

## PROGRAM INFORMATION

**EQIP:** APPLICATIONS WILL CONTINUE TO BE PRE-APPROVED AS FUNDS BECOME AVAILABLE. **SIGNUP ANYTIME FOR 2023 FUNDS.**

**CSP:** CSP APPLICATIONS CONTINUE TO BE PRE-APPROVED AS FUNDS BECOME AVAILABLE. **SIGN UP ANYTIME FOR 2023 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 AUGUST 31<sup>ST</sup>.** APPLICATIONS MUST BE SIGNED BY THE OWNER.

**ENERGY EFFICIENCY GRANT:** SIGN-UP DEADLINE FOR 2023 FUNDS IS **OCT. 31, 2022.** RURAL DEVELOPMENT IS ALREADY ACCEPTING APPLICATIONS FOR THIS DEADLINE. FOR MORE INFORMATION CONTACT JOLENE JONES AT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER AT 308-455-9837.

## CALENDAR OF EVENTS

**JULY 5: CNPPID BOARD OF DIRECTORS MEETING**

**JULY 12: TBNRD BOARD MEETING**

**JULY 15: TBNRD 50<sup>TH</sup> ANN. OPEN HOUSE (9:30-10:30 AM)**

SEE INVITATION ON PAGE 2.

**JULY 24-28: PHELPS COUNTY FAIR**

**JULY 26-30: GOSPER COUNTY FAIR**

**JULY 29-AUG 1: KEARNEY COUNTY FAIR**

## Water Applied per Pivot Circle???

How much water are you actually getting to the crops with one circle of the pivot? The answer to this question starts with your flow meter. With a propeller type flow meter, you need to time the odometer to get a more accurate pumping rate.

I have worked up two examples below. One example is for a flow meter that reads in gallons and the other is for a flow meter that reads in acre-inches. In these examples we will only work with the acres under the nozzles since that's where the majority of the crop is located.

In these two examples, the end gun is off. One pivot circle takes 3 days. We will use 90% nozzle efficiency (new pivot).

### Ex. 1 (Flow Meter reads in gallons):

Timed 7000 gallons over 10 minutes = 700 gpm  
700 gpm x 72.0 hours (3 days) x 60 min/hr = 3,024,000 gallons  
3,024,000 gallons / 27154 / 120 acres (nozzles) = 0.928 inches  
0.928 inches x 0.90 efficiency = 0.835 inches applied to the crop under the nozzles.

### Ex. 2 (Flow Meter reads in acre-inches):

Timed 0.25 ac-in over 10 minutes = 0.025 ac-in per minute  
0.025 ac-in x 72.0 hours (3 days) x 60 min/hr = 108 ac-in  
108 ac-in / 120 acres (nozzles) = 0.90 inches  
0.90 inches x 0.90 efficiency = 0.81 inches applied to the crop under the nozzles.

If you would like to know how much water you are applying and do not have a flow meter OR just have some questions about this, you can call Curtis Scheele at 308-995-6121, Ext. 3.

## CURTIS'S COLUMN



United States Department of Agriculture

Natural Resources Conservation Service

## CSP REMINDERS!!!

For CSP contract holders who are getting 2022 payments for corn leaf tissue samples and/or nutrient management.

### A. Leaf Tissue Samples

The following are guidelines:

- 1 leaf sample per 40 acres or less per management system.
- **\*\* Samples must be taken prior to tassel. \*\***
- 15-20 plant leaves per sample.
- Sample leaves are ear shoot leaves. If samples prior to ear shoot leaf, samples will be the youngest mature leaf (top leaf with a collar).
- Dirty/dusty samples should be lightly rinsed. Over-rinsing can leach out soluble nutrients.
- Samples should be air dried or placed in a paper bag for shipping.
- Contact your lab for additional information on sampling and analysis.

### B. Nutrient Management

- Total fertilizer applied for 2022 crop must be applied according to UNL recommendations.
- Fertilizer applied last fall counts towards total fertilizer applied for 2022 crop.

## EQIP Dryland, No-till, & Grass Field Checks!!!

The NRCS will be starting their annual field checks for dryland, no-till, and grass contract obligations for EQIP contract holders. These checks will take place over the next month or so. This past spring, EQIP contract holders received a reminder letter. **Failure to comply with your EQIP contract could result in termination, repayment of funds, and/or penalties.**

## Ultrasonic Flow Meter Measurements Are Available!!!

The ultrasonic flow meter can be used to determine how much water your well is pumping, how much water is going into your irrigation system, how much water you are losing from leaky gates and gaskets, how much water you are applying to your field, or it can be used as a check against your permanently installed flow meter.

If you wish to request an ultrasonic flow meter measurement, you can contact Curtis Scheele, NRCS, at 308-995-6121, Ext. 3 OR the Tri-Basin NRD at 308-995-6688 to schedule an appointment.



**McConaughy Update:**

Predicting the future water level at Lake McConaughy is not an easy task and many variables are at play when trying to determine where the elevation may end up at the end of the summer.

