

MWF News

Midwest Federation
of Mineralogical and Geological Societies

December 2019 - Issue No. 587

Web Site - www.amfed.org/mwf

Member of the American Federation of
Mineralogical Societies



PRESIDENT'S MESSAGE

John Donker, MWF President

As the new president of the Midwest Federation, I'd like to thank you for the opportunity. I want to thank our outgoing president, Kevin Ponzio, for a job well done.

We all pay our taxes each year on time. Let's make it easier on our 2nd Vice President, Catherine Clevenz, save her from making many phone call to each club, and pay our membership dues on time. The form for doing that is on page 7 of this newsletter.

The Midwest Federation has many chair positions open, so if you would like to serve as a committee chair, let the Board know. We need your help. Contact MWF Secretary Donna Moore (mwfsecretary@gmail.com) or send a line to me (jjredon65@comcast.net).

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THE BULLETIN EDITORS' CONTEST IS HERE!

by Sharon Marburger, BEAC Chairman

DEADLINE: DECEMBER 15, 2019

The American Federation has decided to make consistent the deadline to submit entries to it. In order for the regional competitions to be completed by the January AFMS due date, the deadline to submit to the MWF is now December 15 each year. Eligible entries this year include December 2018 through November 2019.

Hello Editors:

After another year of editing your club's bulletin, keeping your members informed about activities, and providing educational tidbits, it is time to gather your bulletin items to send for competition in the MWF Bulletin Editors' Contest, sponsored by the Midwest Federation of Mineralogical and Geological Societies ("MWF").

It is nice when members appreciate what you do as Editor and to receive local praise, but it is also

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PRESIDENT'S MESSAGE, CONTINUED

(Continued from page 1)

The next two MWF meetings will be in Michigan. The spring Executive Committee meeting will be in Grand Rapids in April, hosted by the Indian Mounds Rock & Mineral Club. The convention (and fall Executive Committee meeting) will be in September, hosted by the Livingston Gem & Mineral Society of Howell, Michigan. There is much to do and see in Michigan! More details will be coming.

Have a great holiday and safe travel this winter.

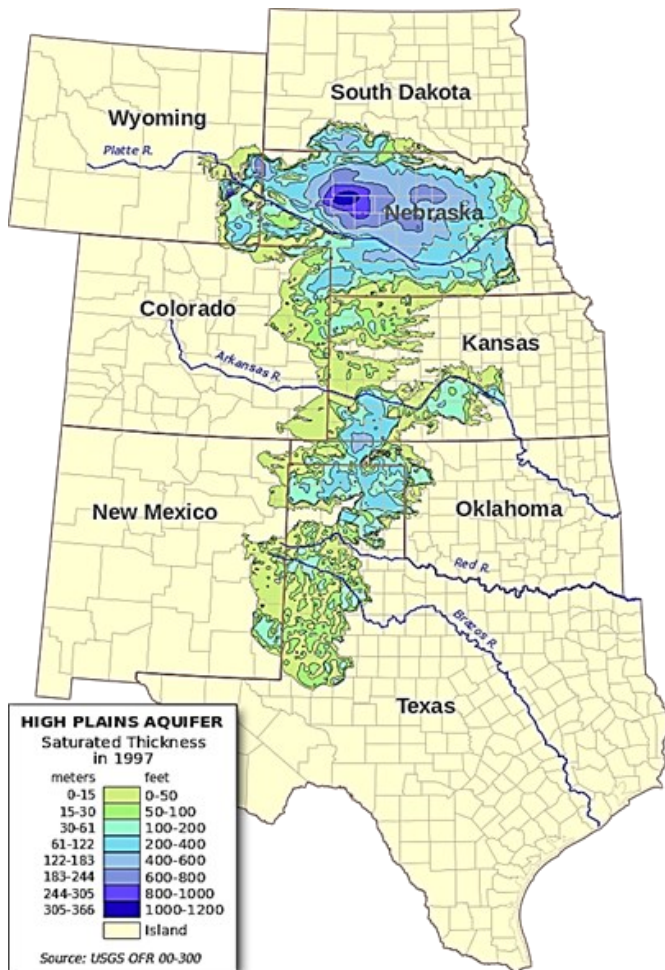
HOW CAN THE OGALLALA AQUIFER BE CONSERVED?

