



**CONNECTICUT ONSITE WASTEWATER RECYCLING ASSOCIATION  
SUPPORTING CONNECTICUT AND OUR ENVIRONMENT**

**P.O. BOX 116**

**EAST HAMPTON, CT. 06424**

**PHONE: 860-267-1057 FAX: 860-267-1557**

E-mail us at [Info@cowra-online.org](mailto:Info@cowra-online.org)

Visit COWRA on line at [www.cowra-online.org](http://www.cowra-online.org)

## **December 2008**

# **HAPPY HOLIDAYS**

## **Letter from the President**

### INSIDE THIS ISSUE

Letter from the  
President

New Member Profiles

Public Health Code  
Advisory Committee  
2009

Article  
Good Drawings  
Communicate  
Professionalism  
By John Laudano

Date to Remember  
April 25, 2009

We are accepting  
applications for our  
Installer and Cleaner  
schools

COWRA Brochures  
are available to our  
Members at \$22.50  
per 100, including  
shipping

Seasons Greetings and Happy New Year to all!

Hope all is well now that the cold weather is upon us.

Nice to see the price of fuel has come down finally. Hopefully it will help the economy.

I know it's been a slow year for most of you, but hang in there! It is bound to get crappier!

My dad always said in good times or bad, people have to eat and people have to dispose of their wastes and that's where our trade shines!

Although the economy is slow, hopefully we can all make it through to better days. I wish you all well at these times and always.

Sincerely,

Your President  
Frank Talarico

## **NEW MEMBER PROFILES COWRA WELCOMES**

**Peter Christopher** joined us in October 2008. Peter is the owner of Fairfield County Home inspection LLC. His company provides complete home inspection services. His services for septic inspection evaluate the entire leaching system including pumping, septic tank evaluation, distribution, soils, surface water, system performance and surfacing effluents. Peter is licensed with the State of Connecticut and has been in business for many years. For more information about Peter's company visit him on the web at:

[www.fairfieldcountyhomeinspection.com](http://www.fairfieldcountyhomeinspection.com)

**Jim Costello** joined us In November 2008. Jim is a retired engineer who has begun a new business of computer consulting and website design. COWRA hired Jim when we needed to rebuild our new website and his work on the site speaks for itself. He built our site for a fraction of the cost of other design estimates. To reach Jim Costello about a website for your company, email him at:

[jimcostello204@comcast.net](mailto:jimcostello204@comcast.net)

**Jay Daymon**, of T. M. Wright Excavating Inc., joined us in December 2008. Jay's membership will be replacing his father-in-law Thomas M. Wright, who, sadly, passed away last July. Thomas Wright had been a member from the beginning of this organization. Jay has been with T. M. Wright for 30 years. T. M. Wright Excavating has been in the installation business for over 60 years. We welcome Jay to COWRA and we offer our condolences to him and the rest of the family.

## New Members Profile Continued

**Dan Troiano** joined us in December. Dan is the owner of C. Troiano & Sons Excavators which is located in North Branford CT. Dan is a licensed installer. His services include septic Installation, excavation and site work. C. Troiano & Sons has been in business for over 50 years. Dan will be sending one of his employees through COWRA's Installer School in 2009.

## Code Advisory Committee

On December 1, 2008 the Code Advisory Committee met to discuss the new Connecticut Public Health Code that will come into effect in 2009. COWRA Board Member Bill Hall, of Kaiser-Battistone, and Board President Frank Talarico, of Frank Talarico and Son, are members of the Code Advisory Committee and attended the meeting. Following are some of the changes to be implemented in the 2009 Code.

### Section V. Septic Tanks:

#### Subsection A:

Concrete septic tanks shipped prior to 14 days after date of manufacture shall include supporting documentation that tank reached minimum strength prior to shipping.

Non-concrete tanks: Approved tank manufacturers must keep updated specifications and dated installation instructions on file with the DPH.

Clarify riser retrofits only required over cleanout manhole(s), not over inlet & outlet baffles, unless effluent filter is provided, in which case a riser over the outlet baffle is required.

Tanks in paved areas shall have riser extended to grade. Stipulate that riser and manhole extensions to grade shall be designed and constructed to prevent storm water infiltration

Inlet pipe extensions >15 inches to cleanout manhole: Support pipe or use PVC Schedule 40 approved piping.

#### Subsection B:

Single-family home septic tank capacities: The required minimum septic tank capacity for single-family residential buildings shall be 1000 gallons for the first 3 bedrooms, and 125 gallons of additional capacity for each bedroom beyond three. Note: Septic tank sizing for 4 bedrooms and lower remains the same. 5 bedrooms could use 1250-gallon tank, 6 or 7 could use 1500-gallon tank.

