



Sustainable Delaware

NEWSLETTER

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INSIDE THIS ISSUE:

TTHM	1
Sahle Hollow	1
TTHM —cont'd	2
Shale Hollow— cont'd	2
Fair Trade	3
De-icing	3
Web Articles	4
Calendar	4

Trihalomethanes in Delaware's Drinking Water

Last December, the residents of Delaware received a notice in their monthly water bill that no doubt surprised many. It read in part, "Ohio EPA has advised the City of Delaware that trihalomethane levels in its public water system exceeded drinking water standards and that our water customers must be notified. The average level of TTHM over the last four quarters was 0.1000 mg/l. The standard is 0.080 mg/l. The levels detected do not pose an immediate health risk and it is not necessary to use alternative (bottled) water sources. However, over time, some people who drink water containing trihalomethanes in excess of the MCL [maximum contaminant level] may experience liver, kidney, or central nervous system problems, and may have an increased cancer risk. We are investigating and taking necessary steps to correct the problem."

Trihalomethanes (THM's) are a group of chemical compounds that form when chlorine,

chloramine, or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic matter such as leaves, algae, or wood.

Water treatment facilities that draw water from surface sources (as is the case in Delaware) produce higher levels of THM's than facilities that rely on groundwater. According to scientific studies, THM's are indeed both carcinogenic and mutagenic, meaning that they can cause cancer and genetic mutations. Over time, TTHM's (total trihalomethanes) can also lead to kidney, liver, and bladder damage as well as a higher rate of miscarriage. *continued on pg. 2*



Shale Hollow Preserve

On December 8, 2013, Shale Hollow Preserve opened after years of planning, grant-writing, and a deliberate acquisition process. It is the latest addition to Delaware County's Preservation Parks system that currently consists of a total of eleven parks. With 188 acres, it is the second-largest area. (Only the Gallant Woods Preserve is bigger.) Located on the west side of State Rte. 23 in Lewis Center, just south of Hyatts Road on Artesian Run, it features towering shale cliffs, small waterfalls, large rock concretions, and undisturbed old-growth forest. Needless to say, the site is also rich in wildlife. According to a spokesperson,

at least 44 species of birds and 171 plant species have been documented, including species that are endangered or threatened in Ohio. With some luck, you will also encounter deer, coyotes, and other mammals on the 1.1-mile hiking path. By the way, there is no reason to be afraid of any of the local critters. Crossing an urban intersection – now that's scary! At one point, the trail takes you to Big Run, the creek that runs through the area and on to the Olentangy River. There is also a former residence that was refurbished and made into a public facility and nature center, easily accessible by all. *continued on pg. 2*

Trihalomethanes - cont'd

Plans to protect air and water, wilderness and wildlife are in fact plans to protect man.

- Stewart Udall

The problem of elevated THM levels is well understood and relatively easy to remedy. On January 11, Brad Stanton (Public Utilities Director) and Tom Hinson (City Water Manager) attended the monthly SDO meeting and explained the specific steps Delaware has taken to address the problem: 1. The city has decreased the intake of surface water and increased the use of groundwater from its three wells north of Delaware. Groundwater is generally cleaner than surface water. 2. The city is adding activated carbon in powdered form to help settle out remaining organic material in the raw water. 3. Most importantly, the city's new \$30-million water treatment plant is scheduled to go on-line later this year. Located off US Rt. 23 North, it is a state-of-the-art facility that will use ultrafiltration and nanofiltration membranes to remove practically all pollutants, including pharmaceuticals, atrazine, and cryptosporidium.

