ONSITE journal
Nov • Dec 2004
NEWS FOR THE ONSITE WASTEWATER RECYCLING INDUSTRY

2004 Ends with a Whirlwind of Activities and a Succssful Conference

Vol. 14 No 5

NOWRA
National Onsite
Wastewater Recycling Association

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SPECIAL TRIBUTE TO NOWRA'S BENEFACTORS, SPONSORS & SUPPORTERS

During the past year, many businesses, organizations, and individuals have contributed financial support to NOWRA for its operations and programs. These funds have been primarily used to support the ongoing services of the Model Performance Code Project Manager and work of its Committee, and educational materials and membership services provided to the States by NOWRA's management staff. Without this support, NOWRA could not have achieved the significant progress it has made during the past years.

The National Onsite Wastewater Recycling Association expresses its sincere gratitude and appreciation to the following for their support in 2004. They will be formally recognized at the NOWRA Annual Awards Luncheon on Tuesday, November 9, 2004.

Model Performance Code Committee Work

Infiltrator Systems, Inc
Hancor, Inc.
Advanced Drainage Systems
Zoeller Pumps, Inc.
American Decentralized Wastewater Association
F.R. Mahoney & Associates
Northwest Cascade, Inc
Ohio Onsite Wastewater Association
Michigan Onsite Wastewater Association
Washington Onsite Wastewater Association
Wisconsin Precast Concrete Association
U.S. Environmental Protection Agency, Office of Wastewater Management
American Decentralized Water Resources Capacity Development Project

NOWRA Education and Membership Services Work

David Burnham
Ronald Ewald
Richard Schoeck
David L. Sheridan
Mark W. Thompson

NOWRA BUSINESS PROGRAM AND CONFERENCE SPONSORS

GOLD

Adelante Consulting, Inc.*
Bio-Microbics, Inc.
Consolidated Treatment Systems Inc.
Delta Environmental Products, Inc.
Orenco Systems, Inc.
Premier Tech Environmental*

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National Environmental Services Center
Netafim USA
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Crane Pumps & Systems
Ecological Tanks, Inc.
E-Z Set Tank Company, Inc.
GAST Manufacturing, Inc.
Hoot Aerobic Systems, Inc.
Infiltrator Systems, Inc.
MicroSepTec Inc.
National Precast Concrete Association, Inc.
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ZENON Environmental, Inc.
Zoeller Pumps, Inc.
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Nozzalator, LLC*
Schoor DePalma*

*Conference Sponsor only

ONSITE journal

Nov•Dec 2004

NEWS FOR THE ONSITE WASTEWATER RECYCLING INDUSTRY

National Onsite Wastewater Recycling Association

Vol. 14 No. 6

ADVERTISERS' INDEX

** IFC – Inside Front Cover; IBC – Inside Back Cover; BC – Back Cover*

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Peat, Raymond | Bio-Microbics, Inc.

Past President
Frank, Tim A. | Tim Frank's Septic Tank Cleaning

Vice President
Stonebridge, Jerry | Stonebridge Construction

Secretary Treasurer
McQuestion, **Brian |** Lake Shore Burial Vault

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Byers, Matthew E. | Zoeller Pump Co

Christopherson, Sara | University of Minnesota

Converse, James C. | Biological Systems Engr. | University of Wisconsin

Edvardsson, Tina | MicroSepTec, Inc.

Groves, Tom | New England IWPPCom

Himschoot, Robert | Crews Environmental

Kaminski, Roman A. | WI Dept. Comm.-Safety & Bldgs.

Otis, Richard | Ayres Associates
Smithson, Anthony | Lake County Health Department

Stephens, Larry D. | Stephens Consulting

Suchecki, Ron | Hoot Systems, Inc.

Thompson, Carl | Infiltrator Systems

Committee Chairs

Borgeson, Karen –Communications and Information | SJE Rhombus

Byers, Matthew E. – Technical Practices | Zoeller Pump Co .

Christopherson, Sara – Education | University of Minnesota

Corry, Michael– Model Code | Corry Associates

Guy, Brenda R – Business Council | Delta Environmental Products, Inc.

McQuestion, Brian– Finance | Lake Shore Burial Vault

Novickis, Richard– Conference | Cuyahoga Board of Health

Thomas, John – State Leaders | Washington Onsite Association

Thompson, Carl – Government Relations | Infiltrator Systems

To learn more about your new Board of Directors, go to www.nowra.org

NOWRA 2004 AWARDS

Honorable Service Award as a Board of Director and Officer
Tim Frank (2001-2004) President
Jean Caudill (2001-2004) –Board Member and Model Performance Code Leadership as Committee Vice Chairperson
Brenda Guy (2001-2004) Board Member and Conference Committee Chairperson
Tom Fritts (2001-2004) Board Member and State Leaders Committee Chairman
Tom Ferrero – (2002 – 2004) Officer - Secretary Treasurer
E. Jerry Tyler (2001-2004) Board Member and Model Code Leadership
Jerry Stonebridge (2001-2004) Board Member

Meritorious Committee Service Awards 2002 - 2004
Robert B. Mayer, P.E., Technical Practices Chairman • James Converse, Ph.D. Education Co-Chair • Mary Margaret Minnis, Ph.D., Education Co-chair • Michael Corry, Model Performance Code Chairman

Model Performance Code Committee Awards Leadership Recognition for ongoing services and products 2002-2004
Robert Pickney • Del Mokma, Ph.D. • Roman Kaminski • Frederick Bowers, Ph.D. • Michael Hines • Robert E, Lee, P.E. • Ronald Suchecki.

Major contributors to resulting products – 2003-2004
Anthony Smithson • Bennette Burks • Stephen Branz • Anish Jantrania, Ph.D. • Matthew Byers, Ph.D. • Tibor Banathy • Carl Thompson

1. Outstanding Program Service and Support
Alison Blodig • Robert B. Mayer, P.E. • Robert Siegrist, Ph.D. • Shawn Luton • Samuel Robertson • Ed Freedman • Mark Jones • Brian McQuestion • Rodney Ruskin • Mike Stidham

2. Recognition of Service as a Committee Chairperson
Government Relations – Robert Himschoot • Membership – Robert E. Lee • Technical Practices – David Linahan • State Leaders – Thomas Fritts

3. NOWRA Appreciation Awards to Businesses Providing Financial Support to the work of the Model Performance Code Committee
F.R. Mahoney & Associates • Northwest Cascade, Inc • Ohio Onsite Wastewater Association • Michigan Onsite Wastewater Association • Washington Onsite Wastewater Association • Wisconsin Precast Concrete Association

4. NOWRA Business Supporters
Fralo Plastics • SCS Systems, LLC • Snowden On-Site, Inc. • Waterloo Biofilter Systems• Zabel Environmental Technology • NORWECO, Inc. • Arcan Enterprises

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NOWRA 2004 RECYCLE, RE-USE & RECLAIM! …in review

Overall, NOWRA's 2004 conference was a success program with more than 40 presentations on topics ranging from technical research, to planning – management, and case studies. The two pre-conference workshops, held on Sunday, were also well attended. Financially, the conference exceeded its targeted revenues, with expenses for the most part within budgeted targets – the exception being production & printing, shipping and management.

Tim Frank shows off his "thank you" gift – a photo of life on the range

Key Conference Facts

- Conference registration reached 414. Budget projections were based on 300 registrants. 60 additional persons registered on site – and over 40 guests toured the Exposition "Open House" on Monday.
- 110 exhibit booths were sold to 77 exhibitors. This is 20 more booths sold, than in 2003. Traffic between the two rooms was constant throughout the two days.
- Exhibit income is higher due to increased attendance of the business community.
- 314 persons represented exhibitor businesses attending the conference many of whom paid additional fees.

Joyce Hudson with the US EPA Report

- 35 persons each attended the recycling workshop and installer course.
- Each of the field trips had 22 and 24 people
- Last minute cancellations were significantly fewer than last year.
- Large blocks of regulators attended the conference from eight states and included a Native American tribal community from Oklahoma.
- The Exposition "Open House" was a success and is recommended for 2005.
- Representatives from congressional offices attended the opening general session and stayed through until the end, all taking notes. They were provided with briefing folders and thank you letters sent.
- The opening general session and lunch were very well attended. The Opening Session included stimulating panel discussion on issues facing the onsite industry; and luncheon guests were treated to a presentation by Doug Dent, honoring president Tim Frank.
- The new "Cyber-Café" was also a successful venture,

Del Mokma presenting the soils component of the model code

receiving many compliments.

