Climate Impacts on Agriculture

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LAND+WATER

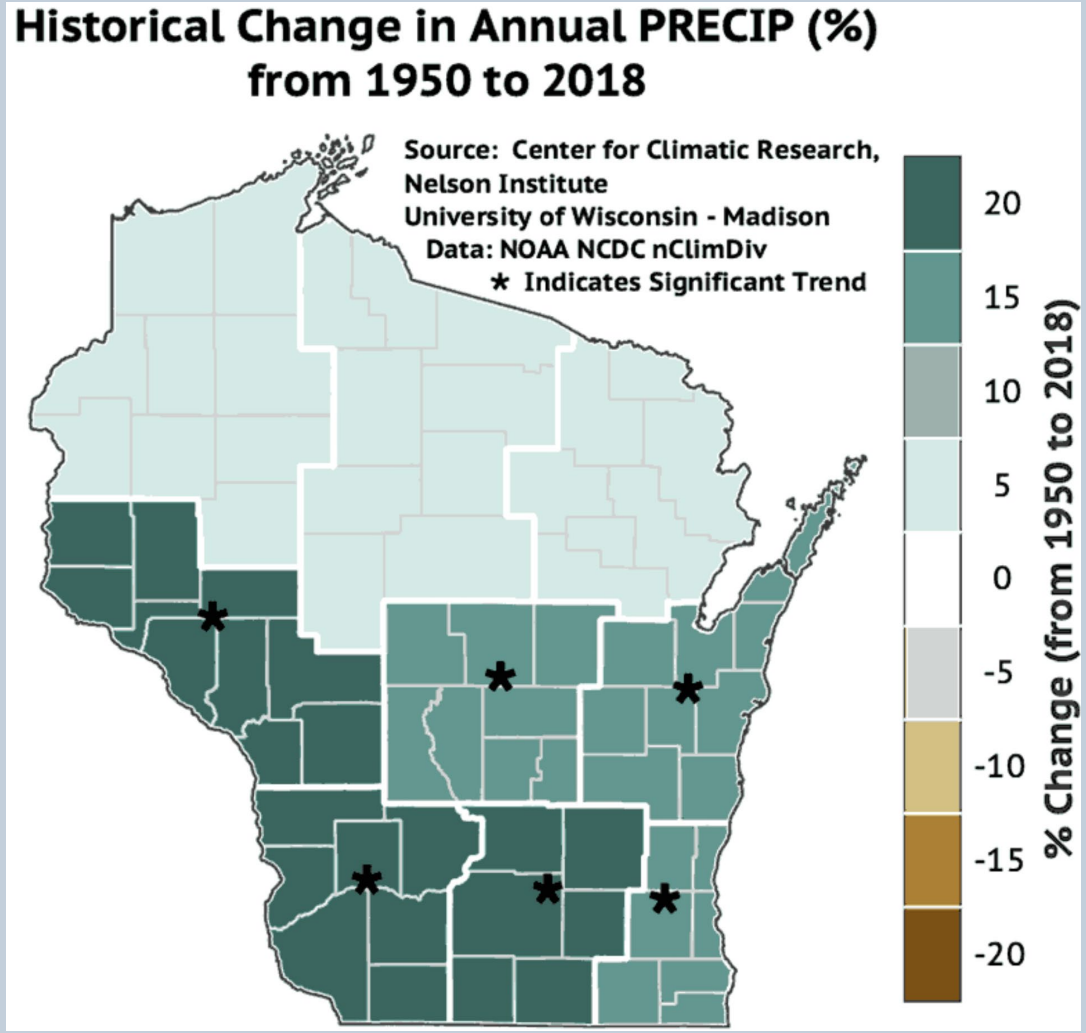
Who We Are

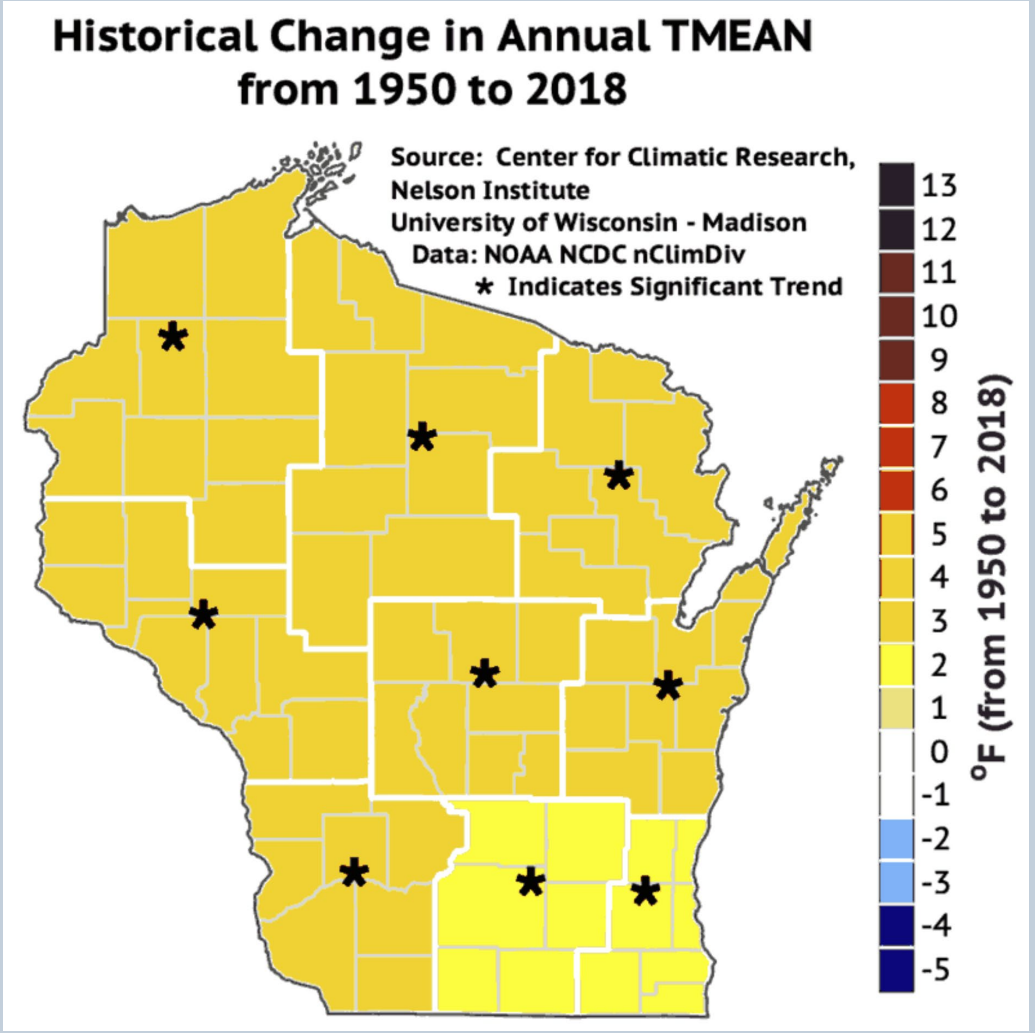
- Nonprofit, non-partisan 501(c)(3) membership organization that supports the efforts of 450 land conservation committee (LCC) members and 370 land and water conservation department (LWCD) staff in Wisconsin counties.
- Established in 1953 to deliver conservation locally

WI Land+Water programs

- **Advocacy** – advocate for county conservation on legislative and policy issues
- **Communications** – amplify county conservation success stories for greater impact
- **Standards Oversight Council** – facilitate development and revisions of sensible conservation standards
- **Conservation Training** – provide technical training and professional improvement opportunities
- **Youth Conservation Education** – Wisconsin Envirothon, Conservation Poster & Speaking Contest, Youth Camp
- **Climate Resilience Program** – help counties better adapt and plan for climate change impacts

