



Building Resilience on America's Freshwater Coast

Beth Gibbons

American Society of Adaptation Professionals

The Power of the Great Lakes Region



4,530 miles of US coastline



30 Million people



5 out of 10 leading agricultural states



160 Million Tons of Cargo transported Annually



80% of the surface freshwater in the US



Growth & Opportunity Under a Changing Climate

45 Million ppl



Agricultural Growth



Population Growth



Ag-tech/water tech/ industry growth

In neighborhoods flooding annually @ 3' SLR

History of Policy Impacts



RACIST ZONING
POLICY



URBAN RENEWAL AND FHWA
“BLIGHT” REMOVAL



STATE SANCTION
VIOLENCE



SUBPRIME
MORTGAGE
TARGETING



Overcoming History in a Changing Context

Detroit

- Detroit Climate Action Collaborative
- Detroit Climate Ordinance
- We the People of Detroit

Milwaukee

- MMSD Capital [\$35 Million]
- MMSD CSO Reduction [55/year to 2.3/Year]
- New GI RFP for a PPP to capture 50 million gallons of stormwater

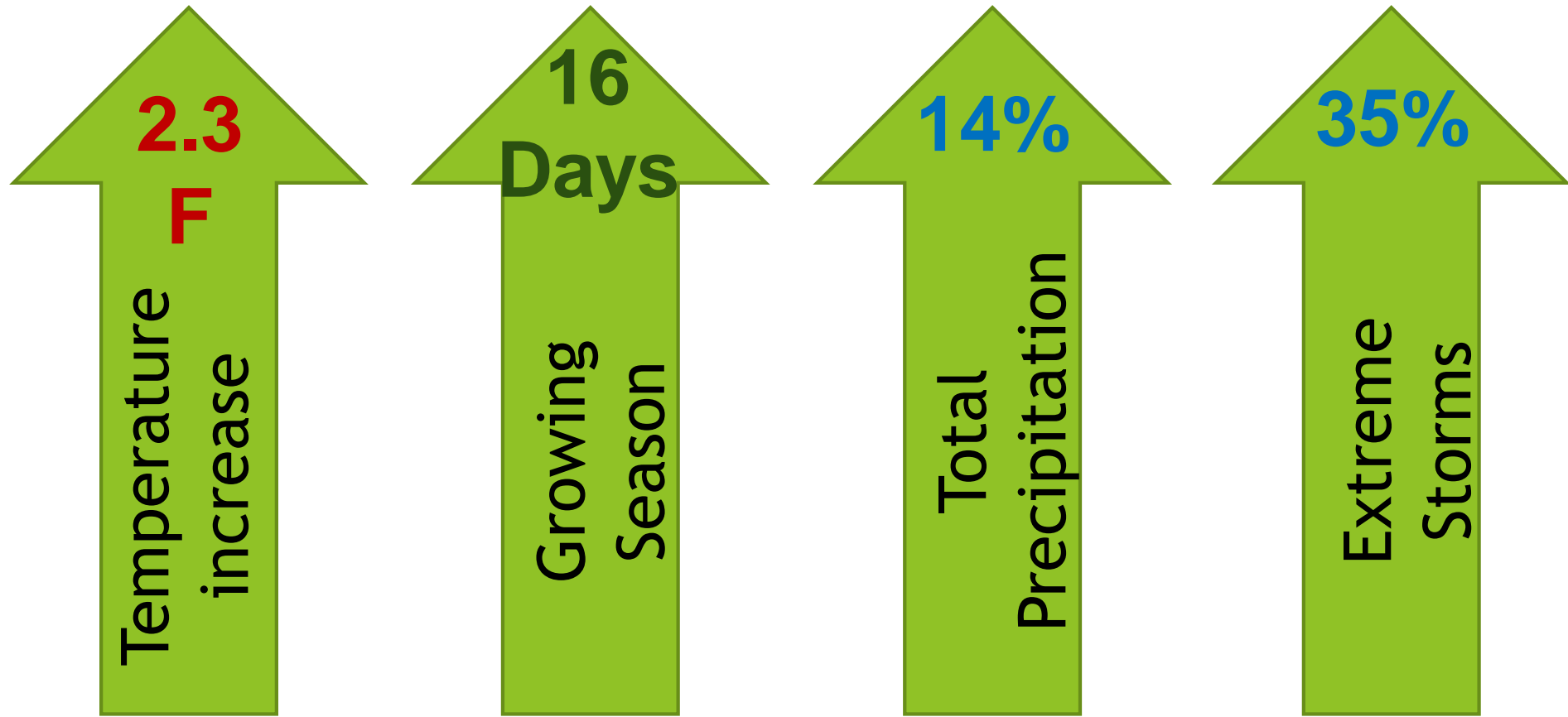
For the small
cities too...

