

2012 TBNRD Republican Basin Water Use Reported

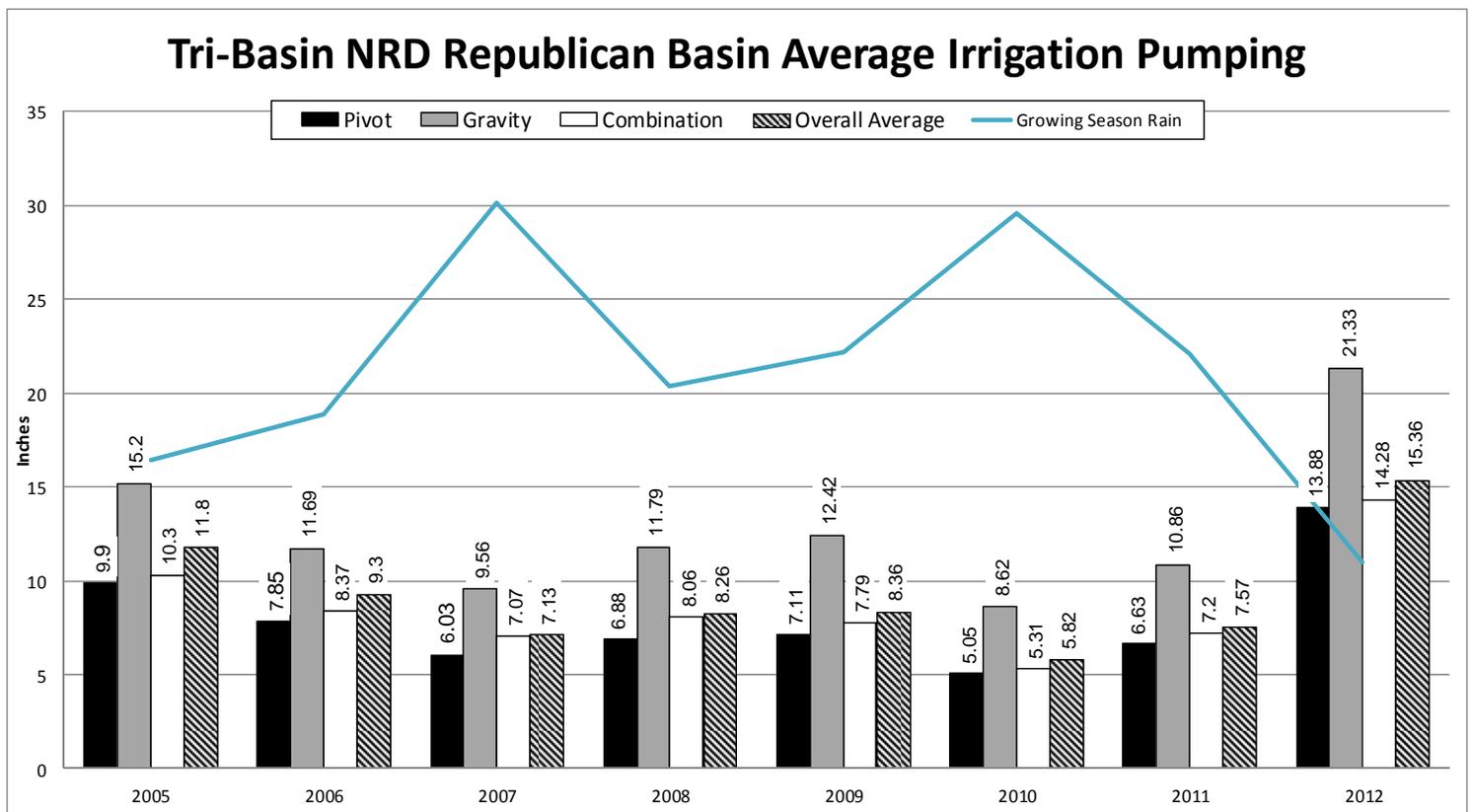
Republican Basin water use data for the 2012 growing season in Tri-Basin NRD has been compiled and is a depiction of the effects of last year's drought. Irrigation pumping in this area in 2012 was much higher than that of 2011.

Taking the drought into consideration, irrigators in Tri-Basin NRD made good use of their groundwater last year. When the water use data is analyzed in conjunction with precipitation data from last year (see chart on this page), a more complete picture becomes apparent. The growing season precipitation for 2012 was less than half of the growing season precipitation of 2011. In spite of the drought, Tri-Basin irrigators applied less water on average to make up for the lack of rainfall than what was needed to

provide the full crop water consumption requirement (27 inches per acre for corn). In spite of that deficit, according to numbers reported to TBNRD, producers maintained high yields.