Projected climate change for Wisconsin





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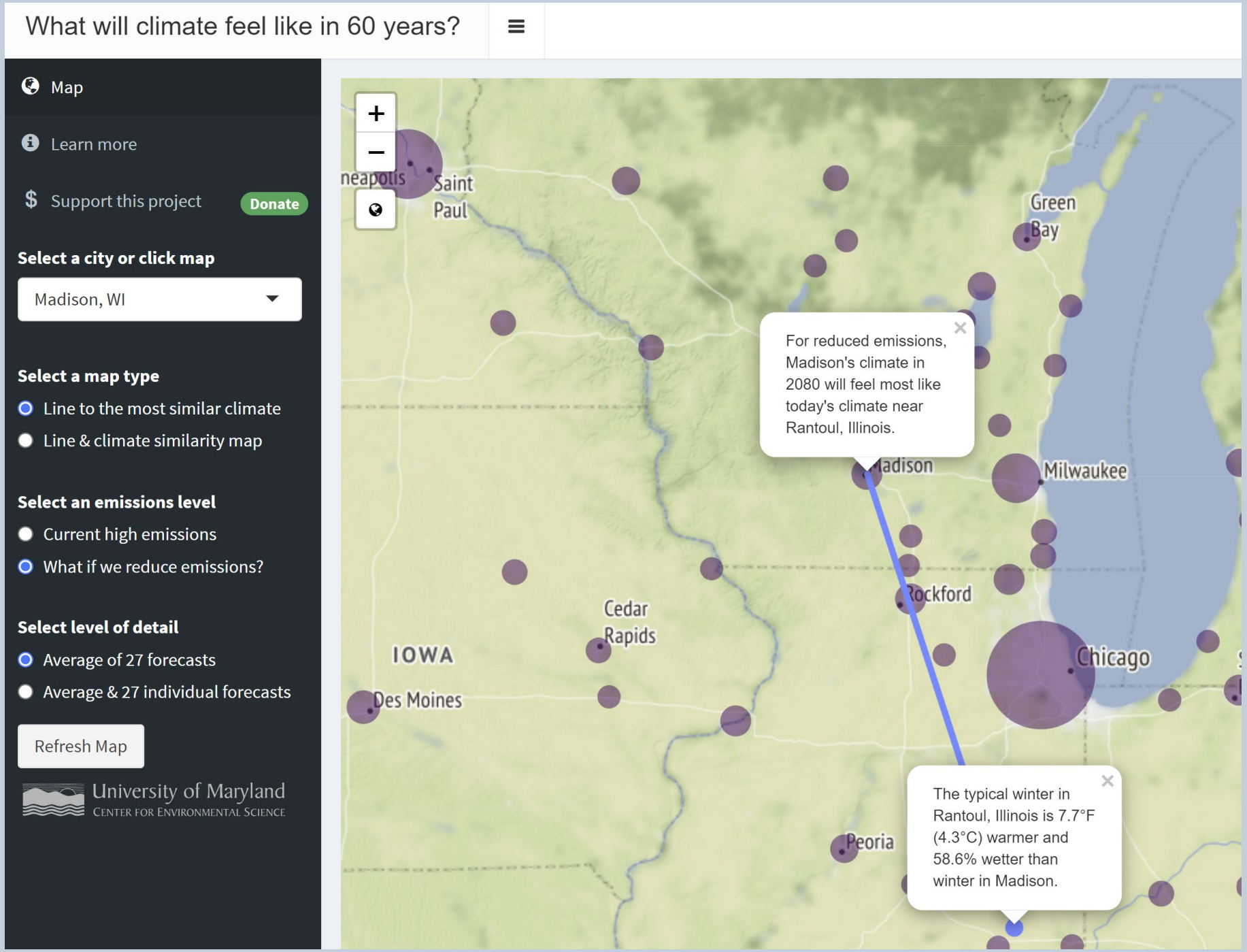


