

SHENANDOAH RIVERKEEPER®

P.O. Box 1251, Berryville, VA 22611

mark@shenandoahriverkeeper.org | 540-252-3465

www.shenandoahriverkeeper.org

November 9, 2015

Dawn Jeffries
Virginia Department of Environmental Quality
Valley Regional Office
4411 Early Rd.
P.O. Box 3000
Harrisonburg, VA 22801
Via Electronic Mail
Dawn.jeffries@deq.virginia.gov

Re: Comments on and Objection to Draft VPDES Permit, Massanutten Public Service STP, Permit No. VA0024732; Request for Public Hearing

Ms. Jeffries:

Please accept the following comments and objection to the issuance of the above - referenced Clean Water Act discharge permit on behalf of Shenandoah Riverkeeper and the Potomac Riverkeeper Network (“SRK”). In addition, SRK hereby requests that the Virginia Department of Environmental Quality (DEQ) hold a public hearing for this permit. The bases for our objection and required information for the public hearing requests are included below.

Shenandoah Riverkeeper is one of three branches of the Potomac Riverkeeper Network, an environmental nonprofit organization whose mission is to protect the public's right to clean water by stopping pollution, protecting drinking water, restoring healthy river habitat and enhancing public access and recreation. Quail Run is a tributary of Boone Run, a direct tributary of the Shenandoah River. Permitted discharges from the Massanutten sewage treatment plant (STP) that flow into Quail Run directly affect the interests of Shenandoah Riverkeeper and its membership, who frequently and regularly use the Shenandoah for paddling, fishing, swimming, birding and general outdoor recreation.¹ We have over 1,200 members and a number of them derive their livelihood from the Shenandoah River as fishing guides, canoe livery owners, outfitters and B&B proprietors. Without protective effluent limits for nutrients (phosphorus and nitrogen) in the Massanutten individual VPDES permit, these discharges will continue to directly, adversely affect the economic interests of many of these members.

The draft VPDES permit for the Massanutten Public Service STP (VA0024732), as noticed, fails to meet provisions of state and federal law and may not legally be approved in its current form. The DEQ has failed to perform the required analyses to ensure that this discharge will meet Virginia water quality standards. Further, we offer abundant and undisputed evidence, for the record, that shows that stringent effluent limitations for nitrogen and phosphorus must be included in this

¹ For more information on Shenandoah Riverkeeper, please see www.shenandoahriverkeeper.org



Shenandoah Riverkeeper is a branch of Potomac Riverkeeper Network, a registered 501(c)3 nonprofit organization.



individual VPDES permit to protect the designated uses of the receiving water and downstream waters. The DEQ cannot rely on the Virginia VPDES Watershed General Permit (WGP)² to set concentration and loading limits for nutrients for the Massanutten facility, because Massanutten's annual Waste Load Allocations (WLA) for nitrogen and phosphorus under the WGP are not stringent enough to protect local water quality and prevent further impairment of Quail Run, the South Fork Shenandoah River, and the Shenandoah River.

Application of Water Quality Standards

The State of Virginia is required to and has adopted water quality standards for state waters.³ These standards include designated uses, criteria (both numeric and narrative), and anti-degradation provisions. By applying only numeric criteria and ignoring both narrative water quality criteria and the regulatory requirement that all designated and existing uses be maintained and protected, the DEQ's action fails to comply with regulatory requirements and runs afoul of state and federal law.

The DEQ is required to include limits in a VPDES/NPDES permit to prevent water quality standards violations for all pollutants in the discharge for which there is a reasonable potential that violations of water quality standards will occur without imposition of such effluent limits, under both Federal and State law. Federal regulations state, at 40 CFR 122.4(d)(1)(i):

Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. (emphasis added).

This requirement applies to Virginia's VPDES permitting under the regulations governing delegation of NPDES programs to states. 40 CFR 123.25. Note that the regulation specifically references the obligation to limit pollutants or pollutant parameters to meet narrative water quality standards.

Though the DEQ and the State Water Control Board have so far refused to adopt numeric nutrient water quality criteria for "free-flowing" streams, such as Quail Run and the other waterbodies affected by this discharge, this failure cannot provide justification for the refusal to perform the "reasonable potential" analysis in this case. The information about impairments in the receiving waters submitted with these comments indicates that there is indeed more than a reasonable potential that the Massanutten STP discharge will cause or contribute to standards violations - there is a certainty that such problems exist and that this discharge causes and contributes to impairments and will continue to do so without imposition of limits specifically designed to protect Quail Run and downstream waters in the Shenandoah watershed.

