Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Secretary of Natural and Historic Resources

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Director

Memorandum

Subject: Summary of Comments Received from Draft Permit Comment Period & Draft Permit Public Hearing Comment Period
Synagro Central LLC – Orange County
Virginia Pollution Abatement (VPA) Permit No. VPA00075, Reissuance

To: Trisha Beasley, Director of Operations

Through: Jaime Robb, Director, Water Operations Division

From: Neil Zahradka, Manager, Office of Land Application Programs

Date: May 27, 2026

Proposed Permit Action: Reissuance of VPA Permit No. VPA00075

Permittee: Synagro Central LLC

Background:
DEQ issued Synagro Central LLC (Synagro) a VPA permit on May 6, 2015 that authorized Synagro to land apply biosolids on 2,527.8 acres of land in Orange County for a 10-year term expiring on April 30, 2025. Synagro applied for, and on September 30, 2016, DEQ issued a modification to the permit that authorized land application on an additional 745.5 acres and removed 5.0 acres because it was discovered that the land is located in Spotsylvania County. An additional permit modification dated March 22, 2019 authorized land application on an additional 295.5 acres and removed 21.5 acres. On October 2, 2024, DEQ received an application from Synagro for a permit reissuance which included the addition of 200.7 acres to the permit and removal of 1178.1 acres from the permit. As proposed, the reissuance would result in Synagro having a total of 2,564.9 permitted acres of land in Orange County for land application of biosolids, which is less than the currently authorized acreage for land application of 3542.3 acres.

Following technical review and receipt of additional information, DEQ deemed the application technically complete on March 20, 2025. The current permit has been administratively continued pending reissuance processing.

Locality and State Agency Notice:
DEQ notified Orange County officials, as well as the Virginia Department of Health (VDH), and the Virginia Department of Conservation and Recreation (DCR), of receipt of the VPA permit application on October 7, 2024.

Public Meeting Information:
The new acreage proposed to be added to the permit is less than 50% of the acreage included in the initial issuance. Section 9VAC25-32-140.B.2. of the VPA Permit Regulation does not require DEQ to hold a public meeting for a permit reissuance unless the application to reissue includes the addition of sites increasing acreage by 50% or more of that authorized in the initial permit. Therefore, no public informational meeting was held.

Preparation of Draft Permit:
DEQ staff completed the draft permit and requested Synagro review on June 15, 2025. Synagro concurred with the draft permit on June 18, 2025.

Public Notice of Draft Permit:
DEQ staff sent 20 adjacent landowner notifications on June 27, 2025 to citizens whose property is adjacent to the newly proposed acreage requested in the permit application, and also posted notice on the agency website. DEQ published a public notice in the *Orange County Review* on July 3, 2025 and July 10, 2025 announcing the 30-day public comment period and opportunity to request a public hearing on the draft permit. The public comment period closed on August 4, 2025.

Summary of Draft Permit Public Notice Responses:
During the draft permit public comment period, DEQ received sixty-two (62) written comments, fifty-nine (59) of which contained requests for a public hearing. Fifty-four (54) requests included all of the criteria specified in § 10.1-1184.1 of the Code of Virginia and 9VAC25-32-175.B of the VPA Permit Regulation. On August 29, 2025, DEQ determined that a public hearing would be held.

Public Notice of Draft Permit Public Hearing:
The public notice seeking public comment and announcing a public hearing was posted on the DEQ website and the Viginia Regulatory Town Hall on September 4, 2025. The hearing notice was published in the *Orange County Review* on September 18. 2025. The notice was also distributed via email directly to those citizens requesting a public hearing. The September 18, 2025 publication started a 45-day comment period which ended on November 7, 2025.

Public Hearing:

DEQ hosted a public hearing on October 23, 2025 at 6:30 pm at the Orange County Board of Supervisors Meeting Room located at 11282 Government Center Drive, Orange, VA 22960. DEQ staff conducted an information briefing immediately prior to the public hearing at 6:00 pm. Richard Doucette, DEQ Northern Regional Office Director, served as the hearing officer. Fifty-three (53) people attended the meeting. Synagro Central, LLC was represented by Caleb Snyder, who provided an oral comment during the public hearing. Nineteen (19) other individuals also provided oral comments during the public hearing. Of those 19 individuals, five (5) of them also submitted written comments. Forty-one (41) additional written comments were received during the comment period. The draft permit public hearing public comment period closed on November 7, 2025.

Summary of Comments and DEQ Responses:

Staff conducted a review of the comments submitted during the public comment period. The comments are summarized and categorized according to issue as shown below along with responses prepared by DEQ staff. A list of commenters is provided in Attachment A along with the category of each commenter's concerns.

Summary of Comment Category 1: Water Quality

- **Commenters expressed concerns regarding potential surface water contamination (specifically the Rappahannock River watershed, Rapidan River watershed, North Anna River, York River, Lake Anna, Lake Orange, Wilderness Run Reservoir, Germanna Lake, Lake of the Woods, Pamunkey Creek, Mountain Run, Mine Run, Blue Run, and Chesapeake Bay) and groundwater contamination.**

DEQ Response to Comment

DEQ developed the conditions in the permit in accordance with the VPA Permit Regulation (9VAC25-32-30.A.) to prohibit point source discharges of pollutants to surface waters, including wetlands, except in the case of a storm event greater than the 25-year, 24-hour storm.

For biosolids, the VPA Permit Regulation (9VAC25-32-560) requires the implementation of agricultural best management practices (BMPs) to reduce nonpoint source pollution from farmland. This includes restrictions on application timing, application rate, slope, and in particular, setback distances from sensitive environmental features. DEQ regulates stormwater from certain non-point agricultural sources (such as land application of biosolids) by requiring BMPs that reduce pollutant levels in the stormwater. So just like stormwater from any other source, there may be pollutants present, but the permit conditions ensure that pollutant levels are minimized, and downstream surface waters are protected.

With respect to groundwater, the conditions in the permit are based on requirements in the VPA Permit Regulation to prevent negative influences from either infiltration or runoff on groundwater. Planting and harvesting requirements are designed such that the plant root systems uptake nutrients. Runoff and infiltration are addressed through the assessment of field conditions, such as crop type, distance to groundwater, soil type, and topography. Additionally, the permit conditions include limitations on land application to sites with greater than 15% slope and require that biosolids be staged in a location selected to prevent runoff to waterways and drainage ditches.

The VPA Permit Regulation (9VAC25-32-560.A.1.) also requires that a Nutrient Management Plan (NMP) be written by a person certified by the Virginia Department of Conservation and Recreation (DCR), and that land application be conducted in accordance with the NMP. The NMP dictates the rate and timing of biosolids land application to synchronize the application rate with agronomic needs and restricts application of excess nutrients that could run off or leach to groundwater. All NMPs must be prepared in accordance with the Virginia Nutrient Management Training and Certification Regulations (4VAC50-85) and the Virginia Nutrient Management Standards and Criteria.

Summary of Comment Category 2: Pollutants in Biosolids

- **Commenters expressed concerns regarding the presence and accumulation of heavy metals, pharmaceuticals, microplastics and associated impacts to the environment, wildlife, human health, and local food source contamination.**

DEQ Response to Comment

Biosolids are generated from municipal wastewater treatment processes. Federal and state regulations require monitoring for nine heavy metals commonly found in biosolids and prohibit land application of material with metals concentrations above certain concentrations (9VAC25-32-356). The United States Environmental Protection Agency (EPA) addressed heavy metal accumulation in the development of the federal regulations for biosolids land application (40CFR Part 503) and determined that as long as the concentration of heavy metals in the biosolids were below specified levels, accumulation was not problematic. The basis for this assertion is that the significant amount of organic matter contained in the biosolids acts as a sink for the small amounts of metals in the biosolids. As additional metals are introduced into the soil, so is additional organic matter to bind those metals so that they are not readily available to plants. The state and federal rules require that if biosolids contain metals above specified levels, then cumulative loading rates for Class B materials would be required. All these requirements are included in permit VPA00075.

