

2010 ANNUAL REPORT

BOARD 2010-2011

Chair

Scott J. Kendzierski, M.S.,
R.E.H.S. Director of
Environmental Health
Services. The Health
Department of NW MI

Vice Chair

Peter Read
Read & Associates.
Traverse Assoc. of Realtors.

Treasurer

Bill Crawford MSA, R.S.
Director. Benzie-Leelanau
District Health Department

Secretary

Daniel R. Thorell, M.S., R.S.
Environmental Sanitarian
Grand Traverse County
Health Department

Directors

Patrick Donovan R.S.
Pollution Prevention Specialist

Jack Johnson
Johnson Septic Tank Service

Robert Paulus REHS
Regulatory Consultant

Technical Consultant

Richard Otis PE Ph.D., DEE.
Otis Environmental LLC
President National Onsite
Wastewater Recycling
Association. NOWRA

Executive Director

Dendra J. Best

2010 brought difficult times to northwest Michigan.

Many communities witnessed soaring foreclosures, job losses and economic cut backs. Regional public health agencies shared that impossible task of trying to meet an ever increasing need with an ever shrinking source of revenue.

2010 was especially difficult for WasteWater Education as we granted our Executive Director extended Family Leave to deal with a serious medical condition.

However, while not able to travel, the Executive Director was able to work via our virtual office and to devote time to what any mission driven organization must have - a comprehensive Long Range Strategic Plan.

We have begun to implement the identified goals and outputs of that plan. A copy may be viewed or downloaded from our redesigned web site.

As we prepare our education activities and events for 2011, I am constantly reminded of the immediate need for what this organization does. Education.

Water, clean water, is our most precious resource. It defines this region. It defines the economy of this region. It affects every aspect of our quality of life.

Far too often we see water use pigeon holed in to silos - ground; surface; storm; drinking; wastewater; watersheds. Water is a reusable, recyclable resource and wastewater is part of that cycle. It is everyone's responsibility to return clean, treated, safe water to that cycle.

Our Mission is to provide access to the wealth of knowledge, research, case studies, cost assessment tools, site assessment tools and professional expertise that is readily available from our many partners. In these tough times, especially, it is unconscionable to reinvent the wheel.

WasteWater Education has evolved to become a valuable resource working in collaboration with, and in support of our regional environmental health agencies: *To increase awareness that water quality is directly linked to the use of appropriate wastewater systems and their management.*

Scott J. Kendzierski, M.S., R.E.H.S. Board Chair.



Building Partnerships



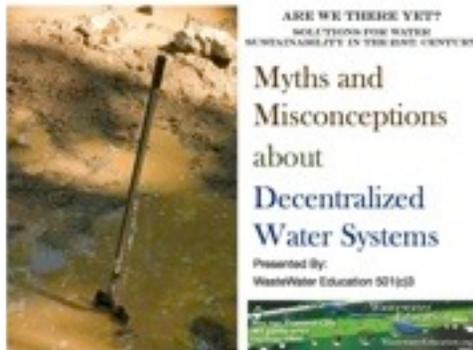
In 2010, WasteWater Education continued to strengthen professional collaborations and provide a series of physical site and distance learning events. We expanded the manner of communication and incorporated both print, web based and digital media. The organization actively participates in, and contributes to, a number of professional listservs. WasteWater Education established a social media presence on Facebook, Twitter, LinkedIn, Goodsearch and YouTube and launched an electronic e-News.

Freshwater Future



WasteWater Education received a **Technology Support grant from Freshwater Future**. Not only did this fund a significant upgrade to our computer hardware and software, it also launched our distance learning services. Through a 50 site license from Elluminate we have been able to hold virtual meetings, lectures and seminars, public education events and online tutorials. Via Elluminate, now partnered with Wimba and Blackboard, we have been able to provide 'face-to-face' access to national experts when current funding levels would have made that impossible. That service has since been expanded to turn recorded events into CD, DVD or Podcasts.

Distinguished Speakers



2010 online education series was entitled "Are We There Yet? Solutions For Water Sustainability In the 21st.Century."

The inaugural lecture was given by our Technical Consultant Richard Otis P.E Ph.D., DEE. current President National Onsite Wastewater Recycling Association. (NOWRA). An edited podcast is available via our website. In 2010, WasteWater Education has built strong partnerships with several national entities in order to present current technologies and case studies.