Attendees had this to say about the Conference…

- Quality of the Technical Sessions was rated as high and moderately good.
- Quality of the Presenters was rated as high
- Quality of the Presentations were rated as "Understandable"
- Topics of Most Interest – included:
  - Advanced Treatment Units
  - Installation training
  - Professionalism
  - Management Systems
  - Planning, Small Community Issues, Growth
  - Safety Factors
  - Business Building
  - Ethic Issues
  - Sessions on Spray & Drip Irrigation
  - New Technologies
  - Nutrient Removal
  - Performance Standards
  - Monitoring and Maintenance Strategies

Suggested Topics For 2005 include…

- Installation and Maintenance of Lagoons
- Pump Design and Controls
- Site Evaluation Process
- Survey and Leveling Applications in onsite installations
- Economics of onsite system alternatives
- System Sustainability – getting private citizens involved and educated
- Pharmaceuticals and personal care products impacts

on decentralized/soil-based systems

- Service Provider Education & Training

Rating of Food and Amenities was very high • Rating of NOWRA's service was high

Additional Comments and Suggestions…

Speakers were very educated and highly informative • The NOWRA Installer certification program is very much needed • An overall great program • Keep meeting rooms close together and avoid relocation of scheduled meeting • Need at least 5 minutes between sessions • Need to build in longer am and pm breaks • Start and end sessions on time • Appreciated the computer work stations – great idea • Appreciated breakfast trays – quite good! • **Good Exhibits –**

The Official Change of Leadership

New President Raymond Peat and Past President Tim Frank

Jerry Stonebridge - NOWRA's New Vice President

NOWRA's 2005 Committee Chairs (from left to right) Brian McQuestion–Finance, Matt Byers–Technical Practices. Carl Thompson–Government & Legislative Affairs, Sara Christopherson–Education, Rick Novickis –Conference Events, John Thomas–State Leaders, Mike Corry–Model Performance Code

NOWRA 2005 Conference
Call for Abstracts & Presentations

NOWRA welcomes abstracts of presentations for the Annual Conference in Cleveland, Ohio October 10-13, 2005. The conference theme is *Onsite is Here to Stay!*

Types of presentations open for considerations are:

1. Technical research-based presentations with papers
2. Policy related topics with papers
3. Technical presentations with designers, installers and maintainors as the primary audience with or without a paper
4. Forums and panel discussions with or without a paper

All subject matter related to onsite systems is open for discussion. Due to the location of the conference on Lake Erie the following topics are of great interest:

- Surface water quality protection
- Sustainable solutions in lake shore areas
- Great lakes water quality improvements
- Measured success with licensing/certification program
- Effective management of subsurface and surface discharging onlot treatment systems
- Technology to provide advanced nitrogen and phosphorus removal
- Field practices to deal with challenging site conditions
- Successful planning and management strategies to assure performance
- Business practices for profitable onsite professionals

Questions about the applicability of topic should be discussed with Committee Chair, Sara Christopherson by email at heger001@umn.edu or by phone at 612-625-7243.

- Abstracts and presentations are due by February 15, 2005.
- They should be sent as MS Word documents to nowra@hanifin.com and will be reviewed by the NOWRA Education Committee. If you are unable to email your submittal, please fax it to (410) 798-5741 or mail directly to the NOWRA office. Confirmation of all abstracts received will be provided by the NOWRA office.
- Individuals will be notified of the Committee's selection by the NOWRA office by March 15, 2005, and provided with instructions regarding paper format.
- Approved submittals are to be produced as papers and submitted to the Education Committee for review and editing by June 15, 2005.
- Final papers are to be sent to the NOWRA Headquarters office by August 15, 2005 both as a paper document and CD to be included in the NOWRA 2005 Conference Proceedings.

Submittal Procedures

Please provide the following details as MS Word Documents.

1. Name of Presenter
2. Affiliation of Presenter
3. Address of Presenter
4. Phone number and email address of Presenter.
5. Names and emails of co-authors, if any.
6. Abstract/Presentation Topic:
   a. Title
   b. 200-300 word description of the proposed paper/presentation. *(Please do not send a PowerPoint presentation or the full text of the presentation.)*
7. A short biography that includes education degrees and description of experience as it relates to the onsite industry.
8. Proposed length of presentation - 25 minutes or 50 minutes.

Any administrative questions about submittals should be directed by email to nowra@hanifin.com or by phone to (800) 966-2942.

NOWRA COMMITTEE APPLICATION FORM

As a volunteer organization, NOWRA encourages members to participate on its working committees, and to support the industry in its leadership role. NOWRA's 2005 Committee Chairs are soliciting members to develop work plans and activities. Please provide the following information identified on this form and return it to the NOWRA Headquarters Office. This response will then be given to the respective committee chairs.

NOWRA 2005 Committees

Please identify the committee you desire to participate and support in 2005. If selecting more than one, please prioritize.

- ❑ **Education** – *Develops education programs for NOWRA's conference & states on request*
- ❑ **Conference** – *Develops conference program local activities & events & supports exposition marketing to region*
- ❑ **Communications/Information** – *Focuses on non-member awareness*
- ❑ **Finance** – *Financial oversight, benefit programs and revenue enhancement*
- ❑ **Government & Legislative Relation** – *Legislative program support*
- ❑ **State Leaders** – *Programs for state members and benefits*
- ❑ **Technical Practices** – *Produces technical standards, procedures and products.*
- ❑ **Model Performance Cod**e – *Producing regulatory code direction*

Name _____

Title/Company _____

Address _____

City/State/Zip _____

Office/Mobile/Home # _____

Fax Number _____

Email _____

NOWRA Membership Number _____

Please comment about your willingness to participate on the selected committee(s) and contributions you desire to achieve through this work:

_____

_____

_____

_____

_____

Signature Date

Annual Report
to the Membership on NOWRA's 2004 Programs and Activities

Overall as the year is coming to an end, NOWRA has accomplished a significant amount of work with limited resources. A final report will be provided in the next issue of the Onsite Journal and placed on NOWRA's website at the conclusion of the financial statements.

The NOWRA Board of Directors began 2004 with an approved strategic plan that defined the goals and objectives for defined programs.

2004 Goals

- Increasing membership growth through support to state groups
- Establish a partnership program that provides new opportunities for the business sectors and financial support for NOWRA's work.
- Facilitate an integrated industry through collaborative partnerships
- Develop a framework in 2004 to launch education programs in 2005
- Facilitate the Development of Certification Programs through Continuation Education Programs
- Ensure Consistent and Quality Products and Standards
- Grow NOWRA's presence as industry experts
- Increase visibility of industry issues and funding needs
- Produce the draft report on Model Performance Code by the Annual Conference

Revenue

NOWRA receives its funding from membership fees – through state groups and individuals, grants and donations, advertising for its publications and the annual conference. While membership and conference income increased over last year, there was a decrease in income from grants to support program work. The result is that additional expenses were incurred for managing NOWRA's program and activities that had no revenue sources.

Membership

Overall membership revenues increased as a result of new state groups. However, with the increased membership, there are increased work activities associated with the processing of new membership information. Discussions with state leaders during the 1st meeting initiated a dialogue on increasing fees in 2006 from $20.00 per member to $30.00 or $35.00. This discussion also addressed the increased services to the state groups.

Grants and Donations

While a special list of private industry and state groups have donated funds to support NOWRA's work, grants to fund program activities in 2005 have yet to be approved.

In 2004 numerous proposals requesting funding to support NOWRA projects and programs and staff operations were prepared by the Executive Director. These proposals included:

- Research on Barriers to Education Materials submitted to WERF
- Industry and Regulator Education and Outreach Program for Performance Codes to the U.S. EPA
- The Development of a Certification Program for State Training Centers and Responsible Management Entities to the U.S. EPA
- The Establishment of an International Research Database on Projects Integrating Watershed & Stormwater Management with Onsite System Planning and Design and Presentations at 2006 International Conference to the Water Environment Research Foundation.

Fundraising Efforts included Meetings and Actions Marketing NOWRA

- Congressional and Legislative contacts were established with staff members of key Senator and Congressional offices on capital hill to begin an education process to obtain funding for the onsite industry education and training programs.
- Discussions are in progress with the National Association of Home Builders to provide technical services
- NOWRA's 2004 Business Benefit Program reached its projected goals five months earlier than anticipated.
- A contract signed with private firm of Essie Consulting failed to realize any activity.
- NOWRA Office initiated independent membership fundraising campaign - Sept/Oct issue of Onsite Journal
- Model Performance Code gained three new financial supporters – Zoeller Pumps, National Decentralized Wastewater Association and NOWRA in-kind services
- Separate fundraising letters were sent to NOWRA Industry Businesses in November soliciting funds.
- News articles were produced in the Onsite Journal to spotlight these activities.

NOWRA's 2004 Accomplishments are Documented in the Accompanied Table.

2004 Strategic Action Plan

MEMBERSHIP

Growth*

Our goal was to facilitate 15% membership growth through support to state groups by:

1. Providing support to establish new state groups.
2. Getting D&O Insurance programs established.
3. Providing support to State Groups to manage & recruit members.
4. Marketing NOWRA to Outside Groups

Our accomplishments:

- We established New Jersey, Maryland and provided support to restructure Arizona
- D&O Insurance Program for State Groups is in place
- Conducted 1st State Leaders Meeting in August with 22 States participating
- Initiated contracts with Utah, Oregon, Oklhoma, Georgia and Alabama to affiliate with NOWRA
- Increased membership by 2486 by July 2004
- Provided state groups with presentations and materials for distribution at annual meetings
- Initiated investigation of insurance benefit programs to support membership growth

BUSINESS DEVELOPMENT

Partnership Programs**

Our goal was to establish a partnership program that provides new opportunties for the business sectors and financial support for NOWRA's work through promoting the Business Benefit Program to attract 20 companies by:

1. Producing materials and marketing plan that provides companies and members with a comprehensive membership package, donor support and marketing and advertising opportunties.
2. Producing a program targeted for smaller industry businesses that promotes their products and services.
3. Establishing a website structure that provides maximum marketing capabilities.
4. Providing enhanced marketing activities activities to promote capabilities.
5. Structuring a public education component to support marketing activities.