Narrative portions of Virginia's water quality standards that must be enforced by VPDES limits in the Massanutten permit include those quoted below. Each and every one of these conditions can and must be addressed in an analysis of the need for permit limits.

²The VPDES Watershed General Permit for Nutrient Discharges to Chesapeake Bay, which establishes guidelines for nutrient discharges and nutrient credit trading, can be found at

<http://www.deq.virginia.gov/Programs/Water/PermittingCompliance/PollutionDischargeElimination/NutrientTrading.aspx>

³ Electronic version of Title 9 of the Virginia Code can be found at

<http://law.lis.virginia.gov/admincode/title9/agency25/chapter260/>

A. Uses designated for all streams in Virginia include: “recreational uses, e.g., swimming and boating; the propagation and growth of a balanced, indigenous population of aquatic life, including game fish, which might reasonably be expected to inhabit them; wildlife; and the production of edible and marketable natural resources, e.g., fish and shellfish.” 9VAC25-260-10.

B. “State waters . . . shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life.” 9VAC25-260-20.A.

C. “Specific substances to be controlled include, but are not limited to: floating debris, oil, scum, and other floating materials; toxic substances (including those which bioaccumulate); substances that produce color, tastes, turbidity, odors, or settle to form sludge deposits; and substances which nourish undesirable or nuisance aquatic plant life.” 9VAC25-260-20.A.

D. “All surface waters of the Commonwealth shall be provided” a level of protection which maintains and protects “existing instream water uses and the level of water quality necessary to protect the existing uses.” 9VAC25-260-30.A.1.

While the draft permit for Massanutten STP includes phosphorus and nitrogen concentration limits for the treatment plant when the discharge is increased to a flow of 2.0 million gallons per day (MGD), these limits reflect allocations to meet the Chesapeake Bay-wide TMDL. Fact Sheet, Appendix B, pg. 3. The draft permit does not include effluent limitations for nitrogen and phosphorus loadings or concentrations for the facility when it operates under limits designated for the discharge prior to upgrades allowing a 2.0 MGD average discharge rate. Draft VPDES Permit, pgs 1-2. The fact sheet provides no discussion of possible effects from nutrients in the discharge on local waters.

Limits for the portion of total nitrogen discharged in the form of ammonia are included in the draft permit for each of the discharge flow conditions. Draft VPDES Permit, pgs. 1-3. However, these limits are set to prevent toxic effects in Quail Run, in accordance with a TMDL approved by EPA in 2003, to prevent violations of criteria designed to prevent toxic effects on aquatic organisms in Quail Run.⁴

While the DEQ has not publicly communicated any reasons for failing to conduct the required reasonable potential review or to develop limits in this permit to uphold its narrative criteria, SRK assumes that the agency’s rationale would likely be the same as that expressed when the State has refused in the past to designate nutrient-degraded waters as “impaired,” in accordance with its obligations under CWA section 303(d).

In the 303(d) proceedings SRK participated in leading up to the 2012 IR, in which we demonstrated the need for listing the Shenandoah River as impaired for algae, the DEQ asserted that one reason they have failed to designate waters as impaired is that assessing impairments in free-flowing streams is more difficult and complicated than in lakes or coastal zone waters because the factors that

⁴ U.S. EPA, Decision Rationale, Total Maximum Daily Load for the Aquatic Life Use Impairment on Quail Run, August 18, 2003, pgs. 3 - 4.

affect plant growth in streams and the interplay of those factors in any particular stream may vary widely. However, this difficulty does not justify the State in failing to act in either 303(d) listing decisions or in VPDES permit issuances.

Courts have forcefully rejected excuses that setting limits is difficult and that protocols have not yet been adopted for that reason. The D.C. Circuit Court of Appeals stated that, despite difficulties cited by EPA as an excuse for failing to impose proper requirements, agency officials may not "thr[o]w up their hands and, contrary to the Act, simply ignore water quality standards including narrative criteria altogether when deciding upon permit limitations." *Am. Paper Inst., Inc. v. EPA*, 996 F.2d 346, 350 (D.C. Cir. 1993).

