Mission Statement: To increase awareness, that water quality is directly linked to the use of appropriate wastewater systems and their management.

Onsite Wastewater of Northwest Michigan
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Previously Northwest Michigan Onsite Wastewater Task Force
From the Board Chair

As of December 2006, Onsite Wastewater of NW MI (NWMOWTF Inc.) fulfilled its five year Probationary Period and became fully recognized as a 501(c)3 not-for-profit organization in compliance with the Internal Revenue Service.

With a full time Executive Director, the organization continues to grow and strengthen its education purpose.

In 2007, to better access appropriate funding opportunities, OWNWMI changed its operating Fiscal Year from ‘calendar’ to July-June.

Filing a half year IRS990 in June 2007, this Report covers our activities from January 2007 - December 2008.

This has been a challenging period for many reasons - realizing both successes and obstacles - but we are ever mindful of our Mission Statement.

As northern Michigan mirrors the same economic struggles as our nation - the importance of maintaining a focus on our ‘out-of-sight’ wastewater infrastructure becomes ever more critical.

William Crawford, Chair. Director
Benzie~Leelanau District Health Dept.
Benzonia And Lake Townships, Benzie County Project

Following a series of successful 2006 Public Meetings, 182 residents indicated a desire to take part in a voluntary onsite system repair, replacement and maintenance program. At the urging of Michigan Department of Environmental Quality, a Strategic Water Quality Initiative Fund (SWQIF) planning grant of $45,000 was awarded. OWNWMI provided project administration and the required 10% match from our Joyce Foundation grant.

A majority of those wishing to participate are incurring significant costs from being restricted to a holding tank wastewater system. Most participants were willing to join with their neighbors in using of a network of small, community, shared systems.

A comprehensive Planning Report was prepared prior to an application being made to MDEQ for @$6m to begin a phased replacement program with those seeking a loan mandated to be bound by a contractual maintenance agreement. A Public Hearing was held in June 2007 following which both Benzonia and Lake Townships voted to proceed via an interlocal government agreement. An RFP was issued to create a ‘preferred provider’ list of qualified designers and installers. (See www.michiganonsite.org)

However, subsequently, MDEQ withdrew its support of funding privately owned community systems via SWQIF - indicating the Townships should pursue a publicly owned State Revolving Loan Fund option. An appeal of this decision was denied. The additional ruling - that Townships may not legally use their credit to provide a pass-through for private SWQIF loans, an oversight in the SWQIF enabling legislation, has left the project in limbo. With the depletion of Clean Michigan Initiative Bond revenue, the source of SWQIF, it would appear this project has come to a close.

Activities

2007
Regional Wastewater Infrastructure Survey

Beginning in 2005, with funding provided by the Joyce Foundation, Onsite Wastewater of NW MI 501(c)3 (then Northwest Michigan Onsite Wastewater Task Force) contracted with Northwest Michigan Council of Governments to undertake a survey and assessment of the condition of both municipal, centralized, sanitary sewers and onsite wastewater systems within this region.

On-site wastewater collection and treatment systems ("septic systems") are now, and will continue to be, the primary sewage option for:

i) individual residences on suitable soils and lots, small communities, ii) small subdivisions iii) rural commercial businesses, iv) groups of homes with flows up to 10,000 gallons per day.

The intent of undertaking this survey was to enable a comprehensive overview: to document the extent of service, condition, cost of operation, cost of anticipated repairs. Such an overview can be then used to plan how northwest Michigan could best be served by a range of wastewater infrastructure, in a cost efficient manner while minimizing environmental impact.

In addition, survey and assessment results would be documented visually via a series of overlay maps of critical impact areas (i.e. wetlands, sensitive and hydric soils, slopes greater than 15%). These maps will enable current and projected future growth patterns to be viewed in perspective - a look at the bigger picture. It is intended that by seeing the location, and interaction of wastewater systems with watershed topography - the true relationship of water use, reuse and degradation will be obvious.

We are surrounded by, live on or near, and depend on ground and surface water resources. Clean water is essential for drinking, hygiene, agricultural and industrial well being. We cannot consider water and wastewater as separate issues. They are both part of regional groundwater hydrology and watershed based water replenishment cycle.

Michigan Energy Fair

Onsite Wastewater of NW MI 501(c)3, with funding provided by the Joyce Foundation, continuously conducts public outreach education.

For the second year we supported the Michigan Energy Fair by both exhibiting for three days and providing speakers.

Shown right are:

**Top - Board Member John Sych** (Grand Traverse County Planner) with our guest speaker *Dr. Ray Ehrhard P.E., BCCE*, a Research Associate in the Department of Energy, Environmental, and Chemical Engineering located at Washington University in St. Louis, Missouri and a registered professional engineer and Board Certified Environmental Engineer with the American Academy of Environmental Engineers.

