

CLIMATE & HEALTH NEWS WATCH

MICHAP AWARDED BRACE FUNDING FROM CDC

The MDCH-Division of Environmental Health was recently awarded another 3-year grant from the Centers for Disease Control & Prevention, National Center for Environmental Health (CDC-NCEH). The project, '*Building Resilience Against Climate Effects (BRACE) in State Health Departments*', will utilize CDC's BRACE framework to build upon the planning and implementation work completed from 2 previous grants. We are thrilled to continue these efforts! Visit <http://www.michigan.gov/climateandhealth> to learn more.

Key activities for this project include:

- Generating a *Michigan Climate and Health Profile* that describes Michigan's historic climate and disease patterns, and characterizes the communities, subpopulations, and locales that are particularly vulnerable to climate-related impacts;
- Forecasting the changes in disease burden expected due to future climate change in our state, working with climatologists and researchers to develop projections that are

scientifically sound and useful for planning at the state and regional level;

- Assessing the suitability and effectiveness of interventions for reducing this disease burden, working with our partners to test and evaluate promising strategies at the state, regional and community level;
- Reviewing and updating our current *Climate and Health Adaptation Plan* to incorporate the BRACE approach and new information generated since 2010.

To accomplish and evaluate these activities, the MICHAP program will once again work closely with its partners in other state agencies, non-profits, academia, local public health and community planning.

PILOT PROJECT TO ENGAGE HEALTH PROFESSIONALS IN THE LAND USE PLANNING PROCESS

Land use planning originated in the United States as a strategy for improving Public Health. Today, we see that land use decisions have a huge impact on the overall health of a community. According to the American Public Health Association, designing places to encourage active

lifestyles and improving access to healthy foods are among the most effective public health strategies.

Although the public health and land use planning connection has been well-documented, public health officials are often absent from the planning process.

Integrating Health into Local Planning is a project designed to identify ways that local health departments can be more effective participants in the land use planning process at the community level.

Monroe County has been selected as a pilot community for this project to build upon the existing planning effort <http://www.resilientmonroe.org/>. Project staff members are conducting a series of focus groups in Monroe County with health officials, planning commissioners, and planning staff to identify ways local health officials can better influence the planning process. Funding for this project is provided by the Michigan Department of Community Health and LIAA (<http://www.liaa.org/>) a non-profit community planning organization, with in-kind support from the Monroe County Health Department (MCHD) and LIAA.

Great American Adaptation Road Trip



Kristen Howard & Allie Goldstein, recent graduates from the University of Michigan, spent

three months in the summer of 2013 traveling 17,358 miles around the United States, visiting 31 states. Their goal was to document examples of climate resilience—uncovering stories of people and places adapting to the impacts of climate change. They set out to answer the question:

What does climate adaptation look like?

Kristen and Allie visited towns, cities, rural areas, and national parks meeting all sorts of people - city planners, natural resources managers, business owners, farmers, fisherman, foresters, homeowners, and community leaders.

Highlights from Michigan: [Ann Arbor](#) is investing in a newly restructured stormwater utility. The Detroit Climate Action Collaborative is leading the way to develop [Detroit's](#) first climate action plan that will

lay out strategies for both reducing greenhouse gas emissions and enhancing the resiliency of infrastructure and institutions. After a number of flooding events, the [City of Grand Rapids](#) is taking steps to improve its wastewater treatment plan for its stormwater system. Members of the [Pentwater Harbor Committee](#) are brainstorming solutions to address the unprecedentedly low lake levels that are creating challenges for larger boat traffic.

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Intergovernmental Panel on Climate Change - Headline Statements from the Summary for Policymakers

<http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>

“Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea levels have risen, and the concentrations of greenhouse gases have increased.”

“Human influence has been detected in warming of the atmosphere and the ocean, in changes in global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes. This evidence for human influence has grown since AR4. It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.”

-Approved September 27, 2013

MICHIGAN CLIMATE CHANGE INDICATORS REPORT RELEASED

In 2011, a working group of the Council of State and Territorial Epidemiologists (CSTE) proposed a list of indicators that health departments could generate and use for ongoing assessment of the impacts of a changing climate on health and health-related programs and policies in their state. In 2011, MICHAP participated in a pilot of 23 of these indicators, organized into 5 groups: environmental indicators, health outcome indicators, mitigation indicators, adaptation indicators, and policy indicators. Examples include: state greenhouse gas emissions rates and frequency of wildfires; trends in rates of Lyme disease, West Nile virus, and asthma hospitalizations; per capita energy consumption and vehicle miles travelled; state and municipal adaptation and mitigation plans; and development of state and local climate change action plans.

Indicators are intended to be descriptive summary measures that are easy to understand and straightforward to calculate from existing data; they are intended to help improve public health practice by providing information for decision-making and allowing tracking of trends over time.

