



City of Wayne Newsletter

City of Wayne
Utilities

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ENERGYWISE TIP ~ Corner Pivot Systems



During the summer of 1989, I was coming home on a commercial jet from a business trip to Los Angeles. As we were descending a few minutes outside of Lincoln, I remember overhearing a teenager seated in front of me exclaiming, “Wow, mom! Do you think aliens made all those crop circles down there?”

I smiled broadly and thought, “Nope! Not aliens. Not crop circles. It’s farmers and center pivots. Welcome to Nebraska!”

In 2016, Nebraska had over 9.3 million irrigated acres. About 80% of those irrigated acres use center pivots as their water delivery system. Since being invented by Frank Zybach in 1940, an estimated 78,000 systems are in use across the state. Of those, about 53% are supplied water by an electric-driven pump.

While not always the case, the majority of pivots operate on a quarter-section of land (160 acres) that is square (1/2 mile wide x 1/2 mile long). By locating the starting point of a standard 1/4-mile long pivot in the center of the field, a full circular rotation of the system irrigates approximately 125 to 141 acres depending whether an end gun is used. This

leaves 19 to 35 acres in the corners not watered.

By 1970, pivot manufacturers were producing corner pivot systems that have a special arm to swing out when approaching corners and then tuck back in when approaching the center of field edges. Compared to the standard pivot operating on a quarter-section of land, an additional 14 to 31 acres can be irrigated. Most existing systems have a buried, low-voltage wire around the outside of the field and a radio receiver on the corner arm to follow and direct the steering system. Recently, some newer guidance systems take advantage of a global positioning system (GPS) to direct the corner arm, thus eliminating the need for a buried guide wire.

When the corner arm is fully operational, water flow requirements increase about 40% as the system delivers greater volume over a greater distance. Pumping systems, including the size of the electric motor, are designed to account for this increase in flow. However, this maximum flow is only needed about 20% of the operating time. To adjust, pressure and flow regulators reduce output to match water delivery. Unfortunately, the pump motor continues to operate

at 100% output and wastes energy 80% of the time.

If the pump motor is compatible, this energy waste can be reduced by installing a variable frequency drive (VFD). VFDs vary the frequency and voltage of electricity supplied to the pump motor based on the changing flow requirements, thus eliminating most of the “overpumping”. In a report published through the University of Nebraska last year, CONSERVATION OF ENERGY USING VARIABLE FREQUENCY DRIVE FOR CENTER PIVOT IRRIGATION SYSTEMS IN NEBRASKA (Dilshad Brar, M.S. University of Nebraska, 2015), data reveals that energy efficiency savings of 20 to 30 percent are achieved for center pivot corner systems when paired with VFDs.

To find out more about whether a VFD can bring energy savings to your irrigation, contact your local electric utility. You may even find you are eligible for EnergyWiseSM incentives to help with the cost of installing a VFD on your corner pivot system.

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CITY COUNCIL MEETINGS

April 2nd
April 26th
April 30th (Retreat)

CITY HALL OFFICE HOURS

City Hall office
Hours are:
7:30 a.m.
until 4:30 p.m.



Department News ~

Wayne Public Library ~



The Easter Bunny has promised to stop by early this year! **The Annual Easter Egg Hunt is scheduled for Saturday, April 6th at 10:30 a.m.** Children will be divided up by age groups, and are encouraged to bring a sack, bucket or basket to collect eggs in.

Innovation Studio classes are available by request this month. Taking a class is required for the use of the studio machines. Most machines do have age requirements for use. Call or stop in to schedule a class on the: Vinyl Cutter, 3D Printer, Laser Cutter, CNC Router, Heat Press, Embroidery Machine, Button Maker, Laminator, 35 mm Camera and Green Screen, Lego Mindstorm, Makey Makey, Music Kit, & Spark Fun. "Nebraska Library Innovation Studios," is brought to us by the Nebraska Library Commission, partnered with the University of Nebraska—Lincoln Nebraska Innovation Studio, Nebraska Extension & Regional Library Systems. This project was funded through a National Leadership Grant awarded by the Institute of Museum & Library Services. Keep an eye on our Facebook page as well as other media sources for more information about this project.

Open House to celebrate National Library Week will be held Sunday, April 7th all day with cookies and coffee, great time to stop in and take a look at the Innovation Studios machines.

Minute-to-Win-it! Games to celebrate National Library Week! We will start the games at 4:00 p.m. on Wednesday the 10th! Join us for a great time playing silly one minute challenges!

We are excited to invite you to the **Maker's**

Showcase on Thursday evening the 11th from 6:00-8:00 p.m. The Showcase will be a collection of items made by those who have been participating in the Innovation Studio classes. Stop in to see the creativity of our community come to life!

Friends of the Library Book Sale — The annual book sale will be held Thursday and Friday the 11th and 12th from noon to 7:00 p.m. at the City Auditorium.

