

# Karst Spring Research at WVU: An Update on Ongoing Work

Dorothy Vesper (and Joe Donovan)

May 5, 2004: Great Valley Karst Forum



WVU Dept of Geology & Geography;  
WV Water Research Institute



## 3 Ongoing Projects in the Panhandle

- WV Water Research Institute



- USDA National Research Initiative  
Competitive Grants Program



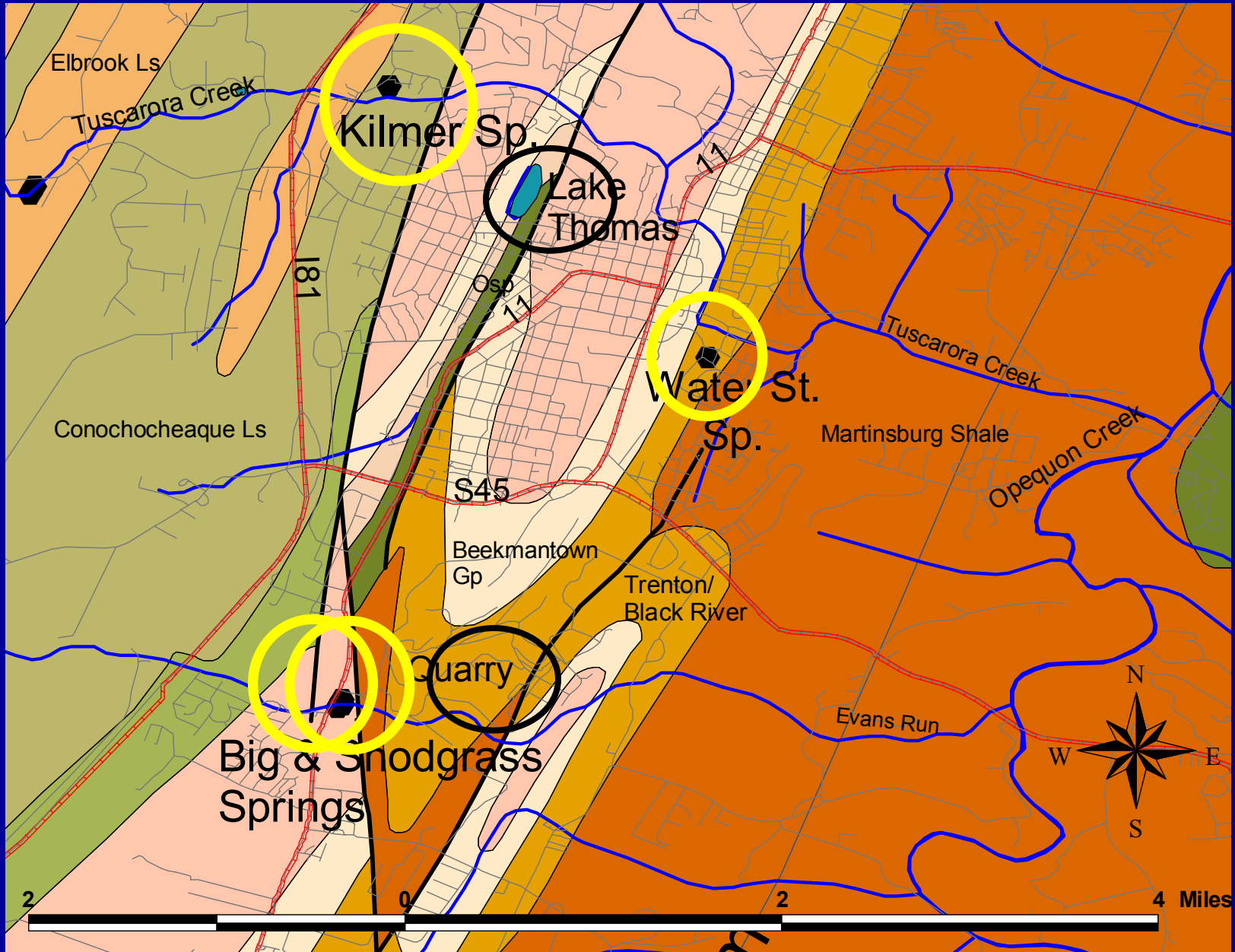
- Eastern Panhandle Conservation District &  
Morgan County Rural Water Committee