fitzlab.shinyapps.io/cityapp/

Primary Impacts to Agriculture

Warmer spring and fall

Warmer winter

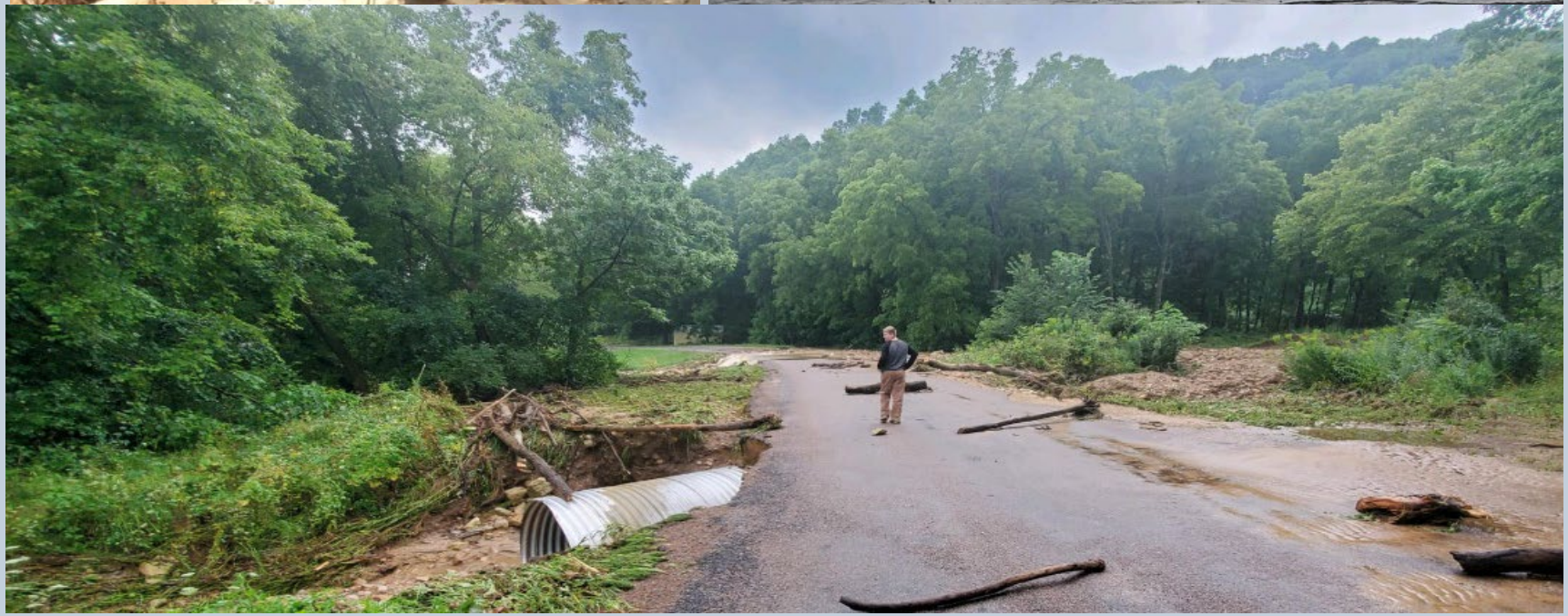
Warmer summer

Increase precipitation

Increase extreme weather

https://wicci.wisc.edu/

Impacts to Soil and Water

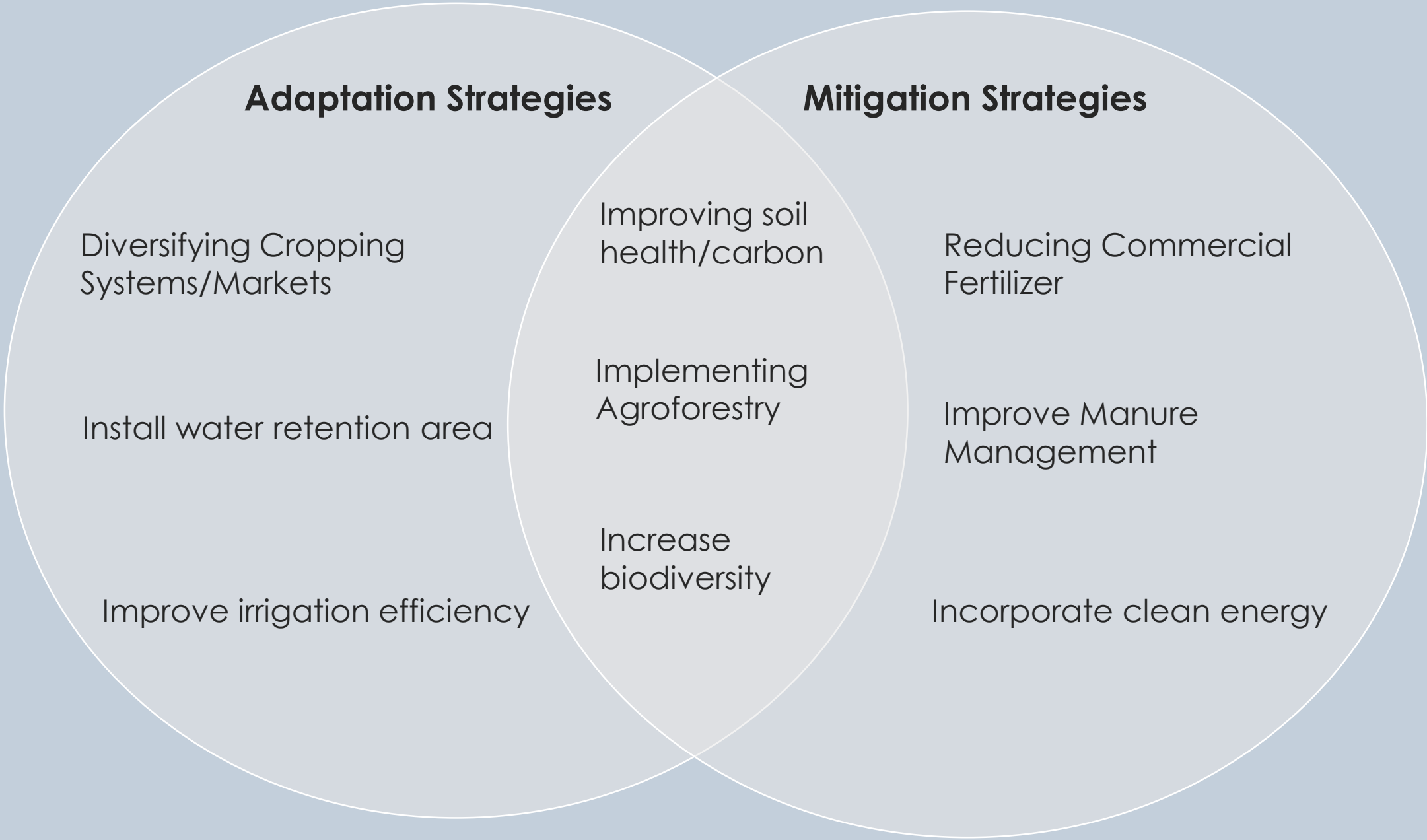


Adaptation

Supporting landowners in adapting to increase in extreme weather, longer seasons, infestation of new pests and invasive species.

Mitigation

Working across all industrial sectors and communities globally to reduce greenhouse gas emissions and slow the rate of climate change


Adaptation Strategies