### Section VIII Leaching Systems:

Clarify Reserve areas do not have to meet MLSS

Subsurface sewage disposal system design plans that include retaining walls shall provide retaining wall information and specifications including type of structure, ground water control mechanisms (drains, weep holes), footings and a cross section showing existing and proposed grades. Retaining walls cannot have groundwater drains that violate separating distance provisions in Table #1. Retaining walls within 50 feet down gradient of a leaching system shall not act as a hydraulic barrier to groundwater and wastewater movement in the natural occurring soil. Retaining walls off the ends of leaching systems shall not be subject to possible seepage through the wall, and the inner edge of the retaining wall shall be at least 10 feet from the leaching system.

Add language about leaching systems under vehicular travel areas: Require 1 foot minimum cover over stone trenches, stipulate precast concrete structures shall be H-20 load rated, and stipulate proprietary systems shall only be installed in vehicular travel areas if authorized by the manufacturer and require proprietary companies to provide DPH-dated supporting documentation to be kept on file.

Clarify crediting of leaching row areas that do not meet center-to-center spacing requirements: end connections on trenches.

Eliminate requirement to use filter fabric in proprietary leaching systems that is labeled with the fabric manufacturer's name & ID #. Require proprietary leaching system be marked/labeled with DPH-approved identification information (i.e., company name, model#) by July 1, 2009.

Interconnection ends sections on level leaching systems and the extension on L-shaped or U-shaped leaching systems can be credited, however the length of the main row(s) shall only be measured to the center of the interconnecting segment or extension. Note that U-shaped, L-shaped or box leaching system configurations can be considered, when MLSS is not applicable or when the groundwater hydraulic gradient is 0%. U-shaped, L-shaped or box leaching system configurations may represent a concern for non-uniform distribution of effluent on MLSS application lots with non-flat hydraulic gradients.

#### Subsection B leaching Trenches:

Stone aggregate must meet No. 4 or No. 6 stone aggregate gradation.

#### Subsection C Leaching Pits:

Stone aggregate must meet No. 4 stone aggregate gradation.

#### Subsection D Leaching Galleries:

Stone aggregate must meet No 4 stone gradation.

Require gallery invert pipe be raised and placed in stone whenever stone is placed on top of galleries for additional ELA credit. Pipe shall have at least 2 inches of stone cover and shall be higher than a normal gallery pipe elevation by least the depth of stone on top of the gallery.

#### Subsection E Proprietary Leaching Systems

ASTM C33 Sand: Eliminate 3% passing maximum reference. Sand back-fill must minimally meet select fill gradation specification for #100 & #200 sieve.

Stone utilized in proprietary leaching systems must meet stone aggregate requirements, and No. 4 or No. 6 Stone aggregate gradation.

----

These are a few of the changes that will be in the new 2009 Connecticut Public Health Code. COWRA will notify Members when the new Code is released and make it available on our website.

## Good Drawings Communicate Professionalism By John Laudano

"Say what you mean and mean what you say." My Dad said that to me when I was a young person of ten or twelve years old. His fatherly guidance impressed on me the importance of being able to communicate in a way that would make my ideas clearly understood.

My father was talking about communicating verbally but his advice applies to all types of communication. When communicating by writing or speaking, or through artwork and drawings, we need to do it clearly and understandably. This is important, whether you are selling a service or presenting a drawing of a septic system to your local Sanitarian.

In designing and drawing a septic system you are communicating an idea, a solution to a problem. As a septic system installer and designer you are also a draftsman creating a drawing that communicates your thoughts. You may be the best installer, have the best solution, and the best skills, but if you can't put your ideas on paper, in a way that someone else can understand, you will have a difficult time getting permits and getting the job.

Nobody expects that you should make drawings that are as detailed and precise as a drawing made by a Professional Engineer or a professional draftsman. But you are expected to supply a drawing to your local Health District that contains all of the most important and basic information.

Those of us who are sanitarians see a lot of drawings; some are excellent and some are very poor. There are some simple things you can do to ensure your drawings reflect professional skills and knowledge.

Whether you are making a drawing for a replacement septic system or are making a drawing to satisfy Section 19-13-B100a of the Health Code, your approach should be the same. Detail is important and necessary.

My first suggestion for making an adequate drawing is to start with a big enough piece of paper. Let me say this one more time- *start with a big enough piece of paper, please*. You'll make reading and reviewing the drawing easier for everyone; it will even be easier for you to make the drawing. Notebook paper (8 1/2" x 11") might be big enough for a drawing

of a tank or D-box replacement but it is not big enough to show an entire replacement septic system.

A better choice is to use 11" x 17" paper. And, if you prefer graph paper, some of the office supply stores like W.B. Mason have inexpensive pads that are ideal for the drawings that you'll be making. For less than \$25 you can have enough paper to last your whole career.

Don't worry that you won't be able to fax 11" x 17" size paper; your local sanitarian doesn't want a faxed copy anyway. Faxed drawings are difficult to read and, if the original isn't dark enough, details in the drawing become lost or unreadable. Besides, smaller paper doesn't leave enough room for everything that must be on the drawing. Mail your sanitarian a copy of your drawing or take it to the Health District personally. And please, make an appointment so that the sanitarian can give you enough time to cover all of your concerns. We have lots of things to do just like you do.

