



Michigan Chapter

Winter 2021

Fostering the science and art of soil and water conservation in Michigan and the Great Lakes Region.

Since the Fall Newsletter, what a spectacle of events we've witnessed! Between the Covid-19 vaccine rollout, the polar vortex, a deadly Texas blackout, and for the first time ever in our nation's history, a transfer of presidential power marred by serious violence. In what are certainly among the most turbulent days of our history, I'm reminded of the Boy Scout's motto from my youth: "Be Prepared."

Merriam Webster's Dictionary defines "**conservation**" as follows:

"careful preservation and protection of something *especially*: planned management of a natural resources to prevent exploitation, destruction, or neglect."

Whether we're considering predominantly "natural" or "anthropogenic" systems, it's clear that we can not assume such systems will take care of themselves. To sustain healthy systems requires that we actively plan and guard against exploitation, destruction and neglect. Planning requires accurate information: collecting and disseminating such information to that end is largely what we strive to do in our Chapter, so it is fitting the feature article this quarter is about "systems thinking" and sharing in broad collaboration through information technology.

2021 ANNUAL ANR SEMINAR/WEBINAR

Meanwhile, our Chapter carried on with planning and hosting its ANR Seminar as a Webinar entitled "A Systems Approach for the Future of Soil Health and Water Quality." President Glenn O'Neil moderated the programs held the mornings of March 2nd and 3rd with presentations by Dr. Eileen Kaladivko, Purdue University; Chapter Treasurer Kelly Goward, Environmental Program Manager at Macatawa Area Coordinating Council; Tim Boring, President, Michigan Agriculture Advancement; and farmer Tim Kruithoff of Kent City, MI, speaking with Chapter Vice President Katie Droscha. The presentations for both days were recorded and are available for registrants, on the Michigan Chapter SWCS's YouTube channel. The links have been sent to those who registered for the webinars.

Additional information including speaker biographies and earlier seminars and presentations can be found at <https://www.migswcs.org/events-and-archives/>

Introducing Wildones.org “Healing the Earth one yard at a time.”

A colleague at work sent out a link to a newsletter from Wildones.org. Based in Wisconsin, Wild Ones has several chapters in Michigan listed here: [Chapters in Michigan - Wild Ones: Native Plants, Natural Landscapes](#) . A big part of their mission is designing native garden landscapes appropriate to specific ecoregions. Seven professionally-designed, native garden plans are available free to use in the ecoregions of Chattanooga, Chicago, Milwaukee, Minneapolis, St. Louis, Tallahassee and Toledo. The designs can be downloaded from Wild Ones’ newly launched nativegardendesigns.wildones.org website. Their newsletter is impressive, in my opinion, for its practical content and beautiful photography. They are also working with animation, an example of which describes a well-appointed residential native landscape that for many of us will remain “aspirational.” [Landscape Design Featuring Native Plants - Greater Toledo Area - YouTube](#)

FEATURE ARTICLE

Swarming and Sustainability - A Long-term Vision for Collaborative Management of Michigan’s Natural Resources

Three members of the Michigan Chapter of the Soil and Water Conservation Society are happy to introduce a new initiative. Brockton Feltman, a PhD student at Michigan State University (MSU) studying water governance; Zachary Curtis, co-founder of Hydrosimulatics INC. ,an MSU small-business spinoff; and Jon Bartholic, the former director of the Institution of Water Research at MSU, are facilitating a broad community discussion around emerging opportunities for sustainable, long-term management and protection of Michigan's land, soil and water.

We are emphasizing “system-based” thinking to tackle issues and challenges in the Michigan natural resource community. We hope to bring together different leadership perspectives and create new linkages across institutional boundaries. How can actors interested in resource sustainability develop innovative ways of collaborating towards shared goals?

Additionally, our group seeks to take advantage of information technologies that allow stakeholders and decision-makers to understand complex social-ecological systems in unprecedented detail. We are interested in learning how actors involved in Michigan resource management are using information technologies to guide wise sustainable decision-making, and communicating these insights broadly.

In the graphic below, an illustrative example from a groundwater study in west-central Michigan is presented to demonstrate a process for complex problem-solving that acts as a guide for how sustainability initiatives can be successful. We plan on holding a virtual meeting about our initiative at the end of March or early April. If you are interested in joining conversations about leadership in the realm of resource management, or how you are using information technology to solve problems, please contact Brockton Feltman at (517) 803-6766 or feltmanb@msu.edu.

Thank you, and we look forward to speaking with you soon.

