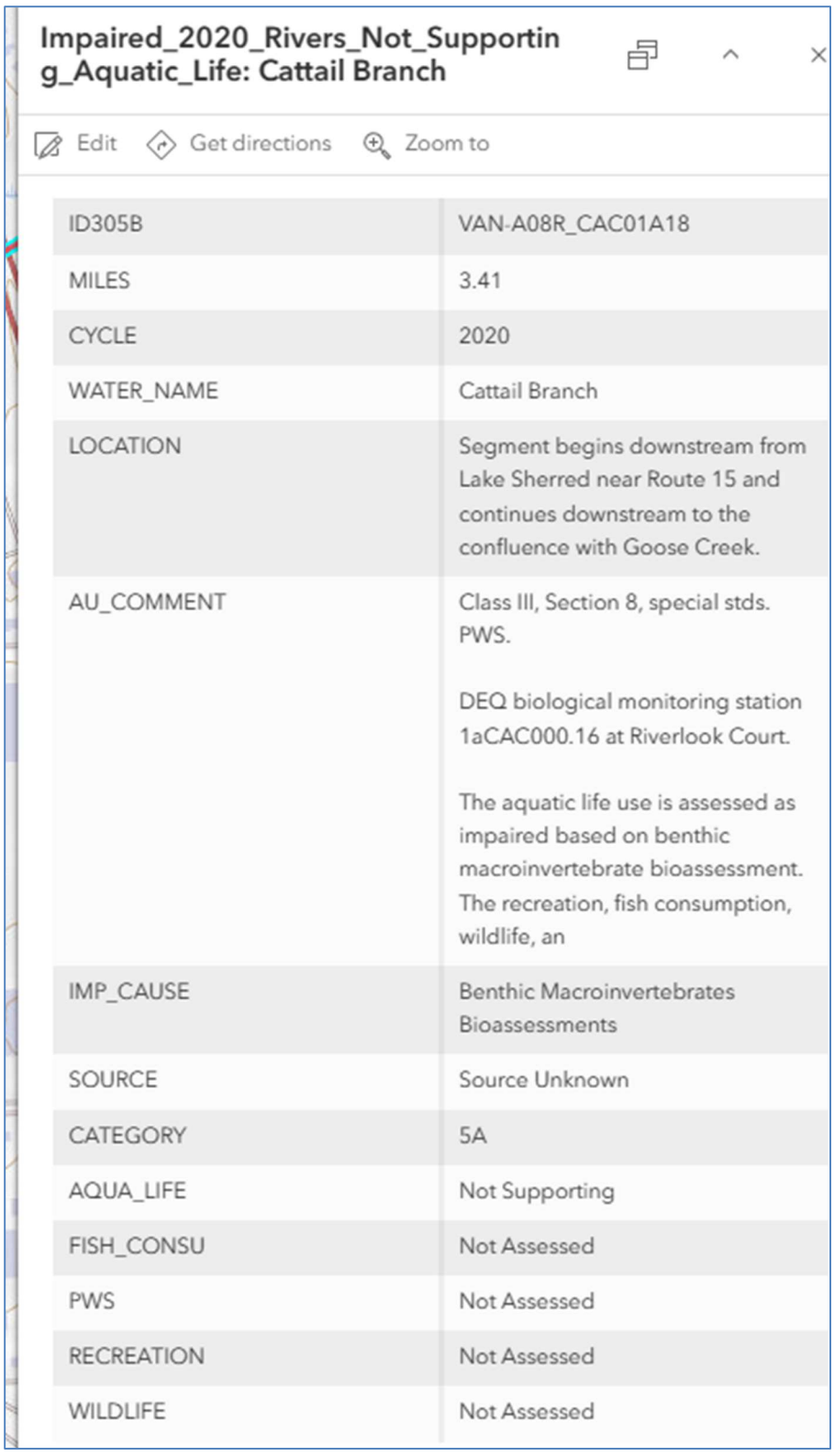


(3) Monitoring objective.

The reach is near several ongoing and planned residential and possibly commercial developments.

(4) Water quality data are integrated into map application.

The reach has an Aquatic Life Use (benthic) impairment VAN-A08R_CAC01A18 and was not assessed for a Recreational Use (bacteria).


