



## MEMORANDUM

**To:** CMAP Environment and Natural Resources Committee

**From:** CMAP Staff

**Date:** February 4, 2016

**Re:** Next plan: climate resilience policy framework

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Scientific consensus indicates that our climate is changing at a global scale. In northeastern Illinois, these changes include more frequent and severe extreme weather, heat, and drought. The impacts of climate change have significant implications for the built infrastructure, communities, economies, and ecosystems in this region. Flooding has led to major road, rail, and utility outages, sewer overflows, moldy and damaged property, disruptions to freight traffic, and financial losses for local businesses. Heat waves have caused illnesses, hospitalizations, and deaths, and drought has had significant adverse impacts on the agricultural sector and the region's natural areas.

This memo proposes a policy framework for a regional climate resilience strategy. First, the memo presents working principles of a regional vision for climate resilience. These principles were developed in conjunction with the climate resilience resource group made up of stakeholders representing diverse perspectives from emergency management, public health, stormwater management, transportation, conservation, and other sectors. The vision presented in this memo touches upon the various ways that climate change relates to CMAP's primary areas of action relating to transportation, land use, water resources, and quality of life. Lastly, this memo includes a proposed outline of the final strategy paper.

### **Working Principles of our Vision for Climate Resilience**

#### **1. Responsive and robust infrastructure**

Infrastructure can encompass many types of systems, including buildings, transportation networks, energy systems, sewer pipes, and green infrastructure. In a resilient region, all infrastructure will be stronger to withstand extreme weather and smarter to respond to a range of conditions throughout its life cycle. Green and gray

infrastructure will be designed as flexible, interconnected networks that build redundancies at different scales to ensure continued performance at all times. When possible, communication of real-time data will be built into infrastructure design to enable decision-makers to make informed mid-course corrections and future decisions. Natural landscapes will support healthy, biodiverse ecosystems and serve as our region's first line of defense for reducing the impacts of climate change. The design, siting, management, retrofitting, and expansion of our region's built structures and ecosystems will incorporate lessons learned from past experiences and account for future climate conditions.

## **2. Participatory and integrated processes**

Engagement processes will enable resilience planning by relying upon multiple forms of information, from technical to experiential, to guide decision-making. Information will be transparently and effectively conveyed and build capacity at all levels of public, private, and individual action to affect outcomes. Participatory processes will cultivate multi-directional dialogue and shared ownership across sectors to implement the range of activities needed to build resilience.

## **3. Equitable reduction of vulnerability**

Resilient communities will reduce the risks of climate change by ensuring the provision of critical services and infrastructure that meet present and future climate conditions. Our region will emphasize strategies that reduce impacts of climate change, particularly in communities that bear the brunt of climate impacts, whether due to geographic or socioeconomic factors. Capacity building and physical planning practices will strengthen social cohesion among residents, particularly vulnerable populations, to create the community networks necessary to withstand and recover from climate impacts.

# **Outline of Climate Resilience Strategy Paper**

## **1. Introduction: Moving toward a resilience framework**

- a. Purpose of the strategy paper
- b. Definition of regional climate resilience
- c. Why is climate change important to the region?

## **2. Regional climate vulnerability assessment**

- a. Climate changes in northeastern Illinois
  - i. Temperature
  - ii. Precipitation
- b. Regional vulnerabilities to climate change
  - i. Definition of vulnerability, including physical vulnerability and vulnerable populations

- ii. What factors contribute to climate vulnerability?
- iii. Which places and residents are most vulnerable to extreme heat?
- iv. Which places and residents are most vulnerable to flooding?

### **3. The existing climate resilience landscape**

- a. Prior agency work on climate change
- b. Climate action in local communities in CMAP region
- c. State, federal, and international climate policies and implications for the region
- d. Landscape review of climate resilience stakeholders and actors in the CMAP region

### **4. Climate resilience framework**

- a. Guiding principles of the vision for regional climate resilience
- b. CMAP strategy areas (organized by principle)
- c. Stakeholder strategy areas (organized by principle)

### **5. Next steps**

- a. Measurement of success
- b. Future areas of research

*ACTION: Discussion*