SYSTEMS-BASED PLANNING AND LONG-TERM SUSTAINABILITY OF MICHIGAN'S NATURAL RESOURCES

An interdisciplinary think tank focusing on:

- Creating connections and learning opportunities across projects and stakeholders.
- Using modeling tools to facilitate long-term planning and resource sustainability.
- Integrating findings for planning and implementing sustainable solutions.



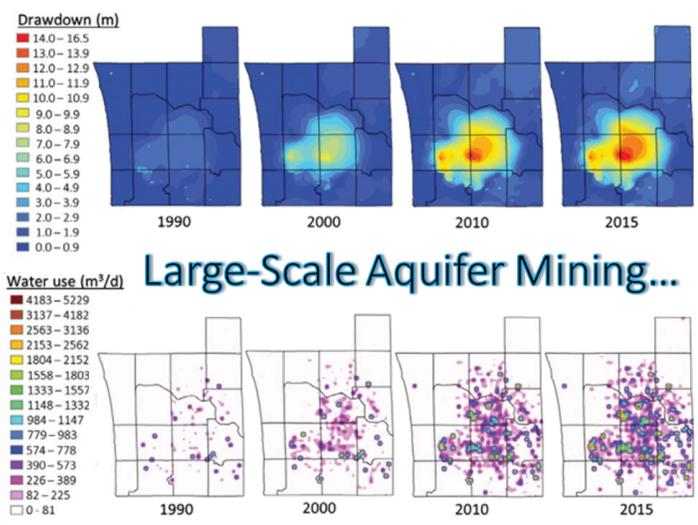
Example Project

Ottawa County Groundwater Study

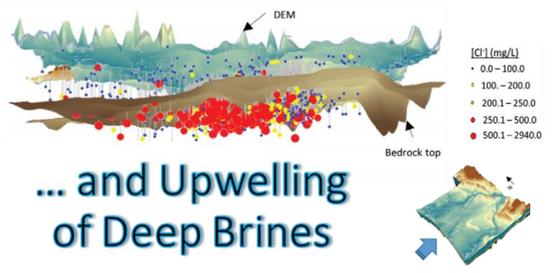
COLLECTIVE CONSEQUENCES TO OUR SHARED RESOURCES

Problem: In recent decades, countywide, cumulative increases in groundwater use by various users depleted reserves and impaired water quality

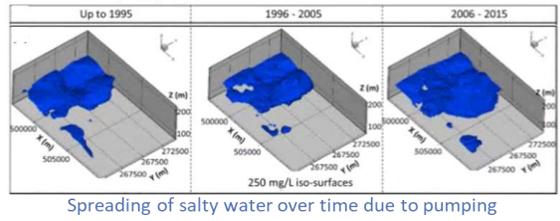
Solution: All individuals / organizations, working together to assess, analyze, plan and develop together long term water resource sustainability solutions for human and natural resources of the county.



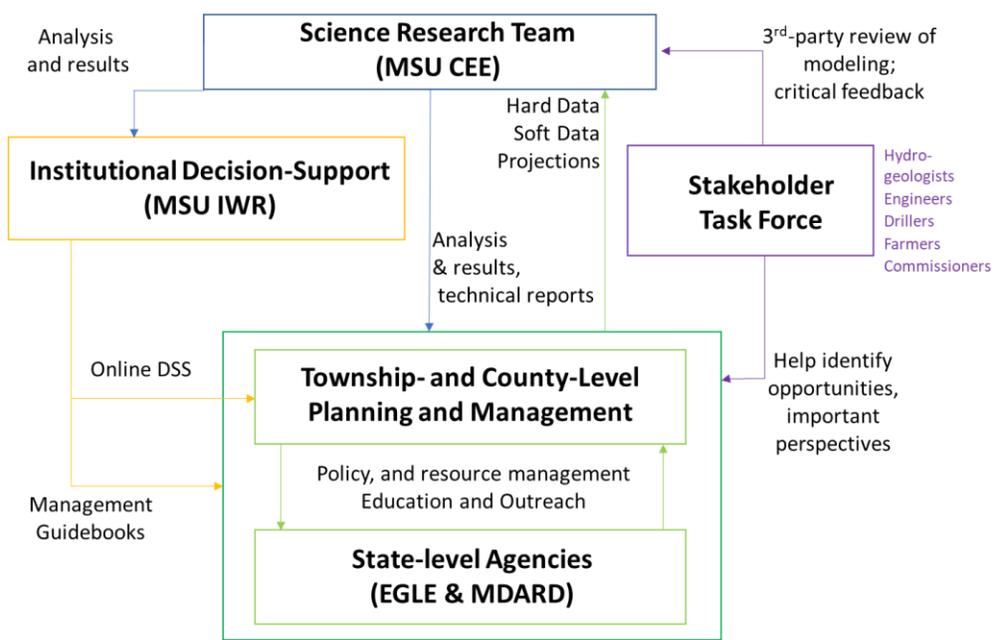
Large-Scale Aquifer Mining...



