

## PROGRAM INFORMATION

**EQIP:** APPLICATIONS WILL CONTINUE TO BE APPROVED AS FUNDS BECOME AVAILABLE. **SIGNUP ANYTIME FOR 2022 FUNDS.**

**CSP:** GENERAL CSP APPLICATIONS CONTINUE TO BE APPROVED AS FUNDS BECOME AVAILABLE. **SIGN UP NOW FOR 2022 CSP FUNDS.**

**NSWCP:** NEW FUNDS COME JULY 1<sup>ST</sup> FOR ALL CONSERVATION PRACTICES. **TO HAVE FIRST CHANCE AT IRRIGATION PRACTICE APPROVAL, GET YOUR IRRIGATION APPLICATIONS IN BY AUG. 31<sup>ST</sup>.**

**ENERGY EFFICIENCY GRANT:** SIGNUP DEADLINE IS **OCTOBER 31, 2021 FOR 2022 FUNDS. RURAL DEVELOPMENT IS ALREADY ACCEPTING APPLICATIONS FOR THIS DEADLINE. FOR MORE INFORMATION CONTACT KELLEY AT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER AT 308-455-9837 OR [KELLEY.MESSENGER@USDA.GOV](mailto:KELLEY.MESSENGER@USDA.GOV).**

## CALENDAR OF EVENTS

**MAY 31: MEMORIAL DAY – GOV'T OFFICES CLOSED**

**JUNE 7: CNPPID BOARD OF DIRECTORS MEETING**

**JUNE 7: CNPPID 12 WEEK IRRIGATION RUN SCHEDULE STARTS**

**JUNE 8: TBNRD BOARD MEETING**

**JUNE 14: FLAG DAY**

## Tool to Determine Crop Water Use – Part 1

The Nebraska Agricultural Water Management Network (NAWMN) is underway for the 2021 crop season across the Tri-Basin NRD. This network is a tool for participating and area producers to use when scheduling irrigations. The information gathered is used to determine how much soil moisture their crops are using. This information can be found on the website listed on page 3 under the "NAWMN Sites" portion of the section "Crop ET Information". If you get this via email, just click the links.

There are 6 weather stations within or neighboring the entire NRD where producers can get crop water use information. This network adds 14 additional locations. See map on page 3. Having this information more localized allows producers to better determine what their crops are using for soil moisture. Unlike the weather stations, these sites allow producers to use their own crop stage of growth. Having these sites closer to a producer's fields and being able to use their own crop stages, this network serves as an excellent tool in determining crop water usage by field. Knowing your crop water use allows you to better schedule irrigations which can mean more money in the bank, water for future generations, prevent leaching of nitrates into the water supply, etc. etc.

On page 3 of each Tri-Basin Irrigator issue, information from the prior two weeks will be provided for all 14 sites. Because this newsletter is sent bi-weekly, **it's highly recommended to use the websites for the most accurate and current information.** The websites are updated by Tuesday of each week. **Also, I will be emailing crop water use information from this network weekly to those who wish to receive it.** In the next issue of this newsletter, an example of using this network will be provided.

If you have any questions, call Curtis Scheele at 308-995-6121, Ext. 3 or email to [curtis.scheele@ne.usda.gov](mailto:curtis.scheele@ne.usda.gov).

## CURTIS'S COLUMN



### Early Season Soil Moisture Levels:

I don't have any moisture numbers at this point but will have in the next issue. Last week we installed sensors across the NRD. From what I can tell and with recent rains, we are currently sitting at a full soil profile across the NRD. What started out as a very dry start to the year, mother nature has provided ample moisture to get us to a full profile, and just in time. In March, 5-8 inches of rain across the NRD bailed us out. For the most part, the soil took every bit of that moisture. Now with some decent recent rains since then, the Tri-Basin NRD is sitting pretty good moisture wise to start the 2021 crop season.