Valerie J. Meyers, Editor

In early October, I went on a trip to Northwest Kansas sponsored by the Osher Lifelong Learning Institute's KU-based office. Our guide was Rex Buchanan, director emeritus of the Kansas Geological Survey. While he was also well versed in the history of the area and, as someone who grew up on a farm, in agriculture, he obviously also gave us a lot of information about the region's geology.

As our bus drove past fields of corn and milo, Buchanan discussed the Ogallala Aquifer. The aquifer is a massive reserve of water in beds of coarse sand and gravel, anywhere from 100 to 400 feet under the ground, and 2 million to 6 million years old. It spreads for about 174,000 square miles under parts of eight states – Kansas, Oklahoma, Texas, New Mexico, Colorado, Wyoming, South Dakota, and Nebraska.

In western Kansas, which is drier than the eastern part of the state, the aquifer is crucial to agriculture. Its depth in Kansas varies greatly, Buchanan said, ranging from about 25 feet in some areas to 300 or 400 feet in other areas. (In a large part of Nebraska, sometimes called "the eye," the saturated thickness of the aquifer ranges from 500 to over 1,000 feet.) Since post-World-War-II technology made it possible to pump large quantities of water up out of the



*Saturated thickness of the Ogallala Aquifer in 1997.
Map by kbh3rd, via Wikimedia Commons.*

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THE BULLETIN EDITORS' CONTEST IS HERE!, CONTINUED

(Continued from page 1)

good to get recognition from the outside world. Club members who contribute articles, poems, features, or special publications also deserve recognition and encouragement. This contest is one way to earn that recognition.

After being judged at a regional level, the submissions are forwarded to the American Federation of Mineralogical Societies ("AFMS") for competition nationwide. It is a wonderful feeling to walk away with a first, second, or third place trophy from the MWF or AFMS. Even receiving a certificate for a lesser place is still something special!

The 2020 Bulletin Contest packet contains the forms and instructions needed to enter your club's bulletin and the work of your authors. The contents of the packet will be posted on the MWF website, <http://www.amfed.org/mwf>. Contact me should you prefer a packet be mailed to you; contact information is at the end of this article.

The AFMS has made some changes for the 2020 competition

Electronically generated drawn features will be permitted.

A club or society may enter more than one Special Publication if the subject and purpose differ.

Summary of General Rules

The author and editor of the item must be a member of the club whose editor is submitting the item to the contest.

All entries must have been originally published during December 2018 through November 2019 only. They should not be revised in any way.

All entries (except Special Publications) must have been published in the club bulletin.

The subject matter must be related to some phase of the earth science hobby.

There should be no copyright violations.

Only one entry is allowed per author, per class, per club, except that any number of special publications may be entered. (See below for specific information for contest submissions.)

Bulletins:

- Mini Bulletins (6 pages or less)
- Small Bulletins (7 to 11 pages)
- Large Bulletins (12 pages or more)
- New Editors (any number of pages)

Articles/Features/Poetry/Drawings:

- Original Articles, Adult
- Original Articles, Adult Advanced
- Original Articles, Junior (ages 12-17)
- Original Articles, Junior (under age 12)
- Original Adult Poetry
- Original Junior Poetry
- Written Features
- Drawn Features
- Special Publications

Entries of bulletins and special publications must be "original printings" exactly as distributed to the club members. (Exception: If the item was distributed only by electronic mail or on CD/DVD, then a "hard copy" must be submitted on one-sided paper.)

Entries of articles, poems, and features should be sent as actual pages from the bulletin. Photocopies of an entire page are acceptable if the page includes the bulletin title, date, and page number. Be sure to include any continuation pages.

If a club belongs to more than one regional federation, the editor must pick only one federation contest to enter. If a club has more than one bulletin, only one may be entered in competition.

The act of entering the contest constitutes the granting of permission to the MWF, the AFMS, and their member clubs to reprint any materials entered, provided the author and the name and date of the original publication are properly credited.

How to Enter the Contest

The MWF contest uses basic AFMS contest rules with some modifications, as shown below. The

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THE BULLETIN EDITORS' CONTEST IS HERE!, CONTINUED

(Continued from page 3)

complete AFMS rules and some interesting essays by expert judges are posted on the AFMS website at <http://amfed.org/editor/BEAC/contest.htm>.

Read all the General Rules, Additional Rules, and Score Sheets that pertain to the item(s) to be entered.

