Michigan Geological Survey Report 23 from the K-12 Outreach Director, Peter Voice, May 11, 2018

New Items:

- 1. June 23rd presented Report 23 to the Director of the Survey
- 2. June 26th exchanged emails with Mikka Dryer (MiCareerQuest-Southwest) about registration materials for the Fall 2017 MICareerQuest-Southwest Career Exposure Fair
- 3. June 27th exchanged emails with John Yellich, Peter Rose on whether the Michigan Basin Geological Society could borrow a core pump set. They ended up finding their set and so did not need to borrow one of ours.
- 4. June 29th exchanged emails, phone calls with John Yellich, Erika Vye, and Bill Rose (Yye and Rose Michigan Tech) on my availability to assist with a K-12 Summer Camp in the Keweenaw July 10-14.
- 5. June 28th received policy statements for working with minors from Erika Carr (WMU Director of Pre-College Programming.
- 6. June 29th July 1st exchanged emails with Erika Vye provided brief biographical sketch for the K-12 Summer Camp.
- 7. July 1st exchanged emails with Sue Tyner about the XRF workshop and registration.
- 8. July 2nd exchanged emails with Dave Chapman about the XRF Workshop and registration.
- 9. July 3rd exchanged emails with Steve Kaczmarek and colleagues about scheduling a meeting to plan XRF Workshop.
- 10. July 5th exchanged emails with Lisa Anderson (MSU Extension Program) and NC-GSA Sessions Chair Lisa updated the Session description and turned it in for the 2018 meeting.
- 11. July 6th exchanged emails with Erika Vye, Don Lafreniere, and Colin Tyrell about K-12 Camp in Keweenaw logistics.
- 12. July 7th exchanged emails with Steve Kaczmarek and Heather Petcovic about the XRF Workshop Meeting.
- 13. July 9th exchanged emails with Richard Lund (St. Johns Highschool) about the XRF Workshop and registration.
- 14. July 10th 14th at Michigan Tech for their K-12 Summer Camp. Presented on geologic maps what we use them for, what they show and how to make them (~15 students). Went into the field with the students and discussed mapping outcrops.
- 15. July 10th July 11th exchanged emails with Linda Hensel (MI-AIPG) and John Yellich the society had decided to donate \$2000.00 to CoreKids.
- 16. July 12th exchanged emails with Dana Hudson about the CoreKids program and setting up an appointment for her call bank students to visit the MGRRE facility.
- 17. July 13th exchanged emails with Daniel Tillman about the XRF Workshop and registration.
- 18. July 13th 14th exchanged emails with Erika Vye, Don Lafreniere and Colin Tyrrell about the Keweenaw Summer Camp

- 19. July 14th exchanged emails with Leslie Montgomery (Bemis Junior High) about logistics for the XRF Workshop.
- 20. July 14th exchanged emails with Ryan Foster (Kalamazoo Air Zoo) about scheduling CoreKids activities with their summer camps.
- 21. July 18th exchanged emails with Kathy Wright (Geosciences) she had received the MI-AIPG check and sent it off to the WMU Foundation for processing.
- 22. July 19th 20th exchanged emails with Robb Gillespie about preservation of the Harvey Quarry and whether it could be included in the Keweenaw Park.
- 23. July 23rd exchanged emails with Angela Monday (St. Joseph Catholic School) about the XRF Workshop and registration.
- 24. July 23rd exchanged emails with Wayne Martin about his fossil collection.
- 25. July 24th exchanged emails with Sita Karki and Paul Emert about a rock identification for Paul Emert sent him information on concretions.
- 26. July 24th exchanged emails with John Yellich about a draft thank you letter for the Mi-AIPG donation.
- 27. July 25th July 26th exchanged emails with Kathy Wright (Geosciences) and Suzanne Beals (WMU Foundation) about the donation drive for CoreKids.
- 28. July 25th exchanged emails with John Yellich and Linda Harrison about the promotional materials generated by Suzanne Beals group.
- 29. July 26th exchanged emails with Steve Kaczmarek about the XRF Workshop Registration at 19 registered.
- 30. July 26th exchanged emails with Cheryl VanEngen (Mattawan Schools) we were unable to accommodate her group.
- 31. July 26th exchanged emails with Dana Hudson about scheduling a visit for her phone bank staff also exchanged emails with Kathy Wright and Tom Howe (Geosciences) about logistics for visit (required use of dept. van).
- 32. July 26th exchanged emails with Linda Harrison and Steve Kaczmarek (Geosciences) about logistics for XRF Workshop especially meals.
- 33. July 26th exchanged emails with Steve Kaczmarek about putting together an abstract for NC-GSA on the XRF Workshop.
- 34. July 27th exchanged emails with Kathy Wright, Suzanne Beals and Dana Hudson about logistics of Call Bank Visit.
- 35. July 27th exchanged emails with Kathy Wright on a contact form email about whether the Department could identify meteorite samples.
- 36. July 27th prepared report of activities from Upper Peninsula field work and outreach activities submitted it to John Yellich for review.
- 37. July 27th exchanged emails with John Yellich about report of field activities. John forwarded it to Michael Marketti (USGS).
- 38. July 28th exchanged emails with Kathy about the CoreKids budget.
- 39. July 28th exchanged emails with current CoreKids Student Assistants asking who wanted to continue with the program. Received affirmative responses from Katie Dvorak, Hannah Pankratz, Guzalay Sataer, Olivia Oerther, Leah Erlandson, and Joey Birdsall.

