

INTEGRATION OF HEADWATER RESOURCES

NEBAWWG AND MAWWG

2018 Joint Wetlands Meeting

Cooperstown, NY

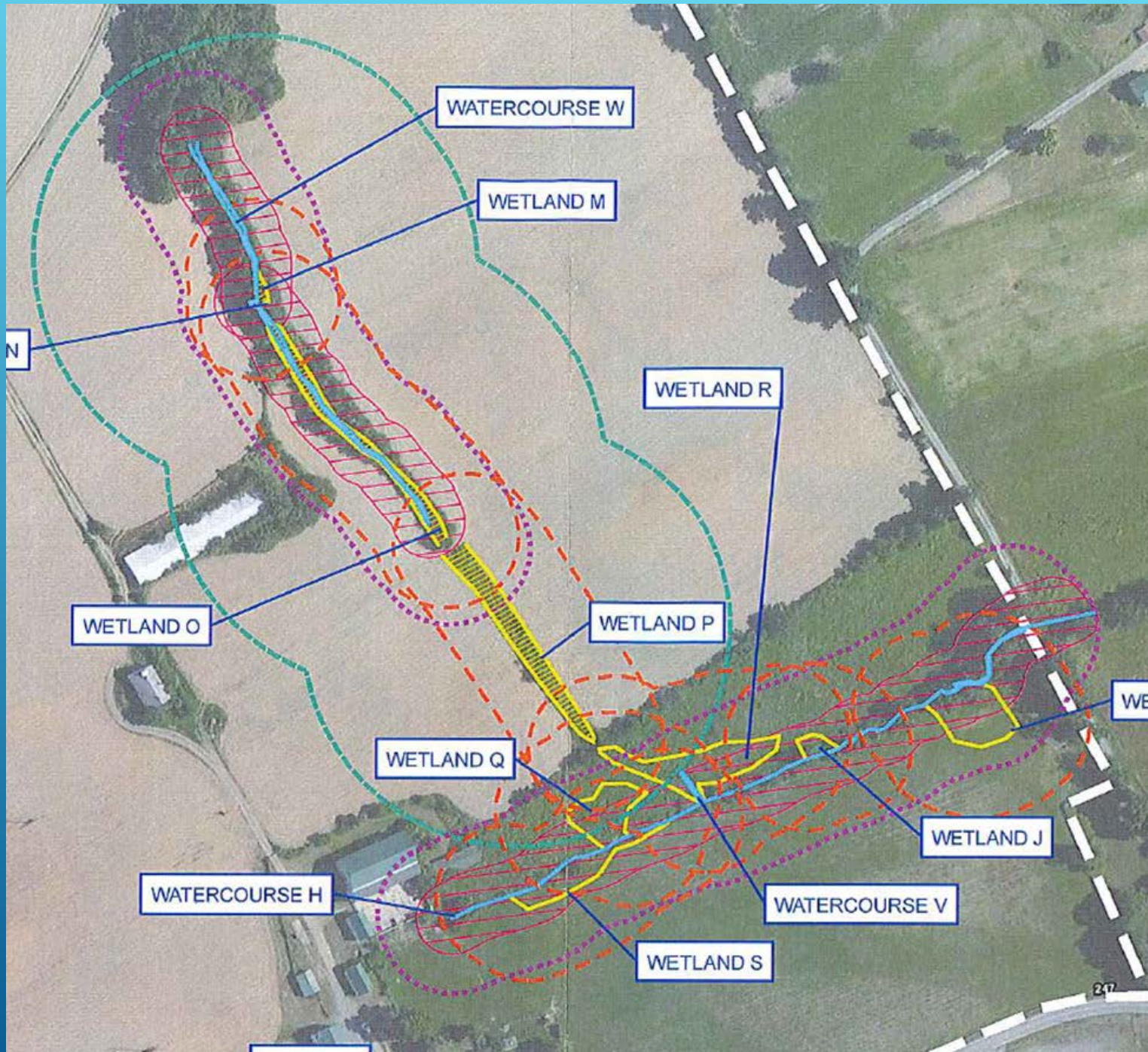
November 16, 2018

David Goerman

PA Dept. Environmental Protection

- ▶ Implemented Level 2 RAPs for Riverine, Wetland and Lacustrine resources in regulatory program
 - ▶ Cases where linear headwater features have both a channel and adjacent wetlands
 - ▶ Consultants performing both riverine and wetland RAPs.
- ▶ Building scientific literature
- ▶ Extent of resource

