

Climate Change IDSS for Local Partners

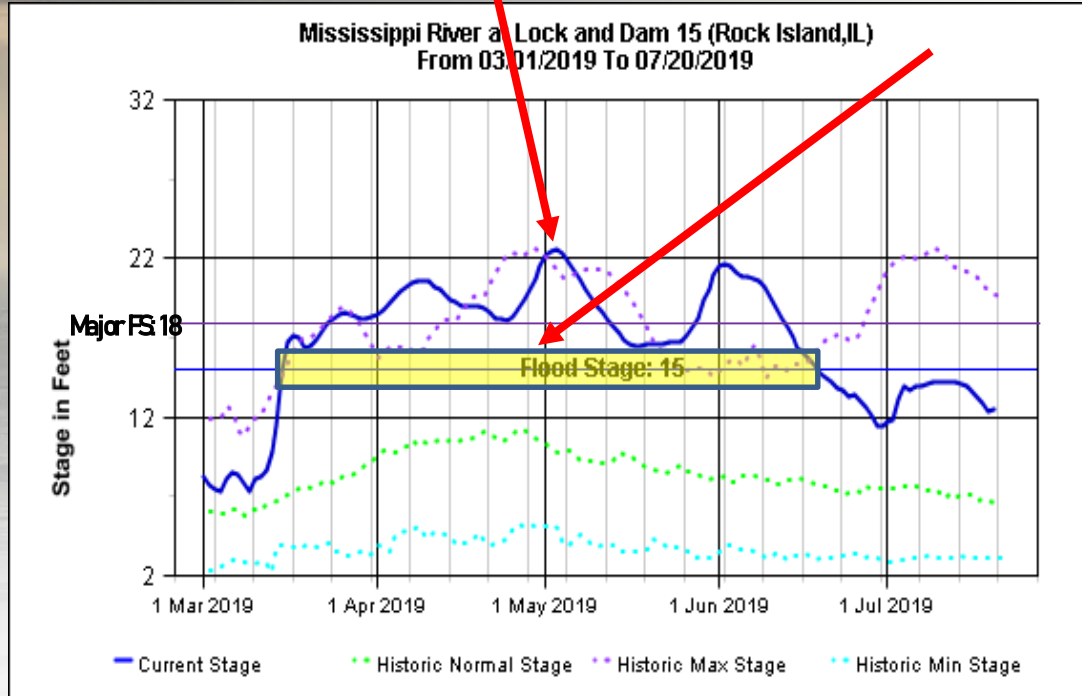
Ray Wolf

NWS Davenport, Ia (Quad Cities)



2019 Mississippi River Flood

- Record height (22.7ft) and duration (97 days) in the Quad Cities



Primary Causes

- First Crest – snowmelt
- Second Crest – snowmelt from late snowstorms and heavy rains
- Third Crest – more heavy rain in May on top of already high river levels

Davenport Flood Task Force

- Inform members on societal and science aspects of the flood issue toward the goal of making recommendations for future actions.
 - Residents
 - Business Owners
 - Developers
 - Elected Officials
 - River Experts
 - USACE / NGO
 - Weather Experts
 - SOO and SH