- 40. July 28th exchanged emails with Abigail Clark (Kalamazoo Air Zoo) about a second Air Zoo Summer camp she requested assistance for Aug. 30th. I confirmed that we could do it. Also emailed Ryan Clark to confirm that there were 2 events Abigail sent confirmation.
- 41. July 28th received thank you note from Michael Marketti (USGS) about working with the Keweenaw Summer Camp.
- 42. July 30th exchanged emails with Duane Hampton with advice on parks in the Alpena area to go to.
- 43. August 1st exchanged emails with Linda Hensel about submitting an article to the MI-AIPG newsletter thanking MI-AIPG for the donation.
- 44. August 1st and 2nd exchanged emails with Steve Kaczmarek (and others) about the XRF Workshop logistics.
- 45. August 2nd exchanged emails with Ryan Foster about logistics of upcoming joint Air Zoo event.
- 46. August 2nd exchanged emails with Joe Ficht (Youth Challenge Academy) about the XRF Workshop and registration.
- 47. August 2nd exchanged emails with Allison VanDriessche about a CoreKids Visit to Western Middle School I informed her that we would be unable to accommodate her school.
- 48. August 3rd exchanged emails with Steve Kaczmarek for feedback on my slides for the XRF Workshop.
- 49. August 3rd Kathy sent email about stipend paperwork for the teachers attending the XRF Workshop.
- 50. August 3rd exchanged emails with Jennifer Billington about logistics for the XRF Workshop.
- 51. August 4th sent out a logistics email to all of the participants in the XRF Workshop note on meals, location of MGRRE, lodging, etc.
- 52. August 4th sent Steve documents for the XRF Fossil activity to place in workbook for XRF Workshop. Also sent him documents on Corekids and Natural Resources.
- 53. August 5th exchanged emails with Zakiya Jackson she informed me that she would be unable to attend the XRF Workshop.
- 54. August 7th exchanged emails with Tom Howe about van availability for the Phone Bank Students Tour and the Hydrofield camp tour.
- 55. August 7th Hydro. field camp tour 30 participants
- 56. August 7th Phone Bank Students Tour 20 participants
- 57. August 7th exchanged emails with Janice Fulford and Bill Harrison about Core Samples for the Kalamazoo Nature Center.
- 58. August 7th exchanged emails with Linda Harrison about the CoreKids 1 pg. Summary.
- 59. August 9th exchanged emails with Abigail Clark about the Aug. 30th joint event with the Air Zoo.
- 60. August 9th XRF Workshop 15 Teachers attended workshop. Presentations by Peter Voice, Bill Harrison and Steve Kaczmarek. Several student-led activities. Heather Petcovic organized a discussion session at end of the meeting.
- 61. August 10th exchanged emails with Linda Harrison she provided the pictures she had taken during the workshop.

- 62. August 11th exchanged emails with Lisa Anderson (MSU Extension Program) our NC-GSA Session had been approved.
- 63. August 11th exchanged emails with Erika Vye on the Keweenaw GeoPark she sent me information for a letter of support. Forwarded to John Yellich.
- 64. August 14th exchanged emails with Janice Fulford (KVCC) about Core Samples. Forwarded her email to Bill Harrison as I was out of town. He arranged to meet with her to hand off samples.
- 65. August 15th exchanged emails with Heather Petcovic, Laura Tinigin, and Steve Kaczmarek about the feedback on the XRF Workshop. Laura had organized and summarized the feedback.
- 66. August 16th exchanged emails with Steve Kaczmarek his budget from the NSF Workshop allowed for a second workshop so we started discussing planning.
- 67. August 16th exchanged emails with Tony DeRose about a rock he had found.
- 68. August 16th Kalamazoo Air Zoo Event 20 participants.
- 69. August 22nd Exchanged emails with Kathy Wright and Lynda Hunt (WMU Foundation) about the Mi-AIPG donation.
- 70. August 23rd exchanged emails with Hannah Pankratz and Abigail Clark (Air Zoo) about logistics of upcoming event.
- 71. August 24th exchanged emails with Mike Velbel (MSU) about scheduling a visit to MGRRE for his class. Tentatively scheduled for Nov. 4th.
- 72. August 24th exchanged emails with Peter Rose, John Yellich, and Arlene Anderson-Vincent (Michigan Basin Geological Society) with title and abstract for my talk to the Michigan Basin Geological Society scheduled for Sept. 13th.
- 73. August 30th Kalamazoo Air Zoo Event 20 participants.
- 74. August 31st exchanged emails with Chris Havlock provided identification of fossils he had found.
- 75. Sept. 5th exchanged emails with Brittany Burgess (MAEOE and U of M Museum) about a scholarship opportunity for students attending the MAEOE field conference. I forwarded the MAEOE announcement to Heather Petcovic to pass on to her students. We also discussed CoreKids participation in several U of M Museum events
- 76. Sept. 7th exchanged emails with Julie Fick about MSU Fossil Day at the Museum event confirmed CoreKids participation.
- 77. Sept. 8th exchanged emails with Keith Agdanowski (KGMS) he requested the use of the MGRRE Ed room for the November KGMS Meeting I am working on scheduling it for him. Nov. 7th.
- 78. Sept. 14th exchanged emails with Steve Kaczmarek about the text for a newsletter item on the XRF Workshop to be submitted to the MESTA E-news. Submitted the revised item to Parker Pennington (MESTA) later on the 14th.
- 79. Sept. 14th –exchanged emails with Mike Pozniak (MBGS) and Veronica McCann (KVCC) she requested information on the MBGS September meeting at MGRRE including directions to get there.

