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MARC
MID-AMERICA REGIONAL COUNCIL

MEETING SUMMARY

AIR QUALITY FORUM

April 8, 2025
10:00 – 11:30 a.m.
MARC Board Room/Hybrid

Member and Attendees:
Andy Savastino (MO Co-Chair), City of Kansas City, MO
Rollin Sachs (KS Co-chair), Johnson County DHE
Allison Smith, KDOT
Carol Adams, Environmental Management Commission
Jodi Gooseman, City of Kansas City, MO
Josh Wood, City of Olathe, KS
Juan Yin, MoDOT
Kelly Gilber, Metropolitan Energy Center
Michael Park, City of Lee's Summit, MO
Doug Watson, KS Department of Health and Environment

Other Attendees:
Kurt Heine, Mo. Department of Natural Resources
Mark Leath, Mo. Department of Natural Resources
Keena Divakar, Kansas State Pollution Prevention Institute
Tiffany Le, BPU
Josh Vander Veen, Mo. Department of Natural Resources
Nicole Weidenbrenner, Mo. Department of Natural Resources
Will Wetherell, Mo. Department of Natural Resources
Jim Starcev, KC Digital Drive

MARC Staff:
Karen Clawson
Doug Norsby
Faith Eberhart
Kate Ludwig
Rachel Krause
Ron Achelpohl
Cy Splichal
Nordia Epps

1. **Introductions and Determination of Quorum**

2. **Approval of January Meeting Summary***

The meeting minutes were APPROVED.

3. **Ozone Season Outlook presented by Weather or Not**

Sullivan Brown, Weather or Not, presented the 2025 ozone season outlook. Brown explained how the weather can affect our ozone season. Brown talked about how the ocean is an indicator of the outlook of weather patterns. Brown addressed three ocean circulations that influence our weather patterns. He explained how Sea Surface Temperature (SST) can predict weather patterns.

Brown also explained how drought is a predictor of patterns. Drought conditions in KC are good at the moment. Southwest areas of the U.S. are experiencing high drought levels. The concern is that this area could expand to the Northeast. Brown explained that it would take a major pattern change in Sea Surface Temperature to break drought conditions.

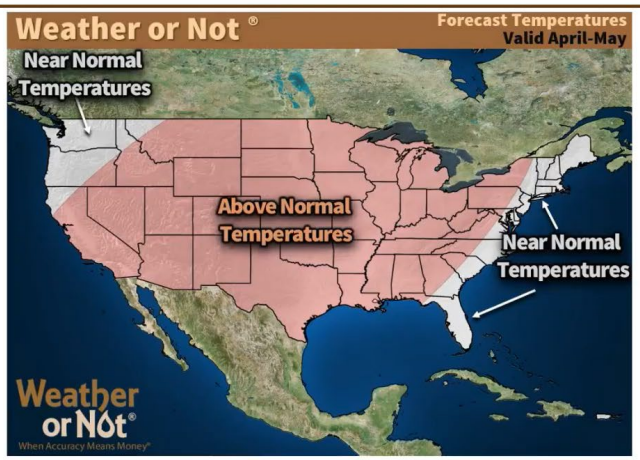
Brown explained using analogs, or looking for historical years closely matching current patterns and climate signals, to help predict upcoming weather patterns. This helps in predicting month to month patterns. The best historical matches for Spring and Summer based on previous weather pattern data are:

- 1962
- 1968
- 2001
- 2006
- 2009
- 2012
- 2018

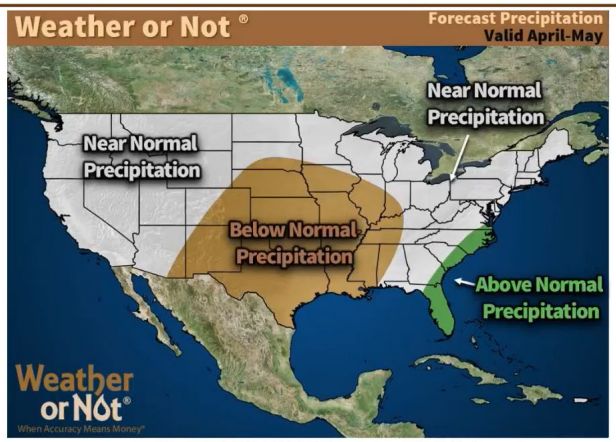
The season is broken down into monthly chunks from what they have seen from the overall pattern and how they predict there will be much higher temperatures overall within the U.S. as we move into May, with some cooler temperatures in the Pacific Northwest and along the eastern seaboard. Along with this, Brown explained that KC region may experience a decrease in precipitation with higher pressures. Brown explains how the region will have high pressures with little precipitation due to ridging.