EPA WaterSense



Cary McElhinney, Coordinator for EPA Region 5 U.S. Environmental Protection Agency's (EPA) WaterSense program. Our organization, a WaterSense Partner, has joined the national "We're for Water" campaign to encourage Americans to make simple choices that save water. WaterSense products use about 20% less water than standard models and can cut electricity consumption considerably too! Practicing water conservation can vastly increase the life of any wastewater system and bring down the frequency, and cost, of maintenance.



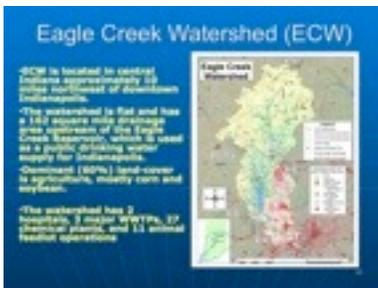
Mound Systems



"Everything you've always wanted to know about your Mound onsite wastewater system! How it works, how to take care of it, how to landscape it!" was taught by Daniel R. Thorell, M.S., R.S. Environmental Sanitarian Grand Traverse County Health Department Environmental Health Division. Planting and landscaping information was provided by

Scott Dierks P.E. of JFNew. For many property owners, a mound is just 'the big green pile in the back yard!' - an eye sore and a waste of space! But the processes at work inside are keeping the environment, their health and the health of their neighbors safe. It's a vital piece of any property's infrastructure and needs some loving care and attention to keep it working properly. And, as was shown in this presentation, it doesn't have to be an ugly green nuisance! For more than 20 years, JFNew has been providing sound solutions to challenging environmental issues across the U.S. With more than 355 available species, JFNew also operates one of the largest native plant nurseries in the nation. Mound system owners were able to ask questions via their computer and receive advice from experts. This interactive, real time, online public education event was provided at no charge. A Podcast is available via our web site.

Watershed Based Risk Management

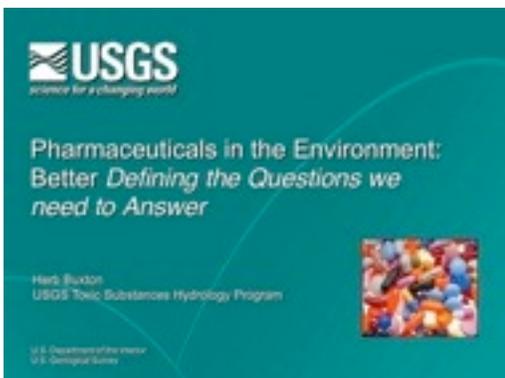


Al Alwan, Ph.D. Water Quality Branch, Water Division, Environmental Protection Agency Region 5: Alternative Approaches to Address Pharmaceuticals and Personal Care Products (PPCP) Environmental Fate.

This webinar is available both as a recording and as a Podcast. On September 23 we presented this distance learning seminar on the consequences to the environment both from customary use and improper disposal of PPCP's. "On September 25, 2010, US Drug Enforcement Agency coordinated a collaborative effort with state and local law enforcement agencies to remove

potentially dangerous controlled substances from our nation's medicine cabinets. The National Take-Back Day provided an opportunity for the public to surrender expired, unwanted, or unused pharmaceutical controlled substances and other medications for destruction. These drugs are a potential source of supply for illegal use and an unacceptable risk to public health and safety."

Prescription For The Future



Herbert T. Buxton - U.S. Geological Survey (USGS) Toxic Substances Hydrology Program Coordinator. A review of recently completed and current research in progress, on the presence of, environmental and public health impact of, pharmaceutical and personal care products (PPCPs) in wastewater, drinking, surface and ground water. There is growing concern about the long term effects of PPCPs on human health and the natural environment - through a series of science based seminars WasteWater Education, a regional 501©3, seeks to provide some clarity to the risks involved.

This webinar was co-hosted by the League of Women Voters Benzie County and is available both as a recording and as a Podcast.

