

MINUTES
ENWRA Technical Committee Meeting
Friday February 11, 2022 9-11:00 am
Virtual Zoom meeting
Eastern, Nebraska

Attendees (10):

Annette Sudbeck (Lewis and Clark NRD [LCNRD]), Brian Bruckner (Lower Elkhorn NRD [LENRD]), Chuck Wingert (Nemaha NRD [NNRD]), Daryl Andersen (Lower Platte North NRD [LPNNRD]), Dick Ehrman (LPSNRD), Myles Lammers ([LCNRD]), Paul Woodward (Papio-Missouri River NRD [P-MRNRD]), Aaron Young (University of Nebraska-Lincoln, School of Natural Resources, Conservation and Survey Division [UNL CSD]), Sue Lackey (UNL CSD), Katie Cameron (Eastern Nebraska Water Resources Assessment [ENWRA] Coordinator/UNL CSD)

Recent Activity Review:

ENWRA and GeoCloud renewal agreements and Water Sustainability Fund (WSF) award agreements went through LPSNRD board January 19th 2022. NRD Legislative Conference: January 24th 2022 informal meeting with Brian, Dick and Chuck and ENWRA Tradeshow January 25th 2022 featuring Nebraska GeoCloud (Jesse Korus, preview of new tools here: <https://youtu.be/Fs4OsWJQhe8>), USGS Age Dating Report for ENWRA (WSF#4125), AEM coverage and 2020 NNRD and P-MRNRD AEM Flights. Transducer Round Table was mentioned for possible NRD fall conference. ENWRA

NRD Priority Area Discussions, near term and Long Range Plan (LRP) perspectives:

- Reviewed conversations from December to February 2022 and priority topics mentioned
- The “Map/characterize limited/isolated aquifers” objective in 2A of the LRP – (how much water is available, or can area handle more development) - would be a continued effort that could justified as beneficial to all ENWRA NRDs
- County zoning discussions – subdivisions and residential developments are a current concern for these limited areas around more populated towns (poultry concerns slowed way down, don’t use that much water compared to irrigation)
- ENWRA projects not having to cross NRD boundaries - study of an NRD specific area and justify how other ENWRA NRDs benefit, now that major framework has been mapped smaller analysis areas are the next step and they may not be applicable to all ENWRA but the sharing of results could be beneficial to the rest of the group
- Nitrates and accurate age dating – is it a relevant time frame? 50s, 70s, could the study say for example this area impact is from the 90s - Daryl sent Lower Loup NRD study to the group as follow-up example. **UPDATE:** USGS hosted a Feb. 22, 2022 *Groundwater tracers: Practical applications and case studies from Nebraska Seminar* as part of their Workshop Series and there is a new Hydrologist, Mikaela Cherry who presented with Chris Hobza.
- Aquifer testing – costs can be varied based on different levels of testing to getting results (single well pumping, slug testing, step testing, other tools)
- NRDs have done pilot work on their own but could use ENWRA as vehicle to collect more data, test advanced techniques, share results

- Manganese (mn) and other quality parameters, ENWRA well sites have majority of well clusters with results exceeding 1 mg/L mn, keep this emerging contaminants objective in mind
- **Ground-based geophysics:** CSD bought a walkTEM which will be based out of Scottsbluff with Mohamed but all CSD could use it including ENWRA, agreements like we do for test holes but as maybe up to 5 virtual boreholes a day (costs are being worked out but comparable with a day of test hole work). NMR or other assessment tools also mentioned. Tools for Well Head Protection areas (WHPAs), maybe areas where with remaining questions after AEM survey, or in other areas with data gaps. Prepare a bullet sheet that summarizes geophysical tools in relation to ENWRA.
- **Recharge** is the main assessment focus for ENWRA now along with our current WSF. Need **lateral and vertical understandings** of how the aquifers are being recharged and their boundary interactions. LPNNRD and maybe other ENWRA NRDs could use multiple recharge sites and would need recharge factors for their whole districts, the WSF covers the wettest part of LPNNRD but other areas need study. Also, the nitrate side of it, how nitrate is moving in the recharge system. WSF grant at Phase 1 will give us initial map of high, moderate, low recharge areas to target for more detail and estimating rates.
 - Intentional recharge was a topic also mentioned. P-MRNRD: Elkhorn RV with paleochannel mentioned, Platte RV is natural recharge, LPNNRD: consultants looked, Ashland big site first then other Butler, Colfax areas.
 - ENWRA LRP Objective #4 was study of Hydraulically Connected Areas (HCAs), leave in as a LRP objective because they are subject to recharge. Recharge and discharge are part of LRP #5 Water Budget, recharge would be the top priority of that.
- Website future needs – adequate or major improvements/new approach in next 5 yrs?
- Previous Priority Areas list when planning for WSF was displayed on screen for reference mainly for context on the discussions, most covered in WSF award. SQS#1/DVB paleochannel was on the list but not covered in the WSF focus area list (potential future project similar to SQS#2 approach), recent NRD WSF framework awards will help categorize specific project areas needing new data collection.
- Partner, consultant, or other data sets/projects that will be used – NRD framework model projects were discussed, LPSNRD is just at the initial RFP stage. LENRD: ENWRA allowed for where LENRD is at with modeling stage, would share if others will benefit from exposure. LENRD is at the final review stage of their current product and will have personalized training at the end of February on the cloud-based user interface. LPNNRD and P-MRNRD: still in review mode on framework model, can let the group know the results release date. Consultants use the GeoCloud, would like to move forward with the public facing side of the products.