With respect to control of pathogens such as bacteria and viruses, the conditions specified in permit VPA00075 to significantly reduce pathogens as well as the site restrictions required to protect against pathogen transfer are consistent with federal regulation (40CFR Part 503.32(b)) and the VPA Permit Regulation (9VAC25-32-675.B.). These conditions provide options for treatment that achieve the level of pathogen reduction required by state and federal regulation, and specify the length of time after land application that harvest of various crops may occur. In addition, the draft permit contains setback requirements as specified in the VPA Permit Regulation (9VAC25-32-560.B.3.e.(1)) that are more restrictive than those in the federal regulations. These conditions also contain provisions for extension of setbacks for individuals who may be more susceptible to infection from pathogens. DEQ follows agency guidance to grant setbacks to adjacent residents who provide a form signed by their physician, and coordinates with VDH where residents assert additional health concerns.

The constituents in biosolids that permit VPA00075 requires to be monitored, and the frequency of that monitoring, is consistent with federal regulation (40CFR Part 503.13 et seq) and the VPA Permit Regulation (9VAC25-32-356 through 9VAC25-32-358). The required frequency is based on the amount of biosolids that is land applied from a particular source, ranging from monthly to annually, and considers the expected consistency of the residual content. Thus, the frequency of testing varies dependent upon the biosolids generating facility. VPA permits allow multiple sources of biosolids to be utilized on permitted sites, as long as the generating facility is approved by DEQ. Before a source is approved for land application in Virginia, DEQ staff reviews historical monitoring data to ensure that the material meets regulatory requirements.

The Virginia General Assembly has responded to questions regarding the safety of biosolids land application. In 2016, the Virginia General Assembly passed HJ120, which directed the Joint

Legislative Audit and Review Commission (JLARC) to analyze the current scientific literature regarding the long-term effects of biosolids and industrial residuals on health, including potential impacts on well, surface, and ground water; and evaluate the regulatory requirements for land application and storage. JLARC's 2017 report, while it did recommend further study, concluded that land application of these materials according to the current regulation poses a very low or low risk to human health.

The Virginia General Assembly has taken no action on the findings of the report in subsequent sessions. In land application permits, DEQ continues to apply the requirements in state and federal regulation for reporting biosolids treatment. DEQ also continues to require 400-foot setbacks to all odor sensitive receptors, and to extend setbacks from occupied dwellings to land application sites from 200 feet to 400 feet when the occupant or owner of the dwelling submits a note from their doctor requesting such. The VPA Permit Regulation includes health care facilities, convalescent homes, schools, dormitories, athletic facilities, and other facilities used to host large groups of people in the definition of odor sensitive receptors, and DEQ applies extended setbacks without the need for evaluation by a physician. DEQ also applies extended setbacks to businesses open to the public.

DEQ also solicits comments from VDH on each draft permit prior to issuance. In numerous permit actions taken in recent years, VDH has not made any recommendations regarding additional restrictions on biosolids or industrial residuals use or setback extensions in their comments on permits.

The EPA Office of the Inspector General (OIG) report of November, 2018 (#19-P-0002) outlined a number of concerns regarding the federal biosolids program, and EPA responded with a list of program directives that the agency would carry out, all aimed at improving the biosolids regulatory program. The OIG accepted EPA's responses, none of which involved a moratorium on the authorization of land application. The additional research and activities initiated by EPA in response to the OIG report are detailed on the EPA OIG website.

The lack of change in requirements, however, is not representative of a lack of additional study. Research into the safety and use of biosolids as an agricultural soil amendment is ongoing. Note that the term "biosolids" is used to mean sewage sludge that has been treated to meet the pollutant concentration limits and treatment requirements of federal and state law and regulation. The Clean Water Act [33 U.S.C. § 1345(d)(2)(C)] requires EPA to review existing sewage sludge regulations at least every two years. The purpose of the review is to identify additional pollutants that may be present in sewage sludge, including pharmaceuticals and other contaminants of concern, and if appropriate to develop regulations for those pollutants. If EPA develops federal regulations for additional pollutants, DEQ will modify the VPA regulation accordingly, and modify permits if deemed necessary. The latest review for which EPA has finalized results is 2020-2021. The results of the EPA reviews are available at https://www.epa.gov/biosolids/biennial-reviews-sewage-sludge-standards.

Summary of Comment Category 3: Per- and polyfluoroalkyl substances (PFAS)

- **Commenters expressed concern that DEQ is failing to address the presence of PFAS or "forever chemicals" in land application of biosolids used by Synagro Central, LLC, noting concerns that PFAS is detrimental to public health, including the welfare of Orange County residents, and the environment**
- **Commenters reference the draft EPA Risk Assessment for PFOA and PFOS in biosolids**
- **Commenters note that observed levels of PFAS contamination of surface waterways within the geography of Synagro's Orange County operation exceed EPA's draft recommended water quality criteria for protection of human health**
- **Commenters noted that DEQ has sampled Pamunkey Creek for PFAS contamination and found levels of PFAS of 8.96 ppt; commenters also noted that there are land application fields on both sides of this sampling location**
- **Commenter noted that Virginia has regulations pertaining to biosolids land application that ensure safety within the current level of knowledge, asserted that manufacturers are curtailing numerous products containing PFAS which is reducing prevalence in the environment, and encouraged control of PFAS at the source in various commercial products. The commenter encouraged DEQ to not prohibit biosolids land application and let source reduction efforts reduce PFAS levels in biosolids.**
- **Commenters noted that biosolids are a valuable resource for farmers but should not be applied if the material contains PFAS**
- **Commenters made the following requests related to PFAS:**
    - **Require PFAS monitoring in biosolids**
    - **Require comprehensive testing of soil, water, and vegetation with fields receiving biosolids**
    - **Make any and all PFAS monitoring results publicly available via the DEQ website**
    - **Prohibit land application of any biosolids found to contain PFAS**
    - **Provide farmers more information regarding the risk of PFAS contamination from biosolids**
    - **Expand DEQ PFAS sampling in Orange County to include soil, surface water, and fish tissue in all application zones**
    - **DEQ review of impacted areas and exclude those areas adjacent to the Rapidan River and its tributaries if the permit is issued**
    - **Establish an inter-agency PFAS monitoring and data sharing task force between DEQ, Rapidan Service Authority, and Orange County to track long-term water quality and biosolids safety**

DEQ Response to Comment

Per- and polyfluoroalkyl substances (PFAS) are a family of chemicals that have been used in the manufacture of personal care products, cosmetic products, textiles, carpets, firefighting foams, paper products and food packaging. These materials may remain in biosolids following wastewater treatment. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are the most commonly detected in the environment. PFOS was phased out of production in the early 2000s in the U.S., and PFOA in 2015.

DEQ has been working collaboratively with VDH and following EPA's strategies to address issues related to PFAS. EPA is utilizing a risk paradigm to approach the problem of PFAS contamination. Understanding that there are gaps in the knowledge surrounding PFAS, EPA has been rapidly expanding the scientific foundation for understanding and managing the associated risk. The risk paradigm is focused on first identifying and prioritizing risk and then to take action to reduce that risk. The research is organized around:

- understanding toxicity (dose and response relationships between PFAS chemicals and both humans and ecosystems),
- understanding exposure (how are people and ecosystems being exposed, and how are chemicals moving through the environment),
- assessing risk (prioritizing and determining which exposures are most harmful), and
- identifying and planning effective treatment and remediation actions to prevent adverse effects.

EPA is at the "assessing risk" step for two PFAS in biosolids. On January 14, 2025, EPA published a Draft Biosolids Risk Assessment for PFOA and PFOS for public comment. The EPA draft risk assessment is a draft document, and it is not a regulatory mechanism that prescribes or requires changes in biosolids land application practices. The risk assessment is not intended to be used as a benchmark for regulatory or permit limits. Furthermore, the risk assessment does not assess the risk for the general population, only those living on or near impacted sites. DEQ has reviewed the draft risk assessment, and notes the following:

- The risk assessment suggests that certain site management practices could serve to mitigate risk, but the draft assessment does not quantify those effects.
- Some of those mitigating practices are already included in the requirements for biosolids land application in Virginia, such as additional setbacks to surface waters and wells, minimum depth of soil above bedrock and groundwater, and the timing and rate restrictions included in nutrient management plans. These practices were not included in the modeling for the draft risk assessment.
- The average land application rates applied in Virginia are approximately one-third of the loading modeled in the risk assessment.

The comment period on the draft risk assessment ended on August 14, 2025. The EPA is currently determining the next steps related to federal regulation of PFAS in biosolids.