The DEQ also may not defer or delay the imposition of effluent limits on certain pollutants simply because the waterway at issue has not been listed as impaired and had a TMDL established to address the impairment and pollutants which caused it, pursuant to Section 303(d) of the CWA. A federal appeals court noted that EPA was required to make an independent determination as to the need for water quality-based nitrogen limits in a permit "whether or not a TMDL has been developed." *Upper Blackstone Water Pollution Dist. v. E.P.A.*, 690 F.3d 9 (1st Cir. 2012)

DEQ officials have stated that the Department has no established method for interpreting its own narrative criterion that requires it to control "substances which nourish undesirable or nuisance aquatic plant life." 9VAC25-260-20.A. Yet, this narrative criterion in the Virginia water quality standards has been in place for decades. Further, Shenandoah and Potomac Riverkeepers have demonstrated in previous submittals to the DEQ that such determinations are made routinely in published papers and that the EPA Criteria documents provide guidance for making such determinations.⁵ The referenced Technical Review explains that other government regulatory bodies have developed procedures for applying and enforcing these kinds of narrative standards and that there are systematic, methods for determining when attached algal growths reach undesirable or nuisance levels, based on scientifically-valid public opinion surveys.

In addition, and most importantly, EPA has developed methods for translating narrative criteria into numeric criteria and permit limitations and federal regulations require that one of three methods described in those regulation "must" be used. 40 CFR 122.44(d)(1)(vi). The plain language of the regulation leaves no room for Virginia to legally avoid its command. The three methods EPA provides are:

- (A) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents; or
- (B) Establish effluent limits on a case-by-case basis, using EPA's water quality criteria, published under section 304(a) of the CWA, supplemented where necessary by other relevant information; or
- (C) Establish effluent limitations on an indicator parameter for the pollutant of concern. .

..

⁵ See Sligh, David, Technical Review of Evidence to Determine the Presence, Extent, and Consequences of Excessive Algal Growths in the Shenandoah River and its Tributaries, January 30, 2015, pgs. 26 - 29 (Attachment 9 to this letter).

40 CFR 122.44(d)(1)(vi). As demonstrated in the section below, the EPA's ecoregion-specific criteria for nitrogen and phosphorus are easily applied to the streams affected by the Massanutten STP and would allow Virginia to begin meeting the federal regulation immediately, using choice (B) above. Also, the Academic Panel analysis for application of N and P numbers would allow choice (A) to be implemented.⁶ Though we do not believe the Academic Panel's recommended methods are adequate, because they focus only on aquatic life uses and do not consider other water uses, they at least provide a credible approach that could possibly be adapted to meet Virginia's needs.

Both federal and state regulations mandate that, even if numeric criteria for nitrogen and phosphorus had been or ever are adopted by Virginia, that the narrative criteria still must be applied as separate and independent thresholds for violation of water quality standards. As a technical matter also, the application of both sets of criteria will be necessary, because nutrients may produce excessive algal growth in waterbodies and still be found in relatively low concentrations in a waterbody on many occasions. For example, sediment-bound phosphorus in reservoirs or in slow-moving stream segment often is not measurable at high concentrations in the water column until anoxic conditions near the bottom of the waterbody, cause the phosphorus-sediment bonds to break and soluble P is carried to the photic zone, where it can cause algae blooms.

Despite the need to apply both numeric and narrative nutrient-related criteria, SRK's experience with Virginia officials in relation to the development of numeric N and P criteria is instructive of their intransigence in fulfilling their responsibilities to protect waters from nutrient pollution. After more than ten years of delay, while the DEQ has studied methods to set numeric criteria for nitrogen and phosphorus, and after multiple promises that regulations would be introduced to set these criteria, DEQ's promised deadlines have come and gone and no action has been taken.

During a discussion with EPA and DEQ officials on April 14, 2015, DEQ officials stated that they believed Virginia should not be required to apply nutrient criteria in free-flowing streams until all other states in the Chesapeake Bay watershed were required to do so. All the while DEQ has presented no concrete reasons why they have failed to develop any such method during the decades that this requirement has been included in the State standards and officials have failed to meet commitments.

Evidence of Impairment in Quail Run

Impairments to Quail Run from nutrients are shown in several ways.

1. The presence of "undesirable or nuisance aquatic plant life" has been shown on a number of occasions.
2. The nature of the excessive algae growth cited in 1. shows that the nutrient pollution and the resulting algae blooms interfere with designated and existing uses, including wading, fishing, and aesthetic enjoyment.
3. Laboratory data, both from Quail Run and the Massanutten STP discharge, when compared to numeric measures of nitrogen and phosphorus over-enrichment that have been developed by scientifically-valid methods, show that the narrative criteria are violated.

