

Southwest Michigan Field Crops Updates

Here are updates from the MSU Extension Field Crops team in Southwest Michigan. If you have any items you would like me to include in future email updates - whether events you want others to know about or topics you would like to have addressed - please send me an email or call the office.

Seeking Office Support Staff at Centreville Extension Office

MSU Extension provides valuable services in every county in Michigan. Although not every county has a field crops educator housed in the county, we provide coverage to every county. We also offer services with health and human nutrition and, of course 4-H programming. It literally takes a team to provide our constituents with these educational opportunities.

At the St. Joseph County Extension office, we are in need of an additional full-time office support staff. This person will be a MSU employee with full benefits and will support various aspects of our team's programming efforts. If you know someone who is friendly, a self-starter, works well with people, and preferably has some secretarial experience, please direct them to [this job posting](#) found on the MSU Human Resources website or [this position description](#). We will begin interviewing as soon as we have a pool of qualified candidates, hopefully sometime in March.

Pesticide Disposal to Protect Water Resources

A group of Extension educators in the NCR Academy [I participated in this a couple of years back] is developing a series of short educational videos to inform people how to properly use, apply, and dispose of pesticides to protect water resources. The training is meant for anyone from the home applicator using "off-the-shelf" products to licensed commercial/private applicators. To help guide their topic selection, they have prepared a [short survey](#) [took me 3 minutes]. Please consider taking this survey to help them hone in on what resources would be most needed for the various groups of stakeholders.

2019 Michigan Soil Sample Summary

Most farmers understand that soil testing is a critical part of any crop nutrient management plan. Adding fertilizer or manure on the "we've always applied this much" premise is risky both on the high end (over-application, low or negative economic return, potential water pollution) and the low end (insufficient levels for crop success). Getting your soils tested every 3-5 years is a best management practice. It is also interesting to know what soil tests are like on other farms. The tables below were generated by [A&L Great Lakes for the 2019 season](#) for Michigan as a whole (top) and Southwest Michigan (bottom).

Soil Test	Statistics		Percent Samples by Soil Test Rating				
	Average	Std. Dev.	Very Low	Low	Medium	High	Very High
Organic Matter,%	2.8	4.4	2.6	62.6	31.1	1.6	2.1
Phosphorus (P1), ppm	58	68	3.5	12.9	16.2	27.0	40.4
Phosphorus (P2), ppm	84	77	1.9	9.4	16.0	29.0	43.8
Potassium (K), ppm	128	63					
pH (1:1)	6.7	0.7	1.6	7.9	51.6	26.5	12.5
CEC, meq/100g	8.7	5.0	2.7	50.0	39.7	6.4	1.1
Sulfur (S), ppm	10	18.5	1.5	45.2	40.7	6.5	6.2

Soil Test	Statistics		Percent Samples by Soil Test Rating				
	Average	Std. Dev.	Very Low	Low	Medium	High	Very High
Organic Matter,%	2.7	4.6	2.8	70.9	22.3	1.7	2.4
Phosphorus (P1), ppm	73	104	3.2	11.7	15.3	25.3	44.6
Phosphorus (P2), ppm	77	105	3.1	28.1	21.9	12.5	34.4
Potassium (K), ppm	122	62					
pH (1:1)	6.4	0.7	6.0	11.3	60.2	19.5	2.9
CEC, meq/100g	7.4	4.5	3.6	65.8	26.0	3.8	0.9
Sulfur (S), ppm	10	11.4	1.7	47.5	34.7	7.2	8.9

Tri-State Fertilizer Recommendations Changing

You may have heard in the last year or so that the Tri-State Fertilizer Recommendations for agronomic crops will be updated soon. The [most recent version available here](#) is from 1995, and much work has been done at The Ohio State, MSU, and Purdue in the last five years to verify whether those recs are still valid. Here is a summary of what we can expect according to Harold Watters, Ohio State University Extension agronomist.

- From 2014 to 2017, over 300 on-farm strip trials were conducted across Ohio.
- Yield responses to P and K fertilizer in soils at or above the current maintenance range were very rare.
- Long-term data show that when soils are in the current maintenance range, they supply sufficient P and K to meet corn and soybean demand for many growing seasons without yearly fertilization.
- Recommended corn N rates were updated and are based on maximizing farmer profitability, not maximizing yields (<http://go.osu.edu/corn-n-rate>).
- Corn, soybean and wheat today yield more grain with less nutrients.

