

Signs of Change



You may have noticed new “mid-block” pedestrian crossings located in the Township. There are two to help walkers and bikers utilize the new trails – one on Keller Road and one on Willoughby Road near Maple Ridge Cemetery. Another is located on Cedar Street in the vicinity of Edru Skating Rink. And another is located on Holt Road near Tamarack Apartments.

These crosswalks allow people using the sidewalk or trail to cross the road in a safe and convenient manner. It is important that all drivers understand that they must stop for any pedestrian either in the crosswalk or approaching it. The pedestrian always has the right-of-way and the driver must yield.

As we strive to make Delhi more walkable and continue new phases of the trail system, you’ll see more of these “mid-block” pedestrian crossings.

Please be aware of these new crosswalks in the community and drive appropriately.

Thank you, Delhi Township residents

Thank you, Delhi Township residents, for your support of the Police and Fire Millage ballot proposals this August. Earlier this year, Plante and Moran’s “Five-Year Financial Forecast” projected a severe deficit in the General Fund budget beginning in fiscal year 2011 without any significant increases in revenue. The community’s support for these millages will enable us to continue providing quality fire/EMS and police services – while remaining among the lowest costs in the area for such services.

Even though the millages passed, it doesn’t mean the Township budgets are back to “normal.” Cuts are still being made. Efficiencies are always examined. And grants are being pursued. This diligence means that we are spending less than we’re taking in for the proposed fiscal year 2011 General Fund budget. For 2011, we will be adding to the fund balance (or “rainy day fund”). Thanks to your support, we will be able to continue all the services Delhi residents and businesses have come to expect and appreciate while maintaining the excellent quality of life in Delhi Township.

Holt/Delhi Calendar of Events

- December 27 – January 28 – Christmas tree drop-off at the maintenance facility, 1492 Aurelius Road.
- January 13 – Holt Kiwanis blood drive, 1:00 to 6:45 p.m., Holt Presbyterian Church.
- January 14-15 – Holt Kiwanis newspaper recycling drive, Holt Plaza.
- February 8 – Holt Relay for Life kickoff event – 6:30 p.m., Charlar Place, 4230 Charlar Drive. Everyone welcome!
- February 11 – Holt Lions spaghetti dinner fundraiser – 4:30 to 7:30 p.m., Holt Methodist Church (corner of Holt & Aurelius).
- February 12 – April 2 – Winter Warm Up Community Challenge – help Delhi Twp. win grant money by logging your walking and/or exercise activity. Check delhitownship.com for details.
- March 1-11 – Youth volleyball registration. Avoid the line, get the form online at delhitownship.com and mail with payment.
- March 1-14 – Adult softball registration. Avoid the line, get the form online at delhitownship.com and mail with payment.
- March 3 – Holt/S. Lansing Rotary celebrity server luncheon, Texas Roadhouse. Call 331-0900 for more info.
- March 10 – Holt Kiwanis blood drive, 1:00 to 6:45 p.m., Holt Presbyterian Church.
- March 21 – April 8 – T-ball, baseball and softball registration. Avoid the line, get the form online at delhitownship.com and mail with payment.
- April – Spring brush drop off – TBA, check delhitownship.com for dates and times.
- April 1 - 24 – Holt Lions Easter flower fundraiser sales, call 268-3007 for more info.
- April 22 – May 1 – Holt Lions White Cane Week
- April 23 – Holt Kiwanis/Delhi Parks & Rec. Easter egg hunt and Easter bonnet contest, 1:00 p.m. at Valhalla Park.
- May 6 – Holt Kiwanis chicken BBQ fundraiser
- May 7 – Annual Reuse Rally – visit delhitownship.com for details. Note: the annual POTW Open House, traditionally at this time, will be on June 4.
- May 21 – Brush and yard waste drop off, hosted by Holt Lions – 9 a.m. to 1 p.m. POTW pond area on Grovenburg Rd. (across the street from the Recycling Center).
- May 21 – Aquafina Pitch, Hit and Run competition – Elliott Elementary Baseball Field, 11:00 a.m. Visit delhitownship.com for details.



Delhi Township is now on Facebook and Twitter!

Now it's easier than ever to connect with Delhi Township. Join our Facebook group and follow us on Twitter to stay up to date on Township news and events.

Delhi Township Board

Stuart Goodrich, Supervisor	John Hayhoe, Trustee
Evan Hope, CMC, Clerk	Jerry Ketchum, Trustee
Harry Ammon, CPFA, Treasurer	Derek Bajema, Trustee
	Roy Sweet, Trustee

The Township Board of Trustees meets on the 1st and 3rd Tuesday of each month at 7:30 p.m. at the Delhi Charter Township Community Services Center Board Room (2074 Aurelius Road). Meeting agendas and minutes are available on the Township website, delhitownship.com.

The Parks Commission meets the 2nd Wednesday of the month at 5:30 p.m.

The Township Planning Commission meets the 2nd and 4th Mondays of each month at 7:00 p.m.

Community gardening grows-in more ways than one!



If you want to garden, we have the land!