WHAT AND WHY

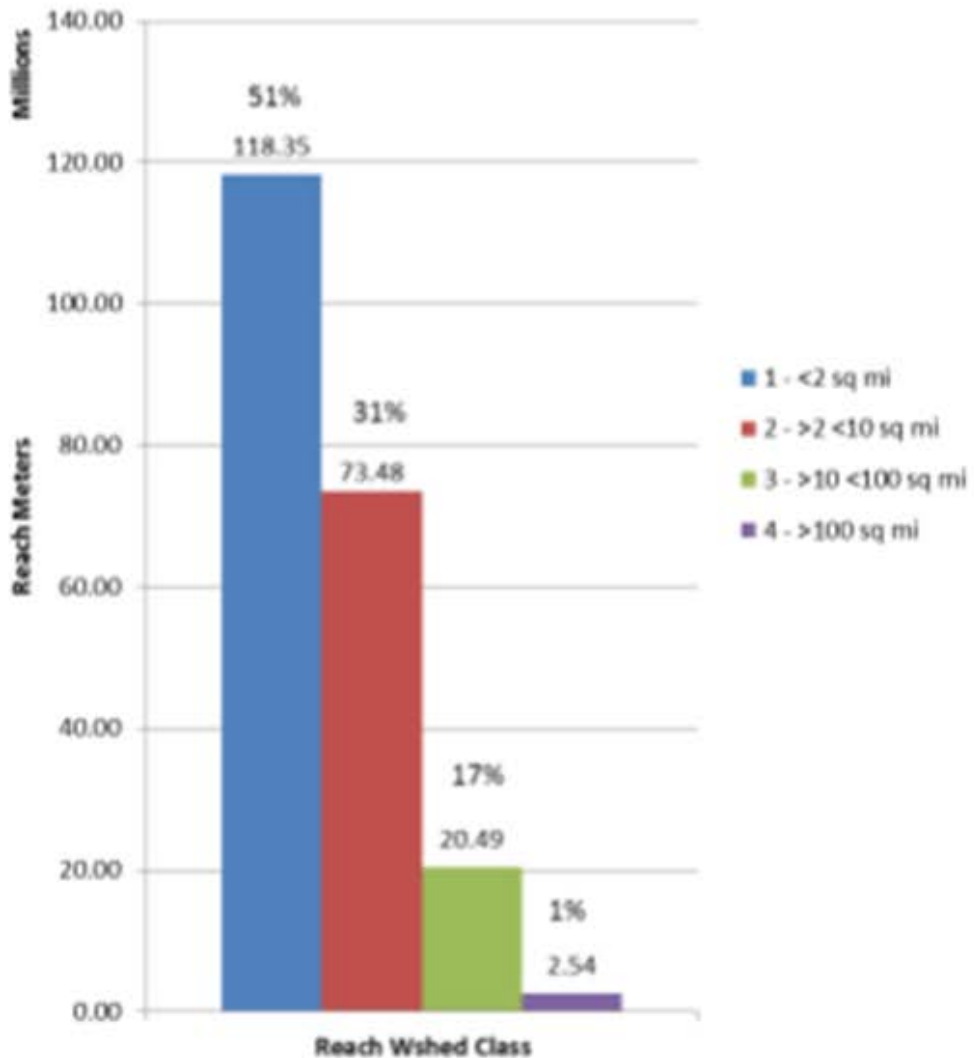


- ▶ PA Aquatic Communities Classification
 - ▶ Abiotic Stream Classification Factors
 - ▶ Geology
 - ▶ Slope
 - ▶ Drainage Area
 - ▶ 0-2 square miles
 - ▶ 2-10 square miles

