**NORTH CENTRAL** Climate Adaptation Science Center

# NEBRASKA

Nebraska falls within the domain of the North Central Climate Adaptation Science Center (CASC)

## North Central CASC Consortium Institutions

Host: University of Colorado at Boulder

**Consortium:** 

University of Montana South Dakota State University Wildlife Conservation Society Conservation Science Partners Great Plains Tribal Water Alliance

# **OUR WORK IN NEBRASKA**



## **Key Science Topics**



Wildlife & Plants



**Grasslands & Plains** 



Freshwater

Drought



Science Tools for Managers

# **PROJECT HIGHLIGHTS**

## Protecting Vulnerable Grassland Birds from Climate Change

America's prairies, home to beloved birds such as meadowlarks and mallards, are under threat from human development and climate change. Climate change occurs quickly in flat, low-lying areas, meaning that heat waves, droughts, and extreme weather events have become the new norm for many prairies in the central U.S. This also means that grassland birds, which rely on grasslands for habitat, are particularly vulnerable to climate change.

#### WHAT:

The North Central CASC is synthesizing the available information on the vulnerability of grassland ecosystems and grassland-dependent migratory birds to climate change across the Central Flyway.

#### **RESULTS:**

How conditions are changing, and how fast, varies dramatically across the region. While some parts of the Central Flyway are experiencing a megadrought, others are facing unprecedented flooding, record-breaking heat, or strong winter storms.

#### **IMPACT**:

To help cut through the complexity of climate impacts, the team is developing a Grassland Adaptation Menu of conservation strategies for grassland birds. The menu has already been implemented by The Nature Conservancy to plan new strategies for their properties in the region.



### Invasive Species & Climate Change Management Network

Natural resource managers consistently identify invasive species as one of the biggest challenges for ecological adaptation to climate change. Given the many ways that invasive species and climate change interact, such as changing fire regimes, it is more critical than ever to integrate climate adaptation science into natural resource management.

#### WHAT:

The North Central CASC established the "North Central Regional Invasive Species and Climate Change (RISCC) Management Network" to focus on the intersection of invasive species, fire regimes, and climate change in the region. The team is identifying which species and ecosystems in the region are most threatened by invasive species, which invasives will be most important to manage in a changing climate, and how wildfire, climate, and invasive plants interact and result in ecosystem change.

#### **IMPACT**:

By translating and synthesizing the science behind invasive species, fire, and climate change, the RISCC Network will contribute to the conservation and management of key ecosystems in the region including sagebrush steppe and grasslands.

