



PROTECTING THE HOSENSACK CREEK WATERSHED

10 Things to Know About ...

**Geryville Materials' Proposed Quarry
Permit No. 39140301 and NPDES Permit No. PA0225444**

1. Quarries have long lives

Pennsylvania has quarries in operation today that cut their first stone decades before Gifford Pinchot pushed to pave the Commonwealth's roads in the 1930s. In Pennsylvania, quarry permits are not renewed and have no expiration date. As a result, opportunities to impact this quarry operation and associated activities are greatest at the time of this permit application.

The application before the Pennsylvania Department of Environmental Protection (PADEP), once approved, will permit mining operations on 127 acres in Lower Milford Township. However, Geryville Materials' permit application lists the mineral rights boundary as encompassing its full 628 acres. Geryville Materials has previously outlined plans to mine the full 628 acres incrementally. Any expansions will require additional permitting, but the key moment to influence the proposed operations is now before any quarry is permitted at the site.

2. Local governments have a key role and, in Pennsylvania, a constitutional obligation to protect the environment.

The Pennsylvania Noncoal Surface Mining Conservation and Reclamation Act places authority to regulate the operation of noncoal surface mining within the PADEP but as part of its permitting process, PADEP solicits input from local agencies—including the municipality where the quarry will be developed—whose interests may be affected by proposed mining activities. Moreover, the Pennsylvania Supreme Court has upheld the ability of local governments to protect their local communities and natural resources

through zoning.¹ In keeping with this obligation, Lower Milford Township has been actively working to protect its communities from the harmful impacts of this proposed mine for over 10 years.

Geryville Materials has not yet secured from the Lower Milford Township Zoning Hearing Board the Special Exception approval needed to initiate mining. Geryville Materials' land development plan cannot move forward, and should not be permitted by PADEP, unless all of the conditions, including the zoning approval, are met.

3. *The proposed quarry is located in the headwaters of the Hosensack Creek watershed, along some of its cleanest tributaries.*

The Stroud Water Research Center (SWRC), renowned for studies of the ecology of streams, rivers, and their watershed, monitored water quality in the Schuylkill River basin from 1996 to 2007. The water quality at the SWRC's monitoring site in the Hosensack Creek watershed was among the best in the Schuylkill River watershed. Only Pine Creek (Berks County), which PADEP uses as a reference for judge the health of other streams, had a better Macroinvertebrate Aggregated Index for Streams (MAIS) score. In addition, macroinvertebrate data collected by Normandeau Associates, Inc., (NA) in 2006 also confirmed the outstanding water quality and aquatic community of the Hosensack Creek basin.

4. *Wetlands in the Hosensack Creek watershed are exceptional.*

Certain wetlands in Pennsylvania qualify for official designation as "Exceptional Value," a regulatory designation that requires additional protections, and that can qualify streams associated with those wetlands for additional protections as well. Exceptional value wetlands in Pennsylvania include wetlands that serve as habitat for fauna or flora listed as threatened or endangered under the federal Endangered Species Act.² The documented presence of the federally threated bog turtle (*Clemmys muhlenbergii*) documented in the Hosensack Creek watershed lends those wetlands exceptional value status, as does the Hosensack's listing, by the Pennsylvania Fish and Boat Commission (PFBC), as a Wild Trout Water (see pp 47, 48 and 66 in Appendix D, Pennsylvania Wild Trout Waters (Natural Reproduction) – Jan 2015.³

5. *The entire Hosensack Creek watershed is being studied for Exceptional Value designation.*

Under Pennsylvania law, a surface water of exceptional ecological significance meets the necessary condition for designation as an Exceptional Value stream.⁴ Pennsylvania defines surface water of exceptional ecological significance as "[a] surface water which is

¹ Robinson Township v. Commonwealth of Pennsylvania, 83 A.3d 901 (Pa. 2013).

² 25 Pa. Code §105.17(1)(i).

³ Pennsylvania Fish and Boat Commission. 2015. Pennsylvania Wild Trout Waters (Natural Reproduction). Retrieved from http://fishandboat.com/trout_repro.pdf.

⁴ 25 Pa. Code § 93.4b(b)(2).

important, unique or sensitive ecologically, but whose water quality as measured by traditional parameters (for example, chemical, physical or biological) may not be particularly high, or whose character cannot be adequately described by these parameters.”⁵ When making permitting decisions, PADEP is required to ensure that no degradation is allowed in Exceptional Value waters.

The Delaware Riverkeeper Network, the Perkiomen Chapter of Trout Unlimited, and Lower Milford Township have petitioned the Environmental Quality Board (EQB), the entity which adopts the regulations under which the PADEP operates, to upgrade the Hosensack Basin and all of its tributaries to Exceptional Value status. The petition was unanimously accepted for review by the EQB in April 2015. PADEP must take this petition into consideration when reviewing Geryville Materials permit application.