**What do you think the soil profile looks like in each of these nearby fields after this rain event in June 2006?**



**Tilled**  
(Runoff water in ditch)



**No-Tilled**  
(No runoff water)

### ET Data Texting Service

**Again in 2021, anyone can receive daily ET Data via a daily texting service. You can sign-up to receive these daily updates by texting START to 855-743-2457 or you can call the Tri-Basin NRD (308-995-6688) with your cell number and they will get you added. Daily (D) and Future 3 Days (F3d) estimated water use will be given for Corn and Soybeans (Beans) at three locations across the district: Holdrege 5N (Hld), Axtell 5NE (Axt) and Smithfield 2E (Smfld). For additional information, see attached flyer.**

### Now is the Time to Install Soil Moisture Sensors:

If you have soil moisture sensors to install, now is the time to be getting them installed. You want to install these at emergence or shortly thereafter for the following reasons:

- This gives the sensors and surrounding soil time to gel by irrigation season so as to provide the most natural soil conditions in the field.
- This prevents the cutting of crop roots from taller crops, thus allowing all the roots to grow naturally around the sensors.
- This prevents the breaking of larger crops that get in the way during installation causing potential crop voids in the field that can affect soil moisture readings.

Accurate soil moisture readings can help you better schedule your irrigations, potentially saving you money.

**If you are getting paid for sensors from EQIP or CSP contracts, you need to get these installed. If you don't have them yet, you need to be getting them so that they can be installed in a timely manner for 2020. Contact your local NRCS office for more information.**

### Employee Changes and Merger Update:

2021 brought a few position changes in the irrigation department at Central Nebraska Public Power & Irrigation District. Dallas Roemmich was hired to take over as Irrigation Service Specialist for patrol 34, which is located from Axtell to Minden on the north side of Highway 6 & 34. Mark Rupe, the previous ISS on patrol 34, moved to a maintenance position. Dave Ford retired in January after 34 years with the district. Scott Dicke took over his role as the Irrigation and Water Services Manager. In addition, Alex Linden joined the district as the new Public Relations Specialist.

A major topic being discussed at Central is the potential merger with Dawson Public Power District. Both boards voted to advance the consolidation talks into phase two of the four phase study. Phase two includes a more detailed analysis of the financial components of a merger necessary to satisfy both boards as well as requirements of any financial or regulatory agencies. It will also refine the outlook of benefits of a consolidation and work through possible resolution options for potential challenges. The first phase yielded favorable data that indicates a good strategic fit. Potential savings were identified in power supply costs and combining of facilities. Power Systems Engineering (PSE) of Wisconsin is conducting the studies.

Visit [www.cnppid.com](http://www.cnppid.com) or follow @CNPPID on Facebook, Instagram and Twitter for updates throughout the year.

### Check Flowmeters Before Starting Irrigation:

We would like to remind producers to check the flowmeters on their wells before starting irrigation this season. It is a good idea to make note of the meter reading at the beginning of the season, to make sure it matches the reading from the end of last season. Checking the meter periodically throughout the season to make sure it is working properly benefits both Tri-Basin NRD and you, the irrigator, so that you can keep accurate irrigation records. It is the responsibility of the producer to make sure the flowmeter is functioning properly during the irrigation season.

It has also come to our attention that producers who have **Senninger brand flowmeters** may want to make sure the batteries they are using are the correct size. **These meters take lithium 3.6-volt batteries instead of standard 1.5-volt AA batteries.** Using standard AA batteries will cause these flowmeters to not work properly.



### Minimizing Ground Sprayer Soybean Losses:

University research indicates that ground sprayer narrow wheel tire track damage to soybeans may almost be eliminated if sprayer applications occur prior to R1 growth stage (at least one flower on any node). On average, it only takes about 4 days to move from R1 to R2 (full flower); and sprayer wheel tracks, after R1 through harvest, can reduce yields.

Robert Klein, UNL Weed Specialist, says lower soybean populations and later plantings may suffer yield loss during this R1 period. However, soybean plots research with more than 100,000 plants per acre (planted late April through mid-May) did not suffer any yield loss when sprayed with a self-propelled sprayer with narrow tires at R1 growth stage.