April-May Temperatures

Weather or Not®
When Accuracy Means Money®

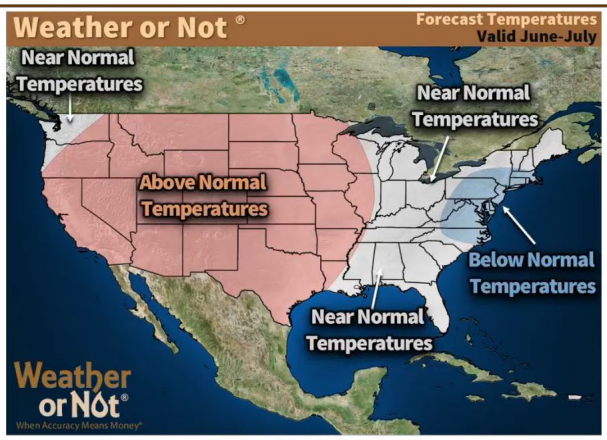


April-May Precipitation

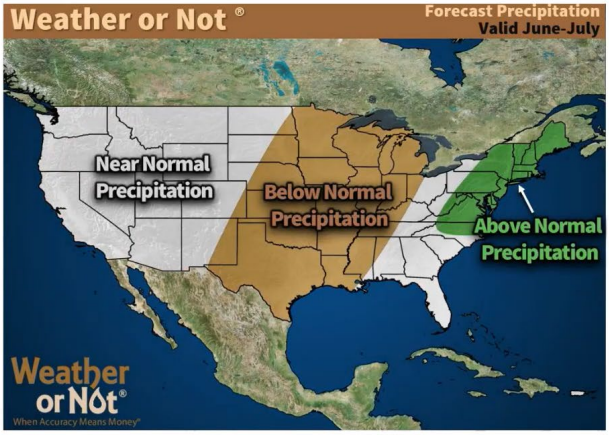


June through July, Brown explains that the KC region will experience above normal temperatures due to ridging. Brown explains how ozone alert days are a potential during the June and July season.