Tri-Basin NRD also receives a limited number of Water Use reports from irrigators in the portions of the Platte River Basin and Little Blue River Basin that lie within the district's boundaries. The data from those reports is quite similar, with most irrigators using approximately double the amount of groundwater irrigation in 2012 as they did in 2011.

The chart on page 3, "Holdrege Annual and Seasonal Precipitation: 2005 to 2012," reemphasizes the lack of
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Manager's Message

by John Thorburn

Keep Looking Up!

The recent explosion of a meteor over Russia reminded me of a slogan that was embedded in my mind years ago. "Keep looking up!" was the catchphrase of Dr. Jack Horkheimer, an astronomer who hosted a five minute TV show called "Star Hustler" late nights on Public Television in the 1980s. In each segment, Jack talked about some feature of the night sky that was prominent at that time. I really enjoyed that show. It encouraged me to go out and look at the night sky, appreciate its beauty and learn its patterns. I have continued to be a "naked eye" astronomer, and I still spend some time outside most clear evenings marveling at the dazzling heavenly dome. My interest in astronomy led me to buy astronomy books, star maps and other star-finding aids, but those of us with smartphones now have an even handier resource to locate celestial features, the indispensable "Google Sky" app.

For a couple weeks each month, the Moon outshines the stars. Many professional astronomers consider the moon to be a visual obstacle and moonlight as a form of "light pollution" that obstructs their view of deep space. To a casual observer, however, its close proximity to Earth allows many details of its surface, such as its *mare*, or "seas", to be easily viewed from anyone's backyard. Many of its more prominent craters, like Copernicus (lunar craters are named after famous astronomers) can also be easily recognized, even without a telescope. Another thing to look for when you see the Moon is a halo. If you see a halo of light around the Moon, it indicates that ice crystals are abundant in the stratosphere. This usually indicates that a storm system is approaching within three or four days.

There is a lot more to the night sky than just the moon, stars and planets. Satellites are always whizzing by overhead, and many can be easily seen, if you know when and where to look. Over the years, I have observed Apollo-Soyuz, the Soviet Mir space station, space shuttles, the International Space Station and many others. They appear as



bright dots moving steadily across the sky. They can be distinguished from aircraft, because they don't have blinking lights (when you see a satellite, you're seeing sunlight reflected off of solar panels or antennae). The Iridium communications satellites are especially interesting to see. They each have a polished dish antenna that reflects sunlight in a narrow beam. If you're in the right place in relation to the satellite's path, you will see an "Iridium Flare", a light that, for a few seconds, is as bright as a car headlight.

The key to successful satellite spotting is to know the tracks of their orbits and when they will pass overhead. There are several internet websites that provide satellite tracking information. My favorite is a German website called heavens-above.com.

Other night-time phenomena are rarer and, for that reason, even more exciting to see. While exploding meteoric fireballs are, thankfully, an extremely rare occurrence, meteor showers occur on a predictable and regular basis. The most reliably visible one in our part of the world is the Perseid meteor shower, which occurs every August. This year, the Perseid shower will peak between August 10 and 13. During that period as many as 100 "shooting stars" per hour will be visible. Mark your calendar!

The Northern Lights (*Aurora Borealis*) are visible at our latitude a couple times a year. Look for these shimmering curtains of light along the Northern horizon when you hear reports of strong solar activity (sunspots and coronal mass ejections) known as "solar storms". Solar storms don't usually affect us much here on Earth, because our magnetic field protects us from the Sun's deadly gamma radiation and electromagnetic energy bursts. Occasionally, however, solar storms are strong enough to overwhelm Earth's natural defenses. When these solar "superstorms" hit, they can disrupt communications and devastate electric power grids. We are now in a period of solar maximum, which means that the Sun is especially active.

I'm fortunate to live in an area where there aren't many streetlights, so my stargazing isn't affected much by light pollution. Even if you live in an urban area, however, you can go to a nearby park, or drive just a few miles out of town to see dazzling night skies. You never know what you might see if you "keep looking up!"

Nebraska Natives

Ponderosa Pine (*Pinus ponderosa*)

Ponderosa pine is native to northwest and northcentral Nebraska. It can withstand prolonged drought and is the best pine to use on severe sites. It is best used in east and south inside rows of windbreaks. At maturity, the ponderosa pine can reach 35 to 55 feet tall.

Zimmerman pine moths and Sphaeropsis (Diplodia) blight can be serious problems and can kill or deform trees if not controlled.



<http://www.tribasinrd.org>

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, 2013. Anyone who wants to apply fertilizer or ag chemicals through their irrigation system needs to apply for a chemigation permit for the 2013 season. Land-owners 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.