Historically low inflows, along with environmental account releases from the end of May to the end of June have all contributed to elevation levels lower than the past few seasons. Around 80,000 acre feet of water was released for the environmental account.

Average median inflows into Lake McConaughy are generally 1,500 cubic feet per second (cfs) in the month of June. This year from June 1 through July 1 the average inflow was only 243 cfs.

Irrigation demand has increased towards the end of June and with lower than normal inflows, the water level is falling at a greater than normal rate.

Civil Engineer Tyler Thulin says Lake McConaughy typically drops approximately 15 feet from peak spring elevation until early September. He foresees that drop to be higher than average this summer with a drop of between 15-20 feet. This could easily vary a couple of feet if inflows into the lake change.

Find us at [www.cnppid.com](http://www.cnppid.com) or @CNPPID on Facebook, Instagram, Twitter and LinkedIn.

**TRI-BASIN NRD NEWS**




YOU'RE INVITED TO

# 50th Anniversary

OPEN HOUSE

July 15, 2022, 9:30-10:30 a.m.

TRI-BASIN NATURAL RESOURCES DISTRICT

1723 Burlington St, Holdrege, NE 68949

Door Prizes - Refreshments  
Demonstrations - Displays  
Come Join Us



**2022 Custom Rates Webinar – July 7:**

The new 2022 Nebraska Farm Custom Rates Report can be downloaded at: <https://cap.unl.edu/customrates>. Also, this site links registration for a free UNL Custom Rates webinar set for noon on July 7. Since custom rates vary across Nebraska, survey responses are reported by Nebraska Ag. Statistics districts. This year, the rapid fuel price increases my need factored into the final survey comparisons. For example, the average farm delivered diesel fuel rate per gallon in 2022 reported by survey participants was \$3.05. Since then, the diesel price has exceeded \$5.00 per gallon for delivered diesel. So, custom service operators likely should account for a \$2.00 per gallon fuel price increase and a machine consuming 0.80 gallons per acre; by adding \$1.60 per acre onto charged rates.

**2022 Hail Updates:**

Hail storms caused higher field damage impacts **earlier** in the growing season in 2022 compared to normal. Irrigators are reminded that the UNL HailKnow website provides educational resources to assist with field management decisions. Damage assessment tools include: Assessment Videos; Corn Hybrid Maturities and Late Planting; Late Soybean Planting Strategies; Corn GDD Tool; Infographics; and Soybean Cam replant App.

Visit: <https://cropwatch.unl.edu/hailknow>.

**Fertigating Pollinating Corn:**

Fertigation nitrogen applications during pollination can lower pollen survival. Therefore, it is recommended to **not** fertigate through pivots on pollinating corn in the early morning (6 a.m. to noon); since corn pollination occurs mostly between 8:30 a.m. and noon when the temperatures are below 90°F to 95°F. During hot days, pollen is killed by heat & seldom viable past 2 p.m.



Along with running pivots and applying nitrogen during the cooler morning hours, fertilizer leaf burn effects can be reduced by applying at least 0.25 inch of water with 30 lbs. of nitrogen per acre and at least 0.50 inch of water when applying 50-60 lbs. of nitrogen per acre. Silks tend to be viable for three or four days even with higher temperatures (> 90°F); so if a plant isn't pollinated one day, generally the next day will work just fine.

Generally brown corn silks are good visual signs for growers; since each corn silk provides a conduit to move shed pollen to one individual kernel. As individual corn kernels are pollinated successfully; each silk will detach from the kernel and brown on ear tips. Thus, when corn silks are still green long after tassel pollen shed; this may indicate ear pollination problems which might later result in blank kernel ear development.

Although there are risks associated with applying nitrogen on pollen during corn pollination; completely delaying nitrogen application until after the pollination period is not recommended either. Corn nitrogen needs during pre-tassel and again at kernel growth (1 to 3 weeks post pollination) are high. Plants deficient in nitrogen about seven to ten days post-pollination (before brown silk) may have kernel abortion and potentially have serious yield losses.

**Corn & Soybean Development:**

Our irrigation season is rapidly approaching mid-point for corn at the 16-leaf stage (2450 growing Degree Days maturity) and soybeans at full bloom (2360 GDD). As of July 4<sup>th</sup> = Growing Degree Days accumulated at Holdrege 5N = corn (1063) & soybeans (973); Axtell = corn (1073) & soybeans (982); and Smithfield = corn (1033) & soybeans (948).