Our accomplishments:

- Achieved goal by 12%.
- Updated website search engines
- Promoted program and availability in the onsite journal and on the website
- Sent press releases promoting the online locator
- 1500 Business Benefit Program were printed and,

  – 750 directly mailed to NOWRA Businesses and Exhibitors with accompanying letters

  – 150 copies sent to each State Groups for distribution and marketing
- 7,500 Online Locator Brochures were printed to market to small onsite industry businesses

  – Direct Mail with letters to all NOWRA small businesses (file sort from national database)

  – Used two other organizational databases and mailed with a letter to join NOWRA

  – 100-300 compies each sent to NOWRA state groups
- 20,000 yellow "Help" brochures produced to promote the Online Locator service for regulators, system owners and policy officials that also addressed the do's and don'ts of onsite systems operations

  – Packets of 300 copies sent to all state groups to promote locally

Industry Integration

In 2004, our goal was to facilitate and integrated industry through collaborative partnerships by building a coalition of support for industry funding by:

1. Indentifying target groups and key contacts.
2. Revising a draft partnering agreement for Board Action.
3. Producing and implementing meeting and collaborative marketing.
4. Marketing NOWRA to outside groups.

Our accomplishments:

- We developed a partnership agreement for Board consideration,
- Initiated and conducted meetings with 3 national organizations,
- Marketed NOWRA through 4 industry trade shows, and
- Participated in the development of an industry memorandum of understanding with the U.S. EPA (signed Jan 2005)

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EDUCATION AND TRAINING

Draft Installer Curriculum

Our objective was to produce Draft Installer Curriculum for the 2004 conference by:

1. Initiating a proposal to partner with the consortium for education development
2. Conducting education sessions at the request of state groups
3. Supporting new state efforts with education support
4. Producing manuals for membership use
5. Developing an online training program plan

Our accomplishments:

- Collaborated with NEHA on a development process
- Produced funding proposed
- Produced a draft installer qualifier materials and conducted a program at the 2004 Conference

Technical Education Program

Our objective is to produce a quality, financially successful technical education program for the 2004 Conference by:

1. Developing a budget, announcement materials and exposition plan
2. Producing materials and marketing plans
3. Organizing technical sessions of local interest
4. Integrating more research and student papers

Our accomplishments:

- We increased member and regulator attendance
- A Recycling / Reuse program was organzied and produced
- New interest groups registered
- We increased business sector support and attendance
- NDWRCDP presented significant research reports
- Student presentations had good attendance

Education and Information Awareness

Our goal was to increase the wareness of education and information through NOWRA's publications and website by,

1. Establishing online membership and conference registration.
2. Creating homeowners education and information section
3. Setting-up polling process and ongoing calendar of meetings
4. Developing online education program
5. Producing the 2003/2004 Membership, Product and Services Directory
6. Produce the Onsite Journal with expanded technical information

Our accomplishments:

- Online registration was in place for the conference
- Use increased by 40%
- We set up a committee work area
- Public information section is being used
- The online education program is underway
- The 2003/2004 Membership Product & Services Directory was produced and reflected a 15% increase in membership
- The Onsite journal was produced and mailed to an expanded distribution list

Framework for the 2006 International Conference

In establishing the framework for the upcoming International Conference, we were to:

Initiate the investigation of the costs and arrangements and report back to the board

Our accomplishments:

- We identified site locations
- The budget and work plan was drafted
- Proposals for funding and sponsoring support was sent to two organizations

CERTIFICATION

Technical Education Program

Our goal was to establish certificaiton programs for State Training centers & responsible management entities by:

1. Developing a concept for clearer understanding & integration
2. Producing a draft action plan
3. Developing procedure to create a certification program
4. Establishing a certification process
5. Defining components needed

Our accomplishments:

- We developed a concept plan on curriculum production
- Proposals were produced and submitted for funding
- We performed research and developed a proposal for accreditation of NOWRA's CEU process

TECHNICAL GUIDELINES

Consistent and Quality Products and Standards

To do this, our objective is to establish NOWRA document review and adoption procedures by:

1. Revising the document of procedures for reviewing publicly distributed documents prepared by NOWRA committees and members, that are designated as representing NOWRA interests and policies.
2. Revising the diagram illustrating the process
3. Providing to the Board for final action at the February meeting
4. Identifying procedures and reports to the Board

Our accomplishments:

- Procedures were adopted by the Board in June 2004
- We produced the outline of overall policies and pr0cedures
- Components are being integrated into the NOWRA Policy and Procedures Manual.

PERFORMANCE REQUIREMENTS

National Industry Presence Growth as Industry Experts

Our objective is to define and implement a plan addressing regulations and policies affecting the onsite industry ecomony by:

1. Initiating a leading role through letters to the EPA and subsequent meetings
2. Preparing follow-up letters to address concerns and issues raised at the November 2004 meetin
3. Producing a white paper and publicizing our position strategy with NOWRA model code
4. Scheduling a meeting with EPA officials, laying the foundation for funding soils tables.

Our accomplishments:

- We produced letters, Journal articles and website statements
- A position / policy statement was developed
- We facilitated the EPA in taking a more active role in NOWRA Code meetings
- We reached an agreement with the EPA on an MOU that addresses issues
- Quarterly EPA meetings were secured to address industry concerns
- Proposals were submitted to fund soil tables
- We initiated meetings with Congressional and Senate staff on industry needs
- We developed a proposal for the Industry Forum for Legislative Issues

Increased Visiblity of Industry Issues and Funding Needs

To reach this goal, our objective is to conduct a legislative forum on industry issues by:

1. Producing the framework and action plan
2. Obtaining an agreement with partners on issues
3. Producing implementation schedule and budget
4. Assessing the effectiveness of the endeavor

Our accomplishments:

- The Board deferred the project until 2005
- Contacts were initiated with legislative staff on Capitol Hill
- The Board adopted a white paper on regulatory reform
- Information on legislative needs was sent to states and members
- Support was given to Arkansas, California, Maryland and Michigan on legislative reform

Model Performance Code

Our goal is to draft a report on the Model Performance code for the conference , completing 4 sections through committee process by:

1. Conducting work through 4 committee meetings
2. Completing soils research draft by mid-year
3. Defining the next steps in the process
4. Integrating a peer review process
5. Securing funding for 2005

Our accomplishments:

- The draft report was ready in time for the conference.
- An agreement was signed with fundraising
- NOWRA proposals were sent to the EPA to obtain additional funding
- We received three new major donors from NOWRA businesses
- Outreach effortst with regulators for input were expanded.

**** 2005 Recommendations for Membership:*** Goal: Increase membership base by 20% through support to state by: ensuring that all State groups have D&O Insurance; supporting States to develop strategic action plans and budget, providing membership recruitment materials and training; obtaining 4 new state affiliations; and establishing 3 new state groups

*****2005 Recommendations for Business Development***: Goal: Increase business participation by 25% by: intiating Program marketing in 2004 for 2005; increasing advertising base by 25%; establishing marketing relationships with national businesses to promote the onsite industry products and services; increasing the use of website search engines to provide maximum awareness of industry businesses, increase Online Locator participants by 50%; taking listings from 2004 Directory and integrating into website product and services locator; placing NOWRA Membership Directory on the website in 2005, producing an addendum following state updates; and defining aggressive marketing plan to cost-effectively increase distribution of the Onsite Journal

Continued on page 14

Proposed 2005 Program Activities

The following information was provided for the NOWRA Board's consideration during the development of the 2005 NOWRA Operations Budget and Financial Plan.

2005 Recommended Actions to Increase NOWRA Revenues

- Increase level of legislative support to states and accelerate congressional staff discussions on industry funding needs – e.g. NOWRA Programs
- Continue Fundraising Proposals: Installer Education & Training, and identify new opportunities during planning process; obtain grant writing assistance
- Partnership with company on computer applications of Model Code
- Initiate Specialty Forums

  – Legislative Forum on Model Code

  – Water Softener Symposium

  – Management Systems

Advertising/Marketing NOWRA

2005 Business Benefit Program

- Produce stronger advertising base
- Integrate priority criteria for exhibit space
- Expand beyond NOWRA member base.

