

Driftless Area









**100 year flood event - every year!!**





**Saturated/Flooded Cropland**



# Symptoms of Climate Change



**Flooded Basements**



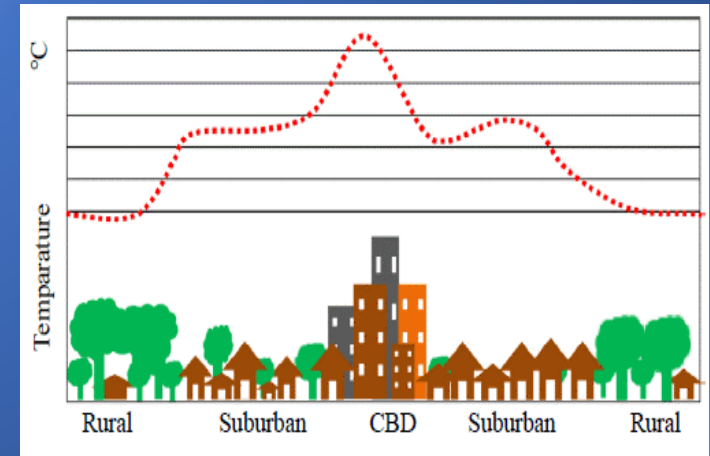
**Manure Storage Facility - Capacity**



**Ground Water - Contamination**



**Invasive Species**

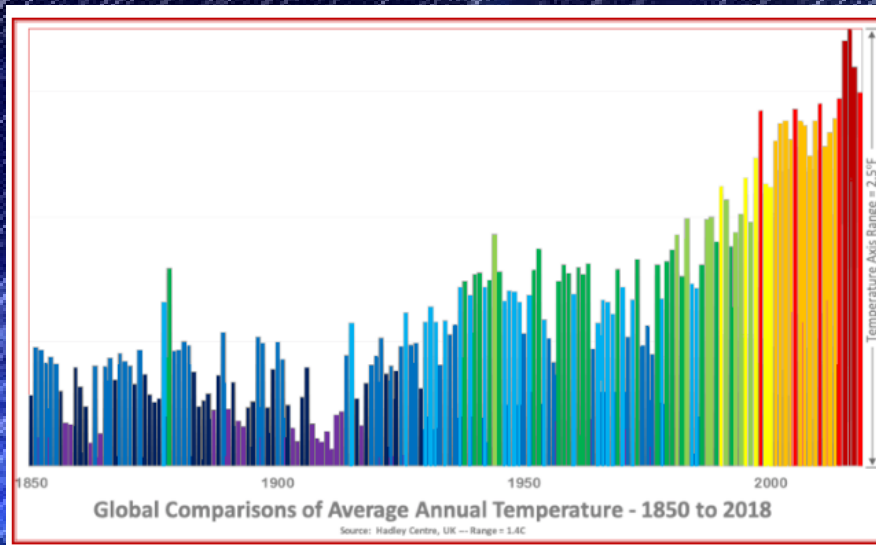


**Localized Temperature Regimes**



# Acknowledge Climate Change

- *Last 34 years – Warmest Years (temp) on Record*
- *Average Temperature is +2 degrees*
- *Increase Evaporation*
- *Since 2007 – 19 Major Flood Events (Financial Impact)*
- *Rainfall Intensity 2-6” hour*





Coon Valley



Ontario



## PL566 Flood Control Dams



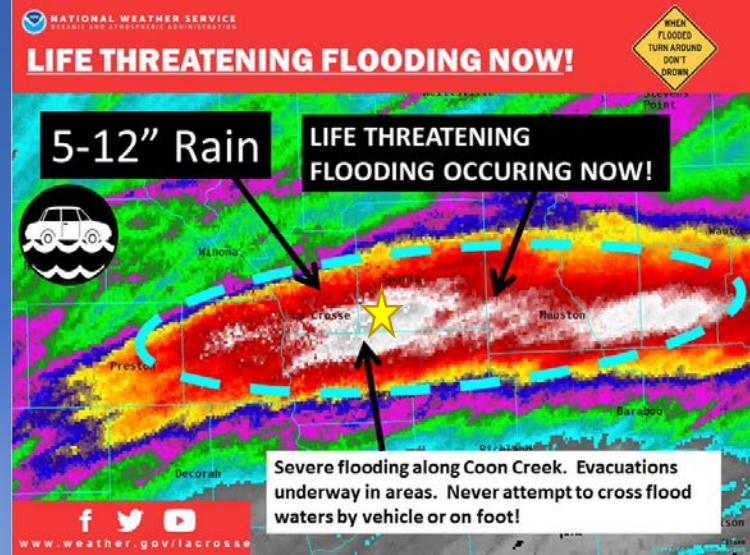
Town of Portland (Coon Creek)



