

Tri-Basin Irrigator

Volume 19, Issue 4

July 4, 2019

PROGRAM INFORMATION

EQIP: EPHEMERAL GULLY INITIATIVE APPLICATIONS DUE JULY 19TH.

CSTWP: 2019 APPLICATIONS RANKED AND AWAITING FUNDING.

NSWCP: NEW FUNDS CAME JULY 1ST. FIRST ROUND OF IRRIGATION APPLICATIONS TO BE REVIEWED FOR APPROVAL NEEDS APPLICATIONS SIGNED BY THE OWNER BY AUG. 28TH.

ENERGY EFFICIENCY GRANT: APPLICATIONS DUE OCTOBER 31, 2019. CONTACT KELLEY AT RURAL DEVELOPMENT AT 308-455-9837 OR KELLEY.MESSENGER@USDA.GOV.

CALENDAR OF EVENTS

JULY 4: INDEPENDENCE DAY – GOV'T OFFICES CLOSED

JULY 9: TBNRD BOARD MEETING 1:30 PM

JULY 20-25: PHELPS COUNTY FAIR

JULY 25-27: GOSPER COUNTY FAIR

AUG 5: CNPPID BOARD OF DIRECTORS MEETING 9 AM

AUG 9-11: KEARNEY COUNTY FAIR

NO-TILL ON THE PLAINS EVENTS: GOTO

[HTTP://WWW.NOTILL.ORG/UPCOMING-EVENTS](http://www.notill.org/upcoming-events) FOR MORE INFO.

- JULY 30-AUG 1: TEXAS PANHANDLE BUS TOUR

- AUG 13: COMPANION CROP DEMO FIELD DAY @ TIPTON, KS

- AUG 29: COMPANION CROP DEMO FIELD DAY @ OSAGE CITY, KS

- SEPT 10: SOIL HEALTH FIELD DAY @ ALMENA, KS

Pivots Running, 1st Irrigation, ???

As I drove across the TBNRD on June 27th, I noticed some pivots running on soybeans and corn. My first reaction was, it's still wet, why are they running. That comes from installing sensors across the NRD to a 4-foot depth and they have all been wet to all depths through June 21st. These are all on Holdrege Silt Loam soils. Sand is a different story. So the NRD has a full profile all the way to 4 feet and deeper.

So why are they running in corn now?

1. They could be fertigating. A good practice to place nitrogen on the corn when it needs it. This also helps prevent leaching of nitrates into the groundwater.
2. Another reason is to get pivot tracks into the field. The taller corn gets, the pivots with their gear boxes have to work harder to push through the corn. Not the best on gear boxes and pivots. Also, too tall of corn can potentially cause pivots to get stuck if conditions are right.
3. They could be putting a little CNPPID water on based on their schedule and what they have room for in the profile. Maybe a quick 0.5 inches.

What about the soybeans?

1. They could be activating recently applied herbicides.
2. They could be putting a little CNPPID water on based on their schedule and what they have room for in the profile. Maybe a quick 0.5 inches.

Cont'd under "Curtis's Column" on right side.

CURTIS'S COLUMN



Pivots Running, 1st Irrigation, ??? – cont'd from left:

Pivots have taken irrigation to a different level from gravity irrigation. They are so easy to turn on and off at any point of the growing season. They allow the producer many options in their management decisions. A few examples I just mentioned, there may be more. So, seeing a pivot running does not necessarily mean they are irrigating. Yes, they are applying water, but it may be for the benefit of other things, such as groundwater quality by spreading the fertilizer out to when the crops need it as I mentioned above. I always say, there are positives and negatives to everything. Yes, a little extra water when wet but better fertilizer management. If it was dry, it would look better. One can't predict each year and farm accordingly. One must pick the option which best fits their operation year in and year out. Decisions must be made along the way. Some years it works, some years it doesn't. In the end, hopefully, the war is won, even if a few battles are lost along the way.

However, there are issues that still need addressed. Hopefully as we move forward we continue to strive towards winning the war. Future generations, yes our kids, grand kids and beyond are relying on us to provide them with clean drinking water, the same benefits that we receive today from being able to irrigate, less sediment flowing into streams, maintaining wildlife diversity, etc. There are numerous conservation programs that can help us move forward such as NRCS's EQIP and CSP, the NRD's NSWCP program, and Energy Grant's from RD to name a few of the bigger ones. There are many more. Visit your local NRCS office to learn more.

In closing, I will mention, I wrote this article on Wednesday, July 3rd before last night's rain. The last half of this article leaned more on if we should be irrigating and when. Last night's rain kinda ruined that for me. So, the last half I changed it up this morning, Friday, the 5th, and it kinda flowed a different direction. I will keep the chart for you of the 2019 rain totals through June compared to averages for Holdrege, NE.

	Jan	Feb	Mar	April	May	June	Totals
2019	0.16	1.09	4.57	1.99	7.62	5.88	21.31
Average	0.51	0.67	1.46	2.46	4.06	3.98	13.14

CSP Contract Holders Leaf Tissue Samples Prior to Tassel!