Online Locator - 2005 Recommendations

- Keep program; already have invested costs in structure, continue to heavily promote and work closer with state leaders to emphasize how it supports their efforts
- Take listings in front part of 2004 Directory and list in Locator

Onsite Journal 2004 Accomplishments

- Increased technical content
- Stronger membership support
- Increased advertising mid-year
- Increased distribution = increased printing, mailing, postage expenses

2005 Recommendations

- Quarterly publication
- No increase in advertising rates
- Investigate outsourcing
- Continue pursuit of non-profit postage status

Membership Products and Services Directory

- Quality document, well received and in demand.
- Expensive production and mailing costs not offset by advertising (most of the advertising revenues increased "mid-year")
- Late marketing & advertising commitments due to decisions on BBP

2005 Recommendations

- Place membership directory on website for public access – w/security system – with a mid-year addendum
- Take P/S listings and sell to service locator for '05 to offset expenses in '04
- Distribute remaining documents to new state groups as membership incentives

NOWRA ANNUAL CONFERENCE

- 2004 attendance goals presented challenges due to location and economy
- Financially, far more reasonable than other locations
- Expectations for overall good performance – revenues & exhibitor support to be higher

Recommendations

- Start 2005 exhibit marketing in November 2004 – 2005 conference one month earlier
- Expand market to large equipment manufacturers – space on back exhibit area
- Begin conference marketing January 2005: identify pre-conference workshops, theme, program topics by December 2004
- Increase exhibitor fees
- Keep registration fees below $400 – lodging expenses higher

Student Design Competition Completes 2nd Round

The second round of the Student Design Competition was completed at the 2004 NOWRA Conference in Albuquerque, NM, when the two teams competing for first and second place presented their design reports to participants and a judging panel. Two teams from Texas A&M, both with advisor Dr. Bruce Lesikar, submitted written reports in May and presented their designs and displayed their results on posters. The members of the first-place team are Andrea Froboese, Lisa Grimm, and Matt Piazza, and the members of the second-place team are Donna Chudej Hayes, Brandi Hanson, Emily Sabato, and Philip Taucer. All the students have graduated and are either gainfully employed or are into their graduate program. The first-place team receives a $1000 cash award and the second-place team receives $500 cash award. For more information about the Student Design Competition, please go to the Consortium of Institute for Decentralized Wastewater Treatment's website: http://www.onsite consortium.org/index.cfm or contact the project's team leader Dr. Kitt Farrell-Poe (kittfp@ag.arizona.edu).

Utility Management for Decentralized Wastewater Facilities: Part II

A Minnesota Model of Management

The decentralized wastewater industry started booming in Minnesota in 1997. In response to developer's desires to build independent community wastewater systems, new innovative approaches to wastewater were employed. The design of these new systems focused on long-term solutions for wastewater treatment. By employing this approach, developers were credited with bonus densities, resulting in smaller lot sizes and more lots. This allowed lower development costs and by minimizing infrastructure. These developments, known as cluster development, became popular in outlying areas of the Twin Cities Metropolitan area. As the development boom proceeded, reliable management of wastewater facilities became the hot topic in the state. Utility management become not only one of the many options for management, but a preferred method in certain counties for new decentralized wastewater facilities.

It is essential to determine management of a wastewater facility early on in the planning and engineering process. Without considering management during planning, the wastewater facility can become a ticking time bomb. As long as the proper planning takes place, the concept of utility management is desirable for developers, regulators and homeowners. Below are benefits by all three parties.

Developers see the benefit of limiting their long term liability by transferring wastewater assets to the ownership of the utility for minimal investment. Developers typically do not want to understand wastewater treatment facilities. They just want a solution that will work and is cost effective. Over time, developers in Minnesota have learned management is an integral component of making systems work. For a minimal investment (the legal work), developers will pay for the construction of the wastewater systems while the utility takes over the ownership after it is operational. At the time of transfer, future liability is minimized for the developer. From this point on, the utility is responsible for long term operation, maintenance and capital replacement.

Without considering management during planning, the wastewater facility can become a ticking time bomb. As long as the proper planning takes place, the concept of utility management is desirable for developers, regulators and homeowners.

Regulators encourage utility ownership because the utility provides stable and accountable management. Regulators want to know that systems are being taken care of and will work for the long term. After all, they are the ones that issue permits. Having an entity that you know is accountable and will not pack up shop and leave town is vital to long term management. With good management, regulators are assured the system will have a better chance to remain compliant. A utility provides accountability and the ability to fix problems before they turn into big issues. Further, the utility has the ability to fund capital improvements projects in the event that funds are needed for future repairs.

Homeowners typically like the model since the management process is streamlined and Homeowner Associations do not need to become experts in wastewater operation and maintenance. Most homeowners are

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well acquainted the utility model for their gas and electric service. Homeowner Associations typically elect one member of the Board to the wastewater system. This person is the lucky (or unlucky) person who is responsible for managing the wastewater system. They typically hire the operator and make recommendations to the Board on improvements. Under Utility ownership, the responsibility for day to day decisions rests with the utility. This minimizes the need of daily involvement of the HOA.

In Minnesota, Connexus WaterWays is the utility who has set the standard for effective wastewater management. Four tangible benefits of the utility model includes: 1) administrative responsibility; 2) fiduciary responsibility; 3) providing better engineering products; and 4) a turnkey operation. These benefits are described below:

Administrative Responsibility

The Utility approach has the ability to utilize their existing customer service personnel and billing infrastructure. These services allow wastewater charges to appear on the monthly utility bill. Future planning and administrative tasks are completed by the utility. The alternative would be for an elected Homeowner Association or other entity to create and administer their own billing system with utility management, the utility is responsible for debt collection, instead of the responsibility resting with the Homeowner Association.

Fiduciary Responsibility

The Utility has the responsibility to fund wastewater replacement projects without having the need to asses property owners to obtain the funding. The Utility collects fees from homeowners and sets aside funds for capital replacement. In the event that major repairs or maintenance is needed, the Utility is able to tap into these funds to maintain operation of the facility with capital improvements. Part of setting this up is cash flow analysis. In the analysis, the assets are assigned a design life which is taken into account in the monthly rate structure. In the event that repairs are needed that exceed the amount of cash in reserve, the utility may have other funds from which they can draw upon.

Better Engineering Products

When a utility plans to take over a wastewater system, typically they provide due diligence to make sure that what they receives minimizes their risk. During their due diligence investigation, changes to the design may be required to minimize the risk of taking over the project. This in turn provides improved systems that limit long term maintenance concerns.

Turnkey Operation

A utility can be thought of as a one stop shop including responsibility of day to day operations along with the responsibility of long term asset management. If residents have questions or concerns, the utility is the point of contact.

The questions that arises is why would people not want utility management? For some, the answer is they would rather not have a "big brother" approach to managing their wastewater system. Others may state that they have no control over fees charged by the utility. Others simply do not trust utilities.

The utility approach is not perfect, nor is it the correct approach for all people. The model is, however, an effective and efficient method to help those who desire professional and systematic approaches for decentralized wastewater facilities. ●

Ryan C. Brandt is the Director of Business Operations for the Forest Lake, Minnesota-based EcoCheck, Inc. The company operates and manages over 50 decentralized wasewater facilities across the upper Midwest. EcoCheck works with all types of ownership models. Mr. Brandt can be reached at 651-255-5049.

Decentralized / Onsite Wastewater and Drinking Water Regulations

Rod Frederick, Suzanne Kelly, Robert Goo, Joyce Hudson*

EPA acknowledges that the use of well-planned and managed decentralized/onsite wastewater treatment systems (OWTSs) protect both ground and surface water quality. Although these treatment systems have proven to be a cost effective means to treat domestic wastewater, the impact of these system on drinking water sources must be considered. Additionally, those developing OWTSs must consider drinking water regulations, for example:

- **What is the potential to use OWTS discharges to recharge ground water?**
- **What are the impacts of OWTS discharges on ground water and how are they addressed under the Safe Drinking Water Act?**
- **This article summarizes the minimum federal requirements under the Safe Drinking Water Act for the discharge and reuse of decentralized system wastewaters. Case studies and examples of state and local source water protection programs to protect drinking water resources from OWTS discharges are identified.**

Introduction

Many areas of the US are experiencing lowered water tables and/or water shortages because development has altered ground water recharge patterns. More ground water is being extracted to meet drinking water needs, but wastewater and storm water are not being used to replenish those aquifers. Onsite wastewater treatment systems (OWTSs) that are well-planned and managed contribute to ground water recharge by returning water to the immediate zone of use and can possibly be a part of the solution to ground water shortages.

However, there are potential risks to recharging ground water with OWTS-dispersed effluent. OWTSs that are not sited, designed, operated or maintained properly can contribute to contamination of ground water used as a source for drinking water. USEPA estimates that 168,000 viral and 34,000 bacterial illnesses occur each year as a result of consumption of water from improperly treated ground water (USEPA 2003a). The contaminants of primary concern in USEPA's study of ground water-based drinking water systems are waterborne pathogens from fecal contamination (US EPA 2003a). Improperly sited, designed, and malfunctioning septic systems have been identified as a potential source of this contamination; other sources could include leaking or overflowing sanitary sewer lines, stormwater runoff, agricultural runoff, and wildlife. USEPA is also concerned about nitrates in ground water, particularly in rural areas where residents must rely on individual wells and onsite systems to serve relatively small lots.

The Safe Drinking Water Act established two major protection programs with missions to prevent contamination of ground water that is used or could be used as a source of drinking water, the Source Water Assessment and Protection Program (SWAP), which includes the Wellhead Protection Program, and the Underground Injection Control (UIC) Program.

Background

Residential development, and the commercial development that follows it, typically occur on the urban and suburban fringe. Today, sprawl is consuming land at an accelerated pace throughout the nation and possibly causing a wide array of impacts which include shortages of ground water and ground water contamination.

