

What's the Problem?

Adequate water levels in the Smith Mountain Lake (SML) and Leesville Lake are essential for supporting multiple activities, including the Appalachian Electric Power (AEP) Pumpback Project for electricity generation, recreation on the two lakes and commercial and recreational activities for users downstream from the Leesville dam. Groundwater flowing through the soils in Franklin County is a major source of the water flowing into these lakes. The possibility that the Mountain Valley Pipeline (MVP) route may seriously reduce this critical groundwater flow into the lakes and the associated economic costs has not been studied by either MVP or the Federal Energy Regulatory Commission (FERC) in their Draft Environmental Impact Statement (DEIS). The Smith Mountain Lake Association (SMLA) believes this is a serious deficiency in the DEIS and the SMLA has recommended that FERC ensure a hydrologist knowledgeable about near-surface groundwater flows in the Franklin and the associated counties is retained to quantitatively analyze and assess these issues before a decision about the MVP pipeline is made by FERC

Why is this a Problem?

Approximately 60% of the water flowing into the SML/Leesville Lakes is near-surface groundwater flowing through the soils above the bedrock, according to a United States Geological Survey (USGS) report. Approximately 50% of the SML/Leesville drainage area is upstream from the proposed pipeline route, raising the possibility that the pipeline may disrupt a significant fraction of this groundwater flow into the lakes. The proposed MVP route through Franklin and adjoining counties is shown in the figure, taken by the MVP website <https://www.mountainvalleypipeline.info/>

The SMLA has identified 3 possible ways that the MVP might potentially cause a significant loss of groundwater flow into the SML and Leesville Lakes

1. The MVP filing shows that blasting or other methods to cut through bedrock will be required in about 44% of the proposed MVP path through Franklin County. Blasting –induced fractures in the bedrock may allow a significant fraction of this upstream groundwater to follow new paths and miss entering the lakes.
2. Soil depths in Franklin County are fairly shallow, with the bedrock within 7 feet of the surface for 31 percent of the pipeline path through Franklin County. A pipeline trench depth of up to 9 ft. may cause blocking of the upstream

groundwater flow through the soil, again causing the groundwater to follow new paths and miss entering the lakes.

3. The pipeline trench may also act as a shunt, moving this near-surface groundwater flow from Franklin to Pittsylvania Counties.

The first two possibilities listed above may affect AEP's ability to both generate electricity during summer periods and keep SML water levels high enough for summer recreation. Preliminary flow calculations using USGS streamflow gages suggest if Leesville releases remain unchanged, SML water levels could drop as much as 12 ft. annually. Clearly water releases from Leesville dam would be required to offset this water level drop. Based on economic data from the FERC relicensing of the AEP pumpback project, economic losses could be as much \$7.6 million annually from lost electricity generation and reduced recreational opportunities.

The third possibility primarily shifts water from SML to Leesville Lake, making SML water levels dependent on the AEP pumpback activities to keep SML water levels high enough for recreational uses. Without this AEP pumpback, SML water levels could drop as much as 8 ft. annually, with local economic losses as much as \$1.6 million annually or more, again using economic data from the FERC relicensing of the AEP pumpback project.

Neither FERC nor MVP has assessed the likelihood that the MVP route through Franklin County could significantly reduce the amount of groundwater flowing into SML/Leesville Lakes from any of these possibilities. Nor have they estimated the economic losses that might result, including the economic losses downstream from the Leesville dam if water releases from Leesville have to be reduced. In all 3 cases, the predictive model AEP uses to predict lake levels and initiate trigger points and reduced water releases from Leesville dam will also probably no longer work well and require revisions.

Recommendations

The SMLA recommends that the FERC final EIS for this proposed project include a detailed quantitative analysis on the impact of the MVP Project on near-surface groundwater flow and its potential impact on FERC project 2210-169 (the AEP pumpback project) and SML water levels. Furthermore, the SMLA also recommends that FERC ensure a hydrologist knowledgeable about near-surface groundwater flows in the Franklin and the associated counties is retained to quantitatively analyze and assess these issues before a decision about the MVP pipeline is made by FERC. The SMLA has filed a statement

with the FERC detailing its concerns about this deficiency in the DEIS and its recommendations with FERC. This SMLA filing is available for public viewing in the FERC eLibrary as accession number 20161123-5028 for docket CP16-10. A copy is also available from the SMLA Office and any questions may be addressed to SMLA at TheOffice@SMLAssociation.org. The SMLA has about 1200 members and represents its members on issues that affect Smith Mountain Lake and its watershed. More information on SML water levels and other lake issues may be found on the SMLA website: www.smlassociation.org.