Davenport Flood Task Force

2019 Mississippi River Flood Review with a Look to the Future

RAY WOLF AND JESSICA BROOKS

NOAA / NATIONAL WEATHER SERVICE

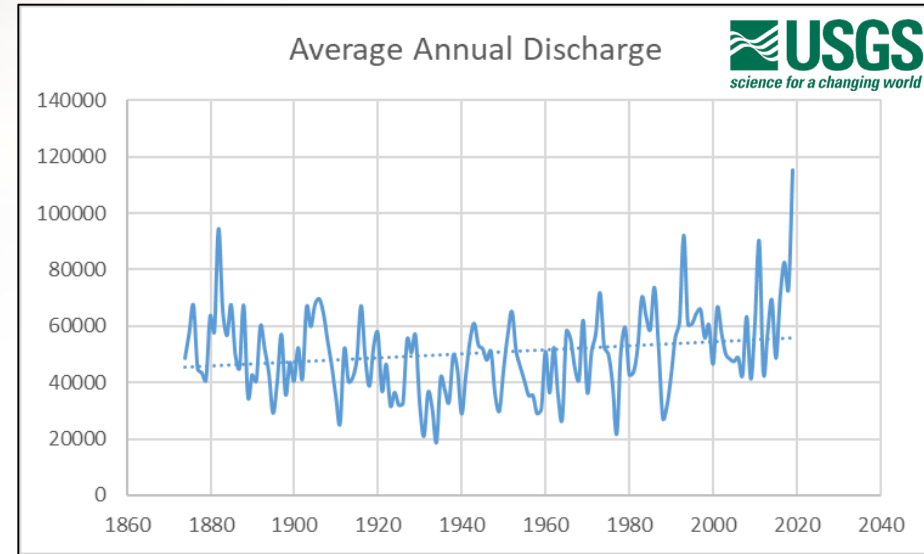
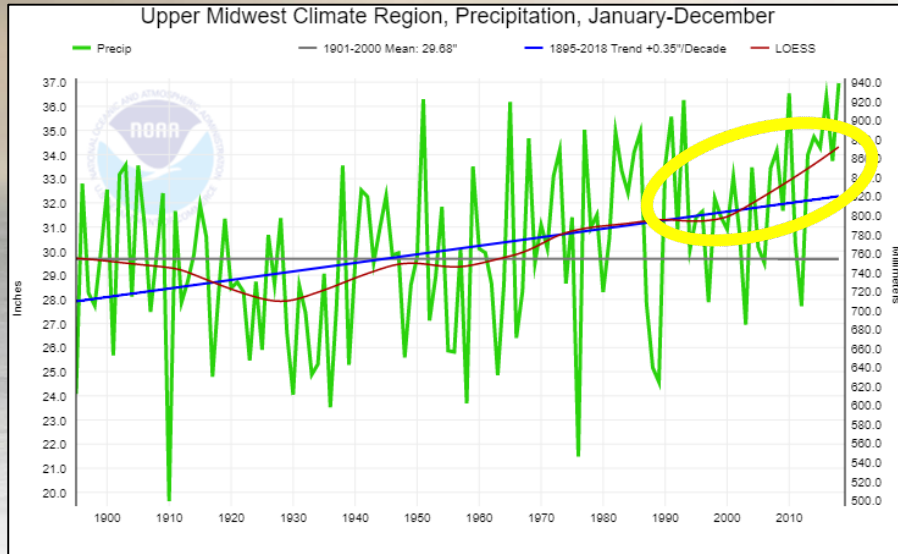


Davenport Flood Task Force Meeting, 23 June 2019



Davenport Flood Task Force

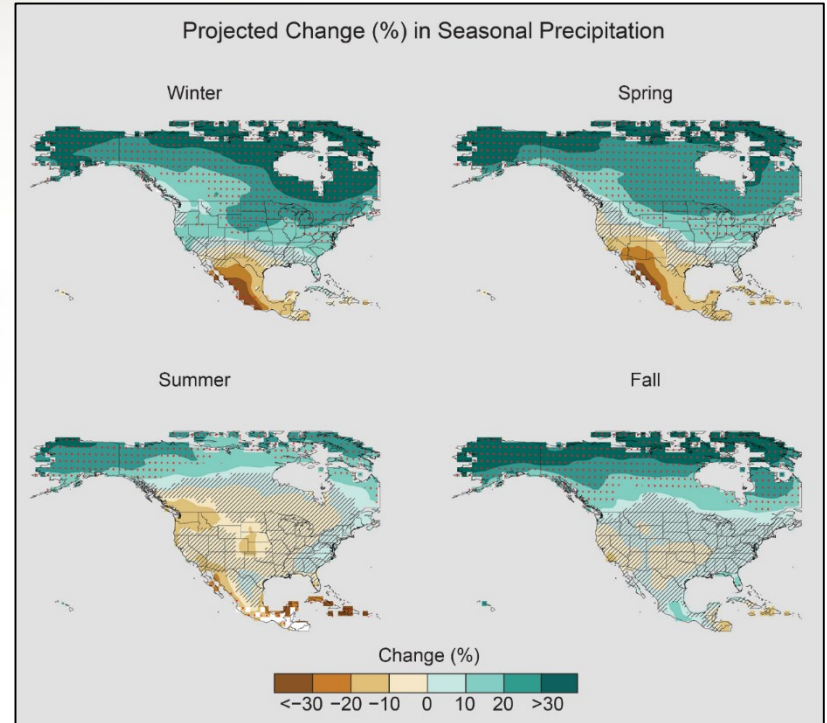
- **#1** – Use of historical data establishes trends