Prescription For The Future: Continued



Herbert T. Buxton - U.S. Geological Survey (USGS) Toxic Substances Hydrology Program Coordinator. What's in Our Wastewaters and Where Does it Go? (Source: <http://toxics.usgs.gov/highlights/whatsin.html>)

Whether your drinking water comes from a private well and aquifer or via a municipal system; whether you have a private onsite wastewater system or connect to a municipal sewer; if you live by an ocean, a lake or a stream - traces of pharmaceutical products have been detected. When prescriptions and over-the-counter drug purchases now run in the billions annually it's not surprising. The general misconception is that the body consumes the total dose - which is far from true. In addition, some municipal wastewater treatment processes can increase the toxicity of flushed medications and cannot effectively remove them prior to discharge to a local lake or river. Although the amounts are measured in parts-per-billion or million, what is the long term accumulative effect on people and the environment? USGS lead research attempts to provide answers.

Anatomy of Precast Concrete



In response for requests for affordable, accessible training – WasteWater Education 501(c)3 provided a four-part series of internet based courses covering all aspects of fabricating, installing and maintaining precast concrete tanks. Continuing Septage Education credit hours were approved by MDNRE. 10 CEU hours are approved for courses by the State of Wisconsin for Master Plumber Restricted Service License and POWTS Maintainer Registration.

The Anatomy of Quality Precast Concrete Septic Tanks - was underwritten by Concrete Sealants, Inc. and taught by Sam Lines MBA. Sales / Safety Engineer, Lean Coordinator Concrete Sealants, Inc.

and Instructor for National Precast Concrete Association

Is it cement or concrete? Why does it even make a difference?

A brief history of concrete - the oldest building material still being used today, a brief overview of current issues in the industry, including associations, certifications, and standards applicable to precast concrete.

Fabricating a Watertight Precast Concrete Septic Tank

Not all precast concrete septic tanks are built alike. The industry "Best Practices" were presented, principles of construction that are critical to the long term performance of a concrete septic tank, in plant, as well as on-site, performance testing.

Implementing a Formal Quality Management System in a Precast Plant

Does the precast plant produce a quality product that consistently meets or exceeds the standard specifications? Producing consistent quality requires that the precaster must "Say It, Do It, and Prove It." This class lead potential candidates for NPCA certification through the process and demonstrated the financial and environmental benefits from implementing a Quality Control NPCA Certification program. A Michigan NPCA Certified Plant - Milan Vault - discussed what they learned, and gained from their Quality Certification.

Microbial Induced Corrosion: Causes and Methods of Prevention

Microbial Induced Corrosion (MIC) shortens the life span of concrete products. There are incorrect assumptions about the cause and effect. Systematic events lead to the colonization of bacteria that causes this corrosion. The impact and severity of this corrosion was explained, and the actions necessary for the prevention of MIC were presented. Concrete corrosion can be prevented.

This course will be repeated and expanded upon in 2011.

Proposed Courses



Wastewater Education of NWMI 501(c)3 proposed a 2 day Part One Onsite Wastewater System Installer Course, in September 2010.

Attendees would have been able to participate both at the primary location Benzie-Leelanau Health Department, and via video link to The Health Department of Northwest Michigan.

16 Continuing Septage Education Credit Hours were approved by the State of Michigan and included a practical field component.

Participants who completed this, together with following courses, prepared to take the NEHA Installer exams. This course was suitable for any experienced excavator/installer, who needs updated

skills, as well as those who may be new to the profession or are new hires. It is particularly suited to health department staff, construction and building employees who are new to installing onsite systems. Unfortunately the course, to be taught by Dr. Richard Otis, was cancelled due to insufficient enrollment.

Recorded Podcast

Green Remodeling and Retrofitting Course.
Saving Water = Saving \$\$\$\$\$
Dendra J. Best,
Executive Director WasteWater Education.



In 2010 WasteWater Education became a nonprofit partner of the Home Builders Association Grand Traverse Area. Although the health of the Executive Director prevented her from fully participating in the Green Remodeling and Retrofitting course - a Podcast was recorded for distribution.

WasteWaterEducation.org
Box 792, Traverse City, MI 49685-0792
(231)233-1806
10/16/13

To preserve and protect our water quality is directly linked to the use of appropriate water-saving practices in our homes and businesses.

WasteWater Education, an EPA WaterSense Partner, is a collaborative of agencies, serving 7 Counties of NW MI, all dedicated to protection of our precious water resources, our environment and public health.