- 80. Sept. 19th exchanged emails with Peter Rose (MBGS/MI-DNR) about a fossil coral he needed identified.
- 81. Sept. 20th exchanged emails with Danita Brandt (MSU) she requested copies of the graphs in my MBGS Talk to use in her class I provided her the materials.
- 82. Sept. 20th Presented on MI Natural Statistics to the Michigan Basin Geological Society
- 83. Sept. 21st forwarded the MESTA E-news to the Harrisons, Steve Kaczmarek, Mohamed Sultan and Heather Petcovic the newsletter had the XRF Workshop report and a second item on the early history of MESTA and WMU's contributions to the society.
 - a. Exchanged emails with Rod Cranson (retired teacher, MESTA Historian) about Lloyd Schmaltz and Dick Passero.
 - b. Parker Pennington made a correction to the History newsletter item and I have forwarded it to Lloyd and Dick.
 - c. Sept. 26th received a note from Dick Passero about the newsletter item he was quite pleased with the success that MESTA had over the years.
- 84. Sept. 21st exchanged emails with Milt Gere (retired Mi-DEQ) about the MBGS Presentation. He also forwarded me information to pass onto teachers from the Society for Mining, Metallurgy & Exploration (SME) for a scholarship program.
 - a. Sept. 25th Andrea Williams (MESTA) forwarded the announcement to the MESTA listsery.
- 85. Sept. 21st exchanged emails with Robb Gillespie about the Kingman Museum's Spooky Science Saturday event.
- 86. Sept. 22nd exchanged emails with John Yellich and William Reinthal (Ashland University) about fieldtrip resources to the UP.
- 87. Sept. 22^{nd} exchanged emails with Milt Gere (retired MI-DEQ) about the Central Michigan Lapidary and Mineral Society Annual Show and whether CoreKids would be able to participate in the event. We also talked about a MGS display for the whole weekend.
- 88. Sept. 25th exchanged emails with Adam Wygant (MI-DEQ) he thanked me for forwarding my slides to him.
- 89. Sept. 27th exchanged emails with Andrew Urquhart (WMU alumni) about the WMU field camp He was requesting help finding some locations to take his students to on a field trip.
- 90. Sept. 28th Bill Harrison and I worked on a newsletter item for the MBGS newsletter on the 100th anniversary Women in AAPG display highlighting the contributions of several notable women geoscientists associated with Michigan.
- 91. Sept. 29th exchanged emails with Bill Mitchell (MI-DEQ/KGMS) he requested the use of a set of core pumps for an outreach event.
- 92. Sept. 29th exchanged emails with John Esch about my MBGS talk.
- 93. Sept. 29th exchanged emails with Bill Harrison, Jenny Trout (WMU) and Rachael Agard (CMU) about scheduling a MGRRE visit for her class.
 - a. Tentatively scheduled for Oct. 27th.
- 94. Oct. 3rd exchanged emails with Jon Andrews (WMU Student) he requested to borrow CoreKids equipment for a cub scout troop event I arranged the loan.

