AVOIDANCE AND MINIMIZATION ANALYSIS

SOMERSET COUNTY EXPANSION PROJECT
SOMERSET COUNTY, MARYLAND

March 30, 2020

Site Description

Chesapeake Utilities (Chesapeake, Applicant) is proposing to construct, own, operate, and maintain approximately 10.75 miles of 6-inch diameter buried natural gas pipeline, extending from the intersection of Merser Road and Ocean Highway (U.S. Route 13) southwest to the intersection of U.S. Route 13 and Revells Neck Road, in the Princess Anne area of Somerset County, Maryland. The pipeline will generally be located within public road rights-of-way, approximately five (5) feet from the edge of the roadway pavement. A *Site Location Map* of the pipeline alignment and vicinity is attached as *Figure 1*. The project area primarily consists of roadside areas within wooded areas, developed urban and suburban land, and open areas.

The US Geological Survey (USGS) Quadrangle Maps of Eden and Princess Anne, Maryland (*Figure 2*) indicate that the drainage from the Somerset County Expansion Project area contributes to Barkley Branch, Peggy Neck Branch, Tangs Creek, the Manokin River, Taylor Branch, Jones Creek, and Kings Creek. Within the vicinity of the project area, these waterways are listed in the COMAR stream use classification index as Use I (*Water Contact Recreation and Protection of Nontidal Warmwater Aquatic Life*).

Project Purpose

The project is planned to extend natural gas service to the Eastern Correctional Institution (ECI) and the University of Maryland Eastern Shore (UMES). The delivery of natural gas would improve each facility's environmental profile. UMES and ECI both currently use propane and No. 2 and No. 6 fuel oil to heat their facilities. As an example, when UMES is converted to natural gas it would reduce the facility's SOx, NOx, CO2 and CH4 emissions by 99.9%, 59%, 25% and 65% respectively (i.e., natural gas emissions much less than either propane or fuel oil).

In addition, by transitioning ECI and UMES to natural gas the natural and economic environment of Somerset County as a whole, will very likely improve. Propane and fuel oil are the heating fuel source for most of the homes and businesses throughout the county. Extending natural gas service to ECI and UMES will provide the opportunity for residents and businesses, along the line, to have a choice to use less expensive and environmentally beneficial natural gas service. Proposed impacts have been avoided and minimized to the maximum extent practicable.

Avoidance

The Somerset County Expansion Project will be constructed mostly within existing road rights-of-way, in order to avoid impacts to undisturbed areas, including undisturbed streams and wetlands. Additionally, by utilizing the existing maintained rights-of-way, direct impacts to the resources within the project area have been avoided.

The Somerset County Expansion Project will cross three tidal waterbodies, the Manokin River (Waterbody D), Taylor Branch (Waterbody G), and Kings Creek (Waterbody H). In order to avoid direct impacts to these waterbodies, Horizontal Directional Drill (HDD) construction methods are proposed to cross the waterbodies. HDD construction methods are also proposed to cross Barkley Branch (Waterbody A), Peggy Neck Branch (Waterbody B), Tangs Creek (Waterbody C), Jones Creek, and two unnamed tributaries of the Manokin River (Waterbodies E and F) in order to avoid direct impacts to these resources. Additionally, HDD construction methods are proposed to cross the nontidal wetland buffer associated with two palustrine emergent (PEM) wetlands (Wetlands 3 and the nontidal portion of Wetland 5).

Wetland 1 and Wetland 4, which are located in the vicinity of the Manokin River and Taylor Branch crossings, respectively, are designated as Wetlands of Special State Concern. HDD construction methods are proposed to be used to cross the 100-foot buffer associated with these wetlands, in order to avoid direct impacts to the buffer.

Minimization

The proposed alignment minimizes environmental impacts while maintaining project design and cost objectives. Evaluation of existing transportation corridors was considered when reviewing alternative routes, because transportation corridors generally provide opportunities to minimize impacts to the environment and construction costs. Existing transportation corridors are often previously disturbed and usually result in fewer impacts from the colocation of new utilities. Additionally, construction within existing corridors often reduces landowner consultation for permanent easement acquisition, clearing of new easements, and potential environmental impacts to resources, specifically previously undisturbed resources. Similarly, operation and maintenance costs incurred during the life of the pipeline can be reduced when corridors are shared.

Chesapeake has developed an HDD Inadvertent Return and Contingency Plan, included as part of the Joint Permit Application package, in order to prevent and respond to inadvertent surface returns of HDD drilling fluid during construction. Additionally, Chesapeake has performed site-specific geotechnical investigations at each of the proposed tidal wetland/waterbody crossing locations, and developed site-specific HDD designs for each crossing, in an effort to minimize the potential for an inadvertent surface return when crossing those resources.

In summary, the proposed project avoids and minimizes impacts to waters of the U.S., nontidal wetlands, the 25-foot wetland buffer, tidal wetlands, and the 100-foot WSSC buffer to the maximum extent practicable.

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