Regarding PFAS monitoring results, DEQ has monitored PFAS in waterbodies across the Commonwealth since 2021. Statewide monitoring results are summarized, and data is available

for download in the agency's PFAS dashboard. DEQ has not conducted a targeted water monitoring study focused on biosolids land application and PFAS in downstream surface water. However, DEQ does maintain data on biosolids land application at permitted sites. Data tables and maps depicting the PFAS monitoring data that DEQ has collected in Orange County along with a summary of biosolids land application site activity for the nearest upstream land application sites are included in Attachment B of this memo. DEQ summarized this information in the table below which indicates no clear correlation between stations where PFAS was detected and upgradient biosolids land application.

PFAS Monitoring Data Summary for Orange County

Station ID	Waterbody	Medium	PFAS detected	PFOA/PFOS Drinking Water MCL (4 ppt) Exceeded	Upgradient biosolids land application
8-PMC009.85	Pamunkey Creek	Surface Water	Yes	No	Yes
3-RAP030.21	Rapidan River	Surface Water	Yes	No	Yes
3-RAP045.08	Rapidan River	Surface Water	No	No	Yes
8-NAR061.09	North Anna River	Surface Water	No	No	Yes
3-MTR003.51	Mountain Run	Surface Water	Yes	No	No
3-MIR004.00	Mine Run	Fish Tissue	(see data)	n/a	Yes

The EPA has set drinking water maximum contaminant levels (MCL) values for multiple PFAS in 2024 including for PFOA and PFOS at 4 parts per trillion (ppt) each. The MCL values represent the maximum level these chemicals are allowed in drinking water. While DEQ did not sample potable water, the MCL values provide context for the observed concentrations in the waterbodies. With respect to the noted concentration of total PFAS in Pamunkey Creek, the PFOA and PFOS concentrations were 0.79 ppt and 0.66 ppt, respectively, both below the drinking water MCL of 4.0 ppt each.

The Virginia General Assembly considered multiple bills in the 2026 legislative session pertaining to PFAS. Specifically related to biosolids, Chapters 853 and 854 of the 2026 Acts of Assembly (HB1443 - Del. Lopez; SB386 - Sen. Stuart) amend § 62.1-44.19:3 of the Code of Virginia to establish PFAS testing and concentration-based management requirements for owners of sewage treatment works and other permit holders that land apply, market, or distribute biosolids in the Commonwealth. The legislation is summarized as follows:

1. Section 62.1-44.19:3 T of the Code of Virginia states that "Beginning January 1, 2027, any owner of a sewage treatment works land applying, marketing, or distributing sewage sludge in the Commonwealth shall collect representative samples of the sewage sludge intended to be land applied, marketed, or distributed and have such samples analyzed by an accredited laboratory for PFAS." This section also specifies the analysis method, the

frequency of sampling, and the requirement to report analysis results to the DEQ and any person land applying the sewage sludge. In addition, the requirements of this section apply to the permit holder intending to land apply, market, or distribute sewage sludge that originates from outside the Commonwealth.

2. Section 62.1-44.19:3 U of the Code of Virginia sets PFAS concentration-based biosolids management requirements after July 1, 2027. Based on PFOA or PFOS concentrations in the sewage sludge, the land application, marketing, and distribution of such material is either: allowable with landowner notification, restricted with landowner notification, or prohibited and alternate treatment, use, or disposal must be arranged.

3. Section 62.1-44.19:3 V of the Code of Virginia sets PFAS concentration-based biosolids management requirements after July 1, 2029. Based on a combined PFOA and PFOS concentration in the sewage sludge, the land application, marketing, and distribution of such material is either: allowable with landowner notification, restricted with landowner notification, or prohibited and alternate treatment, use, or disposal must be arranged.

Further, Chapter 933 of the 2026 Acts of Assembly (HB1072 – Del. Laufer) amends § 62.1-44.19:3 of the Code of Virginia to specify that local biosolids monitoring ordinances adopted by a locality may provide for testing and monitoring of PFAS within its political boundaries to ensure compliance with applicable laws and regulations.

On June 23, 2026, the State Water Control Board will consider final exempt regulatory actions to incorporate these new PFAS requirements into the VPA regulation. DEQ will include the new requirements for PFAS monitoring, limitations, and landowner notification in the final permit VPA00075 for Synagro Orange County, as well as to all DEQ permits authorizing biosolids land application, distribution and marketing.

Regarding the information provided to landowners, DEQ requires that Synagro provide a DEQ Biosolids Fact Sheet to the landowner when they agree to have biosolids land applied on their property. The current Biosolids Fact Sheet includes a reference to EPA's work to determine if the presence of other constituents in land applied materials would warrant further testing requirements before land application. The 2026 Virginia legislation requires land appliers provide landowners receiving biosolids the results of the PFAS analyses for materials being land applied on their property at least two weeks prior to land application. DEQ also plans to update the Fact Sheet to be consistent with additional information related to PFAS.

It is expected that the law and regulation of PFAS will continue to evolve, and as changes resulting from the biennial EPA review of the sewage sludge regulations, EPA's PFAS strategy, future acts of the Virginia General Assembly, or other state or federal action, DEQ has the authority under 9VAC25-32-220.A.2 of the VPA Permit Regulation (see the reopener clause at Part I.J.9 of the draft permit) to reopen the permit and modify it based on new requirements.

Summary of Comment Category 4: Odor

- **Commenters expressed concerns regarding odor associated with biosolids land application**

DEQ Staff Provided Background Related to Comment

The federal and state regulations do not prohibit odors. Biosolids, at times, can and do have objectionable odors. The type of treatment process and the climatic conditions during and after application can influence both odor and its intensity. DEQ encourages nearby residents to contact the agency at the number provided on the notification sign as soon as possible when odor issues are identified so that site-specific issues can be investigated and any patterns with sources, practices, or sites identified. The regulation does require the mitigation of odors [9VAC25-32-60.F.1.c.(3)] by both the wastewater treatment facilities generating biosolids and the land appliers. Accordingly, the permit requires an Odor Control Plan with the following conditions:

a. Methods used to minimize odor in producing biosolids;
b. Methods used to identify malodorous biosolids before land application (at the generating facility);
c. Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
d. Methods used to abate malodor from biosolids if land applied such as incorporation, if applicable.

The odor control plan is an enforceable part of the permit and may be reviewed over the course of the permit term for adequacy should site or source specific odor issues become repetitive.

Summary of Comment Category 5: Biosolids from Maryland

- **Commenters expressed concern that PFAS contaminated sources of biosolids are being shipped to Virginia from Maryland to be land applied and stated that Maryland had banned the land application of these biosolids in Maryland.**
- **Commenters also requested a temporary halt of land application of biosolids from Maryland.**
- **Comments state DEQ has authority to require PFAS testing.**

DEQ Response:

The DEQ list of approved sources of biosolids which may be applied in Virginia currently contains 22 wastewater treatment facilities from Maryland. DEQ reviews metals data, pathogen reduction data, and vector attraction reduction process data for each of those sources to ensure that they meet the Virginia and federal requirements for land application. DEQ does not apply any additional Maryland PFAS guidelines to material land applied in Virginia. The Maryland sources have been land applied in Virginia for several years, with the average amount land applied annually from all Maryland sources on Virginia farms averaging approximately 24,000 dry tons per year, which is approximately 21% of the total biosolids land applied in Virginia.

On May 6, 2025, DEQ obtained the latest PFAS analysis data available from the Maryland Department of the Environment (MDE) for each of the 22 facilities and compared those data to the PFAS land application guidelines published by MDE. These guidelines are recommendations from MDE and are not regulations. Maryland has not banned land application of any Maryland biosolids, and has lifted the pause on permit modifications allowing additional land application sites. This pause on permit modification processing was only in effect for a limited period of time during 2024. All of the Maryland biosolids sources approved for land application in Virginia meet MDE's criteria to be land applied in Maryland at a rate of at least 3.0 dry tons per acre. Further, on April 28, 2026, Maryland's Governor signed legislation (Chapters 329 and 330) addressing PFAS in biosolids that use the same PFOA and PFOS concentration thresholds as Virginia to determine whether land application is prohibited, allowable with rate restrictions, or unrestricted. There are some differences, such as the effective date, with the regulatory restrictions not beginning until October 1, 2028 in Maryland compared to July 1, 2027 in Virginia.

DEQ does not have regulatory or statutory authority to prohibit biosolids sources based on the state of origin. If biosolids sourced from another state meets Virginia requirements, those biosolids may be land applied in Virginia.

