

# **A New Utility Paradigm**


## **The Decentralized Water Infrastructure**

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# Why I'm Here

- Introduction about an Industry most know little about.....
- Role in the water infrastructure
- Where utility and regulation meet the decentralized industry
- Going forward with a new approach



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### Who We Are

The National Onsite Wastewater Recycling Association (NOWRA) is the largest organization within the U.S. dedicated solely to educating and representing members within the onsite and decentralized industry. NOWRA headquarters are located in Edgewater, Maryland, with constituent local groups throughout the U.S. and Canada.



### What We Do

Providing education and training programs to professionals within this industry, to policy officials, the public, and system owners is the driving force to the work of this organization. Through education, we provide a leadership role in state and federal legislative initiatives to protect water quality and public health. NOWRA's most prominent initiative at this time is the development of a model performance code for use by states and local regulators.

### Why We Are Needed

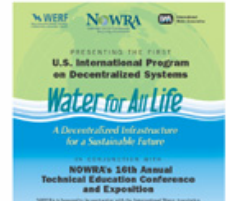
Onsite systems provide wastewater treatment to homes, businesses and industrial centers. This service sector is one of the fastest growing markets within the U.S., Canada, Australia and Eastern Europe. Onsite systems support

### Septic Locator

NOWRA's Septic Locator will connect you with a wastewater professional in your area and our membership list.

[Begin Here!](#)

### Conferences



# Industry Profile

- 55-65,000 industry practitioners in N.A.
- Diverse small to mid-size businesses
  - Annual income - \$50,000 to \$50 million
- 60% Installation/manufacturers
  - Regulators/research-academia
- Offer range of different technologies
  - Greater variance of effluent variables
- Large businesses – into acquisition

# Market Analysis

- 28% of US dwellings use some form of onsite wastewater treatment
- 33% of new construction will be decentralized systems – cluster communities
- 10-20% older traditional septic tanks fail each year due to no management & past perceptions – being viewed as temporary
- 30% Annual Replacement with new systems – requiring management – operations/maintenance

# An Evolution

- 1800's – traditional septic systems dominate wastewater treatment
- 1900's – post-war(s) growth -sewering America = pollutants degrading waterways
- Septic systems in suburban/rural areas
  - oversight by health departments - sanitarians
- 1974 Clean Water Act -construction grants – systems managed by DPW & utilities
  - Message: temporary until centralized sewer arrives
- Septic Impacts – abuse & neglect

# Centralized Infrastructure Management

- 1970's – accelerated growth – new municipal plants regulated by utility industry
  - low customer fees = no contingency funds for future needs
- 1990's – increase regulations - new technology requirements
- Phased out grants program to SRF – financial constraints
- 2000's – \$254 billion in unmet infrastructure
- Emerging role of decentralized systems

# Emerging Role

- EPA 1996 Report to Congress –  
“Properly managed onsite systems –  
permanent part of wastewater  
infrastructure.”
- Industry developed model framework  
for positioning

# An Industry at Work

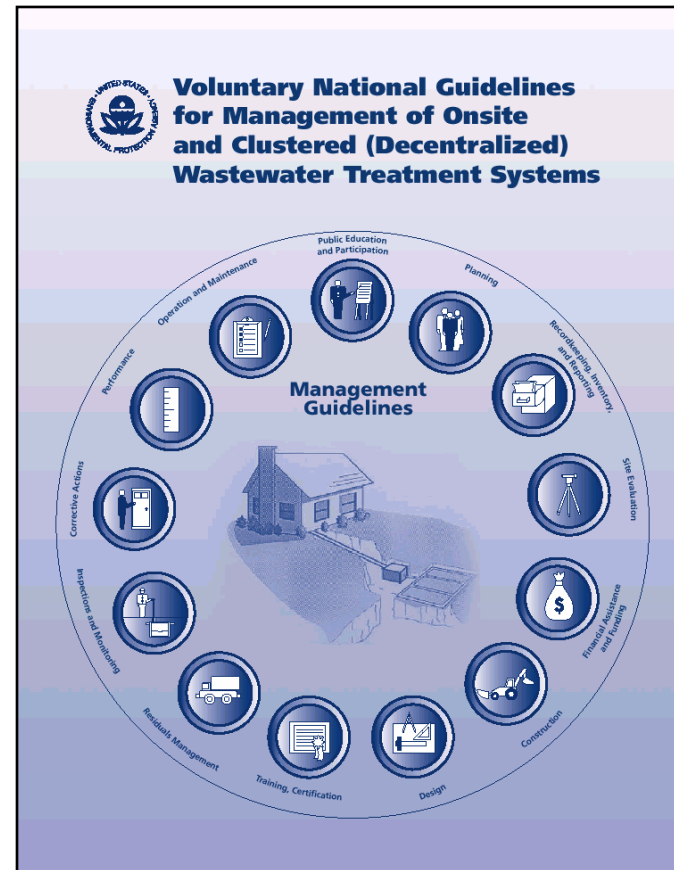
- 1970's/1980's – grant research funds
  - systems for difficult areas – alternative treatment concepts
  - small scale demo projects
- Onsite Industry self-funded technology
- 1990's major technology advancements emerge
- Projects throughout US demonstrate effectiveness in producing better quality effluent than municipal system
- Limitations of municipal systems recognized

