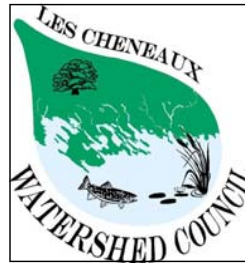


LES CHENEAUX WATERSHED PROJECT

A PARTNERSHIP BETWEEN
THE CHIPPEWA/EAST MACKINAC CONSERVATION DISTRICT
AND
THE LES CHENEAUX WATERSHED COUNCIL



Septic System Help

The Les Cheneaux Watershed Project with help from both Mackinac and Chippewa County Health Departments, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency, recently developed an on-site septic system management handbook to help you keep your toilets flushing, septic systems working, and maximize your drainfield's effectiveness at treating wastewater.

The Les Cheneaux watershed is blessed with numerous islands, creeks, wetlands and near water sites attractive for development. It is also plagued with poor soils and fractured rock near the surface of the ground that facilitates quick movement of water underground. These conditions make it especially difficult for proper management of sewage generated at our homes and cottages.

Project partners are contemplating a workshop for late summer to guide residents through the booklet.

SEPTIC SYSTEM HANDBOOK

- How your septic system works
- Types of septic systems
- Tips for using your septic system
- How to maintain your septic system
- How to locate your septic tank and drainfield
- Who to contact if your tank needs service or pumping
- Who to contact if your septic system needs replacement
- Shoreline property concerns

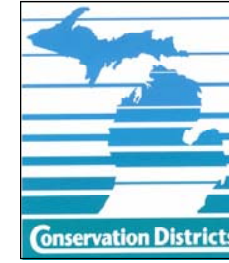
A GUIDE FOR RESIDENTS OF THE LES CHENEAUX WATERSHED

Sustainable water quality will depend on a community well educated in managing on-site septic systems, and selecting properties with wastewater filtering capabilities. You can pick up a copy of the *Septic System Handbook* at the project office (Chamber of Commerce building on M-134 in Cedarville). It is also available at the local health department office.

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LES CHENEAUX WATERSHED NEWS



AUGUST 2007

LES CHENEAUX WATERSHED PROJECT

VOLUME 1, NUMBER 3

The People Speak!

Falling water levels! Failing septic systems! Boat traffic! Weeds! These were concerns voiced by local and seasonal residents at the recent public forum sponsored by Clark Township and other partners. Prompted by planning consultant, Gourdie-Fraser, the local public was invited to prioritize concerns regarding the future of Clark Township including the economy and the environment. The session was designed to help Gourdie-Fraser and the Clark Township Planning Commission improve the Township's *Comprehensive Plan* and *Zoning Ordinances*, and thus the future of the area.

What are these documents? The Comprehensive Plan, known also as the Master Plan, is a plan for the future of Clark Township, including economic, social, and environmental statistics and future goals and objectives to sustain them. Zoning ordinances are the laws and regulations to carry out that plan. For example, if your objective (written in your "plan") is to protect the "looks" of your town, which you hope will sustain visits by tourists, businesses, and future consumers, etc., you design ordinances that regulate location of visually objectionable material, greenspace, signs, etc.

Protecting water quality is the focus of the Les Cheneaux Watershed Project in working with Clark Township to improve the plan and zoning ordinances. How we use our land is the foundation of environmental quality because nearly every environmental problem has a land use origin.

Project partners will work with the planning commission and the community to develop goals for the local environment and devise ways to implement those goals. This is an opportunity for you to play a part in accommodating and directing change to ensure the sustainability of our water resources.



The Planning Commission will work with Gourdie-Fraser and the Les Cheneaux Watershed Project partners every third Tuesday at 7:00 p.m. to improve the Master Plan and Ordinances. You can also visit us at the project office and provide your input for the future of water quality.

Permanent Land Protection: The Ultimate in Water Quality Protection

Unbroken sod doesn't erode and destroy fish habitat. Undisturbed wetlands collect runoff, filter pollutants, and provide nesting, nursery, and feeding habitat for a wide range of aquatic wildlife and protect the quality of our water supply. Undeveloped vistas draw people to appreciate and hold in high esteem wild lands. Get the picture?

A goal of the Les Cheneaux Watershed Project is to promote wise land use for the protection of water quality. With some areas, like coastal wetlands, interior wetlands, areas along our streams and lakes, the best way to protect water quality is to minimize, or even halt development, so that soil isn't eroded, aquatic vegetation and benthic (bottom) habitat is left alone, and wetlands are left to do what they do best.

Several tools are available to promote land protection. A watershed project partner is the Little Traverse Conservancy, established in 1972 by a group of citizens to protect the beauty of northern Michigan by helping landowners protect their land. "Little T", as they are commonly known, utilize several strategies for permanently protecting land.