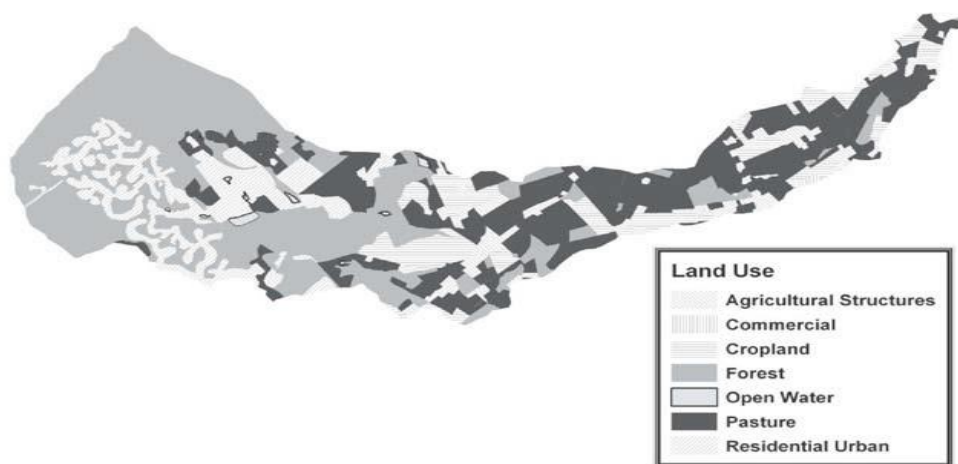
Sources with information supporting a finding of standards violations by one or more of these measures are listed below, with brief discussions of each. Most of these sources are included as attachments to this letter.

⁶ See Attachment 6.

◆ U.S. EPA, *Quail Run TMDL Approval Letter and Decision Rationale*, From Jon M. Capacasa, EPA to Larry Lawson, DEQ, August 18, 2003. (Attachment 2)

In this document EPA recounted that during DEQ studies on Quail Run, “[i]n August the DO concentrations at the sampling location 1,300 feet downstream [of the discharge points] dipped to 1 mg/L which is below the 4.0 mg/L instantaneous criteria. The concentrations did not dip below the criteria at the location 4,000 feet downstream. In September the DO concentrations at the sampling locations 100 feet upstream and 500 feet downstream violated the criteria. It is believed that algal growth exasperated [sic] the DO problems observed during both sampling events.” We can confidently assume that pollutants exerting biochemical oxygen demand (BOD) combined with the respiration by algae and other plant life in this case, based on universally-accepted understandings of the nature of municipal wastewater discharges. Both would have contributed to the very low dissolved oxygen levels cited. Also, the finding that concentrations downstream of the discharge were much lower than those upstream shows that the STP discharge was the main contributor to these problems. These findings alone are sufficient to require the DEQ to impose nitrogen and phosphorus limits on this discharge.

EPA assigned significance to the fact that the low DO concentrations were measured while tree-clearing along the stream had increased light levels that could contribute to the algae problems that were noted. This fact though did not negate the fact that high nutrient concentrations and loads were contributors, which is the necessary finding to require permit limitations and/or TMDL development to prevent those problems in the future. In addition, the fact that much of the Quail Run watershed downstream of Massanutten is in agricultural use and most of the stream is not well protected by riparian vegetation makes the focus on this one stream segment seem myopic at best. (See the land use map below. From: Brannan, Kevin, Saied Mostaghimi, Gene Yagow, Theo Dillaha, Brian Benham, C.A. Zeckoski, *TMDL Case Studies*, in *Total Maximum Daily Load: Approaches and Challenges*, ed. Tamin M. Younos, PennWell Books, 2005 (Attachment 3).)



- ◆ Brannan, Kevin, Saied Mostaghimi, Gene Yagow, Theo Dillaha, Brian Benham, C.A. Zeckoski, *TMDL Case Studies, in Total Maximum Daily Load: Approaches and Challenges*, ed. Tamin M. Younos, PennWell Books, 2005 (Attachment 3).

The narrative describing low DO findings in Quail Run cited above is also contained in this source. In addition, the authors of this study state that “[d]uring these extreme low flow conditions, reports show that Quail Run goes dry downstream of the STP outfall when the STP discharge halts.” As discussed below, in the section addressing numeric nitrogen and phosphorus thresholds that could be used to assess and set limits to protect Quail Run, this fact indicates that the 7Q10 used in setting all limits for the Massanutten permit must be set at zero.

Brannan et al. also state that “[t]here are currently no specific water quality standards for P in Virginia, but the VADEQ considers concentrations of total phosphorus (TP) above 0.2 mg/l to constitute threatened conditions that merit closer observation. Concentrations of TP above the 0.2 mg/l threshold were observed both upstream and downstream of the STP outfall, with more TP threshold exceedances reported downstream. Five-year average concentrations of P were above the levels needed for eutrophic growth.” Id. (emphasis added).