TBNRD Offers ACE Camp Scholarships

Adventure Camp about the Environment (ACE) is a natural resources camp sponsored by Nebraska's natural resources districts for students who have completed sixth, seventh, or eighth grade. It will be held at the State 4-H Youth Camp at Halsey June 16-19. Cost of camp is \$190.

Tri-Basin NRD is offering up to six scholarships that cover the full cost of registration for students from Gosper, Phelps, and Kearney Counties who want to attend this camp. The deadline to apply for TBNRD scholarships is April 30, 2013. More information about the camp and applying for the scholarships can be found on Tri-Basin NRD's website, www.tribasinprd.org, or by calling Nicole Salisbury at Tri-Basin NRD toll-free at 1-877-995-6688.

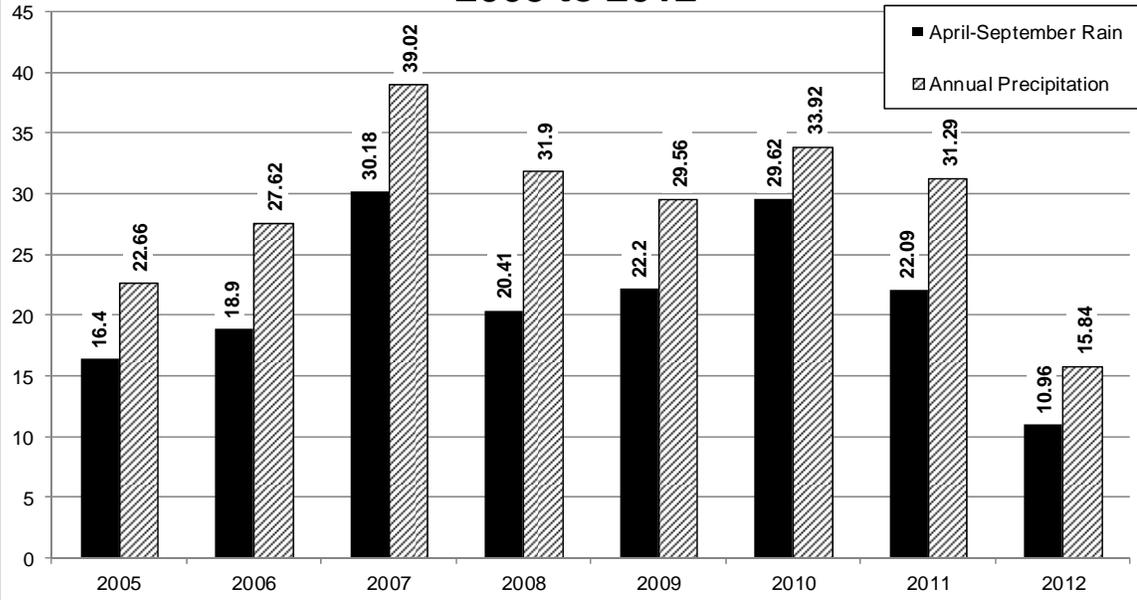


It's Not Too Late to Order Conservation Trees!

Whether you want to establish a new rural windbreak, fill in an existing windbreak, or hand plant trees and shrubs, it's not too late to place a tree order! Contact Alex Hasenauer at Tri-Basin NRD at 1-877-995-6688 for more information!

TBNRD Republican Basin Water Use Data

Holdrege Annual and Seasonal Precipitation: 2005 to 2012



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moisture during the crucial growing season in the district. Holdrege received just 10.96 inches of rain during the 2012 growing season, which is also approximately half of the average growing season rainfall for the Holdrege area.

As we head into planting season, it remains to be seen whether 2012's drought conditions will continue in 2013. But with careful planning and use of best management practices, Tri-Basin NRD irrigators will withstand continued dry conditions.



Spring 2013

Tri-Basin Topics

Non-Profit Permit
U. S. Postage
PAID
Holdrege, NE 68949
Permit No. 220

Tri-Basin Natural Resources District
1723 Burlington St. Holdrege, NE 68949
(308) 995-6688
email: tribasin@tribasinprd.org
www.tribasinprd.org

RETURN SERVICE REQUESTED

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

CALENDAR

April 9.....NRD Board Meeting, 1:30 p.m.*

April 24 & 25Water Jamboree
at Harlan Co. Reservoir for Area 5th Grade Students

May 9-11..... NGPC Outdoor Discovery Program
at Fort Kearny

May 14.....NRD Board Meeting, 7:30 p.m.*

May 27.....NRD Closed for Memorial Day

June 11.....NRD Board Meeting, 7:30 p.m.*

July 9.....NRD Board Meeting, 1:30 p.m.*

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

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A mailing list is maintained and requests to be placed on the list should be sent to the above address. Comments and suggestions may be addressed to the General Manager.

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

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