Land Donations

Outright gift - The Conservancy can accept gifts of land which have ecological, scenic, or conservation value. These properties are typically managed as preserves. Outright donations can be claimed as income tax deductions.

Reserved life estate - The land is donated, but the owner reserves the right to live on and use the property for their lifetime. This also results in a tax deduction but the value of the gift is reduced to account for the life estate.

Bequest - Leaving land to the Conservancy after your death allows you to retain full use and control of the property during your lifetime, yet ensures its care after you are gone.

Conservation easements

Permanent agreement where property owner gives up some development and/or use rights, but retains ownership and various uses. Easement holder agrees to uphold terms of the easement forever. The property is not open to the public. Easement runs with the land. Future owners are bound by the terms of the easement (*continued on page 3*)

The Les Cheneaux Watershed Project

A partnership between the Chippewa/East Mackinac Conservation District and the Les Cheneaux Watershed Council



What Is That Smell?

Sulfate (SO₄)

Sulfates are a combination of sulfur and oxygen (SO₄) that are a part of naturally occurring minerals in some soil and rock formations that contain groundwater. The mineral dissolves over time and is released into groundwater. High levels of sulfate in your drinking water may have a laxative effect, especially for new supply users. With time, people become acclimated to sulfate and the symptoms disappear.

Hydrogen Sulfide (H₂S)

Sulfur-reducing bacteria, which use sulfur as an energy source, chemically change natural sulfates in water to hydrogen sulfide (H₂S). Sulfur-reducing bacteria live in oxygen-deficient environments such as deep wells, plumbing systems, water softeners and water heaters. These bacteria flourish on the hot water side of a water distribution system. Occasionally, the magnesium corrosion control rod present in many hot water heaters can chemically reduce naturally occurring sulfates to hydrogen sulfide.

Hydrogen sulfide gas can occur naturally in some groundwater. It can be formed from decomposing underground deposits of organic matter such as decaying plant material.

If you get a “rotten egg” smell when you turn on the water faucet or when you take a shower, you are smelling hydrogen sulfide. Hydrogen sulfide is a colorless, flammable gas. It is sometimes called hydrosulfuric acid, stink gas, or sewer gas.

In the air, H₂S can be detected by smell at concentrations as low as 0.5 parts per billion. Concentrations at 100 parts per million or above in air cannot be detected by smell. At these higher concentrations, the gas destroys the ability of the olfactory nerve to detect the gas. This makes the higher concentrations of H₂S more dangerous to human exposure, especially in confined spaces.

How can I find the SO₄ and H₂S levels in my well water?

Sulfate level can be obtained through an “Automated Partial Chemistry” test of your tap water. The test, which includes chloride, fluoride, hardness, iron, nitrate, nitrite, sodium, and sulfate, is available through the Department of Environmental Quality (DEQ) for a fee of \$14. Test bottles are available at the Clark Township office or the Watershed Project office.

H₂S testing is not routinely performed on private wells. For a nominal fee, the DEQ, Laboratory Services Section (517-335-8184), or a commercial laboratory, may be contacted to arrange for H₂S testing of your water supply. The DEQ fee for H₂S testing is \$30. For a listing of commercial analytical laboratories, you may contact the DEQ at the number listed above or their website <http://www.deq.state.mi.us/labs/>.

How to deal with high levels of H₂S and SO₄:

If excessive sulfate or hydrogen sulfide is present in your water supply, you can consider options such as using bottled water for drinking and cooking, drilling a new well, installing a water treatment system, replacing the magnesium rod in your water heater with one made of aluminum or another metal, etc. Contact the Watershed Project office if you have any questions regarding the quality of your water supply.

Eight Tons of Hazardous Waste Removed from our Watershed!

On July 14, 2007, 161 households in Les Cheneaux watershed took advantage of a hazardous waste collection sponsored by the Les Cheneaux Watershed Project. With help from the Les Cheneaux Watershed Council and Clark Township, eight tons of materials, detrimental to the quality of our water, were removed from the watershed and disposed of by a licensed waste recovery company.

Among the most dangerous substances removed from our community included:

- ☠ 40 year old DDT, a banned insecticide popular in the 1960's
- ☠ Chlordane, an arsenic pesticide recognized by the EPA as a human carcinogen and suspected neuro and reproductive toxicant
- ☠ Old lead acid batteries
- ☠ Automotive fluids, including oil, gas, antifreeze, cleaners, degreasers, and old paint

We can all rest a little easier with these items removed from our 100 square mile watershed! Remember, one gallon of gas will contaminate over one million gallons of water!! Thanks to those community members who brought these highly dangerous substances to be disposed of properly.