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 with a map indicating which areas needed to be dryland, no-tilled, or have grass maintained. **Failure to comply with your EQIP contract could result in termination, repayment of funds, and/or penalties.**

Central Tours:

Our government & public relations manager, Jeff Buettner, brings the history and current issues pertaining to the hydro-power and irrigation district to life for the public in one- and two-day tours at no cost to participants. If you have not seen Central's project up close, it is an experience you do not want to miss. Visitors from across the globe come to see us and all are welcome here. Jeff can be reached at (308) 995-3559.

On the two-day tour, Jeff begins by introducing you to the men with the vision to add this water to the Nebraska supply and will show you some of the initial system build. In Central's irrigated area you will see current water conservation projects, check structures, a canal headgate and learn the importance of Johnson Lake to the system. Traveling west (upstream) the Control Center hub is an important stop in Gothenburg, as is the tour of the Jeffrey hydro plant. On the two-day tours, dinner and an overnight stay at historic Jeffrey Lodge on the Jeffrey Reservoir waterfront is part of the package.

The tour continues west from Jeffrey to beautiful Lake McConaughy in Keith County. There you will spend some time at the Water Interpretative Center, tour both the Morning Glory spillway and the outlet tower and descend into the large hydroplant at the base of Kingsley Dam. Heading east again, you will see our water connection to and collaboration with NPPD's power generation at the Paxton cut and Sutherland Reservoir. The last stop is the Central Diversion Dam where water is diverted from the Platte River into our canal system.

Our one-day tour is an abbreviated version of the two-day tour and yet catches the system's highlights. It is time well spent for those with an interest in learning more about the many benefits Central's hydro-irrigation provides to Nebraska.

Groundwater Management Area Reporting

Reminders:

Tri-Basin NRD Groundwater Management Rules have brought reporting requirements to additional areas of the district over the past year. Here are some reminders of which areas are affected and what is expected of landowners in these townships. If you have questions about any of these requirements or reports, call Tammy at our office at 308-995-6688.

Groundwater Quantity Management (Water Use)

May Township, Kearney County (6N-13W): Flowmeters must be installed on all irrigation wells for the 2019 growing season.

Grant Township, Kearney County (5N-13W): Flowmeters must be installed on all irrigation wells by December 2021.

Groundwater Quality Management (Nitrogen Management/GMA)

Blaine Township, Kearney County (7N-16W): All sections are now included in the GMA area. Water and soil samples should have been taken in 2018. Results from those tests will be used on Nitrogen Management Reports in fall of 2019.

Anderson Township, Phelps County (7N-17W): All sections are now included in the GMA area. Water and soil samples must be taken in 2019 and results used on Nitrogen Management Reports in fall of 2020.

2019 Nebraska Farm Real Estate:

New Nebraska Farmland Values by Land Type and Average Cash Rental Rates for Crops & Pasture are now available on our Nebraska Extension website.

Overall, land values in Nebraska for the year ending Feb. 1, 2019 averaged 3% lower than the year prior. This marks five consecutive years of declining land values. The state average was \$2,645 per acre or about a \$75 per acre decline to the prior year's value of \$2,720 per acre.

Irrigated land values in the South region (*Adams, Franklin, Furnas, Gosper, Harlan, Kearney, Phelps and Webster counties*) averaged 6% lower for center pivot irrigated cropland (\$6,150 per acre) and 7% lower for gravity irrigated cropland (\$5,365 per acre).

In 2019 current crop prices, property tax levels and farm input costs were the most negative forces leading to the lower market value of land across Nebraska. For more Nebraska land value comparison information click on:

<http://agecon.unl.edu/realestate/2019-farm-real-estate-report>

Weed Management with Irrigated Alfalfa:

Alfalfa growers usually irrigate alfalfa 5 to 6 days before & after alfalfa mowing. By avoiding irrigation immediately after the alfalfa is harvested, field weed competition is reduced.

However, higher rainfall in 2019 and wet soil environmental conditions after cutting has increased broadleaf and grassy weeds (foxtail, crabgrass, pigweeds, & other invasive weeds) competition.

Generally, the best weed management for alfalfa weed control is to keep field stands thick. This begins with good soil fertility and harvesting alfalfa only after it begins to bloom or when new shoots appear at the base of alfalfa plants. This may allow alfalfa to regrow rapidly, so weeds are less likely to get a foothold.

For alfalfa growers experiencing higher than normal weed competition; herbicide applications may be an option. Glyphosate applications such as Roundup WeatherMax® may work well for Roundup Ready® alfalfa varieties. Whereas, annual grassy weeds invasion in conventional fields may require herbicide applications such as Select Max®; Arrow® or Poast Plus®. These herbicides work best on seedling grasses that are less than 4" tall and are well tolerated by alfalfa. Also, since these herbicides do not have soil residual activity, good application plant coverage and repeat sprayings may be required for effective control. Herbicides such as Raptor® and Pursuit® may be used for broadleaf weed control.