We are members of the following professional organizations:
Water Environment Federation
Michigan Water Environment Association - Decentralized Committee Chair
Michigan Environmental Health Association
National Onsite Wastewater Recycling Association
Healing Our Waters - National Wildlife Federation
We are affiliated with: NSF International, The Public Health and Safety Company™, providing local courses, and examinations, which lead to the NSF Onsite Wastewater Inspector Accreditation.
We also collaborate with the Water Environment Research Foundation.
We provide regular education seminars, workshops and training courses, on location as well as online, providing local, state and national expertise for service providers, local government, individuals and communities with one simple message:

Clean Water Starts At Home
Call or email for 2013 events
nwmi@wwe.org

Belanger's Septic Services
307 E. First St. P.O. Box 3000
Rich & Mandy Sogge
231-943-5845

Clean Water Starts at Home
NSF
Belanger Septic Services
Security Sanitation Inc.
Belangers Excavating
Serving the Grand Traverse Region
for all your septic system needs

Drops = Watts!

Renovating a home or business is a great opportunity to save some green by "going green - and blue!"

Northwest Michigan is blessed by our beautiful, and beautiful, water environment. We have a seemingly unlimited supply for all our showers, bathtubs, laundry and landscaping needs. Unfortunately levels of concern, as the old maxim goes, how you use water in your home or business has a direct effect on the collective "liquid wealth" of everyone who is blessed to live here.

Remember time is the perfect time to consider a water audit.

Having water in ready to the environment, your personal finances, local government and local utility providers. The next time your utility bill arrives consider factoring in domestic water use which is a major factor in the operating expenses of drinking water and wastewater systems for both municipal and individual property owners.

If your priority has an individual well and an onsite wastewater system and you are considering upgrading a bathroom or kitchen, or adding extra bedrooms, paying attention to water conservation will save you money both now and in the future.

For example:
Up to 10 percent of water applied by irrigation systems is lost to wind, evaporation, improper system design, installation, or maintenance. Up to 70% of your water consumption could be due to constant leaks. How many times have you witnessed early sprinkler systems and old faucets spraying after days of heavy rain - or even during heavy rain? Several local contractors and EPA WaterSense® water-to: install systems that only put what you services indicate it's necessary.

Updating laundry and dishwashing machines can save 50% your \$\$\$\$ and \$\$\$\$. Additionally to be a lot of participating \$\$\$\$ savers in your area.

Did you know that an American home can waste, on average, 11,000 gallons of water every year due to running toilets, dripping faucets, and other "leakaged" water?

Nationwide, more than 1 trillion gallons of water leak from U.S. homes each year. That's why WaterSense® and other WaterSense of NW MI provides for a Leak Check. It's a simple way to see using a wastewater system to collect, treat and transport clean water?

Less is More - a Lot More

In 2008, consumers who installed WaterSense® showerheads, faucets, and toilet accessories helped save more than 0.3 billion gallons of water and realized \$50 billion in savings on water and sewer utility bills.

These savings resulted from the sale of 1.38 million WaterSense® showerheads and 4.4 million WaterSense® toilet flush valves, faucets and toilets. To date, buyers can choose from more than 800 different toilet models and more than 1,000 different types of water-saving faucets and accessories such as showerheads that have earned the WaterSense® label since 2001.

And water is only part of the equation. WaterSense® labeled faucets saved U.S. households nearly 1 billion kilowatt-hours (kWh) of electricity from not heating the extra water, and toilets saved an additional 25 million kWh of electricity that otherwise would have been needed to pump and treat that water. This avoided the production of nearly 1 million metric tons of greenhouse gas emissions, equivalent to removing 180,000 automobiles from the road for one year. Something to contemplate the next time you wash your hands - with a WaterSense® labeled faucet, why not.

For more information about WaterSense® in Northwest Michigan (check out) go to www.watersense.com/nwmi

Dendra Best, Executive Director
WasteWater Education of NW MI 501(c)3
EPA WaterSense® Partner



Michigan Envirothon: held at Leelanau Outdoor Camp



The Michigan Envirothon is a program that teaches environmental stewardship values to Michigan high school students.

In 2010, the Environmental Issue was: Protection of Groundwater through Urban, Agricultural and Environmental Planning.

Dendra Best, WasteWater Education Executive Director, and Dan Busby Grand Traverse Conservation District chaired the committee locally. The winning team, from Glen Lake High School in Glen Arbor, went on to participate in the 2010 Canon North American Envirothon, an annual environmental education competition, August 1-5 at California State University in Fresno. This was one of Michigan's more memorable showings in its 16-year history in the competition as multiple travel complications delayed the team's arrival until the night before testing.