They also learned that most fields are in the maintenance range, unless they were rented, and that crop nutrient removal was less than it was in the past (see table).

Nutrient	Current Data	1995 Tri-State	% decrease
Corn			
P₂O₅	0.34	0.37	5%
K₂O	0.19	0.27	26%
Soybean			
P₂O₅	0.80	0.80	—
K₂O	1.08	1.4	19%
Wheat			
P₂O₅	0.49	0.63	22%
K₂O	0.24	0.37	35%

Other big news is that they will reportedly be making recommendations based on a Mehlich III soil test for both P and K. The previous Tri-State made recommendations based on Bray P1 for P and ammonium acetate test for K. If we stay in the agronomic ranges for P & K, then the tests are not that different. Based on the Mehlich III test, the maintenance range for P is 20 to 40 ppm and for K is 100 to 150 ppm.

If soil test levels are above maintenance range, then no nutrient application (P and K) is needed. So that things do not get too out of whack, sample and retest every three to four years. Generally, we believe the research supports these remarks as well:

- If P level is below the critical level, then make an annual application. A band application of P₂O₅ can be beneficial when P test is below maintenance range.
- If the CEC is very low or very high an annual K₂O application may be warranted. Low is below 6 meq/100g and high is above 25 meq/100g.

MSU's soil lab is currently using Bray P1 for P and ammonium acetate test for K, and they do not have plans to change in the foreseeable future. A&L Great Lakes has been using Mehlich III and performing back-calculations for reporting, and they will continue to do that until or unless they receive a request from a customer for straight Mehlich III values.

Take Action Free Webinar Series

Take Action is collaborating with university partners to host a weekly webinar series featuring herbicide-resistance management topics. Each webinar features two weed scientists, and the series is hosted by Bill Johnson at Purdue University and Mark Loux at The Ohio State University. A new webinar is available every Thursday at 11 AM EST through the end of March. Sign up for the next webinar [by visiting our homepage](#).

MSU Farm Stress Study - earn up to \$60 in Amazon e-gift cards for participation

Farming is tough. From weather to equipment breakdowns, there are a lot of things that can cause stress. Researchers at Michigan State University Extension are conducting a research study to learn more about struggles Michigan farmers experience and what types of information may help. This study will take place online and via text message. Study participants may earn up to \$60 in Amazon e-gift cards!

To sign up, click on the following link to complete a 1-minute survey to determine if you are eligible to participate: [Farm Stress Eligibility Survey](#). More details are below.

Farm Stress Study Information

Our study involves the use of text messaging to provide information to help farmers manage farm stress. By participating in this study, you have the opportunity to learn more about coping with farm struggles and to provide invaluable insight into how we can help farmers in the future.

This study will take place entirely online and via text message. That means that you do not have to go anywhere to participate, and you can participate at a time and location that makes the most sense to you. We are not asking for much of your time.

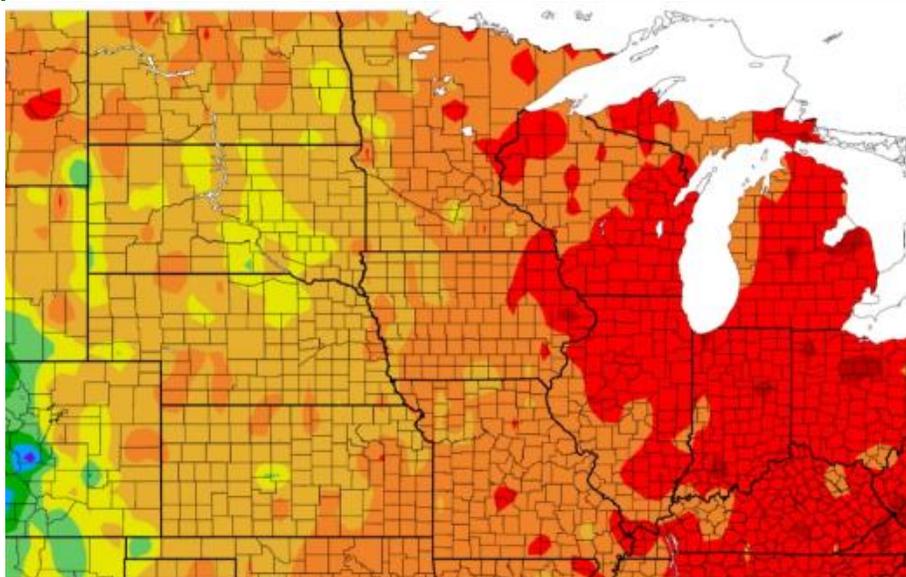
If you are eligible to participate, you will be assigned to one of two groups. You have an equal likelihood of being in either group. Both groups (A and B) will complete two online surveys 12 weeks apart. Group B will also receive 2-4 text messages per week for 12 weeks with information about managing farm-related stress. These text messages will come from MSU Extension. Occasionally, Group B members will also receive a text message asking you to answer a brief question about your opinions about the text messages, stress, and farm-related information. Finally, a small number of group B members will be chosen at random at the end of the 12 weeks to participate in a voluntary 30-minute phone interview.

