New Mexico Environment Department
Liquid Waste Program
Training and Certification Business Plan
March 28, 2007 DRAFT #4

Introduction

Liquid Waste Disposal and Treatment Regulation 20.7.3.904 requires NMED to develop a certification program for the following activities by July 1, 2007:

- Site evaluator;
- System designer;
- Installer 1 and Installer 2;
- Wastewater reuse irrigator;
- Inspector;
- Maintenance service provider or septage pumper;
- NMED Liquid Waste Specialist; and
- Homeowner installation.

Section 904.D.1 provides that certifications can be valid for up to three years, that certification renewals require at least 8 hours of continuing education units per year, and that NMED shall establish fees for the initial application and renewal of certifications.

Program Structure

Certification Requirements

Specific requirements for certification are proposed in Table 1. Some of the certification levels specified in the regulations have been either combined or split into separate categories, and the need for an effluent sampler certification has emerged.

Certification Tracking

The NMED Liquid Waste program already tracks CID licensed installers, 3rd party inspectors, and product manufacturer training programs. Discussions are underway within NMED as to what the most appropriate mechanism would be for tracking the entire liquid waste certification program.

Curricula Approval Process

Regulation 20.7.3.904 NMAC creates an Education Steering Committee charged with making recommendations to the NMED Secretary on sponsors, courses and instructors for training programs. The Education Steering Committee is currently identifying suitable curricula that will be recommended for approval by the NMED Secretary as credit towards one or more certification levels. Existing curricula have already been established by national organizations, by other states, and by the Santa Fe Community College. It is hoped that additional curricula within New Mexico will become available as the requirement for training and certification becomes effective. Table 2 lists specific curricula, and the hours of educational credit towards certification levels. The Homeowner Installation Training Manual and exam have been finalized and distributed to NMED Field Offices for implementation.

NMED will submit materials for a 20.7.3 training class for review by the Education Steering Committee. This four hour class, would be taught by NMED Liquid Waste Program core technical staff at Field and District Offices, would include the following curricula:

- Real Poop on Septic Systems (short version), 1 hour credit
- Regulation Overview, 3 hour credit

NMED has developed the following curricula for in-house training:

- The Real Poop on Septic Systems (technical version)
- Wastewater Treatment Basics
- Program History
- Regulation Overview
- Permitting Process
- Site evaluation
- Soils
- Variances
- Guidance and Policy
- Drainfields
- Advanced Wastewater Treatment
- Wetlands and ET systems
- Gray water rules and systems
- Cluster systems
- Liquid waste database
- EGIS
- GPS
- Effluent sampling
- HACH kits
- Basic hydrology and geochemistry
- Meth labs

Table 1. Proposed Liquid Waste Certification Requirements.

Certification Level (s)	**Activity Covered** (citation to 20.7.3 NMAC)	**Proposed Requirement(s) includes passing exams if given**
Homeowner Installation	Installation or modification of septic tank and conventional trench or bed disposal field (401.C, 904.A.3)	NMED homeowner installation training manual and exam
Installer 1; Gray Water Reuse Irrigator	Installation of conventional treatment and disposal systems and holding tanks that do not involve dosing or other mechanical distribution systems (904.B.3.a, 904.C.2)	• CID license*; and • NMED 20.7.3 four-hour training class every 3 years; and • 20 additional hours of approved training every 3 years (may include training required for CID license*)
Installer 2	Installation of all forms of on-site liquid waste systems (904.B.3.b, 904.C.3)	• Installer 1 certification, including valid CID license*; and • 24 additional hours of approved training every 3 years; and • manufacturer training recommended by WTAC and approved by NMED, for the systems they install and maintain (manufacturer training may count towards the tri-annual 24 hours of training)
Maintenance Service Provider	Operation and maintenance of on-site liquid waste systems (903, 904.B.6) System repair or replacement must be done in accordance with Construction Industry Licensing Act.	• NMED 20.7.3 training every 3 years; and • manufacturer training recommended by WTAC and approved by NMED (not required for orphan systems); and • an operations plan approved by NMED that complies with 20.7.3.903; and • 20 additional hours of approved training every 3 years; and • NAWT O&M training; or • PE license with on-site wastewater speciality; or • Wastewater Operator Certification Level??*.

Effluent Sampler	Collect effluent samples for analysis with field instrument or by professional laboratory	• 24 hours of approved training every 3 years
Third Party Inspector 1 (conventional systems)	Property transfer inspections (904.B.5)	• NMED 20.7.3 training every 3 years; and • Installer 1 certification; or • NAWT inspector training; or • PE license with on-site wastewater speciality; or • REHS or RS certification
Third Party Inspector 2 (all systems)	Property transfer inspections (904.B.5)	• Inspector 1 certification; and • manufacturer training recommended by WTAC and approved by NMED (not required for orphan systems); and • Installer 2 certification; or • PE license with on-site wastewater speciality; or • NEHA advanced certification.
NMED Liquid Waste Specialist 1 (technical staff statewide, job duties include programs other than liquid waste)	Review and approval of permit applications, system inspection, review property transfer inspection reports, investigate complaints and outbreaks of infectious disease, voluntary compliance, enforcement (904.A.2)	• NMED inspector training every 3 years; and • NAWT inspector training; and • 20 hours of approved training every 3 years
NMED Liquid Waste Specialist 2 (core-program technical staff)	In addition to functions of Spec 1, track and evaluate effluent monitoring data for advanced treatment systems, review variances, prepare compliance orders, train staff and industry (904.A.2)	• NMED inspector training every 3 years; and • NOWRA A to Z; and • NAWT inspector training; and • NAWT O&M training; and • PE license with on-site wastewater speciality; or • 44 additional hours of approved training every 3 years
Site Evaluator	Evaluate soil and other site conditions (904.B.1)	• NMED 20.7.3 training every 3 years; and • 20 additional hours of approved training every 3 years (may include training required below) and • PE license with on-site wastewater speciality; or • Installer 1 certification; or