Impaired_2020_Rivers_Not_Supportin
g_Aquatic_Life: Cattail Branch
Edit
Get directions
Zoom to
ID305B
VAN-A08R_CAC01A18
MILES
3.41
CYCLE
2020
WATER_NAME
Cattail Branch
LOCATION
Segment begins downstream from Lake Sherred near Route 15 and continues downstream to the confluence with Goose Creek.
AU_COMMENT
Class III, Section 8, special stds. PWS.
DEQ biological monitoring station 1aCAC000.16 at Riverlook Court.
The aquatic life use is assessed as impaired based on benthic macroinvertebrate bioassessment. The recreation, fish consumption, wildlife, an
IMP_CAUSE
Benthic Macroinvertebrates Bioassessments
SOURCE
Source Unknown
CATEGORY
5A
AQUA_LIFE
Not Supporting
FISH_CONSU
Not Assessed
PWS
Not Assessed
RECREATION
Not Assessed
WILDLIFE
Not Assessed

Upstream: LOGC-103
2009 Habitat: Marginal
2009 Benthic: Severe Stress

Downstream: LOGC-117
2009 Benthic: Stress
2009 Habitat: Suboptimal

Site 3: South Fork Catoctin Creek – Downstream from Purcellville

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Mailing Address: PO Box 1892

City: Leesburg **State:** VA **Zip:** 20177

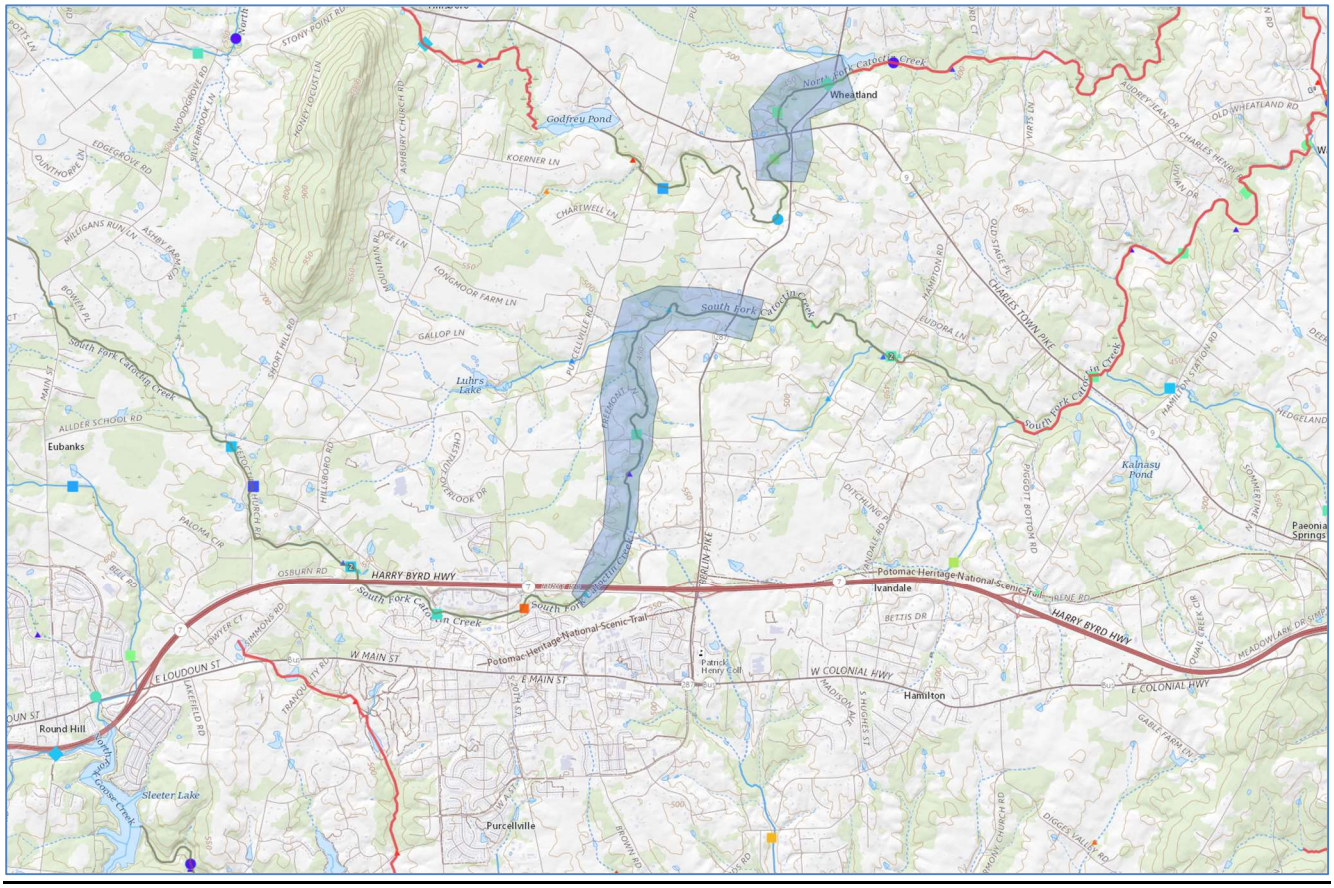
E-mail address: aulland@loudounwildlife.org