Select the proper score sheet for each item. Make as many copies as needed for all intended entries. Fill out the information at the top of each score sheet, down through the CLUB CITY/STATE/ZIP line. Do not mark anything below that line – the BEAC or the judges select which criteria to use.

Use the fillable forms on the website. If you cannot use the online forms, please print clearly and include the 5-digit or 9-digit zip code in the editor's address, since contest results may be mailed there. The club's address is optional except for city and state.

To enter your bulletin, I prefer you send electronic copies. Only one copy is needed if sent electronically. If you must send paper:

1. Submit two copies of the April 2019 bulletin.
2. Attach the proper score sheet with the required information to each of the copies.
3. If your bulletin did not have an April issue, submit the nearest one before April.

To enter anything other than your bulletin, I prefer you send electronic copies. Only one copy is needed if sent electronically. If you must send paper:

1. Submit two copies of each selection.
2. Attach the proper score sheet with the required information to each of the copies.
3. **If the author is a junior member, be sure to include the age of the author at the time of the publication so that the entry may be judged appropriately.**

The BEAC Chair will accept either emailed submissions or those sent via U.S. mail.

Email your PDF entries, no later than December 15, 2019, to the BEAC Chair at mamamar7880@outlook.com; please put "BEAC Competition" in the subject line.

Mail paper entries, postmarked no later than December 15, 2019, to the BEAC Chair:

Sharon Marburger
P.O. Box 64
Hickman, NE 68372-0064

For confirmation of delivery, include your e-mail address or a self-addressed, stamped postcard.

Eligibility of Previous Winners

If a bulletin won a first place MWF trophy in 2019, it is not eligible for MWF competition in any bulletin class in 2020, unless it has a new editor. The new editor may enter in the New Editors competition.

If a bulletin won first place in the MWF in 2019 but did not win first place in the AFMS, it is eligible to compete in the AFMS this year. The editor should send two copies of any one issue to the BEAC, with the label "FOR AFMS" on the score sheets.

Authors and editors who won a first place MWF trophy in any class other than bulletins in 2019 are not eligible for MWF competition in that same class in 2020, but they may compete in another class. (For example, the author of the first place adult advanced article could compete in special publications, features, or poetry.)

Articles, features, and poems are eligible from any bulletin regardless of the bulletin's prior award status.

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January Issue Submission Deadline Is Dec. 4th!

**BULLETIN EDITORS' CONTEST, CONTINUED**

(Continued from page 4)

The first, second, and third place MWF winners in each class will be submitted, by the MWF BEAC Chairman, to the AFMS Bulletin Editors' Contest, unless they are ineligible due to being a first place winner in the previous two years of the AFMS contest. Do not send your entries directly to the AFMS.

Ineligible MWF entries for 2020 are:

1. Small Bulletin: Pick & Dop Stick (Rachele L. Best, Editor)
2. Large Bulletin: Rock Rustler's News (John Porter, Editor) (also not eligible for AFMS)
3. Advanced Adult Articles: Rachele L. Best
4. Adult Articles: Bev Jenkins
5. Adult Poetry: Janet Norse
6. Junior Article, 12-17: Brandon Poy (also not eligible for AFMS)

Please check the MWF website for further information. If you still have questions, please contact Sharon Marburger, mamamar7880@outlook.com, or telephone 402-429-3323.

I look forward to reading your submissions!
Good luck!

DEADLINE CALENDAR

Bulletin Editors' Competition: Entries are due **Dec. 15, 2019**. For details, see the article on page 1. For information, contact Sharon Marburger (mamamar7880@outlook.com).

MWF Dues, Insurance Payments, and Events Forms are due **Jan. 15, 2020**. For more information, see the article and forms on pages 6-8.

All American Club Awards: Entries are due to the MWF program on **Feb. 1, 2020**. For information, contact Mary Ann Rich (birdman035@hotmail.com).

Rockhound of the Year Awards may be submitted at any time for certificates and a mention in the MWF News. See the article beginning on this page, or contact Steve Shimatzki, sjs132@gmail.com.

ROCKHOUNDS OF THE YEAR HONORED

Steve Shimatzki, Chair
Club Rockhound of the Year Committee

This month it is my honor to present two rockhounds who have been selected by their clubs to receive the Rockhound of the Year Award.

**Rock River Valley Gem and Mineral Society,
Illinois**

The Rock River Valley Gem and Mineral Society is happy to announce our 2019 Rockhound of the Year Award recipient, **Todd Hall**.

