

# Tri-Basin Irrigator

Volume 15, Issue 1

May 21, 2015

## PROGRAM INFORMATION

### ***EQIP, CSP, AND ACEP:***

**EQIP** – FUNDS AVAILABLE FOR 2015 CONTRACTS HAVE ALREADY BEEN APPROVED OR OBLIGATED IN THE TRI-BASIN NRD. NO MORE FUNDS ARE AVAILABLE FOR 2015. SHOULD SLIPPAGE FUNDS ARRIVE FROM OTHER AREAS, THEN WE CAN POSSIBLY FUND ADDITIONAL CONTRACTS. HAVE TO WAIT AND SEE.

### **FUNDS AVAILABLE IN THE CPNRD**

THE CENTRAL PLATTE NRD HAS RECEIVED A COUPLE OF FUNDING OPPORTUNITIES THROUGH THE OGALLALA AQUIFER INITIATIVE (OAI) AND THE REGIONAL CONSERVATION PARTNERSHIP PROGRAM (RCPP). THEY ARE BOTH TO IMPROVE IRRIGATION EFFICIENCIES AND WATER QUALITY. IF YOU HAVE LAND LOCATED IN THE CENTRAL PLATTE NRD, YOU COULD BE ELIGIBLE TO CONVERT GRAVITY IRRIGATION TO PIVOTS, SDI, OR DRYLAND AMONGST OTHER PRACTICES SUCH AS NO-TILL, COVER CROPS, ETC.

**SIGN-UP DEADLINE FOR 2015 FUNDS IS JUNE 19, 2015 AT YOUR LOCAL NRCS OFFICE.**

**CSP** – WE ARE CURRENTLY AWAITING THE ANNOUNCEMENT OF PRE-APPROVALS FOR THE NEW 2015 APPLICATIONS.

**NSWCP:** NEW MONEY COMES JULY 1<sup>ST</sup>. APPLICATIONS FOR COST-SHARE CAN BE TAKEN AT YOUR LOCAL NRCS OFFICE. APPLICATIONS MUST BE APPROVED PRIOR TO STARTING ANY INSTALLATION WORK. IN THE TRI-BASIN NRD, FLOW METER, SOIL MOISTURE SENSOR APPLICATIONS, AND NON-IRRIGATION APPLICATIONS ARE REVIEWED FOR APPROVAL MONTHLY. ALL OTHER IRRIGATION APPLICATIONS ARE REVIEWED FOR APPROVAL FOUR TIMES A YEAR, SEPTEMBER, DECEMBER, FEBRUARY, AND MAY. THE TRI-BASIN NRD BOARD MEETS ON THE SECOND TUESDAYS OF EACH MONTH.

**ENERGY EFFICIENCY GRANT:** COULDN'T FIND OUT IN TIME FOR THIS NEWSLETTER IF SIGN-UP IS STILL OPEN FOR 2015 FUNDS. THE PROGRAM PAYMENTS ARE 25% OF ALLOWABLE ITEMS WHICH INCLUDE PIVOTS, SDI, PUMPS, ETC. FOR MORE INFORMATION CONTACT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER OR AT 308-237-3118, EXT. 4.

## CALENDAR OF EVENTS

- MAY 25: MEMORIAL DAY – GOV'T OFFICES CLOSED
- JUNE 1: CNPPID BOARD OF DIRECTORS MEETING 9 AM  
NO-TILL ON THE PLAINS WHIRLWIND EXPOS. GOTO  
[HTTP://WWW.NOTILL.ORG/](http://www.notill.org/) TO FOR MORE INFO AND TO REGISTER.
- JUNE 15: STUART, NE
- JUNE 17: VENANGO, NE
- JUNE 8: CNPPID 12 WEEK IRRIGATION RUN SCHEDULE STARTS  
(SCHEDULE ENDS ON AUGUST 31<sup>ST</sup>)
- JUNE 9: TBNRD BOARD MEETING 7:30 PM

### ***Entities: Renew Your SAM Registration!!!***

Entities with a SAM registration will need to renew their registration prior to expiration. Otherwise, you will have to create a registration again. It's easier to renew!!!!