Delaware has highly trained professionals in its ranks who know their trade inside out. In this

case, they reacted quickly and efficiently to bring the city back into compliance with EPA rules. The necessary funds were made available without bureaucratic fuss. However, as the recent example of Charleston, West Virginia, indicates it is always possible for an environmental crisis to occur. A train may derail and spill chemicals, a manufacturing plant may explode, or a rogue individual may dump toxic waste into a stream. Delaware is not free of air, water, and soil pollution. There are industrial brown fields and pockets of blight. There are old landfills with leachate and methane problems. The public beach of Delaware Lake is regularly contaminated with E. coli. Catastrophic disasters can quickly overwhelm a community. Both public officials and private groups such as SDO need to remain vigilant and work together to identify problems and find solutions. The health and welfare of the people is of paramount importance, and robust environmental regulations are therefore a necessity.

Shale Hollow - cont'd



Several scheduled events have already taken place in Shale Hollow Preserve – winter walks, a New Year's Day hike, and a night hike that focused on the great horned owl. In February, hikers will explore "the stinky" (skunk cabbage), one of the first wildflowers of spring.

In Delaware County, densely populated urban areas and natural habitats exist side by side, proving that it is quite possible and even desirable for culture and nature to co-exist peacefully. It is Preservation Parks' dual mission 1. to protect and conserve undeveloped

land for present and future generations, and 2. to provide families with educational and recreational outdoor opportunities to become reacquainted with the magical woods, hills, streams and the wildlife that inhabits them. Preservation Parks is funded by property-tax money, and Shale Hollow Preserve was made possible by additional grant assistance and/or low-interest loans from the Ohio/EPA, the Ohio/EPA Water Protection Conservation Fund, the CleanOhio Fund, and the federal Land & Water Conservation Fund. Thanks for everyone's help, but special thanks goes to Delaware County's taxpayers for their generous support and exemplary foresight.

The Fair-Trade Concept



Millions of laborers in developing countries work for a handful of dollars a week and often under deplorable, unsafe conditions. By purchasing fair-trade products you enable farmers and workers to receive a fairer price for their products. That, in turn, leads to greater economic and social stability for them, their families, and their communities. Fair Trade not only supports economic justice and human rights, it also promotes a more sustainable and healthier environment by using fewer pesticides and chemical fertilizers and by preserving forests, soils, water, and biodiversity. Not coincidentally, fair-trade products are often grown using organic methods only.

Coffee is probably the best-known fair-trade commodity, but there are hundreds of other items as well. They include food stuffs such as rice, fruit, chocolate, and sugar; beverages such as coffee, tea, cocoa, and wine; and additional items such as flowers, cotton garments, handicrafts, and even footballs. Global Village in Delaware just announced a partnership with Shema Solutions, which is a

line of soaps, lotions, and cleansers made from fair-trade shea butter from Uganda. The shop sells many other fair-trade products as well and is worth a visit. Fair-trade products were once a novelty. But these days you will frequently see the "Fair Trade Certified" label when you shop in large supermarkets or eat in cafeterias. Fair Trade represents a growing portion of the national food and beverage industry.

There are some problems with Fair Trade. No agreed-upon definition of what counts as fair trade exists. Some small-scale farmers cannot afford the steep annual membership fee. Others live in areas that are too remote to be part of the network, and so the very poor often find themselves excluded. Sometimes the parent organization (Fairtrade International) authorizes national unions to conduct business on its behalf, but then does not follow through with surprise inspection visits. Occasionally corrupt participants attempt to evade the rigorous fair-trade standards. For example, in 2011 NPR reported that Victoria's Secret had switched to fair-trade cotton underwear, but it turned out that forced child labor was used in the production of the garment.

But in general, the fair-trade concept is good and sound. It empowers many African, Asian, and Latin American producers to lead a better, more dignified life. So, please give fair trade a chance. The ethically made product might cost you a few extra pennies, but the quality is often superior. Plus, buying fair trade is an opportunity to make a real difference in the world.

De-icing Ideas Instead of Salt

Freezing rain and snow can create icy conditions that we try to minimize with the use of salt. Safe driving and walking conditions are important, but sodium chloride (better known as salt) is degrading surface water and ground water supplies. The City of Delaware pumps these waters to the water treatment facility for drinking water distribution. The more chemicals that are in our water at its source, the more costly the treatment becomes.

