

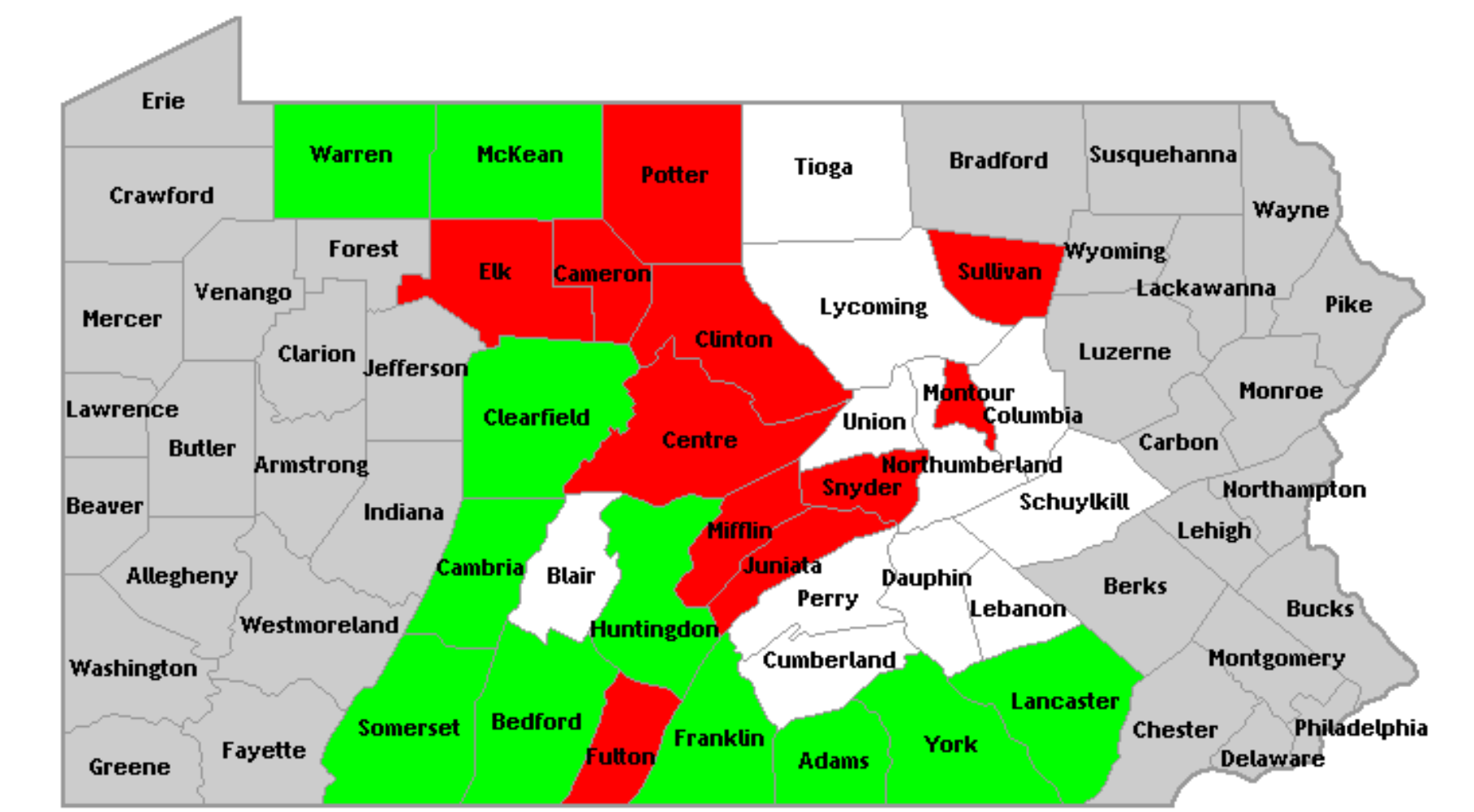
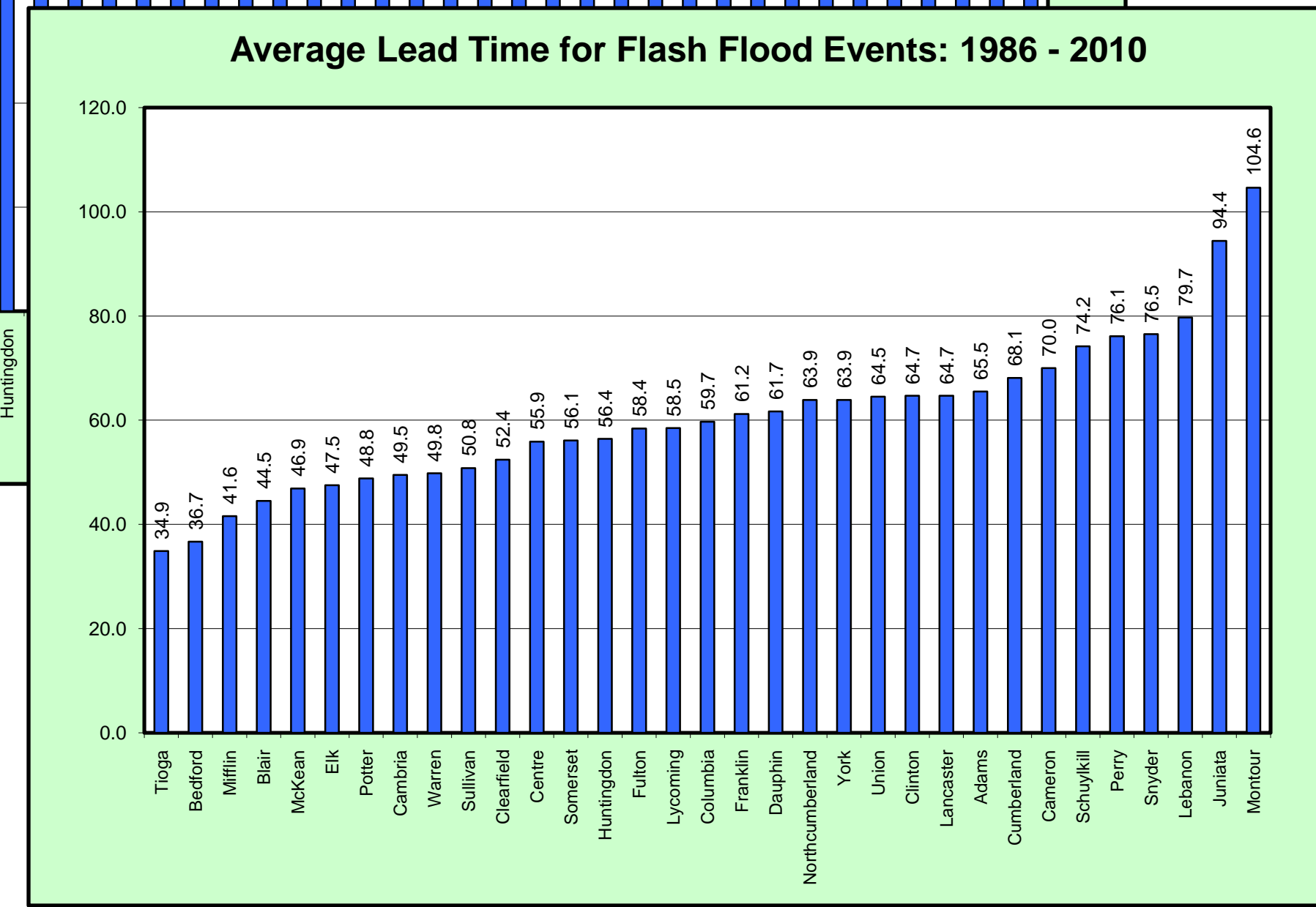