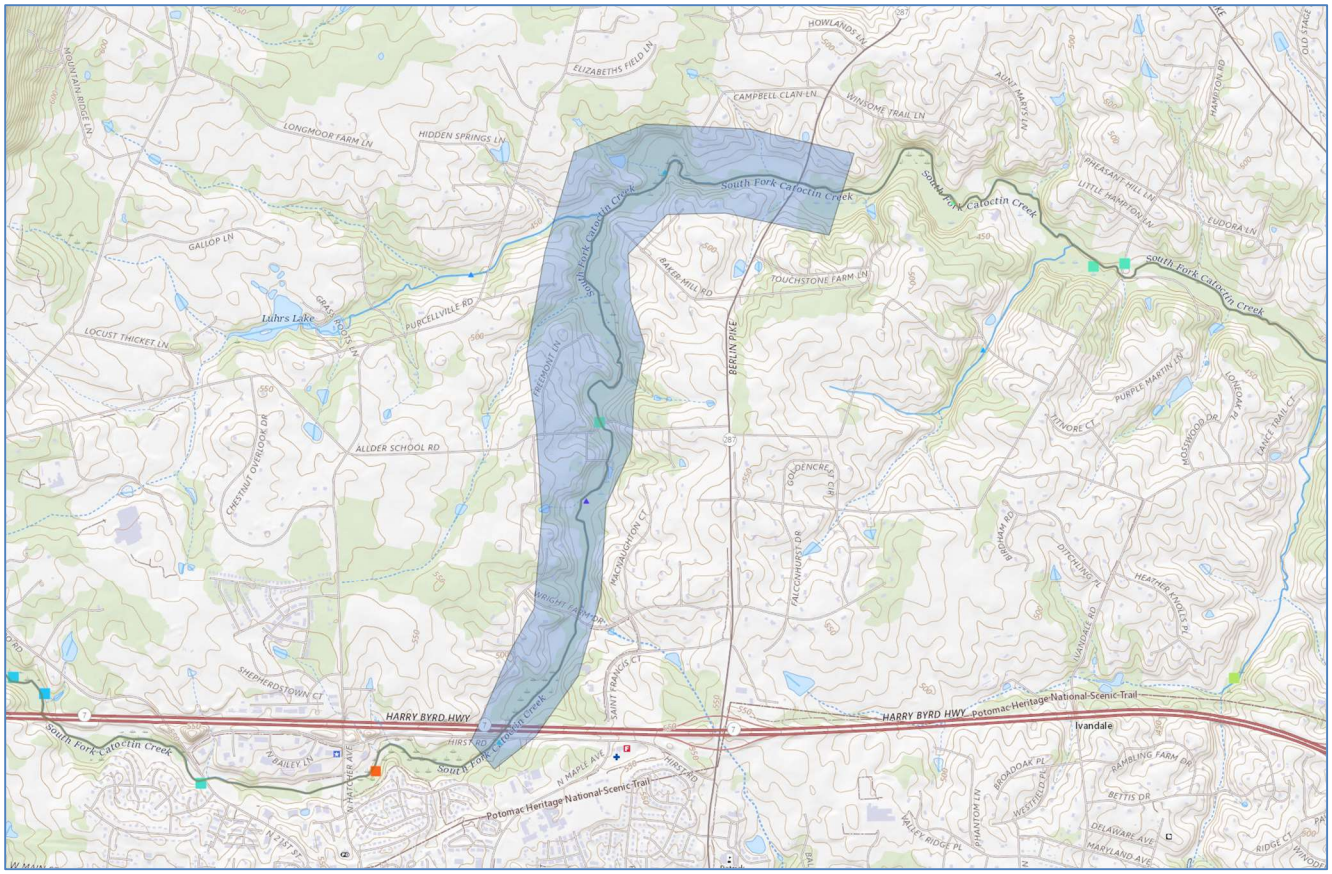
Home telephone: _____ **Business telephone:** (571) 293-1696