Surveys for both groups will be sent via an email link and completed online. They will include questions about you and the struggles you may be experiencing on your farm. Each survey should take no longer than about 30 minutes to complete. You will be compensated with a \$40 Amazon gift card at the end of the study after you have completed Survey 1 and Survey 2, and selected participants will receive \$20 for the interview.

If you are interested in participating, please complete this brief survey to determine if you are eligible to participate in the Michigan State University Farm Stress Study: [Farm Stress Eligibility Survey](#).

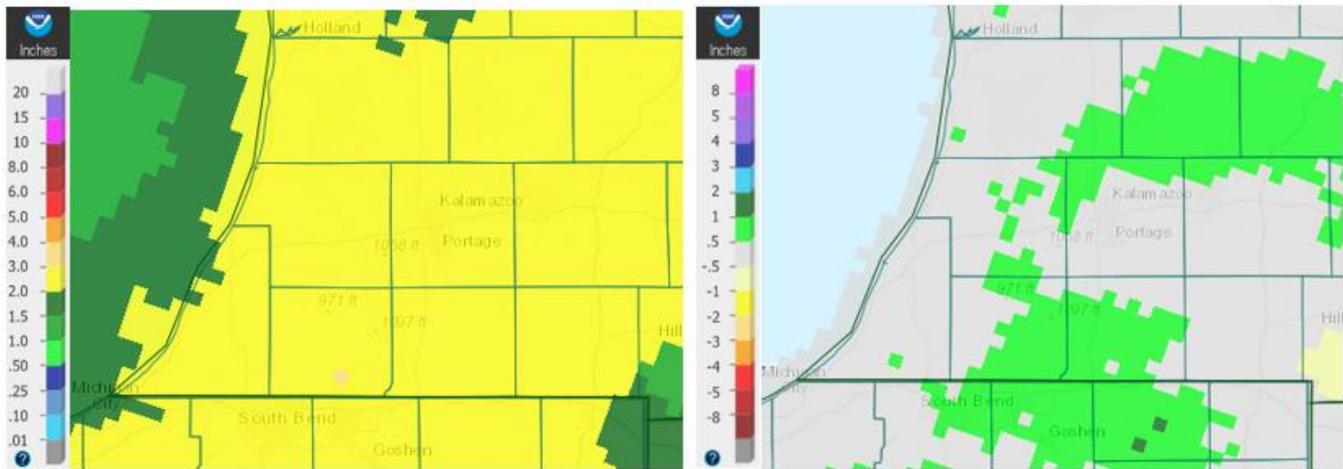
For more information on farm stress resources from MSU Extension visit: [MSU Extension Farm Stress Resources](#).

Weather Update (in graphic form)