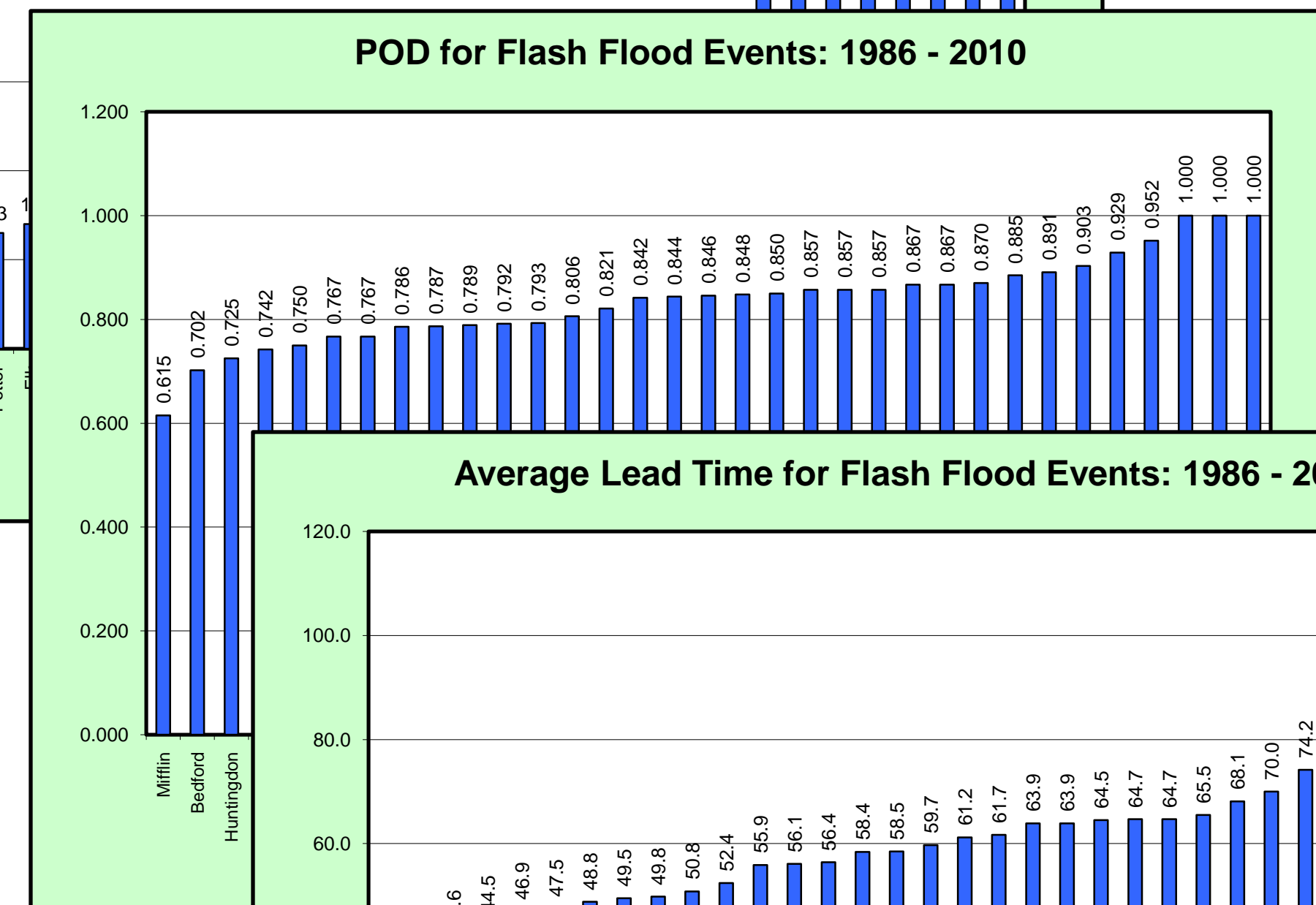