(1) Name of the water body or water bodies proposed for monitoring:

South Fork Catoctin Creek – Downstream from Purcellville

(2) Site maps





(3) Monitoring objective.

The reach is downstream of continued development within the town of Purcellville, however, the impact may not affect this reach.

(4) Water quality data are integrated into map application.

There are no DEQ impairments near this reach. The reach is fully supporting for Aquatic Life Use (Benthic), but is not supporting for Recreational Use (Bacteria).

In 2009 the habitat was found to be Optimal and beaver alert.

In 2009, upstream is Severe Stress and Suboptimal.

In 2009, downstream is Stress and Suboptimal.

At SFCC-220 along the reach:
2009 Benthic: No data
2009 Habitat: Optimal

At SFCC-217 along the reach
2009 Benthic Stress
2009 Habitat: Optimal

At SFCC-216 Upstream
2009 Benthic: Severe Stress
2009 Habitat: Suboptimal

Site 4: Little Run – Near Aldie

REQUEST TO INCLUDE A WATER SEGMENT IN DEQ'S ANNUAL MONITORING PLAN

Name: Amy Ulland **Date:** 4/14/2024

Mailing Address: PO Box 1892

City: Leesburg **State:** VA **Zip:** 20177

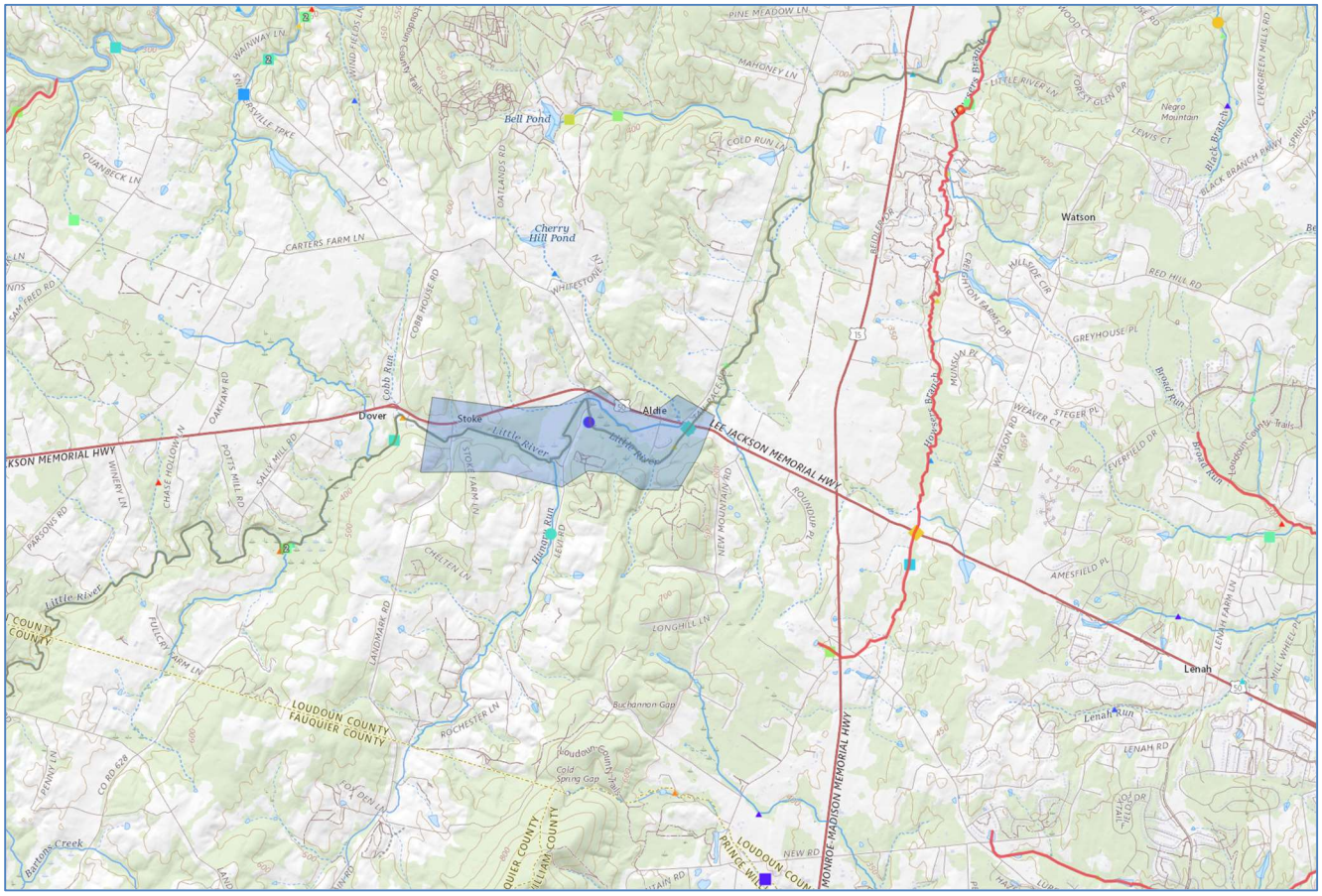
E-mail address: aulland@loudounwildlife.org