June-July Temperatures

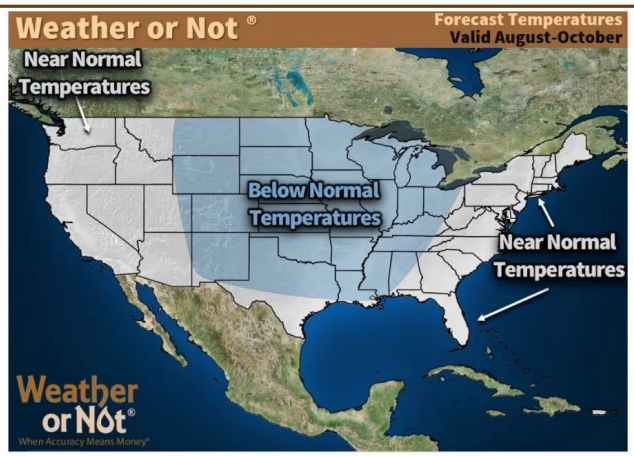


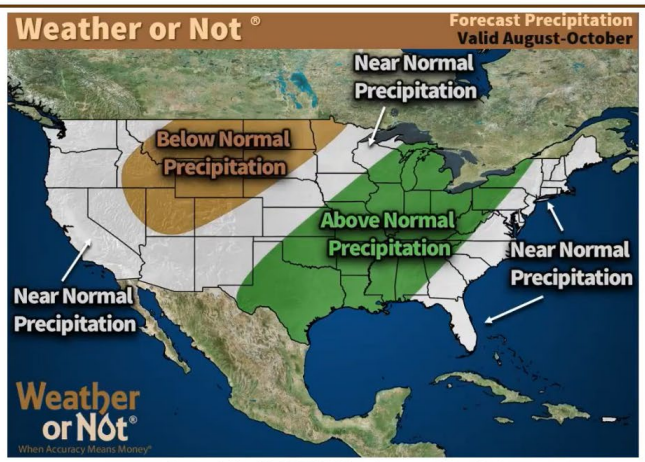
June-July Precipitation



Starting in August through October is when we will see a flip from dry, milder conditions to more precipitation, and cooler conditions. Brown explains that these conditions are due to troughing, which causes lower pressures and more precipitation. Ozone conditions may be mild due to the precipitation clearing the air.

August-October Temperatures





The region is likely to experience high ozone alert days in July and August, with moderate days starting in June. September is predicted to experience greener and few yellow ozone alert days. June-August will be our peak of ozone alert day potential. We cannot rule out alerts in May with milder and drier patterns.

Tom Jacobs, MARC, asked about the analogous years and how they would square this with the question of fluctuations in the climate forecast. Brown explained how our season was active spring into summer, so we do still see individual fluctuations year by year. The ocean's effect on our patterns has been consistent. Looking at the analog years is to look at the most recent years. Sea surface temperature and the ocean help to identify fluctuations in our patterns.

4. MARC Air Quality Public Awareness Campaign

Nordia Epps, MARC, introduced the plans for the Ozone Season Media Campaign starting with the 2025 media plan overview:

- Timing: Advertise May through October with a focus from May through August due to peak ozone seasons.
- Target: KC Region
- Budget: $240,000
- 20% of the budget specifically focuses on advertising to minority population.

MARC uses online advertisement through May-September using the various online providers, targeted audience advertisement, and sponsored content. Online content is a major source for people to get their ozone information. Television and the news are another avenue in which people want to receive their information. This advertising is conducted June-August.

Epps also introduced audio as an avenue, including Spanish language stations. Outdoor advertisement, including a bus shelter and digital billboards, will run from June through August.

KCTV 5 hosts an Air Quality Index through sponsorship with the MARC program. Other ideas include KC Current, Royals, Chiefs Training Camp, Cumulus Weather, and KCI Airport digital signs are all possible sponsorships. Epps explained that MARC uses social media including Instagram, Facebook, YouTube, Snapchat, and TikTok. Epps explained that they particularly promote ozone alert days on Facebook and X.
Epps also introduced print as an avenue.

5. Air Quality Sensor Project

Doug Norsby, MARC, introduced the Air Quality Sensor Project, launching at MARC. MARC has acquired 75 air quality sensors that will create a network of units throughout the region. Fifty of these sensors were acquired in collaboration with KC Digital Drive, and 25 are newly purchased sensors. MARC is looking for people to host a sensor. The goal is to create a network of sensors that is widely spread across the region with a concentration in populated areas.

Participants will also be able to name their sensor given a naming convention. The names will start with the first letter of the county the participant is located in. For Jackson or Johnson County, for example, sensors will start with 'Ja' or 'Jo,' like the names Jack or John. Norsby explained the two different styles of the sensors MARC acquired: A round shaped sensor and the square shaped sensor:

Square shaped sensors have the capabilities of measuring data other than PM2.5 in the future. These sensors will be placed in the more populous areas of the region. Norsby explained the set-up guide pictured above. He mentioned the connection and troubleshooting lights which indicate if the sensor is connected to Wi-Fi, or other communications.

Norsby explained the setup guide for the sensors: Which is similar to a Bluetooth connection. It is important to avoid a BBQ or smoker area, at head height, Wi-Fi connection, power, and adequate protection. Norsby shared the zonal map for the air quality sensor network. The network has 32 different zones, with a concentration around the 435 loop:

If anyone has an interest in hosting a sensor at any time, you can use the pictured QR code to fill a form to apply to host a sensor. The MARC team wishes to get the acquired sensors deployed as soon as possible. Jim Starcev, KC Digital Drive, added that the sensor network will be able to produce a heat map of air quality within the region. There are roughly 25

deployed sensors within the region currently running. Karen Clawson, MARC, also added that Tellus is the mapping platform for the sensor network, which can be viewed today.
Starcev added that these sensors are fairly easy to deploy, given Wi-Fi does not provide problems. If you are interested in committing to three years of hosting, please fill out the intake form, which will also provide more information.

