



September 20, 2019

VIA EMAIL TO robert.d.baker@tn.gov

Tennessee Department of Environment And Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102
Attention: Robert Baker

Re: Applications by McCrory Lane Partners, LLC for
Aquatic Resource Alteration Permits for Proposed 7848 McCrory Lane
Development; Quarry Dewatering and Fill Placement, and Outfall
Structure Permit Applications,
File# NRS19.124, Harpeth River, Davidson County, TN
(the “Applications”)

Dear Mr. Baker:

Thank you for the opportunity to comment on the Applications.¹ The Applications raise important issues not only for the residents of the area proximate to the proposed development, but also for the treatment of Exceptional Tennessee Waters such as the State Scenic Harpeth River.

Harpeth Conservancy (“HC”) is a twenty-year old, science-based conservation organization that seeks to employ scientific expertise and collaborative relationships to develop, promote and support broad community stewardship and action. HC’s vision is clean water and healthy ecosystems for Rivers in Tennessee championed by the people who live here.

HC has long been involved in issues related to the McCrory Lane quarry. In 2006 and 2007 we worked with stakeholders to defeat an attempt to modify state law to allow a construction & debris (“C&D”) landfill to be located on the quarry property. We remain concerned about plans to fill the McCrory Lane quarry site because of potential impacts to the State Scenic Harpeth River, and we offer the following comments on both the Applications generally and specific sections of the Applications.

¹ These comments are also submitted on behalf of the Tennessee Scenic Rivers Association and the Tennessee Chapter of the Sierra Club. Comments on the application for the Quarry Dewatering and Fill Placement permit should be taken as comments on the application for the Outfall Structure, and vice-versa.

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Prohibition of Landfills Near State Scenic Rivers

State law continues to prohibit construction of a landfill for the disposal of “solid waste” within two (2) miles of a State Scenic River² as would be the case at the McCrory Lane site.³ “Solid waste” is defined as:

“... garbage, trash, refuse, abandoned material, spent material, byproducts, scrap, ash, sludge, and all discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, and agricultural operations, and from community activities. Solid waste includes, without limitation, recyclable material when it is discarded or when it is used in a manner constituting disposal;

"Solid waste" does not include:

- (i) Solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows, or industrial discharges that are point sources subject to permits under § 402 of the Federal Water Pollution Control Act, codified in 33 U.S.C. § 1342; or
- (ii) Steel slag or mill scale that is an intended output or intended result of the use of an electric arc furnace to make steel; provided, that such steel slag or mill scale is sold and distributed in the stream of commerce for consumption, use, or further processing into another desired commodity and is managed as an item of commercial value in a controlled manner and not as a discarded material or in a manner constituting disposal;”⁴

The purported rock and clean dirt proposed to be disposed of at the McCrory Lane quarry either constitutes solid waste or so closely approximates it, that it should be considered to constitute a prohibited landfill within the meaning of the State Scenic Rivers Act. If, in fact, contaminated or other materials are disposed of inadvertently at the quarry, the entire site and its operation would constitute a landfill prohibited by the State Scenic Rivers Act.

Further, materials proposed to be disposed of in the McCrory Lane quarry are very similar to those allowed in a C&D landfill, namely:

² T.C. A. § 11-13-111 (b) provides that:

- (1) No landfill for the disposal of solid or hazardous wastes shall be permitted within two (2) miles from the center of a Class II river on each side nor within two (2) miles of the center of such river on each side in any county which is adjacent to such Class II river, notwithstanding the fact that the river is not designated as a scenic river in such adjacent county, if the river in such adjacent county flows into the county in which such river is designated as a Class II river.
- (2) It is the intention of the general assembly by the provisions of this subsection (b) to protect Class II rivers from possible pollution due to the proximity of landfills for the disposal of solid or hazardous wastes.

³ See <https://www.tn.gov/environment/program-areas/na-natural-areas/na-sr-scenic-rivers-list/scenic-rivers-list/na-sr-harpeth.html> (accessed Sept. 17, 2019).

⁴ T.C.A. § 68-211-103(8) (emphasis added).