... and Upwelling of Deep Brines

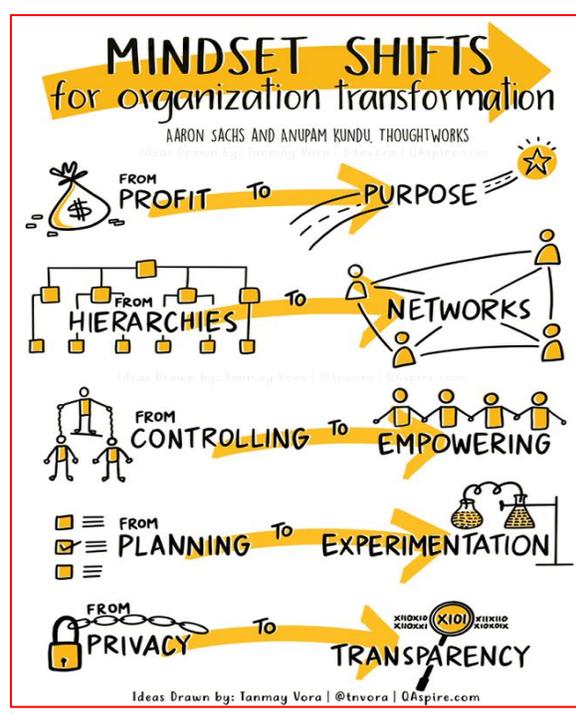


FRAMEWORK & PROCESS FOR SUCCESS



Opportunities for the Future

'Mindset Shifts' through Networking, Empowering all parties involved, plus experimentation and transformation through Systems Based Planning, provides Great Opportunities for integrating findings for implementing Sustainable Solutions for us and our Natural Resources



Importance of "Swarming" and Data-Intensive, Adaptable Management:
 "The ability to effectively manage our water resources is reliant on the availability of quantifiable data that can continuously inform our decision-making. The 7-year scientific study of Ottawa County's hydrogeologic conditions was a necessary and critical starting point to developing a systematic approach to improving our water resource management efforts into the future. Data is the key to drive necessary policy and behavioral change as it relates to water use and availability in Michigan's fastest growing county."
 - Paul Sachs, Director, Ottawa County Planning and Performance Improvement Department

SOIL HEALTH VIDEO

If you haven't seen a Mollisol before, you'll see one in this video.. They have a thick, dark and fertile "mollic epipedon" which develops over centuries beneath grassland in semi-humid environments too dry to support forests. Although Abby is working in North Dakota, the point she makes surely holds true for many Michigan soils and has implications for groundwater recharge as well as soil health.

Click on the link here [Soil Health Minute with Abby Wick, NDSU Extension](#)



LEGISLATIVE COMMITTEE REPORT

Legislative Committee Chair Jerry Miller reports that the Senate Agriculture Committee held a hearing entitled "Farmers and Foresters: Opportunities to Lead in Tackling Climate Change" on Thursday March 11. Senator Debbie Stabenow Chairs the Committee and is a co-sponsor of legislation pertaining to carbon markets (Growing Climate Solutions Act). A video recording of the meeting, nearly three-hours long, is available here: [Hearing | Hearings | The United States Senate Committee On Agriculture, Nutrition & Forestry](#).