**WV Water Research Institute**

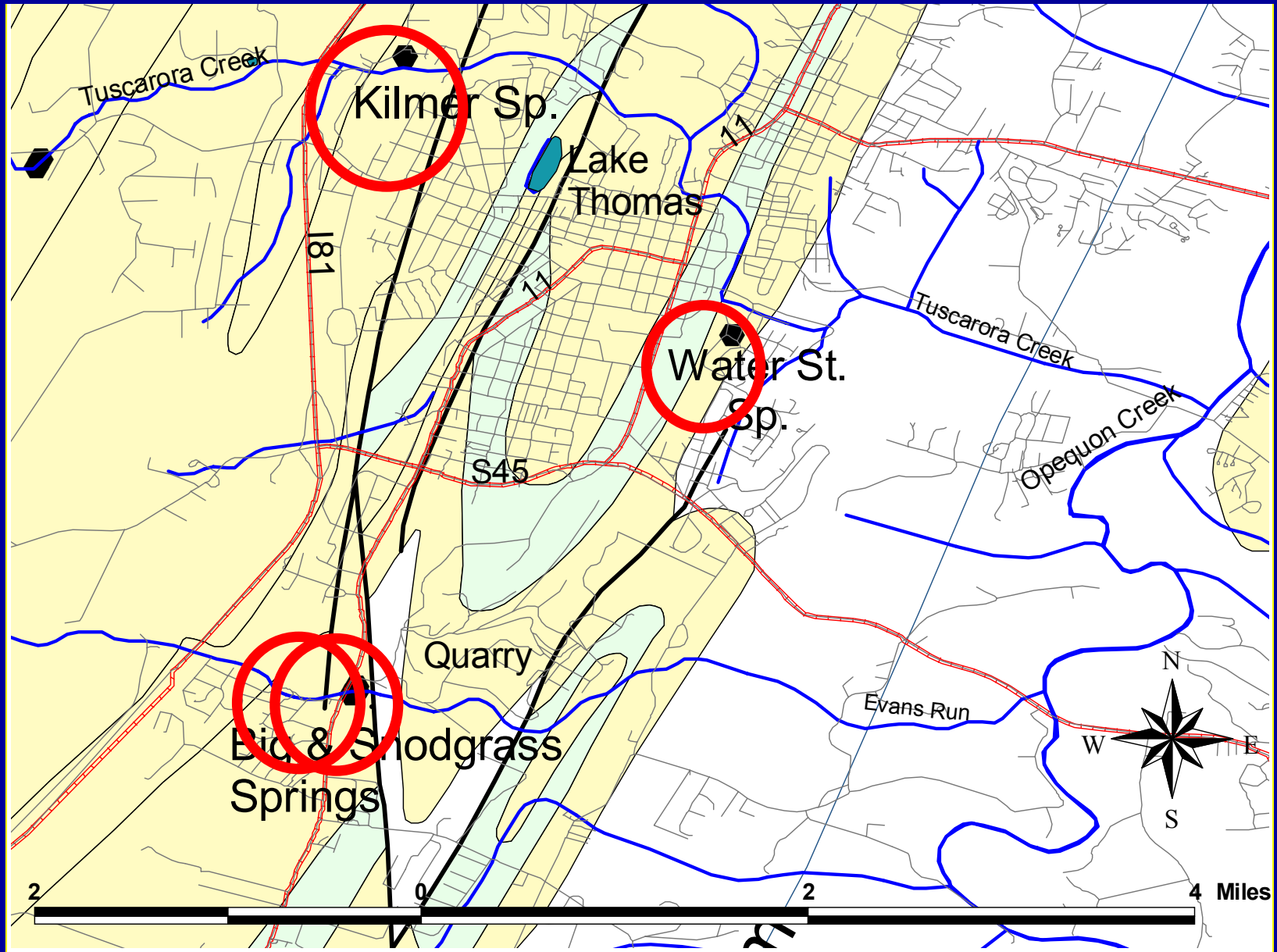
**(2003-2004+)**

**Martinsburg Case Study**

# Martinsburg Area Geology



# Martinsburg Area Karst



# Martinsburg Area Springs

## Kilmer Spring





**Water Street Spring (series of seeps?)**



**Snodgrass Spring**





**Big Spring**

# Martinsburg Study Objectives

- Continuous monitoring for
  - Stage (Discharge)
  - Temperature
  - Specific Conductance (SC)
- Limited chemical analysis of water (field and lab)