“Construction/demolition wastes” means wastes, other than special wastes, resulting from construction, remodeling, repair and demolition of structures and from road building. Such wastes include but are not limited to bricks, concrete and other masonry materials, soil, rock and lumber, road spoils, rebar, paving material.⁵

It was disclosed at the September 10, 2019 public hearing (the “Public Hearing”) that Applicant will charge a tipping fee to dispose of materials at the quarry. We question whether these facts render the quarry operation a landfill prohibited under the State Scenic Rivers Act.⁶

Regardless, we are concerned that what may end up as fill in the quarry may not be clean dirt and rock as proposed. This concern as to what may end up within the quarry draws back to our main concern about what contamination may leach into the Harpeth River. Because the quarry does not have a liner at the bottom, we emphasize that there is no room for error as to what the quarry is filled with. Whatever ends up within the quarry will ultimately end up in the Harpeth River.

A C&D landfill is a “Class IV [4]” landfill under TDEC rules.⁷ What is proposed as controls in section 8.2 of the Quarry Dewatering and Fill Placement Application is significantly less stringent than what is required to assure that the materials disposed of in the quarry will not be contaminated. Further, compliance with the inadequate controls proposed in section 8.2 is entirely within the responsibility of the operator, thus substantially, if not entirely vitiating any effectiveness of that proposed program. We note that inspections of regulated C&D landfills can be infrequent and are concerned that inspections of an operation that purportedly does not qualify as a C&D landfill will be even less stringent.

The risk that contaminated soils and other materials will be disposed of in the quarry is compounded by the fact that it can be difficult to determine what is contaminated. Petroleum (and other) contaminated soils (called “dirty dirt”) can be, but are not necessarily, darker in color (stained) than regular soil. Even the most vigilant operators can find this difficult to police. It was calculated at the Public Hearing that approximately 168,000 multi-ton truckloads of materials will be required to fill the quarry in an operation scheduled to last until 2025.⁸ Thus, we have significant questions about the adequacy of the proposed controls.

Since there seems to be so little difference between what may be disposed of in a C&D landfill and what will be placed into this quarry and they are therefore subject to the same risks, TDEC should require a program similar to that applicable to a C&D

⁵ TN Comp. & Regs. § 0400-11.01-.01.

⁶ In these circumstances, the “Jackson Law,” T.C.A. § 68-211-701, should also apply.

⁷ TN Comp. & Regs. § 0400-11-01-.01(3)(d).

⁸ Section 5 (Project Schedule), included in Appendix 1 to the Quarry Dewatering and Fill Placement Application.

landfill, comprising two (2) main elements of 1) monitoring what goes into the quarry, and 2) monitoring the groundwater. The outlines of such a program should include at least the following in addition to those listed in section 8.2 of the Quarry Dewatering and Fill Placement application:

- 1) Allowing TDEC to enter & inspect the quarry.⁹
- 2) Monitoring and reporting and performing a survey at TDEC's request.¹⁰
- 3) Observing the general facility standards for Class IV landfills (like controlling access & litter, having proper equipment, having erosion control measures.¹¹
- 4) Prohibiting the use of materials from and an acceptable distance downgradient from, NPL, CERCLIS / (SEMS), RCRA, UST, and brownfield sites, and requiring certification of the same;
- 5) Performing random inspections of the materials disposed of in the quarry. TDEC's C&D landfill rules state that 5% of daily incoming loads, and all suspicious loads, must be inspected. Records must be kept, and personnel trained, and notification sent to TDEC in case unauthorized loads are received.¹²
- 6) Installing a groundwater protection & monitoring system. This must consist of at least 1 upgradient and 2 downgradient monitoring wells, and more as site conditions warrant, and detection monitoring, and corrective measures if problems are detected.¹³
- 7) Posting financial assurance for closure and post-closure.¹⁴ (We also note that no information was provided on prior reclamation (or other) plans for the quarry, and thus it cannot be determined whether, for example, the current use of the quarry as a lake constitutes compliance with those plans, or whether there is any remaining financial assurance that could be drawn.)

An additional method to try to assure that contaminated materials do not reach the Harpeth River would be to require that only rock can be disposed of below the water

⁹ TN Comp. & Regs. § 0400-11-01-.02 (8).

¹⁰ TN Comp. & Regs. § 0400-11-01-.02 (9), (10), & (11).

¹¹ TN Comp. & Regs. § 0400-11-01-.04 (2).

¹² TN Comp. & Regs. § 0400-11-01-.04(1)(s).

¹³ TN Comp. & Regs. § 0400-11-01-.04 (7)(c). We note that no attempt has been made to survey the site with a view to determining whether additional groundwater monitoring wells may be needed.