In this account, as in the EPA document discussed above, the single-minded focus on whether the low DOs and eutrophication of the stream were responsible for benthic macroinvertebrate impairments did not answer the question that is pertinent here. The over-enrichment of the algae populations in Quail Run are and were a problem that violates narrative water quality criteria whether the impacts are detectable in benthic communities or not. As discussed in a Technical Report submitted by the Riverkeepers in the 303(d) listing process (Attachment 9), algae blooms can be a precursor to benthic impairments and are themselves indicators that the aquatic ecosystem is out of balance - that the integrity of the system and support for the aquatic life support designated and existing uses are not fully supported. (See: Sligh at pgs. 31 - 32, Attachment 9).

- ◆ U.S. EPA, *Ambient Water Quality Criteria Recommendations, Rivers and Streams in Nutrient Ecoregion IX*, EPA 822-B-00-019, December 2000 (Attachment 5).

This document established EPA criteria for nitrogen and phosphorus in streams, based on an analysis of an enormous body of data to describe the ranges of concentrations found in streams throughout an area with substantial similarities in landscape and background conditions. For Ecoregion IX, in which the Shenandoah Watershed lies, EPA recommended levels of total nitrogen (TN) at 0.69 mg/l and total phosphorus (TP) at 36.56 µg/l (0.03656 mg/l) as being representative of regional streams that are relatively un-impacted by human degradation and, therefore, as suitable water quality goals to protect all designated and existing uses of streams.

The data presented in Attachment 7 to this letter show that these EPA criteria are exceeded in almost all instances for which measurements have been taken and by large amounts. Table 1 in Attachment 7 presents data collected by a volunteer monitor and reported by the Friends of the Shenandoah River (FOSR) on their web-based system (<http://fosr.org/water/?sid=GA51>). Of 22 nitrate concentrations reported in Table 1, 21 results exceeded the EPA criterion for total nitrogen of 0.69 mg/l and the average concentration of the FOSR nitrate data was 2.75 mg/l - nearly 4 times the goal. Results for ortho phosphorus show that 16 of 22 concentrations exceeded EPA’s criterion

value of 0.03656 mg/l. The average P concentration in the FOSR data was 0.089.5 µg/l, more than doubling the criterion.

Table 2 in Attachment 7 shows a limited amount of data reported by the DEQ for stream sites upstream and downstream from the Massanutten STP discharge. For the upstream or “background” site, almost all results were at 0.1 mg/l or 0.01 mg/l P and the median of all values at this station was 0.1 mg/l (it is unclear what the method detection limit was for the various results reported here, but it appears possible that some of these values were below that level. If this is true, the data reported would over-state the actual P levels upstream.) Downstream from the STP discharge point, there was a median value of 1.2 mg/l. While both numbers reported exceed the EPA TP criterion, and would seem to justify an impaired designation and permit limits, the downstream concentrations are enormous in comparison to the criterion. The highest of the downstream concentrations, at 3.7 mg/l is over 100 times the water quality goal of 0.03656 mg/l.

Finally, Table 3 in Attachment 7 shows a summary of Massanutten STP discharge monitoring report (DMR) data compiled by DEQ. To interpret these data in relation to stream concentrations we have to consider that the permit and TMDL developed for this facility have based limits and wasteload allocations, respectively, on a stream 7Q10 of 0.45 cfs. However the stream reportedly becomes dry, except for contributions from the discharge, as reported in Brannan et al. (Attachment 3) and quoted above. Therefore, the effective 7Q10 should be set at 0 cfs. Further evidence to support the use of a zero 7Q10 is provided in the site assessment report by Shenandoah Riverkeeper below. As discussed there, upstream flows in Quail Run were significantly lower than the 7Q10.

In any case, the discharge will dominate the stream under critical low-flow conditions and permit limits must reflect this fact. Therefore, we compare the nutrient pollutant concentrations in the effluent, report in Table 3, directly to the in-stream goals described above. For the period from November 2006 through May 2007, DEQ lists effluent monthly average TPs ranging from 1.35 mg/l to 3.48 mg/l. Concentrations listed as “maximum” values in the data provided by DEQ range from 2.33 mg/l to 4.25 mg/l. In all of these cases the effluent concentrations exceed the criterion of 0.03656 mg/l by two orders of magnitude. Values exceed the TN criterion of 0.69 mg/l in every instance reported and by as much as 73 times in the most extreme case.