		• NEHA basic certification; or • REHS or RS certification; or • Professional Soil Scientist (SSSA or NSCSS); or • SFCC WWTP 150
System Designer 1	Configure conventional on-site liquid waste systems (904.B.2)	• NMED 20.7.3 training every 3 years; and • 20 additional hours of approved training every 3 years (may include training required below); and • PE license with on-site wastewater speciality; or • Installer 1 certification; or • NEHA basic certification; or • REHP or RS certification; or • SFCC WWTP 150
System Designer 2	Configure all on-site liquid waste systems (904.B.2)	• NMED 20.7.3 training every 3 years; and • 20 additional hours of approved training every 3 years (may include training required below); and • PE license with on-site wastewater speciality; or • Installer 2 certification; or • NEHA advanced certification.
Reuse Irrigator	Design, construction, operation and maintenance of wastewater reuse irrigation systems (904.B.4)	• Installer 2 certification; and • manufacturer training recommended by WTAC and approved by NMED, for the proprietary dispersal systems they install and maintain
Septage Pumper	Pumping and cleaning of on-site liquid waste system tanks (904.B.7)	• NMED 20.7.3 training every 3 years; and • 20 additional hours of approved training every 3 years (may include training required below); and • NAWT vacuum truck certification; or • Other criteria approved by NMED
PE license with on-site wastewater speciality	(Adrian and Richard, describe)	• NMED 20.7.3 training every 3 years; and • NOWRA A to Z; and

		• NAWT O&M training; and • NAWT inspector training; and • 20 additional hours of approved training every 3 years

*As used in Table 1,

- CID license includes MM-1, MM-98, MS-1 or MS-3.
- Wastewater Operator certification is described in 20.7.4 NMAC http://www.nmenv.state.nm.us/SWQB/FOT/20.7.4NMAC.pdf.
- NAWT inspector, operation and maintenance, and vacuum truck certifications are described at http://www.nawt.org/.
- NEHA basic certification is described at http://www.neha.org/onsite/.
- NOWRA A to Z training is offered at annual NOWRA conferences http://www.nowra.org/annual_conference.html.
- Approved training means curricula recommended by the Education Steering Committee and approved by NMED.

Table 2. Minimum Requirements to Obtain Liquid Waste Certification.

Curricula	Installer 1	Installer 2	MSP	Effluent Sampler	3rd Party Inspector	NMED LW Spec 1	NMED LW Spec 2	Site Evaluator	System Designer	Reuse Irrigator	Septage Pumper	PE
NMED 20.7.3	X	X	X	X	X	X	X	X	X	X	X	X
CID license	X	X								X		
NAWT Inspector		X	X			X	X				X	X
NAWT O & M		X	X				X					X
NAWT Vacuum											X	
NOWRA A to Z		X					X					X
Additional Hours of Training	20	44	20	20	20	20	44	20	20	20	20	20
Manufacturer Training (may count as additional hours above)		X	X		X					X		
20.7.3.903 operations plan			X									
Other					See Table 1			See Table 1	See Table 1			

Table 3. Approved Liquid Waste Training Credits and Reciprocity for Short Courses and Conferences.

Curricula	Educational Credit Hours*
Training Opportunities for all Certification Categories	
NAWT Inspector	12
NAWT O & M	??
NAWT Vacuum	??
NOWRA Basics of On-Site Systems, A to Z	16
NOWRA other class or conference	hr/hr
SORA conference	6 hrs/day
NEHA conference, on-site wastewater session	hr/hr
NMEHA conference, liquid waste session	hr/hr
NGWA class or conference, on-site wastewater or vadose zone	hr/hr
OSHA approved curricula* for: • trenching and excavation safety; • crane, derrick and hoist safety; or • confined spaces safety	hr/hr
Additional Training Opportunities for Installer 2, NMED LW Spec 2, and PE	
WTAC meeting	4 hrs/day
Subscription to: • Small Flows Quarterly; and • On-Site Journal	4 hrs/year

*As used in Table 3,

- hr/hr means hour per hour reciprocity credit.
- OSHA approved curricula means any class offered through either the NMED Occupational Health and Safety Bureau or through the Federal Occupational Safety and Health Administration Training Institute regarding the subjects listed in Table 3.

Table 4. Liquid Waste Training Curricula.

Curricula	Description	Status
NMED homeowner installation manual and exam	Manual and exam required for one-time approval of homeowner installation permit	Approved
NMED Real Poop, short version	Introduction to on-site wastewater management in N.M. with emphasis on health and environmental issues. Can be offered as stand-alone one-hour class, or as part of four-hour 20.7.3 class	Pending
NMED 20.7.3	Four-hour class, includes Real Poop, short version	
NAWT Inspector	Training and certification for septic system inspectors	??
NAWT O & M	Training and certification for operation and maintenance of advanced treatment systems	??
NAWT Vacuum	Training and certification for vacuum truck operators who pump septage	??
NOWRA A to Z	Basics of On-Site Systems	??
SFCC WWTP-105	Basic wastewater treatment concepts, types of on-site treatment systems, site specific applicability, O&M requirements, state and federal regulations	??