¹⁴ TN Comp. & Regs. § 0400-11-01-.03. We also note that no information was provided on prior reclamation (or other) plans for the quarry, and thus it cannot be determined whether, for example, those plans have already been complied with, or whether there is any remaining financial assurance that could be drawn.

table at the quarry site. This method will help ensure that the groundwater will not come into contact with any contaminated fill; thus, the conductivity of ground water flow will only be through clean rock or bedrock, therefore ensuring that potential contamination from the quarry does not reach the Harpeth River.

Comments on Specific Portions of the Applications

HC offers the following comments on specific sections of the applications for the Quarry Dewatering And Fill Placement and the Outfall Structure.

Quarry Dewatering And Fill Placement Application

Section 6.1. Narrative Description¹⁵

First, we believe that TDEC should give little, if any, weight to Applicant's statements for the principal rationales for the proposed permits. Indeed, the statements undercut much of the permit application itself. The application speaks of the "unavoidable impacts" caused by fill placement and grading. However, as was pointed out at the Public Hearing, the Applicant bought the property in its state as an unfilled quarry, and it assumed the risk that the property would and should remain in the state in which it was purchased. Further, the Applicant states that the quarry is a public safety risk and it should be filled to mitigate that risk. Applicant fails to note that a commercial scuba diving operation has long operated on its property in an open and notorious fashion.¹⁶ TDEC must evaluate whether apparent inaccuracies and omissions of this magnitude vitiate the entire application.¹⁷

Second, the application states that it will discharge "clean water" to the Harpeth River at the rate of 1,500 gallons per minute, or approximately 3.3 cubic feet per second. Applicant provides no information or evidence that pumping at this rate will actually dewater the quarry or that this pumping will actually keep the quarry dry. TDEC should demand that the Applicant calculate and disclose how this method of pumping will keep the quarry dry and how many years it will take for the quarry's water levels to reach equilibrium.

Further, TDEC should require the Applicant to provide full disclosure of how long it will take to pump the contents of the quarry into the Harpeth, and all other details of its calculations and regarding its pumping plans. TDEC should take into account that, even though the Applicant has stated that it intends to pump the quarry dry within a few months' time, that the quarry will not remain dry and will continuously recharge itself so long as groundwater levels in the area are higher than those in the quarry.

¹⁵ Although we have indicated which sections of the Applications, we believe particular comments are most pertinent, there is considerable repetition of issues and points throughout the Applications, and these comments should be taken to represent comments on the application as a whole and not limited to particular sections. The comments on section 6.1 also apply to Section 7 of the application, for example.

¹⁶ In addition to the statements at the Public Hearing, see <http://scubanashville.com/quarry/> (accessed Sept. 16, 2019).

¹⁷ See, e.g., T.C.A. . § 69-3-108 (b)(4)-(6), (i), 69-3-115(a) (1)(C), (b), and (c).

Indeed, it appears that draining the quarry will “rob” the Harpeth of groundwater that would otherwise flow into the river. We question how the Applicant can conclude, in light of the pumping rates and the discharges to the river (as well as missing and incomplete data, as noted elsewhere), that the impact on the State Scenic Harpeth River, an Exceptional Tennessee Water, is de minimis. Because of these impacts, TDEC’s remedies include rejecting the Applications as incomplete as well as requiring mitigation, none of which is offered in the Applications.

Third, the applicant fails to disclose how it will judge “turbidity” and when it will redirect that turbid water into the proposed sediment basins.

Fourth, the Applicant has provided no calculations or other information to support its conclusions that the soil proposed to filter the water on the quarry site will be capable of absorbing the volumes of water proposed to be discharged (whatever those volumes may be, estimates of which are also not disclosed). Applicant should be required to perform percolation tests – tests determining at what rate the soil at the site can absorb the discharged water and over what period -- and disclose the results of the tests, so that its calculations can be verified. In addition to the percolation tests, a part of the information required and disclosed should be the depth to bedrock.

Fifth, no information is provided on the “natural depression” on the site. There is no information on whether this natural depression is a sinkhole. Depending on the results of those disclosures, TDEC should cause the Applicant to evaluate whether a Class V [5] injection well permit is required and file an appropriate application.¹⁸

Sixth, although the application states that various elements of the discharge and treatment system are located within the Harpeth River floodplain, the application does not, but must, evaluate the impact of the potential for flooding on its plans. For example, the application states that remaining turbidity will be filtered by vegetation in the floodplain, but no information is provided on the potential for the vegetation to be washed away by flooding, or what alternative plans would be in that instance. As noted on the attached map, significant portions of the proposed systems are within the 100-year floodplain. HC has significant concerns regarding this 100-year floodplain and the potential for contaminated soil and vegetation to reach the Harpeth River waters in the event of a flood.