# USDA Study Objectives (2003-2005)

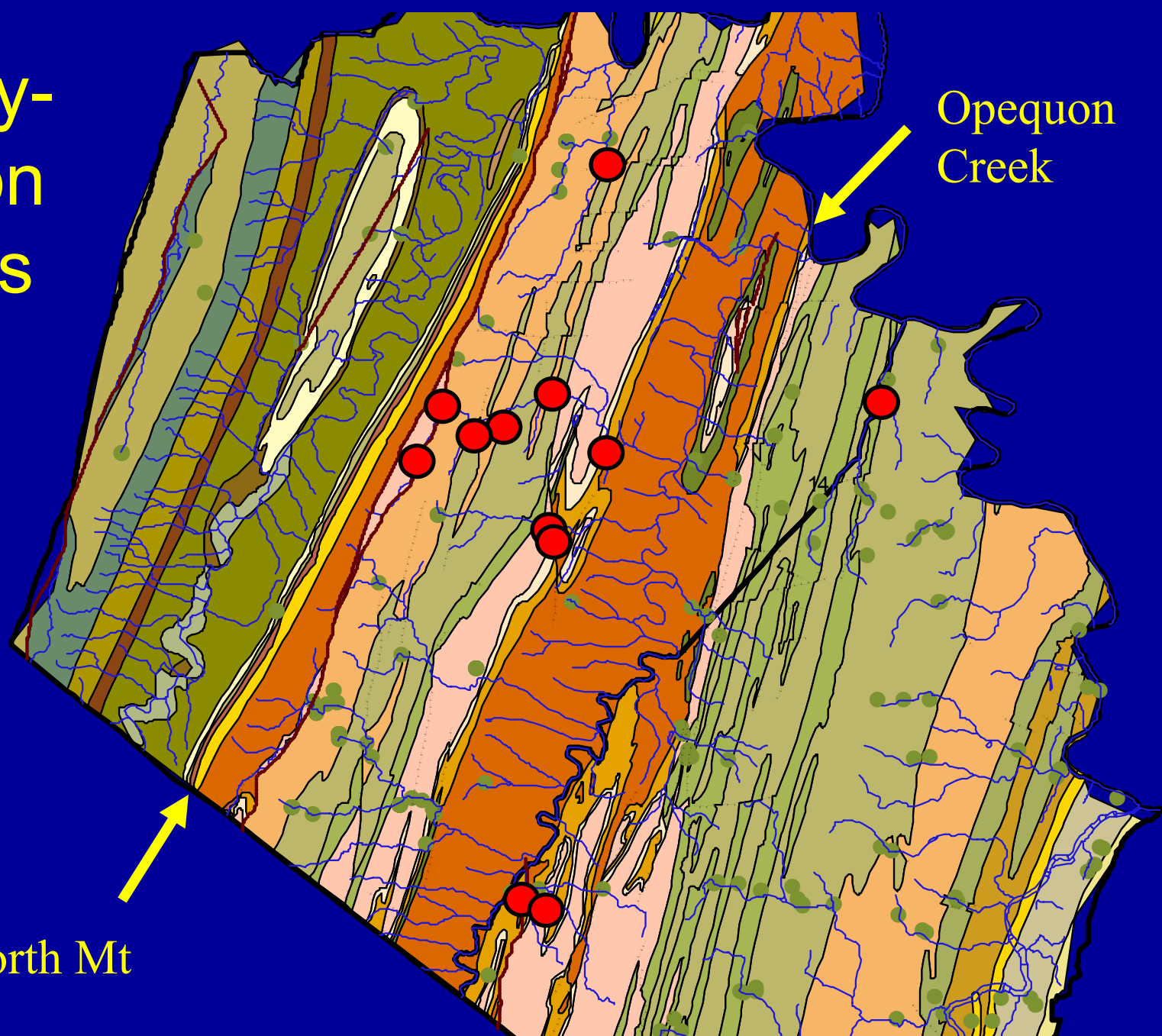
- Similar to WRI Project but more regional
  - Datalogging
  - Discharge
  - Chemical
- Modeling