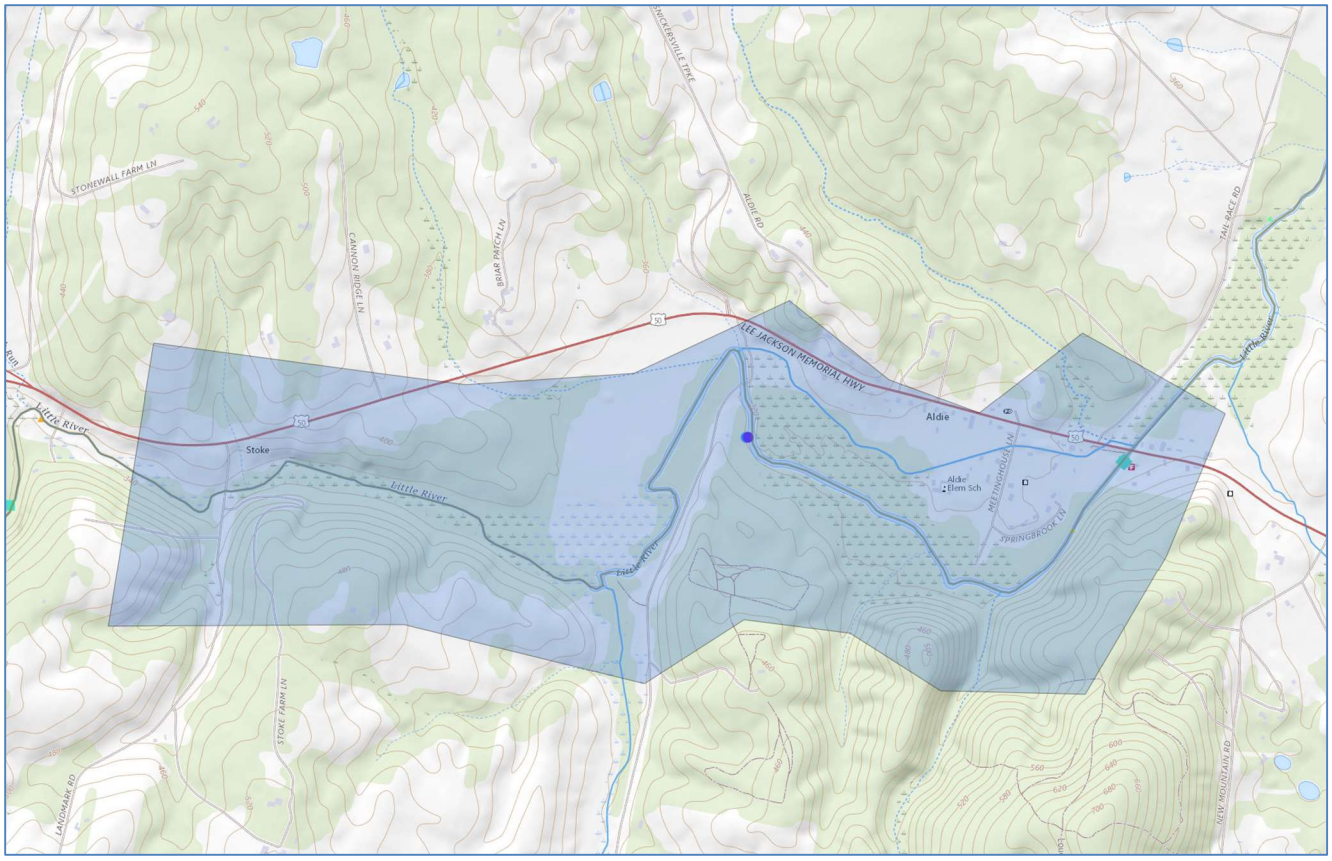
Home telephone: _____ **Business telephone:** (571) 293-1696