- 95. Oct. 3rd exchanged emails with Tom Howe, Kathy Wright, Carla Koretsky, Heather Petcovic, and Mohamed Sultan about numbers of visitors to the Geosciences Museum.
- 96. Oct. 4th exchanged logistics emails with Brittany Burgess (U of M Museum) on upcoming events.
- 97. Oct. 4th exchanged logistics emails with Milt Gere (Retired-MI DEQ) about the Central Michigan Lapidary and Mineral Society's Annual Show School Day.
- 98. Oct. 4th exchanged logistics email with Bill Mitchell (MI-DEQ) about returning Core Pumps.
- 99. Oct. 5th exchanged emails with Andy Urquhart about field sites in the Marquette area to take his class.
- 100. Oct. 6th exchanged emails with Mike Velbel (MSU) on rescheduling his class's visit. Tentatively scheduled for Oct. 28th.
- 101. Oct. 6th exchanged emails with Cameron Buck on logistics for the MiCareerQuest Southwest.
- 102. Oct. 6th exchanged emails with Robb Gillespie confirming CoreKids participation in the Oct. w8th Spooky Science Saturday event at the Kingman Museum.
- 103. Oct. 6th exchanged email with Jenny Trout on cost of making Core Pumps.
- 104. Oct. 6th exchanged emails with Rachael Agardy (CMU) about logistics of her class's visit to MGRRE.
- 105. Oct. 9th exchanged emails with Mike Velbel about class visit logistics. Bill Harrison realized that he was unavailable so worked on rescheduling the MSU and CMU visits.
- 106. Oct. 13th exchanged emails with Heather Petcovic and Mohamed Sultan about the MLK Career Day event.
- 107. Oct. 14th attended the MESTA 50th Annual Meeting in St. Clair Shores.
- 108. Oct. 16th exchanged emails with Mike Velbel confirmed Oct. 28th tour date.
- 109. Oct. 16th rescheduled the CMU visit to Nov. 3rd.
- 110. Oct. 17th exchanged emails with Emily Powell (Kingman Museum) about logistics for the Spooky Science Saturday event.
- 111. Oct. 17th received photograph from Jay Sinclair of myself and WMU Students at the MESTA 50th Annual Meeting.
- 112. Oct. 20th exchanged emails with Jerry VanNocker (KGMS), John Yellich and Bill Harrison, with regard to Dr. Stefano's possible visit to MGRRE during his stay at the KGMS Annual show in May.
- 113. Oct. 23rd exchanged emails with Elizabeth Keith (YWCA) was unable to accommodate a school visit.
- 114. Oct. 24th exchanged emails with John Shook (Detroit Salt Mine/MBGS) about my Natural Resources slides shared a document with him to forward to teachers he knows.
- 115. Oct. 24th exchanged emails with Katy Avery (Kingman Museum) about logistics for the Spooky Science Saturday event.
- 116. Oct. 26th exchanged emails with Cameron Buck (MICareerQuest Southwest) for logistics issues for the Career Exploration Fair.
- 117. Oct. 26th exchanged emails with Rachael Agardy (CMU) about logistics for their Nov. 3 tour of MGRRE.

- 118. Oct. 28th Scheduled College Group visit Mike Velbel's class 15 students.
- 119. Oct. 28th Scheduled CoreKids Joint event Spooky Science Saturday at the Kingman Museum.
- 120. Oct. 31st through Nov. 2nd exchanged emails with Laura Tinigin (WMU) and Gary Glesener (Virigina Tech) about the Hydraulic Fracturing Model.
- 121. Oct. 31st exchanged emails with Keith Agdanowski about the Nov. 7th KGMS event logistics.
- 122. Oct. 31st exchanged emails with Brittany Burgess (U of M Museum) about logistics of upcoming events.
- 123. Nov. 1st submitted AAPG 100th Anniversay Women Geoscientists newsletter item to MBGS Arlene Anderson-Vincent accepted the document for publication.
- 124. Nov. 1st and 2nd scheduled CoreKids event MiCareerQuest Southwest Career Exploration Fair.
- 125. Nov. 2nd exchanged emails with Rachael Agardy (CMU) about logistics (handouts and lab exercises) for her classes visit to MGRRE.
 - a. Email later in day canceled event as they were having vehicle problems. Will work on rescheduling.
- 126. Nov. 2nd exchanged emails with Kathryn Wright update on CoreKids Budget.
- 127. Nov. 3rd registered for the MLK Jr Career Cruising Day event.
- 128. Nov. 3rd received update on MiCareerQuest Southwest event totals over 5000 8th graders attended the event.
- 129. Nov. 6th exchanged emails with Linda Harrison about the CoreKids grants and donations updated the MGRRE list of awards to CoreKids.
- 130. Nov. 6th exchanged emails with David Dancha about a stone he had found.
- 131. Nov. 7th received email from Bradley Rangel (WMU) stating that CoreKids was approved for the MLK Jr Career Cruising Day event.
- 132. Nov. 7th KGMS event at MGRRE
- 133. Nov. 8th exchanged emails with Montgomery Leslie she wanted access to the XRF Workshop materials. I then exchanged emails with Steve Kaczmarek and Mohamed Al-Musawi to get the documents posted for Leslie to use.
- 134. Nov. 8th exchanged emails with Rachael Agardy she was unable to determine a date that would work for her class to reschedule to. Tour postponed to Spring semester.
- 135. Nov. 8th scheduled joint event U of M Museum
- 136. Nov. 9th exchanged emails with Jamie Hatfield (Woodward Elementary) I was unable to accommodate her school visit.
- 137. Nov. 10th scheduled joint event U of M Museum
- 138. Nov. 10th exchanged emails with Michelle Gates about setting up a donations page on the CoreKids Website.
- 139. Nov. 13th exchanged emails with Brittany Burgess she updated the statistics for the Nov. 8th and 10th events 268 students between the 2 days.