# Berkeley- Jefferson Counties

North Mt

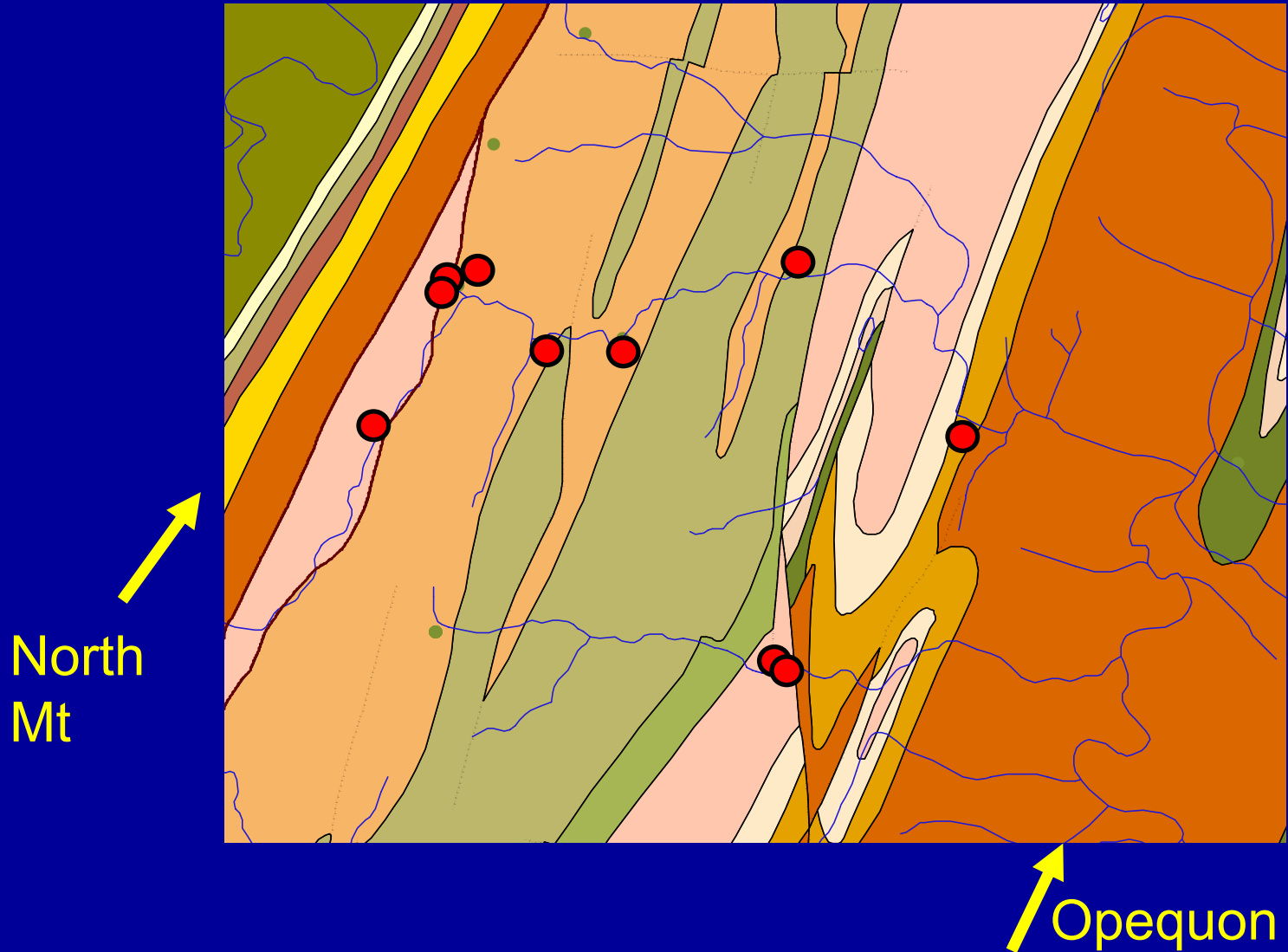
Opequon  