Regarding DEQ's authority to require additional testing and prohibit biosolids land application based on PFAS content, 9VAC25-32-315 of the VPA Permit Regulation authorizes DEQ to impose requirements for the use of biosolids or the disposal of sewage sludge in addition to or more stringent than the requirements in Part IX of the VPA Permit Regulation when necessary to protect human health and the environment from any adverse effect of a pollutant in the biosolids or sewage sludge. DEQ is following the directives of the Virginia General Assembly as specified in the 2026 legislation regarding PFAS monitoring and limitations for Virginia and Maryland biosolids.

Summary of Comment Category 6 – Request to deny the permit.

- **Commenters assert that because PFAS has been identified in surface waters and in the biosolids sources proposed to be land applied, that expanding land application area would expand PFAS contamination, thus DEQ should deny the permit**
- **Commenters request denial of the permit until all possible sources of biosolids are confirmed to be free from PFAS**

DEQ Response:

DEQ has reviewed the application submitted by Synagro and determined that it contains all the information required by applicable law and regulation. DEQ staff have visited the proposed application sites and determined that they meet the applicable technical requirements for land application. DEQ has processed the permit application and prepared a permit that contains all the criteria required by the state and federal regulations designed to protect human health and the environment. Considering these facts, DEQ has no basis upon which to deny or delay reissuance of the VPA permit.

Attachment A
Commenter Listing

Commenter Listing

The table below lists the commenters who submitted comments during the public comment period for the reissuance of permit VPA00075 and includes the category or categories of comments associated with the commenter:
1 – Water Quality
2 – Pollutants in Biosolids
3 – PFAS
4 – Odor
5 – Maryland biosolids
6 – Request to deny the permit

Comments Submitted During Public Comment Period to the Draft Permit				
July 3, 2025 – August 4, 2025				
Name	**Type**	**Date Received**	**Comment Category**	**All Public Hearing Request Criteria Included**
1. McConnell, Jamie	Email	7/15/2025	1,2,3	Yes
2. Hammond, Leslie Anne	Email	7/16/2025	requested hearing	No
3. O'Donnell, Richard	Email	7/16/2025	1,3	Yes
4. Aldrich, David	Email	7/17/2025	1,2,3	Yes
5. Squire, Dana	Email	7/17/2025	1,2,3	Yes
6. McCullough, Heather	Email	7/19/2025	1,3	Yes
7. McConnell, Lorraine	Email	7/23/2025	1,2,3,4	Yes
8. Seale, Gary R	Email	7/23/2025	1,2,3,4	Yes
9. Seale, Lillie T	Email	7/23/2025	1,2,3,4	Yes
10. Jacobson, Roy	Email	7/25/2025	1,3	Yes
11. Aldrich, Jennifer	Email	7/26/2025	1,2,3	Yes
12. McCown, Don - PEC	Email	7/26/2025	1,2,3	Yes
13. Bielecki, Anna	Email	7/27/2025	3	Yes
14. Davies, Dave	Email	7/28/2025	1,3	Yes
15. Dr. Hilary Holladay, Ph.D.	Email	7/28/2025	1,2	Yes
16. Holladay, Cary	Email	7/28/2025	2,3	Yes
17. Iglehart, Jill	Email	7/28/2025	1,2,3	Yes
18. Lange, Kerry M	Email	7/28/2025	1,3	Yes
19. Passarello, Kevin	Email	7/28/2025	3	Yes
20. Phillips, Cheryl	Email	7/28/2025	1,3	Yes
21. Phillips, Claudia	Email	7/28/2025	1,2,3	Yes
22. Rowan, Rebekah Hamilton	Email	7/28/2025	1,2	Yes
23. Westfall, Rocky	Email	7/28/2025	requested hearing	No

Comments Submitted During Public Comment Period to the Draft Permit				
July 3, 2025 – August 4, 2025				
Name	**Type**	**Date Received**	**Comment Category**	**All Public Hearing Request Criteria Included**
24. Erwin, Delano	Email	7/29/2025	requested hearing	No
25. Hatch, Christopher	Email	7/29/2025	3	No
26. Hodsdon, Beth	Email	7/29/2025	3	Yes
27. MacFadden, Gary	Email	7/29/2025	1,2,3	Yes
28. MacVicar, Theresa	Email	7/29/2025	1,3	Yes
29. Poole, III, Alfred J	Email	7/29/2025	1	Yes
30. Troast, Richard, Ph.D.	Email	7/29/2025	3	No
31. Smariga, Ed	Email	7/29/2025	1,3	Yes
32. Adams, John	Email	7/30/2025	3	Yes
33. Anglin, Delton J	Email	7/30/2025	1,2,3	Yes
34. Bennett, Mary	Email	7/30/2025	1,3	Yes
35. Cruickshank, John	Email	7/30/2025	3	Yes
36. Gould, Rosemary	Email	7/30/2025	1,3	Yes
37. Grover, Kim	Email	7/30/2025	3	Yes
38. Haynes, Kingsley E	Email	7/30/2025	1,3	No
39. Meislin, Debra	Email	7/30/2025	1,2,3	Yes
40. Van Yahres, Peggy	Email	7/30/2025	1,3	Yes
41. Chapman, Joan	Email	7/31/2025	3	Yes
42. Jaske, Pam	Email	7/31/2025	1,3	Yes
43. Keating, John	Email	7/31/2025	1	Yes
44. Pillow, Michael	Email	7/31/2025	3	Yes
45. Keating, Toni	Email	7/31/2025	1,3	Yes
46. Bell, John R	Email	8/1/2025	1,3	Yes
47. Donnelly, Martha	Email	8/1/2025	1,3	Yes
48. Feld, M David	Email	8/1/2025	requested hearing	No
49. Greenall, Christine	Email	8/1/2025	1,2,3	Yes
50. Hart, Kelly	Email	8/1/2025	1,3	Yes
51. Hogan, Trynn	Email	8/1/2025	1	Yes
52. Rhett, John M	Email	8/1/2025	2	Yes
53. Shaunesey, Donna	Email	8/1/2025	1	Yes
54. Vasilas, Alexander	Email	8/1/2025	1,2,3	Yes
55. Barr, Barry	Email	8/3/2025	1,2,3,4	Yes
56. DiCaprio, Carol	Email	8/3/2025	1,2,3	Yes

Comments Submitted During Public Comment Period to the Draft Permit				
July 3, 2025 – August 4, 2025				
Name	**Type**	**Date Received**	**Comment Category**	**All Public Hearing Request Criteria Included**
57. Coiner, Jackie	Email	8/4/2025	1,2,3	Yes
58. Coiner, Lindsay	Email	8/4/2025	1,2,3	Yes
59. Coiner, Robert K	Email	8/4/2025	1,2,3	Yes
60. DiPasquale, Frank	Email	8/4/2025	1,2,3	No
61. Massie, Sophie	Email	8/4/2025	1,2,3	Yes
62. Nicol, Bryan	Email	8/4/2025	1,2,3	Yes

Comments Submitted During Public Comment Period to the Draft Permit Public Hearing				
September 18, 2025 - November 7, 2025				
Name	**Type**	**Date Received**	**Comment Category**	**Explicitly Support or Oppose Reissuance**
1. Small, Monica	Written	10/9/2025	2,6	Oppose
2. Clark, Marquerite & Jay Sheldon	Written	10/14/2025	2,6	Oppose
3. Hall, Robert	Written	10/14/2025	2,6	Oppose
4. *Illegible name*	Written	10/17/2025	1,2,3	Oppose
5. McConnell, Jamie - Rotary Club Conservation Committee	Written	10/18/2025	1,2,3,5,6	Oppose
6. Newbig, Tom	Written	10/20/2025	1,2,3	
7. Barr, Barry	Oral	10/23/2025	1,3	
8. Bibb, Richard	Oral	10/23/2025	3	
9. Hale, Crystal	Oral	10/23/2025	1,3	
10. Hoffman, Bryan	Oral	10/23/2025	3	
11. Massie, Sophie	Oral	10/23/2025	1,3	
12. Nicol , Bryan	Oral	10/23/2025	1,3	
13. Norell, Erik	Oral	10/23/2025	3	
14. Passarello, Kevin	Oral	10/23/2025	1, 3	
15. Seale, Beth	Oral	10/23/2025	1,3,4	
16. Shackelford, Mary Jane	Oral	10/23/2025	3	
17. Shaughnessy, Donna	Oral	10/23/2025	3	
18. Speiden, Bill	Oral, Written	10/23/2025	3	
19. Stantone, Karl	Oral	10/23/2025	1	
20. Wharton, Larry	Oral	10/23/2025	2,4,6	Oppose