¹⁸ See TN Comp. & Regs. § 0400-45-06-.02 (definitions of “Injection well” and “improved sinkhole” for example), and §§ 0400-45-06-.03(1), 0400-45-06-.04, 0400-45-06-.06(5), and 0400-45-06-.07.

Section 6.4. Existing Stream and/or wetlands characteristics

In addition to the comments above, which are also applicable to this section of the application, HC offers the following comments:

First, TDEC should take in to account the significant changes in water levels between 2006-2007, when the first plans to locate a C&D landfill were proposed, and today. Water levels have increased by approximately 64 feet since 2006-2007. Applicant should be required to measure and disclose the elevation levels in both the quarry and the river, and how long it will take the quarry and the river to return to equilibrium, in comparison to how long it intends to try to keep the quarry dry, which should also be disclosed.

Second, we have concerns about whether, as stated, the water quality in the quarry pit is better than that in the Harpeth River. Appendix 3 of the application labels sampling locations as “Q1T” and “Q1B,” for example. It cannot be determined, and must be disclosed, whether these locations involved sampling the sediment at the bottom of the quarry pit. Adequate sediment samples – taken in accordance with a credible and approved work plan for the sampling -- must be required to evaluate the correctness of the statements regarding the quality of the proposed discharges to both the river and on the quarry site itself.

At least one commenter (the operator of a scuba school on the site) has stated that there appear to be significant temperature differences between the water at the surface and at depth. Applicant should be required to state whether it measured the temperatures at various depths, and, if it has not done so, be required to take and disclosure those readings.

HC also has concerns about the analytical results disclosed in Appendix 3. Applicant does not state why only the substances noted in Appendix 3 were sampled for, or whether sampling results for other compounds are already available, or what the detection limits of its sampling is. HC notes that Tennessee’s water quality criteria for fish and aquatic life¹⁹ limit discharges of a number of toxic substances in addition to those listed in Appendix 3, and TDEC should require strict adherence to those criteria. Applicant should be required to disclose full lab reports for all analytes sampled.

Further, Appendix 3 does not evaluate even those substances disclosed against the criteria required by Tennessee’s standards for fish and aquatic life, namely “criterion maximum concentration (CMC)” and “criterion continuous concentration (CCC).” In fact, two of the substances disclosed are above various of the criteria in the Tennessee’s water quality criteria for fish and aquatic life, namely:

Heptachlor, which exceeds the CCC both in the quarry and in the river; and
Selenium, which exceeds the CCC in the quarry.

¹⁹ TN Comp & Regs. § 0400-40-03-.03(3)(g).

The sampling points disclosed do not include locations up-river of the quarry, so it is difficult, if not impossible, to determine whether the site is itself a source of this and other contamination noted in the river. Further, review of Appendix 3 shows discrepancies in several areas, including between non-detects and blanks, and failure to use required units for metals. All these issues render even the data reported as suspect and potentially unreliable, and thus unusable to make any determination of de minimis or other impacts on the State Scenic Harpeth River.

We also note that there does not seem to be any data on the “hardness” of the water in the quarry, particularly at its bottom. TDEC should require the Applicant to provide this data.

We note that TDEC cannot issue a permit when permitted conditions, alone or in combination with others, would result in a condition of pollution.²⁰ And, of course, this segment of the Harpeth River is on Tennessee’s 303(d) list, and special protections apply.

Further, the nature of two of the substances disclosed, heptachlor and endosulfan, both of which have been banned for a considerable period, raise questions about the nature of operations (such as railroad) conducted on or near the quarry site, as well as potentially suggest the presence of other compounds not yet analyzed. For example, because the presence of toluene suggests the presence of benzene or TCE, TDEC should require testing for BTEX, in addition to testing for VOCs, PAHs, PCBs, total hydrocarbons, all heavy metals, creosote, herbicides and pesticides.

We further note that no information is provided about dissolved oxygen levels in the river or at various depths of the water in the quarry. This segment of the Harpeth River is impaired for both dissolved oxygen and phosphorus, and Applicant cannot discharge any more of any parameter for which the river is already listed.²¹

Also, Tennessee’s water quality standards for fish and aquatic life provide that temperature can vary only three degrees centigrade (3° C) from an upstream control point, as well as other additional controls.²² Insufficient information is provided to evaluate whether any of these requirements have been met.

