AGENDA
ENWRA Spring Technical Meeting
Thursday, May 3, 2018 1:00-3:00 pm
Lower Platte North NRD
Wahoo, Nebraska

1:00 to 1:15 – Introduction, Budget

- Agenda overview
- ENWRA financials (Table attached)

1:15 to 1:40 – ENWRA Activity Updates

- Nebraska GeoCloud Program – Jesse Korus
- WSF Projects – Status and Reporting
- Test Holes/Monitoring Well Installations
- Upcoming Pilot Study Sampling

1:40 to 2:30 – Recharge Next Step Roundtable Discussions

- Where are we at with our current track on recharge assessment in relation to ENWRA Long Range Plan (LRP) Objective #3- Estimate recharge areas and rates (see attached pdf for LRP details, Objectives #4 and #5 also relate to #3 and are included for reference)
- Recharge assessment in relation to the ENWRA partner agency priorities, programs, needs and management questions (where are the overlaps, potential mismatches – white board activity) – is now the time to start working toward dovetailing any entity efforts? with an ENWRA workscope? - get NeDNR, indiv. NRD, USGS, & CSD thoughts (mention DNR Workshop on SUSTAIN, other potential related entity buildouts/efforts)
- Example discussion points: AEM coverage/use, need more physical measurements?, assess deep vadose behavior/time delay effects?, more work with existing data?, what potential model calibration datasets do we need for long term?, conceptual refinements to the water budget? consider needed scales (area specific, District, ENWRA Region, State) for assessment objectives
- Next step: roundtable results, potential proposal funding and/or grant applications – 2019 submittals?, work in the meantime to prepare? who does what & when

2:30 to 3:00 – Airborne Electromagnetic (AEM) Survey Flights

- 2018 AEM flight planning update – Jim Cannia of AGF will be present
- Discussions, starting May 9th plan for detailed review of final flight lines for each District

3:00 Recap and Adjourn

ENWRA Financials

ENWRA FY18 Summary (as of May 2, 2018):		Budgeted	Projected
Total Bank for start of FY 18:		**$327,232**	**$ 327,232.00**
Planned Routine expenses:			
PR	Pilot site wells/equip maint.	$ 7,500.00	$ 15,727.34
PR	Pilot site water sampling	$ 6,200.00	$ 6,322.00
PR	Weather stations	$ 7,800.00	$ 7,800.00
PR	Website (includes dropbox)	$ 520.00	$ 532.38
PR	Coordinator Salary (2017-2020 Coop Agre	$ 57,331.00	$ 49,147.74
PR	Office Reimbursement to LPSNRD	$ 5,000.00	$ 5,000.00
PR	AEM Database/Data Management efforts	$ 24,134.60	$ 22,609.23
	Subtotal	$ 108,485.60	$ 107,138.69
Planned (P) and/or Suggested (S) expenses for consideration:			
P	Deep THs near AEM Flight lines (2 NRDs)	$ 18,300.00	$ 18,300.00
P	2015 ENWRA USGS WSF Grant -Extended	$ 25,392.40	$ 25,392.40
S	Recharge Project JFA Extended	$ 13,333.00	$ 13,333.00
S	Recharge Project/Weather Stations/ Other	$ 50,000.00	-
	Subtotal	$ 107,025.40	$ 57,025.40
	TOTAL	$ 215,511.00	$ 164,164.09
	Plus Incoming FY18 Dues: $147,000		
	Estimated Bank going into FY19:	**$ 258,721.00**	**$ 310,067.91**

DRAFT ENWRA FY19 Budget:		
Total Bank estimated for start of FY 19:		**$ 310,067.91**
Planned Routine expenses:		
PR	Pilot site wells/equip maint.	$ 15,000.00
PR	Pilot site water sampling	$ 6,200.00
PR	Weather stations	$ 7,800.00
PR	Website (includes dropbox)	$ 520.00
PR	Coordinator Salary (2017-2020 Coop Agree)	$ 58,864.00
PR	Office Reimbursement to LPSNRD	$ 5,000.00
PR	AEM Database/Data Management efforts	$ 24,057.00
	Subtotal	$ 117,441.00
Planned (P) and/or Suggested (S) expenses for consideration:		
P	Deep THs near AEM Flight lines (LPN, N, LPS	$ 27,450.00
P	2015 ENWRA USGS WSF Grant -JFA Extended	$ -
S	Other Projects, Grant Applications?	$ 50,000.00
	Subtotal	$ 77,450.00
	TOTAL	$ 194,891.00
	Plus Incoming FY19 Dues: $147,000	
	Estimated Bank going into FY20:	**$ 262,176.91**

Note: AEM Database/Management reflects ENWRA's portion of the Nebraska GeoCloud WSF Project local match, the remaining interlocal NRD portion (as well as costs assoicated with WSF #5189 for the 2018 AEM flights) are accounted for separately from the ENWRA account financials.

ENWRA Long Range Plan Objectives #3 -#5

3) Estimate recharge areas and rates

a. Map recharge areas (Figure 5)
b. Evaluate recharge in a variety of settings (Figure 5) - evaluate in areas with geophysical block flights, maintain and add additional vadose stations as necessary, evaluate models/installations for big picture of vadose framework, and work with partner agencies

Estimating recharge rates (Objective 3) is necessary to manage pollutant sources (such as feedlots) and provide accurate input to numerical models, the results of which can be sensitive to the recharge parameter.

4) Assess potential connections between groundwater and surface water

a. Continue to evaluate Hydrologically Connected Areas (HCAs) - update CSD maps (water table, transmissivity, etc.); incorporate CSD & DNR & ENWRA frameworks
b. Map saline groundwater, map salt spring & stream reaches, and map salt/fresh boundary in secondary bedrock formations using variety of methods (2015 WSF Application with USGS ties in)
c. Review/incorporate ongoing alluvial valley assessment work - identify gaining/losing reaches

Assessing the connection between groundwater and surface water (Objective 4) is necessary to understand how pumping groundwater will affect surface water flows and how increased surface flows may recharge groundwater. Knowing the extent of hydrologic connection can optimize both groundwater pumping and in-stream flows. Assess potential connections between groundwater and surface water.

5) Estimate water budgets for management decisions

a. Calculate groundwater in storage, estimate/calculate sustainability – ongoing activity using available framework/priority area results (mapped under objective 2). Includes assimilation, analysis and periodic publication of data and keeping up to date with partners' water budget work and planning.
b. Evaluate marginal areas where development threatens limited aquifer quantities, intensity of management concerns will drive order of assessment for the priority areas (in conjunction with funding)
c. Formulate for drought conditions to minimize impact/water use restrictions (example: focus on areas with residential pressure or past management concerns during drought conditions)

Estimating water budgets (Objective 5) requires assimilation of all the data regarding the geologic framework, inputs and outputs to a hydrologic system. Water budgets are necessary to assess if water resources are being sustainably managed, and if not, approximate how long the resource will remain viable.