Kelly Gilbert, Metropolitan Energy Center, asked if MARC had flyers or information sheets for outdoor events and other events. Clawson explained that MARC will have this information soon. Gilbert also asked about the QR code. Clawson explained that the QR code is for participants information who may be interested in hosting a sensor.

Andy Savastino, KCMO, asked what the sensors will be monitoring. Norsby explained that the sensors will be monitoring PM2.5 or particulate matter. It will also measure temperature and humidity which affects PM2.5. Fine dust, smoke, and other pollutants that the sensors measure. Savastino asked about AC units outside, which Norsby explained would not affect the sensors.

Savastino asked if participants would need an app, which Norsby explained they would need an app to participate. The Tellus app helps connect the sensor to Wi-Fi and allows the participant to monitor their sensors readings.
Doug Watson, KDHE, asked Norsby about these monitors and the comparability of other monitors. Norsby explained that these units are sensors rather than monitors. These sensors will not be used for regulatory policy purposes. Monitors are calibrated daily and for attainment purposes. Low-cost sensors provide a background for how PM2.5 is being distributed. A few sensors will be collocated at certain locations for further assurance in readings. Watson explained that these sensors are sensitive to smoke, and people who are near the sensor smoking. It is important for people who may look at the data to take this into account. Clawson explained that information will be provided for potential sensor spikes in readings.

6. Flint Hills Smoke Plan Update - KDHE

Doug Watson, KDHE, introduced the Flint Hills Smoke Management Plan Update. Watson wanted to give an update about the burning season. The season so far has been slow through the month of March due to extreme winds. The satellite analysis of the acres burned shows a smaller number of acres burned than in previous years. Some burn days produced yellow and red days in the Kansas City Region due to the wind's direction. Burning will continue to ramp up through the season due to the delay of windy days.

Two exceedances occurred early on February 28th and March 2nd in Oklahoma, most likely due to wildfires in Oklahoma. A dust storm/wildfire event on March 14th produced 25 exceedances across the area. Winds were harsh, wildfires in Oklahoma and dust from Texas and Oklahoma produced high exceedances within the region. Specifically for the Flint Hills, there have been two PM 2.5 exceedances so far. The smoke from the Flint Hills fires caused the exceedances on March 26th close to the City of Wichita and the other was in Oklahoma. Winds have delayed safe burning days. As the season continues, more prescribed burns will continue at higher rates.

On average, KDHE burns about 2 million acres in total in the Flint Hills every year. As of March, the acres burned was just under 200,000. Watson moved to introduce the Flint Hills Smoke Management Plan. This plan is intended to help mitigate the smoke from the Flint Hills beginning in 2010 with a committee of legislators, environmental groups, ranchers, and other stakeholders. The subcommittee wrote the plan.

At the beginning of November of 2024, the subcommittee stakeholders were brought together with the same organizations, to update the Flint Hills Smoke Management Plan. The plan update aims to provide tools and information to fill in areas that the original plan may have missed. For instance, creating a modeling tool for ranchers to decide where the smoke will go if they decide to burn that day.

Questions:

Tom Jacobs, MARC, mentioned the windy days have prohibited the number of prohibited burning days. Jacobs asked Watson if they had seen the plan to be effective in some way overtime. Watson answers by stating that the low number of exceedances are a good indicator that the plan is working. It has been really windy, so the dangers of wildfires are extreme, so burns are less likely to occur. The extreme weather has prohibited burns therefore has not produced smoke for exceedances to occur. Doug Norsby, MARC, mentions the public outreach side of the update and the best way to update the region about the burning of the Flint Hills.

7. Particulate Matter - Modeling and Communications Discussion

Clawson introduced the particulate matter discussion. Rollin Sachs, DHE, proposed the concerns that have risen due to the dust storms and other weather events that create exceedances in PM2.5. There is high value of the PM, while the forecast is green from Ozone forecasting. The question is how the region can update its forecasting, and should there be an update to forecasting to include PM. Sachs asked the forum how to best communicate to the region when Ozone readings are low(green), but PM readings may be high(red). Sachs recommended the region start to consider forecasting for PM. The variables with PM forecasting are much different than Ozone, but other regions are forecasting for Particulate Matter.