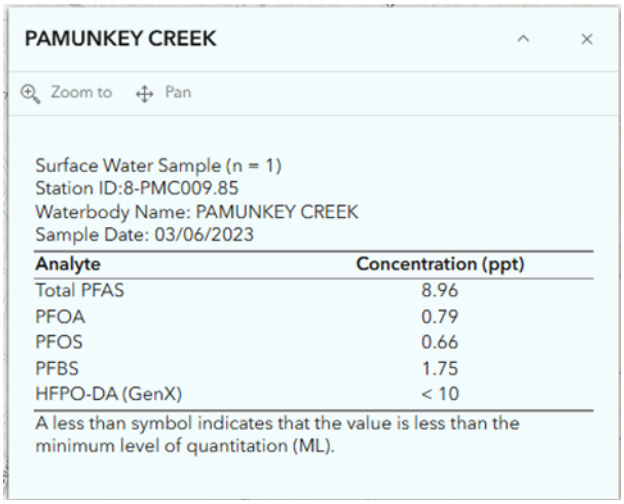
Comments Submitted During Public Comment Period to the Draft Permit Public Hearing				
September 18, 2025 - November 7, 2025				
Name	**Type**	**Date Received**	**Comment Category**	**Explicitly Support or Oppose Reissuance**
21. Jaske, Pam	Oral, Written	10/23/2025, 10/23/2025	1,2,3	Oppose
22. Davies, Dave	Oral, Written	10/23/2025, 10/30/2025	1,2,3,6	Oppose
23. Seale, Gary	Oral, Written	10/23/2025, 11/3/2025	1,2,3,4,6	Oppose
24. Troast, Richard, Ph.D.	Oral, Written	10/23/2025, 11/3/2025	1,2,3,6	Oppose
25. McCown, Don - Piedmont Environmental Council	Oral, Written	10/23/2025, 11/4/2025	1,2,3,6	Oppose
26. Audibert, Philip	Written	10/24/2025	1,3	
27. Bensko, Cally Holladay & John	Written	10/25/2025	2,3	Oppose
28. Griggs, Tracey	Written	10/27/2025	2,3	Oppose
29. Orange County Board of Supervisors (R. Mark Johnson, Chairman)	Written	10/28/2025	1,2,3,6	Oppose
30. Chapin, Elizabeth	Written	10/30/2025	2,6	Oppose
31. Long, Anne	Written	10/30/2025	2,3,6	Oppose
32. DiPasquale, Frank	Written	10/31/2025	3,6	Oppose
33. MacGowan, Virginia	Written	10/31/2025	1,2,3,6	Oppose
34. Meislin, Deb	Written	11/1/2025	1,2,3,6	Oppose
35. Bacelis, Marissa	Written	11/3/2025	1,2,6	Oppose
36. Higgins, Jim	Written	11/3/2025	2,3,6	Oppose
37. Keener, James	Written	11/3/2025	1,2,6	Oppose
38. Phillar, Thomas C	Written	11/3/2025	1,2,6	Oppose
39. Varouxis, Alex	Written	11/3/2025	1,2,3,6	Oppose
40. Villator, Juan Lopez	Written	11/3/2025	2,6	Oppose
41. Wood, Bryan	Written	11/3/2025	1,2,6	Oppose
42. Seilheimer, Charles H. Jr.	Written	11/4/2025	1,3	
43. Walker, Frank S. Jr.	Written	11/4/2025	2,3	
44. Baker, Greg - President Lake Anna Civic Association	Written	11/5/2025	1,2,3,6	Oppose
45. Gutenson, Angela	Written	11/5/2025	1,2,6	Oppose
46. O'Donnell, Richard	Written	11/5/2025	2,3,6	Oppose
47. Wharton, Otis & Teresa	Written	11/5/2025	3,6	Oppose
48. Wise, Robert	Written	11/5/2025	1,2,3,6	Oppose

Comments Submitted During Public Comment Period to the Draft Permit Public Hearing				
September 18, 2025 - November 7, 2025				
Name	**Type**	**Date Received**	**Comment Category**	**Explicitly Support or Oppose Reissuance**
49. Feinstein, Andy	Written	11/6/2025	2,6	Oppose
50. Futenson, Alex	Written	11/6/2025	1,3,6	Oppose
51. Purdue, David and Elizabeth	Written	11/6/2025	1,6	Oppose
52. Clark, John	Written	11/7/2025	2,6	Oppose
53. Laufer, Amy – Delegate, 55th District	Written	11/7/2025	2,3,6	Oppose
54. Hammond, Leslie Anne	Written	11/7/2025	2,3,6	Oppose
55. Knights, Laird	Written	11/7/2025	2,6	Oppose
56. MacDonald, Angus Malcolm	Written	11/7/2025	3,6	Oppose
57. Marlott, Megan	Written	11/7/2025	2,6	Oppose
58. Mountjoy, Lisa	Written	11/7/2025	2,3,6	Oppose
59. Clark, Marguerite	Written	11/7/2025	2,6	Oppose
60. Woodcock, Deborah	Written	11/7/2025	3,6	Oppose

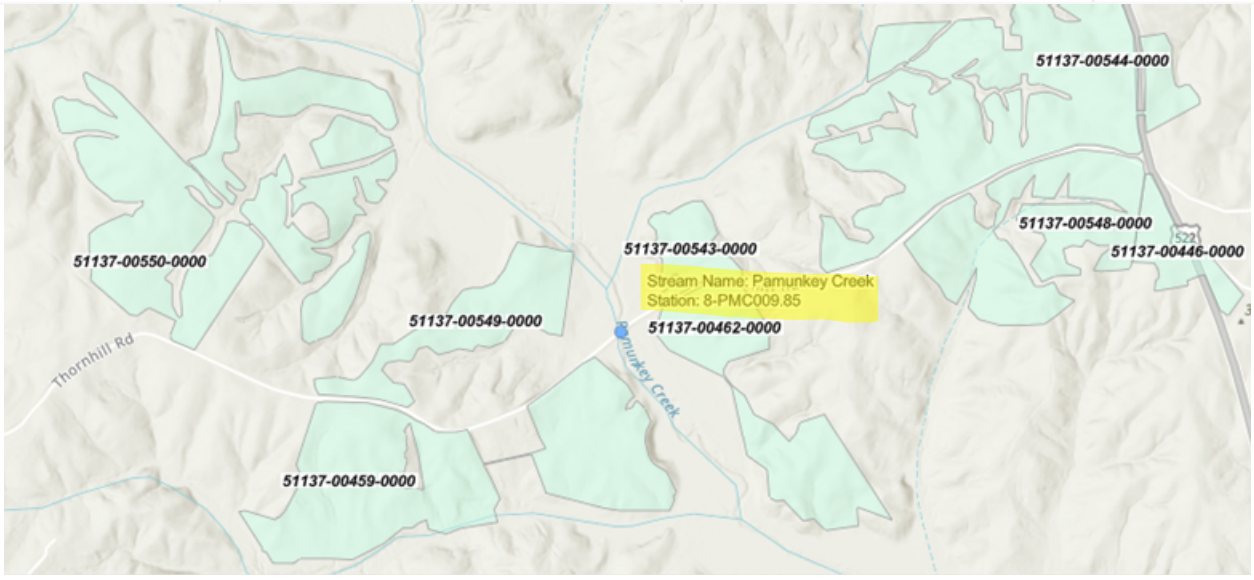
Attachment B
DEQ PFAS Monitoring Data and VPA Permitted Land Application Sites
Orange County, Virginia

Station ID: 8-PMC009.85 Pamunkey Creek

Station ID 8-PMC009.85 is located on Pamunkey Creek at the intersection with Thornhill Road in the southeast corner of Orange County. Biosolids were applied on sites 51137-00550-0000, 51137-00549-0000, 51137-00543-0000, 51137-00544-0000 between 2018-2021.