## CURTIS'S COLUMN



### ***Tri-Basin Irrigator: Up and Running in 2015!!!:***

The Tri-Basin Irrigator has arrived for another season. Welcome to those of you getting this newsletter for the first time! My name is Curtis Scheele. I am the Water Management Specialist with the NRCS covering Gosper, Phelps, and Kearney counties. My office is located in Holdrege. See page 4 for my contact information.



This newsletter is sent to you with the hopes of helping you with your irrigation water management program. It will be sent bi-weekly during the crop season.

Archived copies from 2009 to present are available on the Tri-Basin NRD's website at [http://tribasinprd.org/tb\\_irrigator.html](http://tribasinprd.org/tb_irrigator.html).

### ***Tri-Basin Irrigator via EMAIL***

***If you would be willing to receive this newsletter via email, please provide me with your email address. You can call me at 308-995-6121, Ext. 3, call your local NRCS office (see contact info. on page 4, or you can email me at [curtis.scheele@ne.usda.gov](mailto:curtis.scheele@ne.usda.gov).***

### ***EQIP and CSP Contract Payments for Irrigation Water Management!:***

I would like to remind everyone who has received or is receiving financial assistance for Irrigation Water Management (IWM) of the required irrigation recordkeeping for crop year 2015. ***These records must be submitted to your local NRCS office at the end of the irrigation season in order to receive payment and to remain in compliance with your contract.*** Irrigation records to be kept are Soil Moisture Readings, Crop ET, Applied Water Amounts, Flow Meter Readings and Rainfall during the cropping season. NE-ENG-80 forms, Crop Consultant forms or any other forms are acceptable provided ALL INFORMATION is recorded.

**CSP producers:** Reminder letters were sent to participants reminding them the WQT07-Regional Weather Networks for Irrigation Scheduling enhancement needs to be completed for 2015.

**EQIP producers:** Letters and forms were sent to participants reminding them to complete this recordkeeping for the 2014 crop season. ***In addition, if you are to install sensors, now is the time to be installing. So you will need to be getting those if you haven't already.***

Monitoring soil moisture, water usage, etc. can play a huge role in total water applied for the year.

If you have any questions, contact your local NRCS office.



**Pay tribute to those who paid the price of freedom so you can live the life of freedom.**

**A SALUTE TO ALL WHO PAID THE PRICE!**

**E67 Telemetry Project:**

Central received a three-year Nebraska Environmental Trust Grant, funded by NE lottery dollars, for precision management of irrigation water on the E67 Canal. McCrometer Inc. and Nebraska Extension are partners with us in this work. In this pilot project, every turnout in use on E67 will be fitted with digital equipment over the grant period, roughly 1/3 of the turnouts each year. A solar-powered UHF radio will send hourly digital flowmeter and rain gauge data from fields to a receiver at the J-1 hydroplant. That J-1 unit will also receive high/low temperature, wind speed, relative humidity, solar radiation and precipitation data from two new weather stations in the E67 area and crop water use will be calculated from those data. Growers can access these data anytime from a smartphone, tablet or home computer and will be able to match water inputs (rain and irrigation) to crop water use. This high precision irrigation management can produce top yields while saving irrigation water and protecting domestic groundwater wells from crop chemicals that can move down to the water table with excess irrigation. We have asked our growers to take a look at this system, use it and help us determine how it to best incorporate this detailed information into the irrigation decision making process. This new technology can help us care for our land and water resources in a way never before possible.

**Chemigation Permit Renewals Due June 1:**

Chemigation renewal forms have been sent to producers and are due, along with payment, in the Tri-Basin NRD office by June 1, 2015. Anyone who wants to apply fertilizer or ag chemicals through their irrigation system needs to apply for a chemigation permit for the 2015 season. Landowners and operators should contact Tri-Basin NRD toll-free at 1-877-995-6688 regarding chemigation permits. All newly permitted chemigation systems must be inspected before use. A person who is certified as a chemigation applicator must supervise injection of fertilizer and ag chemicals in irrigation water.