Creek



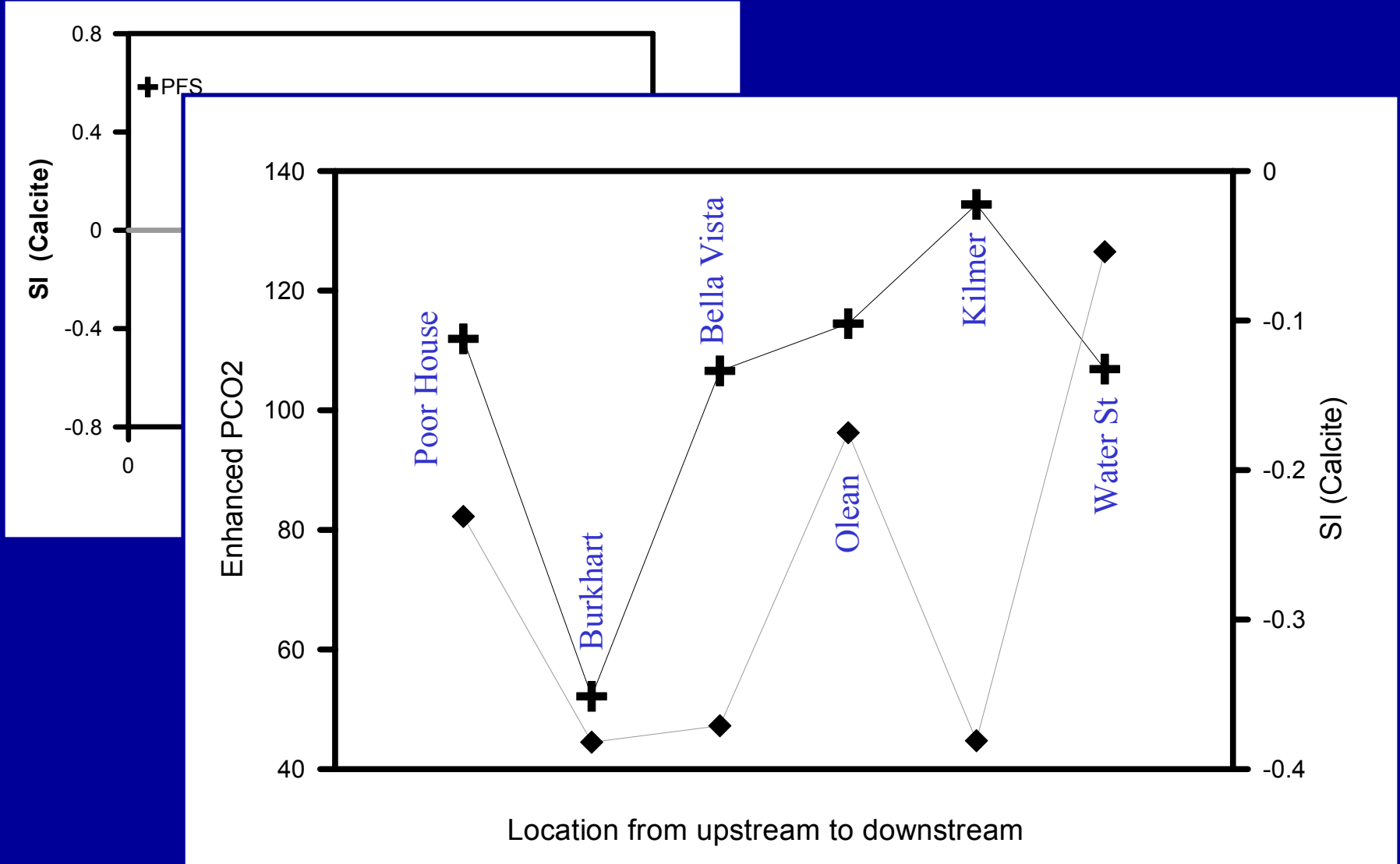
# USDA Objectives... Evolving....