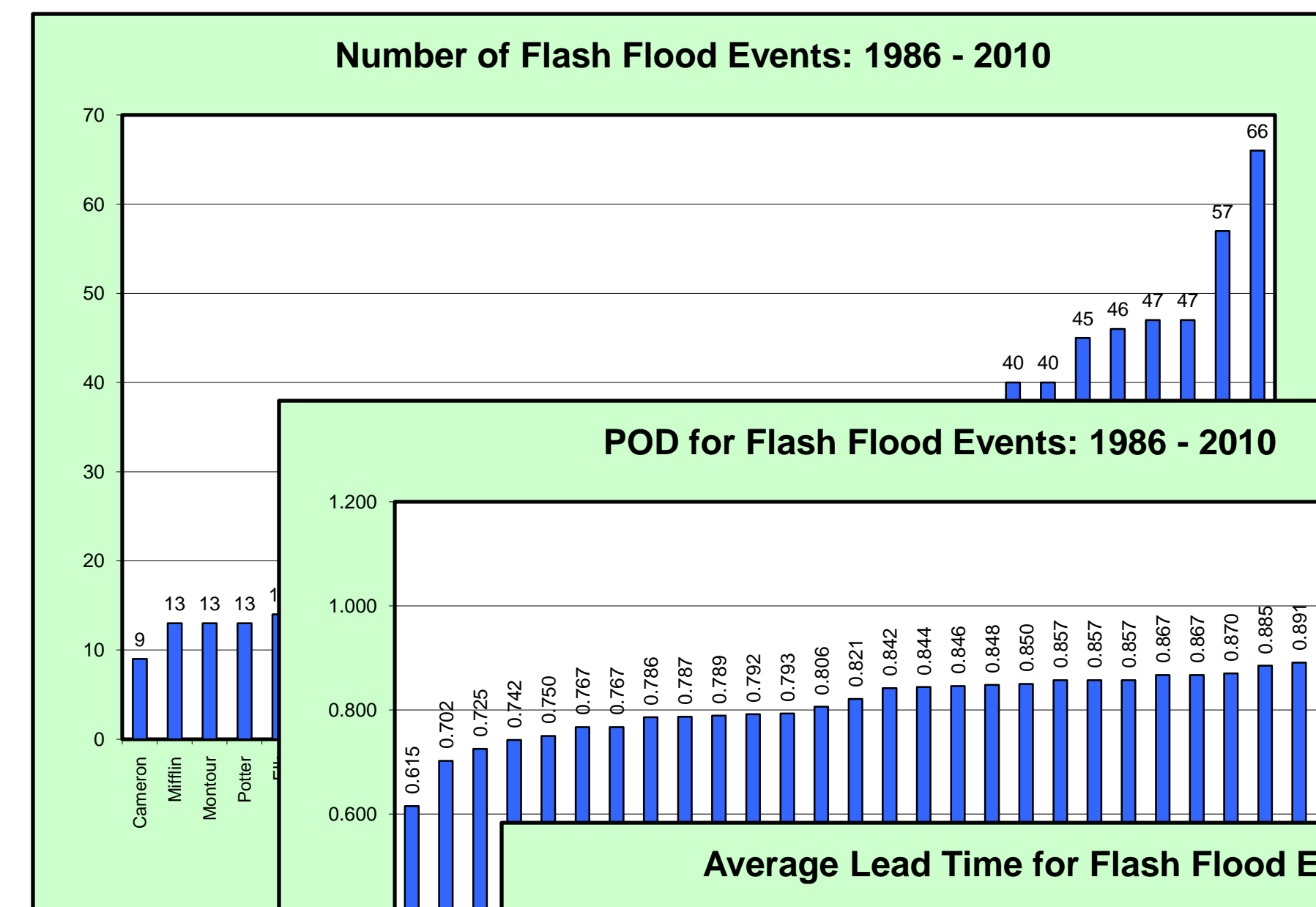
**Improving Flash Flood Performance through Post Analysis and the Development of Best Practices**