Development causes an increase in impervious surfaces (such as roads and parking lots) and compacted soils, which replace more pervious forests

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**U.S. Environmental Protection Agency Office of Water, Washington DC*

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and meadows. Impervious surfaces decrease the volume of rain and snowmelt infiltrating into ground water thereby contributing to water shortages. Ground water used in homes and businesses that is routed after use to centralized sewers and subsequently discharged to surface waters also contributes to depletion of ground water. Drought causes lowering of water tables and exacerbates the shortages of ground water.

Onsite wastewater infiltration is one way to recharge ground water, but it is not without risks. Underground Injection Control requirements can help prevent un-intended impacts of OWTSs. The Source Water Assessment and Protection efforts, and the Underground Injection Control Program requirements must be considered when evaluating alternatives to disperse and infiltrate wastewater to ground water because of the potential for contamination.

OWTS/Decentralized Wastewater and Ground Water Recharge

OWTSs serve approximately 25 percent of U.S. households and approximately 33 percent of new development. Onsite and cluster systems can provide a high level of public health and natural resource protection if they are properly planned, sited, designed, constructed, operated and maintained.

The USEPA (1997) issued the "Response to Congress on Use of Decentralized Wastewater Treatment Systems", where for the first time the Agency acknowledged that sewering the entire country is not feasible from an economic standpoint and that decentralized wastewater systems are a viable alternative to the use of centralized wastewater treatment facilities.

Tremendous potential exists to increase ground water recharge where OWTS/decentralized systems can be installed and managed to disperse treated wastewater into ground water without representing a risk to human health. Increases in the quantity of ground water can raise water tables as well as minimize salt-water intrusion in coastal areas. In one coastal county in North Carolina, with a population of 120,284 and 71% of households sewered, about 25 billion gallons per year could be used to recharge ground water if OWTSs were used to treat wastewater instead of centralized treatment and collection followed by discharge to the ocean.

Potential Impacts to Ground Water, Drinking Water and Public Health

The use of OWTSs for ground water recharge should be carefully considered. Many of OWTSs currently in use do not provide the level of treatment necessary to adequately protect public health and ground water quality. For example, in Montana, residential development and the resulting sprawl is being blamed for increasing levels of ground water contamination (Frederick, 2003). Davis (2002) and others have blamed poorly planned and proliferating onsite systems for elevated nitrate levels in ground water, which have recently risen from a median of 1.0 mg/l in the Helena Valley to values of 7.9 mg/l and higher in some locations. Other examples in which septic systems were identified as a source of pollution include 82 cases of shigellosis resulting from a contaminated well in Island Park, Idaho in 1995, 46 cases of hepatitis A from a privately-owned water supply in Racine, Missouri, and 49 cases of hepatitis A in Lancaster, Pennsylvania in 1980 (USEPA 2003b).

While it is difficult and expensive to measure and document specific cause-and-effect relationships between onsite wastewater treatment systems and the quality of our water resources, it is widely accepted that improperly managed systems (resulting from inadequate siting, design, construction, installation, operation and/or maintenance) can contribute to ground and surface water quality problems.

Safe Drinking Water Act
(Pub. L. 93-523)

Source Water Assessment and Protection Program

As of 2003, approximately 165,000 public drinking water systems have the responsibility of providing the Nation with clean and safe water to drink. Additionally, almost half the population of the US relies on ground water for drinking water, and more than 90 percent of rural residents obtain their water from ground water. Congress, recognizing the need to protect sources of drinking water, amended the Safe Drinking Water Act (SDWA) in 1996 to authorize the establishment of the Source Water Assessment and Protection (SWAP) Program.

The SDWA Amendments outline six steps for prevention programs to protect and benefit public drinking water systems. Together, these steps form the basis of a comprehensive drinking water source protection. Source water assessment and protection consists of six steps:

1. Delineating protection areas for the source waters of public drinking water supplies,
2. Identifying potential sources of contaminants within these areas,

3. Determining the susceptibility of the water supplies to contamination from these potential sources,
4. Making the results of the assessments available to the public,
5. Implementing management measures to prevent, reduce or eliminate risks to drinking water supplies, and
6. Developing contingency planning strategies that deal with water supply contamination and service interruption.

The SWAP Program is one of several provisions of the SDWA Amendments aimed at protecting source water by encouraging States to form voluntary, mutually beneficial partnerships to develop source water protection strategies for each water supply based on the results of their source water assessments. SWAPs may vary from State to State, according to each State's priorities, and the degree to which ground water resources were managed at the program's inception.

Assessments for many water systems, such as those in rural areas, are likely to inventory OWTSs located in delineated source water areas and possibly identify some of these as priority pollution threats. Communities are encouraged to consider information from the assessments as a factor in deciding what level of management is necessary to protect their drinking water sources from such threats. States are making progress on their SWAPs and are at various levels of completion. At the end of 2003, states reported that they had completed the source water assessments for about 70% of their public drinking water systems. USEPA anticipates that all source water assessments will be complete by the end of 2006. For more information on the status of specific source water assessments contact your state source water program liaison. Contact information can be found at the USEPA website: http://www.epa.gov/safewater/source/contacts.html

The City of Scottsdale, Arizona, is a good example of a how a local community used the results of their source water assessment to promote protection activities. The total population of Scottsdale is approximately 218,000. The city owns and operates a municipal water system fed by surface and ground waters. Their source water assessment identified pre-existing septic systems located in close proximity to potable water production wells as a potential source of contamination. The city is directing efforts toward increasing public education and awareness on septic system operation, appropriate landscaping and other best management practices aimed at preventing septic system failures.

Underground Injection Control (UIC) Program

Facilities across the US discharge more than 750,000 billion gallons of hazardous and non-hazardous fluids into more than 800,000 injection wells. In 1974, the SDWA authorized the Underground Injection Control (UIC) Program to establish minimum federal requirements for the protection of underground sources of drinking water (USDWs; 40 CFR 144.3) from the variety of underground injection practices. The federal regulatory classification for injection wells consists of five classes (Classes I-V), from deep (Class I-III) to shallow (Class IV and V). The Class V well category encompasses a wide variety of wells that are typically shallow, percolating systems, such as dry wells, leach fields, and similar types of drainage wells that overlie USDWs. To date, 33 states have obtained primary enforcement authority (primacy) for all classes of injection wells. Seven states share primacy with EPA. For the remaining states EPA directly implements their UIC Program. States and tribal UIC Programs can have more stringent requirements above and beyond the minimum federal requirements discussed here.

UIC Well Definition

A well or injection well is a bored, drilled, or driven shaft, or dug hole, whose depth is greater than its largest surface dimension; an improved sinkhole; or a subsurface fluid distribution system used to discharge fluids underground (40 CFR 144.3)

Since1980, an OWTS has been considered a Class V well (40 CFR 144.81) that must meet UIC Program regulatory requirements (state and federal) if one of the following conditions is met:

1. The OWTS receives solely sanitary waste from multiple family residences or a non-residential establishment and has the capacity to serve 20 or more persons per day [also known as a "large-capacity septic system (LCSS)"].
2. The OWTS receives any amount of industrial or commercial wastewater (also known as an "industrial waste disposal well").

The majority of Class V wells, including LCSSs, are "authorized by rule" (144.24(a)) provided they meet these minimum federal requirements: (1) the injectate does not endanger USDWs and (2) the owner or operator submits basic inventory information to the state or USEPA regional UIC Program. "Authorized by rule," means that an individual permit is not required, unless

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requested by the UIC Program Director in your state. Inventory information includes: facility name and location, legal contact name and address, ownership information, nature and type of injection well(s) and operating status.

The non-endangerment standard prohibits injection that allows the movement of fluids containing any contaminant into a USDW, if the presence of that contaminant may cause a violation of any primary drinking water regulation or adversely affect public health. The point of compliance where LCSSs must meet this non-endangerment performance standard is determined on a case-by-case basis depending on a variety of site-specific factors such as soil and hydrogeology, wastewater characteristics and system design. USEPA acknowledges that the soil is an integral part of the wastewater treatment system for LCSS receiving solely sanitary waste. However, a conventional OWTS (meaning those OWTSs that consist of a septic tank and drain field) receiving industrial wastewater without pre-treatment might be required to meet drinking water or other health-based standards, e.g., Maximum Contaminant Levels at the point of injection or be prohibited entirely because these systems are not designed to treat industrial wastewaters.

The majority of states and regional UIC Programs work in partnership with their local health departments to ensure that these minimum federal requirements are met before the LCSS is permitted. This cooperative relationship ensures that all LCSSs are regulated in a consistent manner locally regardless of size. In addition, the UIC Program works with external stakeholders such as National Onsite Wastewater Recycling Association and other offices within the USEPA to improve the management and performance of LCSSs. For instance, the UIC Program has worked cooperatively with the USEPA's Office of Wastewater Management for over 10 years and more recently contributed to the Office of Water's 2003 Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems. The Federal UIC Program requirements are consistent with the management tools outlined in the National Guidelines.