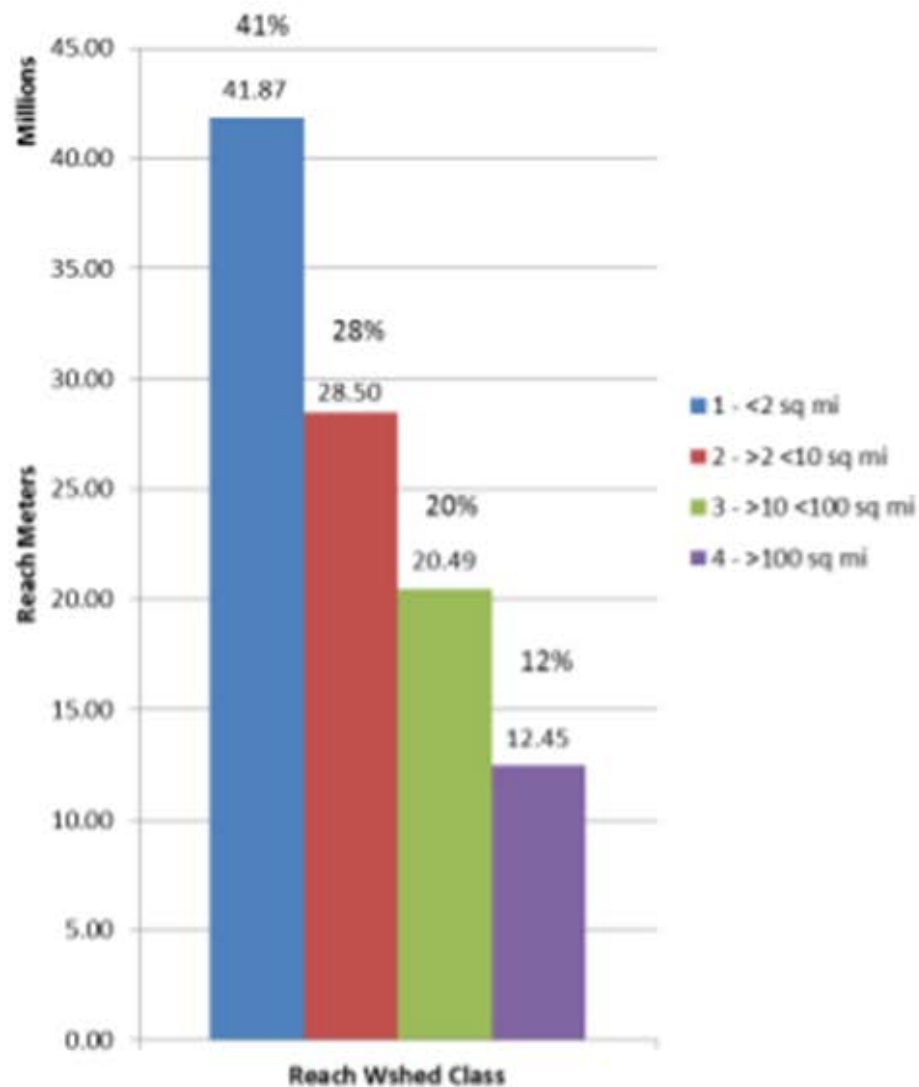
DEFINING HEADWATERS

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, set against a blue background.

Watershed Class Distribution in Appalachian Plateau Province



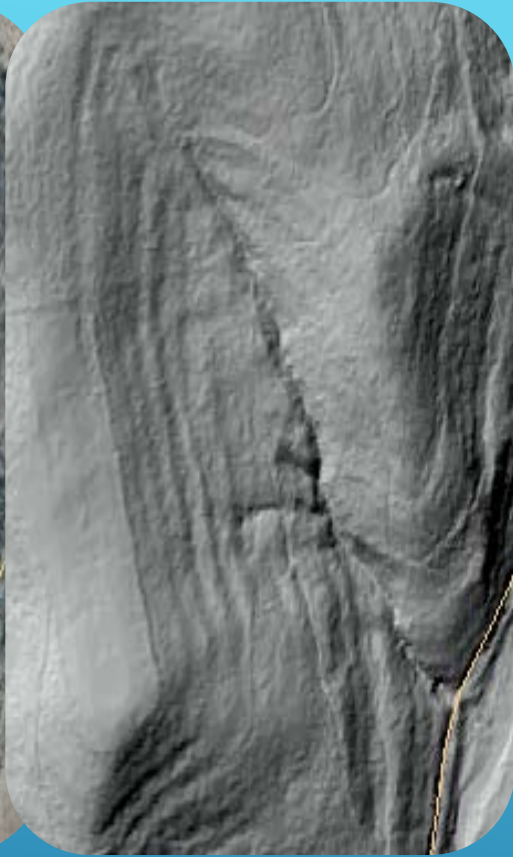
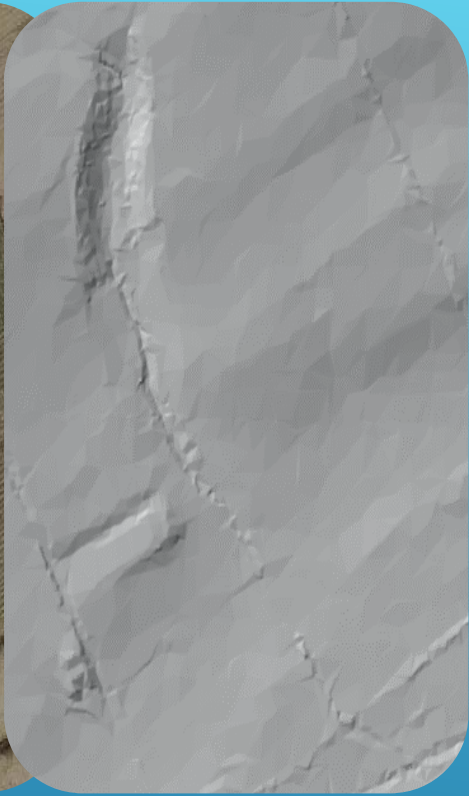
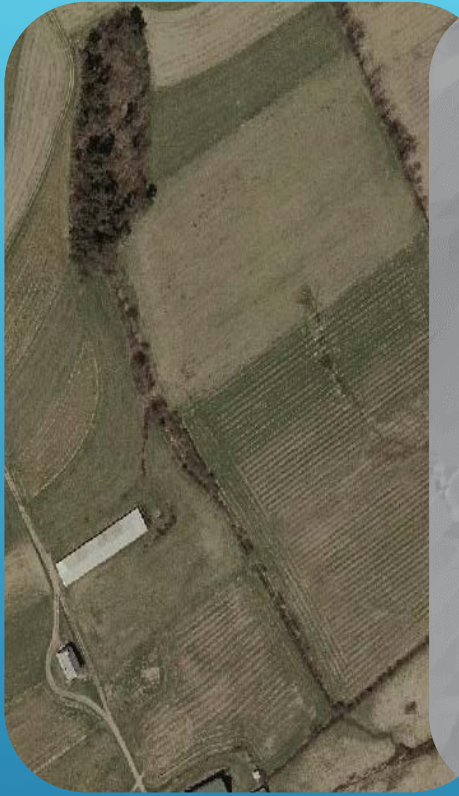
Watershed Class Distribution in Ridge and Valley Province



