The Recorder
IN THE COMMUNITY, ABOUT THE COMMUNITY, SINCE 1877.

2016-10-27 / Top News

Forest Service questions 'best-in-class' measures

BY JOHN BRUCE • STAFF WRITER

MONTEREY — Three Highland County sites are among nine the U.S. Forest Service chose to be scrutinized in detail for potential hazards posed by Dominion's proposed Atlantic Coast Pipeline.

The USFS asked Dominion for site-specific design of stabilization measures in selected high-hazard portions of the study corridor. Three other sites were chosen in Augusta County. The six sites in and around George Washington National Forest add to another three in Monongahela National Forest.

The request follows the USFS's rejection of the original route in fall 2016 due to encroachment on endangered species habitat; a realignment shift added about 50 miles to the route and delayed the project.

"The route for the Atlantic Coast Pipeline Project, proposed by (Dominion) would cross some very challenging terrain in the central Appalachians," the USFS said in a post on the Federal Energy Regulatory Commission website Tuesday.

"Potentially difficult situations include steep slopes, presence of headwater streams, geologic formations with high slippage potential, highly erodible soils, and the presence of high-value natural resources downslope of high hazard areas. These hazards are exacerbated by high annual rates of precipitation and the potential for extreme precipitation events," the forest service said.

"Similar hazards on other smaller pipeline projects in the central Appalachians have led to slope failures, erosion and sedimentation incidents, and damage to aquatic resources. Therefore, the USFS is concerned that crossing such challenging terrain with a much larger pipeline could present a high risk of failures that lead to resource damage."

To address the hazards, Dominion proposed implementing "best in class" slope stabilization and erosion/sedimentation control measures. The company provided descriptions and conceptual drawings of those methods.

“In comments on resource reports and in other formal and informal communication, the USFS has asked (Dominion) to provide documentation of the effectiveness of these techniques,” USFS stated.

Both the George Washington and Monongahela National Forests contain Forest Plan standards that limit activities in areas that are at high risk for slope and soil instability. To facilitate accepting Dominion’s Special Use Permit application for further processing, the USFS must determine the project is consistent or can be made consistent its forest plan, the USFS said.

To clarify the likelihood the project can be constructed through the forests without undue risk of damage to forest resources, the USFS requested Dominion develop site-specific stabilization designs for some areas of challenging terrain. Forest specialists chose several sites that could be a high risk for slope failure, slippage, and erosion/ sedimentation.

“Note that these are merely representative sites that have been selected to demonstrate whether stability can be maintained for the purpose of making a preliminary determination of forest plan consistency,” the USFS said. If the project is permitted, “multiple additional high hazard areas will need to be addressed on a site-specific basis,” the USFS explained.

The forest service told Dominion it should present designs for the selected sites that illustrate the following:

• Anticipated hazards at each site;

• How the hazards will be minimized, to include specific techniques and materials tailored to the conditions of each site;

• Plan and profiles (cross sections) perpendicular to centerline, and a longitudinal cross section along the centerline with dimensions showing the original ground surface; the maximum extent of the cut, fill and spoil during construction; the post-construction reclaimed ground surface, showing reclamation backfill, reclaimed slopes and the permanent right-of-way;

• Short-term and long-term measures (i.e., construction vs. operation and maintenance periods);

• Provisions for ensuring long-term stabilization features will remain in place and effective over the life of the project, without the need for continual maintenance;

• Rationale and supporting documentation for the likelihood that the techniques and materials used at each site will be effective; and

• Potential resource impacts in the event of a failure, and how the potential for such impacts will be minimized.

Of methods used to select representative sites, the USFS said, each forest chose several locations along the right of way where expert knowledge and resource data indicate a potential "worst case scenario" for trying to maintain slope stability; preventing potential significant indirect adverse effects to resources such as water quality, hydrology and aquatic ecosystems; and ensure long-term maintenance and stability can be accomplished if the project is implemented.

The three Highland sites are:

• "GWNF Site 1" at milepost 83.95 — "Horizontally-bedded rock is exposed near top of the slope. Shallow bedrock underlies the slope as it descends eastward at an inclination of approximately 26 degrees (50 percent). The slope flattens and initially there is ampler room for construction but the alignment then approaches a ridge that narrows. There is some evidence of shallow surficial creep on sides of ridge … Conventional steep slope construction but care required to prevent spoil from spilling over sides of narrow ridge."

• "GWNF Site 2," from milepost 84.9 to 85.0 — where "the alignment ascends an extremely steep slope inclined at 46 degrees (105 percent) which shallows to 31 degrees (60 percent) … Site specific trench backfill stabilization design (is) required on extremely steep slope segments because during right of way grading and pipeline trench excavation, disturbance to the existing shale and sandstone bedrock will result in material with reduced strength parameters. Given the extremely steep slope inclination, this disturbed material will not be stable as trench backfill unless stabilization measures are implemented."

• "GWNF Site 3," from milepost 86.5 to 87.2 — where "the alignment follows a ridge crest with steep slopes identified along either side of the route. The centerline has been mapped slightly off of the ridge crest, thus causing the route to apparently intersect steep slopes that would be avoided if the centerline were on top of the ridge crest. The ridge crest is very narrow is some places."

Monongahela Forest supervisor Clyde Thompson said high-risk sites located on or in close proximity to national forest system lands were selected to provide a worst-case scenario for analysis and design. Indirect and cumulative effects occur at a landscape scale; therefore, such effects are best addressed through an all-lands approach, he said.