- 140. Nov. 13th exchanged emails with Linda Harrison, Jenny Trout and Tim Brock (Brock Engineering) Tim wanted to borrow the Core Pumps for a workshop that he was teaching. We arranged for the loan.
- 141. Nov. 16th exchanged emails with Emily Powell (Kingman Museum) she provided updated metrics for the Spooky Science Saturday over 800 showed up for the event with another 200 volunteers and booth participants = 1000 total.
- 142. Nov. 17th exchanged emails with Andy Urquhart he provided feedback and a photograph of his class in the UP enjoying the geology in the Marquette Area.
- 143. Nov. 29th exchanged emails with Parker Pennington (MESTA) put together a newsletter item on a Geological Society of America program for teachers.
- 144. Dec. 1st exchanged emails with Kathryn Wright on the CoreKids budget.
- 145. Dec. 4th exchanged emails with Brittany Burgess on AGI resources (soccer equipment poster and minerals used to make the equipment) I helped her find the source.
- 146. Dec. 6th exchanged emails with Kyle Kempster (Western Michigan Christian High School) tried to figure out a way to assist his school's international student program provided some ideas but was unable to schedule anything.
- 147. Dec 7th exchanged emails with Lisa Bouda (MESTA) and Matthew Linke (U of M Museum) about availability of core specimens for display at U of M.
- 148. Dec. 15th exchanged emails with Tim Woodburne (MI-AIPG) about presenting at the Feb. 15th meeting.
- 149. Dec. 19th exchanged emails with Matthew Linke (U of M Museum) updated him on the cutting of slabs of fossiliferous limestone sent them out in the mail.
- 150. Dec. 20th exchanged emails with Lisa Anderson (MSU Extension Program) about our NC-GSA Session.
- 151. Dec. 28th through Jan. 2nd— exchanged emails with Tim Woodburne (MI-AIPG) sent title, abstract for my talk to be published in their newsletter announcement.
- 152. Jan. 2nd exchanged emails with Lisa Bouda volunteered to help with field sites for the MESTA Field Conference in Munising (Summer 2018).
- 153. Jan. 3rd exchanged emails with Mike Velbel (MSU) to arrange a class tour of MGRRE.
- 154. Jan. 8th exchanged emails with Erin Lewis (Air Zoo) about possible joint event.
- 155. Jan. 8th exchanged emails with John Yellich, Bill Rose and Erika Vye (MTU) about a County Atlas Project for the Keweenaw Area. Set up a skype meeting.
- 156. Jan. 8th exchanged emails with Sara Syswerda (Barry County Library System) about possible events.
- 157. Jan. 10th exchanged emails with Bill Harrison, Steve Kaczmarek and Heather Petcovic put together abstract to submit for NC-GSA 2018. Abstract focused on the XRF workshop.
 - a. Submitted Jan. 16th.
- 158. Jan. 10th exchanged emails with Holly Peterson (Guilford College) about the Hydraulic fracturing Model.
- 159. Jan. 10th exchanged emails with Bill Harrison and Mike Velbel (MSU) about scheduling his class for a tour. Tentatively scheduled for Feb. 24th.

- 160. Jan. 11th exchanged emails with Erika Vye confirming timing of conference call later today.
 - a. Spoke with Bill Rose and Erika Vye (MTU) and John Yellich discussed what would go into County Atlas Project focus on Keweenaw area counties.
 - b. Discussed possible funding sources
- 161. Jan. 12th exchanged emails with Ruth Gullekson (Stanwood Middle School) unable to accommodate school visit.
- 162. Jan. 12th –exchanged email with Erin Lewis (Air Zoo) about scheduling a joint event.
- 163. Jan. 12th exchanged emails with Sara Syswerda about scheduling an event with the Barry County Library System. Scheduled for Feb. 21st.
- 164. Jan. 13th scheduled event MLK Jr Career Cruising Day. 70 participants.
- 165. Jan. 15th had request from Keith Agdanowski for a guest speaker to the KGMS February Meeting forwarded it on to students.
- 166. Jan. 15th exchanged emails with Tim Woodburne (MI-AIPG) he forwarded me the announcement for my Feb. 15th talk for approval.
- 167. Jan. 16th exchanged emails with Keith Agdanowski (KGMS) about Continuing Education Credits.
- 168. Jan. 23rd exchanged emails with Eden Morris (Bridgman Library), Jenny Trout, and the Harrisons was unable to accommodate summer visit to library due to budget.
- 169. Jan. 29th Lisa Anderson and I worked on scheduling the talks for the GO-MPS session at North-Central GSA. Reached out to a few presenters to see if they would be willing to do oral talks instead of posters.
- 170. Jan. 29^{th} exchanged emails with Erin Lewis (Kalamazoo Air Zoo) about logistics for Feb. 24^{th} event.
- 171. Feb. 2nd exchanged emails with Kevin Dehne (Delta College/MESTA) about field stops at the MESTA Field Conference (summer 2018).
- 172. Feb. 5th exchanged emails with Rachael Agardy (CMU) attempt to schedule MGRRE tour. Tentatively scheduled for March 16th.
- 173. Feb. 6th and Feb. 7th exchanged emails with Sarah VanderMeer (WMU Student) requesting assistance for additional field sites that MESTA could visit during their field conference.
- 174. Feb. 7th exchanged emails with Erika Vye (MTU) she provided an update on their proposal for a county atlas.
- 175. Feb. 8th exchanged emails with Danita Brandt about the potential expansion project of Fitzgerald Park in Grand Ledge she asked me to provide a letter of support for the city to use in their grant proposal. I said that I would write a letter and suggested that she reach out to Andrea Bair (Delta College) and John Weber (GVSU) for letters as well.
 - a. John Yellich also agreed to submit a letter of support from the survey.
 - b. Feb. 9th received approval from Dr. Sultan to send the letter of support to Grand Ledge.
 - c. Feb. 12th received thank you from Jodie Willobee from the City of Grand Ledge.
- 176. Feb. 8th received notice that the NC-GSA XRF workshop abstract had been approved.