**Bottom - Board Member Patrick Donovan R.S.,** (Pollution Prevention Specialist with MDEQ), manning the wastewater exhibit and information booth. Donovan gave a presentation on the reuse of recycled chipped tires as a medium for wastewater treatment. Approx. 12,000 pieces of literature were distributed.

*Water For All Life: The connection between water, wastewater and energy.*

**The Energy-Water Nexus: Rising Energy Costs Meet Vulnerable Water Supplies**

Water and wastewater treatment facilities are the largest and most energy-intensive facilities owned and operated by local governments.

By Lyn Corum: Water Efficiency  *September/October 2006 Vol 1, No1*  
http://www.waterefficiency.net/we_0609_toc.html
Activities

2007 - 2008

Great Lakes & St. Lawrence Cities Annual Conference: The Executive Director attended and OWNWMI also exhibited at the Grand Rapids DeVos Center. GLSLC has identified a Goal of reduced energy/water consumption and pollution prevention from wastewater systems.

Grand Traverse Regional Community Foundation: An Agency Fund was established to promote donor awareness and as a preliminary to a future endowment campaign for operating support. OWNWMI exhibited at the Great Lakes Bioneer event.

Podcasting: OWNWMI web site was redesigned to include educational online content. The inaugural presentation featured Big Fish Environmental LLC, an innovative, privately owned septage treatment facility Charlevoix, MI. See: [http://web.me.com/nwmowtf/Podcast_Series/Podcast/Podcast.html](http://web.me.com/nwmowtf/Podcast_Series/Podcast/Podcast.html)

2008 Pumper & Cleaner Environmental Expo Louisville, Kentucky
February 27 - March 1, 2008: Executive Director attended and completed the National Association of Waste Transporters Wastewater System Onsite System Installer Certification course and numerous Continuing Education Units eligible courses.
Activities

2008 ~ Continued

NSF Onsite Wastewater Inspector Accreditation Course

James C. Converse, PE, Ph.D and Emeritus Professor University of Wisconsin, in April, taught a day and a half course to a full class at Gaylord University Center and via live link distance learning to Kent County Health Department and University of Northern Michigan at Marquette.

COURSE CONTENT
Introduction: NSF CERTIFICATION PROCESS
Sources of Wastewater
Sewage Treatment and Disposal Systems - Primary Treatment
Secondary Treatment
Basic Mathematics and Calculations
Effluent Distribution Systems and Devices
Soil Absorption System, Soil Treatment and Dispersal

BOARD CHAIR: WILLIAM CRAWFORD,
DIRECTOR BENZIE-LEELANAU DISTRICT HEALTH DEPARTMENT,
GAVE THE COURSE ON BASIC SAFETY FOR INSTALLERS, INSPECTORS AND MAINTENANCE

THE COURSE WAS CERTIFIED FOR BOTH MDEQ CONTINUING SEPTAGE EDUCATION CREDIT HOURS AND MICHIGAN ENVIRONMENTAL HEALTH ASSOCIATION CEU HOURS

Half the participants took the NSF Classroom written Exam,
Six went on to take the final Field Practical.
2008 ~ Continued

**EPA WaterSense™**

As an EPA Watersense Partner, in keeping with our Mission, OWNWMI has concentrated on educating the public and elected officials that “Water Use = Energy”.

Wastewater Systems are cheaper to operate, construct and last longer if we practice water conservation.

American public water supply and treatment facilities consume about 56 billion kilowatt-hours — enough electricity to power more than 5 million homes for an entire year.

Furthermore, up to 80% of that energy is used just to move water in both public and private systems.

As an EPA WaterSense™ Partner OWNWMI educates that:

- If one out of every 100 American homes retrofitted with water-efficient fixtures, we could save about 100 million kWh of electricity per year—avoiding 80,000 tons of greenhouse gas emissions. That is equivalent to removing nearly 15,000 automobiles from the road for one year!

- If 1 percent of American homes replaced their older, inefficient toilets with WaterSense labeled models, the country would save more than 38 million kWh of electricity — enough to supply more than 43,000 households electricity for one month. [www.epa.gov/watersense]
Liquid Assets

OWNWMI Executive Director is a member of Water Environment Federation (WEF) and its MI affiliate Michigan Water Environment Association, MWEA. She serves on the MWEA Onsite Systems Committee.

OWNWMI strives to educate that “water is life”, WEF’s motto.

We maintain a membership in National Onsite Wastewater Recyclers Association, NOWRA, a WEF partner, together with other professional water and wastewater groups, in an EPA Memorandum Of Understanding to promote ‘decentralized’ alternatives.

Throughout 2008, OWNWMI has promoted “Liquid Assets”, a groundbreaking PBS documentary developed to draw attention to the $500B shortfall in funding for repairs and upgrades to our nation’s water and wastewater infrastructure.