### Virginia Creeper Invading Corn:

Specific annual weed such as henbit, foxtails, pigweeds, field penny cress, yellow rocket, smartweed and marestail may become troublesome under continuous No-till systems.

However, certain creeping perennials weeds may also become pesty such as bindweed, hemp dogbane and sumac. Virginia creeper (*Parthenocissus quinquefolia* (L.) Planch) is emerging as another tough-to-control weed in conventional No-till corn.

"Leaves of three, let it be; Leaves of five, let it thrive," is a popular 'trail hiker' phrase. Although both vines have raphides potentially causing skin irritation; poison ivy vines, which have 3-leaflets per vine petiole, cause more severe skin reactions. Virginia creeper vines (see below) have 5-leaflets per petiole.

Poison Ivy



Virginia creeper



Although hikers can allow Virginia creeper to thrive, No-till producers seek to vigilantly control this woody vine. During mid to late summer, spot treatment with glyphosate may be effective; however, application may need repeated with this tough perennial. If glyphosate is not an option in conventional corn, Amit Jhala, UNL Weed Specialist, recommends applying Diflexx Duo® 24 fl. oz/A + Atrazine 0.5 lbs./A with possible follow-up application.

### 2021 Wheat Field Day – June 14:

The 2021 UNL West Central Wheat Field Day is scheduled for Mon., Jun 14, beginning at 10:00 a.m. (MST) or **11:00 a.m. (Central time)**. Field tours and research updates will close with a free sponsored lunch. Please pre-register online at: <https://extension.unl.edu/statewide/westcentral/2021-wheat-field-day-at-stumpf-registration/>.

Location for the field day from Grant: north on Hwy 61; then west on Rd 761. Turn south on Rd 329. Plot is due east of the Stumpf Farm Building / Perkins County Extension Office.

### 2021 Southcentral Wheat Plot – Todd Anderson:

Special thanks to Todd Anderson, our 2021 Nebraska Extension South Central Wheat Performance Plot cooperater. The wheat plot was drilled on Oct. 1, 2020 (following soybeans) and is located 13 miles south of Elwood (or 6.5 miles north of Arapahoe) just east of US Hwy 283. This replicated plot features 29 different wheat varieties.

Yield results will likely be published following wheat harvest with the 2021 UNL Statewide Wheat Performance Plot Results. However, the public is encouraged to attend our other UNL plot tour locations; since this rainfed plot was severely impacted by the extreme dry conditions in the fall of 2020 which then has dramatically delayed Spring growth.

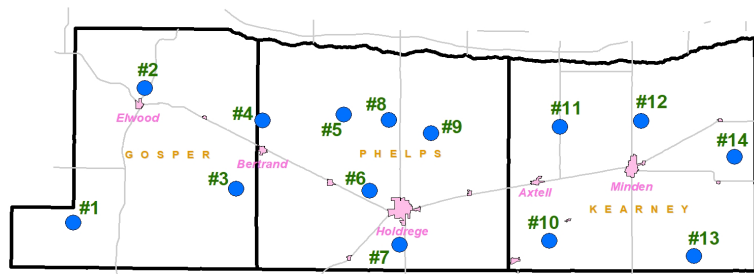
## NAWMN CROP ET INFORMATION

Additional Information and other ET resources can be found at websites listed under "Crop ET Information" below.

Inches of Crop Water Use (ET) =

Evaporation x Kc

Site	May 9 – May 16		May 17 – May 23	
	Evaporation	Rain	Evaporation	Rain
1	NA	NA	1.10	1.04
2	NA	NA	1.10	0.90
3	NA	NA	1.20	0.79
4	NA	NA	1.20	0.82
5	NA	NA	NA	0.75
6	NA	NA	0.90	0.91
7	NA	NA	1.30	NA
8	NA	NA	NA	NA
9	NA	NA	1.20	0.70
10	NA	NA	0.80	0.76
11	NA	NA	1.10	0.91
12	NA	NA	1.20	0.50
13	NA	NA	0.90	0.52
14	NA	NA	1.30	0.76