Despite missing all of the pre-test training sessions provided by the host site, the students from Glen Lake H.S. performed well, especially in the category of Soils, where they placed 17th out of 54. The top five winners for 2010 included California, Delaware, Minnesota, Florida and Maryland, respectively.

Kudos to Glen Lake!!



Strategic Planning

Since the creation of this organization, in early 2003, we have evolved from
 1) Northwest Michigan Onsite Wastewater Task Force
 2) Onsite Wastewater of Northwest Michigan
 and now we are simply WasteWater Education.

We maintain our IRS Tax ID: :20-0042087 as Northwest Michigan Onsite Wastewater Task Force Inc.)

In 2010, realizing many of the original goals had been accomplished, and further realizing that our education service area had expanded, both geographically and in content, the Board and Staff undertook a lengthy process utilizing the Logic Model for strategic planning. Following a training program hosted by Rotary Charities, the Board proceeded on the

following premise: *“Logic modeling is a way of thinking... not just a pretty graphic.” (University of Wisconsin Extension) - The “If....then” Logic.*

If/Since these needs or gaps exist  *Then these activities will be implemented to meet those needs*

If those activities are implemented, then these outcomes will result

If those outcomes result, then this will be the longer term impact

As a result, a project and organization Action Plan defines target clients, projects, services and outcomes. The Plan may be viewed or downloaded from our web site at www.wastewatereducation.org



Service Providers

1. Need for comprehensive, relevant and affordable training curriculum for service providers based on existing established operation and maintenance curriculums.

Actions:

Publicize a 40 CEU hour program (24 class/ 16 in field) This will be created modeled on existing O&M Service Provider, Installer and Inspector courses.

Engineering and Regulatory Community

1. Need to increase local knowledge of advanced decentralized systems technology and their management, both in the US and internationally.
 2. Need to enable access to knowledge: convenient, interactive, relevant and affordable in terms of time and cash.

Actions:

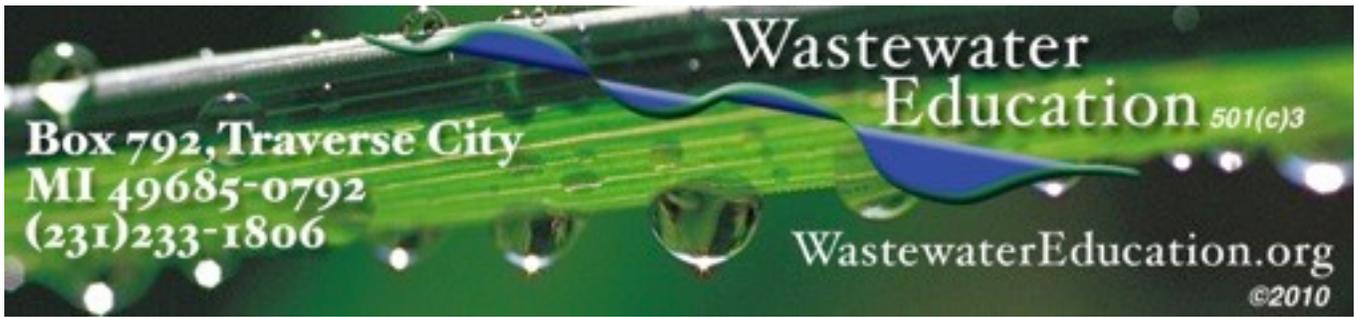
- i. Master Class Seminar/Symposium Series: in blocks of 4 (2 hour blocks to include Q&A
- ii. Utilize our web based distance learning license to provide group/ individual access to knowledge and expertise.

Municipalities

1. Need to overcome perceived barriers to decentralized options.
 2. Lack of publicized good case studies relevant to northern states.
 3. Need to demonstrate Responsible Management Entities as a utility service.

Actions:

- iii. Host a Responsible Management Entity seminar featuring successful and unsuccessful community projects.
- iv. Partner with WERF and NOWRA to publicize the level of real life research that has been published recently and cost analysis tools. expertise.



Strategic Partners



Water Environment Research Foundation



And the resources available through the EPA Decentralized Wastewater MOU.



National Onsite Wastewater Recycling Association



GRAND TRAVERSE AREA, INC.