Duluth, MN (pop. 86,000)

- Resilient Walkway investment \$25 Million

Marquette, MI (pop. 21,000)

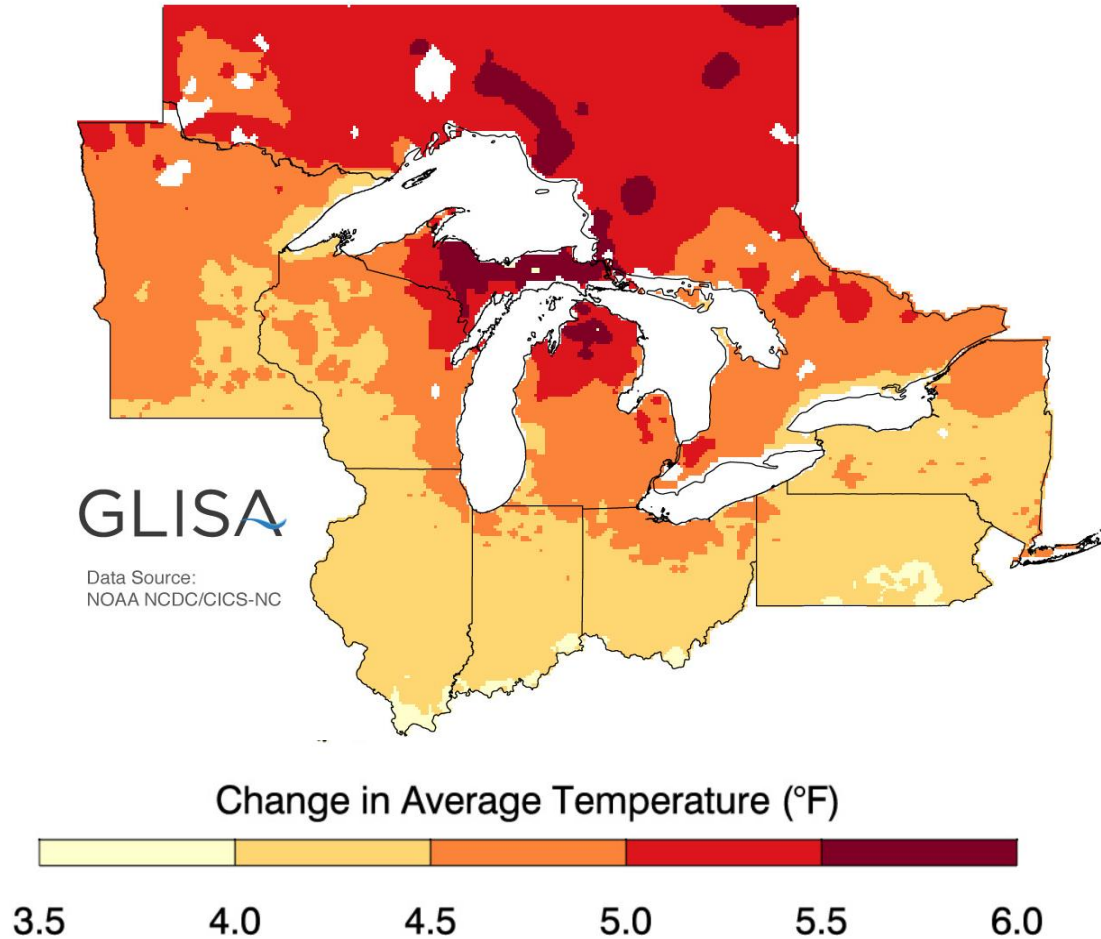
- \$5 Million in road shift
- Civilian Conservation Corps



Changes from 1951 - 2017
We are in the change, right now.