Todd, our "Tucson Connection," is a longtime member of the club who is also the owner of Earth's Hidden Treasures. You may have met him at a rock show or two. He started in the field by being fascinated with the wonders of calcite. He is always willing to answer our questions, and we appreciate his generous sharing of his time and knowledge. Congratulations and thank you, Todd.

**Parma Lapidary Club, Ohio**

Parma Lapidary Club has voted **Michele Stoffan** as our Rockhound of the Year for 2019.

Michelle has served the club in many capacities. As chair of the Board of Trustees, she works at home writing the agendas and sending them out ahead of the meetings so everyone is prepared. She serves as a reliable resource for the operation of the club by making sure that the bylaws and other club documents are followed.

Michele is very diplomatic and professional in all her dealings with the club. She is friendly and welcoming to all.

Michele organizes outreach programs and, along with other members, has recently given presentations at local libraries. As a teacher, she excels in her craft and shows others the basics of wire wrapping so that they can create beautiful pieces on

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ANNUAL DUES AND EVENTS FORMS ARE HERE! AND HERE'S THE INFORMATION YOU NEED

Sandy Fuller, MWF Treasurer

The 2020 Midwest Federation forms for renewing club memberships are now available on our website (www.amfed.org/mwf) and in this issue of the Midwest Federation News. Look for them! Meanwhile, please alert club officers to collect information for the forms.

One important piece of information needed is the total number of individual adult and youth members during the year completed in 2019. These figures are used for dues and insurance calculations. The rationale is that your total membership, by the end of the year, is usually about the same, so you always pay the current-year dues based on your past experience. The treasurer needs this information **before January 15th** so that our insurance can be activated on time.

Please provide a roster of current officers, including preferred mailing addresses, phone numbers and email address. If handwritten, please ensure that letters and numbers are legible. If an individual does not want this information published on the website, follow the directions on the form to indicate this. However, please provide all contact information so we can actually reach you and not some unattended phone or email. This year you may include a list of additional officers who would like to receive the MWF News via email. You must provide the name, position and email addresses for these individuals.

We will send the MWF News to each email address that you provide. This is a great way to make sure that all of your officers are "in the know."

Clubs who renew on time will receive an email subscription to the juniors' publication Mini Miners Monthly, distributed only via email. If you wish to have the Mini Miners Monthly subscription sent to someone other than your editor (1st choice) or president (2nd choice), please provide a name, position and valid email address for that individual, and indicate that they are to receive the Mini Miners materials.

Use the EVENTS form to submit details of shows and events during the coming year. You may include a flyer, printed on white paper, as additional information. If this information is submitted with the dues, we will make sure it gets to the website, newsletter and directory coordinators. If it is submitted later, or separately, it is more likely to get overlooked.

Finally, and probably most important to many, the 2020 membership rates are the same as before. Our MWF Endowment Fund supports our special projects, helping to keep dues consistent from one year to the next. Dues are \$2.00 per adult and \$.50 per youth.

Insurance will stay the same for 2020. Our current rate is \$4.50 per individual to be covered by the policy. Clubs that submit their dues on time (postmarked no later than January 15, 2020) may take a \$.25-per-member discount. Include **all** members when computing your insurance premium.

Remember: Federation insurance policy will cover groups of clubs jointly sponsoring shows or events **only if** all of the sponsoring clubs are current federation members and all of the sponsoring clubs purchase federation insurance. Requests for insurance for these jointly sponsored events must include a list of all sponsoring clubs.

Questions about your MWF forms or dues? MWF Treasurer Call Sandy Fuller at 651-459-0343, or email her at MWFtreas@rock-biz.biz. Direct insurance questions to Sue Goedert at 616-337-1162 or sonbeams2000@yahoo.com.



Midwest Federation of Mineralogical and Geological Societies Annual Dues, Insurance and Club Contact Information

(Use INK! Please print, type or complete form on-line. Submit original.)