Clawson stated that currently, MARC is pushing the region to EPA's tool AirNow app, which is the region's tool for monitoring PM and to analyze the pollution in the areas which distinguishes between Ozone and PM. Kelly Gilbert, Metropolitan Energy Center, asked Clawson for clarification. Gilbert asked if EPA's AirNow app is used to push notifications regarding Particulate Matter, and SkyCast is used to illustrate Ozone readings. Clawson confirmed this. Gilbert agreed with Sachs statement regarding forecasting future Particulate Matter within the region.

Josh Vander Veen, MODNR, added that Missouri has made some efforts to forecast PM around St. Louis, but have not made many efforts in forecasting PM2.5 beyond this. Clawson noted that while funding may become a challenge (particularly if contractor support is needed), there are opportunities to analyze other agencies that are currently forecasting PM and understand their methods for forecasting, public outreach, and other variables. Norsby mentioned that a "red flag" warning could be used as an indicator of high risk for PM 2.5 events, since PM 2.5 forecasting is different than Ozone. For instance, the March 14th PM 2.5 exceedances raised the question of whether PM 2.5 levels would have been elevated without the involvement of fires and a dust storm. This suggests a shift in mindset from pollutant accumulation to risk-based forecasting due to factors such as the March 14th exceedances.

Watson explained that Ozone forecasting differs from PM forecasting. The variables indicating an exceedances in Ozone is clearer than PM, given that certain weather conditions and seasons of the year produce Ozone exceedances. Pm 2.5 events can sometimes cover

multiple states and can occur year-round. Watson mentioned that some states, like Oklahoma, are already forecasting PM 2.5 and could serve as examples.
Mark Leath, MODNR, asked Clawson and Norsby if the AirNow app could be used to forecast PM2.5 and Ozone. Norsby stated that Weather or Not puts the Ozone forecast into AirNow. Norsby stated that SkyCast predates AirNow. AirNow has grown and became more holistic. Something to consider is moving from SkyCast to AirNow to forecast and analyze air quality readings. Watson noted that one flaw with the AirNow app is the use of the contours and the effects of special monitors at specific sites. AirNow could illustrate a larger problem because of the contouring issues.Vander Veen agreed with Watson.
Sachs noted that a learning curve is needed to navigate AirNow, and the region should be educated on the current readings versus forecasted readings. Currently, AirNow provides real-time data, which is useful and beneficial.
Sachs and Leath noted that understanding AirNow forecasting and monitoring methods is the next step to effectively communicate information to the public.
Watson mentioned that the National Weather Service has an air quality forecast for both Ozone and PM 2.5 on their site. Brown added that while the forecast tool uses model guidance, it has limitations. The model hasn't been significantly updated since 2013. Looking ahead, effective PM 2.5 forecasting would require identifying key parameters like drought and wind, and may be better framed in terms of risk categories (e.g., healthy vs. unhealthy) rather than concentrations.

8. Other Business

a. MDNR – Follow up on PM2.5 Designation Recommendation

Leath provided an update on Missouri's PM 2.5 boundary recommendations, noting they went out for public notice in December 2023 and received one supportive comment. Although the plan was to adopt the recommendations at the March 27th Missouri Air Conservation Commission meeting, the state paused action following a March 12th announcement that EPA may reconsider 31 regulations, including the 2024 PM 2.5 standard. Missouri has sent a letter to EPA requesting more information and is waiting to see how the process unfolds, especially as 2024 data may influence recommendations for areas like St. Louis, though no changes are expected for the Kansas City Region.

Vander Veen shared the new monitoring site replacing the Blue Ridge I-70 site has been operational since January with the original site offline since May 2023. Additionally, through Inflation Reduction Act grant funding, Missouri is launching a monitoring project at the Troost site, with upgrades starting this month. The site will be similar to the Blair Street site in St. Louis, though EPA has clarified it is not officially designated as an air toxics trends site and may not receive long-term funding.

9. Next Meeting – Tuesday, June 10, 2025 at 10:00 a.m.

10. Adjourn

**Action item*