**2021 Map of NAWMN Sites across the Tri-Basin NRD.**

Crop Coefficients (Kc)			
Corn		Soybeans	
Stage	Kc	Stage	Kc
2 leaf	0.10	Cotyledon (VC)	0.10
4 leaf	0.18	1st Node (V1)	0.20
6 leaf	0.35	2nd Node (V2)	0.40
8 leaf	0.51	3rd Node (V3)	0.60
10 leaf	0.69	Beg. Bloom (R1)	0.90
12 leaf	0.88	Full Bloom (R2)	1.00
14 leaf	1.01	Beg. Pod (R3)	1.10
16 leaf	1.10	Full Pod (R4)	1.10
Silk – Beg. Dent	1.10	Beg. Seed (R5)	1.10
¼ Milk Line	1.04	Full Seed (R6)	1.10
Full Dent (½ Milk)	0.98	Yellow Leaf (R6.5)	1.00
¾ Milk Line	0.79	Beg. Mat. (R7)	0.90
Black Layer	0.60	Full Mat. (R8)	0.20
Full Maturity	0.10	Mature	0.10

### CROP STAGE INFORMATION

**Corn (Planted to V4-4 Leaf stage):** Hail, wind, or frost that damages the exposed leaves at the 3-leaf stage have little or no effect on yield due to the below ground growing point. At 6-leaf, the growing point will be above the soil surface.

Avg. daily water use from May 17 – May 23 was 0.00"-0.03".

**Soybeans (Planted to V1-First Node stage):** Loss of one cotyledon has little effect on plant growth, but both can reduce yields 8-9%. After V1, photosynthesis by the developing leaves is adequate for the plant to sustain itself.

Avg. daily water use from May 17 – May 23 was 0.00"-0.11".

May 17-May 23 (12 of 14 NAWMN sites reporting): Average weekly rainfall was 0.78 (range 0.50 to 1.04). Average weekly ET for corn was 0.02 and for soybeans was 0.02.

### CROP ET INFORMATION

**NAWMN Sites:**

<https://nawmn.unl.edu/ETdata/DataMap>

**CropWatch:** <https://cropwatch.unl.edu/gdd-etdata>

**CNPPID:** <https://www.cnppid.com/weather-et-data/>

**Texting:** TBNRD: 308-995-6688

**Email:** CNPPID: 308-995-3555

CORN STAGE		DESCRIPTION
V2	2 Leaves	Leaf stage is defined by number of leaves with visible collars. The collar is a discolored line where the leaf meets the stalk. This line circles the stalk. <b>TIP:</b> Mark the 6th leaf or a higher leaf by cutting a notch in it or some other way so as to know that leaf number. Reason is the lower leaves will be lost as the plant develops. Flag or somehow mark the plant in the field as a reference plant when determining later leaf (vegetative) stages.
V4	4 Leaves	
V6	6 Leaves	
SOYBEAN STAGE		DESCRIPTION
VC	Cotyledon	Shortly after emergence. Cotyledons and unifoliate leaves are unfolded. (1 node)
V1	First Node	One trifoliate leaf has 3 leaflets. V1 is the first trifoliate leaf with unrolled or unfolded leaflets. Leaflet edges are no longer touching. (2 nodes = 1 unifoliate + 1 trifoliate)
V2	Second Node	V2 has 2 nodes on main stem, each with a trifoliate leaf with unfolded leaflets. Plant as 3 nodes total: 1 unifoliate + 2 trifoliate



## LAKE AND RIVER LEVELS

CNPPID Reservoir Elevation and Platte River Flow data listed below and other locations can be found on CNPPID's website at <http://cnppid.com/wp-content/uploads/2016/06/lakeRiverData.html>.