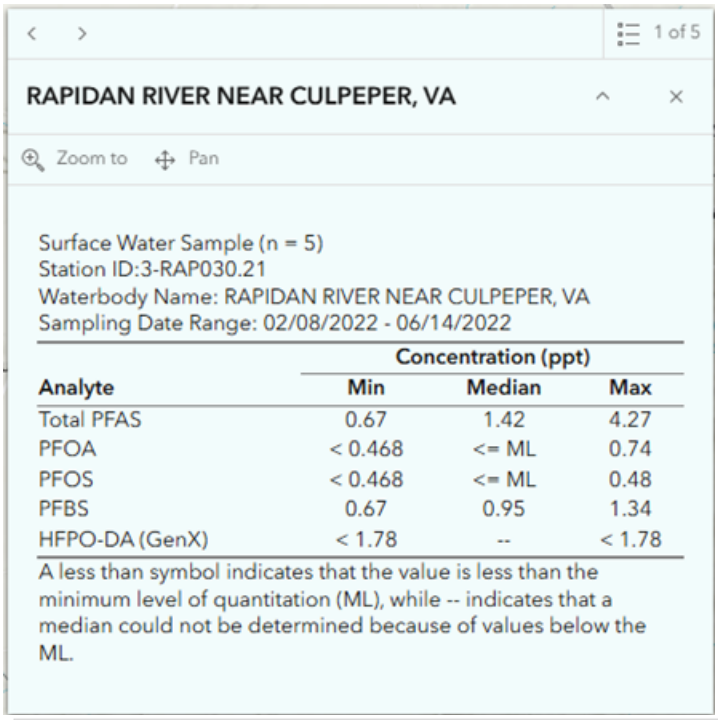


STATION_ID	ANALYTE	FDT_DATE_TIME	ANALYTE_CONCENTRATION_PPT	PG_MEASUREMENT_UNIT
8-PMC009.85	N-EtFOSAA	3/6/2023, 7:58 AM	0.717580158	ng/L
8-PMC009.85	N-MeFOSE	3/6/2023, 7:58 AM	5.037073304	ng/L
8-PMC009.85	PFBS	3/6/2023, 7:58 AM	1.750220345	ng/L
8-PMC009.85	PFOA	3/6/2023, 7:58 AM	0.785460831	ng/L
8-PMC009.85	PFOS	3/6/2023, 7:58 AM	0.664970814	ng/L
8-PMC009.85	Total PFAS	3/6/2023, 7:58 AM	8.955305452	ng/L



Station ID: 3-RAP030.21 Rapidan River

Station ID 3-RAP030.21 is located on the Rapidan River near the intersection of River Rd. and Bushy Mountain Rd. on the northwest border of Orange County. Biosolids were applied on site 51047-00698-0000 in 2018 and 2021.



1 of 5

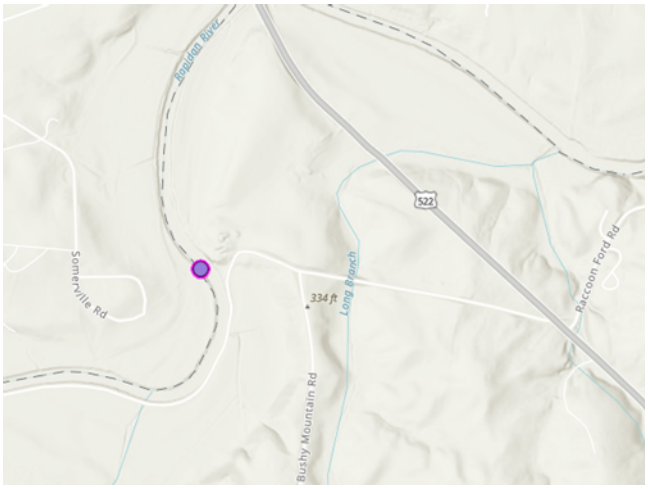
RAPIDAN RIVER NEAR CULPEPER, VA

Zoom to Pan

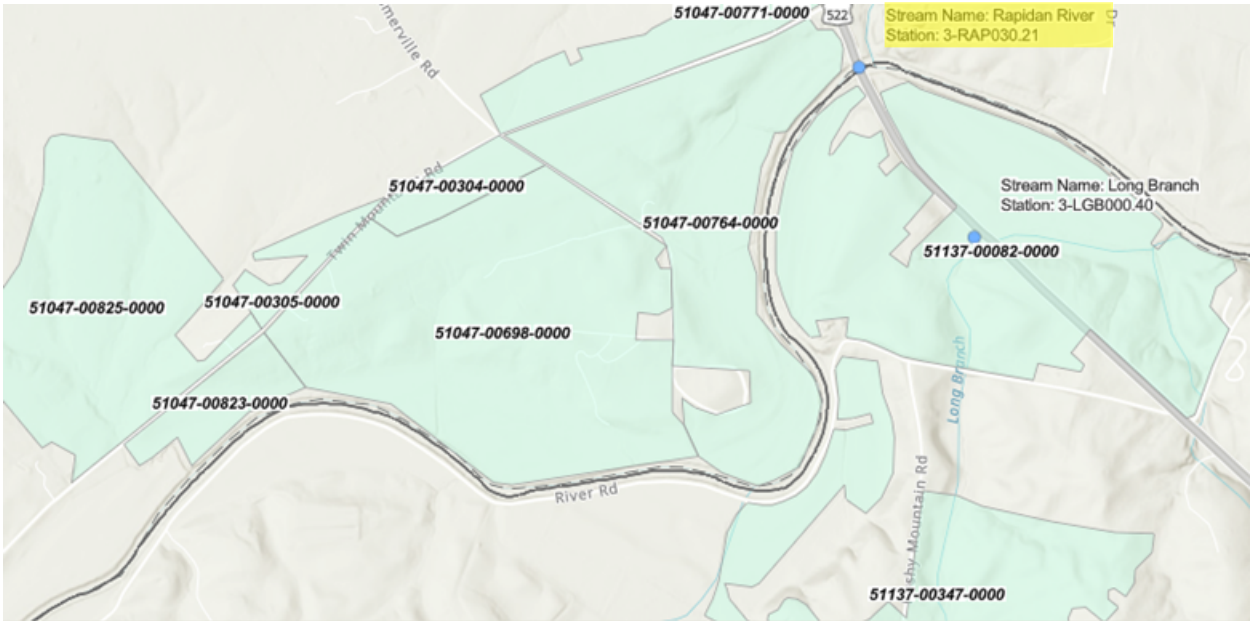
Surface Water Sample (n = 5)
Station ID:3-RAP030.21
Waterbody Name: RAPIDAN RIVER NEAR CULPEPER, VA
Sampling Date Range: 02/08/2022 - 06/14/2022

	Concentration (ppt)		
Analyte	Min	Median	Max
Total PFAS	0.67	1.42	4.27
PFOA	< 0.468	<= ML	0.74
PFOS	< 0.468	<= ML	0.48
PFBS	0.67	0.95	1.34
HFPO-DA (GenX)	< 1.78	--	< 1.78

A less than symbol indicates that the value is less than the minimum level of quantitation (ML), while -- indicates that a median could not be determined because of values below the ML.