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EPA RELEASES GREENHOUSE GAS (GHG) EMISSIONS DATA FROM LARGE FACILITIES

The U.S. Environmental Protection Agency (EPA) released its third year of GHG gas data detailing carbon pollution emissions and trends broken down by industrial sector, GHG, geographic region, and individual facility. The data, required to be collected annually by Congress, highlight a decrease in GHG emissions as more utilities switch to cleaner burning natural gas.

EPA's Greenhouse Gas Reporting Program collects annual GHG information from over 8,000 facilities in the largest emitting industries, including power plants, oil and gas production and refining, iron and steel mills, and landfills. In addition, the program is receiving data on

the increasing production and consumption of hydrofluorocarbon (HFCs) predominately used in refrigeration and air conditioning. The GHG Reporting Program is the only program that collects facility-level GHG data from major industrial sources across the United States.

The 2012 data show that in two years since reporting began, emissions from power plants have decreased 10 percent due to a switch from coal to natural gas for electricity generation and a slight decrease in electricity production. Fossil-fuel fired power plants remain the largest source of U.S. GHG emissions. With just under 1,600 facilities emitting over 2 billion metric tons of carbon dioxide in 2012,

these plants account for roughly 40 percent of total U.S. carbon pollution.

The data are accessible through EPA's online data publication tool, FLIGHT, which is available for both desktop and mobile devices. FLIGHT has been updated with new features, including the ability to view trend graphs by sector and facility, and download charts and graphs for use in presentations and reports. The data are also published through EnviroFacts, which allows the public to download data for further analyses.

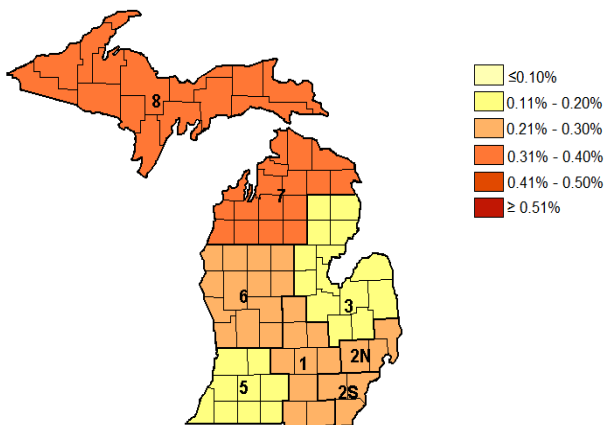
Access FLIGHT:

<http://www.epa.gov/ghgreporting/>

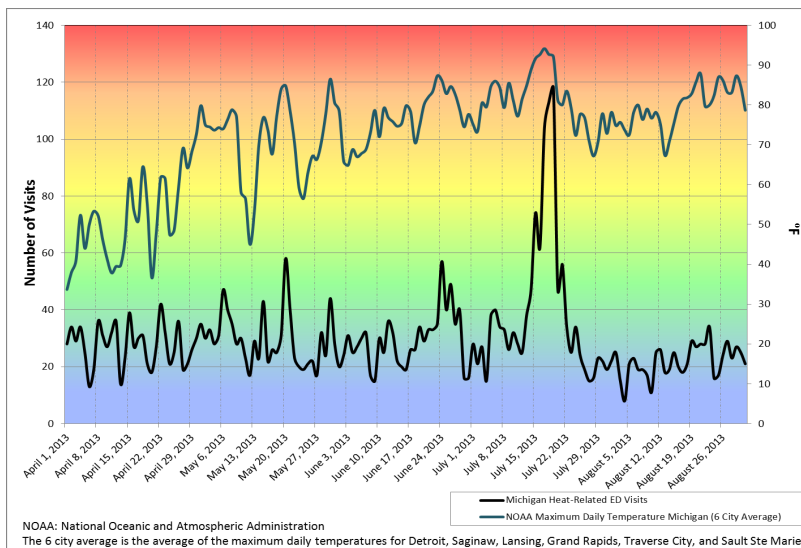
MICHIGAN HEAT-RELATED ILLNESS, EMERGENCY DEPARTMENT (ED) VISITS: 2013 SUMMARY

Statewide Heat-Related ED visits and National Oceanic and Atmospheric Administration (NOAA) Maximum Daily Temperature Averages for 6 Select Cities (April 1 - August 31, 2013)

All ED visits related to Heat, by Preparedness Region



Proportion of Heat-Related ED Visits of all ED Visits (April 1 - August 31, 2013)



NOAA: National Oceanic and Atmospheric Administration
The 6 city average is the average of the maximum daily temperatures for Detroit, Saginaw, Lansing, Grand Rapids, Traverse City, and Sault Ste Marie

MICHIGAN SYNDROMIC SURVEILLANCE SYSTEM (MSSS) SUMMER 2013 HIGHLIGHTS

Each summer the Michigan Department of Community Health's - Regional Epidemiologists monitor heat-related emergency department (ED) visits using the Michigan Syndromic Surveillance System. This system is used for early detection of heat-related illnesses to mobilize a rapid response if needed, thereby reducing morbidity and mortality among residents.

