Conclusions of the Commission:

Weather and climate variability and change is of direct importance to the environmental quality, public safety, and economic health of our society in North Carolina.

While global and national weather and climate patterns are generally known, local weather and climate variability and change and its impacts in North Carolina are not well-understood by scientists, governments, and the general public.

Sufficient local environmental observations are required to understand and predict local weather and climate changes and the impacts to North Carolina.

There is exists within NC a wealth of scientific expertise that can be leveraged to the service of the state relative to climate change guidance.

<u>Recommendation 1</u>: Improved environment & climate monitoring for North Carolina

The existing NC Environment and Climate Observing Network (ECONet) currently supported by DENR, NC State University, and other agencies should be expanded to provide local environmental monitoring in each county of North Carolina. Data collected by the ECONet will be made publicly available for all uses, including research on NC climate change and variability, education at all levels, agriculture, environmental resource management, public safety, and commercial applications. A cost-benefit analysis from the late 1990s suggests savings of $90 million annual in NC with an annual investment of $2 million for the ECONet.

<u>Recommendation 2</u>: Establishment of the NC Climate Program in the University of North Carolina.

A multi-university Climate Program should be established in the University of North Carolina system with a mission to discover, disseminate, and improve knowledge about weather and climate variability and change in North Carolina and the impacts to North Carolina. The Program should coordinate climate research across North Carolina and facilitate collaborations between the State Climate Office, government agencies, and university faculty to study climate variability, provide guidance on future climates, and the impacts to the state. The Program should provide prioritized funding for research efforts which are specifically focused on needs determined by climate information users and ensure that research efforts are translated into working decision support tools. The Program should establish a public outreach and education program to support climate adaptation and regional and community levels and should include programs for K-12, community planning and leadership boards, and specific sectors identified as sensitive to climate. The State Climate Office at NC State University should be charged to lead this effort.

Notes:

These recommendations are focused on climate adaptation, which has not received the attention it needs in LCGCC meetings or as part of the CAPAG process.

These recommendations will not have any effect on greenhouse gas emissions.

The recommendation will provide needed coordination for adaptation studies and decision support systems, which are needed to support State and local governments and private sector businesses as they plan for climate change and deal with climate variability.

The State Climate Office already has partial implementation of the ECONet monitoring network and has help preliminary workshops to develop a NC Climate Program. Authorization and appropriations are all that is needed to move forward.

While it is difficult to quantify the direct economic benefits of the NC Climate Program, the government agencies need a scientifically reliable resource to plan for climate change and variability at the state and local levels. This resource is only partially available through the State Climate Office at NC State University, which is unable to meet the enormous demand from climate information users.

Respectfully submitted,

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