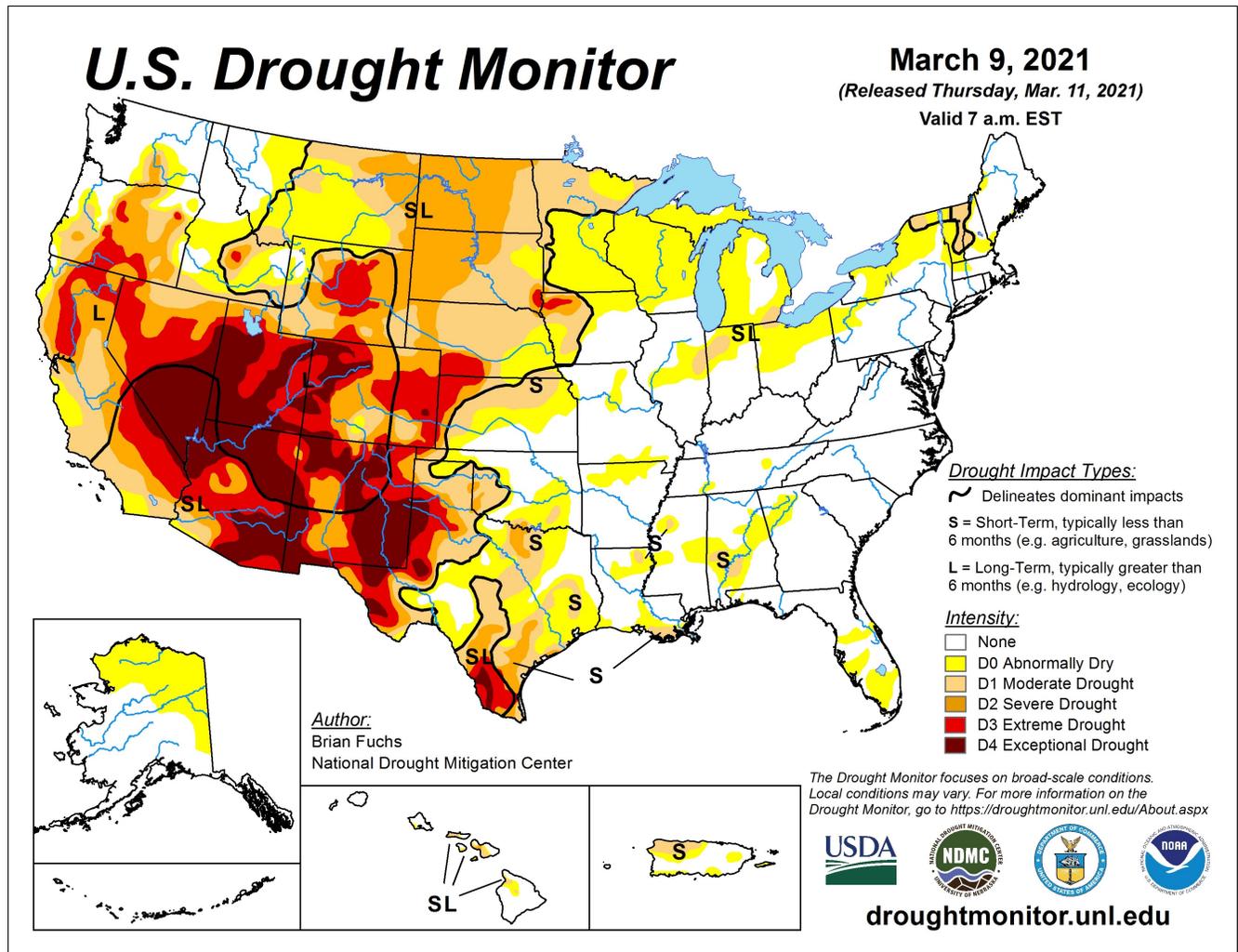
Western basin of Lake Erie viewed from Luna Pier, MI February 27, 2021. Photo by John Freeland

PICTURES FOR THE NEWSLETTER

Have some interesting pictures to share with a Michigan Soil & Water theme? If you would like to share them with the Chapter, please send them to John Freeland, Newsletter editor at freeland.nrc@gmail.com