CLUB NAME _____ STATE _____

2020 Club Dues

(Use membership figures from year completed in 2019)

Number of Adult Club Members _____ X \$2.00 = \$ _____

Number of Youth Club Members _____ X \$0.50 = \$ _____

Do you want MWF Membership Cards? ___ Yes ___ No

2020 Club Insurance (Optional, but if chosen, must pay for all members)

Total number of club members _____ X \$4.50 (\$4.25 for qualifying clubs*) = \$ _____

(*Renewals postmarked by January 15, 2019 receive a discounted insurance rate of \$4.25 per member)

Total Dues and Insurance Remitted: (Make check payable to Midwest Federation) \$ _____

FORM, DUES, INSURANCE, & EVENTS FORM are DUE by JANUARY 15, 2020

Mail to: MWF, c/o Sandy Fuller, 8445 Grange Blvd., Cottage Grove, MN 55016

Club Contact Information for Mailings, Directory & Website

Please provide mail and email addresses that are checked regularly. Place an asterisk (*) in front of each email, phone and address that should not be listed on the MWF website. Circle "P" for people who should receive paper copies of the MWF News, "E" for those who should receive electronic copies.

P E President _____ Email _____ Phone _____

Address _____ City _____ State _____ Zip _____

P E Secretary _____ Email _____ Phone _____

Address _____ City _____ State _____ Zip _____

P E Treasurer _____ Email _____ Phone _____

Address _____ City _____ State _____ Zip _____

P E Liaison _____ Email _____ Phone _____

Address _____ City _____ State _____ Zip _____

CLUB BULLETIN NAME _____

P E Editor _____ Email _____ Phone _____

Address _____ City _____ State _____ Zip _____

CLUB MEETING PLACE _____

DAY & TIME _____

Club Website/Facebook _____ **Club Email** _____

Please send the MWF Directory and Official Federation Mail to:

Choose one only > ___ President ___ Secretary ___ Treasurer ___ Liaison

Please use separate sheet to list additional officers (name, position, email) who would like to receive federation newsletter and/or juniors materials via email.



Calendar Of Events Listing Information

For Publication In MWF Directory, Website & Newsletter

(Use INK! Please print, type or complete form on-line. Submit original.)

CLUB NAME _____ STATE _____

Show Chair _____ Email _____

Event Type: __Annual Show, __Rock Swap, __Other_____

Dates: _____ Days/Times: _____

Facility/Location Name: _____

Street: _____ City: _____ State: _____

EVENT CONTACT INFORMATION (This will be published!)

Contact Person's Name: _____ Phone: _____

Street: _____ City: _____ State: _____ Zip: _____

Email: _____ Club Website: _____

ADDITIONAL EVENT:

Event Type: __Annual Show, __Rock Swap, __Other_____

Dates: _____ Days/Times: _____

Facility/Location Name: _____

Street: _____ City: _____ State: _____

EVENT CONTACT INFORMATION (This will be published!)

Contact Person's Name: _____ Phone: _____

Street: _____ City: _____ State: _____ Zip: _____

Email: _____ Club Website: _____

**** Please include event listings for January, February, March and April 2021. ****

Mail completed form with your dues. Questions? Call 651-459-0343

DEADLINE FOR DIRECTORY INFORMATION IS JANUARY 15, 2020

REMEMBER, this information, including contact information, will be published in the MWF Directory, posted on the MWF website, and listed in the MWF News.

ROCKHOUDS OF THE YEAR, CONTINUED

(Continued from page 5)

their own. Michele is talented and knowledgeable in many areas.

Giving freely of her time, Michele genuinely has the welfare and stability of the club in mind at all times. Michele Stoffan is an asset to our organization and deserves this recognition.



Now, Name Your Own Club's ROTY!

The Rockhound of the Year is an award that a club may bestow upon a club member for a number of reasons. It's presented to a member who is or has been helpful or instrumental to the club, now or in the past.

You may now be wondering HOW do you nominate someone for "Rockhound of the Year" (ROTY)? There are a few guidelines that were handed down to me and I think they will serve us all well, so when your club has a nomination for ROTY, please send me the following information by email (Subject: MWF Rockhound of the Year) or regular mail so that we can process it properly:

1. The person's name.
2. Accomplishments that warrant the nomination. (How you would like it to read in the MWF News announcement.) Please try and limit it to 100-125 words or less.
3. Name, phone number, and address of where the award is to be sent, not necessarily the recipient if you plan to present it to the recipient at a club event.

Send that information to me by email or U.S. mail. The mailing address is:

MWF Rockhound of the Year
c/o Stephen Shimatzki
4295 County Road 16
Woodville, OH 43469

My email address is sjs132@gmail.com, and my cell phone number is 567-868-8794. Feel free to call or text if that is easier for you.