- 177. Feb. 13th and Feb. 14th exchanged emails with Paige Brandli (Hastings Public Library) about the family Science Night covered logistics of event.
- 178. Feb. 14th exchanged emails with Marc Miller (MI-DNR) provided him with the Natural Resources Plots summary.
- 179. Feb. 15th Presented on Mi Natural Resources Statistics talk ~50 attendees.
- 180. Feb. 20th exchanged emails with Mike Velbel about logistics for his upcoming MGRRE Tour.
- 181. Feb. 21st Scheduled Event Family Science Night, Hastings
- 182. Feb. 21st exchanged emails with Deb Perry she notified me that Michigan History would have an article on Mi clay deposits I had provided her reference materials.
- 183. Feb. 22^{nd} exchanged emails with Paige Brandli (Hastings Public Library) she provided feedback on the students who had assisted with the Family Science Night. The total tally for the event was 270 people.
- 184. Feb. 24th MSU MGRRE Tour 35 participants.
- 185. Feb. 24th Scheduled Joint event with Kalamazoo Air Zoo 70 participants
- 186. Feb. 26th sent to Yellich the Hastings Reminder it had a brief article on the Family Science Night and mentioned the CoreKids program.
- 187. March 3rd through March 5th exchanged emails with Heather Petcovic, the Harrisons, Matt Reeve and Mohamed Sultan on the NSF GOLD and GeoPATHS Alliance Submission
 - a. Scheduled meeting to watch webinar
 - b. Discussions of whether the program fit us or not.
- 188. March 5th invited to provide presentation to the Tulip City Gem and Mineral Club for the April 25th meeting.
- 189. March 5th exchanged email with Tony Boxleiter (WMU alumnus) he sent his greetings and asked about the process for giving a donation to CoreKids. We arranged to meet when he would be in town next.
- 190. March 6th exchanged emails with Erika Vye (MTU) and John Yellich about the County Atlas Project –they missed the deadline for a grant and were tabling the project for the time being.
- 191. March 7th exchanged emails with Julia Sherwood about logistics of April 25th meeting.
- 192. March 19th exchanged emails with Hannah Pankratz offering her to use CoreKids materials for the Science Olympiad.
- 193. March 20th Prepared Name Change Announcement for the Department to send out to the various teachers association groups.
 - a. Approved by Mohamed Sultan then sent to rest of faculty for discussion
 - b. Several rounds of edits performed.
 - c. Tom Howe suggested that it should also be sent to MI-AIPG
- 194. March 22nd exchanged emails with Rebekah Banas filled out paperwork for DEQ Earth Day booth
 - a. Generated proof of liability waiver paperwork from Laura Weber (March 23rd)
 - b. Submitted booth application March 23rd

- 195. March 22nd exchanged emails with Zakk Waber provided references for a new position for him.
- 196. March 23rd exchanged emails with Bill Harrison, Jenny Trout (WMU) and Peter Riemersma (GVSU) about scheduling a MGRRE tour for a GVSU class. Tentatively scheduled for April 18th.
- 197. March 26th continued to make changes to the Name Change Announcement
- 198. March 26th discussed with Steve Kaczmarek and Linda Harrison the date for the next teachers workshop. Tentatively scheduled for August 15th.
- 199. March 26th exchanged emails with Parker Pennington (MESTA) about newsletter deadlines.
- 200. March 29th exchanged emails with Laura Tinigin she requested that I put brochures for her summer camp at my KGMS booth I agreed to do so.
- 201. March 29th exchanged emails with Steve Kaczmarek about the XRF Workshop announcement.
- 202. March 29th exchanged emails with Tom Howe he forwarded the name change announcement to the MI-AIPG, MAEP, and WM-AWMA for their newsletters.
- 203. March 29th submitted to Parker Pennington the name change announcement and the XRF workshop announcement for submission to the MESTA E-news.
- 204. March 29th –submitted to Angela Richardson (MSTA) the name change announcement and the XRF workshop announcement for submission to the MSTA newsletter and listserv.
- 205. March 29th submitted Dept. Name Change announcement to Arlene Anderson-Vincent (MBGS) for their newsletter.
- 206. March 29th exchanged emails with Susan Heiss about the XRF Workshop registration.
- 207. March 29th exchanged emails with Glenda LaBruyere about the XRF Workshop registration.
- 208. March 29th exchanged emails with Jenni Snider about the XRF Workshop registration.
- 209. March 29th exchanged emails with Amy Quinn about the XRF Workshop registration.
- 210. March 29th exchanged emails with Russ Miller about the XRF Workshop registration.
- 211. March 29th exchanged emails with Taoufik Nadji (President, MI-AAPT) requesting that he forward the XRF Workshop onto his teachers.
- 212. March 29th exchanged emails with Katrenia Flanigan about the XRF Workshop registration.
- 213. March 29th exchanged emails with Renee Gilson about the XRF Workshop registration.
- 214. March 29th exchanged emails with Rashell Bowerman about the XRF Workshop registration.
- 215. March 29th exchanged emails with Anne Boers about the XRF Workshop registration.
- 216. March 29th exchanged emails with Kathleen O'Connor about the XRF Workshop registration.
- 217. March 29th exchanged emails with Kimberly Owens about the XRF Workshop registration.
- 218. March 30th exchanged emails with Steve Kaczmarek and Heather Petcovic about continuing education credits and how we could offer them at the workshop.

