



# MICHIGANVIEW 2018 - 2019

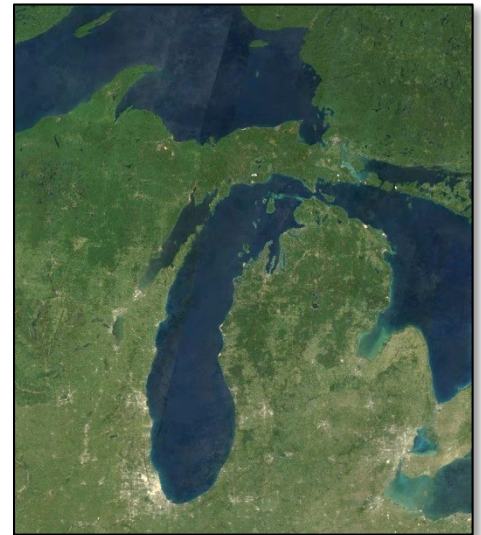


## MICHIGANVIEW HISTORY AND SUCCESSES

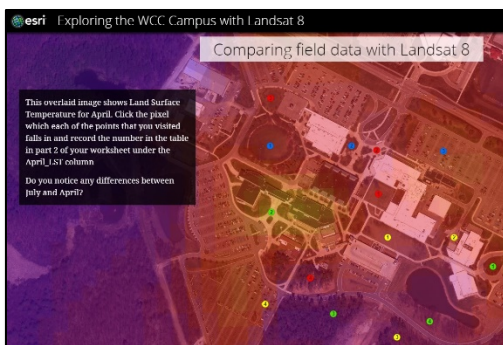
Since its formation in 2007, MichiganView has worked to promote and further the science of remote sensing within the State of Michigan. As a state member of the AmericaView Consortium, MichiganView's activities have focused on providing remote sensing imagery for the state, development of web-based technologies to improve remote sensing data access and exploitation, and outreach programs designed to make Michigan's citizens aware of the exciting ways remote sensing can be used to benefit people and the environment.

Recent work has focused on the creation of K-12 remote sensing education materials. By working with educators around the state, MichiganView has helped to implement exciting hands-on activities that incorporate remote sensing data and technology into science and math curricula. By introducing students to remote sensing during their K-12 education they have better opportunities to pursue degrees and careers in related fields. To date, MichiganView has worked with dozens of teachers and hundreds of students.

MichiganView has also been active in making access to data and derived products easier. MichiganView's website provides easy access to an archive of remote sensing data, and links to a variety of interactive maps containing useful geospatial information on a variety of topics. Additional work has included development of college-level Synthetic Aperture Radar course materials designed to train those interested in working in the geospatial field.



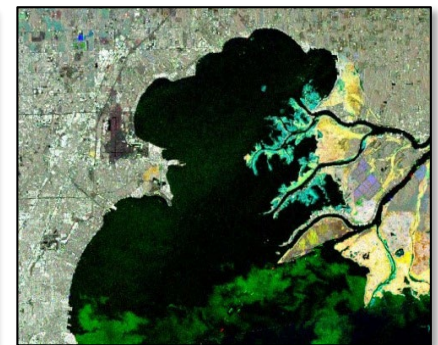
*A cloud-free color composite image of Michigan's upper and lower peninsulas created with imagery from Landsat 8. Landsat data is used in many MichiganView activities.*



*Screenshot of an interactive module created to introduce Environmental Science students at Washtenaw Community College to remote sensing.*



*MichiganView PI Nancy French presents to a group of students and teachers at an event at the Michigan Science Center.*



*Composite Sentinel-1 SAR image of Michigan's Lake St. Clair used in SAR training materials created by MichiganView*



The MichiganView consortium is based at the Michigan Tech Research Institute and is comprised of members from Michigan Technological University, the University of Michigan, and public and private school educators from around the state.

MichiganView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state. AmericaView is funded by USGS grant agreement G18AP00077.



AmericaView Website:  
[www.AmericaView.org](http://www.AmericaView.org)  
Christopher McGinty, Executive Director:  
[chris.mcginty@americaview.org](mailto:chris.mcginty@americaview.org)  
Lisa Wirth, Program Manager:  
[lisa.wirth@americaview.org](mailto:lisa.wirth@americaview.org)  
Brent Yantis, Board Chair:  
[rodney.yantis@louisiana.edu](mailto:rodney.yantis@louisiana.edu)

## MICHIGANVIEW 2018 - 2019 ACTIVITIES

One of MichiganView's primary efforts during the last year focused on introducing students to remote sensing science through development of hands-on activities that tie into Michigan's science curriculum standards. A main component of this activity is establishing partnerships that will allow students from a broad range of socioeconomic backgrounds to participate in activities involving remote sensing and geospatial technology.

MichiganView held several meetings with various groups in southeast Michigan during 2019 to discuss collaborations. Conversations with organizations such as the Wayne Regional Educational Service Agency have resulted in access to more teachers and students throughout Wayne County, which includes Detroit. For example, students from the Detroit Area Pre-College Engineering Program participated in an event that included a MichiganView remote sensing presentation followed by UAS demonstrations. Additional activities with other schools and organizations are under development.



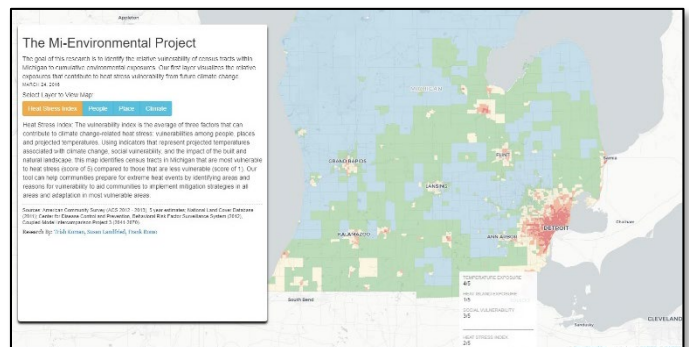
MichiganView Co-Investigator Mike Battaglia speaks to students from the Detroit Area Pre-College Engineering Program during their visit to the Michigan Tech Research Institute.



Environmental Science students at Washtenaw Community College using an interactive ESRI Story Map to assess surface temperature variability across their campus.

Another of MichiganView's main activities is focused on advancing technology to facilitate easy access to remote sensing data. Efforts to support efficient data transfer technologies have been a significant component of this activity, and have included numerous proposals and pilot projects with other AmericaView consortium members. As part of this activity, MichiganView's website was also updated to include a map-based interface for data downloads. Several new interactive web-maps that display products derived from remote sensing data were added to the website as well. One example of this is the Mi-Environment tool, which identifies vulnerable Michigan communities based on social, climatic, and environmental factors.

Although MichiganView has traditionally worked with K-12 students and educators, an opportunity to work with Washtenaw Community College resulted in the inclusion of remote sensing content in the college's GIS and Environmental Science courses. The GIS students completed a lab activity focused on utilizing Landsat data and computing basic metrics such as the Normalized Difference Vegetation Index. The Environmental Science students participated in a field data collection effort on campus and analyzed their data with Landsat imagery using an ESRI Story Map created for the activity (<http://arcg.is/1qHOLe>). Additional activities and lesson plans are being developed with WCC with the goal of expanding the remote sensing knowledge of both students and instructors.



A screenshot of the Mi-Environment tool, which was presented at a legislative hearing on climate change and health in April 2019.

MichiganView Principal Investigator:

Dr. Nancy French

Michigan Tech Research Institute

734-913-6844

[nhfrench@mtu.edu](mailto:nhfrench@mtu.edu)



<http://www.michiganview.org>