Mitigation Strategies
Diversifying Cropping Systems/Markets
Install water retention area
Improve irrigation efficiency
Improving soil health/carbon
Implementing Agroforestry
Increase biodiversity
Reducing Commercial Fertilizer
Improve Manure Management
Incorporate clean energy

WICCI's 4 Key Strategies

Increase continuous living cover on agricultural land

Avoid conversion of grasslands

Improve manure management to reduce liquid manure storage

Increasing nitrogen use efficiency

Mitigation

Global goal to reduce GHG emissions

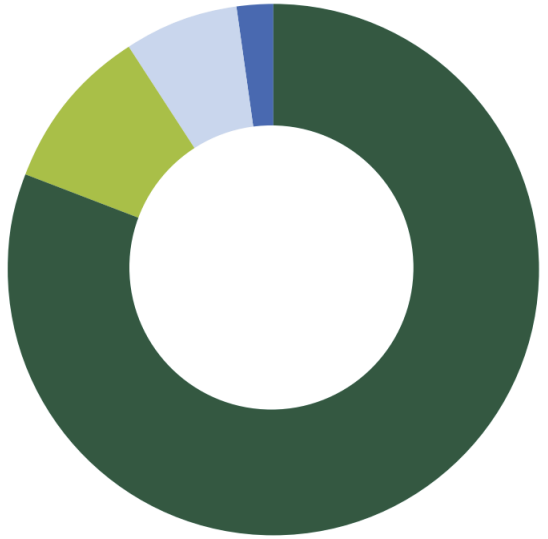
Wisconsin's Climate Action Plan:

Reduce GHG to 26-28% below 2005 levels by 2025

2017 WISCONSIN EMISSIONS
BY SECTOR

33%	Electricity
24%	Transportation
15%	Agriculture
11%	Industrial
8%	Residential
5%	Commercial
3%	Industrial Processes
1%	Waste

2017 WISCONSIN EMISSIONS
BY GREENHOUSE GAS



81%	Carbon Dioxide (CO_2)
10%	Methane (CH_4)
7%	Nitrous Oxide (N_2O)
2%	Fluorinated Gases (HFC, PFC, SF_6)

Off-setting Carbon - Carbon Markets

indigo

Nori

Soil and Water Outcomes Fund

ESMC Ecosystem Services Market Consortium

CALIFORNIA AIR RESOURCES BOARD

In-setting Carbon – Supply Chain Impacts

Accelerate, Transform, Regenerate:

NESTLÉ'S NET ZERO ROADMAP

General Mills

Regenerative agriculture

We invest in the future of agriculture to ensure a thriving future for both people and the planet.

“Climate-Smart” Commodities

USDA to Invest $1 Billion in Climate Smart Commodities

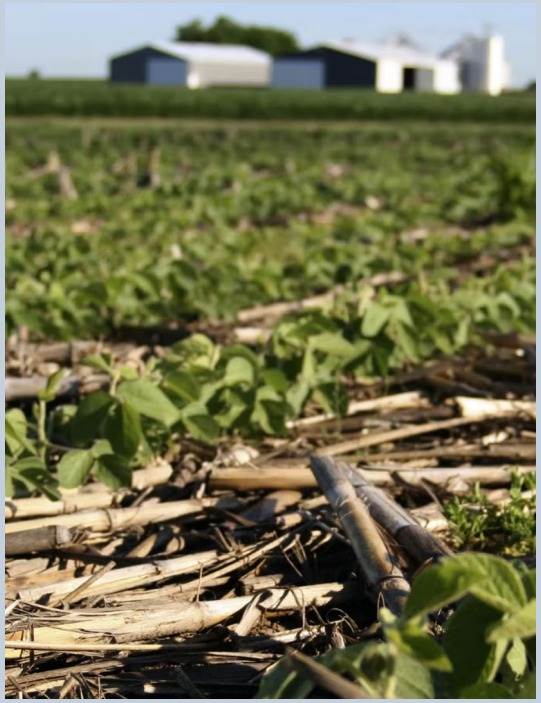
FEBRUARY 8, 2022 /

USDA United States Department of Agriculture

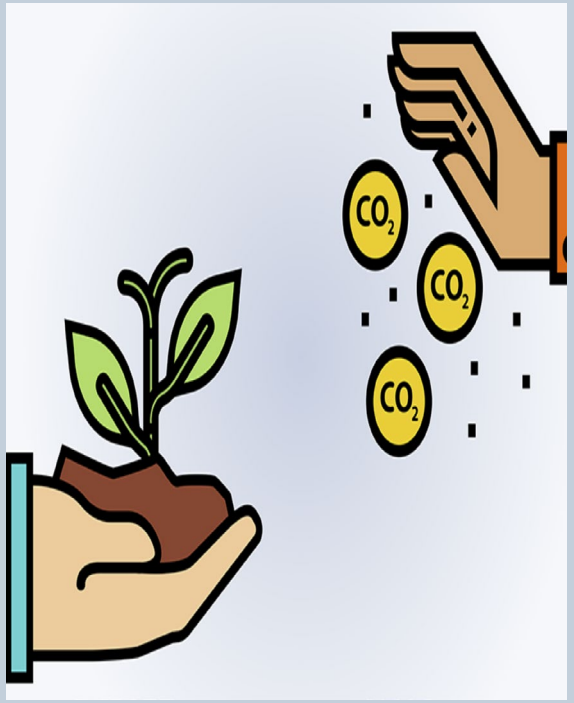
Reduce dependence on fossil fuels

Ways to support farmers with climate change

Integrate climate into planning



Include carbon lens in conservation



Support farmers understanding carbon incentives

Identify opportunities to include clean energy

Questions?

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