- 219. March 31st— exchanged emails with Connie Atkisson about the XRF Workshop registration.
- 220. March 31st— exchanged emails with Carrie Wilkinson about the XRF Workshop registration.
- 221. March 31st exchanged emails with the MAEOEgram Editor about the name change announcement and XRF workshop announcement
- 222. April 2nd exchanged emails with Kathryn Wright about CoreKids Budget.
- 223. April 2nd exchanged emails with Audrey Edwards on the XRF Workshop and registration.
- 224. April 2nd exchanged emails with Laura Elliott about the XRF Workshop and registration.
- 225. April 2nd exchanged emails with Renee Larm about the XRF Workshop and registration.
- 226. April 2nd exchanged emails with Mark Sheler about the XRF Workshop and registration.
- 227. April 3rd exchanged emails with Teresa Turner on the Kalamazoo River suggested more appropriate people to interview.
- 228. April 4th exchanged emails with Deborah Hasselschwert about the XRF Workshop and registration.
- 229. April 6th exchanged emails with Alyssa Gipson about the XRF Workshop and registration.
- 230. April 8th exchanged emails with Kristy Butler about the XRF Workshop and registration.
- 231. April 9th exchanged emails with Christin Schmitt about the XRF Workshop and registration.
- 232. April 9th exchanged emails with Mary Burke (Kalamazoo RESA Science Education Consultant) about the XRF Workshop and other possible collaborations.
- 233. April 9th exchanged emails with Lisa Harbour about the XRF Workshop and registration.
- 234. April 9th exchanged emails with Jeffrey Clark about the XRF Workshop and registration.
- 235. April 9th exchanged emails with Mary Ackerson about the XRF Workshop and registration.
- 236. April 9th exchanged emails with Lisa Bouda and Parker Pennington about the possibility of MESTA offering Continuing Education Credits (SCECHs) for the XRF Workshop.
- 237. April 9th exchanged emails with Julia Sherwood about logistics of the April 25th presentation at the Tulip City Gem and Mineral Club.
- 238. April 10th exchanged emails with Shauna Williams on the XRF Workshop and registration.
- 239. April 10th exchanged emails with Jennifer VanHoe about the XRF Workshop and registration.
- 240. April 10th exchanged emails with Craig Denton about the XRF Workshop and registration.
- 241. April 10th exchanged emails with Gary Horrocks about the XRF Workshop and registration.
- 242. April 10th exchanged emails with Veronica McCann (KVCC) about the XRF Workshop and registration. We also talked about possible teaching collaborations.

- 243. April 10th exchanged emails with Leslie Burleson about the XRF Workshop and registration.
- 244. April 10th exchanged emails with JoEllen Pollack about the XRF Workshop and registration.
- 245. April 10th exchanged emails with Rebekah Banas and Hannah Pankratz about logistics for Earth Day Event.
- 246. April 11th exchanged emails with Lisa Anderson (Purdue Extension Program) discussion of meeting up prior to next week's NC-GSA meeting.
- 247. April 11th exchanged emails with Chika Hampton about the XRF Workshop and registration.
- 248. April 12th exchanged emails with Greg Taylor about the XRF Workshop and registration.
- 249. April 12th exchanged emails with Katherine Johns about the XRF Workshop and registration.
- 250. April 15th exchanged emails with Lisa Bouda on the SCECH request she was going to add it to the agenda for the MESTA Board Meeting on May 5th.
 - a. Additional information provided to Shawn McNamara and Lisa Bouda on April 16th
- 251. April 16th 17th NC-GSA meeting
 - a. Chaired GO-MPS Outreach session with Lisa Anderson
 - b. Presented talk on XRF Workshop titled: Bridging the gap: Using geochemical data to integrate geology and chemistry in K-12 Education
- 252. April 17th- exchanged emails with Lisa Dewind about the XRF Workshop and registration.
- 253. April 19th MI DEQ Earth Day Event
- 254. April 20th the MESTA E-news had the Dept. Name Change article in it.
- 255. April 24th exchanged emails with Greg Taylor about the XRF Workshop and registration.
- 256. April 25th Tulip City Gem and Mineral Club Presentation presented on Michigan Natural Resources Statistics about 50 participants.
- 257. April 26th exchanged emails with Kevin Cole (GVSU) about my talk on the 25th.
- 258. April 26th exchanged emails with Haas (MBGS) and John Yellich about surplus equipment found out that the piece he wanted had already been recycled.
- 259. April 27th exchanged email with Jerry VanNocker about the logistics for the KGMS show.
- 260. April 30th met with Robb Gillespie, Andrew Caruthers, Johnson Haas, Heather Petcovic and Mohamed Sultan to discuss the Rood Dinosaur Park.
 - a. April 30th Developed short paragraphs on how my courses could potentially use the park
 - b. May 4th Andrew prepared a full white paper on the park to be submitted to College of Arts and Sciences as well as other interested groups.
- 261. May 3rd Met with Dr. Chris Stefano (MTU), John Yellich, Bill Harrison, Lloyd Schmaltz, Linda Harrison to discuss the WMU Lloyd Schmaltz Museum