(1) Name of the water body or water bodies proposed for monitoring:

Little Run – Near Aldie

(2) Site maps





(3) Monitoring objective.

The site is in a relatively undisturbed area. The goal is to develop a baseline.

(4) Water quality data are integrated into map application.

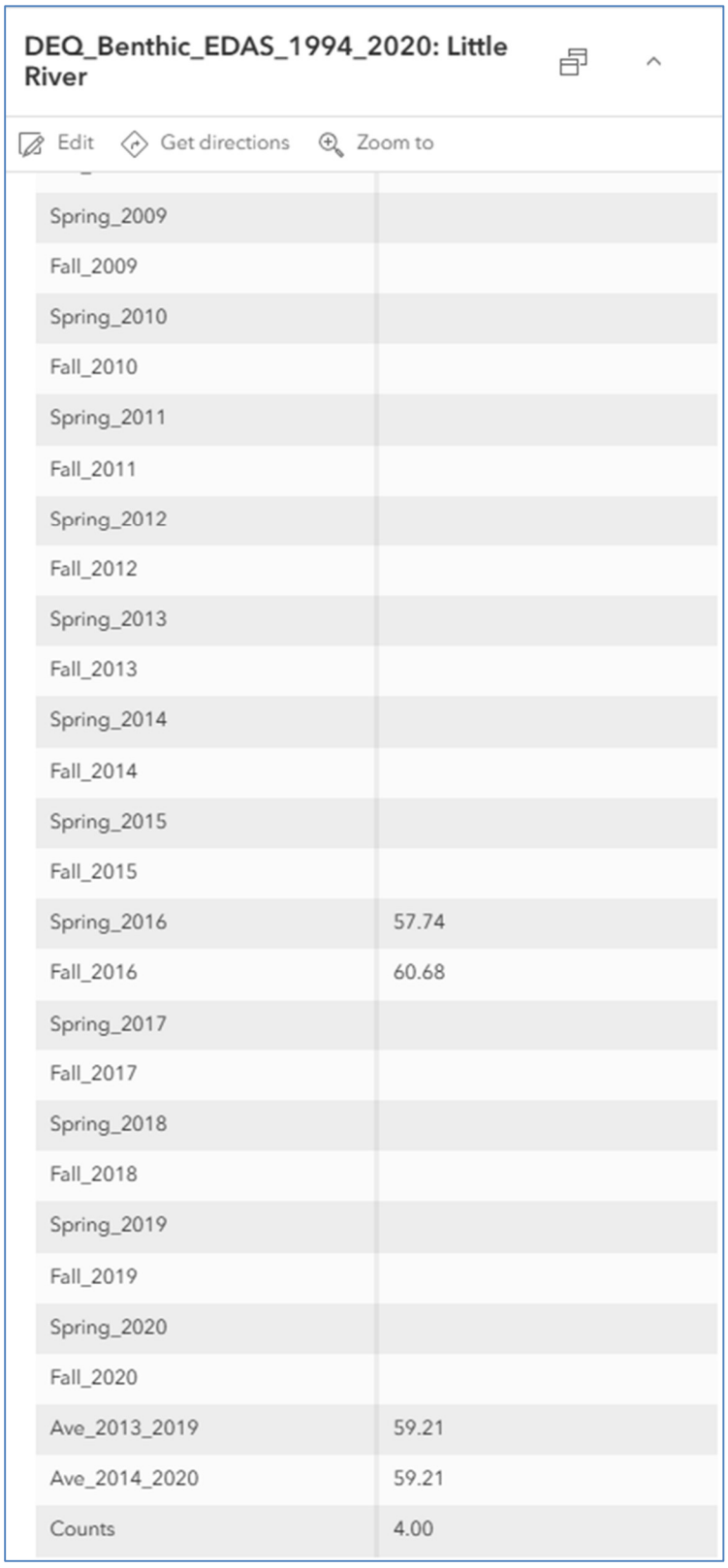
Citizen data show continues acceptable benthic scores.

