

MEMORANDUM: Proposed Reclassification of Teer Quarry and a Portion of Eno River in Durham County (Neuse River Basin) to Class WS-IV CA (Critical Area)

The Division of Water Resources (DWR) is requesting that the Environmental Management Commission (EMC) grant staff permission to proceed to public notice with the proposed reclassification of (Nello) Teer quarry and a segment of the Eno River. The City of Durham requested this reclassification. The quarry and Eno River segment are to be reclassified from WS-IV (Protected Area or PA) to WS-IV Critical (CA) because the City of Durham seeks to construct a new intake in the river, pump water from the riverine intake to the quarry, and utilize the quarry's waters as a public water supply.

Water in the quarry will be used to help meet local water demands; thus, this proposal serves the public interest per Executive Order #70 and complies with G.S. 150B, the Administrative Procedures Act (APA). DWR Public Water Supply staff have no objections to the proposal. Furthermore, DWR staff worked with the NC Wildlife Resources Commission (WRC) and City of Durham staff to come to an agreement in 2019 regarding the conditions pertaining to water quantity by which the City of Durham would be allowed to (1) withdraw water for water supply purposes from the Eno River as well as Lake Michie and Little River Reservoir and transfer those waters into the Teer quarry, and (2) use water in the Teer quarry for water supply. The waters to be reclassified meet surface water supply water quality standards according to 2021 DWR studies.

Teer quarry is located adjacent to the southern side of the Eno River, approximately five miles west of Falls Lake, and at the northern terminus of Denfield Street in Durham, NC. The proposed riverine intake is located about 1.1 miles downstream of the U.S. 501 bridge. The boundary for the proposed CA for the quarry consists of the top of the quarry's berm whereas the boundary for the proposed CA for the new intake would extend approximately 0.5 mile from and draining to that intake. There are no named tributaries to the river or quarry included in this proposal.

Sampling of groundwater wells adjacent to the quarry has revealed the presence of contaminants from releases of petroleum hydrocarbons and chlorinated solvents associated with historical uses of the area. According to the most recent groundwater evaluation, a January 2022 Phase II Remedial Investigation (RI), levels of 1,4-dioxane exceeded its associated groundwater (2L) standard in several intermediate and deep monitoring wells. Levels of vinyl chloride, naphthalene, and an estimated value of hexachlorobenzene exceeded their respective 2L standards in one (each) of separate intermediate wells. Levels of naphthalene, bis(2-ethylhexyl) phthalate, and 2-methylnaphthalene exceeded their respective 2L standards in one deep well. Lastly, "given groundwater flow in the intermediate and deep zones is toward the quarry pit, the... compounds detected are likely migrating toward the pit." Lastly, "based on results of this Phase II RI, ELMSS (consulting firm) recommends continued annual monitoring at the site. Surface water monitoring points should be increased for the next monitoring event to confirm groundwater impacts are not affecting surface water in the quarry pit."

If reclassified, restrictions associated with new development and new industrial process wastewater discharges would apply, and no new landfills and no new residual or septage land application sites would be allowed in the proposed CAs. There are no permitted or planned wastewater discharges, and no known planned land applications sites, landfills, or developments that would be impacted by the proposal, according to Raleigh Regional Office and local government staff. The subject watershed consists mainly of developed single-family residential areas plus two developed industrial parcels.

Durham County and the City of Durham are the only local governments with jurisdiction in the reclassification area and are the only local governments that would need to modify their water supply watershed protection ordinance within the required 270 days after the reclassification effective date. Each of these local governments has provided a resolution to DWR, and the purpose of a resolution is to indicate whether a potentially impacted local government will implement the water supply rules within its jurisdiction once a reclassification becomes effective. In addition, letters of no objection were received from the parties that are subject to the Voluntary Eno River Capacity Use Area Water Management Operations Plan (WMOP) along with the City of Durham, which are the Town of Hillsborough (Hillsborough Water System), Orange-Alamance Water System, and Resco Products (formerly Piedmont Minerals). A regulatory impact analysis for this proposal, which has been approved by OSBM, shows a one-time cost of \$2,000 to the state associated with notification, review, and approval of ordinance changes. The analysis also shows a one-time shared cost of \$8,000 to the City of Durham and Durham County affiliated with rezoning and ordinance text amendments.

Staff recommends sending this item to the July 2022 EMC meeting to request permission to proceed to public notice with the proposed reclassification. The estimated effective date of this proposal is May 1, 2023.