- LRP does not need edits before the next board meetings where interlocal renewal is presented. **UPDATE:** Tasks and Timeline for next 5 years for ENWRA roughed out through follow-ups with the technical committee, presented at LPNNRD and LENRD March meetings. Recharge and 3D Modeling are the main 2 priority areas for NRDs, we can get areas categorized and prioritize concerns for each for LRP update maybe in June or July 2022.

Budget and Interlocal: ENWRA expected final fiscal year (FY) 2022 budget numbers and Draft FY2023 budget was reviewed. Change AEM database/Database management budget item to \$23,000 to cover in case other non-ENWRA NRDs don't sign or pull out of GeoCloud interlocal. Other listed items ok by NRDs, March is when LPSNRD starts with budget planning for next fiscal.

ENWRA and GeoCloud Interlocals: current 5 Year term ends June 30, 2022, renewal proposed through June 30, 2027. Five-year term and contract clauses were discussed. Discussion on the need for ENWRA visibility, layout of renewal reasoning and perspectives, what ENWRA does for NRD boards. Discussion on % of ENWRA area and percent of ENWRA dues breakout table from years ago, NRDs made comments related to their Districts' amounts. Will leave the Interlocal Amendment 7 for next 5 years as is with LPNNRD and LENRD both going next up for approval at board meetings in March 2022 and ENWRA presentations with Daryl and Brian (hope to get all NRDs signed by April 2022). **UPDATE:** all 6 NRDs signed Interlocal Amend 7 renewal for FY23-27 effective as of March 28, 2022.

ENWRA WSF #5312 Scope Review and Upcoming Activities:

- Three phase, three year project with USGS and UNL-CSD partners. Budget: \$96,000 out of pocket for ENWRA, \$144,000 from WSF, \$74,000 USGS coop dollars.
- USGS taking existing AEM data and water quality data to create a Phase 1 2D map of the region similar to the AGF recharge Google Earth Datasets for the top layer of resistivity data but using deeper AEM data down to the water table (high, moderate and low categories).
- CSD will be creating a better than the 1995 water table contour surface to use with the USGS work and as a separate product, products will go on the GeoCloud
- Phase 2 will look at Focus Areas across NRD boundaries, Figure from the grant application was reviewed on screen. Phase 3 will be an enhanced recharge map product and will include recommendations for management/sustainability of the focus areas
- Getting more measuring points accurately located and categorized by aquifer unit was the first order goal on the phased approach, NRDs will work with Aaron Young to get a list of NRD measuring points in their district. Aaron showed existing measuring point and test hole locations on maps of the focus areas onscreen for discussion. Borehole logs that NRDs may have that are not in the registered well database or in CSD records was also discussed. Comments were made on possible CSD and USGS use of the log data (considered public

because part of a permit? Remove all personal information from the log data if used?, ENWRA scanning of the logs like we have in ENWRA archive?).

ENWRA Upcoming Activities:

- Meetings, Presentations Updates to Boards: Nemaha ENWRA Update was August 12, 2021, LPSNRD ENWRA agreements went in January 2022, LCNRD ENWRA Update was January 20, 2022, LPNNRD water committee update was Mar 1, 2022, LENRD Mar 10, 2022 (Sue Lackey attended with Katie and requested to attend LENRD's end of Feb. training).
- Spring technical meeting and Long Range Plan update meetings were due to be scheduled and we try to get ENWRA Updates to boards every other year, no formal changes to the general past meeting schedule plan except for being flexible to more frequency on an as needed basis. Spring technical meeting will occur through email and Zoom as follow-ups to this February 2022 meeting. The next Long Range Plan Update meeting with the whole ENWRA group and partners is tentatively scheduled for June or July 2022.
- April will be the first working meeting for the ENWRA WSF #5312 project but we have the official go ahead for reimbursable charges because the over-arching WSF contract is fully signed as of February 3, 2022 (USGS JFA is also fully signed and CSD Agreement is routing at UNL).

Adjourn