In summary, based on the data presented, it is simply not possible to conclude, as Applicant does, that the water in the quarry is cleaner than that in the river. Additionally, we note that the proposed discharge rate of 1,500 gpm, or 3.3 cfs, is approximately 50% of the 7Q10 of the river below the quarry.

In addition to the other concerns noted, all of this information also raises the question of whether the proposed activities will have a detrimental effect on plant and animal

²⁰ T.C.A. § 69-3-108(g)(2).

²¹ TN Comp. & Regs. § 0400-40-03-.06(1), (2).

²² TN Comp & Regs. § 0400-40-03-.03(3)(e).

species on or downstream of the site that may be endangered, threatened, or in need of management.

Section 8.2. Sequencing

In addition to our comments above in the section entitled “Prohibition of Landfills Near State Scenic Rivers,” we also question why Applicant simply does not employ an infiltration gallery. Temperature variations in water are typically easier to “smooth” using infiltration technology.

We further note that there is no room for error with respect to materials disposed of in the quarry because the quarry is not lined, unlike the case with a landfill. We emphasize that any contamination within the quarry will undoubtedly end up within the Harpeth River.

Section 10. Alternatives Analysis

We have noted previously the failure of the Applicant to disclose the commercial scuba diving operation on its property and the effect this should have on its application.

Applicant has raised the issue of the purported need for additional capacity for permanent storage of clean rock and soil materials but provides no data on which to draw that conclusion. We further note that any filling of other areas such as wetlands require their own separate, individual permits, which are not at issue here.

In summary, the Applicant has provided insufficient and inadequate information to draw the conclusion that the impacts of its operations will be de minimis. The applications should be rejected as incomplete or the additional analysis regarding of reasonable alternatives and economic and social necessity²³ should be required.

Outfall Structure Application

Section 6.1. Narrative.

We note that the application states that special provision will be made for when turbid water is encountered during dewatering. We see no evaluation of the potential for the filling of the quarry to create turbidity in the river. If the connectivity between the groundwater on the site and the water in the river is high, filling the quarry with dirt, even if clean, could transmit that dirt into the river in the form of turbidity. The degree to which this could be a problem needs to be evaluated by tests to establish the degree of correlation of changes in elevation between the water in the river and in the quarry. To date, these tests have not been required, but should be.

²³ TN Comp & Regs. § 0400-40-03-.06((4)(a)2., (c), and (d).

Further, the documented connectivity between the river and the quarry site gives rise to other concerns. Nearby water wells could be sucked dry by the dewatering operation. These wells must be inventoried, baselines established, and periodically monitored. Dewatering the site could also draw in water from the river itself. Again, tests regarding the degree of connectivity between the site and surrounding water resources should have, but have not yet, been done, and should be required.

Additionally, there are no conditions yet proposed to limit what may be done in the settling ponds that may be used when the dewatering reaches more turbid waters near the bottom of the quarry. Coagulants, which could turn the river white, should be prohibited, among other controls.

Conclusion

Tennessee's State Scenic Rivers Act provides that:

The commissioner of environment and conservation shall cooperate with the appropriate federal and state water pollution control agencies and environmental management agencies, including forestry, for the purpose of eliminating or diminishing the pollution of waters within scenic rivers areas; provided, that such cooperation furthers the objectives of preserving natural stream flow and natural ecological conditions.²⁴

There can hardly be any clearer case for the application of this provision of law than the proposed Applications for the development of the former McCrory Lane quarry. We question whether the proposed operations constitute a prohibited landfill within the meaning of the State Scenic Rivers Act. Although TDEC should reject as incomplete the Applications as presently submitted, Harpeth Conservancy is committed to working with the Applicant and TDEC to assure that water quality in the Harpeth River is preserved and improved in fulfillment of the promises of the State Scenic River Act.

²⁴ T.C.A. § 11-13-116 (emphasis added).

We look forward to hearing from you and to working with you and the Applicant to protect and improve the water quality in the State Scenic Harpeth River.

Sincerely yours,

Harpeth Conservancy

By:



James M. Redwine, Esq.
VP & COO

Tennessee Scenic Rivers Association

By: /s/ _____
Gary Weatherford, President

Tennessee Chapter of the Sierra Club

By: /s/ _____
Axel Ringe, Conservation Chair

Location of quarry dewatering structure and pipe on adjacent owner property in floodway and 100 year floodplain.