Davenport Flood Task Force

- **#2** – Use of National Climate Assessment for future trends

“Expected increases in the severity and frequency of heavy precipitation events will affect inland infrastructure in every region, including access to roads, the viability of bridges, and the safety of pipelines. ”



Davenport Flood Task Force

#3 - Results

- Future planning considered climate change.
- Hired a contractor to perform a comprehensive study.

POLITICS AND ELECTIONS

'It seriously could've been worse': National weather experts warn local flooding will worsen with climate trends

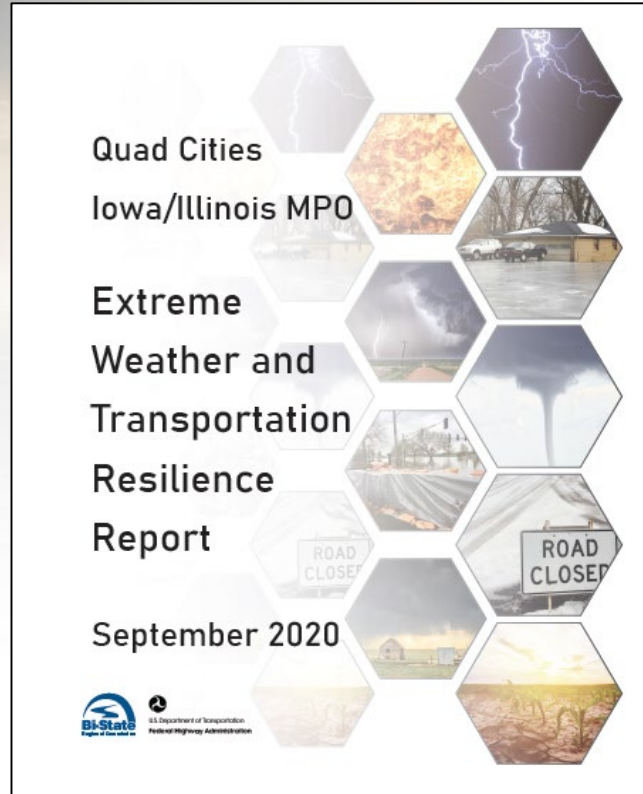
Updated Aug 13, 2019

National weather experts on Tuesday painted a bleak picture of what future floods might look like in the Quad-Cities under changing weather pa...