Jersey Valley – Dam Breach – (Kickapoo)



# August 28, 2018 – Flood Event



## ★ PL566 Flood Control Dams (Coon Creek Watershed)

- 6 of 7 Overtopped
- 3 Breached



**Auxiliary  
Spillway**



# Coon Creek Farmstead



Before

After



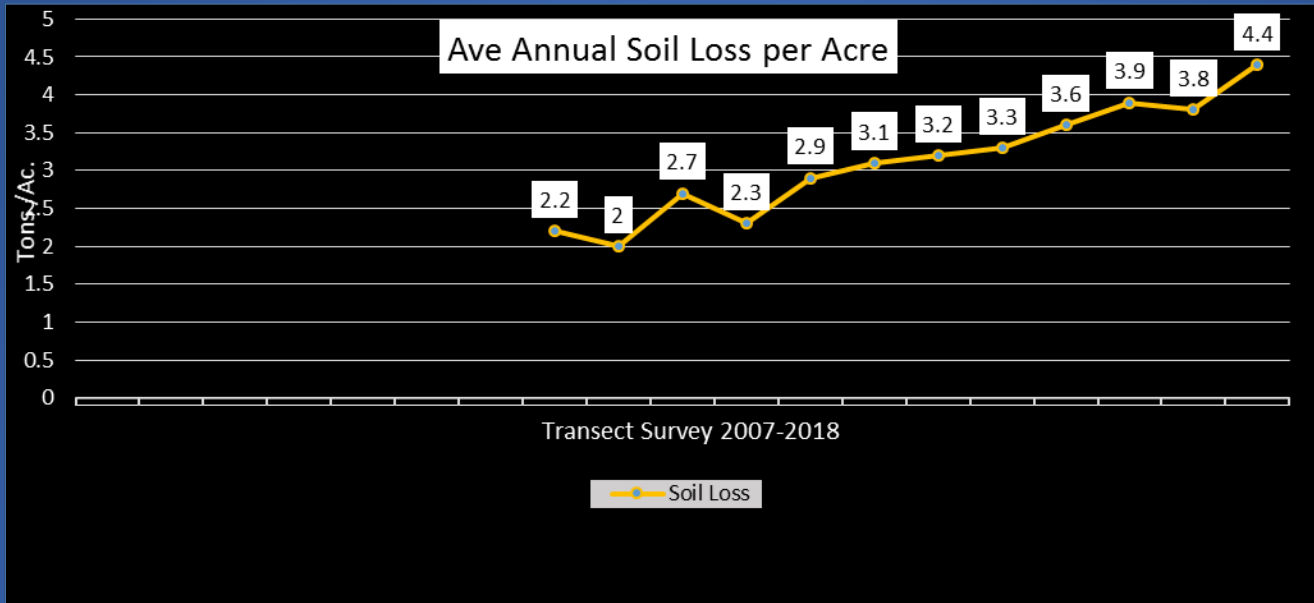


# Reclaim Valley Floors





# Soil Erosion & Delivery - Cropland



Soil Loss = 649,057 tons/year



Mono-Culture Farming



Dump Truck Loads = 32,453



# Localized Rain Events

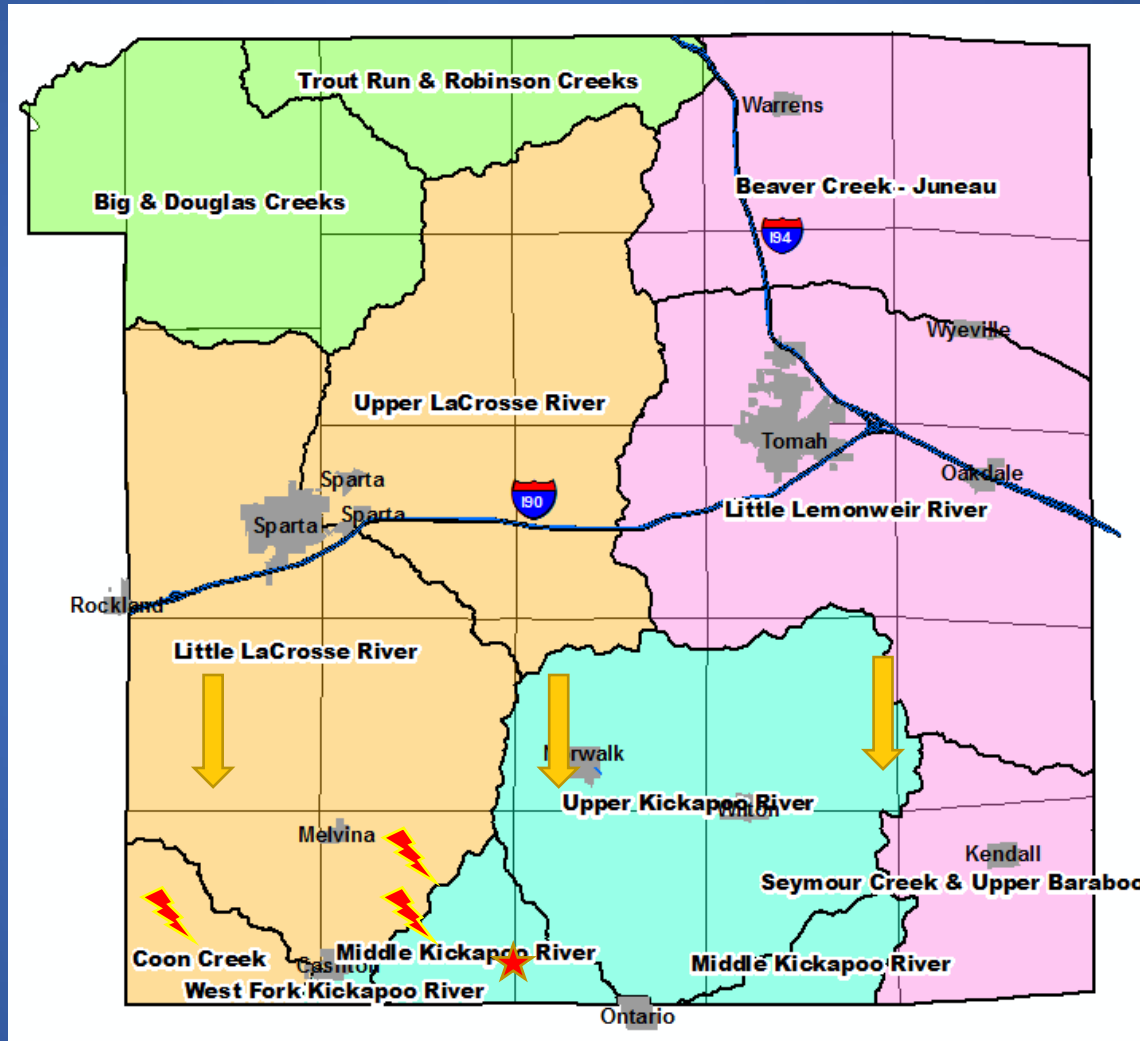
Ave. Annual Rainfall = 33"  
 April 3<sup>rd</sup> – Dec. 31, 2018

★ 60.79"



2019

- July 3<sup>rd</sup> (4-5"/1.5 hrs)
- July 9<sup>th</sup> (1"/20 min)
- July 18<sup>th</sup> (6-8"/2 hrs)



Monroe County - Watersheds



# Infrastructure Failure





# Conservation Practice Failure



Grass Waterway



Streambank Stabilization



Grade Stabilization Structure



**July 1, 2019** – Concrete Stream Crossing



**July 3<sup>rd</sup>** - 5" rain in 90 minutes



**July 5<sup>th</sup>** - County Adm. Meeting



## Monroe County

### Climate Change - Task Force

**Define: goals/plan/action – 12/11/19**

(Sequence based on importance and development time)

1. *Implement monitoring devices (weather stations) and warning systems in real time by coordinating with emergency management and the national weather service. (warning signage/Nixel/messaging)*
2. *Floodplain Management – Remove structures/roads/crossings within floodway that have a history of being flooded & or under immediate threat. Define standards for building within the floodplain.*
3. *Complete flood impact study to identify 100 year floodway boundary based on recent rainfall data and current land use. Focus on areas with development pressure & or chronic flooding issues.*
4. *Zone to promote sustainable land use decisions. Improve existing enforcement of shore land zoning ordinance.*
5. *Enforcement of land use decisions.*
6. *Flood Mitigation Projects – (watershed management) implement/develop water infiltration, retention practices that address rainfall and runoff.*
7. *Promote sustainable land use policies or practices that influence state and federal legislation.*
8. *Climate Change Mitigation:*
  - *ID contributions/sources*
  - *Establish standards for sustainability*
  - *Implement climate change mitigation and adaptation planning into municipal (county, town, village, city, etc.) comprehensive plans and promote planning integration throughout other municipal plans (transportation, hazard mitigation, watershed, etc.).*
  - *Implement mitigation programs (ex. Tree planting, mass transit, Runoff Curve Number (RCN) & Temperature balancing, Agriculture – Carbon Sequestering practices, etc.*
  - *Individual Empowerment*
9. *Provide information & education*
10. *Seek funding sources to implement Task Force recommendations/goals.*