Future Strategies

As the Nation continues to grow over the next 20 years, millions of new homes and business will be built outside of existing urban and suburban areas creating a need for more OWTSs. Communities need to make decisions about how best to manage development to ensure safe and sustainable water supplies and cost-effective wastewater treatment systems. OWTSs when properly managed can be the wastewater treatment option of choice for local communities. These systems, however, need to be considered in the context of a fully integrated water supply and treatment framework that meets regulatory requirements and evaluates water quality needs and potential water quality impacts. ●

References

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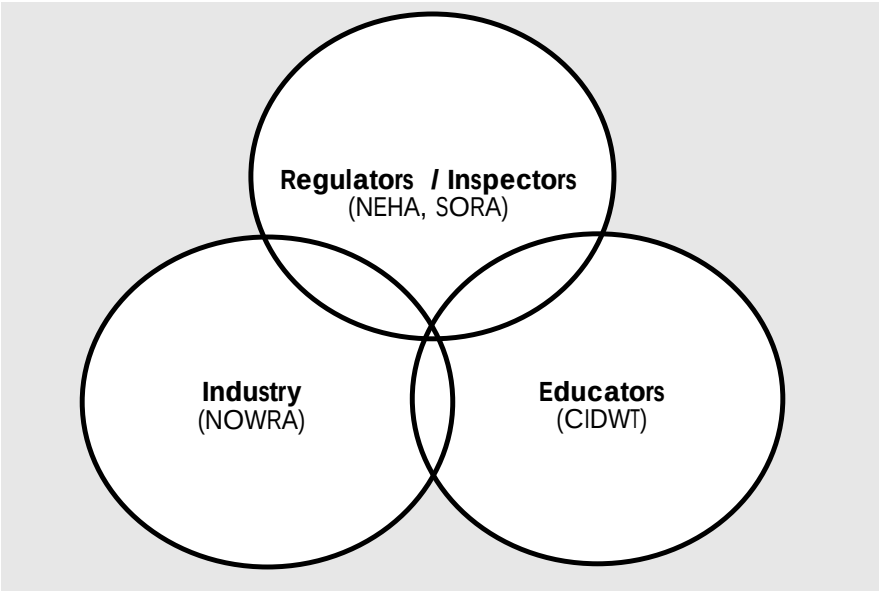
NEHA Installer Creditential Program



Introduction

- Each stage of the creditial development will involve consensus between these groups
- Stakeholders will provide realm and reach of credential
- Subject matter experts will provide technical expertise
- NEHA is the facilitator for the development of the credential

To participate in the installer survey, go to www.nowra.org and download the pdf.

Credential Development Process

- Stakeholders identify knowledge, skills and abilities (KSA's) needed to install an onsite system
- Insdustry is surveyed to verify KSA's and set scope/range of examination
- Subject Matter Experts (SME) write questions
- Selection of Testing Agency

Training Component

- Training Guidelines will be developed based on competencies identified by Stakeholdesr / Subject Matter Experts
- Training program will be developed by an outsdie group or association
- NEHA will not be doing training

Building Sustainability and Professionalism in the Industry

- Training and certification is one of the tenets ofthe USEPA Voluntary Management Guidelines
- Uniform, nationwide, acceptable practices for the industry.

Additional information can be obtained from Christi Pokorney at 303-756-9090 ext. 305.

Virginia: Loudoun County Signs First Agreement for Wastewater Treatment System Maintenance

The Loudoun County Health Department has signed a first-of-its kind agreement with GeoTrans incorporated, which calls for the Sterling company to manage, operate, maintain and monitor onsite wastewater treatment systems in the county.

Under the agreement, GeoTrans is recognized as a Responsible Management Entity (RME), and will maintain and monitor alternative wastewater treatment systems, sample the effluent from the systems semi-annually and provide homeowner guidance and instruction in the use of the systems. The company will also test groundwater for any increase in pollutant levels to assure that the groundwater is safe.

"To our knowledge, GeoTrans is the first company recognized as an RME in Virginia and we believe this agreement is the beginning of a concept that will become the standard for alternative onsite treatment systems across the country," said Robert E. Lee, Policy Development Manager of the Loudoun County Health Department.

The Health Department has determined that certain onsite wastewater treatment and dispersal systems require a high degree of management to assure the protection of the public health and safety of the community. Under the department's management approach, the homeowner or homeowners association continues to own the system, but a qualified RME must be employed to provide proper management, operation and maintenance of the system.

Lee expects that other companies will be recognized as RMEs by the Health Department in the future.

More information about wastewater treatment in Loudoun County is available on the Loudoun County Government Website at www.loudoun.gov/health/water.htm

Missouri Smallflows Organization
9th Annual Conference & Exhibition
A G E N D A

Welcome – Charles Harwood, President MSO

Daryl Brook, DHSS-SEPH, Update on DHSS issues

Carrie Schulte, MO DNR, Environmental Specialist, Update on the Individual On-Site Financing Program

Linda Hanifin-Bonner, Executive Director, NOWRA, Update on NOWRA activities locally and nationally.

Keynote Speaker – Bennette Burks.PE, The Principles of Evaluation, Design, Installation and Maintenance.

Bennette Burkes, PE, Overcoming Soil & Site Limitations.

Jerry Prewett, Geologist, MO DNR, GSRAD, Dye Testing, A Follow up to the Inspectors Course and an Introduction for Those Interested.

Blake Smith, Competent Person/Excavation Safety/Confined Space

Bennette Burkes, PE, Overcoming Soil & Site Limitations.

Jerry Prewett, Geologist, MO DNR, GSRAD, Dye Testing, A Follow up to the Inspectors Course and an Introduction for Those Interested.

Blake Smith, Competent Person/Excavation Safety/Confined Space

Wednesday, January 19, 2005

Mike Corry, Co-Chair, National On-Site Wastewater Recycling Association, Model Performance Code Committee, NOWRA-Model Performance Code Update

Jim Gaughan, Environmental Engineer, and Percy Johnson Environmental Public Health Specialist IV, DHSS, Design and Construction of Onsite Systems to Facilitate O & M / Onsite System Inspection Issues and Review

Troy Chockley, Environmental Engineer, USDA-NRCS, Designing to Treat High-Organic-Strength Wastewater with On-site Technology. What may and may not work?

Dennis Meinert, Soil Scientist, MO-DNR, An Introduction into Soils. What is the Soil Scientist Looking At and Why?

Business Meeting

Election of New Board Members

Guest Speaker; Matt Gaunt, Development Officer, Office of Advancement, College of Agriculture, Food and Natural Resources, The School of Natural Resources Alliance

Jim Gaughan, Environmental Engineer, and Percy Johnson Environmental Public Health Specialist IV, DHSS, Design and Construction of Onsite Systems to Facilitate O & M / Onsite System Inspection Issues and Review

Troy Chockley, Environmental Engineer, USDA-NRCS, Treating High-Organic-Strength Wastewater with On-site Technology.

Dennis Meinert, Soil Scientist, MO-DNR, An Introduction into Soils. What is the Soil Scientist Looking At and Why?

Closing Remarks – Charles Harwood, President MSO (Door Prizes)

54th MICHIGAN ONSITE WASTEWATER CONFERENCE

PROGRAM AND EXHIBITS

JANUARY 11, 12 & 13, 2005

KELLOGG HOTEL & CONFERENCE CENTER

MICHIGAN STATE UNIVERSITY

EAST LANSING, MICHIGAN

A three-day, educational conference for the industry including local public health, engineers, consultants, installation contractors, septic tank pumpers, and others interested in onsite wastewater management. You will learn about the latest in onsite wastewater industry trends, regulatory changes, approaches to onsite wastewater management, and the latest technologies. The onsite technology day, January 11th will provide three concurrent sessions, one on the basics of onsite wastewater treatment and dispersal, one on advanced onsite wastewater treatment, and sessions on understanding soils and microbiology from a treatment perspective.

EXHIBITS

With over 40 exhibitors in the hall, there will be an ideal place to exchange ideas and discuss new products and/or services. Representatives from all major suppliers will be present.

2005 MICHIGAN ONSITE WASTEWATER CONFERENCE

TECHNOLOGY TRAINING DAY - Tuesday, January 11, 2004

There are three concurrent sessions. Basic Onsite session in 103AB for newer onsite professionals or those wishing to refresh their knowledge base; The other sessions are for those more advanced in knowledge who want to enhance their understanding of Advanced Onsite Treatment concepts. Handouts will be available only for those who pre-register prior to December 29.

THE BASICS OF ONSITE WASTEWATER

Moderator: Kathleen Hill, R.S., Private Sanitarian
How Septic Systems Work – An Introduction
Bryan Wilke, R.S., Saginaw Co. Health Dept.
Soils Siting of Systems
Del Mokma, Prof of Soil Science, MSU
Septic Tanks
National Precast Concrete Association
Ben Foster

Construction Practices
Kathleen Hill;
Treatment Systems
Marshall Bowman, Bowman Excavating, Howell

Final Inspections – Kathleen Hill

Trouble Shooting; Failure Analysis
Bruce Gruner, R.S., Retired from Ingham County Health Dept.
History & Microbiology of Onsite, Dr. Peggy Minnis, PACE University
Understanding Soils as a Wastewater Treatment System, Del Mokma, Professor of Soil Science, MSU

ADVANCE ONSITE TREATMENT

Moderator: Bill Gregory
Why Advanced Treatment?
Ted Loudon
Packed Bed Filters – Sand Filters, AdvanTex, SCAT, Peat, etc.
Aerobic Treatment Units

Wetland Treatment Systems
Drew Bender, J.F. New & Associates,

Health Dept. Perspective - Advanced
Ron Lindsay, Milan Engineered Systems,

Bryant Wilke, Saginaw Co. Health Dept.