# Integrated Infrastructure Options

- Traditional Septic Systems
- Onsite Technology
- Advanced & Aerobic Treatment Units
- Decentralized System Supporting Community
- Distributed/Integrated Systems

# Management Models

- 1 - Homeowner Awareness
- 2 - Maintenance Contracts
- 3 - Operating Permits
- 4 - Responsible Management Entity (RME) Operation and Maintenance
- 5 - Utility Ownership and Management



# NOWRA's Work

- Unmanaged systems represent threat to groundwater
- Addressing Inconsistent regulations unable to deal with new technology
- Catalysts to making EPA's voluntary management program to facilitate sustainability a reality

# NOWRA's Work

- Framework for a Code for the Decentralized Wastewater Industry
- Regulator Training & Education
- Industry Education – Certification
- Legislative Initiatives
- Management Standards/Training (RME)

# The New Models

- Tennessee, Alabama, Delaware, Wisconsin, Minnesota Washington
  - Community Decentralized Systems
  - Private Company Ownership
  - Regulated by State Utility Commissions
- Others emerging on the scene
- Perceived threats to business interests

# Regulating the Decentralized Industry

- Complex – Political
  - Used to control growth & land use
- Origins in public health vs public works
  - Unable to deal with new technology
- Jurisdictional variability with licensing
  - States where no codes exist

# Different Approach to Regulation

## Regulatory Barriers = Economic Impacts

- Changing Community and Political Priorities
- Protect water quality, not just public health
- Seek suitable systems for sites rather than suitable sites for systems
- Ensure that all systems are appropriate for their application and performing as intended?
- Consider area wide risks from all systems and sources rather than just risks from individual systems?
- Strengthen onsite programs to achieve parity and integration with conventional sewerage?
- Provide financing assistance to urban and rural development fairly

# A New Industry Paradigm



# NOWRA's Work - Partnerships

- Alliances with industry groups affected by decentralized industry
- Focus on sustainable & economic infrastructure
- Changing traditional paradigms

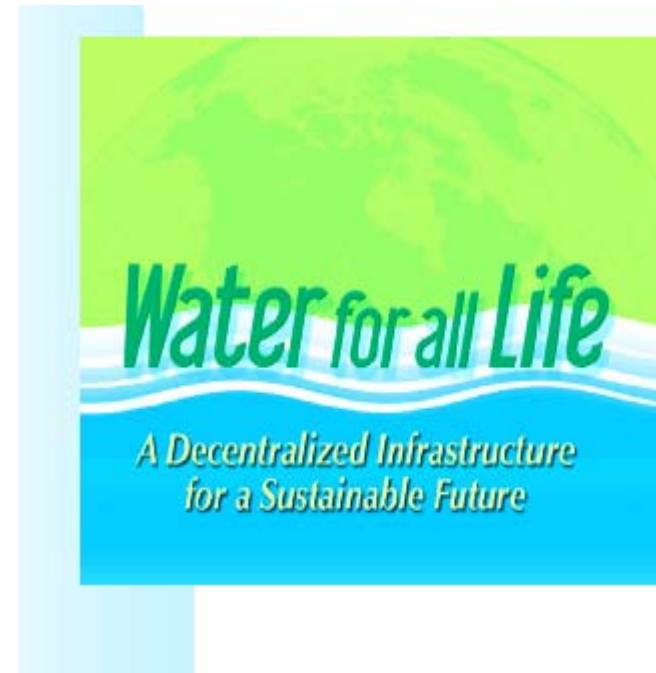
# NOWRA Conference

March 12-14, 2007

Baltimore Marriott  
Waterfront Hotel

International Program on  
water infrastructure for  
sustainability

Sustainable Water  
Resources



# NOWRA

**Making a Difference.....*With People***

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Program – Water for All Life***

***March 12-14, 2007***

***Baltimore Marriott Waterfront Hotel***

***[www. Waterforalllife.org](http://www.Waterforalllife.org)***



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**People Caring About Water**

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