

Executive Summary :

① Well Registrations & Locations

As meters installed & acres certified were matching
regs. & getting unreg. - registered. URNRD
good shape.

Detective Kit discussion

→ Interim Compact Well Table w/
unique ID's for each well,
until all are matched w/ DNR
reg. database

② Meter Reading - Came up a common set of info to
collect. MT distribute

③ Fall Report Cards - a few legitimate differences
among NRD's but we did
agree a core set of info to collect
each fall.

MT distribute

④ Instantaneous readings - particularly for non-metered
wells

⑤ Electric Records - Ask for shared power billing ≈ 1000
- Let's try to get it from power
companies. Ask on form if well metered
separately \Rightarrow Power Co. won't release info.

⑥ Cert. Acres - Christy put in tables - don't wait on us.
Field boundaries on photo - eventually digitizing
- Best if perfected w/ FSA or Courthouse documents if DNR wants to!!!

From: Mike Thompson [mthompson@dnr.state.ne.us]

Sent: Tuesday, July 29, 2003 5:41 PM

To: Christy Peterson; Bartels, Sid; Brad Edgerton; Bryan Lubeck; Hipple, Bob; Merrigan, Robert; Richard K. Holloway; Thompson, Mike

Cc: Ann (Work) Bleed; Patterson, Roger; Gayle Starr; Steve Gaul; Clements, Mike; Dan Smith; John Thorburn

Subject: Annual Reporting Etc
Republican River NRD Technical Staff:

Annual Reporting

A few things were discussed at the meeting with the GW modeling crew. Some of the issues were pertinent to the annual administration of the Republican River compact. The most urgent need is to get a handle on: (1) amount of groundwater pumped, (2) actual irrigated acres, (3) pump power source, (4) delivery system type, (5) crop type and acres by well and (6) whether the well irrigates land under a surface water permit (commingled). The obvious companion information that goes along with this information is the Well Registration (Well ID) number and well location. Along with the well location, it is extremely desirable to have the irrigated land mapped out too.

Some of this information is needed for the GW model to work adequately and some is needed for reporting purposes. Most of this was listed in the timetable document discussed and distributed at the meeting on May 9, 2003 in Holdrege. I have attached it and Appendix C. With all the activity in the last two months, I thought it would be good to review the list. The following section, referring to Nebraska's annual groundwater use reporting, was copied from page 33 of Appendix C of the Settlement Stipulation:

Nebraska – will provide an annual tabulation through the representative Natural Resource District (NRD) in Nebraska that includes: the well registration number or other ID number; groundwater pumping determined by a meter on each well (or group of wells in a manifold system) or by reported hours of use and rate; wells will be identified by; location; system type (gravity, sprinkler, LEPA, drip, etc.); and irrigated acreage. Crop distribution will be provided on a county basis.

The first year of reporting (that will go into the 5-year averages) begins in 2003. Not all the wells will be metered by the end of this year. Where meters are installed, we should get "end of year" readings. This will be useful, even if we don't know the meter's starting number for 2003. For instance, if a meter was installed on June 17, 2002; we would like to know the EOY reading for 2003. If it was not read last year, we can still get an idea of use based on total volume pumped since installation.

The wells with no meters installed are a challenge. We will have to use the estimation of hours pumped times instantaneous pumping rate. Any ultrasonic readings should be reported. In the case of electric wells it will be useful to know the meter or customer number of the power record, so we can approximate a location for the water use and estimate hours of use. We can work with the power companies to get the data, but would need to collect unique ID numbers from the electric bills to match to wells. This is one of the bits of information that could be collected with the annual report cards OR when the owner/operator comes in to certify acres. Along with the meter/customer number, it would be necessary to know the "nameplate" horsepower for the pump unit on each well. For natural gas, gasoline and diesel power units (assuming no water meter data available), it would be useful to know if the producer keeps track of hours of operation.

The actual acres irrigated could be collected when the irrigator comes in to certify acres. If that doesn't happen, then we will have to follow up with personal visits or collect it with the annual report cards. This is true for the delivery system type (gated pipe, surge valve, center pivot, side-roll, drip, LEPA etc), crops and acres of each crop, and finally the commingling question. The crop distribution is not absolutely required by well, but it will be very useful to judge the county statistics.

If you have addressed these issues by designing a report card form already, I would like to see it. If you have major concerns, please let me know.

GIS Data

I have installed some GIS scripts at the LRNRD and MRNRD that make pulling up and printing an aerial photo easy to do. Therefore, making a quick map to staple to an acre certification form shouldn't be a major hindrance. If the URNRD and Tri-B NRD would like those scripts and the related base data installed, I would be glad to do it.

I received GIS data yesterday from the Flatwater Group regarding the official boundaries of the basin and moratorium areas. I will review it and deliver the data to you ASAP. In addition, I am working to get our dam and well databases posted to our web site and ftp server every night (in zipped shapefile format). I will send instructions as soon as that is ready. These files can be copied to the hard drive in the folders set up for the ArcView scripts. That will keep the information in your ArcView projects current.

Palm Pilots and GPS

We have configured and tested our Palm OS devices with the attached GPS units. Currently we use Palm m515 units with Magellan GPS Companion units. This combination allows us to use the Palm device to quickly record well, canal and irrigated land attribute information along with location. We have used this equipment to map irrigated acres and canal features on several canal systems. I have just requested two new units manufactured by Garmin. The model is the iQue 3600 and is a fully functional Palm PDA with built-in GPS functionality. The iQue 3600 has only been sold since July 1, 2003.

If you obtain this or equivalent equipment, we would be glad to set it up and show you how to use the forms and create new ones. The forms automatically download to an access table when you plug the PDA into its synchronization cradle. The software is called Pendragon Forms and DNR will supply a reasonable number of user licenses, if you are interested.

I look forward to hearing from you all.

Mike

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Mike Thompson

From: Mike Thompson [mthompson@dnr.state.ne.us]
Sent: Thursday, August 14, 2003 8:13 AM
To: Christy Peterson; Bartels, Sid; Brad Edgerton; Bryan Lubeck; Hipple, Bob; Merrigan, Robert; Richard K. Holloway; Thompson, Mike
Cc: Clements, Mike; Dan Smith; John Thorburn
Subject: NRD Technical Staff - Agenda for concurrent meeting

Agenda
DNR-NRD Technical Committee Meeting
Holdrege, NE
August 15, 2003

Note: No additions or modifications were offered to the draft agenda. Number 10 covers any new business that comes up in the next 24 hrs.

1. Protocols for well locations. How do we want to proceed with the task of matching well locations with registrations?
2. Protocols for meter readings. What are we going to require as a minimum set of data we collect at each meter-reading event (whether self-reported or via NRD staff visit)?
3. Hours of Operation X Rate. This is the prescribed substitute for meter readings. How do we implement this provision of the RRCA procedures? Can we obtain information from electricity bills? We would need nameplate horsepower and water depth information too.
4. Database Design Report. Discuss table schematic and what else needs to be added.
5. Fall Report Cards. What needs to be on them and when do they get sent out? What format should be used? Examples of DNR mailing procedures for DNR acreage and meter report cards.
6. Mid-season visits. Can we implement a plan to take instantaneous ultrasonic readings to establish a measured rate to compare with instantaneous readings from the meters? Will irrigation season visits be made for compliance checks and interim recording of meter data?
7. Certified Acres. How do we maintain records and enable verification?
8. RRCA data reporting timetable from May 9, 2003 (attached) meeting. Revise?
9. Other issues from E-mail of July 29, 2003 (attached).
10. Other items?

8/15/2003

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