*Peter Jung  
Richard Grumm*

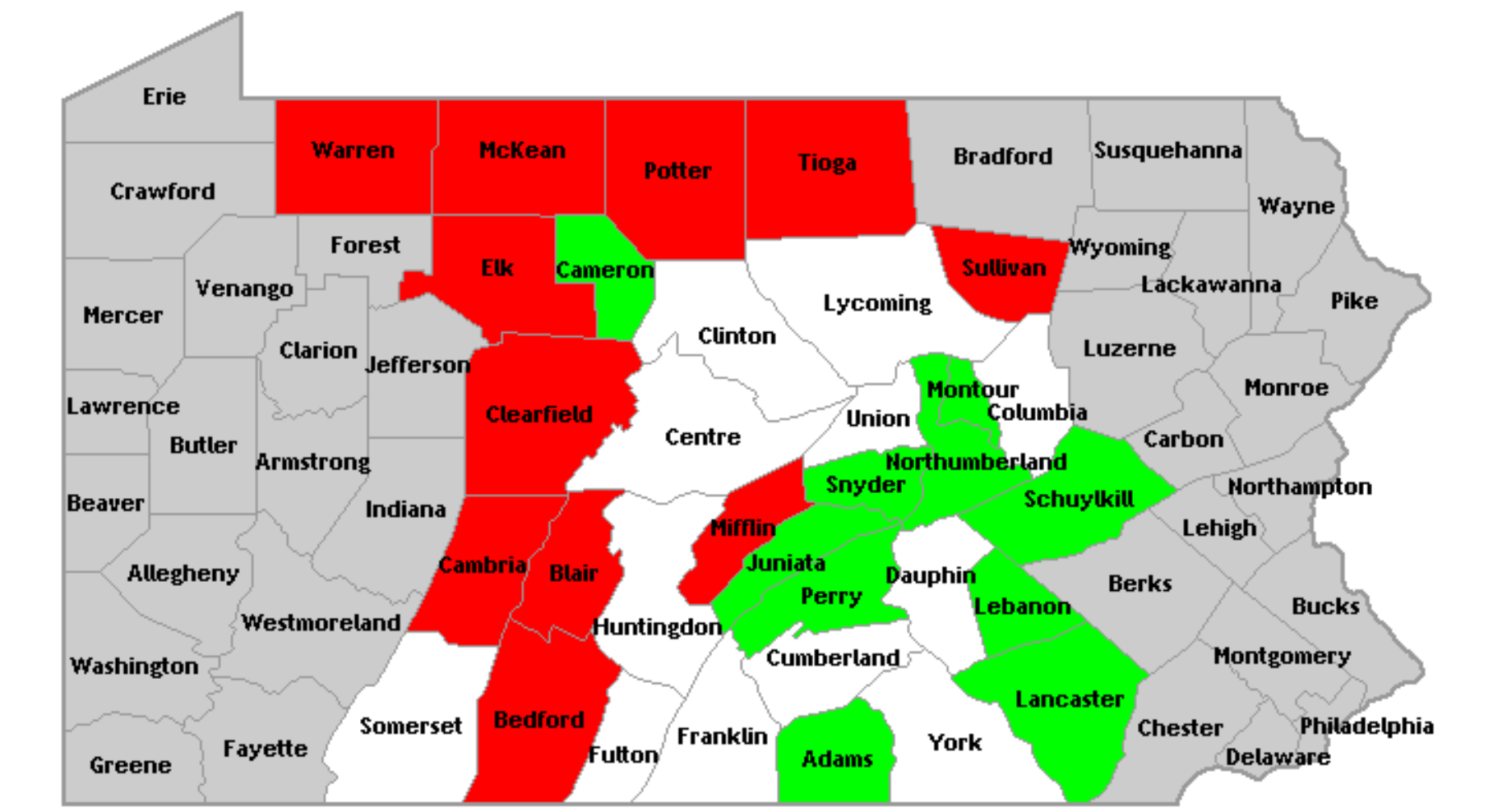
National Weather Service  
Forecast Office  
State College, PA

Centre County	
Flash Flood Warnings Issued	34
Flash Flood Warnings Verified	25
Flash Flood Warnings Not Verified	9
Cameron County	
Flash Flood Warnings Issued	14
Flash Flood Warnings Verified	9
Average Flash Flood Warnings Not Verified	5
Cambria County	
Flash Flood Warnings Issued	66
Flash Flood Warnings Verified	44
Flash Flood Warnings Not Verified	22
Average Flash Flood Events	40
Flash Flood Events with Warning	34
Flash Flood Events with No Warning	6
Average Lead Time (minutes)	49.5
Percent of Events with Lead Time >0	75 %
POD	0.850
FAR	0.333
CSI	0.596

Blair County	
Flash Flood Warnings Issued	50
Flash Flood Warnings Verified	34
Flash Flood Warnings Not Verified	16
Bedford County	
Flash Flood Warnings Issued	71
Flash Flood Warnings Verified	35
Average Flash Flood Warnings Not Verified	36
Adams County	
Flash Flood Warnings Issued	65
Flash Flood Warnings Verified	39
Average Flash Flood Warnings Not Verified	26
Flash Flood Events	31
Flash Flood Events with Warning	23
Flash Flood Events with No Warning	8
Average Lead Time (minutes)	65.5
Percent of Events with Lead Time >0	58 %
POD	0.742
FAR	0.400
CSI	0.496



Green - Greatest Number of FF Events  
Red - Least Number of FF Events



Green - Highest FF Warning Lead Times  
Red - Lowest FF Warning Lead Times

**Best Practice #1**  
Statistical Analysis  
Identify Areas Where Office Flash Flood Performance is High/Low  
And Areas Historically Prone to Flash Flooding

**BEST RESULTS**

**Best Practice #5**  
Adequate Staffing

**Best Practice #3**  
Situational Awareness  
- Antecedent Conditions -

**Best Practice #4**  
Situational Awareness  
- Pattern Recognition -

**INSERT YOUR OFFICE'S BEST PRACTICE HERE**

**Best Practice #2**  
FFMP