	May 27, 2021, 8:00 AM	1 Year Ago
Capacity of Lake McConaughy	76.7%	NA
Inflows to Lake McConaughy	1100 cfs	1370 cfs
Flows on the North Platte at North Platte	530 cfs	1240 cfs
Flows on the South Platte at North Platte	1090 cfs	282 cfs
Flows on the Platte at Overton	1390 cfs	3770 cfs

**“Those who have long enjoyed such privileges as we enjoy forget in time that men have died to win them.”**

– Franklin D. Roosevelt

**Thank You to those who fought and died for our ability to live as free people.**

## WEBSITES OF INTEREST

NRCS Nebraska [www.ne.nrcs.usda.gov](http://www.ne.nrcs.usda.gov)  
 Farm Service Agency [www.fsa.usda.gov/](http://www.fsa.usda.gov/)  
 TBNRD Home Page [www.tribasinrrd.org/](http://www.tribasinrrd.org/)  
 Central Irrigation District [www.cnppid.com/](http://www.cnppid.com/)  
 HPRCC [hprcc.unl.edu/](http://hprcc.unl.edu/)  
 UNL Cropwatch [cropwatch.unl.edu/](http://cropwatch.unl.edu/)  
 UNL Extension [extensionpubs.unl.edu/](http://extensionpubs.unl.edu/)  
 K-State SDI Website [www.ksre.ksu.edu/sdi](http://www.ksre.ksu.edu/sdi)  
 No-till On The Plains [www.notill.org](http://www.notill.org)  
 Soil Health: [www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/)  
 NE State Irrig Assoc [www.nebraskastateirrigationassociation.org/](http://www.nebraskastateirrigationassociation.org/)

## RAINFALL

Rainfall amounts listed below and other locations come from NeRAIN which can be found at website <https://nednr.nebraska.gov/NeRain/Maps/maps>.

Location:	May 13 – May 26	May 1 – May 26
Elwood 0.26 mi. S:	2.42	2.95
Bertrand 6.1 mi. SE:	3.13	4.39
Holdrege 0.99 mi. E:	1.00	2.04
Minden 7.2 mi. W:	2.25	3.82
Minden 5.8 mi. E:	1.72	3.43

**Average Rain for May in Holdrege = 4.06 Inches**

\*\*\* If you wish to receive this newsletter via e-mail, or have any questions, comments or ideas, feel free to contact Curtis Scheele at the NRCS office in Holdrege or you can email him at [curtis.scheele@usda.gov](mailto:curtis.scheele@usda.gov). \*\*\*

### USDA - Natural Resources Conservation Service

1609 Burlington Street  
 PO Box 798  
 Holdrege, NE 68949-0798  
 308-995-6121, Ext. 3

309 Smith Street  
 PO Box 41  
 Elwood, NE 68937-0041  
 308-785-3307, Ext. 3



1005 South Brown Street  
 Minden, NE 68959-2601  
 308-832-1895, Ext. 3

### Central Nebraska Public Power & Irrigation District

415 Lincoln Street  
 PO Box 740  
 Holdrege, NE 68949  
 308-995-8601



### Tri-Basin Natural Resources District

1723 Burlington Street  
 Holdrege, NE 68949  
 308-955-6688



### Nebraska Extension

1308 2<sup>nd</sup> Street  
 Holdrege, NE 68949



PO Box 146  
 Elwood, NE 68937

308-995-4222

308-785-2390

424 North Colorado  
 PO Box 31  
 Minden, NE 68959  
 308-832-0645

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# Free ET Data Texting Service

A texting service for ET Data is replacing the Water Use Hotline.

You can opt-in to receive updates by texting **START** to **855-743-2457**. You can also call the Tri-Basin NRD (308-995-6688) to request to be added to the ET Data texting.

ET Data (Evapotranspiration Data) can be useful in making decisions about your irrigation, fertilizer and chemical application schedule. Texts are sent Monday through Friday during irrigation season. The texts contain:

Daily (D) and Future 3 Days (F3d) estimated water use for both Corn and Soybeans (Beans) at three locations across the district: Holdrege 5N (Hld), Axtell 5NE (Axt) and Smithfield 2E (Smfld).

**Text: START**  
**To: 855-743-2457**

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