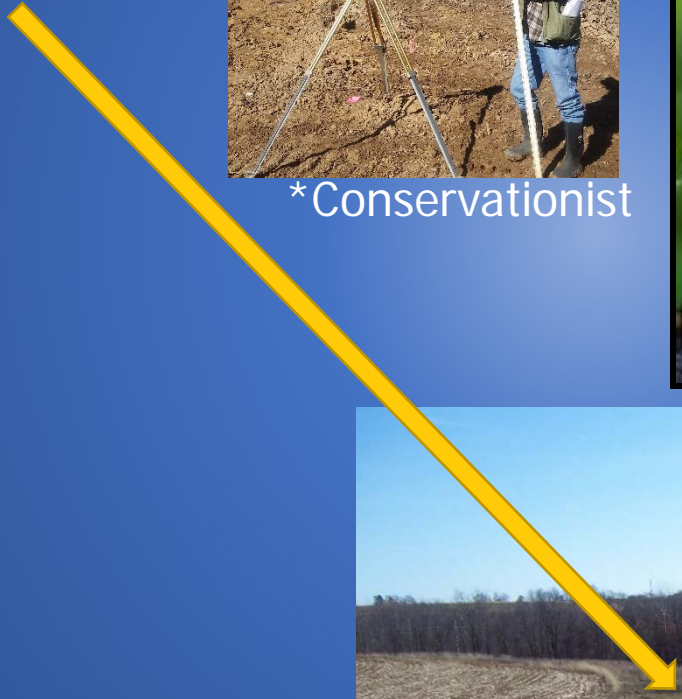
### **CCTF - 16 Members: (August 28, 2019)**

1. County Administrator
2. LCD – Director
3. Land Use Planner
4. UWEX – Agent
5. Emergency Mgt. Coordinator
6. Hwy Commissioner
7. Sanitation & Zoning Administrator
8. County Board Supervisor
9. County Board Supervisor
10. County Board Supervisor
11. County Board Supervisor
12. Town Board Supervisor
13. Town Board Supervisor/Farm Bureau President
14. DNR Program & Policy Agent
15. Fort McCoy – Public Affairs Officer
16. Fort McCoy – Fisheries Biologist



# Address the Symptoms:

- Need to keep people out of the flood-way
- \*Mitigate intense rain events on the landscape
- \*Manage runoff events
- \*Conservationist



Address the Cause





## Objective #1 (2020 )

*Implement monitoring devices (weather stations) and warning systems in real time by coordinating with emergency management and the national weather service.*



- Land Use – Roads, Buildings, Cropland, etc.



Shore land zoning  
(Flood Plain)

Crossings



Ladder Effect





Dust Bowl Days or the "Dirty Thirties"

***"The land just blew away; we had to go somewhere."  
— Kansas preacher, June 1936***

**Today - Climate Change?**





## CLIMATE CHANGE IN MONROE COUNTY

**WHEREAS**, climate change poses a serious threat to Monroe County's natural resources, agriculture, public health, communities, tourism, and economy; and

**WHEREAS**, increasing instances of extreme weather events since 2007 and more recently August of 2018 and July of 2019 are devastating Monroe County and surrounding communities; and

**WHEREAS**, the safety of our citizens is of the utmost importance and adequate monitoring of severe weather occurrences will help protect individuals, businesses and communities; and

**WHEREAS**, adequate floodplain management can help alleviate future property damage; and

**WHEREAS**, updating and or creating the county's floodplain map through an impact study will more accurately reflect current weather events; and

**WHEREAS**, identifying current landuse trends and challenges will allow the county to improve enforcement of standard zoning policies and practices to create sustainable land use decisions; and

**WHEREAS**, Monroe County citizens, businesses, and municipalities have incurred significant financial damage in the millions of dollars due to climate change and extreme weather events. These damages are impacting the municipalities budgets and adding substantial financial strain; and

**WHEREAS**, the Climate Change Task Force (CCTF) will seek federal, state, and local technical and financial assistance to implement Task Force recommendations and goals; and

**WHEREAS**, the CCTF will provide educational materials and inform the citizens of Monroe County about climate change and it's effects on the County; and

**WHEREAS**, establishing mitigation programs throughout Monroe County that will benefit all citizens; and

**WHEREAS**, promotion of sustainable land use policies and practices with the state and federal government is vital for future change; and

**WHEREAS**, our county has a responsibility to current and future generations of Monroe County residents to act to prevent continuing damage to our resources and infrastructure and to invest in solutions that help to mitigate the changes that have already occurred.

**➔ NOW, THEREFORE, BE IT RESOLVED** that the Monroe County Board recognizes that climate change is occurring in Monroe County and supports the efforts of

# Monroe County Board September 28<sup>th</sup>, 2019



Resolution - Vote: 15-0-1

**Re-Active / Pro-Active**