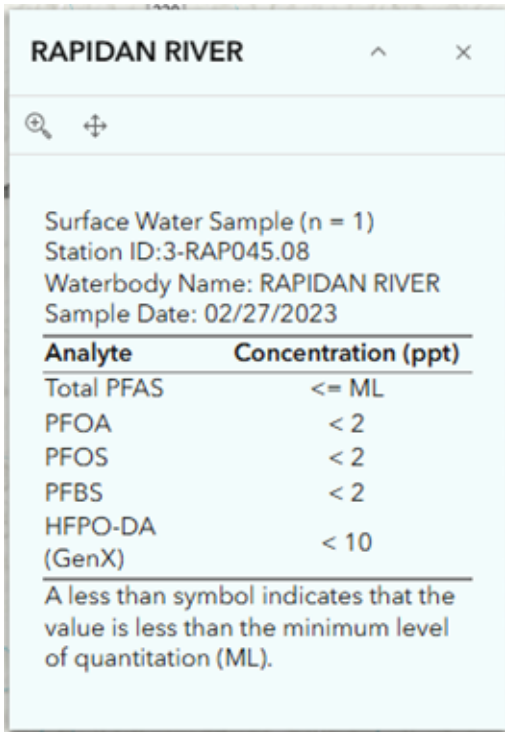


STATION_ID	ANALYTE	FDT_DATE_TIME	ANALYTE_CONCENTRATION_PPT	PG_MEASUREMENT_UNIT
3-RAP030.21	PFBS	2/8/2022, 8:15 AM	0.952	ng/L
3-RAP030.21	PFBS	3/14/2022, 3:45 AM	1.34	ng/L
3-RAP030.21	PFBS	4/7/2022, 4:30 AM	0.885	ng/L
3-RAP030.21	PFBS	4/12/2022, 4:15 AM	0.67	ng/L
3-RAP030.21	PFBS	6/14/2022, 6:00 AM	1.33	ng/L
3-RAP030.21	PFHxA	3/14/2022, 3:45 AM	0.878	ng/L
3-RAP030.21	PFHxA	4/7/2022, 4:30 AM	0.538	ng/L
3-RAP030.21	PFHxA	6/14/2022, 6:00 AM	0.537	ng/L
3-RAP030.21	PFOA	3/14/2022, 3:45 AM	0.741	ng/L
3-RAP030.21	PFOA	6/14/2022, 6:00 AM	0.518	ng/L
3-RAP030.21	PFOS	6/14/2022, 6:00 AM	0.475	ng/L
3-RAP030.21	PFOSA	6/14/2022, 6:00 AM	0.445	ng/L
3-RAP030.21	PFPeA	6/14/2022, 6:00 AM	0.964	ng/L
3-RAP030.21	Total PFAS	2/8/2022, 8:15 AM	0.952	ng/L
3-RAP030.21	Total PFAS	3/14/2022, 3:45 AM	2.959	ng/L
3-RAP030.21	Total PFAS	4/7/2022, 4:30 AM	1.423	ng/L
3-RAP030.21	Total PFAS	4/12/2022, 4:15 AM	0.67	ng/L
3-RAP030.21	Total PFAS	6/14/2022, 6:00 AM	4.269	ng/L


51047-00771-0000
522
Stream Name: Rapidan River
Station: 3-RAP030.21
Stream Name: Long Branch
Station: 3-LGB000.40
51047-00304-0000
51047-00764-0000
51137-00082-0000
51047-00825-0000
51047-00305-0000
51047-00698-0000
51047-00823-0000
River Rd
Long Branch
51137-00347-0000

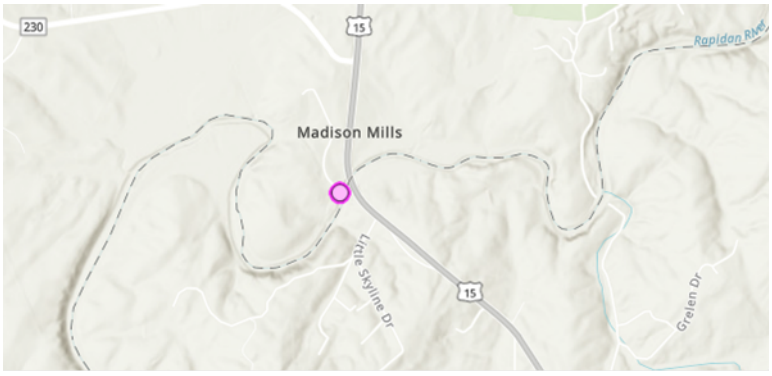
Station ID: 3-RAP045.08 Rapidan River

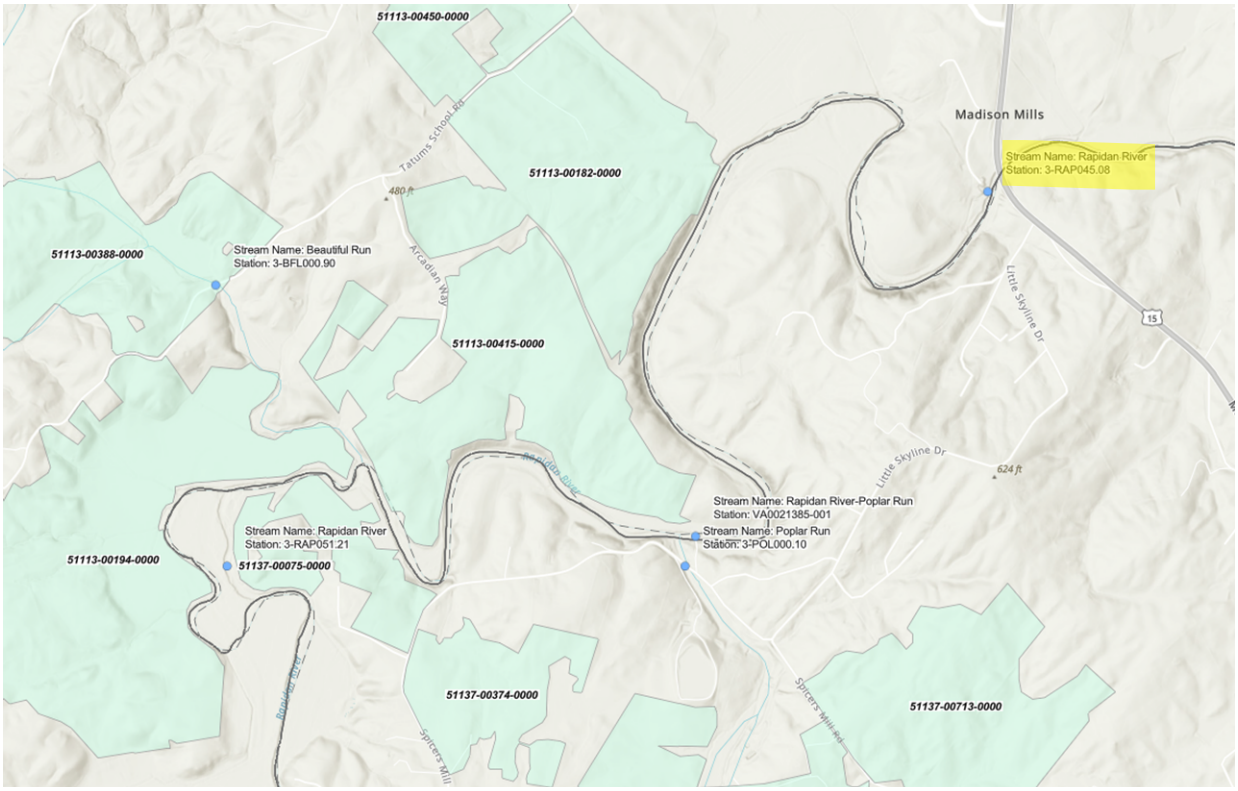
Station ID 3-RAP045.08 is located on the Rapidan River near the intersection with Route 15 on the western border of Orange County. Biosolids were applied on sites 51113-00388-0000, 51113-00182-0000, 51113-00194-0000, and 51137-0000374-0000 at various times from 2017 through 2022.



Analyte	Concentration (ppt)
Total PFAS	<= ML
PFOA	< 2
PFOS	< 2
PFBS	< 2
HFPO-DA (GenX)	< 10

A less than symbol indicates that the value is less than the minimum level of quantitation (ML).





Station ID: 8-NAR061.09 North Anna River

Station ID 8-NAR061.09 is located on the North Anna River at the intersection with Cales Drive in the southeast corner of Orange County. Biosolids were applied on site 51137-00581-0000 in 2021 and on site 51109-00846-0000 in 2020.