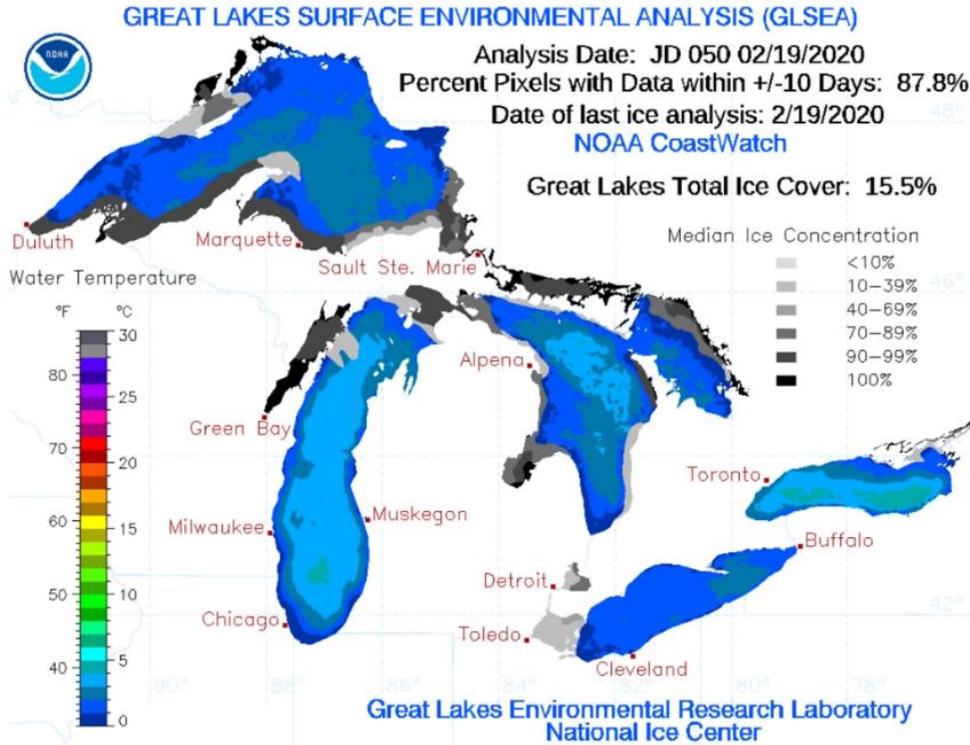


Source: HPRCC, hprcc.unl.edu

60-day temperature departure from normal since the end of 2019.



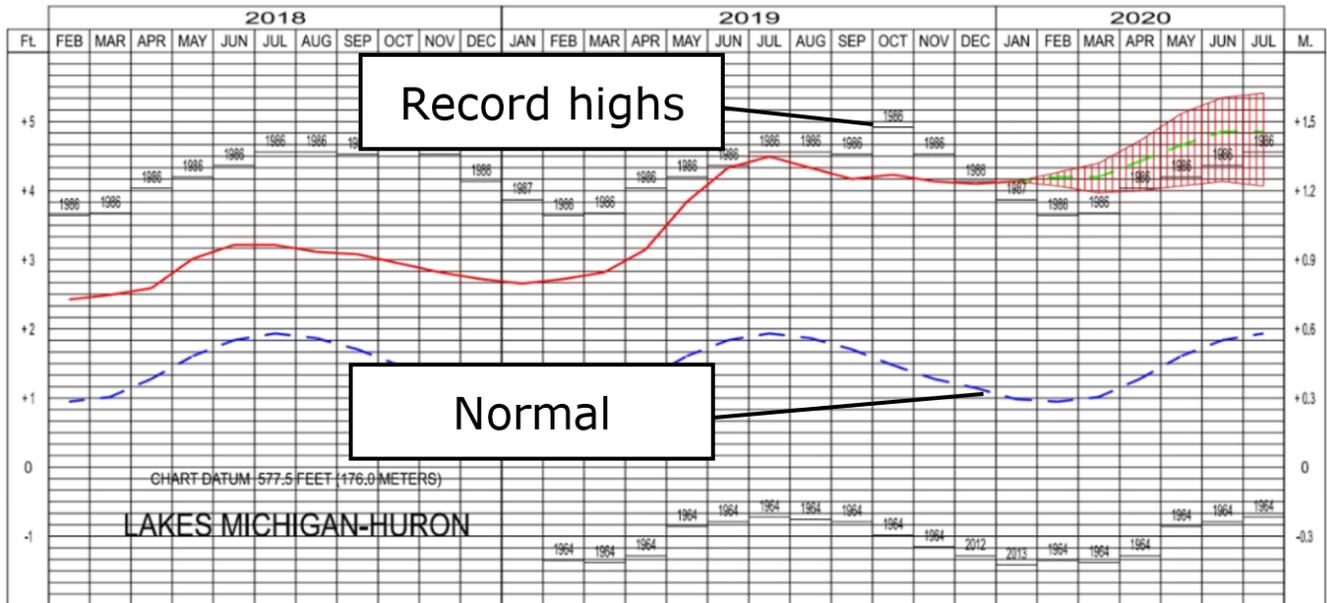
Precipitation totals in the last 30 days - pretty much normal for February for SW MI.