Mound Construction
William Wehrman, Preferred Pump Co., Ohio

Advanced Maintenance & Troubleshooting
Ron Lindsay, Bill Gregory
Advanced Maintenance cont.

Michigan Conference continued

Wednesday, January 12

Keynote Speaker – Senator Patty Birkholz

Legislative plans for a state sanitary code

The MDEQ state code task force white paper -- Ric Falardeau

The NOWRA National Model Code – Mike Corry, Special consultant to NOWRA, former code manager, Wisconsin Department of Commerce

Revised Part 117 –Septage management program – Matt Campbell MDEQ Septage Program Coordinator

State Code discussions

"Focus Group" discussions on state wide issues - see websites listed on page 1.

Sponsored Social Hour – Exhibit Area, MSTA Banquet

Planning Committee:

Ted Loudon, Chair
(MEHA, MOWRA, MSTA, MSU)

Representing MOWRA
Bill Gregory
Mike Stephens

Representing MSTA
Mark Scott
Carl Steinberg

Representing MEHA
Bruce Du Hamel
Kathleen Hill

Representing MWEA
Corky Overmeyer

Representing MSU
Del Momka

Thursday, January 13

Code discussion breakout session feedback

Is Your Truck Overweight or Misloaded? Ask the "Truck Cop" - Lieutenant David E. Ford, Michigan State Police, Motor Carrier Division (Back by popular demand)

Truck Regulations and The Septage Hauling Industry, Ronald K. Edwards, Michigan Center for Truck Safety

Is your required Motor Carrier Drug and Alcohol testing program in compliance? Sandy Kimbler, C-SAPA, Drug Screens

Septage processing equipment from A to Z, Karen Pena Borgeson, SJE Rhombus, Minnesota

Developing a Septage receiving station. Bret Gourdie, Gourdie-Fraser Associates, Traverse City

Accepting septage waste – A view from a wastewater treatment plant perspective. Dan Wolz, Wyoming Clean Water

Budgeting for Cluster Systems – Larry Stephens, Stephens Consulting Services, P.C., Haslett

Decentralized Wastewater Systems and Land Use, Steve John, Environmental Planning and Economics, Inc., Decatur, IL

Experiences with Assisting Homeowners to Comply with maintenance requirements, Mike Stephens, Stephens Consulting Services, P.C., Haslett

Update on the progress of the NW Michigan Onsite Wastewater Task Force, John Kelley, Chairman, Traverse City

Low Interest Loans for Improving Onsite Wastewater Treatment, Edwyna McKee, Strategic Water Quality Initiative Fund,

Soil and Crop Management for safe septage recycling, Natalie Rector, MSU-Extension Manure Nutrient Management Specialist

Benefits of Engineered Slurry Store systems, Tinus Koom, Michigan Ag Services, Inc.

Screening and Land Application of Septage, Richard Boelson, Hydro Engineering, Inc.

Panel Discussion on Gravelless Systems – Dan Milan, Moderator

Chambers	Polystyrene Aggregate	Chipped tires
SB-2	Tubing Bundles	The NSF draft standard for Gravelless systems

Michigan

MOWRA Scholarship Announcement and Criteria

The Michigan Onsite Wastewater Recycling Association is pleased to announce the availability of a Scholarship to be awarded to a worthy individual in academic pursuit of a career in the Decentralized Wastewater Management industry. This scholarship is to be awarded in the summer of 2005 to help cover academic expenses for the 2005–2006 year. The following information and criteria has been established for this scholarship:

Amount of Scholarship:	$1,500.00
Application Deadline:	**March 1, 2005**
Academic Status:	Applicant must be entering his/her Junior year of study
Demonstration of Interest:	A successful applicant must have exhibited an interest in Decentralized Wastewater Management through his choice of major and field of study.
Field of Study:	The scholarship committee will consider the following majors in the award of this scholarship: • Civil, Environmental or Biosystems Engineering • Water Resources or Resource Development • Soil Science • Environmental Health • Related majors dealing with decentralized wastewater treat -ment, or environment and land use policy

The scholarship committee will also consider the following in the award of this scholarship:

- The student's grade point average.
- The student's participation in extra-curricular activities that demonstrate his or her leadership qualities.
- Job experience and/or personal projects that demonstrate skills or interest in decentralized wastewater treatment.

For application forms and information contact:

MOWRA Secretary
P.O. Box 708
Haslett, MI 48840
Phone: (517) 339-8692

State Leaders Meeting
April 4-5, 2005
Kansas City, Missouri
Watch the website for updates!

2005 Business Benefit Program

NOWRA National Onsite Wastewater Recycling Association

This benefit package for businesses is truly an exceptional value, but the greatest benefit of NOWRA membership is derived through your active participation in and support of NOWRA's many programs—all designed to benefit our industry.

Building on the successes achieved in unifying the onsite industry, NOWRA is moving forward to further strengthen the industry's leadership role. To that end, we are offering an invaluable business benefit program that promotes the products and services of NOWRA onsite industry business members and organizations, and increases their leadership visibility. This partnership will enhance the success of onsite businesses while helping NOWRA fulfill its mission to protect human health and the environment through education.

To help achieve this goal, NOWRA will provide promotional packets for this program for members to use at State Conferences and elsewhere to solicit Business Members.

To download a 2005 Business Benefit Program application, please visit www.nowra.org

Participation Requirements

- Your business must have at least one NOWRA member on staff in order to participate in the program.
- Business must sign a statement subscribing to the NOWRA Ethics Policy.

Additional Benefits

In addition to the benefits listed for each membership category in the chart below, participating businesses receive:

- A NOWRA Business Membership Plaque
- A large NOWRA logo sticker for posting on an office door or window
- A logo for display in your Annual Conference booth for Gold, Silver, and Bronze participants

Special Advertising Opportunity

The 2005 NOWRA Directory information will be posted on the website. Within the "Membership" listings, you may choose:

- Banner Ads—full color ads at the top of selected pages for just $50 per month
- Company Online Locator and Website Link—FREE for Business Benefit Program members
- Online Products and Services Locator—$350 per year or $50 per month

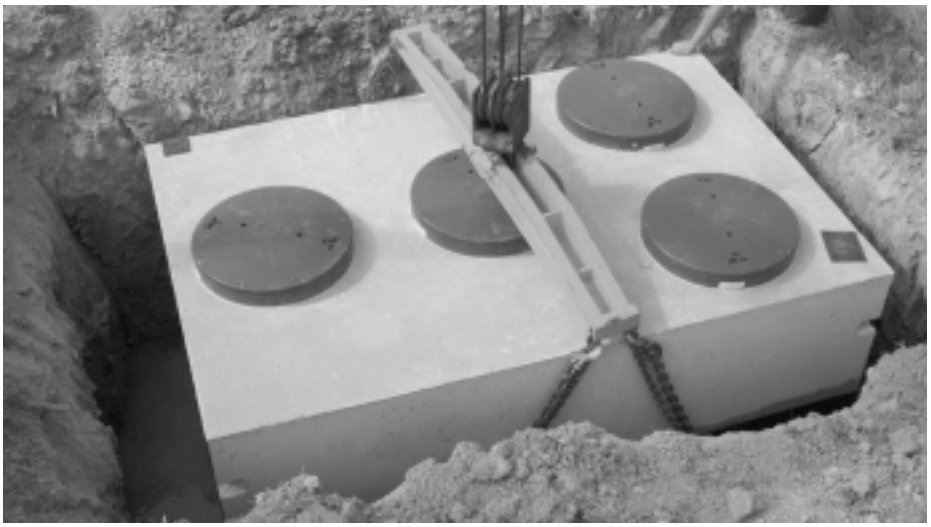
Business Benefit Packages	GOLD '05	SILVER '05	BRONZE '05	LOYAL SUPPORTER '05
MEMBER BENEFITS	Annual Fee $5,000	Annual Fee $3,500	Annual Fee $2,000	Annual Fee $350
Additional Subscription(s) to Onsite Journal	4	3	2	1
Discount Website Advertising	25%	20%	15%	No
Website Link + Online Directory participation	Yes	Yes	Yes	Yes
Conference Program Advertising	Full Page	1/2 Page	1/4 Page	No
Discount on any size black & white ad in Onsite Journal	25%	20%	15%	No
Booth at Annual Conference	Yes (2)	Yes (1)	50% 0ff (1)	No
Conference Sponsorship	Gold	Silver	Bronze	N/A
Membership Rates at National Conference for two employees	Yes (2)	Yes (2)	Yes (2)	N/A
Membership rates for employees attending non-Conference Education Programs	Yes	Yes	Yes	No
Discount on Exhibit Booth at special education program courses	25%	20%	15%	No
Free promotion or press release of products & services in Onsite Journal on the new products page (# per year)	Yes (x3)	Yes (x2)	Yes (x1)	No
Business Advisory Council Representative	Yes	Yes	No	No

PRECAST CONCRETE SEPTIC TANKS: WATERTIGHTNESS IS REALITY

The National Precast Concrete Association (NPCA) is offering a precast concrete septic tanks program on February 11, 2005 from 9:00 a.m. – noon at the Indiana Convention Center in Indianapolis, IN. The purpose of this free program is educating regulators, sanitarians, installers, and producers on the production and installation practices necessary to ensure watertight septic systems. Time has also been allocated to discuss the future of onsite systems, including shared, community and cluster systems. Presentations by the EPA and suppliers of accessories for septic tanks will conclude the program. This will be an excellent opportunity for agencies and companies in all facets of the onsite industry to get a glimpse into the future of what precast concrete has to offer.

