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MINNESOTA ENVIRONMENTAL QUALITY BOARD

Wednesday, February 18, 2015

Meeting Location: MPCA Board Room
St. Paul, Minnesota
1:00 p.m. – 4:00 p.m.

AGENDA ADDENDUM

I. Minnesota Climate and Health Profile

Presenter: James Kelly, Minnesota Department of Health

Issue before the Board: Changes occurring in Minnesota's climate will have serious consequences for human health and well-being. The Minnesota Climate and Health Profile Report (Profile), authored by the Minnesota Department of Health, is intended to help state and local community leaders and planners, policy makers, public health professionals and the public understand climate change health impacts so they can start to develop ways to adapt.

Background: Minnesota has become measurably warmer, particularly in the last few decades, and precipitation patterns have become more erratic, including heavier rainfall events. Climate projections for the state indicate these trends are likely to continue well into the current century and may worsen, according to some scenarios. The Profile is the second major report completed by MDH's Climate and Health Program since October, 2014. An earlier report, the Minnesota Climate Change Vulnerability Assessment, assessed the historic occurrence of extreme heat events, air pollution, vector-borne diseases, flooding, and drought and mapped vulnerable populations to each of the climate hazards by county.

Discussion: The two reports were funded by a cooperative agreement from the Centers for Disease Control & Prevention (CDC) for the purpose of conducting program activities aimed at reducing health impacts of climate change. The report was a component of the "Building Resilience Against Climate Effects" (BRACE) implementation effort. The BRACE framework was developed by CDC as an approach for state and local health departments to address health-related climate impacts. The BRACE framework is a multi-step process that facilitates coordination between public health professionals, climate experts, and others to develop and implement effective climate adaptation strategies for specific state and local jurisdictions.

The specific hazards examined in the report were:

- **air pollution** (causing potential increases in chronic obstructive pulmonary disease, lung cancer, cardiovascular disease, allergies and asthma)
- **extreme heat** (leading to heat stress, heat stroke or organ failure; worsening of pre-existing conditions, such as diabetes, chronic obstructive pulmonary disease,

cardiovascular disease, kidney ailments, mental or behavioral disorders; and heat-related deaths)

- **floods and drought** (increasing drownings and injuries, mental stress and waterborne disease outbreaks)
- **changes to Minnesota's ecosystems** (increase diseases caused by ticks and mosquitoes, such as Lyme disease and West Nile virus, and exposure to toxins from harmful algal blooms)

The Profile report notes that there are some data gaps to understanding and characterizing the effects of climate change on health. For example, limited data exist to help characterize all the impacts from flooding on Minnesotans, including financial, physical, and emotional influences on health and well-being. The two reports are among several educational and planning tools developed by MDH to help communities plan for climate change. Other resources include the Minnesota Extreme Heat Toolkit and six training modules on different climate change impacts on public health. MDH also provides GIS services to local public health departments and communities to help identify populations vulnerable to climate change.

In the next few months, MDH staff will be traveling to each region of Minnesota to share information from the reports and to learn about adaptation efforts underway throughout the state. More information on the Profile and climate change in Minnesota can be found on the MDH website at: http://www.health.state.mn.us/divs/climatechange/index.html