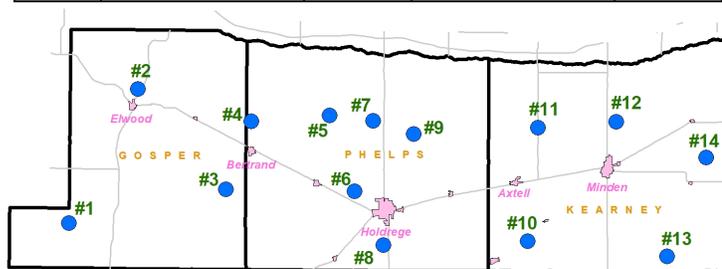
## NAWMN CROP ET INFORMATION

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 K<sub>c</sub>

| Site | June 20 – June 26 |      | June 27 – July 3 |      |
|------|-------------------|------|------------------|------|
|      | Evaporation       | Rain | Evaporation      | Rain |
| 1    | 2.10              | 0.37 | 2.50             | 0.65 |
| 2    | 1.70              | 1.05 | 1.90             | 1.28 |
| 3    | 1.70              | 0.26 | 2.40             | 0.61 |
| 4    | 1.50              | 0.58 | 2.00             | 0.66 |
| 5    | 1.50              | 0.50 | 2.15             | 1.46 |
| 6    | 1.60              | 0.25 | 2.00             | 0.90 |
| 7    | 1.50              | 0.31 | 2.00             | 0.49 |
| 8    | 1.70              | 0.43 | 2.10             | 0.63 |
| 9    | 1.60              | 0.54 | 1.90             | 0.84 |
| 10   | 1.70              | 0.05 | 1.70             | 1.23 |
| 11   | 2.00              | 0.36 | 2.70             | 0.71 |
| 12   | 1.90              | 0.30 | 2.00             | 0.91 |
| 13   | 1.90              | 0.19 | 2.50             | 1.50 |
| 14   | 1.50              | 0.44 | 2.70             | 0.50 |



**2022 Map of NAWMN Sites across the Tri-Basin NRD.**

### Crop Coefficients (K<sub>c</sub>)

| Corn               |                | Soybeans           |                |
|--------------------|----------------|--------------------|----------------|
| Stage              | K <sub>c</sub> | Stage              | K <sub>c</sub> |
| 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 (V10-10 Leaf to V16-16 Leaf stage):** V15 is the beginning of the most crucial period of plant development in terms of seed yield. R1 (Silking) is the most crucial period. Avg. daily water use from June 27 – July 3 was 0.17"-0.42".

**Soybeans (V3-3<sup>rd</sup> Node to R1-Beginning Bloom stage):** Environmental stress from Beg. Bloom through Full Seed will reduce yields more than any other time. Full Pod is the most crucial period. Vertical root growth increases sharply at Beg. Bloom. Avg. daily water use from June 27 – July 3 was 0.15"-0.35".

June 27-July 3 (14 of 14 NAWMN sites reporting): Average weekly rainfall was 0.88 (range 0.49 to 1.50). Average weekly ET for corn was 1.74 and for soybeans was 1.65.

### CROP ET INFORMATION

**NAWMN:** <https://nawmn.unl.edu/ETdata/DataMap>  
**TBNRD:** <https://www.tribasinrnr.org/tbawmn>  
**CNPPID:** <https://www.cnppid.com/weatheret-data/>  
**CropWatch:** <https://cropwatch.unl.edu/gdd-etdata>  
**Texting:** TBNRD: 308-995-6688 or UNL: 308-995-4222  
**Email:** CNPPID: 308-995-3555

| CORN STAGE |           | DESCRIPTION   |
|------------|-----------|---|
| V12        | 12 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: Lower leaves are lost. See TIP in previous Tri-Basin Irrigator Issues.</b> |
| 16         | 16 Leaves |   |
| R1         | Silking   | Begins when any silks are visible outside the husks.  |

| SOYBEAN STAGE |                 | DESCRIPTION   |
|---------------|-----------------|---|
| V5            | Fifth Node      | V5 has 5 nodes on main stem, each with a trifoliate leaf with unfolded leaflets. Plant as 6 nodes total: 1 unifoliate + 5 trifoliates |
| R1            | Beginning Bloom | At least one open flower is present at any main stem node.  |
| R2            | Full Bloom      | At least one open flower is present at any one of the two uppermost main stem nodes that have fully developed leaves.                 |

## 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>.

|   | July 7, 2022,<br>8:00 AM | 1 Year Ago |
|---|--------------------------|------------|
| Capacity of Lake McConaughy               | 55.0%                    | NA         |
| Inflows to Lake McConaughy                | 333 cfs                  | 349 cfs    |
| Flows on the North Platte at North Platte | 837 cfs                  | 605 cfs    |
| Flows on the South Platte at North Platte | 143 cfs                  | 232 cfs    |
| Flows on the Platte at Overton            | 983 cfs                  | 520 cfs    |

*Let us not seek the Republican answer or the Democratic answer, but the right answer. Let us not seek to fix the blame for the past. Let us accept our own responsibility for the future.*

- John F Kennedy

## 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/cropwatch.unl.edu](http://www.cnppid.com/cropwatch.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:            | June 23 – July 6 | May 1 – July 6 |
|----------------------|------------------|----------------|
| Elwood 0.26 mi. S:   | 3.48             | 7.69           |
| Bertrand 6.1 mi. SE: | 1.40             | 8.32           |
| Holdrege 0.99 mi. E: | 2.47             | 7.52           |
| Minden 7.2 mi. W:    | 2.08             | 7.59           |
| Minden 5.8 mi. E:    | 2.28             | 7.28           |

Average Rain for May-June in Holdrege = 8.04 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

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

308-995-4222

308-785-2390

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