

Summer 2018
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Tri-Basin Topics

A quarterly publication of Tri-Basin Natural Resources District

TBNRD Seeks Input on Groundwater Decline in Kearney County

Tri-Basin NRD directors will hold a public hearing to receive comment on moving Grant Township (5-13) in eastern Kearney County to Phase 2 for Groundwater Quantity Management. The hearing will be held in conjunction with the district's September board meeting on Tuesday, September 11 at 7:30 p.m. at the Tri-Basin NRD office in Holdrege.

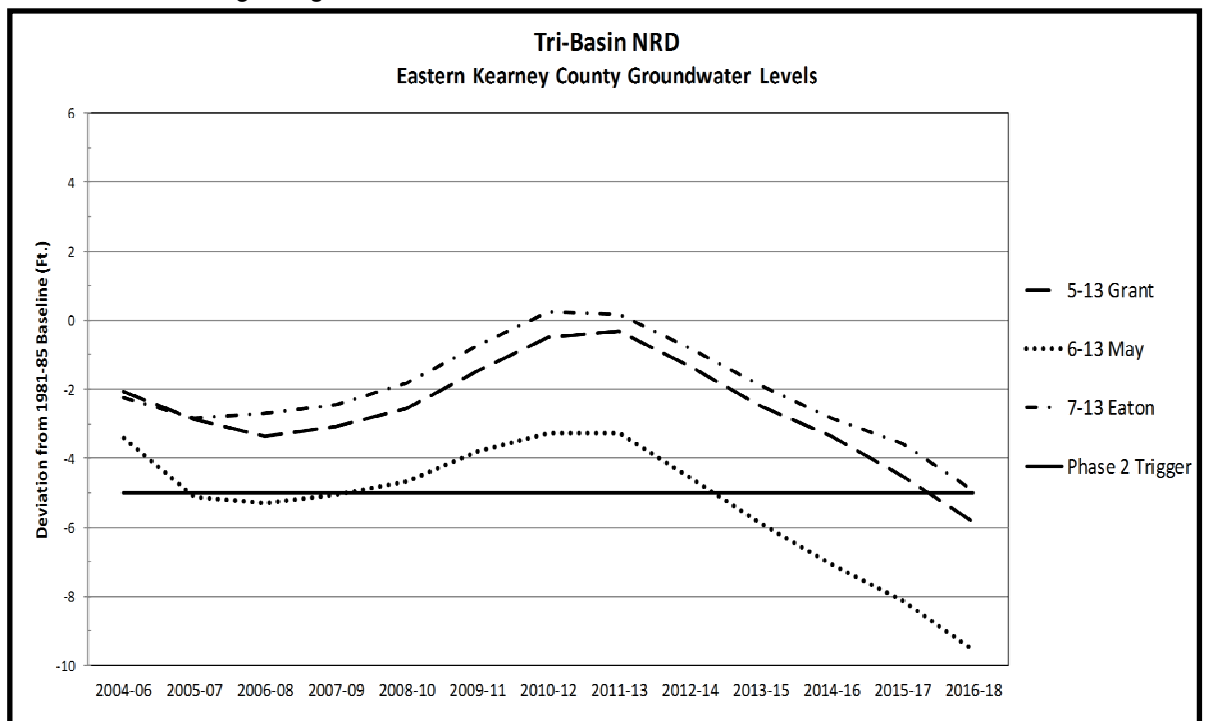
Data from spring 2018 shows that groundwater levels in Grant Township in eastern Kearney County have dropped more than five feet below the 1981-1985 baseline level, so the township qualifies for Phase 2 groundwater quantity management protection. Under Phase 2 rules, flowmeters must be installed on all irrigation wells over the next three years and water usage must be reported to the NRD annually. Additionally, certified irrigated acres may not be transferred into Phase 2 townships. In eastern Kearney County, May Township (6-13) is also in Phase 2 for groundwater quantity.

Tri-Basin NRD directors are committed to protecting groundwater supplies in the district, assuring that groundwater supply needs of district residents will be met in perpetuity. Tri-Basin NRD staff measure water levels in irrigation and dedicated observation wells each year in order to monitor groundwater supplies throughout the district. Intensively measuring our aquifers provides Tri-Basin NRD directors with data they need to discern trends in water levels and make informed decisions to protect our groundwater supplies.