VASOS 2023 6yr Averages3

Edit | Get directions | Zoom to

Aver_2011_2017	10.00
Avg_2012_2018	10.33
Avg_2013_2019	10.13
Avg_2014_2020	10.13
Avg_2015_2021	9.88
Avg_2016_2022	10.17
Avg_2017_2023	10.14
Description	West of Aldie. Follow Rt 50. Turn left (south) on Aldie Dam Road. Go about 1/4 mile, turn left again and the site its on the left across the lawn.
F2008	
F2009	
F2010	
F2011	
F2012	
F2013	
F2014	9.00
F2015	
F2016	
F2017	11.00
F2018	11.00
F2019	9.50
F2020	
F2021	8.00
F2022	11.33
F2023	10.00
LatitudeDD	38.98

DEQ Monitored on the downstream portion of the reach in 2008 and 2016 with scores just below 60 suggesting a possible Aquatic Life Use impairment may be eminent with additional data.



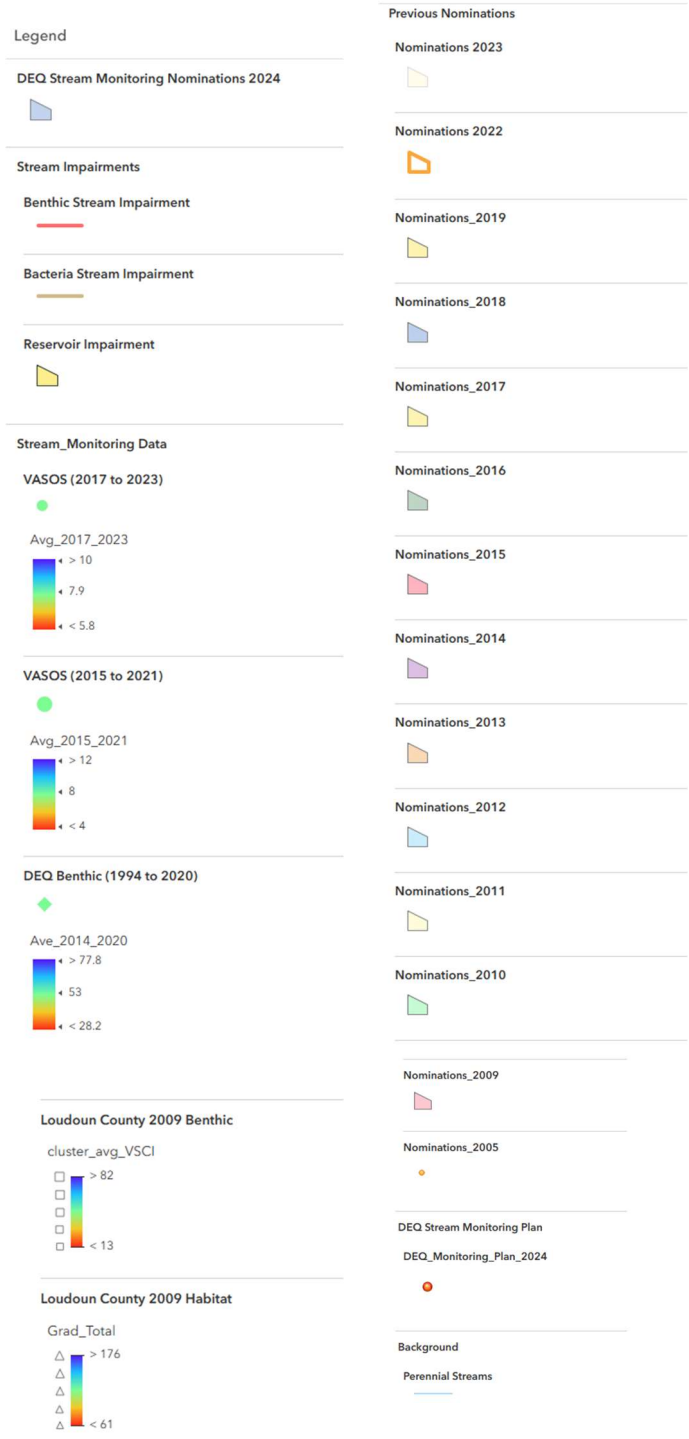
DEQ_Benthic_EDAS_1994_2020: Little River