The Les Cheneaux Watershed Project had plans to host collections in 2008 and 2009, but spent all of the money in one collection! The licensed removal company had estimated that 1 percent of households would participate — we had 10 percent!! They estimated 5,000 pounds of waste — we collected 16,000. They estimated \$5,000 — we spent \$15,000. Fortunately, water quantity is not the only concern of the community — water quality is too!

The Watershed Project wants to go after the other 90 percent of the households in the Les Cheneaux Area. We will need dollars to do it. If you'd like to help, you can contact the Project at (906) 484-3031. Our mailing address is: Les Cheneaux Watershed Project, P.O. Box 578, Cedarville, Michigan 49719. You can send e-mail to lcwatershed@cedarville.net. Let's work together to protect the quality of our water that we do still have.

New Water Bottling Operation Coming to Les Cheneaux?

Say it isn't so! Huge drilling rigs coming across the bridge to poke holes in our *karst*? Massive pumps drawing our aquifers, wetlands, and surface waters down? Store shelves stocked with *Les Cheneaux Bubbly*? Naw, it's just the Les Cheneaux Watershed Project spreading the word that all the water you'll ever need is right here in the good old *Snows*! It's called groundwater and it's crystal clear, cool, and tasty - and best of all, it's free . . . as long as we take care to protect it.

In most rural areas, groundwater is the only source of drinking water. Streams rely on groundwater to sustain flows during the dry months. Safe groundwater is therefore important for the protection of both human health and our aquatic wildlife. Unfortunately, groundwater is very susceptible to contamination. In fact, Clark Township is under a health department moratorium on wells shallower than 100' since the upper, unconfined aquifer has long suffered from bacterial contamination. Fortunately, deeper wells are protected by confining layers of rock and soil and required protection strategies used in the well installation process. Still, there is danger from several potential sources of contamination:

- ◆ Malfunctioning household septic systems
- ◆ Careless disposal of cleaners, oil and antifreeze
- ◆ Improper application of fertilizers and pesticides
- ◆ Leaks from oil and chemical storage tanks
- ◆ Industrial leaks and spills
- ◆ Improper animal manure storage
- ◆ Road salt
- ◆ Landfills and garbage dumps

You can help the project protect groundwater. Learn how to effectively manage your on-site septic system; update it if it is an old, ineffective system; participate in proper disposal of household hazardous waste; carefully follow directions for fertilizer application; and clean up oil and gas leaks, just to name a few.

Most importantly, consider the long term effects of the bottled water craze and the large-scale draws on our aquifers. The Les Cheneaux Watershed Council is working with the Les Cheneaux Project to draw attention to the bottled water issue, with their own water bottles. You can get one (32oz.) with a donation of \$6 to the Watershed Council. Begin enjoying our local groundwater and stop threatening our precious aquifers. If you are skeptical about the quality of your drinking water, get it tested. Research the myriad of filtration and treatment systems available. We can help.

Bottled water factoids:

- ◆ A 700% sales increase between 1997 and 2005!
- ◆ 29.8 billion bottles dumped in our landfills in 2005.

Permanent Land Protection

(continued from page one)

Property owner reserves rights as set forth in the agreement. Some continue to live on the land, cut timber, create trails, farm, hunt, etc. Only now, they have the peace of mind that it will always remain the same.

Donations of conservation easements to qualified organizations are considered charitable gifts for the purpose of federal income tax deductions. However, there are certain requirements that must be met to be accepted by conservancies, and to be acceptable for a tax deductions. There are additional tax incentives under this strategy.

Purchases

Sometimes conservancies purchase land to create nature preserves. Landowners willing to sell for a bargain sale increase the likelihood of success. When sold for less than the market value, the difference is a charitable gift and can offset capital gains or income taxes.

The Les Cheneaux Watershed Project wants to protect water quality for future generations. If you have this same wish, one of these land protection strategies may be for you. You can contact Little Traverse Conservancy (231) 347-0991 or the Les Cheneaux Watershed Project office at (906) 484-3031.

MEMBERSHIP

If you are interested in becoming involved or if you just want to keep informed through our newsletter, please send your membership request to our office in Cedarville. Please make checks payable to LCWC.	\$15	Basic Membership
	\$25	Spring Peeper
	\$50	Green Frog
	\$100	Leopard Frog
	\$500	Blue Heron
	\$1,000	Wetland Water Guardian

Les Cheneaux Watershed Council
P.O. Box 578
Cedarville, Michigan 49719

Pat Carr, Project Manager
Les Cheneaux Watershed Project
Phone: 906-484-3031



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