Specifically in the Little Blue River Basin portion of the district,

TBNRD directors and staff are working on several projects to recharge groundwater supply. These include: 1) a series of three groundwater recharge structures along Sand Creek; 2) development of an Integrated Management Plan (IMP) with neighboring Little Blue NRD; and 3) a geologic study in the Little Blue Basin in cooperation with Little Blue NRD and the University of Nebraska-Lincoln, funded through a Nebraska Environmental Trust grant.

Tri-Basin NRD directors will continue to work with directors from Little Blue NRD to coordinate groundwater conservation and regulation efforts between the two districts, since both districts contain a portion of the Little Blue Basin. TBNRD directors will also continue to meet with landowners and producers from the Little Blue portion of Tri-Basin NRD to address groundwater concerns. The primary groundwater management goal of Tri-Basin NRD's directors is to protect the district's groundwater resources and to assure that the aquifer will be sustained infinitely.





Manager's Message

by John Thorburn

The Soundtrack of Summer

One of my college professors used to say that: "Nature is always screaming at us. Unfortunately it screams in a language that we don't understand very well." While we like to think of the outdoors as peaceful and quiet, the natural world is often a noisy place. Some noises, like the howl of a coyote or the hoot of a great horned owl can be heard any time of year, but most animal sounds are seasonal. Some sounds are so distinctive that they signify specific times of the year. Residents of South-Central Nebraska know that the arrival of spring is foretold not just by the first appearance of robins, but also by the calls of migrating snow geese and Sandhill cranes as they fly overhead. You know that spring has arrived and summer is near when you hear chorus frogs singing in the night after a heavy rain.

Another night-time sound reminds me on warm evenings that summer will soon come to an end. The closest way to approximate that sound in print would be a series of R's, E's and Z's, such as: "Rreezzzerr, rreezzzerr, rreezzzerr, rreezzzzzz." If you say that phrase out loud, you will probably be able to guess the sound that I'm trying to imitate. It is the call of the *Neotibicen pruinosus*, or "dog day" cicada. This cicada is also referred to as the "scissor-grinder" cicada, as a way of describing its song.

Cicadas are often referred to as locusts, but that isn't correct. Locusts are grasshoppers, which are grassland insects, while cicadas live in and around trees. Twenty-four species of cicadas have been recorded in Nebraska. They can be divided into two broad categories. The well-known *Magicicadas*, which have life cycles of thirteen to seventeen

years are periodical cicadas, while others like the dog day cicada are referred to as annual cicadas, because they can be heard every summer. Their life-cycle is actually almost two years long from egg-laying to maturity, but generations overlap. Eggs are laid in tree twigs in late summer. When they hatch the following year, the nymphs burrow into the ground and slowly grow over the course of the following fall, winter and spring, feeding on sap of tree roots. In the second summer of their lives, the nymphs emerge from the ground and climb up trees, where they molt (shed) their exoskeleton. The cicadas are vulnerable at this stage to predators such as birds, snakes and the massive (for a wasp, anyway), "cicada-killer" wasp. If they are able to successfully molt, they emerge with long, transparent wings.

Cicadas mate from mid-July to the end of August most years. The characteristic summer soundtrack is the male's

mating call. The mating call is made using a special tymbal organ. The tymbal is a thin membrane that the cicada shakes with its muscles, making sound in a similar manner to a flag or a sheet flapping in the wind, although with a much greater frequency. The sound from the tymbal is amplified by the cicada's abdomen, which is partially hollow and curved.

Dog-day cicadas are about two inches long and their tymbals are less than a quarter-inch in diameter, but they can "pump up the volume" far beyond what their size would indicate. A cicada can blow out a

microphone, blaring its song at levels measured as high as 116 decibels in close proximity. A chorus of cicadas can sing as loud as a passing freight train, about 80-85 decibels in the open air.

We can only speculate about what songs the male cicadas are singing to potential mates. Are they singing "only you" or "every girl's crazy about a sharp-dressed cicada?" Whatever they're saying, it will always translate to me as "enjoy what's left of this summer, winter will soon be here."



TBNRD Seeks Platte Basin Residents for Water Plan Meetings

Tri-Basin NRD and the Nebraska Department of Natural Resources will soon launch a series of three meetings seeking input from residents of the Platte basin portion of the district. The meetings will focus on reviewing and updating the district's Platte Basin Integrated Management Plan (IMP). State law requires Tri-Basin NRD to make up for (offset) depletions to the Platte River and its tributaries that result from groundwater pumping by new wells drilled after 1997. Tri-Basin NRD has complied with the law by prohibiting development of new irrigated cropland and by initiating several projects that increase groundwater recharge and enhance

streamflows.