Thanks to the first-year success of the Community Gardens in 2009, Delhi Township added a second garden plot for use by residents this year.

The original Community Garden Plot on Pinetree Road offered 60 plots for individual gardens. This year, the west gardens opened at Grovenburg Road, offering an additional 50 plots to Delhi residents. With two garden locations now available, there is plenty of room for everyone to grow! To reserve your garden plot for 2011 call the Delhi Charter Township Department of Public Works at (517) 699-3874.

Energy Efficiency and Multi-Purpose Block Grant (EECBG)

In February 2010, Delhi Charter Township was awarded a grant totaling \$112,847 from the Department of Energy, Labor and Economic Growth (DELEG), Bureau of Energy Systems (BES), under the Energy Efficiency and Multi-Purpose Block Grant.

These grants were made available to assist cities, townships, and counties in implementing energy efficiency and conservation strategies that reduce fossil fuel emissions and total energy use, and that improve energy efficiency in the transportation, building, and other sectors.

Delhi Charter Township will use the grant for improvements to the Community Service Center and to complement the many initiatives the township has already taken for energy conservation.



Delhi Charter Township Solids “Bio-mass to Energy” project



This article originally appeared in the *Treatment Plant Operator Magazine*, May 2010.

The first thing you'll notice about the new wastewater treatment plant in Delhi Charter Township, Michigan, is a flock of sheep tending to the grass.

What is not so evident is that you're also looking at the state's first integrated biomass-to-energy system—a cogeneration plant that uses microturbines to make electricity from methane and uses the recovered heat in the digesters. Located next to the state capital of Lansing, the township has been growing over the last 10 years. The old mesophilic digesters had reached their capacity, according to Allen Bryant, environmental coordinator. In 2007 the township decided to build a self-sufficient plant with very low environmental impact. It went online in June 2009.

Brand-new process

The plant, located in Holt, serves a population of 25,000 and has a design flow of 4.0 mgd (average 2.5 mgd). It uses an activated sludge process with tertiary treatment.

The solids process captures and uses digester methane that used to be flared. Raw sludge is pumped from the primary clarifiers to pre-feed tanks that automatically dose a set of thermophilic digesters where material is kept at 130 degrees F for about 48 hours. The sludge is then incrementally transferred to mesophilic digesters where it undergoes further mixing for about 10 days at 99 degrees F.

The methane from the digesters is processed by a gas compression skid (Unison Solutions Inc.). “After we dry and clean the resulting methane, we use it to drive two Capstone Turbine Corporation microturbines that generate 30 kW each,” says Bryant. The microturbines reduce the need for utility power, and the waste heat supplements digester heating.

“We're happy with the methane production,” says Bryant. “The generators are running pretty much full-time off the methane we're producing.” The annual savings is expected to be around \$30,000 in electricity and \$40,000 in natural gas.

Handling System upgrades



Sandra Diorka, township director of public services, says the staff hasn't calculated the carbon footprint savings, but they are obviously significant. "We were flaring the methane, so we had that carbon dioxide and the byproducts of burning going into the environment," she says. At the same time, the plant is not using as much natural gas or electric power generated by fossil fuels.

A big step

The \$9.8 million project was the result of an effort that started from a need to improve biosolids handling. While considering options about 10 years ago, the township was approached by the HESCO environmental technology firm about partnering on a grant application for a combined heat and power plant. The board was "pretty excited" about the idea, according to Diorka. "But we didn't get the grant."

The township still had to do something. It would have cost about \$3 million to rehabilitate the old digesters or about \$7 million for a new Class B biosolids plant.

"The board said 'Let's just do the right thing and continue on with the combined heat and power,'" recalls Diorka.

Designed by Hubbell, Roth & Clark, Inc. and built by Irish Construction of Howell, Michigan, the plant won a PISCES Award (Performance and Innovation in the State Revolving Fund Creating Environmental Success) from the U.S. EPA. HESCO supplied its patented Integrated Biomass to Energy System (IBES) process using Infilco Degremont's Two-Phase Anaerobic Digestion (2PAD) to enhance the anaerobic digestion process and produce Class A biosolids. HESCO's combined heat and power system is designed to offset the energy requirements

needed to process the solids to a Class A waste. The company says it can produce pelletized and granular dried solids with no further energy input other than that produced from the digestion process. It can also integrate sludge gasification technology with its IBES system.

State assistance made the project more affordable. The Michigan Department of Environmental Quality provided a \$500,000 grant and a \$9.85 million loan at 1.65 percent interest.

Diorka adds that the project was managed with the environment in mind. All plant drawings were submitted and viewed electronically through a shared Internet site, and pay requests were paperless. Surveillance cameras allowed project engineers to monitor progress from their office instead of having to drive to the site.

Just a start

"We like to think that we're kind of a pilot project," says Bryant. Others have taken notice, including Michigan State University. "They're interested in doing something similar on campus, and doing a study to see if our biosolids would be a suitable substitute in a coal-fired power plant," Bryant says. The Lansing municipal utility is also interested in the idea of using the biomass as a fuel. And that sheep idea is pretty intriguing, as well.

