Onsite Wastewater Treatment Industry – Facing the Challenges

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Facing the Challenges

- Solutions for the future
- Enforcement – Leveling the playing field
- Professionalism – Raise industry acceptance
- Training – Continue your education
- I or We - Support your Onsite Wastewater Associations
- Conservation and Protection of Water Resources
Goals for the Onsite Wastewater Treatment System

- Accept the wastewater from the facility
- Remove contaminants from wastewater before it reaches surface water or groundwater
- Disposal vs. reuse
Solutions for the future

- Public perception
- Failed systems
- New Technologies
- Different from a centralized sewer
Onsite Wastewater Treatment Systems?

- Rural and Exurban wastewater infrastructure
- 40%, Wastewater Infrastructure
Onsite Wastewater Treatment System
Failing Onsite System
Range of Technology Options

- Septic tanks
- Aerobic treatment units
- Media filters
- Constructed wetlands
Aerobic Treatment Unit System

- Single-compartment trash tank
- Chlorinator
- Aerobic treatment unit
- Pump tank
- Spray heads
Different from a Centralized Sewer

- Restaurants
- Quick Stops
- Strip Malls
- Residences

- Single or small number of sources
- System must treat peaks and normal flow
Different Management Aspect?

- What does the homeowner want?
  - 24-7-12 service
  - Flush and forget
- Intimacy factor
  - Inputs
  - Alarms
  - Telemetry
Enforcement

- Regulations
- Leveling the playing field
- Consumer protection
- Handles bottom 5% of practitioners and homeowners
Regulations

- Minimum Standard
- Personal Opinion – Shorter is better
- Problem – short rules do not address all ways people will try to get around rules
- History – 1997 rule revisions, a new start
Poor Decisions

- Cutting corners
- Poor professional judgment
Professionalism

- Representative for the industry to public
- Educate homeowner
- Conduct - appearance
- Financially viable
- Responsive
- What role in the industry?
- Defined Services - Contracts
Training

- Training and Certification
- Continuing Education
- Training Centers
- Hands-on Training
Training and Certification

• Range of Licenses
• Installer I
• Installer II
• Site Evaluator
• Maintenance Provider
• Designated Representative
Continuing Education

- Range of options
- Conferences
- General programs
- Targeted programs
Hands-on Training: Digging in the Soil
I or We

- Onsite Association
- Shared voice
- Services for members
- Implement new programs
Texas Onsite Wastewater Association

- Commenting on new regulations
- Legislative voice
- Industry service – Insurance, Equipment
- Certification Programs
Certified Maintenance Provider

- Maintenance provider
- Maintenance contract
- Standards of practice
- Standard contracts
  - Responsibility of parties
  - Operational functions
- Renewal/revocable operating permit
Conservation and Protection of Water Resources

- Groundwater resources
- Streams, rivers, ponds, and lakes
- Bays and estuaries
- Wastewater reuse and recycling
# Water Protection

<table>
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<th>Water Resource</th>
<th>Regulations</th>
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<tr>
<td>Drinking water: sole source aquifer</td>
<td>Wellhead protection</td>
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<td>Groundwater Protection Strategy, Class V Injection Wells</td>
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<td>Fresh water resources: river, lakes and streams</td>
<td>Total Maximum Daily Loads</td>
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<td>Salt water resources: bays estuaries, ocean</td>
<td>Coastal Zone Management Program</td>
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National Guidelines for Management

- 5 “Model Programs”
- Cover new and existing systems
- Surface and subsurface discharge
- Do not supersede existing laws
Program 1: System Inventory/Maintenance Awareness

- Conventional septic systems
- Database of system locations
- Proper siting, installation
- Record, reminder of maintenance
Program 2: Management through Maintenance Contract

- Enables more complex options
- Homeowner contracts with service provider
- Routine maintenance assured
Program 3: Management through Operating Permits

- Performance requirements requiring engineered designs
- Renewable operating permits
- Regular reporting, monitoring
- Homeowner responsible
Program 4: Utility Operation and Maintenance

- "Utility" management entity
- Responsible for O&M, permit
- Routine inspections
- Consistent performance
- Private ownership retained
Program 5: Utility Ownership and Management

- Professional management of all functions
- Consistent with other utility services (gas, electric, phone...)
- Enables area-wide planning
Effluent Quality Considerations

• Wastewater reuse
• Sensitivity of receiving environment
• Development density
Contaminants of Concern

- Organic matter
- Nitrogen
- Phosphorous
- Pathogens
Impaired Watersheds in Region VI

Watershed Management Programs
Water Quality Monitoring
Groundwater Recharge

• Dispersal field
• Percolating water recharges groundwater
• Regional water planning includes recycled water from onsite wastewater treatment system
Wastewater applied in a landscaped bed and yard.
Wastewater Reuse

- Accessibility
- Potential for human contact
- Distribution system
- Plants being grown
Summary

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Thank you for your time.