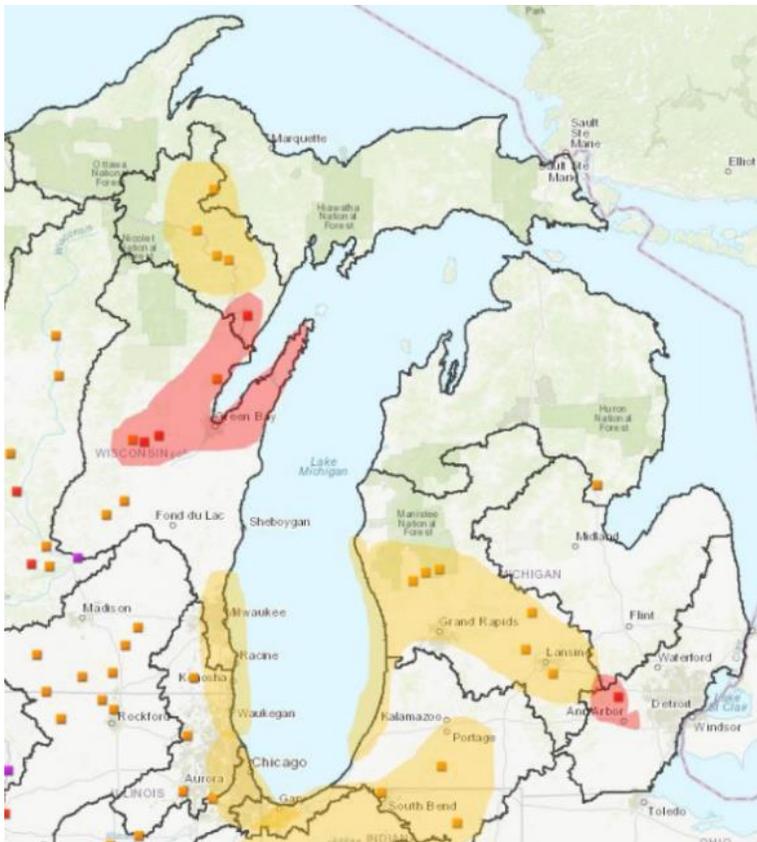
Great Lakes are relatively warm with very little ice cover.



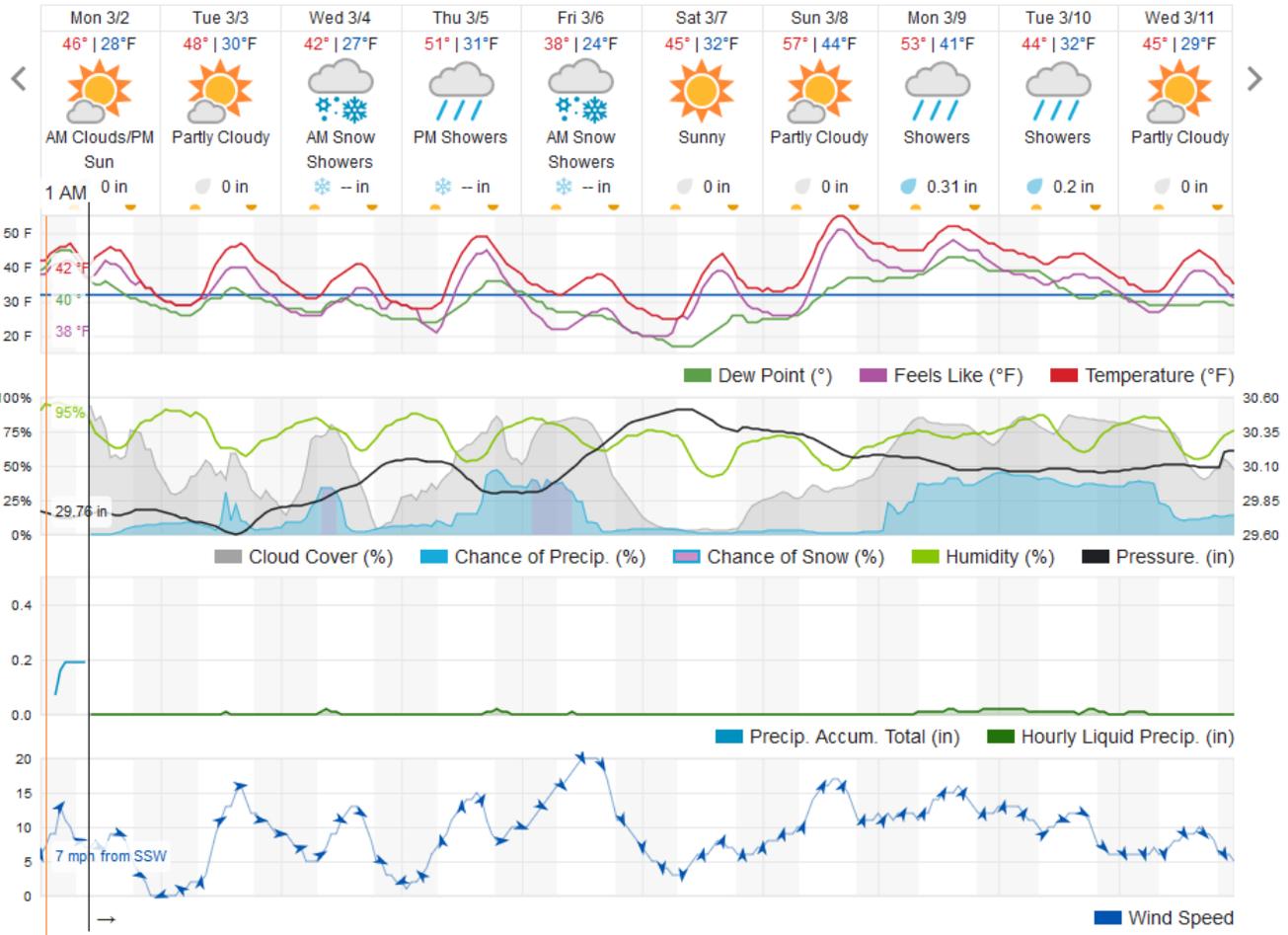
One impact of no ice cover on Lake Michigan.