6. *The proposed quarry will impact the Hosensack’s Exceptional Value wetlands*

PADEP has requested guidance from the PFBC and the Pennsylvania Game Commission (PGC) regarding the potential environmental impacts of the proposed quarry. In response both agencies have expressed concerns for impacts to the groundwater which recharges to the Hosensack and its Exceptional Value wetlands, and as a result both agencies have expressed concerns for the need for intensive monitoring.⁶

PADEP must consider water quantity⁷ as well as water quality impacts when reviewing the Geryville Materials permit application as the quarry operation is likely to intercept groundwater and dewater wetlands. Geryville Materials proposals to use infiltration trenches to preserve hydrology will likely prove inadequate. The Delaware Riverkeeper Network reviewed topography for the site wetlands and infiltration trenches and determined that Wetlands H actually appears to be upgradient of the location of both Outfall 1 and the associated infiltration trenches.⁸ The configuration of the infiltration trenches and the proximity to the proposed limit of mining suggest that the infiltration trenches will not maintain hydrology of these wetlands, but instead continually cycle the flow back into the mining operation.

As trustee of Pennsylvania’s natural resources, the Commonwealth shall conserve and maintain them for the benefit of all the people now as well as in the future. As such, PADEP is tasked with considering, at the time of permitting, impacts that may dewater the Hosensack’s Exceptional Value wetlands, regardless of when those impacts will occur.

⁵ 25 Pa. Code § 93.1 (see definition of surface water of exceptional ecological significance).

⁶ Kepler, S.R. 1 May 2015. Pennsylvania Fish and Boat Commission. Email to Michael Kutney, Pennsylvania Department of Environmental Protection; Painter, J. 5 May 2015. Pennsylvania Game Commission. Memo to Michael Kutney, Pennsylvania Department of Environmental Protection.

⁷ Crum Creek Neighbors v. DEP, 2009 EHB 548

⁸ Geryville Materials, Inc. Rev. December 2014. Application for Non-Coal Surface Mining Permit, Figure 13: Steady State Infiltration Results and Trench Configuration.

7. *The proposed quarry will impact the Hosensack Creek's water quality.*

PADEP requires quarry applicants to address erosion and sediment concerns, but Geryville Materials proposed erosion and sediment controls will not be sufficient to protect the Hosensack. The Delaware Riverkeeper Network commissioned Princeton Hydro LLC (PH) to study the potential impacts caused by the projected changes in land cover and the alteration of the hydrology primarily modeling the site using MapShed, a robust pollutant and hydrologic modeling tool developed by Penn State. Using MapShed, PH established the stream's sediment load and hydrologic budget under existing conditions and under the developed condition. PH ran the developed scenario condition with and without stormwater and sediment erosion control best management practices (BMPs). Even accounting for sediment retention onsite, PH estimated a 96.6% increase in sediment loading to the Hosensack Creek would occur under the proposed quarry conditions.⁹

In addition, Geryville Materials is seeking approval to encroach on the 100-foot distance limitation for streams set by law¹⁰ for construction of a level spreader and infiltration trenches. Geryville Materials' proposes encroaching construction will likely harm the Hosensack's healthy headwaters tributaries for a "proposal [that] would try to artificially maintain ground and surface water hydrology and has a high probability of failing."¹¹

8. *Geryville Materials needs to do its homework.*

Quarries represent irreversible, irreparable, and long-lasting impacts on the landscape. As a result, quarry permitting requires numerous studies be performed. Most of Geryville Materials environmental studies are out of date, most are eight years old or more. In 2014, the PGC informed PADEP in 2014 that it had concerns that the wetlands delineation for this application, completed in 2006, did not reflect the actual extent of wetlands on the site.¹² Considering that Geryville Materials proposes disturbance within 100 feet of unnamed tributaries of the Hosensack Creek, the potential for direct impacts to Exceptional Value wetlands exists. PFBC echoed PGC's concerns regarding stream and wetland delineation, and added that inadequate mapping of streams and springs on site and hydrologically connected wetlands off site could result in harm to wetlands as mining progresses below the elevation of the wetland complexes.¹³

In addition, the U.S. Fish and Wildlife Service (USFWS) has listed the northern long-eared bat as threatened. Lower Milford Township is within the range identified for the northern long-eared bat, as well as the White-Nose Syndrome Buffer Zone.¹⁴ The USFWS has

⁹ Princeton Hydro LLC. 2015. Hosensack Creek – Watershed Modeling.

¹⁰ 25 Pa. Code § 77.504. Distance limitations and areas designated as unsuitable for mining.

¹¹ Kepler, S.R. 1 May 2015. Pennsylvania Fish and Boat Commission. Email to Michael Kutney, Pennsylvania Department of Environmental Protection.

¹² Painter, J. 27 May 2014. Pennsylvania Game Commission. Memorandum to Michael Kutney, Pennsylvania Department of Environmental Protection.