- ▶ Dominant Common Resource Properties
 - ▶ Topographic Position
 - ▶ Linear, mostly confined valleys
 - ▶ Discrete channels, multiple flow paths or diffuse flow
 - ▶ Low stream power

DEFINING HEADWATERS

A decorative graphic consisting of several parallel white lines of varying lengths and orientations, located in the bottom right corner of the slide.



DEFINING HEADWATERS



▶ Dominant Common Resource Properties

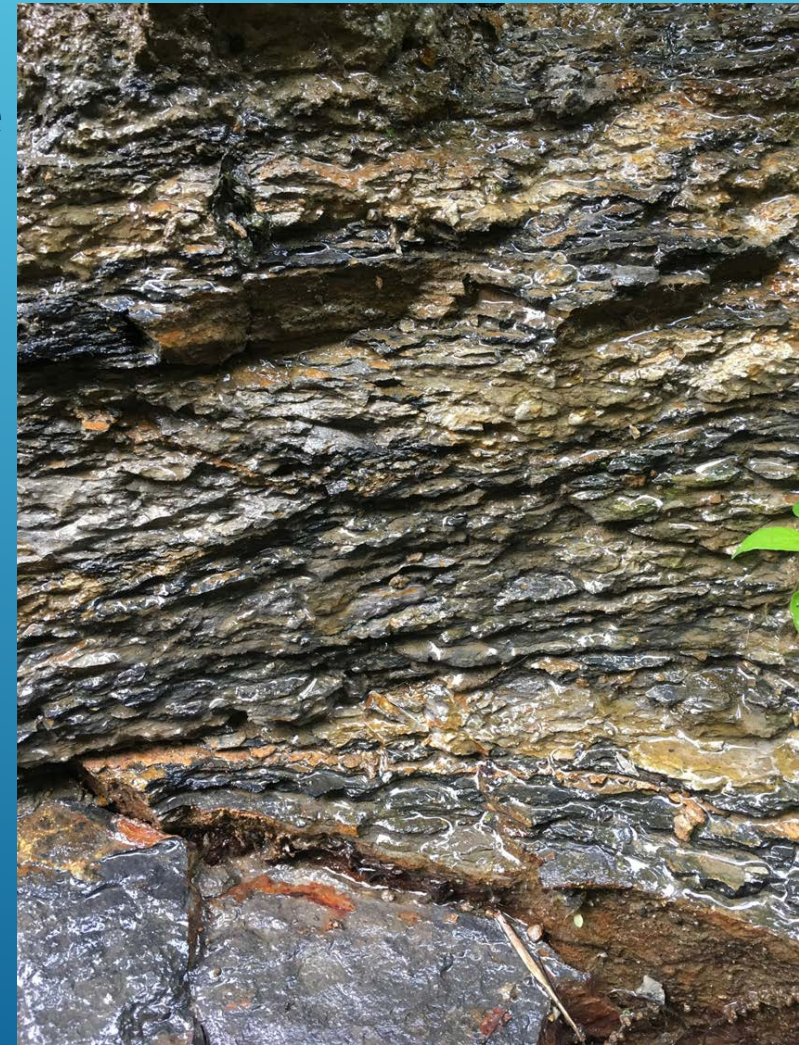
▶ Hydrodynamics

▶ Hydrologic Source - interflow/hillslope water

▶ No regional groundwater

▶ Geochemistry – derived from the catchment geology

DEFINING HEADWATERS





RESTORED HEADWATERS

**Pennsylvania Riverine Condition
Level 2 Rapid Assessment Protocol**



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Division of Wetlands, Encroachments and Training



**Pennsylvania Wetland Condition
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UTILIZE EXISTING CONDITION INDEXES