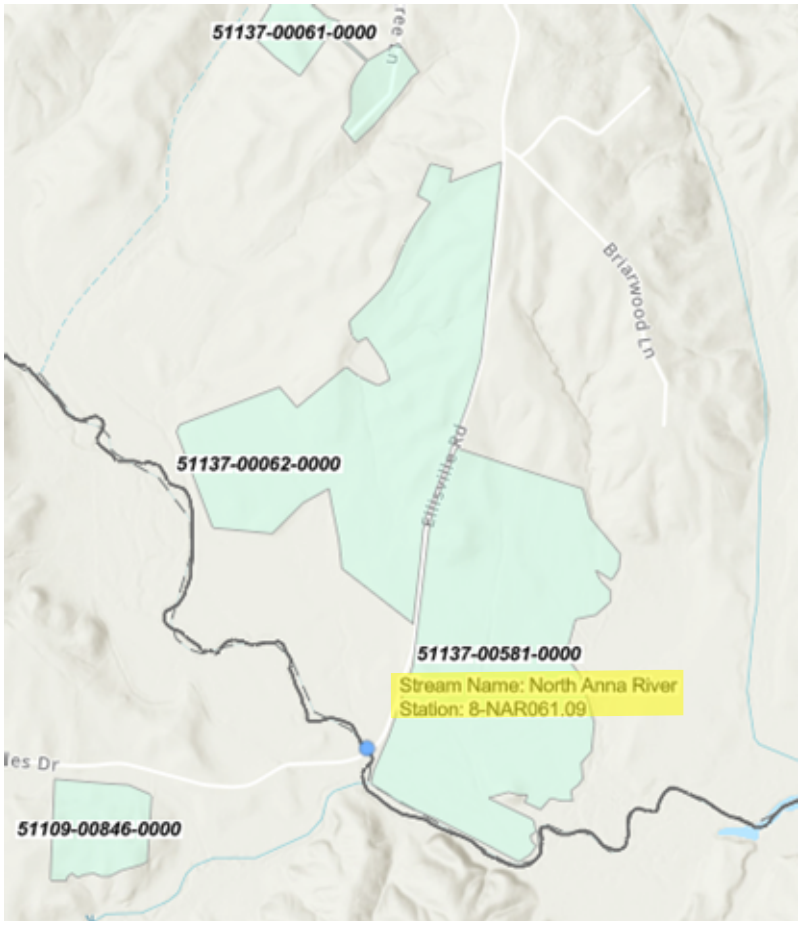
North Anna River

Zoom to Pan

Surface Water Sample (n = 1)
Station ID:8-NAR061.09
Waterbody Name: NORTH ANNA RIVER
Sample Date: 03/06/2023

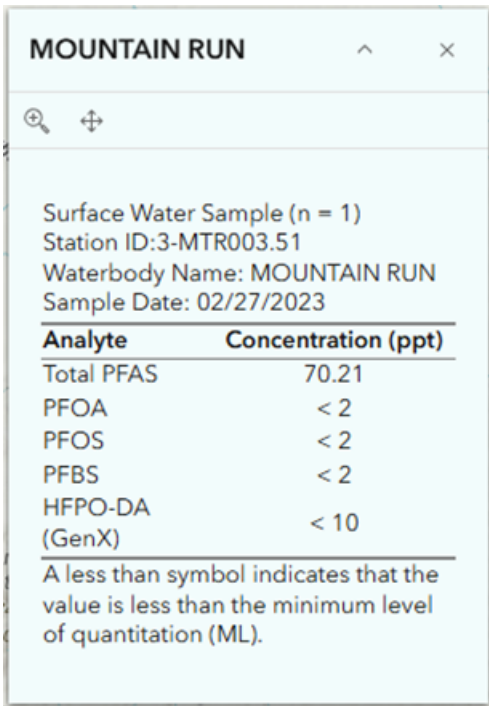
Analyte	Concentration (ppt)
Total PFAS	<= ML
PFOA	< 2
PFOS	< 2
PFBS	< 2
HFPO-DA (GenX)	< 10

A less than symbol indicates that the value is less than the minimum level of quantitation (ML).

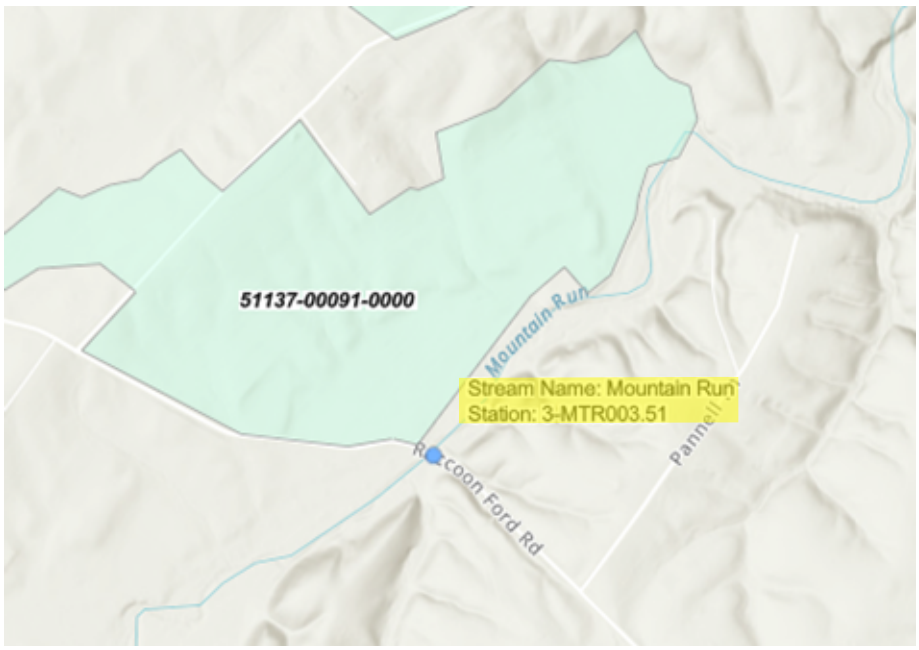


Station ID: 3-MTR003.51 Mountain Run

Station ID 3-MTR003.51 is located on Mountain Run at the intersection with Raccoon Ford Road in northern Orange County. There were no biosolids applications on site 51137-00091-0000 from 2018-2023.

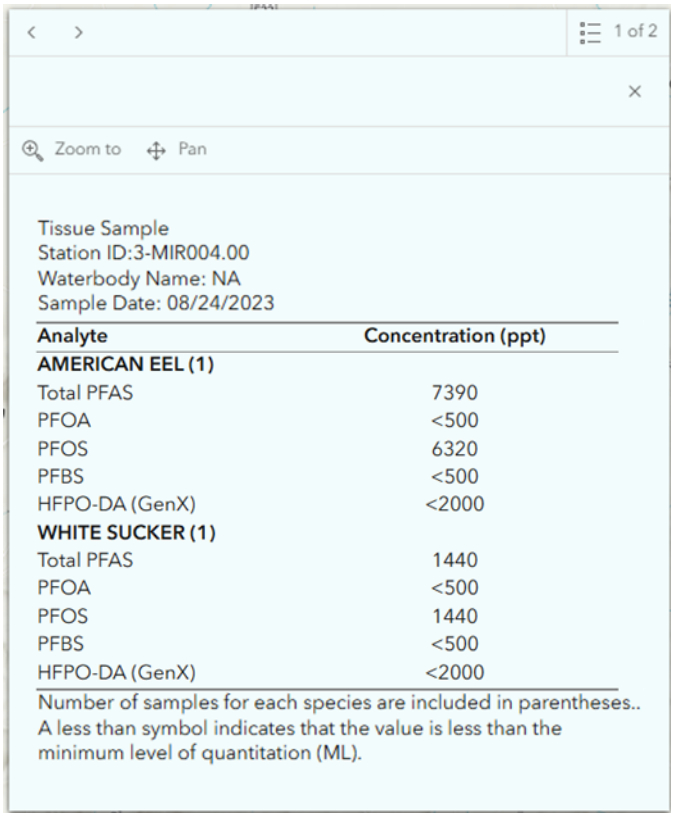


STATION_ID	ANALYTE	FDT_DATE_TIME	ANALYTE_CONCENTRATION_PPT	PG_MEASUREMENT_UNIT
3-MTR003.51	PFBA	2/27/2023, 6:09 AM	70.21	ng/L
3-MTR003.51	Total PFAS	2/27/2023, 6:09 AM	70.21	ng/L



Station ID: 3-MIR004.00 Mine Run

Station ID:3-MIR004.00 is located on Mine Run just north of the confluence with Black Walnut Run and intersection with Zoar Road in the northern area of Orange County. Fish tissue samples were analyzed for PFAS at this station. Biosolids were applied on site 51137-00249-0000 in 2017 and 2021.



Analyte	Concentration (ppt)
AMERICAN EEL (1)	
Total PFAS	7390
PFOA	<500
PFOS	6320
PFBS	<500
HFPO-DA (GenX)	<2000
WHITE SUCKER (1)	
Total PFAS	1440
PFOA	<500
PFOS	1440
PFBS	<500
HFPO-DA (GenX)	<2000

Number of samples for each species are included in parentheses..
A less than symbol indicates that the value is less than the minimum level of quantitation (ML).