GREAT PROGRAMS ARE AVAILABLE FOR CLUBS

Bob Powers, Chair
Program Requests Committee

For those who may be unaware, or under-aware, the MWF has a great collection of videotapes, instructional CDs, and more recent DVDs on a wide variety of subjects. Programs are listed by area of interest on the MWF website. Go to the website, click on Resources, then on Programs, and check them out!

I volunteered to take over handling the MWF Program Library from my wife, Pat Powers, when she became unable to handle the effort during the summer. Please send program requests to:

Bob Powers
18270 Buccaneer Drive
North Royalton, OH 44133

The email address for program requests is now AkronMineralNews@AOL.com, so please note that change.



For instance, request DVD61, "Homer the Triceratops," about the find made by Burpee Museum of Natural History staff. Photo by John Gnida, via allosaurusroar.com

When making program requests, please note the type of medium desired (VHS tape, CD or DVD) and the program number, in addition to the title.

In years past, slide programs were also available. However, since clubs have not requested slides in many many years, the MWF Board decided to remove these from active lending through the Program Library. If your club developed one of these slide programs and you would like to have them returned, please contact me directly.

HOW CAN THE OGALLALA AQUIFER BE CONSERVED?, CONTINUED

(Continued from page 2)

aquifer, farmers on top of it have drilled wells for crop irrigation.

Buchanan is part of a team that measures the depth of the Ogallala Aquifer every year. They measure in January using the agricultural wells, he said, since farmers aren't running the wells and irrigating crops then. (At one point Buchanan said that it was nice to see this countryside when it wasn't bitterly cold and under a foot of snow!)

According to Buchanan, the aquifer's water level in most places is dropping. The rates of depletion, and recharge of the water level from rain, vary widely depending on location. But in areas where rain replaces only an inch to an inch and a half per year of the aquifer's water, and human use is several inches per year, obviously, he said, "that's not sustainable."

Irrigation techniques have changed down through the years, Buchanan said, to use water more efficiently. Old systems in which pipes were laid on the ground spread water inefficiently, giving some parts of a field less water than needed and some parts more.

Since the 1950s, the center-pivot system of irrigation has come to dominate agriculture. In this system, water is pumped up into long pipes on tall, rolling stands, "raining" water down onto the crops, and the stands pivot so that the ground is watered in a huge circle. But there can also be water waste with this system, because some water is lost to evaporation. Placing water hoses on the center-pivot system as low to the ground as possible reduces, but doesn't eliminate, evaporation.

During one night of the Osher trip, our group toured and had dinner at the headquarters of Frahm Farmland Inc., which is managed and largely owned by Lon Frahm, a sixth-generation farmer. Over the years



*Center-pivot irrigation system.
Photo by the USDA, via
Wikimedia Commons.*

Buchanan pinpointed corn crops as a major drain on the aquifer. Corn needs a lot of water, but it is grown widely in western Kansas to feed cattle. Cattle themselves don't drink that much water, Buchanan said, but they are fed a lot of the corn that requires heavy irrigation. The livestock business then obviously leads to regional slaughterhouses and packing plants, which draw immigrants who are willing to work there, and the larger human population means more of a drain on the water supply.

Other crops that fare well in the Midwest, such as wheat and milo, require less water, Buchanan said. But they sell for less, so it's hard to convince farmers to take a cut in income in order to preserve the aquifer.

the family's farms have expanded to approximately 27,000 acres of land – about 18,000 acres of "dryland" crops, meaning that rain is the only water they get, and about 8,000 acres irrigated with 65 center pivots.

Frahm said that his mission for the company, and the people who work there, is to be "stewards of the land." He wants to grow abundant crops, of course, but at the same time conserve soil and water. (According to the Osher brochure about our trip, Frahm's great-grandfather was one of the first in the area to adopt summer fallow practices – leaving a part of one's cropland uncultivated for one growing season to allow the buildup of moisture and nutrients in the

(Continued on page 11)