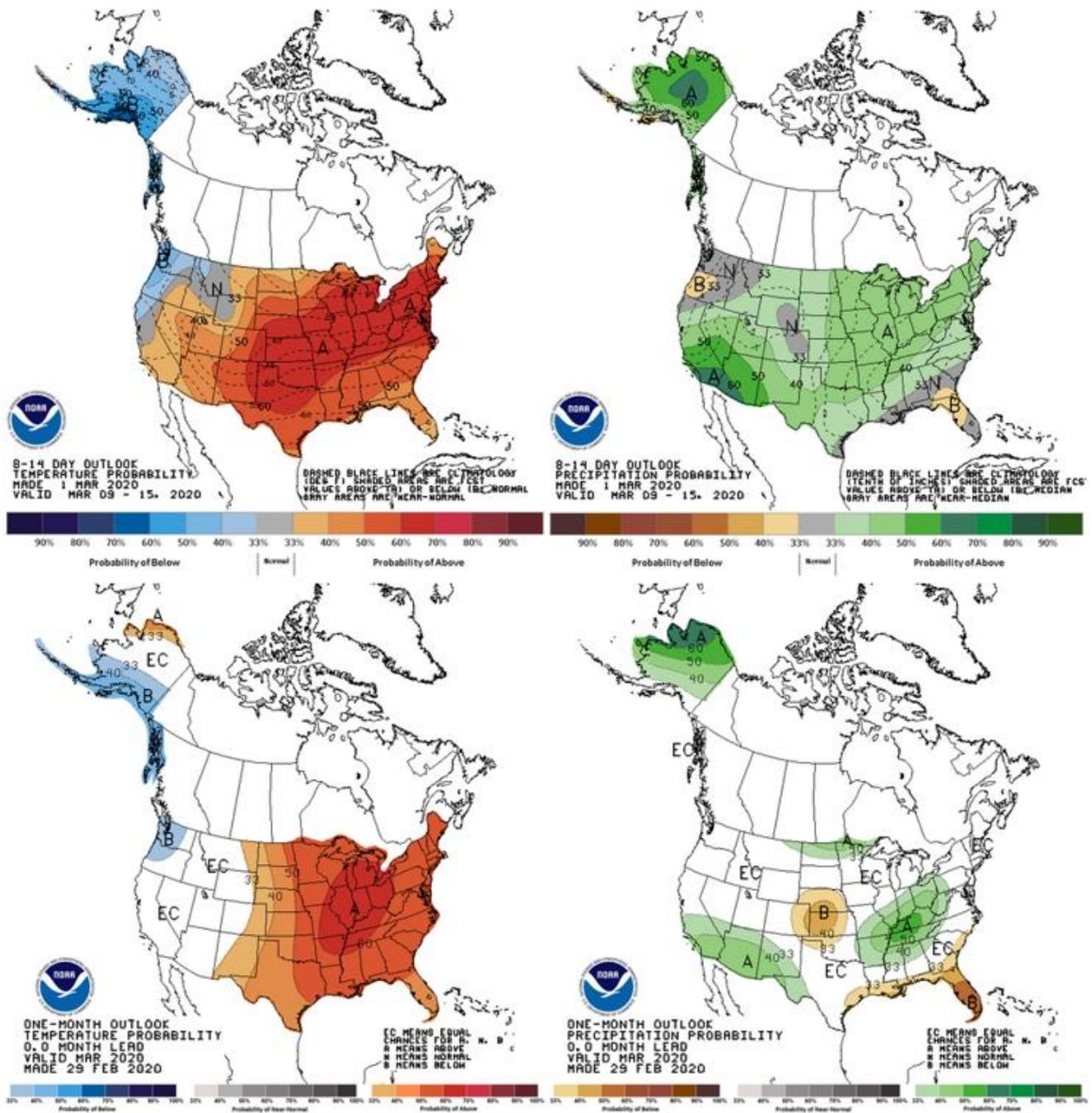
Lake Michigan levels are expected to be near or at record-setting levels through June. With soil moisture levels in the 95th percentile for our region, this could present challenges, particularly with creek and river levels returning to normal following heavy rain events.