Bi-State Regional Commission

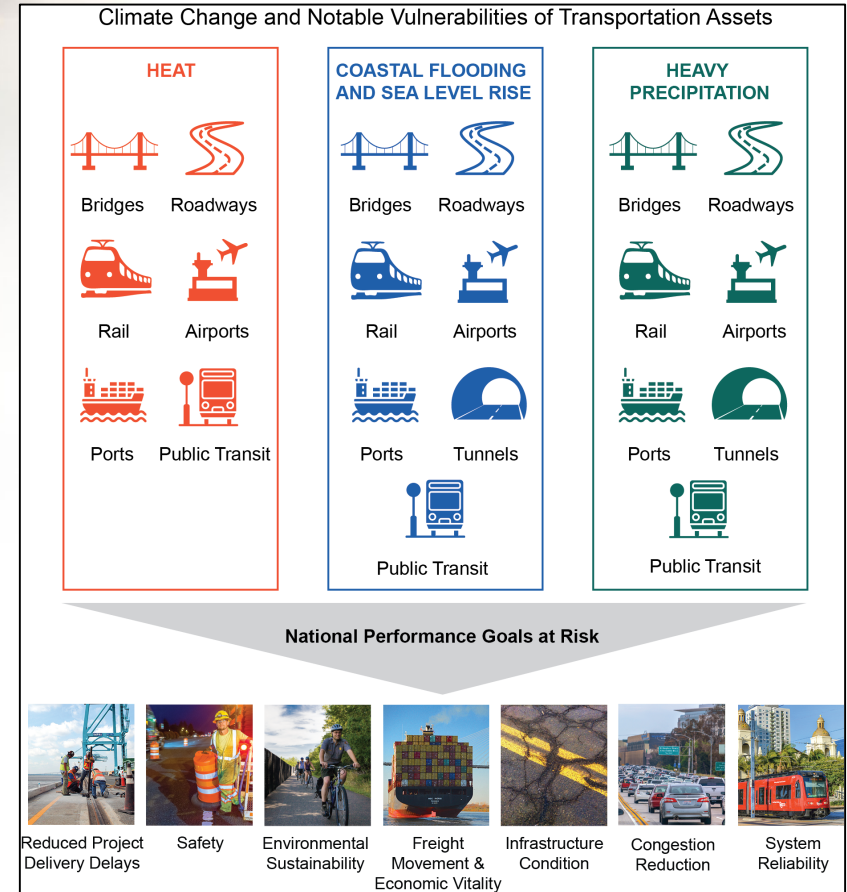
- USDOT Federal Highway Administration grant



Bi-State Regional Commission

- Heat
- Heavy rain; Floods, river and flash
- Drought
 - Wildfires (rare)
- Winter Storms
- Severe weather
 - Tornadoes, hail, damaging wind

- ***These are confounded with an increase in social vulnerability.***



Bi-State Regional Commission

- Changing climate
 - Reduces transportation efficiency and increases accident risk
- Aging infrastructure
- System complexity
- Cross-sector dependencies
 - Transportation modes
- Social Vulnerability
 - As dependency on the transportation system increases
 - Rural areas have less redundancy (less resilient)



