16 July 2020

Memphis & Shelby County Board of Adjustment
125 North Main Street
City Hall, Room 468
Memphis, TN 38103

Re: Comments on Case Number: BOA 20-61
Location: 5122 Crestview Road
Application: Proposed Variance from Requirements of the Unified Development Code

Protect Our Aquifer (POA)—a nonprofit dedicated to the preservation and protection of the Memphis Sand Aquifer, the source of our drinking water—asks the Board to deny this application for a limited landfill operation. We ask you to consider the history of this site and the importance of the site’s function in relationship to the water sources that surround it. We offer the following comments and questions as to the wisdom of siting a landfill in a floodway, flood plain, or flood control area.

History of the Site
From what we can gather, the Applicant is requesting approval for a variance under a prior “Mining Permit” to site a limited landfill operation. As far back as 1989, this site has attracted dumping and debris—often illegally and in most cases, shut down. From 1989 to 2019, the site has attracted stop work and illegal dumping orders from an array of public regulating agencies including the Tennessee Department of Health and Environment, The Tennessee Department of Environment and Conservation, the Division of Solid Waste Management, the Memphis & Shelby County Health Department, today’s County Health Department, Litter Control, Pollution Control, and the Office of Planning and Development.

Today, building materials are not allowed to be landfilled unless the operator has a Class III state permit. According to Tennessee law, a whole range of items may be deposited in a such an operation. POA understands that the Applicant wants to limit the range of items to “brick, concrete, and soil.” But construction debris is generally a mix of benign items (concrete and wood) and harmful substances (asphalt and asbestos). Even sheetrock can leach chemicals in a landfill. More important, it is hard to police all the materials that enter even a “limited construction landfill.”

- Does the Applicant have a Class III permit?
- What safeguards are in place to assure loads are inspected and in compliance?
In a repeat of this history, the Applicant was shut down a year ago when TDEC inspectors wrote them up for conducting a landfill operation without a license. In May 2019, DSWM investigated this site in response to complaints. They discovered “the unlawful processing and disposal of solid waste.” This unauthorized landfill operation was “to cease immediately…and “all construction and demolition waste and other non-natural wood waste will be removed” to a permitted site. The Applicant was ordered to remove “all waste that has been placed in the water.”

- Has all of this work been done?
- Does documentation exist affirming that the applicant has satisfied the conditions mandated by TDEC?

The Wolf River system, Resiliency principles, and Flood patterns

From the start, this site was rejected as a landfill. In June 1989, the site was rejected by the state for three reasons:

- The property sits in the 100-year flood plain,
- The soil is sandy, highly permeable alluvial sediments, and
- A possible hydraulic connection to the Wolf River exists via the alluvial sands.

To permitting officials in 1989, this location and its natural connections would cause problems if developed as a landfill. The state order then concluded: “an application to dispose of the waste on this site will not be entertained.” With 30 years of development near the site and increasing flood events, this is even more true today.

- Why is the idea of a landfill being entertained now?

About half of this property sits in the floodway of the Wolf River. Thus, the property includes a portion of “the channel and adjacent overbank areas necessary to effectively convey flood waters.” The other half of the property is part of the 100-year flood plain. Thus, this area must remain able to buffer nearby communities and commercial operations.

This is not the first landfilled area that has been proposed for this area of the Wolf. Two other landfills have been proposed (and temporarily withdrawn) on either side of this site—all three in wetlands alongside the Wolf River. The unintended effects of these three combined surface changes bode increased flooding and calamitous events for the areas abutting the Wolf, which includes industry, commerce, and neighborhoods.

In Shelby County’s Resiliency Plan, a “riparian corridor” describes a river and its banks and flood plain as a single unit—the water, soil, vegetation, and adjacent wetlands. Riparian corridors serve a vital role in good flood control and watershed function. Healthy and stable riverbanks slow the flow of water through the watershed.

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Based on the County’s own resiliency principles, this site performs several key functions in the river system, in a flood, and in relation to the Aquifer. Filling in this area with debris will restrict the flow of water in a damaging flood. Filling in the area will reduce the storage capacity of this flood plain. According to TDEC’s DSWM, Class III landfills “must not be located in the 100-year floodplain unless it is demonstrated…that it will not restrict the flow of the 100-year flood nor reduce the temporary water storage capacity of the flood plain.”

Of particular concern for us at POA is the possibility of connections among landfilled debris, permeable sands, the alluvial aquifer and most likely, the deep, drinking water aquifer. Since 1989, these connections have been theorized. Hydrologists at the University of Memphis have stated that the Wolf River tends to scour areas creating gaps in the clay layer protecting the deeper aquifer. Only now is a study taking place (by the same scientists at the UM) to identify the potential entry of surface contaminants from the surface and alluvial aquifer into the deeper aquifer.

- Has a current study of potential hydraulic connections been conducted for this area?
- Will you approve a landfill operation without knowing if surface debris and its runoff can enter into our drinking water aquifer?

A Public Greenway
Beyond the protections provided by this property in the case of floods and their resiliency value according to Shelby County’s own plan—natural, vibrant riparian corridors are a significant community asset. The Wolf River Conservancy has plans to build a portion of their Greenway system along the levy on the east side of the Wolf River between the river and this development. All care should be taken to preserve the beauty and the natural systems that the WRC has worked decades to promote. In so doing, the property can become a piece of the Wolf River greenway corridor while still acting as a buffer and basin for extreme weather events.

Conclusion
This piece of property is an integral part of important natural systems in Shelby County. It is part of the Wolf River system, the Fletcher Creek drainage system, a flood control filter for the surrounding commercial community, and most likely an hydraulically connected part of the drinking water Memphis Sand Aquifer. The land has been abused by illegal dumping and debris, and this application asks for more of the same.

POA asks the Board to refuse this application to fill the land with additional, unknown debris. Such actions threaten to upend all of these systems harming river, drainage, flood control, and in a worse case—our very drinking water. POA suggests that the Applicant finish their mining operation and restore the area to a condition that honors its natural functions and avoids harming its natural systems and neighboring communities.

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The time has come for Shelby County to honor the principles of good water management. The time has come to recognize the role of natural systems to mitigate disasters, to allow water to move without harming the built environment and to make sure that our precious drinking water is not damaged by what we do and approve on private property. It is time to say “No” to more landfills in or near the Wolf River, its tributaries, its wetlands, or its drainage areas.

Sincerely,

Ward Archer, President
Protect Our Aquifer

/s with permission
Jim Kovarik, Director
Protect Our Aquifer

/s with permission
Scott Banbury
Conservation Program Coordinator
Tennessee Chapter of the Sierra Club