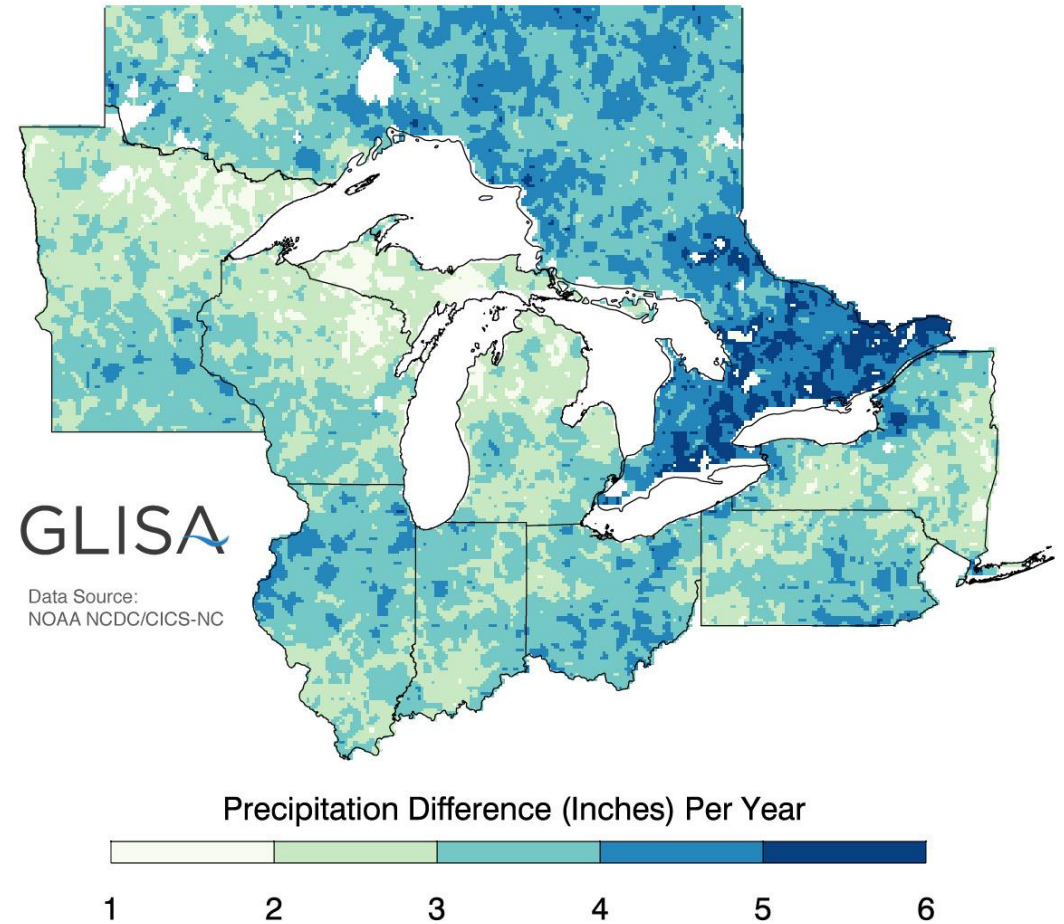
Projected Change in Average Temperature

Period: 2041-2070 | Higher Emissions: A2



Projected Change in Average Precipitation

Period: 2041-2070 | Higher Emissions: A2



Policy Recommendation Themes



**Mainstream
climate.**



Be proactive.



**Develop lasting
authority.**



**Elevate social
equity.**



**Support nature-
based solutions.**



**Facilitate local
and regional
action.**

Specific Policy Recommendations: Policy Updates

- ▶ Modernize the Stafford Act
- ▶ Renew the National Flood Insurance Policy
- ▶ Update FEMA Disaster Funding
- ▶ Accelerate CDBG relief
- ▶ Increase and Expand Great Lakes Restoration Initiative Funding to Great Lakes Restoration & Resilience Initiative
- ▶ Maintain soil health priorities in Farm Bills

Every \$1 on
resilience
bears an \$11
return on
investment.

- National Institute of
Building Science

- ▶ Federally Mandated Resilient Building Codes and Standards
- ▶ Establishment of Resilience Revolving Loan Fund
 - ▶ (e.g. H.R. 3779: Resilience Revolving Loan Fund Act of 2019)
- ▶ Establish funding for separating legacy combined sewer systems

Support Critical Climate Programs

- ▶ NOAA's Regional Integrated Sciences and Assessments (RISA) program
- ▶ NOAA's Regional Climate Centers (RCCs)
- ▶ NOAA's National Estuarine Research Reserves (NERRS) program
- ▶ USGS Climate Adaptation Science Centers (CASC)
- ▶ USDA Climate Hubs.
- ▶ Bureau of Indian Affairs
- ▶ National Climate Assessment