We will continue to do so in 2009.

The position of OWNWMI, and NOWRA, is that now is the ideal time and opportunity to implement the technological advances made in the field of wastewater engineering - to install ‘place based’ systems which have built in expansion and redundancy. Rather than recreate vast centralized systems which fail catastrophically, we support NOWRA’s position that systems should be designed to be cost effective,
Activities

2008 ~ Continued

“Water To Waste” 2008

Grand Traverse Regional Community Foundation Environment Fund underwrote the cost of printing 140,000 copies of this biannual wastewater education publication.

“This publication provides information and examples from other communities and other states designed to encourage you to think about your own water habits.

There is no separation of water and wastewater issues. What goes in surely comes back out!

This is the time to find out what’s driving that electricity meter, both at your home and the municipal wastewater treatment plant.

Are there technologies out there for us to turn waste into power, to turn problems into opportunities?

This is the time to ask yourself or your government, are we making ‘water wise’ decisions?

How much is it costing us all to have clean water?

What can we do to change how we use water? What exactly are you putting down the sink..... the toilet?

Ask yourself, do we have enough water to waste?

Or are we pouring water down the ..........
2008 ~ Continued

Michigan Energy Fair
Executive Director Dendra Best presented twice during the three day event:
1) EPA Watersense Program of which we are a Partner
Approximately 15,000 pieces of literature were distributed to the public together with 2000 Water To Waste 2008 magazines.
Six water well test kits were given out.

“I wanted to thank you for your presentation. It certainly opened my eyes and I learned water conservation measures I intend to put into practice in my own home as well as at the office....”

The Human Footprint
In April 2008, a National Geographic documentary graphically demonstrated how even the simplest actions we take every day, without a moment’s thought, will have a lasting, lifetime effect.

Over the course of an average lifetime, each of us consumes 1.2 million gallons of water. In your lifetime you will take an estimated 28,433 showers.

It can take up to 2 gallons for the water to get warm.
Pharmaceutical Collection and Safe Disposal

In April of 2008, EPA Region 5 issued the Great Lakes Earth Day Challenge: “to collect and properly dispose of old and unused, expired or unwanted medicine. EPA's goal is to collect at least 1 million pills to keep contaminants out of the Great Lakes.”

The total actually collected exceeded 4.5 million.............

Onsite Wastewater considered taking part in this one day event - but the Board chose instead to invite community leaders to meet and discuss creating a regional program that would address this growing issue throughout the year. Through the generous support of a planning development grant from Grand Traverse Regional Community Foundation, matched by the Joyce Foundation and participant ‘in-kind’ support, three meetings were scheduled to begin a process for developing a sustainable safe disposal and public education collaboration.

Northwest Michigan is a water rich tapestry of wetlands, rivers, streams, lakes and bays - all connected via groundwater. Our health and economy rely upon preserving this resource. Although there is still considerable debate concerning the cumulative effects of human and agricultural pharmaceutical residues - as witnessed by the disposal guidelines issued by US Fish And Wildlife Service and Pharmaceutical Research and Manufacturers of America - their presence in area water sources is of considerable concern.

In addition, and of equal concern to local law enforcement, is the illicit and illegal use of stolen or scavenged unused pharmaceutical products by area drug addicts.

Moderator was Dr. Richard Otis P.E. Ph.D., DEE (Onsite Wastewater Technical and Engineering Consultant.) Dr. Otis is a key participant in developing the EPA Voluntary Guidelines for Responsible Management of Onsite Systems. Dr. Otis has been involved in research and demonstration of wastewater collection, treatment, and disposal alternatives including development of alternative natural treatment systems and alternative collection sewers and assessment of the environmental impact of these technologies since 1970.
Activities

2008 ~ Continued

**Oleson Foundation**

A Public Education Grant was received which funded:

- the production of new exhibit panels
- large format postcards detailing water conservation and septic system care advice
- plastic ‘cling’ stickers to affix to bathroom mirrors (see Page Eight)
- the purchase of two “Enviroscape” demonstration models
- travel costs to allow public education outreach throughout the service area of NW Michigan
Activities

2008 ~ Continued

\[\textit{The Oleson Foundation Grant made it possible for OWNWMI to participate in the 4 day Northern Michigan Antique Flywheelers School Days Event}\]

During September 22 - 25, OWNWMI provided education programming and educator resource packets to over 1500 4th. Grade students from throughout Antrim, Emmet and Charlevoix counties.