Meeting participants will be briefed on details of the current Platte IMP and will be asked to help the NRD to update it. Anyone with an interest in water issues is encouraged to apply to be a participant in this series of meetings. The first IMP review meeting will be on Wednesday, September 12 at 7 p.m. at the Tri-Basin NRD office. Meetings are expected to last one and a half to two hours. You can submit your name for consideration by calling Tri-Basin NRD at 877-995-6688, or you can email NRD manager John Thorburn at jthorburn@tribasinprd.org.

TBNRD Intern Program Thrives after 25 Years



Zach Temple, Tyler Schnitzler, and Drayden Bellamy are Tri-Basin NRD's 2017 summer interns.

Tri-Basin NRD's Summer Intern Program is still thriving after 25 years. The district's internships give college students an opportunity to gain natural resources management experience. Interns collect and test groundwater quality samples, monitor wildlife habitat, test irrigation system efficiency, and help maintain drainage improvement project areas (IPAs). The interns also work with staff from Central Nebraska Public Power and Irrigation District, the USDA Natural Resources Conservation Service and the Phelps County Weed Control Authority. TBNRD has three interns working in the district this summer.

Zach Temple, from Holdrege, is a student at the University of Nebraska-Lincoln. He is pursuing a degree in agronomy with a minor in fisheries and wildlife. His activities include Collegiate Farm Bureau, UNL Agronomy Club, UNL Mechanized Systems Club, Alpha Gamma Rho Fraternity and Phelps County 4-H Council. Zach is also involved in Trinity Evangelical Free Church in Holdrege. In his free time, he enjoys outdoor activities, woodworking and carving, football, and NASCAR.

Check Flowmeters Regularly

Check flowmeters on your wells periodically throughout the irrigation season. Making sure that your flowmeters are 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 producers to make sure flowmeters function properly during the irrigation season.

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.

Tyler Schnitzler attends the University of Nebraska-Kearney and is from Kenesaw. He is majoring in biology with a wildlife emphasis. Tyler is involved in Toys for Tots and serves as a youth sports referee. His interests include hunting, fishing, land management, and investing.

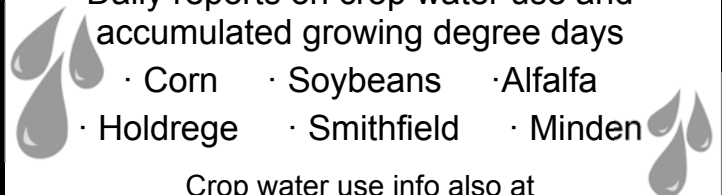
Drayden Bellamy is from Kearney and is a student at Kearney Catholic High School. He is involved in 4-H and Nebraska Youth Range Camp. Hunting and fishing are among Drayden's interests.

Many of the district's former interns have pursued careers in agriculture and natural resources, taking jobs with agribusinesses, NRDs, NRCS and various state agencies. Dalton Refior, TBNRD's current Land Resources Technician, spent three summers working as a district intern.

WATER HOTLINE

308-995-2255 or 800-993-2507

Daily reports on crop water use and accumulated growing degree days



Crop water use info also at www.cnppid.com → News & Info → Weather/ET Data

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RETURN SERVICE REQUESTED

Nebraska's NRDs: Protecting Lives, Protecting Property, Protecting the Future

CALENDAR

July 4 NRD Closed for Independence Day
 July 10 NRD Board Meeting, 1:30 p.m.*
 July 22-26 Kearney County Fair
 July 21-26 Phelps County Fair
 July 26-28 Gosper County Fair
 August 14 NRD Board Meeting, 1:30 p.m.*
 August 24-September 3 Nebraska State Fair
 September 3 NRD Closed for Labor Day
 September 11 NRD Board Meeting, 7:30 p.m.*
 September 11-13 Husker Harvest Days
 September 18 Area Range Judging hosted by TBNRD
 September 20 Rainwater Basin Conservation Day

* Times are tentative. All meetings are at TBNRD office in Holdrege unless otherwise noted.

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Get Tri-Basin Topics in your inbox instead of your mailbox!

To request an electronic version of this newsletter, send an email nsalisbury@tribasinrd.org.