Policy Recommendations in Summary



UPDATE



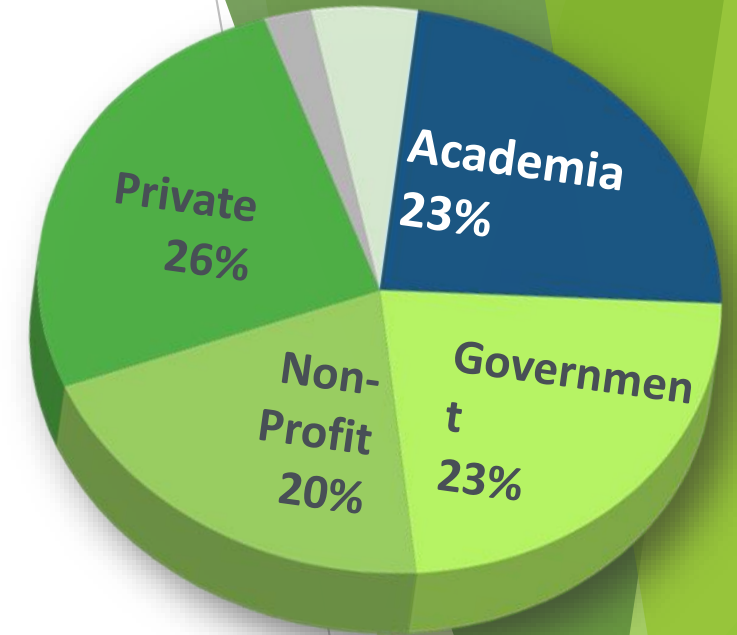
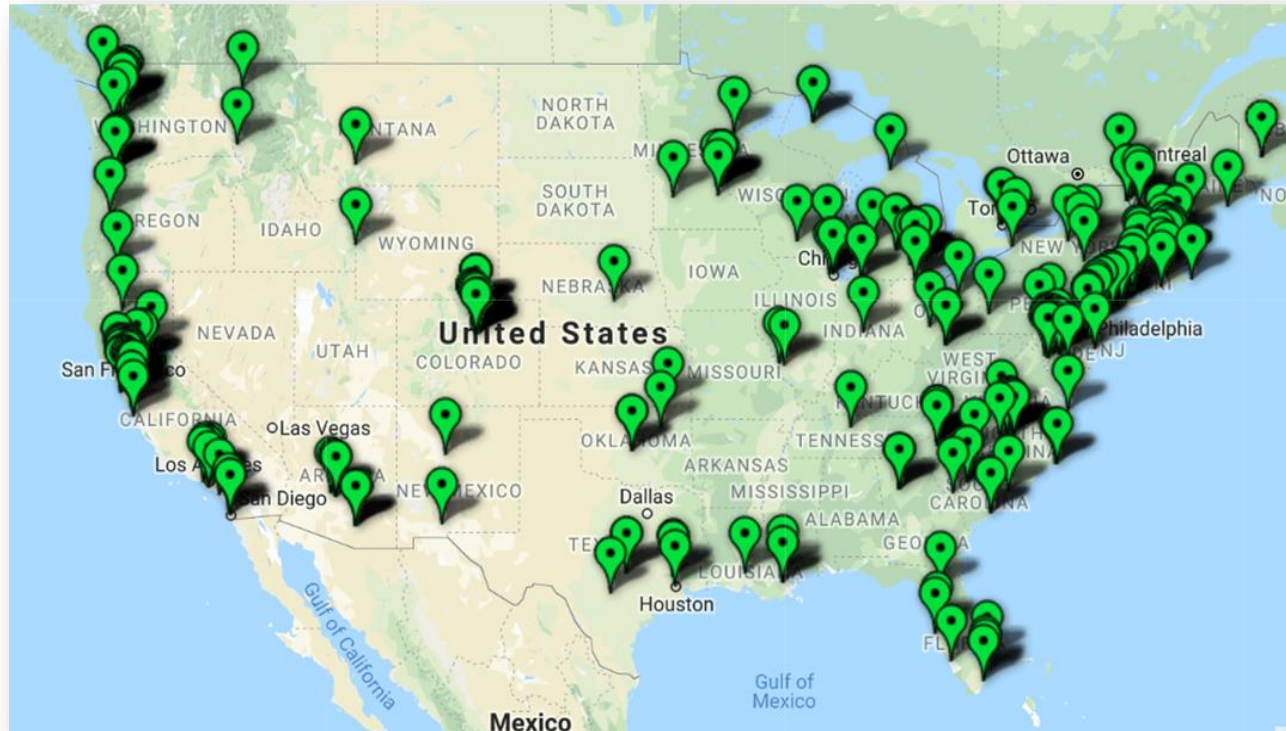
INNOVATE



SUPPORT

American Society of Adaptation Professionals

- Connecting & Supporting Adaptation Professionals to advance innovation & Excellence in the field of adaptation





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