Mercer County Illinois - FEMA grant

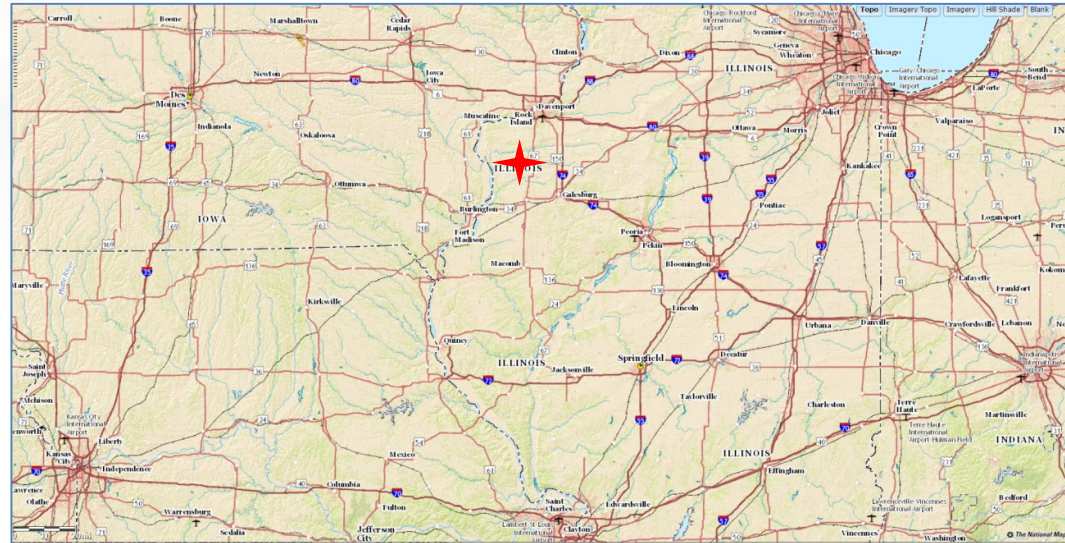
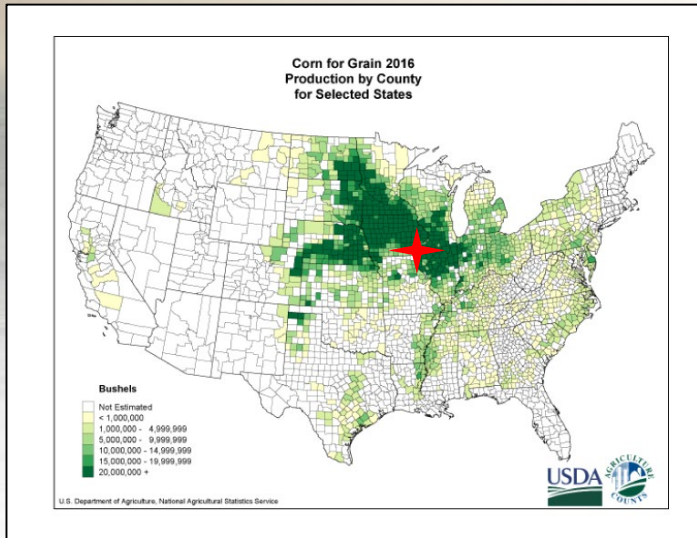
Climate Change and Rural Communities

Address public health and long term consequences of climate change in the community by building a coalition representing local, regional, and state partners to (1) conduct a **needs assessment**, (2) provide **community education**, and (3) provide **training to local health departments**.



Mercer County, Illinois

- Population – 17,000; 80% rural
- Primary industry – Agriculture
- Limited capacity



Climate Change Action Committee

Representatives from the following sectors:

- National Weather Service
- Law Enforcement / Fire Department
- Hospital / Long term care
- Public Health
- Local Government Officials – county and municipal
- USDA Natural Resources Conservation Service
- Illinois Department of Transportation
- County Farm Bureau
- Faith-based community

USFWS Endangered Species Report



U.S. Fish & Wildlife Service

ECOS Environmental Conservation Online System

Conserving the Nature of America

[ECOS](#) /

Iowa Pleistocene snail (*Discus macclintocki*)

[Range Information](#) | [Candidate Info](#) | [Federal Register](#) | [Recovery](#) | [Critical Habitat](#) | [SSA](#) | [Conservation Plans](#)
[Petitions](#) | [Biological Opinions](#) | [Life History](#)

Taxonomy: [View taxonomy in ITIS](#)

Listing Status: **Endangered**

Where Listed: **WHEREVER FOUND**

General Information

The species historical range included Illinois, Iowa. See below for information about where the species is known or believed to occur.

What does a WFO bring to the table?

- **Trusted relationships with...**
 - Local media
 - Emergency management
 - Fire, Police, Hospitals, Schools,
 - County and Local Governments
 - Federal agencies - USGS, USACE, USFS, USFWS, etc.
 - NGOs, general public
- **Local expert in extreme event climatology and preparedness = resilience**
- **Climate partnerships**
 - State Climatologists
 - Regional Climate Centers / USDA Climate Hubs
 - RCSDs, NCEI, NCPO
 - Academia



Summary

- ***Climate data*** is fundamental for laying the groundwork supporting climate change via depiction of trends.
- **NCA** is an important vetted source of climate change information including impacts and projections.
- Factoring in ***climate change*** is critical to future planning.
- **Planning** for climate change is preparedness!
- **Thank You!** ray.wolf@noaa.gov