NRD staff do routine inspections on chemigation systems from June until August. Routine inspections are required every three years. If your system is due for an inspection, you will receive a postcard this summer. Routine inspections must be completed for permits to be eligible for renewal the following year. Renewal permits are \$15 and new permits are \$50.

**Check Flowmeters Before Starting Irrigation:**

We would like to remind producers to check the flowmeters on their wells before starting irrigation this season. It's 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, as an 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.

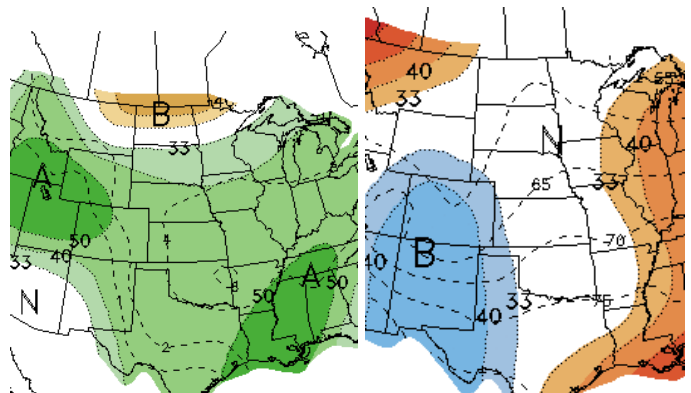
**Climate Outlook:**

With a warm and dry start to spring, the tables have turned and the weather has been cool and wet. As expected, the wet conditions predicted for the southern plains have continued up into Nebraska and provided much needed moisture in April and thus far in May. Areas in the western portions of the Tri Basin have received more moisture as compared to the eastern portions. Most of Nebraska is above normal for May precipitation, but there is a drier area from Minden to Grand Island to Norfolk. Temperatures over the last few days have been much below normal, but since May 1, the area has been near to slightly above normal. Soil temperatures have cooled down into the mid to upper 50s the last day or two and are 10-12 °F below normal for this time of the year.

**Table: Precipitation totals and percent of normal from March 1, April 1, and May 1 through May 19 at three AWDN weather stations.**

Station	Since May 1		Since April 1		Since March 1	
	Precip (in)	% of Normal	Precip (in)	% of Normal	Precip (in)	% of Normal
Smithfield	2.72	117	5.71	123	5.71	91
Holdrege	4.13	173	5.84	124	5.84	92
Minden	1.84	70	4.41	87	4.41	64

The short-term forecast does not look very promising if you are looking to get into the field. Chances of precipitation remain in the forecast through Tuesday, with the highest chances this weekend. The long term precipitation forecast from the Climate Prediction Center (CPC) has increased odds for above normal precipitation through the end of May. High temperatures will climb to near normal (mid 70s) by Monday or Tuesday, but they look to remain fairly moderate through the end of next week. Even though it is pretty far out, we may finally see above normal temperatures by next weekend, which may provide some much needed heat for the pastures and crops. The duration and extent of the warmth will depend on the position of the upper level trough in the southwest U.S., which has been dominating our weather the past few weeks. We are currently in an El Niño and that is predicted to persist through this summer. What this typically means for Nebraska is below normal temperatures during the late spring and summer, especially in July and August, with near normal precipitation. This pattern typically provides good corn growing conditions and above trend-line yields.