Alfalfa herbicides available for weed control are listed in the EC130 Nebraska Extension publication: "2019 Guide for Weed, Disease, and Insect Management in Nebraska" pages 68 – 70.

Corn Approved as Cover Crop in 2019:

USDA Risk Management Agency (RMA) has now approved corn as a cover crop for prevented plant acres in 2019. This change provides further enhancement as forage harvesting of cover crops on prevent planted acres in 2019 is now allowed after Sept. 1st rather than Nov. 1st.

Bin run corn seed is allowed on the growers own managed acres at the 18 lbs./acre recommended rate. Brown mid-rib (BMR) hybrids are recommended for grazing when planted in 15-inch or narrower rows to reduce weeds.

NAWMN CROP ET INFORMATION

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

Inches of Crop Water Use (ET) =

Evaporation x Kc

Site	June 17 - June 23		June 24 - June 30	
	Evaporation	Rain	Evaporation	Rain
1	1.20	3.85	2.30	0.00
2	0.90	2.66	2.30	0.00
3	0.90	2.63	2.30	0.00
4	1.60	2.05	2.30	0.00
5	1.00	3.45	2.00	0.00
6	0.70	4.60	2.00	0.00
7	0.80	2.86	2.30	0.00
8	1.50	1.07	2.40	0.00
9	NA	2.96	2.00	0.00
10	1.00	3.40	2.00	0.00
11	0.60	3.55	2.50	0.00
12	0.90	2.30	2.10	0.00
13	0.70	2.07	2.70	0.00
14	0.80	2.96	2.20	0.00
15	0.80	2.15	2.10	0.00
16	0.80	1.55	2.10	0.00

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 (V6-6 Leaf to V14-14 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. No need to panic yet. Still moisture in the soil.

Avg. daily water use from June 24 – June 30 was 0.10"-0.37".

Soybeans (V3-3rd Node to R1-Beginning Bloom stage): Environmental stress from R3 (Beginning Pod) through R6 (Full Seed) will reduce yields more than any other time. R4 (Full Pod) is the most crucial period. Still moisture in the soil. Avg. daily water use from June 24 – June 30 was 0.21"-0.32".

June 24-June 30 (16 of 16 NAWMN sites reporting): Average weekly rainfall was 0.00 (range 0.00 to 0.00). Average weekly ET for corn was 1.41 and for soybeans was 1.81.

ET INFORMATION SITES

NAWMN Sites:

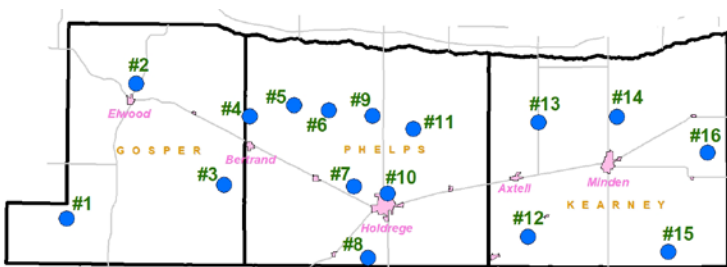
<https://www.cnppid.com/weatheret-data/nebraska-agricultural-water-management-network/>

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

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

CNPPID: <https://www.cnppid.com/weatheret-data/>

Water Use Hotline: 1-800-993-2507



2019 Map of NAWMN Sites across the Tri-Basin NRD.

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. TIP: 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.
V14	14 Leaves	
V16	16 Leaves	
Soybean Stage		DESCRIPTION
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 5, 2019, 8:00 AM	1 Year Ago
Capacity of Lake McConaughy	91.0%	NA
Inflows to Lake McConaughy	2007 cfs	1192 cfs
Flows on the North Platte at North Platte	422 cfs	345 cfs
Flows on the South Platte at North Platte	862 cfs	286 cfs
Flows on the Platte at Overton	667 cfs	2442 cfs

**Happy
Birthday
America!**



WEBSITES OF INTEREST

Soil Health:

www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/

Climate aqclimatenebraska.weebly.com
 NRCS Nebraska www.ne.nrcs.usda.gov
 Central Irrigation District www.cnppid.com/
 TBNRD Home Page www.tribasinrrd.org/
 Farm Service Agency www.fsa.usda.gov
 UNL Cropwatch cropwatch.unl.edu
 UNL Extension extensionpubs.unl.edu/
 K-State SDI Website www.ksre.ksu.edu/sdi
 No-till On The Plains www.notill.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 20 – July 4	May 1 – July 4
Arapahoe 9.8 NNE:	2.29	12.27
Bertrand 6.1 mi. SE:	1.67	11.53
Holdrege 0.99 mi. E:	2.20	13.23
Minden 7.2 mi. W:	1.99	12.06
Minden 5.8 mi. E:	1.41	11.29

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. ***

USDA - Natural Resources Conservation Service

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 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 2nd Street
 Holdrege, NE 68949

PO Box 146
 Elwood, NE 68937

424 North Colorado
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308-995-4222

308-785-2390

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