- Tuscarora Creek Watershed
  - Headwaters to Opequon Creek
  - Influence of non-carbonate rocks at North Mt.
  - Spring – Creek Interactions
  
- Priestfield (Priest, Opequon) Spring Area
  - Spring - Ground Water Interaction
  - Spring – Creek Interaction

# Tuscarora Creek Watershed



# Geochemistry along Tuscarora Creek



# Priestfield Spring (Opequon, Priest)





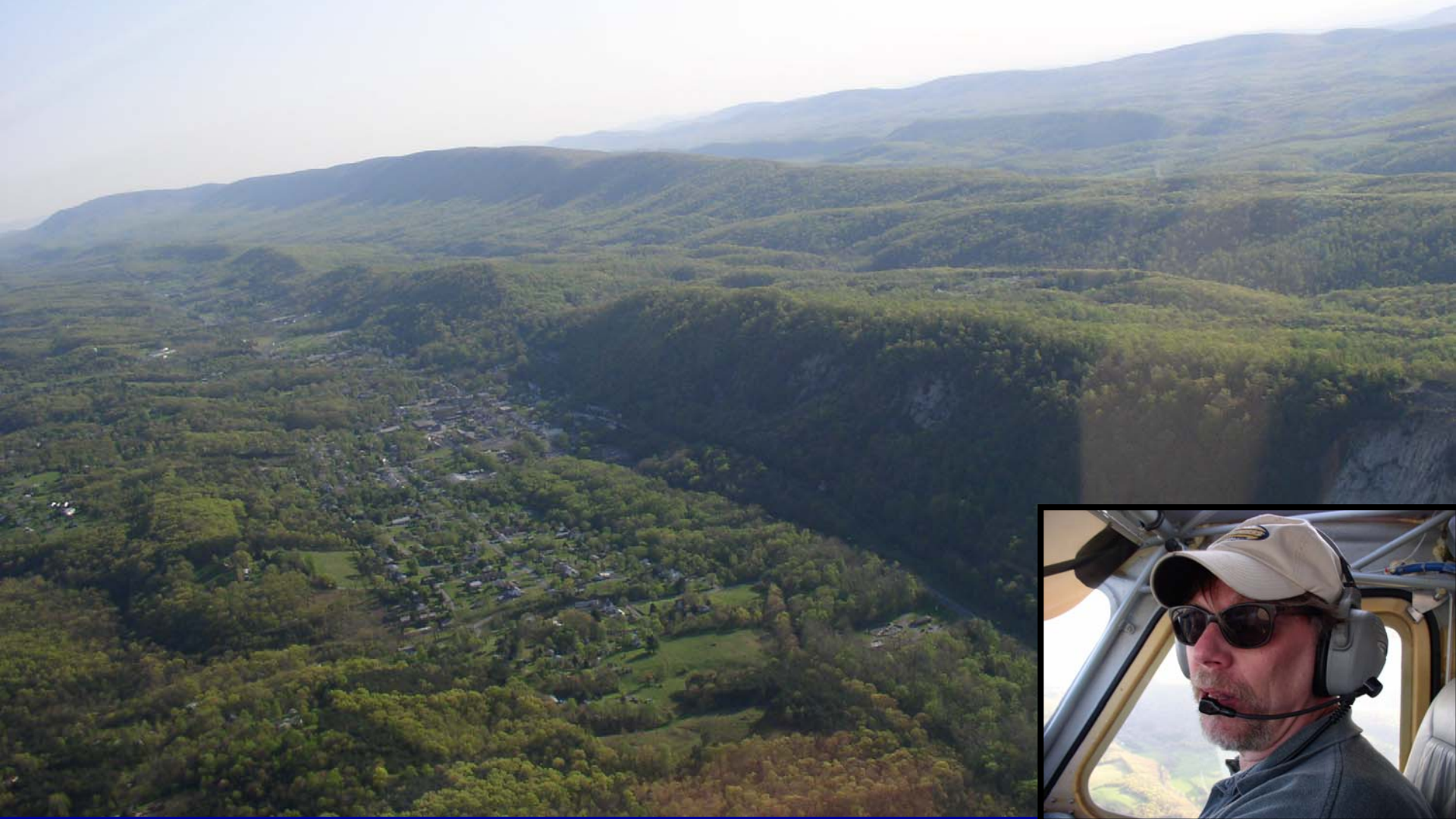
# Priestfield Spring (Opequon, Priest)



Spring  
Discharge

Opequon  
Creek

# Morgan County & Berkeley Springs



Conclusions thus far

This page intentionally left blank

# Questions?