Only minor flooding is expected for the St. Joseph River due to lower snow water content even though soil moisture remains high.



The 10-day forecast for Centreville according to wunderground.com.



National Weather Service 8-14 day outlook (Mar 9-15, above) and one-month outlook for March (below) for temperature (left) and precipitation (right). This looks pretty definite that we'll be warmer than normal this month which should help to dry out fields.

Job Board

I have never included this before, but I received a job posting and was asked to publicize it. If you know of other opportunities for agricultural work in SW MI, feel free to send them to me and I will include in future newsletters. I think I'll just go one-way on this, so please don't send me any "jobs wanted" information.

- Summer field inspectors for the Bayer plant in Constantine. Late June through early August. Contact Hadlee Swope (call/text(269) 535-5011 or j.swope@bayer.com) for more information.
- Other similar positions with seed corn companies and Michigan Crop Improvement will also be open, so contact these companies for more information. Ex. For MI Crop Improvement, contact Chris Tiedje (tiedjec@michcrop.com, 517/332-3546 or 517/449-5160)

Calendar

Titles are clickable links to online content when highlighted and underlined

- March 2** **Field Crops Webinar Series**. 7-8pm Monday evenings through March 30. Participants will learn how to enhance their corn, soybean, small grain and forage production systems in the coming season and have an opportunity to ask questions of MSU agricultural experts. Participants can register for single sessions (\$5 each) or the entire 8-week series (\$20). One RUP credit will be available for each live session. All archives will be available. Register online. Contact Eric Anderson (eander32@msu.edu, 269-467-5511) with questions.
- March 4** **Cover Your Future**. 9am-3pm. Elkhart County Community Center, Elkhart County 4-H Fairgrounds, Goshen, IN. A meeting and tradeshow on options in conservation management. Cost is free, contact the SWCD office at (574) 533-4383, ext 3 or email latkins@elkhartcounty.com to register.
- March 10** **Farming for the Future**. 8:30am-3pm. Van Buren Conference Center, Lawrence MI. Van Buren Conservation District's annual grower meeting, this year featuring Gabe Brown. Free, register online to reserve lunch. **SOLD OUT!** They have a long wait list, so if you signed up but cannot go, please contact them.
- March 10** **Preparing for the Season**. 9:00am-2:30pm. Burnips Equipment, 55232 Franklin Dr., Three Rivers. Equipment Info. And MDARD update on WPS, RUPS, recordkeeping and bulk storage. Register by March 6th by emailing MDARD inspector Steve Lozmack (lozmacks@michigan.gov or 269-208-6890). Lunch provided by Burnips. Register by March 6.
- March 15** **ARC/PLC and NAP Deadlines**. Deadline for making ARC/PLC decisions impacting 2019 and 2020. Deadline for spring-seeded crops coverage for Noninsured Crop Disaster Assistance Program (NAP). Contact your local FSA office.
- March 17** **Specialty Crop Irrigation Meeting**. 9:00-noon. Southwest Michigan Research and Extension Center, 1791 Hillandale Rd., Benton Harbor, MI. An irrigation update for fruit, vegetable, ornamental and other horticultural crops. Contact Lyndon Kelley (269-467-5511 or kelleyl@msu.edu) for more information.
- April 6** **RUP Core Training and Testing**. 8:30am-12pm. **St. Joseph County** MSU Extension Office, 612 E. Main St., Centreville, MI. A review of the Core Pesticide Applicators Manual to prepare for the MDARD Pesticide Applicators Certification Exam. Call the Extension office (269-467-5511) to reserve your seat. Cost is \$20/person. Those taking the exam will need to sign up on MDARD's website (choose "Enter as Guest") or call 1-800-292-3939 and bring a separate check. Three RUP credits available to those with a non-expired pesticide applicator license.