Instead of using traditional road salt on your walkways or driveways, there are alternatives for de-icing that would help reduce this water degradation. Other chemicals that can be applied to snow or potential icy conditions are calcium chloride and calcium magnesium acetate (CMA). Calcium chloride

is a different form of salt that is more effective and less corrosive than the traditional salt, sodium chloride. Calcium magnesium acetate is not very corrosive and drops the temperature of ice forming to -17.5°F . Both options are more expensive but are more environmentally friendly than traditional road salts, which are also corrosive to your vehicles. If the icy conditions are not steeply inclined it may be worth applying sand or wood chips instead of, or in addition to, the alternative salts to reduce slipperiness.

However, it is important to not apply a large quantity of these products because they can clog storm sewer systems. Lastly, removing the snow from walkways and driveways before it becomes packed down by foot traffic or vehicles to prevent icy conditions.



Sustainable Delaware Ohio

Our Mission: Sustainable Delaware is a non-profit group of citizens focused on promoting environmental, social and economic sustainability for the Delaware community through awareness, advocacy and action.

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Have a comment, idea or article for the newsletter? We would love to hear from you, please email us at:
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Interesting Articles on the Web

How Climate Science became Politicized

<http://www.livescience.com/22069-polarization-climate-science.html>

The Year the Monarch Didn't Appear

http://www.nytimes.com/2013/11/24/sunday-review/the-year-the-monarch-didnt-appear.html?nl=todaysheadlines&emc=edit_th_20131124&r=0

Magma-Enhanced Geothermal System

<http://www.treehugger.com/renewable-energy/first-ever-magma-enhanced-geothermal-system-created-iceland.html>

The Sharing Garden Shows the Way to a Moneyless Food System

<http://www.shareable.net/blog/the-sharing-garden-shows-the-way-to-a-moneyless-food-system>

Energy Plan Must be About More than just Energy

<http://www.greenlivingonline.com/article/energy-plan-must-be-about-more-just-energy>

9 Instant Home Warm-ups

<http://www.greenlivingonline.com/article/9-instant-home-warm-ups>

130 years of Temperature Anomalies

<http://www.treehugger.com/climate-change/nasa-cramed-130-years-worth-temperature-anomalies-one-video.html>

Upcoming Events

For more upcoming events and details see the SDO calendar on our website at <http://www.sustainabledelawareohio.org/Events.html>

02/07/14	6p—8p	First Friday—Chocolate Walk; Historic Downtown Delaware
02/08/14	10a—12p	Beekeeping Apprenticeship; Stratford Ecological Center
02/09/14	12p—4p	Second Sunday Open House; Ohio Wildlife Center, Powell
02/12/14	7p—9p	Sustainable Delaware Board Meeting; Delaware County Library, Main Branch
02/15/14	9:30a - 11a	Sustainable Delaware Meeting; Delaware County Library, Main Branch
02/19/14	6:30p—8p	Build a Bluebird Box; Deer Haven Preserve
02/24/14	7:30p	Environmental and Natural Resource Symposium; OWU, HWWC, Benes Room
02/28/14	6p	Ca\$hMob; Meet at the Main Street Delaware office
03/01/14	10a—1p	Maple Sugar Tours; Stratford Ecological Center
03/11/14	1p—3p	Herbal Study Group; Stratford Ecological Center
03/12/14	6:30p -8p	Sustainable Delaware Board Meeting; Delaware County Library, Main Branch
03/15/14	9:30a—11:30a	4-H Open House—Delaware; Willis Government Building
03/15/14	9:30a - 11a	Sustainable Delaware Meeting; Delaware County Library, Main Branch
03/22/14	12p—5p	Farm to Fork; Stratford Ecological Center
03/28/14	6p	Ca\$hMob; Meet at the Main Street Delaware office