Edit | Get directions | Zoom to

Spring_2009	
Fall_2009	
Spring_2010	
Fall_2010	
Spring_2011	
Fall_2011	
Spring_2012	
Fall_2012	
Spring_2013	
Fall_2013	
Spring_2014	
Fall_2014	
Spring_2015	
Fall_2015	
Spring_2016	57.74
Fall_2016	60.68
Spring_2017	
Fall_2017	
Spring_2018	
Fall_2018	
Spring_2019	
Fall_2019	
Spring_2020	
Fall_2020	
Ave_2013_2019	59.21
Ave_2014_2020	59.21
Counts	4.00

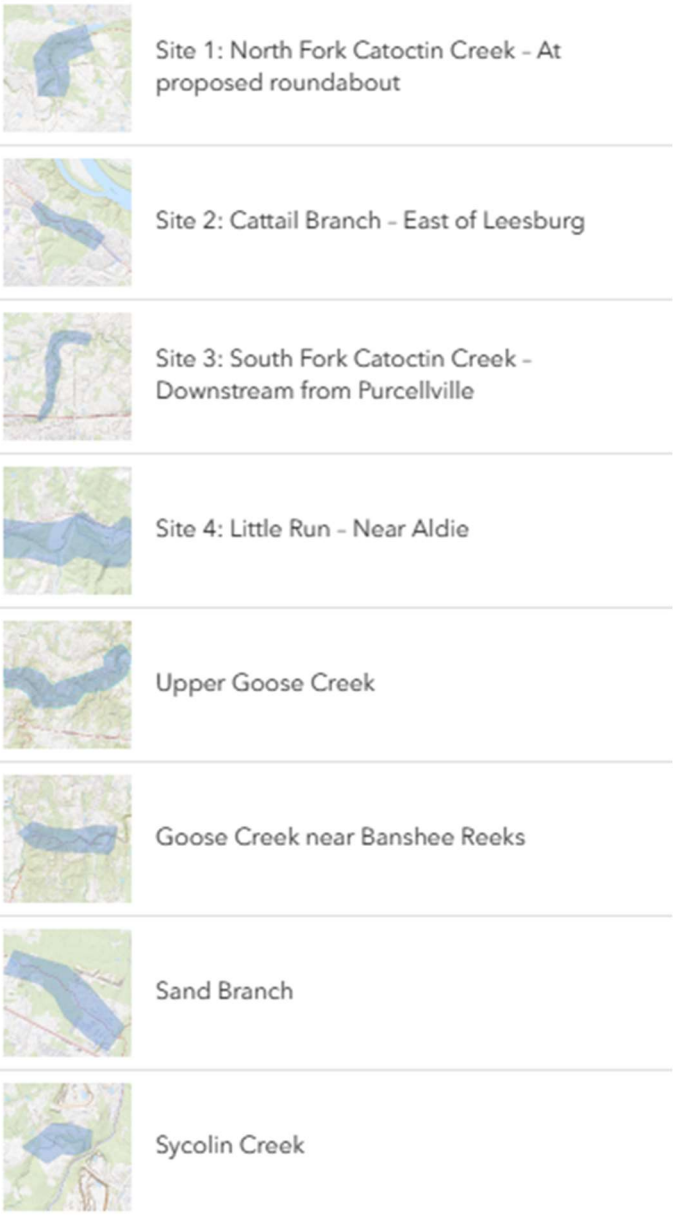
LOGC-145 Upstream
2009 Benthic: No data
2009 Habitat: Suboptimal

Appendix A: Map Legend



Appendix B: Bookmarks

(These are shortcut links to the nomination sites in the map)



Only the first four bookmarks are the sites which are being nominated.