Registrants will be provided complimentary access for that day to the Manufactured Concrete Products Exposition (MCPX) show which opens at 2:00 p.m., also in the Indiana Convention Center. With nearly 400 exhibitors supplying various products and services to the precast concrete, concrete masonry, concrete pavers, and concrete pipe industries, there is likely something of interest for everyone. Visit www.mcpx.org for complete information on the MCPX show.

If you would like more information on the septic tank program or would like to register, please visit www.precast.org/sep. You can also contact Alan Siebenthaler of NPCA at asiebenthaler@precast.org or 800-366-7731.



PRECAST CONCRETE MEETING AGENDA

9:00 a.m.	Introduction
9:15 a.m.	Production Practices - Carl Buchman, NPCA
9:45 a.m.	Septic Tank Installation - Howard Wingert, Concrete Sealants
10:15 a.m.	Future of Onsite Systems - Anish Jantrania, Virginia Department of Health
11:00 a.m.	EPA Septic Tank Outlook - Morris Beaton, U.S. EPA, Region 5
11:30 a.m.	Use of Flexible Connectors - Press Seal Gasket and A-Lok Products
11:45 a.m.	Use of Effluent Filters - Zabel Environmental and Poly Lok
12:00 p.m.	Adjourn

The National Precast Concrete Association (NPCA) is a non-profit trade association representing over 575 precast concrete producers, over 250 of which manufacture septic tanks, throughout North America. NPCA has developed a Septic Tank Manufacturing Best Practices Manual which is available in the NPCA bookstore. For more information on precast concrete septic tanks or to find a precast concrete producer, please visit www.precast.org or call NPCA at (800) 366-7731.

2005 State Meeting Calendar

JANUARY

3-5 OOWA IQ Contractor Candidate Program, Perrysburg OH

6 OOWA Convention & Annual Meeting, Perrysburg OH

10 -11 WPCA Convention, Madison, WI

11 POWRA Board Meeting, Morgantown PA

11-13 MOWRA Conference, E. Lansing MI

18-19 MSO Conference, Columbia MO

20-22 FOWA Winterfest, Howey-in-the-Hills FL

21 MOWPA Educational Forum, Annapolis MD

25-26 IOWWA Conference, West Des Moines IA

27-29 WOSSA Conference, Bow WA

28-29 WOWRA Conference, Madison WI

FEBRUAURY

9 -11 KSFA Conference, Wichita KS

16-17 NOWWA Convention, Lincoln NE

MARCH

4 CPOW Conference, Western Slope CO

7 -8 OOWA Conference, Niagara Fall ON

8 POWRA Board Meeting, Morgantown PA

21-22 MPOWR Conference, Duluth MN

25 CPOW Conference, Front Range CO

29-31 VOWRA Conference, Roanoke VA

29-31 NEOWW Short Course, Groton CT

MAY

3 NJOWRA Conference, Atlantic City NJ

11 - 12 O&M Service Provider Program, WOSSA, Tacoma WA

12 POWRA Board Meeting, Morgantown PA

23 -25 COWA Conference, Sacramento CA

JUNE

13-14 O&M Service Provider Program, Brainerd MN

15 -16 POWRA Conference, Doylestown PA

26-29 NEHA Conference, Providence RI

JULY

12 POWRA Board Meeting, Morgantown PA

13-16 FOWA Convention, Daytona Beach FL

SEPTEMBER

13 POWRA Board Meeting, Morgantown PA

OCTOBER

10-13 NOWRA Conference, Cleveland OH

25-27 COWA Conference, Raleigh NC

29-31 WEF Conference, Washington DC

NOVEMBER

1-2 WEF Conference, Washington DC

8 POWRA Board Meeting, Morgantown PA

For the latest updates, visit www.nowra.org.

NETAFIM INTRODUCES DRIPNET PC

The Industry's First Pressure Compensating, Multi-Season Dripperline

Fresno, CA – Netafim USA, the industry-leading manufacturer of micro-irrigation systems introduced yet another revolutionary breakthrough – the DripNet PC. Developed for their Agriculture Division, the DripNet PC combines the best of both worlds – a pressure compensating dripper in a medium-walled tubing. Together these advanced technologies allow irrigation of row crops over hilly terrain with quarter-mile runs at an affordable price.

Developed with the most advanced pressure compensating technology available, DripNet PC operates with a regulation range of 6 to 30-psi. All drippers deliver precise and equal water applications anywhere in the field – irrigating longer runs and undulating fields with high uniformity. DripNet PC also irrigates fields with runs up to a quarter-mile long helping to reduce installation costs – longer runs require less labor with fewer valves and submains needed.

The dripper of the DripNet PC's is designed with the most advanced dripper technology available:

- An extremely large filtration area, which consist of a groove net to prevent penetration of dirt particles into the dripper.

- A self-adjusting, self-cleaning diaphragm to allow for self-cleaning of the drippers throughout the entire irrigation cycle resulting in a uniform flow rate under a wide pressure range.
- Netafim's exclusive Turbonet flow path, an innovative concept that provides the dripper with a very large water passage area, allowing particles to pass freely through - practically eliminating clogging and allowing long-term efficient operation of the irrigation system using all water types.

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INTRODUCING POLYNET FLAT MANIFOLD

Flexible, Retrievable and Portable for Drip Irrigation Systems

Fresno, CA – Netafim USA, the industry-leading manufacturer of micro-irrigation systems has introduced the PolyNet Flat Manifold for their Agriculture Division. PolyNet provides growers a flexible, portable and economical solution. A flat design and small coil size (small enough for one person to handle) makes installation and retrieval easy. Although the coil is small, it holds large amounts of PolyNet footage – fewer fittings are required to connect one coil to another, helping to reduce labor costs. Lateral lines can also be conveniently installed anywhere along the PolyNet – allowing for easy adaptation to rotation crops with different spacings and different field configurations. Plus PolyNet is portable, allowing growers to retrive it and reuse in another field – saving in overall system costs.

Additional benefits include:

- Surface or subsurface applications
- Available in a large selection of sizes: 1", 1.25", 1.5", 2", 2.5", 3" and 4"
- Optional pressure ratings available on several sizes to fit virtually any application
- Compatible with Netafim's New Twist-Lock‰ Start Connector Fittings as well as standard industry dripperline fittings

"PolyNet brings many benefits to the growers – the most important one being reduced costs," said Dennis Hannaford, Netafim's Market Segment Leader for Thinwall Dripperlines. He added, "Fewer fittings are need for installation - reducing labor costs, and PolyNet is retrievable and portable so it can be reused in another field, in another configuration - reducing the cost of the overall irrigation system."

Awarded ISO 9001:2000 Certification by the International Organization for Standardization - Netafim USA is the largest growing division of the Netafim International Group, the pioneer of micro-irrigation technology. With over 39 years in the irrigation industry and global expertise in more than 80 countries, Netafim offers a full-line of products for a variety of markets including agriculture, landscape, greenhouse, nursery, mining and wastewater. Netafim USA is headquartered in Fresno, California. For more information about Netafim USA, visit us at www.netafimusa.com.

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The DripNet PC is retrievable and reusable and available in wall thickness of 13, 15 and 25 mil and internal diameters of 0.636"and 0.875".

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Zabel Introduces a New Division for Engineering and Land Development Support

Zabel Environmental Technology, a leading manufacturer in the onsite wastewater industry, announces the formation of a new division within their corporate structure.

This new division, called the Engineered Systems Group, has been formed to meet the increasing demand of the engineering and land development community for alternatives to existing STEP and decentralized technologies. The Engineered Systems Group will provide tools, resources, products and assistance in the development of small community, subdivision, commercial and single-family residential wastewater treatment systems which require engineering and/or design expertise.

Zabel has long been an industry leader in providing the highest standard of customer service and assistance to all stakeholders in the onsite industry. The Engineered Systems Group will continue this same great tradition by providing assistance and support to Onsite Wastewater Engineers while allowing them to maintain local control and oversight.

For more information regarding the Engineered Systems Group please contact Brian Borders at 1-800-221-5742.

Finally...Another Choice!

In Decentralized Wastewater Systems

Great Customer Service!
Great Support!
Design Assistance!
Quality Products!

"We have managed over a dozen different projects throughout our area that use Zabel equipment. We have found their products and their service to be the best in the industry. We would encourage other stakeholders in the decentralized market to take a closer look at Zabel Environmental."

Jeffrey Cox
IRM Utility,
Baneberry, Tennessee

At ZABEL we are not out to change the way you do wastewater, we are here to help you find onsite solutions.

1-800-221-5742
www.zabelzone.com

ZABEL Environmental Technology®
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Crestwood, KY 40014-1520

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