

June 12, 2023

**RE: PennEnergy Resources, LLC  
Southwest Pennsylvania Water Management Plan  
Shale Gas Well Development – Big Sewickley Creek Withdrawal  
Economy Borough, Beaver County**

I have reviewed the revised water management plan (WMP) submitted by Moody and Associates on June 1<sup>st</sup> 2023 and offer the following comments:

- The revised plan relies on direct flow measurements taken at a monumented cross-section prior to any water withdrawal. The placement of the cross-section has not been provided but will adhere to USGS guidance derived from Rants et al. (1982). **We request that the cross-section be placed upstream of the proposed withdrawal and that its placement be coordinated with this office ([draab@pa.gov](mailto:draab@pa.gov)) to ensure adherence to USGS guidance.**
- Within the section “Passby and Pool Depth” numbers 6 and 7, the frequency of monitoring is set for various flow scenarios. **Please provide a rationale for the stated weekly, daily, and eight hour measurement intervals.**
- Maximum instantaneous withdrawal rate is stated as 2.3 cfs. Please ensure that pumps are appropriately sized to prevent exceedance of this flow rate.

The following inconsistencies within the WMP have also been noted:

- “Attachment A” references details on passby flow calculation in “Attachment E” and “Attachment J – section C”; however, the referenced details appear in “Attachment E” and “Attachment I – section c”.
- Within “Attachment I”, bullet point “j” states that *“The staff gage at the withdrawal site will be referenced on an interim basis every time a withdrawal is desired to confirm the upstream flow rate and the availability of water for withdrawal.”* This is inconsistent with the stated abandonment of staff gauges as tool for estimating water availability.

Sincerely,



Dakota Raab, Fisheries Biologist  
Resource Extraction Section