The National Climate Assessment (NCA) is being conducted under the auspices of the U.S. Global Change Research Program (USGCRP), pursuant to the Global Change Research Act of 1990, Section 106, which requires a report to Congress every 4 years (http://globalchange.gov/what-we-do/assessment/). Part of the vision, which is now under development, for the sustained National Climate Assessment (NCA) process is a system of physical, ecological, and societal indicators that communicate key aspects of the physical climate, climate impacts, vulnerabilities, and preparedness for the purpose of informing both decision makers and the public with scientifically valid information that is useful to inform decision-making processes such as the development and implementation of climate adaptation strategies in a particular sector or region. These indicators will be tracked as a part of ongoing assessment activities, with adjustments as necessary to adapt to changing conditions and understanding. The indicators will be reviewed and updated so that the system adapts to new information.

The NCA indicator system is not intended to serve as a vehicle for documenting rigorous cause and effect relationships. It is reasonable, however, for it to serve as a guide to those factors that affect the evolution of variability and change in the climate system, the resources and sectors of concern that are affected by it, and how society chooses to respond. Different components of the end-to-end climate issue serve as categories within which to organize an end-to-end system of indicators:

- Greenhouse Gas Emissions and Sinks
- Atmospheric Composition
- Physical Climate Variability and Change
- Sectors and Resources of Concern
- Adaptation and Mitigation Responses

This framing has several advantages. It can be used to identify the different components of the end-to-end climate issue that both decision-makers and researchers are interested in. It is independent of scale, and therefore allows the indicators themselves to be described at spatial scales that are the most relevant for their intended use. National decision-makers may find indicators of national greenhouse gas emissions to be informative; however, state or local decision-makers have the freedom in this framework to define indicators of state, regional, or local greenhouse emissions that are more relevant to their concerns. The framework is also independent of time scale and topics within the broad categories. It therefore allows indicators of different
sectors to be developed, and allows the consideration of both indicators of current state, past trends, and leading indicators. In this talk we will discuss the general conceptual model for the system, the sector specific conceptual models, and indicators that will be included in the prototype end-to-end indicator system.