- 262. May 3rd exchanged emails with Chuck Schepke about the XRF Workshop and registration.
- 263. May 4th 6th Kalamazoo Geological and Mineral Society Annual Show
- 264. May 4th received donation from Tony Boxleiter who visited the show.
- 265. May 8th exchanged emails with Keith Agdanowski about Continuing Education Credits for the KGMS Annual show suggested that he reach out to MESTA.
- 266. May 8th exchanged emails with Veronica McCann to invite her to the XRF Workshop.
- 267. May 8th sent email to Jerry VanNocker (KGMS) asking for update on KGMS Show metrics.
- 268. May 8th had Charlie Ewing analyze a sample provided to me at the KGMS show by Mahamadou Sumareh. Our best guess was that the sample was a chromite. I sent the XRF analysis to Mr. Sumareh in an email.
- 269. May 8th exchanged emails with Erica Rossell about the XRF Workshop and registration.
- 270. May 8th exchanged emails with Milt Gere soliciting metrics for the Central Michigan Lapidary and Mineral Show.
- 271. May 8th exchanged emails with Rebekah Banas soliciting metrics for the DEQ Earth day Event.
- 272. May 9th exchanged emails with Keith Agdanowski (KGMS) about Continuing Education Credits and who can issue them. We also discussed field locations in the UP where fossil collecting can be done.
- 273. May 9th- exchanged emails with Andrew Grimm (CMU Student) about the CoreKids program and outreach positions in the area.
- 274. May 11th exchanged emails with Veronica McCann about scheduling visit to MGRRE to talk about possible collaborations.
- 275. May 11th exchanged emails with Rebekah Banas (MI-DEQ) she provided updated metrics for the DEQ Earth Day Event.

Event Totals July 1st, 2017 to

MI Tech Summer Camp	15
Kalamazoo Air Zoo Events	110
College Groups	130
Teacher Workshop (XRF)	15
Presentations to MBGS, MI-AIPG, Tulip City Mineral Club	130
Central Michigan Lapidary and Mineral Society Annual Show	С
Spooky Science Saturday (Kingman Museum)	1000
MICareerQuest Southwest Event	5000

KGMS Nov. Meeting	40
U of M Museum Joint Events	268
MLK Career Cruising Day	70
Family Science Night	270
KGMS Annual Show	С
DEQ Earth Day	2085
Total:	9078

C – denotes events where I am still waiting on metrics from the hosting group.

Past outreach events July 1st, 2017 to

- i. July 10th 14th Mi Tech Summer Camp
- ii. August 9th XRF Workshop
- iii. August 16th Air Zoo Event
- iv. August 30th Air Zoo Event
- **V.** September 20th Michigan Basin Geological Society Presentation
- vi. Oct. 20th Central Michigan Lapidary and Mineral Society Annual Show School Day
- vii. Oct. 28th Spooky Science Saturday, Kingman Museum
- **Viii.** Oct. 28th MSU visit to MGRRE
- ix. Nov. 1-2nd MiCareerQuest Southwest Career Exploration Fair
- **X.** Nov. 8th U of M Museum Joint Event
- **Xi.** Nov. 10^{th} U of M Museum Joint Event
- **Xii.** Jan. 8th MLK Jr Career Cruising Day
- **XIII.** Feb. 15th MI-AIPG Montly Meeting Presentation
- **XiV.** Feb. 21st Family Science Night
- **XV.** Feb. 24^{th} Air Zoo Joint Event
- **XVi.** Feb. 28th MSU visit to MGRRE
- **xvii.** Feb. 28^{th} Kalamazoo Air Zoo Joint Event
- **XVIII.** Apr. 18^{th} GVSU Class Visit
- **XIX.** Apr. 19th DEQ Earth Day
- **XX.** May $4^{th} 6^{th} KGMS$ Annual Show

Upcoming Events

XXI. August 15th – XRF Workshop