Keeping up on the sheep

In the spring of 2009, the Delhi Charter Township Department of Public Services acquired a small flock of sheep to manage the grass in an enclosed area of the wastewater treatment plant. This large area had previously been maintained by department staff and required mowing once a week. The idea of using sheep to graze the area was an effort to reduce labor and maintenance costs as well as fossil fuel emissions from equipment.

So far, so good. The savings in labor alone are estimated at \$10,000 annually. But that's not the only way the sheep earn their keep. Each spring they are sheared and the wool is made into socks and hats which are made available to the public for purchase (see accompanying article). The socks and hats sold out the first season, and the sales revenue was used to support the flock in the form of vaccinations, supplemental nutrients, etc.

Another benefit of the sheep: more sheep! In the spring of 2010, five adorable lambs were born at the wastewater treatment plant. These baby girls—Sassy, Pepper, Olive, Rainbow and Brittney—were all named by township residents.

If you'd like to help support the flock and stay warm this winter, the new sock and hat shipment has just arrived and is available at the Department of Public Services office.



Stay warm with Delhi wool



Homegrown socks and hats now available!

Delhi Township's Publicly Owned Treatment Works sheep are earning their keep!

Our favorite lawn-grooming sheep were sheared in May and the wool was sent to Frankenmuth to be spun into yarn. The yarn was then used to make socks and hats, which are now available to purchase! The socks and hats come in a variety of sizes and styles:

Beanie hat - \$12.00

Crew sock - \$12.00

Peruvian hat - \$15.00

Thick Hunter sock - \$23.00

These toasty socks and hats are perfect for gifts, or just for the cold days ahead!

They're available at the Delhi Department of Public Services, 1492 Aurelius Road, Holt. For more information, please call (517) 699-3874. Stay warm this winter with Delhi wool!

Delhi receives grant to monitor water quality

This past August, the Department of Natural Resources and Environment awarded eight grants, totaling \$247,795, to help universities, local governments and nonprofit organizations monitor the quality of Michigan's waters. We're proud to announce that Delhi Charter Township was awarded one of the grants.

Delhi Township received \$21,557 to identify and prioritize sources and causes of pollutants in the Sycamore Creek section of the Red Cedar watershed and the Skinner Extension of the Grand River watershed.



Township earns multiple environmental awards

Delhi Charter Township has been honored in the past year with several awards in recognition of its environmental efforts.

2010 Tri-County WRAP Award

The Waste Reduction Awards Program (WRAP) is sponsored by a committee of local waste reduction professionals. WRAP's mission is to publicly acknowledge residents, businesses, governments, educational institutions and non-profit organizations in Ingham, Eaton and Clinton Counties that have exemplary waste reduction and recycling practices and encourage others in the community to increase their efforts to reduce, reuse and recycle.

Delhi Charter Township was one of eight recipients out of 20 nominees. The township received the award for the outstanding recycling center at the wastewater treatment plant, and for public education and outreach, including the use of "Gill" the recycling ambassador, a 12' x 25' fish made from recycled laundry detergent bottles!



PISCES Award

Delhi Charter Township was awarded the PISCES Award (Performance and Innovation in the State Revolving Fund Creating Environmental Success) from the U.S. Environmental Protection Agency in recognition of the installation of the Improved Biosolids Treatment and Technology. The new digester system at the Delhi Waste Water Treatment Plant went online in June of 2009. It uses sewage sludge (biosolids) to produce methane gas to run micorturbine generators to create electricity. (See *Treatment Plant Operator Magazine* article for more information.)

American Public Works Association Project of the Year Award

Delhi Charter Township was co-recipient—with engineering firm Hubble, Roth, and Clark and the Irish Construction Company—for the APWA Project of the Year award. The award was presented in recognition of improvements to the township's digester system, and the Biomass to Energy System.

ACEC/Michigan Honorable Conceptor Award for Engineering

ACEC (American Council of Engineering Companies) of Michigan recognizes special engineering/surveying accomplishments through its annual Engineering & Surveying Excellence Awards. Delhi Charter Township earned the Honorable Conceptor Award for Engineering in recognition of improvements to the digestion system.

delhi neighbor!

Delhi Charter Township
2074 Aurelius Road
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Rain barrels and compost bins for sale at cost



Here's your chance to save money while helping to save the environment!

Delhi Township's Department of Public Services is offering System rain barrels and The Earth Machine compost bins for sale at cost.

Not only will you save on the purchase price, but using rain barrels and compost bins can help you save on your household budget as well. Water collected in rain barrels can be used to water your garden and landscape plants, and compost is an excellent fertilizer.

These are the products available:

System Rain Barrel

34" overall height
26.1" diameter
55-gallon capacity
\$46.00

The Earth Machine Compost Bin

33" overall height
33" bottom diameter
80-gallon capacity
\$49.50

You may purchase these at the Delhi Department of Public Services, 1492 Aurelius Road, Holt. For more information, please call (517) 699-3874.