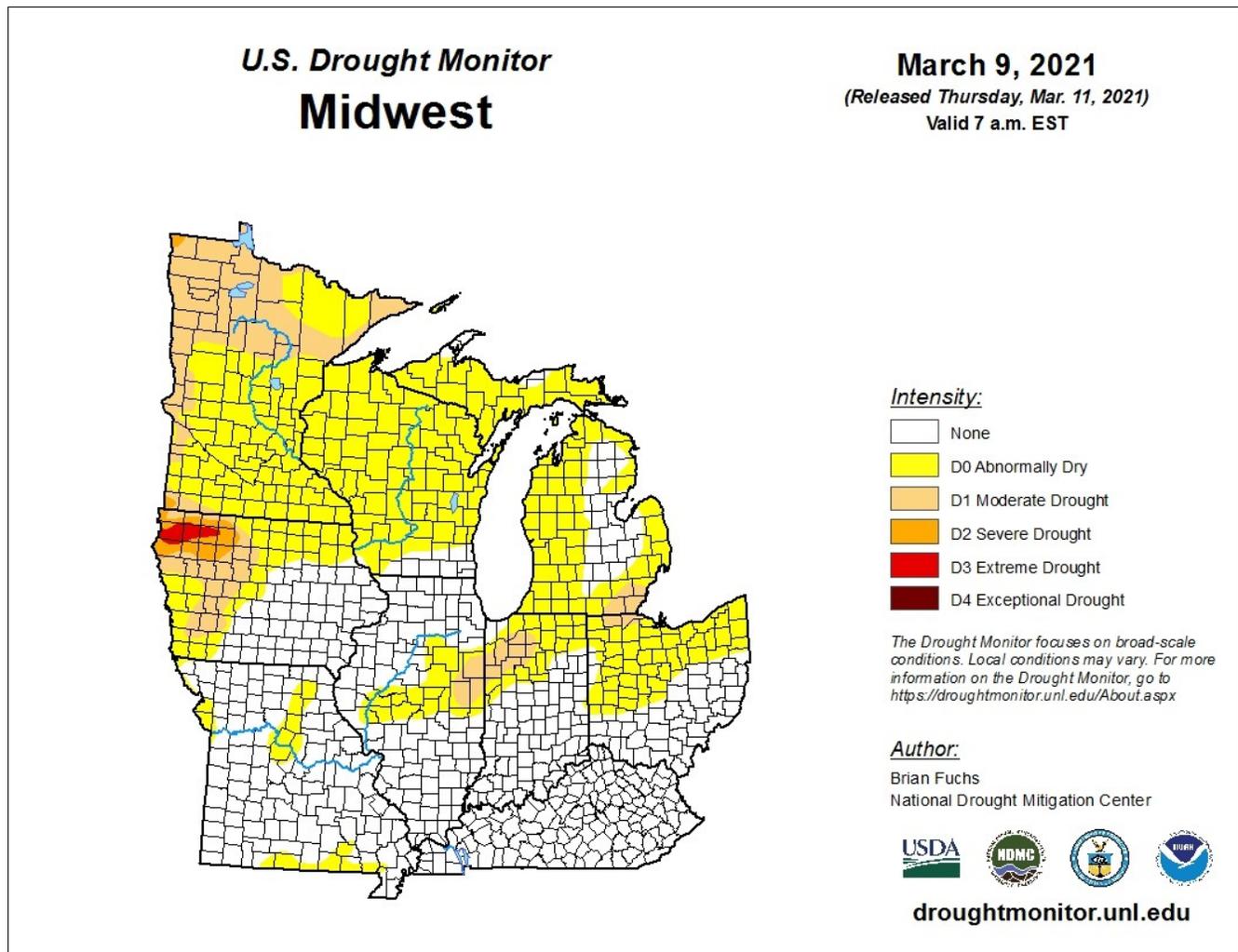
NATIONAL PERSPECTIVE

Because we Michiganders are *peninsular*, not *insular*, we are connected to the rest of the nation and interested in it's soil and water realm. [Current Map | United States Drought Monitor \(unl.edu\)](#) The dark brown area is "exceptional drought." The southwestern states remain largely parched with moderate to extreme drought in the Central Plains. Extreme drought shows up as far east as western Iowa.



MIDWEST PERSPECTIVE

Abnormally dry and moderate drought conditions cover roughly half or more of the Great Lakes Region with some moderate drought conditions in parts of Michigan, Ohio, Illinois and Indiana corn belt. On March 12, the Michigan DNR issued a [statement warning of fire danger](#) and reported a recent fire in the Thumb region scorched 432 acres.



LINKS

[Michigan Soil and Water Conservation Society - YouTube](#)

[North Central Region | Soil and Water Conservation Society \(swcs.org\)](#)

[Great Lakes Echo - Environmental news across the basin](#)

[Michigan Farmers Union | United to Grow Family Agriculture](#)

[American Farm Bureau Federation - The Voice of Agriculture | Homepage \(fb.org\)](#)

[W.K. Kellogg Biological Station • Michigan State University \(msu.edu\)](#)

[Great Lakes Restoration Initiative | Great Lakes Restoration Initiative \(glri.us\)](#)

[Home | Hoosier Chapter of the Soil and Water Conservation Society \(hoosierchapterswcs.org\)](#)

[GLIN: Great Lakes Information Network - Great Lakes Commission \(glc.org\)](#)

[MSU Water Withdrawal Statistics](#)

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