- ◆ Zipper, Carl E., Golde Holtzman, Leonard A. Shabman, Kurt Stephenson, Jane L. Walker, and Gene Yagow, *A “Screening Approach” for Nutrient Criteria in Virginia, Report of the Academic Advisory Committee for Virginia Department of Environmental Quality*, A Publication of the Virginia Water Resources Research Center, July 2012 (Attachment 6).

In this report, the authors suggest a system of assessing stream nutrients that has three parts. Waters below specified low concentrations for nitrogen and phosphorus would be conclusively found to be not impaired (termed a No Observed Effect Concentration or NOEC). Waters with N and P concentrations above specified concentrations (Observed Effect Concentration or OEC) would be found to be impaired and waters whose concentrations were generally in the middle level, between the OEC and NOEC would require further investigation.

The advisory committee explored a number of methods for setting the threshold levels and suggested two sets. In the more lenient of these cases, the OEC for TP was 0.284 mg/l and for TN was 3.66 mg/l. With this approach Quail Run exceeded the OEC for TN on a number of occasions and in almost all cases was far above the NOEC of 0.97 mg/l. TP numbers exceeded the OEC in almost every case.

It should be noted that this approach was based solely on support of aquatic life uses and took no account of the impacts of nutrient enrichment and excessive plant/algae growth on uses such as recreation and aesthetic enjoyment.

The draft VPDES and the TMDL for benthic life are based on a stream flow 7Q10 of 0.45 cfs (0.242 MGD). However, there have been repeated occurrences when the discharge from Massanutten STP constitutes virtually the entire flow in the stream. As noted above, surface flow has stopped when the STP was not discharging. Therefore, the effective 7Q10 should be set at 0 cfs and the water quality criteria (or water quality thresholds designed to enforce narrative criteria) should be the same as the limitations for the pollutants in the discharge. With this understanding, the effluent data from DMRs listed in Table 3 of Attachment 7 must be compared to the in-stream protection thresholds and, therefore, also demonstrate serious impairments in the stream.

◆ Quail Run field assessment performed by consultant Sligh on behalf of Shenandoah Riverkeeper

On September 24, 2015, David Sligh visited Quail Run and viewed the conditions in the stream at five sites. At several of the sites downstream from the Massanutten STP discharge the stream bottom was almost completely covered with brown algae. These growths would certainly be repellent to potential stream users who wished to wade or fish in the stream and seriously impaired the aesthetic qualities of the stream, as exhibited upstream of the STP discharge. If compared to the results of studies assessing public opinion regarding the desirability of using streams with various percentages of benthic algae coverage, the conditions seen in Quail Run would far exceed those deemed acceptable by nearly all survey participants. At the Rt. 636 site viewed, stream bottom coverage exceed 90% over a stream segment of about 50 yards in length. The only portions of the bottom that were not covered were those rocks not covered by water at the time or areas where the bottom was covered in sediments. (See photos in Attachment 14 that show algal growth in Quail Run on 9/24/15).

In addition, flow measurements were taken in the stream, upstream of Route 644 and at bridges on Routes 646 and 636. The streams flows measured at the three listed sites were, respectively, 0.136 MGD, 0.97 MGD, and 0.97 MGD. The upstream site, near Rt. 644, had a flow much below the 7Q10 used by DEQ. Given that the South Fork Shenandoah River stream gage at Luray, VA measured flows for the entire month of September, 2015 that were near the long-term median flows for the stream, conditions characteristic of 7Q10 flow periods are not likely to have been present in Quail Run.

Further, the two downstream flows on September 24 were the same. The fact that numerous tributaries draining a large percentage of the overall watershed area entered Quail Run between the two sites is unusual for most streams. This anomaly may be explained by the fact that Quail Run flows onto karst terrain as it proceeds downstream and, like many streams in the Shenandoah Valley may well be a “losing stream,” from which surface water enters underlying areas and groundwater during at least some portion of the year. Thus the flow measurements and the geological structures underlying the stream seem to support the use of a zero 7Q10.

Evidence of Impairment in the South Fork Shenandoah and Shenandoah Rivers

In addition to its impacts on Quail Run, the Massanutten STP discharge impacts all downstream waters into which Quail Run feeds, although to varying extents. This fact is undeniable, though in many cases the possible contributions to downstream receiving waters is not considered in permit preparation,

as it must be. In preparation of the Chesapeake Bay TMDL, EPA clearly demonstrated that such an approach was required and mandated development of allocations for nitrogen and phosphorus load limits to plants throughout the Chesapeake Bay watershed, including Massanutten STP, to meet water quality standards in the estuary. Just as discharges from Massanutten STP must be limited to prevent the effluent from contributing to violations in the Bay, they must also be limited, if necessary, to prevent them from causing or contributing to violations into Boone Run, the South Fork Shenandoah River, and the Shenandoah River.