UPCOMING EVENTS

Date and Time	Organization	Place	Contact
November 22-24 Fri 3-7, Sat 10-7, Sun 10-5	St. Louis Mineral & Gem Society	White-Rodgers Community Center, 9801 Mackenzie Road, St. Louis, MO	Melissa Perucca, melissa5301@aol.com
November 23-24 Sat 10-5, Sun 10-4	Anoka County Gem & Mineral Club	Crystal Community Center, 4800 Douglas Drive North, Crystal, MN	Martha Miss, martha@rock-biz.biz
November 23-24 Sat 9:30-5, Sun 10-5	Madison Gem & Mineral Club	Alliant Energy Center, 1919 Alliant Energy Center Way, Madison, WI	Nevin Franke, burniesrockshop@gmail.com
January 25 Sat, 1-5	Lincoln Gem & Mineral Club rock swap	Bethany Park Shelter House, corner of Cotner & Vine, Lincoln, NE	Carolyn Ashmore, saturnl_101@hotmail.com

HOW CAN THE OGALLALA AQUIFER BE CONSERVED?, CONTINUED

(Continued from page 10)

soil – so conservation practices have long been a part of the family’s farming.)

Some of the corn that Frahm raises is dryland corn. The Frahm Farmland center-pivot systems in irrigated areas are adjusted to use as little water as possible, Frahm said.

The farm uses a computerized system developed by John Deere in much of its equipment. The settings of combines out in the fields can be adjusted from the headquarters, miles away, to improve the machines’ yield even as crops are harvested. The irrigation system has the same kind of control. If the center pivots are running at night, and rain begins falling, the farmers who work for Frahm no longer have a choice between wasting water or going out to the fields in the middle of a rainy night to shut off equipment; they can turn off the center pivots from their smartphones.

As part of his stewardship ethic, Frahm sponsors education programs for other farmers. These classes had been attracting thirty or forty people at a time, but interest has grown so much that Frahm now has a building at the farm’s headquarters specifically for education. Our Osher group had dinner, and listened to Frahm and his workers speak, in that education building, a large hall that can accommodate a hundred people or more.

Frahm said that, with current water practices, his farm had halved its water use. This year, which was

rainier than usual, they used nine inches of water in their irrigated areas.

“ . . . water levels don’t drop every year in every place,” Buchanan wrote me. “In wet years, they might even rise some. The general trend, though, is down.” Areas where the aquifer is hundreds of feet deep have time to deal with depletion. But in areas where the aquifer is shallow, hard choices will have to be made within a generation or two.

Some of the information for this article was drawn from Wikipedia’s articles “Center-pivot irrigation” and “Ogallala Aquifer.” Some came from StewardingOurAquifer.com, a website produced by Ogallala Commons, a non-profit organization that works to reinvigorate the Great Plains region.

ALERT!

Sandy Fuller, MWF Treasurer

Please **CHECK YOUR CLUB LISTING** on our website at amfed.org/mwf. If there are errors, be sure to **clearly** print or type the corrections on your 2020 club registration form, which is on page 7.

Thank you.

Valerie J. Meyers, Editor
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**It is MWF policy that its name and logo may not be used for commercial purposes.
Please notify the Secretary of any violations.**

STUDYING MINERALS WITH CALCIUM DURING MICHIGAN'S MINERAL WEEK

Kreigh Tomaszewski
West Michigan MWF Mineral Study Group

We started our recent meeting reading the Governor's proclamation naming October 6-12, 2019 as Mineral Week in Michigan. What better way to celebrate Mineral Week than to have a Mineral Study!

Our mineral study group is working through the periodic table of elements. Our featured element this month was Calcium.

We prepare for each meeting by going through our collections to find relevant specimens, and do a little homework on them. Then we pass them around the table in alphabetical order. Holding and inspecting different specimens of a mineral prepares you to be able to hand identify it when confronted with it again.

Our specimens included the tectosilicates Faujasite-Ca and Faujasite-Na, the phyllosilicate Fedorite, the oxide Fernandinite, and the halide Fluorite. Pure fluorite is transparent in visible and ultraviolet light, but impurities usually make it a colorful mineral. Optically clear fluorite lenses have low dispersion so lenses made from it exhibit less

chromatic aberration, making them valuable in microscopes and telescopes. Fluorite optics are also usable in the far-ultraviolet and mid-infrared ranges, where conventional glasses are too absorbent for use.



Fluorite on chalcopyrite. Photo by Rob Lavinsky of iRocks.com, via Wikimedia Commons.

We identified several specimens people had brought in, including one self-collected specimen of the inosilicate Edenite from the type locality county (Orange County, New York, near Edenville).

Please contact me, kreigh@gmail.com, if you are interested in attending our mineral study group. All West Michigan rockhounds are invited to attend. I hope you can join us as we learn about minerals from each other.