- There were a total of 4,541 hospital ED visits in Michigan with self-reported dehydration (3,553, 78.2%), sun-associated complaints (599, 13.2%), and/or heat-

associated complaints (389, 8.6%) between April 1, 2013 and August 31, 2013.

- Michigan experienced a heat wave from Monday, July 15 through Friday, July 19. For the majority of the state, maximum temperatures were at or above 90 degrees Fahrenheit each day during that period.
- There were less ED visits for heat-related illness in 2013 than the previous two summers when several spikes in heat-related illnesses were observed.
- Heat-related illnesses during the week of the heat wave increased 162% compared to the previous week.
- During the week of the heat wave, dehydration complaints increased 79.6%, sun-associated complaints increased 126.7%, and heat-associated complaints increased 900.0%.
- During periods of hot weather, increases in heat-related ED visits were seen among age groups 5 years and older but most significantly among those age groups between 18 years and 64 years as seen in the month of July.
- The highest male to female ratios were observed during periods of hot weather in the month of July.
- Although increases in dehydration were seen during periods of extreme heat, on average, dehydration complaints did not vary greatly by month while sun-

associated complaints gradually increased each month as summer temperatures climbed. The majority of heat-associated complaints were observed during periods of extreme heat.

- The greatest number of heat-related visits between April 1, 2013 and August 31, 2013 occurred in regions 2N, 2S, and 6, likely due to the higher population centers in those regions compared to other regions. *See map above*
- Regions 7 and 8 experienced the highest proportion of heat-related ED visits compared to all ED visits within those regions. *See map above*

For the full report, visit:

http://michigan.gov/documents/mdch/Michigan_Heat_Summary_Summer_2013_437200_7.pdf

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GREAT AMERICAN ADAPTATION ROAD TRIP CONTINUED...

To learn more about how communities across the U.S. are responding to flooding, heat waves, drought, rising sea levels, and other extreme weather events, visit

<http://adaptationstories.com>.

After the road trip concluded in August, Allie joined the carbon team at Ecosystem Marketplace in Washington D.C. and Kirsten began a NOAA Coastal Management Fellowship in Portsmouth, New Hampshire.

MICHIGAN CLIMATE CHANGE INDICATORS REPORT RELEASED CONTINUED...

MICHAP's pilot calculations and evaluation was provided to CSTE and was used to revise and improve the climate change indicators; current guidance is at

<http://www.cste.org/>

[page=EHIndicatorsClimate](http://www.cste.org/?page=EHIndicatorsClimate)

Recently, the CSTE working group posted guidance for generation of climate change indicators at the local level, available here: <http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/EnvironmentalHealth/ClimateChangeIndicatorsReport.pdf>

The report of the Michigan pilot indicators is available at the MICHAP website www.michigan.gov/climateandhealth.

GRAND RAPIDS MAYOR HARTWELL APPOINTED TO OBAMA'S TASK FORCE

President Obama has selected Mayor George Hartwell

as a member of his Task Force on Climate Preparedness and Resilience. The group's responsibility is to advise the administration on how the federal government can respond to the needs of communities nationwide that are dealing with extreme weather and other climate impacts.

President Obama established the Task Force as part of his Climate Action Plan to cut carbon pollution and prepare communities for the impact of climate change and also lead international efforts to address this global challenge. Thus far thirty-five Michigan officials who have signed a letter of support for President Barack Obama's climate action plan.

2012 WEST NILE VIRUS IN MICHIGAN UPDATE

Many states experienced a resurgence of arbovirus activity in 2012 with 5,674 human West Nile Virus (WNV) cases and 286 deaths reported in the U.S., the second highest number since 2003. Michigan was no exception with 202 cases and 17 deaths, the most human cases of WNV reported in the state since 2002. Of the 202 Michigan cases, 143 (71%) were classified as the more serious neuroinvasive disease (e.g., meningitis, encephalitis, acute flaccid paralysis). Many survivors of neuroinvasive WNV required long-term rehabilitation.

Epidemiology At A Glance:

- The age range for Michigan WNV cases was 2-91 years

with a median age of 57 years.

- The case fatality rate for patients with neuroinvasive disease was 12%.
- Blood donor screening detected 38 donors with evidence of WNV in their blood at the time of donation. Of these, 11 became symptomatic.

- 52% of cases were male.

To learn more about WNV, visit

www.michigan.gov/westnile

ABOUT GLISA CLIMATE

GLISAClimate is a subgroup of the Great Lakes Sciences & Assessments Center. GLISA bridges the gap between producers and users of scientific information. GLISAClimate is helping to address the need for downscaled climate information in the Great Lakes.

The GLISAClimate site serves as a portal for the collection of resources and resource narratives that support problem solving initiatives. Members of GLISAClimate submit resources and develop narratives for the purpose of sharing information and expertise.

Read more about the intended users of this site and how to use this site to contribute and collect useful resources.

<http://www.glisacclimate.org/about-glisa-climate>