Library Volunteer Appreciation Day—Join us for treats all day on the 12th to celebrate the many house our volunteers have dedicated to the Library over the past year.

Smart Phone 102 - Beyond the Basics—You've learned to answer your phone, text and email, but you want to know more such as apps that you will use, how to use maps and the importance of your search engines. Wanna learn how to Facebook? What is Snapchat or Instagram? Bring your questions! The class is Monday, April 8th from 6-7:30 PM, let us know if you plan to attend.

The Needle Night group continues to meet. This is a very informal group and isn't limited to knitting. "We welcomes anyone who crochets, weaves, etc. and set aside every Thursday from 6-8 p.m. for needlework with anyone who shows up." The group also joins up with a college group on the last Thursday of the month at the campus library while WSC classes are in session.

Enjoy a relaxing evening! **Adult Coloring Night** on Tuesday, April 9th from 6:00 to

7:30 p.m. at the library. All supplies are provided, plus a light snack will be available at this FREE event sponsored by Pac-N-Save. Coloring benefits people by lowering stress & anxiety levels, helping a person focus on the present to, and giving the brain relief by entering a meditative state.

Movie Saturday! Join us April 13th for a movie. The 2018 release sequel takes place 6 years later, where friends discover a wi-fi router in the arcade that leads them on a new adventure.

90's Trivia Night will be held April 25th at 7:00 p.m. at **Johnny Byrd Brewing Company** in downtown Wayne. Teams of 4/5 are encouraged to register at the Library. 90's Dress is encouraged! First place team receives a \$50 Gift Certificate for Johnny Bird Brewing Co. donated by the establishment.

Toddler Time Wednesday mornings at 10:00 a.m. Parents and caregivers of young ones are welcome to join for stories and play.

Join us for an **Adult Craft Night** on Tuesday, April 16th at 6:00 p.m.

Book Club meets April 30th at 6:30 p.m., to discuss "What She Left Behind" by Ellen Marie Wiseman.

Ask about our 1000 Books Before Kindergarten Program and Our Adult Reading Challenge!

WISE WORDS

"You have to learn the rules of the game. And then you have to play better than anyone else."

~Unknown

TRANSFER STATION HOURS

Monday & Friday

9:00 a.m.—1:30 p.m.

Tuesday

11:00 a.m.—2:00 p.m.

Saturday

8:00 am.—Noon

Or by appointment
Tuesday, Wednesday
and Thursday

Green Notes ~ The Wayne Green Team turns 10 years old!!



Started in 2009 by former Mayor Lois Shelton, the Wayne Green Team is celebrating 10 years of service in our community. From Green Expos to Green Move Outs, Earth Day movies to Zero Waste Chamber Coffees, we have made an impact in reducing waste and increasing sustainable behavior.

Over the last 10 years, we have **recycled** over 100,000 pounds of electronics, 79 tons of glass, 1,000 pounds of string lights, and 526 pounds of batteries. We have **hosted**: 5 Earth Day movies, 4 Green Expos, 3 Household Hazardous Waste events and 2 Green Move Outs at WSC. And, we have **raised** \$42,000 in grant funds. Our efforts together make a positive difference. Let's keep going on our journey to Zero Waste in Wayne America!

This April, join us as we celebrate our community's annual **Earth Day events** to protect and sustain our planet and its resources.

Friday, April 12th at 10:00 a.m. is the "Zero Waste" Chamber Coffee. This event will be at the Wayne Public Library. Bring your own mug and see demos on what you can and cannot recycle in Wayne. #RecycleRight

Sunday, April 14th at 6:30 p.m. — "Tapped" at the Majestic Theatre. Join us at the Majestic Theatre for a free screening of the powerful documentary *Tapped*, a behind-the-scenes look into the unregulated and unseen world of the bottled water industry – an industry that aims to privatize and sell back the one resource that ought never to become a commodity: our water. Doors open at 6:30 p.m. for exhibits, raffles, and discussion, and the 75-minute film begins at 7:00 p.m. Raffle tickets are one for \$5 or five for \$20 and raise funds for the WSC Green Team. This free event is hosted by the WSC Green Team, the City of Wayne Green Team, and the A. Jewell Schock Museum of Natural History. Bring your own popcorn container and cup to make this a zero waste event.

Also, from now until May 31st, Pac N Save will donate its 5-cent reusable bag credit to the Wayne Green Team. Please bring your bags to the store to shop and help raise funds to support our community's Zero Waste programs. For more tips on the Green Path to the Good Life, find the Wayne Green Team on Facebook, Twitter, and www.cityofwayne.org/greenteam.

Every day is Earth Day. Thank you for your support!

The Fair Housing Act protects people from discrimination when they are renting, buying, or securing financing for any housing. The prohibitions specifically cover discrimination because of race, color, national origin, religion, sex, disability and the presence of children.

If you believe you may be a victim of housing discrimination, contact HUD 1-800-669-9777 or your local Fair Housing representative:

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YOUR CHOICE. YOUR RIGHT. YOUR HOME.

