



City of Wayne Newsletter

City of Wayne
Utilities

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Energy-Wise Tip ~ Heat Pump Water Heaters



Most homeowners who have heat pumps use them to heat and cool their homes. But a heat pump also can be used to heat water. You may have already seen one of these units in the hardware store or your plumber's shop and wondered what it was and how it worked. Here are the details:

Heat pump water heaters use electricity to move heat from one place to another instead of generating heat directly through electrical resistance. It takes a lot less energy to transfer heat than it does to generate heat. Therefore, heat pump water heaters can be two to three times more energy efficient than conventional electric resistance water heaters.

To move the heat, heat pump water heaters work like a refrigerator in reverse. While a refrigerator pulls heat from inside a box and dumps it into the surrounding room, an air-source heat pump water heater pulls heat from the surrounding air and moves it into a tank of water. Types of heat pump water heaters include units that are integrated with other space conditioning heat pump systems, split systems with indoor and outdoor components, and stand-alone units, which combine all the required equipment into a single unit located inside your home.

Stand-alone heat pump water heaters require installation in locations that remain in the 40°–90°F temperature range year-round. Also, rooms housing heat pump water heaters should provide at least 500 to 1,000 cubic feet (28.3 cubic meters) of air space around the unit. As heat is transferred into the hot water tank, cool exhaust air can be vented back into the room or ducted outdoors. Ideal locations

for installation are in spaces with excess heat, such as a furnace room. The temperature of the room in which the unit is installed will drop when it is operating by 2 F° to 6 F° and perhaps even more during periods of high demand for hot water.

The energy to feed the heat pump can come from passive solar gain, heat from a conventional heating system, the warming effect of soil surrounding a basement wall, or any other heat source. The resulting cooling of the room by the unit is especially advantageous in the summer. If the unit is installed in a basement located in a humid region, it also removes some of the moisture from the air, reducing and usually eliminating the need for a separate dehumidifier. Since the heat pump water heater operates as dehumidifier, a condensate drain must be provided.

Most heat pump water heaters cannot heat water as quickly as electric resistance water heaters. While the electric-resistance elements in a typical water heater can heat 20 gallons per hour, a heat pump can only manage about 8 gallons per hour (or even less, if the ambient air temperature is below 68°F).

To make up for this basic deficiency in performance, heat-pump water heaters are equipped with electric resistance elements that are energized whenever the heat pump cannot keep up with the demand for hot water. This feature improves the performance of the unit but does reduce its overall efficiency.

Most heat-pump water heaters have controls that allow a homeowner to choose one of

three modes of operation:

- Heat-pump-only mode (a mode that is energy-efficient, but that doesn't allow long showers).
- Hybrid mode (heat-pump operation plus electric resistance backup).
- Electric-resistance-only mode (a mode that you could choose during cold weather, when you might not want the appliance to cool the space where it is located).

A recent study in the north-east U.S. revealed that households installing a heat pump water heater could save between \$40 and \$270 per year by switching from an electric-resistance water heater. Savings calculations were based on a family household that uses 35 gallons of hot water per day, with an electricity cost of 17 cents/kilowatt hour. The low end of the savings scale was seen when the heat-pump water heater was installed in a bad location (a small, cold room). Conversely, the high end of the savings scale was seen when the unit was installed in a good location (a large, warm room).

Your local electric utility wants to help you make the most from the energy you use to provide hot water in your home or business. For more ideas on saving energy while running your business or home, along with possible EnergyWiseSM energy efficiency financial incentives to help with the cost of upgrading to a heat pump water heater, contact your local utility.

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CITY COUNCIL MEETINGS

May 3rd
May 17th

May is Pet Registration Month

City ordinance requires that all dogs over 6 months of age and cats over 16 weeks of age within the City be licensed annually on or before May 1st of each year. Proof of rabies shot is required. Fee is \$6; after May 30th, fee is \$21.





Department News ~

Grass Clippings ~

The Wayne Public Works Department wants to remind all residents that blowing lawn mower clippings into the street is prohibited and is a violation of City Code, Section 78-237. These grass clippings and other such debris left on the street will travel to the storm sewer inlet and can block them. The blocking of the inlets can cause local flooding from storm water accumulation.

Because the water from the storm sewers runs into Logan Creek, the grass clippings can negatively affect the creek with the chemical content in the grass from lawns that have been fertilized and treated with weed killer.

When mowing, please mow the first few rounds so that the grass blows in towards the lawn and when finished, sweep up the grass that has been

thrown into the street.

We thank you for your cooperation during this mowing season.



WISE WORDS

“You don’t lead by pointing and telling people some place to go. You lead by going to that place and making a case.”

~Ken Kesey

City Siren Signals ~

The Wayne sirens are operated by the Police Dispatchers. They are radio controlled with battery power backup so they still work in case the power lines into Wayne go down before a tornado gets here.

Fire alarm sirens: The fire siren will still be the same high/low tone and operate in daytime hours.

Tornado siren: This will still be a

single high tone siren for 3 minutes. The police dispatchers set this warning off only when a tornado is sighted within 5 miles of Wayne or if the weather service radar contacts dispatch and reports a radar sighting that close. We **never use** an all clear siren. If the tornado siren is sounded a second time, that means a tornado is still on the way and may hit us.

Tornado Shelter: If you don’t have a basement, plan ahead with a neighbor

who has a basement or travel to the city auditorium at 3rd and Pearl Street which will be unlocked when the tornado sirens go off. Have a plan for shelter and don’t wait till the sirens sound to decide.



Green Notes ~



Need more time to recycle at the Transfer Station? The Wayne Transfer Station is offering extended hours into the evening beginning in May as a pilot program. New hours will now include **Tuesday 11 am-6 pm**. If you are interested in using the Transfer Station for its free recycling or fee-based trash drop-off during these hours, please be sure to go, as Gill Hauling is testing whether the community will use these later hours. The Transfer Station remains open to the public Monday and Friday, 9 am-1:30 pm, and Saturday 8 am-noon.

Keep it clean. When bringing recy-

clables to the Transfer Station or placing curbside, make sure you clean out or rinse your items. Contamination may spoil an entire load of recyclables, which means Gill Hauling will have to dump the entire load of recycling into the trash as their recycler will not accept such loads.

THANK YOU for a great Earth Day Celebration at our event featuring the free movie *Planet Ocean*. Approximately 90 people attended, including families, college students, seniors and more. \$175 was raised from the raffle, and meaningful discussion was had by all. Thank you to our co-sponsors the

WSC Green Team and A. Jewell Shock Natural History Museum. Remember, every day is Earth Day!

We also just received confirmation from the Northeast Nebraska RC&D that they will have a household hazardous waste collection event in Wayne this Fall!!

For more tips on the Green Path to the Good Life, like the Wayne Green Team on Facebook or visit www.cityofwayne.org/greenteam.