¹³ Kepler, S.R. 4 June 2014. Pennsylvania Fish and Boat Commission. Letter to Michael Kutney, Pennsylvania Department of Environmental Protection.

¹⁴ U.S. Fish and Wildlife Service. 30 April 2015. Northern Long-Eared Bat Interim 4(d) Rule: White-Nose Syndrome Buffer Zone Around WNS/Pd Positive Counties/Districts.

identified activities in the White-Nose Syndrome Buffer Zone that affect the northern long-eared bat's ability to persist while experiencing dramatic declines caused by white-nose syndrome. These activities include cave/mine modifications, human disturbance in roosts and hibernation areas, forest habitat modification, and wind power development would be prohibited without a permit or authorization.¹⁵

As a result of this change in status of the northern long-eared bat, Pennsylvania Natural Diversity Inventory (PNDI) project environmental review receipts run prior to May 4, 2015 are no longer valid and should be re-run before submitting permit applications. Geryville Materials most recent PNDI receipt is dated 10/10/2013 and must be re-run.

9. Quarry operations include more than just stone.

Mining permits, like the one Geryville Materials is seeking, are written to cover many aspects of the mining operations. In addition to the quarry operation, activities proposed under Geryville Materials' permit application include a stone crushing operation, an asphalt plant, a concrete plant, stockpiling of soil, and stormwater discharge. These proposed activities will harm the water quality of the Hosensack Creek watershed.

When an asphalt plant is included within the mining permit area, PADEP must address the stormwater aspects of the facility, including potential stormwater pollution, with the mining permit. The proposed asphalt plant exacerbates the potential for contaminated stormwater from Geryville Materials' operation to adversely affect Exceptional Value wetlands and the Hosensack. The monitoring parameters that would be included in Geryville Materials permit are inadequate to capture the pollutants, such as oil and grease, surfactants, benzene, and copper, lead, and zinc, that can be associated with the proposed asphalt plant.

10. The diabase to be extracted will likely be used for railroad ballast and construction materials

Mill Hill, the diabase ridge that Geryville Materials proposes to quarry, is several miles long, occurring in both Lower Milford Township in Lehigh County and Upper Hanover Township in Montgomery County. This diabase ridge has been identified as having regional significance as a natural area due to the presence of diverse second growth forests with good potential to be home to several plant species of special concern.¹⁶ In Montgomery County, much of the feature has been acquired by Upper Hanover Township and has been designated for conservation and recreation purposes.¹⁷

¹⁵ U.S. Fish and Wildlife Service. 14 April 2015. Endangered Species: Northern Long-eared Bat. Interim 4(d) Rule for the Northern Long-eared Bat, Questions and Answers. Retrieved from <http://www.fws.gov/midwest/endangered/mammals/nleb/FAQsInterim4dRuleNLEB.html>.

¹⁶ Pennsylvania Science Office of The Nature Conservancy. 2005. A Natural Areas Inventory of Lehigh and Northampton Counties, Pennsylvania Update 2005. Lehigh Valley Planning Commission.

¹⁷ Pennsylvania Science Office of The Nature Conservancy. 2005. A Natural Areas Inventory of Lehigh and Northampton Counties, Pennsylvania Update 2005. Lehigh Valley Planning Commission.

These regionally significant habitats will be destroyed by the permitting of the Geryville Materials quarry operation. Authority to regulate the operation of noncoal surface mining lies with PADEP as do trustee obligations for protecting clean air and pure water. Permitting the proposed quarry would cause actual or likely deterioration of the very features that PADEP is charged with protecting.

Mill Hill's diabase ridge is a significant natural region in Lehigh and Montgomery counties; a diabase quarry in its place would be just one of many. The Delaware Riverkeeper Network identified four active diabase quarries within 30 miles of the proposed quarry site. When we expanded our search to consider all crushed stone operations, the number of quarries within 30 miles of the Geryville Materials site easily doubles. If this quarry is permitted, that significant natural habitat, along with the Hosensack Creek and its Exceptional Value wetlands, will be harmed, just to yield crushed stone.

Conclusion

Under Pennsylvania law, PADEP is not to approve a permit, permit renewal, or revised permit application unless the application affirmatively demonstrates, and PADEP finds, no presumptive evidence of potential pollution of the waters of this Commonwealth.¹⁸ Geryville Materials cannot affirmatively demonstrate such evidence because the proposed quarry will result in pollution of the Hosensack and harm to its Exceptional Value wetlands. The proposed discharges from these outfalls will carry water laden with sediment despite the stormwater and sediment erosion control BMPs. It will also alter wetland hydrology, dewatering Exceptional Value wetlands. PADEP must deny Geryville Materials permit application and protect the Hosensack Creek watershed.

¹⁸ 25 Pa. Code § 77.126. Criteria for permit approval or denial.