Quail Run enters Boone Run very near the confluence of Boone Run with the South Fork Shenandoah and we have no specific data or information about the status of Boone Run in this small segment. However, SRK has a great deal of information about the presence and nature of violations of Virginia Water Quality Standards in the South Fork Shenandoah and the Shenandoah River. Much of this evidence is offered by incorporation into these comments of documents, which are being transmitted as separate submittals along with this letter. These documents include Attachment 9, which is a Technical Report submitted during the 303(d) process. The evidence shows that virtually all of the narrative components of the water quality standards listed previously in this letter are violated and that recreational uses are badly impaired or prevented at many times of each year and at many locations.

Use of Nutrient Trading Allows Local Waters to be Degraded

The purchase of nutrient reduction credits by Massanutten to meet its allocations under the WGP are well documented and DEQ has all of the necessary information in its possession about the details. However, we have included Attachments 11 - 13 to this letter to document the 2014 purchases by Massanutten and the actual annual loads Massanutten discharged. The undeniable fact is that, by allowing these trading arrangements, the DEQ and EPA are allowing the Massanutten STP to exceed its allotted nutrient WLAs in the WGP, and contribute significantly to continued impairment and worsening of local water quality, despite commitments in the Bay TMDL documents, guidance, and public statements by officials to the contrary. Appendix S to the Bay TMDL (Attachment 8) is an example of this, containing assurances about maintaining local water quality and compliance with water quality standards which apparently have not been followed in this case. The agencies have an obligation, before allowing any buying and selling of pollution credits, to ensure that local waters are protected - in reality and not just on paper.

Flaws in the Public Notice Procedures

We assert that the public notice issued for this permit fails to meet legal requirements because methods prescribed by regulation were not followed. This procedural deficiency requires that a new public notice be issued to notify all parties a fair and timely opportunity to make comments on the permit. This deficiency further justifies our request for a public hearing.

The Clean Water Act provides that “[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this Act shall be provided for, encouraged, and assisted by the Administrator and the States.” CWA § 101(e) (33 U.S.C. § 1251(e)).

To meet this statutory mandate, federal regulations require that public notice be given when a draft NPDES permit has been prepared. The regulations specify that the permitting official create a mailing list for certain parties and that notice “shall be given by . . . mailing a copy of a notice to” persons “who request in writing to be on the list.” 40 CFR 124(c) (emphasis added). DEQ guidance

echoes this requirement, stating that “[f]ederal and state regulations concerning NPDES programs mandate the use of a mailing list to provide potentially interested parties the opportunity to receive additional information and comment on specific permit actions.” Virginia DEQ, VPDES Permit Manual, 2014.

The following is a chronology of events in this permit public notice period:

- October 10- Notice published in newspaper (inferred from comment deadline reported to us by DEQ personnel)
- October 14- We were notified that the permit had been noticed and that the deadline for comments was November 9.
- November 2- The public notice was included on the DEQ web-based listing and the notice was sent to people on DEQ’s permit mailing list (as reported by Fred Cunningham in an 11/5/15 telephone conversation).

Clearly anyone who depended on the DEQ permit mailing list or the electronic posting of this public notice could have no more than 7 days (less for those reached by mail). And given the legal requirement that a mailing list “shall” be maintained and information sent to people who ask to be on the list, any of those people had a right to expect that they would receive adequate notice. This is a flagrant violation of the requirement that the public be allowed at least 30 days to inform themselves and submit comments. Further, this deficiency provides a strong justification for the DEQ to hold a public hearing in this case, to partially rectify the problem.

The importance and the requirement of using methods other than newspaper notices is explained eloquently in a U.S. Supreme Court opinion.

[W]hen notice is a person's due, process which is a mere gesture is not due process. The means employed must be such as one desirous of actually informing the absentee might reasonably adopt to accomplish it. The reasonableness and hence the constitutional validity of any chosen method may be defended on the ground that it is in itself reasonably certain to inform those affected. . . .

It would be idle to pretend that publication alone as prescribed here, is a reliable means of acquainting interested parties of the fact that their rights are before the courts. It is not an accident that the greater number of cases reaching this Court on the question of adequacy of notice have been concerned with actions founded on process constructively served through local newspapers. Chance alone brings to the attention of even a local resident an advertisement in small type inserted in the back pages of a newspaper, and if he makes his home outside the area of the newspaper's normal circulation the odds that the information will never reach him are large indeed.