MSU Extension Digest Briefs

Variety matters in cover crops

PUBLISHED ON FEBRUARY 26, 2020

Cover crop varieties are not all created equal. Find out which one is best for your purpose in the 2019 Michigan Cover Crop Variety Test Report.

Choosing cover crops: Think like a plant!

PUBLISHED ON FEBRUARY 25, 2020

When selecting a cover crop, consider the life cycle of different species to ensure they grow best at the time of year when planted.

Soybean production lessons learned from the 2019 growing season

PUBLISHED ON FEBRUARY 20, 2020

Many soybean producers would like to forget the 2019 growing season. However, there may be some important lessons that can be learned that will serve producers well in the future.

Identifying and mitigating the risks of ultra-early soybean planting

PUBLISHED ON FEBRUARY 20, 2020

Understand the risks associated with planting soybeans during late March to mid-April, and how to mitigate them.

Handy Bt Trait Table for U.S. corn production updated for 2020

PUBLISHED ON FEBRUARY 18, 2020

Corn growers can use the 2020 Bt Trait Table to keep track of Bt corn traits, efficacy and refuge requirements.

Lessons learned from the 2019 season parts 1-4

PUBLISHED ON FEBRUARY 13, 2020

This article will focus on the importance of farm's financial status. Understanding the process of determining how well your farm is doing.

Great Lakes Forage and Grazing Conference to feature Mike Rankin as keynote speaker

PUBLISHED ON FEBRUARY 13, 2020

The Great Lakes Forage and Grazing Conference on March 5 in St. Johns, Michigan, will focus on uncertainty in producing forages in 2020.

Time to think about grain bin safety

PUBLISHED ON FEBRUARY 13, 2020

Learn more about grain bin safety by following these tips and attending a grain safety meeting on Feb. 28 in Rosebush, Michigan.

Farms needed for insects in agricultural landscapes project

PUBLISHED ON FEBRUARY 12, 2020

MSU study will measure ecosystem services and insect communities on farms across Lower Michigan during summer 2020.

Farmland Rent Considerations - Part 1: Farmland rent - past, present and future

PUBLISHED ON FEBRUARY 11, 2020

This series covers the factors you should take into consideration when renting out your farm land.

Farmland Rent Considerations - Part 2: Tips for negotiations farmland rent

PUBLISHED ON FEBRUARY 11, 2020

This series covers the factors you should take into consideration when renting out your farm land.

Select a seeding method that gives you the best chance for success when establishing a cover crop

PUBLISHED ON FEBRUARY 10, 2020

MSU Extension releases new videos on different seeding methods for establishing cover crops, and information on how to calibrate planting equipment for uniform planting rates.

Muddy fields and rush to finish field work may move soybean cyst nematodes

PUBLISHED ON FEBRUARY 4, 2020

A half-cup of mud may contain thousands of soybean cyst nematodes, each ready to start eating at your soybean profits.

Cover crops and nitrogen cycling: What is my final goal?

PUBLISHED ON FEBRUARY 3, 2020

There are cover crops capable of scavenging nitrogen and others that can fix it. Depending on your objective, one group might work better than the other.

Can deer repellents prevent soybean yield loss?

PUBLISHED ON JANUARY 31, 2020

Efficacy of two different chemical deer repellent products trialed on soybean fields in Presque Isle and Menominee counties.

Eric Anderson

Michigan State University Extension

Field Crops Educator - St. Joseph County

612 E. Main St., Centreville, MI 49032

(269) 467-5510 (Office)

(269) 467-5641 (Fax)

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