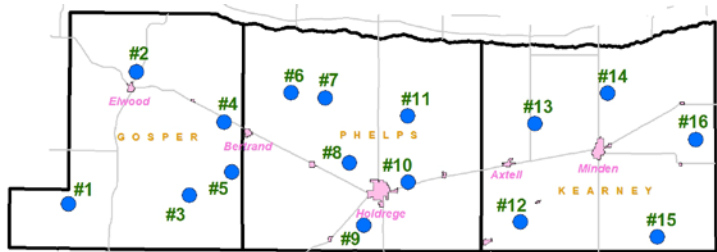
**Figure: Precipitation (left) and temperature (right) outlooks for May 26-30 from the CPC. Increased chances for above normal precipitation and equal chances for above or below normal temperatures are predicted.**

## NAWMN CROP ET INFORMATION

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

$$\text{Inches of Crop Water Use (ET)} = \text{Evaporation} \times K_c$$

Site	May 4 – May 10		May 11 – May 17	
	Evaporation	Rain	Evaporation	Rain
1	NA	NA	NA	NA
2	NA	NA	NA	NA
3	NA	NA	NA	NA
4	NA	NA	NA	NA
5	NA	NA	NA	NA
6	NA	NA	NA	NA
7	NA	NA	NA	NA
8	NA	NA	NA	NA
9	NA	NA	NA	NA
10	NA	NA	NA	NA
11	NA	NA	NA	NA
12	NA	NA	NA	NA
13	NA	NA	NA	NA
14	NA	NA	NA	NA
15	NA	NA	NA	NA
16	NA	NA	NA	NA



**2015 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 (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.

Avg. daily water use from May 11 – May 17 was 0.00"-0.02".

**Soybeans (Not Planted to VC-Cotyledon stage):** Loss of one cotyledon has little affect on yield while loss of both can reduce yields by 8-9%.

Avg. daily water use from May 11 – May 17 was 0.00"-0.02".

May 11-May 17 (16 of 16 NAWMN sites reporting): Average weekly rainfall was NA (range NA to NA). Average weekly ET for corn was 0.10 and for soybeans was 0.10.

### ET INFORMATION SITES

**NAWMN Sites:**

<http://www.cnppid.com/news-info/weatheret-data/nebraska-agricultural-water-management-network/>  
[http://elkhorn.unl.edu/ETGage/xml/NE\\_counties\\_2.jsp](http://elkhorn.unl.edu/ETGage/xml/NE_counties_2.jsp)

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

**CNPPID:** <http://www.cnppid.com/news-info/weatheret-data/>

**Water Use Hotline:** 1-800-993-2507

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)

## 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://www.cnppid.com/news-info/reservoirriver-data/>.

	May 20, 2015, 7:00 AM	1 Year Ago
Capacity of Lake McConaughy	79.4%	60.5%
Inflows to Lake McConaughy	3024 cfs	2010 cfs
Flows on the South Platte River at North Platte	6050 cfs	393 cfs

*Who kept the faith and fought the fight; the glory theirs, the duty ours.*

- Wallace Bruce

## WEBSITES OF INTEREST

NRCS Nebraska [www.ne.nrcs.usda.gov](http://www.ne.nrcs.usda.gov)  
 Central Irrigation District [www.cnppid.com](http://www.cnppid.com)  
 TBNRD Home Page [tribasinrnr.org](http://tribasinrnr.org)  
 Farm Service Agency [www.fsa.usda.gov](http://www.fsa.usda.gov)  
 UNL Cropwatch [cropwatch.unl.edu](http://cropwatch.unl.edu)  
 UNL Extension [www.extension.unl.edu/home](http://www.extension.unl.edu/home)  
 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)

## RAINFALL

Rainfall amounts listed below and other locations come from NeRAIN which can be found at website <http://nerain.dnr.ne.gov/NeRAIN/docs/report.asp>.

Location:	May 7 – May 20	May 1 – May 20
Arapahoe 6.9 NW:	0.72	1.33
Bertrand 6.1 mi. SE:	3.58	3.90
Funk 4.1 mi. NNE:	1.73	2.01
Minden 0.855 mi. W:	2.82	3.05
Minden 8.8 mi. ESE:	4.85	5.53

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@ne.usda.gov](mailto:curtis.scheele@ne.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  
 308-995-4222

PO Box 146  
 Elwood, NE 68937  
 308-785-2390

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

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