Mullane v. Central Hanover Bank & Trust Co. et al., 339 U.S. 306, 70 S.Ct. 652, 94 L.Ed. 865, 1950. The pretense of which Justice Jackson writes in regard to notice in court proceedings in *Mullane* just as great in relation to DEQ’s permitting process and to place small ads in a newspaper in the legal notice section is indeed a “mere gesture,” when DEQ officials know that parties with interests in permit are very likely to live outside the area in which a particular newspaper has circulation. As here, where mailing lists are required to be maintained and have actually been maintained, to rely solely on the

newspaper notices, with the addition of mailings and web postings just one week before the comment deadline, cannot be supposed to have any great likelihood of reaching all interested parties. We are appreciative of the fact that DEQ personnel gave us specific notice of the draft permit, because we had expressed our interest in this case. However, even that notice left us with less than 30 days to compile and send our comments and, as can be seen by the length and complexity of these comments, the full 30 days would have been of use to us.

Request for Public Hearing and Consideration by the SWCB

We submit that the issues involved in our objection to the Massanutten STP permit and level of public interest shown in this proceeding justify that a public hearing be held by DEQ. The public hearing will allow more members of the public to present information and opinions and will, in part, compensate for the flaws in the initial public notice procedures discussed above. Further, the issues we have explained in this letter are of great importance to the health of Quail Run and, further, are pertinent to the procedures by which effluent limits in many DEQ permits are set in relation to water quality standards. We believe that it is vital that the State Water Control Board have the opportunity to review DEQ's current policies and our assertions regarding the illegality of those policies.

We, as individuals, use and enjoy a variety of uses in the South Fork Shenandoah and the Shenandoah River. David Sligh has visited Quail Run and intends to visit this stream in the future and, thus, has an interest in its aesthetic qualities and other features. Further, we present these comments on behalf of the members of Shenandoah Riverkeeper and Potomac Riverkeeper Network, many of whom are long-time and frequent users of the streams affected by this discharge and the VPDES permit. The levels at which our members use the South Fork and the Shenandoah are demonstrated by personal written statements offered by many of them and contained in Attachment 9 at pages 4 -8, and 10 - 11.

In accordance with 9VAC25-31-310 (Public Hearings), 9VAC25-230 (Procedural Rule No. 1 – Public and Formal Hearing Procedures) and §62.1-44.15:02, “the Regional Office (Originating Unit - OU) makes a determination as to whether the responses and requests received during the permit public comment period.” DEQ permit manual, pg. 32. The stated criteria for making the decision are listed below:

- (1) That there is significant public interest in the issuance, reissuance, denial, modification or termination of the permit in question as evidenced by receipt of a minimum of 25 individual requests for a public hearing,
- (2) That the requestors raise substantial, disputed issues relevant to the issuance, reissuance, denial, modification or termination of the permit in question, and
- (3) That the action requested by the interested parties is not on its face inconsistent with, or in violation of the SWCL, federal law or any regulation promulgated thereunder.

In addition, “[t]he Regional Director may make the recommendation to hold a public hearing based on hearing requests from the public or the owner or at his discretion based on substantial issues raised during the comment period.” Id.

We know that other members of the public have made requests for public hearings, though we do not know whether the stated threshold of 25 commenters has been reached. If so, because we assert that requirements (2) and (3) listed above are clearly met, then a hearing must be held. Even if the number of requests is less than 25 however, we believe the Regional Director should recommend a public hearing based on the seriousness of the issues we've presented here and the likelihood that further action, through appeals to EPA or the courts could be needed if the DEQ fails to properly address our concerns in the final version of this permit.

The required contact information is shown below:

Mark Frondorf
Shenandoah Riverkeeper
P.O. Box 1251
Berryville, VA 22611

David Sligh
1433 Wickham Pond Drive, Charlottesville
VA, 434-964-7455
davidwsligh@yahoo.com

We represent Shenandoah Riverkeeper and the Potomac Riverkeeper, Inc., d/b/a Potomac Riverkeeper Network.

Thank you for considering our concerns. We hope to participate in any public hearing convened by DEQ and the SWCB and continue to communicate our perspective on these critical water quality issues.

Respectfully,



Mark Frondorf
Shenandoah Riverkeeper

_____/x/_____
David Sligh
Consultant to Shenandoah and Potomac Riverkeepers

cc: Mark Smith, EPA Region III
Jon N. Capacasa, EPA Region III
Shawn Garvin, EPA Region III
Evelyn MacKnight, EPA Region III