Executive Director Dendra Best talking to 4th. Grade students at 2008 Antique Flywheelers School Days.
Activities

2008 ~ Continued

- **Michigan Environmental Health Association 15th Annual Groundwater/Wastewater Conference**
  Executive Director Dendra Best and Board Member Patrick Donovan MDEQ, both MEHA Members, gave presentations:
  Best ~ “Liquid Assets” which OWNWMI underwrote broadcast of on Central Michigan PBS TV
  Donovan ~ Environmental advantages of utilizing recycled chipped tires in onsite wastewater systems

- **Podcasting**
  OWNWMI has continued its podcast series to include Donovan’s presentation; Valerie Nelson “The Baltimore Charter”; Lorraine Loken “Water Environment Federation - Liquid Assets”.
On December 17, at the Great Lakes Water Studies Institute Classroom, Bob Paulus, R.E.H.S. gave a 3 hour workshop on NSF International Onsite Monitoring Program to area health department staff. NSF Telemetry software is an extremely cost effective web based solution which allows for:

- Real time reporting of alarm and maintenance visits, scheduled or unscheduled
- All reports to be submitted electronically.
- Significant savings in resources with an online system of mapping and monitoring onsite systems.


“All The Water There Ever Will Be, Runs Through You and Runs Through Me!”

Late in December, 2008, Onsite Wastewater received a grant from the Elk Rapids Area Education Endowment Fund. Working with 4th. Grade Teacher Yaro Middaugh and Mill Creek Elementary School, Onsite Wastewater will combine an innovative collaborative curriculum covering water source, pollution prevention and conservation education with music and puppetry theatre creation.
Activities

Memberships, Affiliations, Partnerships

Grand Vision ~ Members participated in Benzie and Grand Traverse Counties.
Conferences and Presentations ~ Numerous public education presentations have been given i.e Shelby Area Rotary, Frankfort Rotary, League of Women Voters, Lake Bluff Audubon.
Freshwater Summit ~ OWNWMI attended and exhibited at the 2008 Hagerty Center event.
OWNWMI Staff and Board Members hold professional Memberships in:

- Water Environment Federation
- Michigan Water Environment Association
- Michigan Environmental Health Association
- National Onsite Wastewater Recyclers Association
- Healing Our Waters Collaborative - Member and Steering Committee Member
- Michigan League of Human Services
- Michigan Township Association
- 2006-2008 Great Lakes, Great Michigan Coalition, Statewide Coordinator
- Michigan Environmental Council, Board Member
- Emmet Co. Master Plan: Agriculture, Cultural and Natural Resources Subcommittee, Chairperson
- Indian River Community Economic Development Alliance,
- Lake Charlevoix Watershed Project Advisory Committee,
- Network of Lake Associations (NOLA),
- American Planning Association
- American Institute of Certified Planners
- Congress for New Urbanism
- Michigan Association of Planning
- Michigan Association of Counties
- League of Women Voters
- Traverse Area Association of Realtors
- Michigan Association of Realtors
- American Academy of Environmental Engineers
- Michigan United Conservation Clubs
- National Pollution Prevention Roundtable
2008 ~ 2009 Fiscal Year Strategic Goals

- Operation Support ~ three year funding.
- Public Education and Local Government Outreach.
- PodCasts: i.e. Ohio Code and Performance Code progress with relevance to Michigan, EPRI Energy Survey, EPA WaterSense, National PreCast Standards, Advanced Systems
- Video Production: a filmed MI site evaluation, pump out, inspection and installation.
- Septic Loan Program.
- Benzonia/ Lake Township Responsible Management Entity / Watershed Wastewater Management Project - finding resolution.
- Operator/Maintenance and Installer Training courses.
- Distance Learning Instruction and Publication.
Chair: William Crawford. Director, Benzie-Leelanau District Health Department

Vice Chair: Peter Read. Century 21 Real Estate.
Traverse Area Association of Realtors

Secretary/Treasurer: John C. Sych, AICP
Planning Director, Grand Traverse County

Engineering Consultant:
Dr. Richard Otis.
P.E Ph.D., DEE.

Board Members:
Grenetta Thomassey.
Policy Director
Tip of the Mitt
Watershed Council

Scott J. Kendzierski, M.S., R.E.H.S.
Director of Environmental Health Services
Northwest Michigan Community Health Agency

Roswell Ard - Supervisor.
Bingham Township, Leelanau County

Board Members:
Patrick Donovan R.S. [Right]
MDEQ Field Specialist,
Environmental Science and Services Division,
Cadillac District Office

Jack Johnson [Left] - Owner.
Johnson Septic Tank Service
2007 - 2008 Finance Reports

Grants Received:
MDEQ - $40,500.00
Community Foundation Of Muskegon - $1,600
Grand Traverse Regional Community Foundation: $16,000 and $5,000
Oleson Foundation - $5,700
Balance Remaining on Joyce Foundation Grant - Beginning 2007, $32,896   Ending 2008 $3,372
Elk Rapids Area Education Endowment Fund - $1,800.00