Before you mail it or take it to the sanitarian, make sure it covers all of the details. At a minimum you need to show the following: the house, the well(s) or public water line, the existing septic system, the property lines, driveways, sheds, pools, streams, ponds, wetlands, footing drain outlets and, of course, the proposed septic tank and leach fields. You also need to show the test holes, perc holes, spot elevations for each of them and a benchmark.

The drawing you make should be relatively proportionate but it does not need to be to-scale; nobody should expect to be able to hold a draftsman's scale to your drawing and verify that every object on it is precisely shown. There is no need for you to make a scale drawing; the dimensions you put on the drawing are what matter and the signature you put on the drawing affirms your confidence in those dimensions. Your drawings become the official documents that septic system approvals and permits are based on.

If MLSS applies to your design, you will need to show where and how you calculated the slope. Remember that the slope that matters is calculated from the proposed leach field to a point down-slope between 25 and 50 feet away. Show the locations and spot elevations that you used in your calculations.

Before you fill the entire paper with the graphic part of the drawing, leave enough space for notes; the property's address, your license and phone or fax numbers, and for your name, date and signature.

The notes that must be on the drawing include the number of bedrooms, calculations for square footage requirements and for MLSS, minimum bottom elevations for the leach field (more on this below) and a statement of whether or not there are wells in the vicinity of your proposed septic system.

When you calculate the bottom elevation of the proposed leach fields, it is the entire width of the leach field product that must meet the minimum separating distance to redox, water, ledge, or atypical ledge. See Figure 1. Your calculations must be based on the elevation of the ground (see A in figure one) at the upslope edge of the stone beside the leach field product, *not* at the centerline of the row. In order to determine the proper elevations and location of the proposed leach fields, you may find that staking the leach field location on the property, *before* making the drawing, will be helpful.

If you ask, some sanitarians may be willing to meet you at the job site to give guidance in establishing elevations. But don't anticipate that the sanitarian will make the drawing for you- that's not their role. The sanitarian can't make the drawing and then approve that same drawing. If the sanitarian makes the drawing that then gets approved, he or she will be accepting liability that is not theirs; it is yours. You are the paid professional on the job. The health official's role and purpose is to verify and confirm that what is being proposed and installed meets the regulatory and statutory requirements.

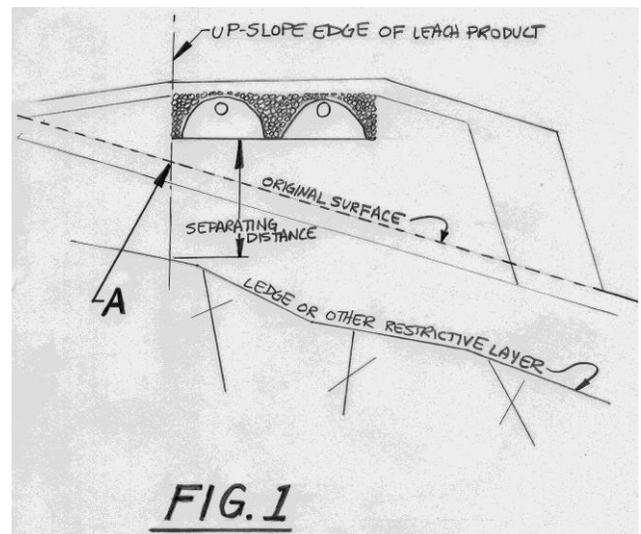
Some Health Districts have example drawings that you can use as a guide. Others may be willing to show you examples of good (or bad) drawings that have been submitted to them in the past.

Your local sanitarian can probably provide you with, or direct you to, someone who can get you plot plans for the job you are working on. Plot plans may be in the Health District's files or they may be available from the Health district's GIS system. Or, most town tax assessor's can make you a photo copy or GIS plot of the property you are working on. These maps

can be enlarged and are a good starting point for making a quality drawing. Some towns have very detailed maps that show wetlands, the location of the house and outbuildings, streams, etc. Often they are free or available for the price of the copy. Some towns even have individual property maps on their web sites. By using a map from a town agency as a base map you will at least have the dimensions and locations of the property's boundary to start with.

Another reason for making a detailed drawing is that, periodically, drawings need to be reviewed by the State Health Department in addition to being reviewed by your local sanitarian. The most common reason for review by a higher authority is when a *Well Separation Distance Exception* is required. Only the State Health Department can grant permission for a septic system to be less than 75 feet from any well; local health departments have no authority to grant well exceptions. When a well exception is needed, your drawing will be reviewed by the engineers at the State Health Department. They expect a quality drawing with detailed information. Your drawing must have clear and specific information for the property you are working on and for the adjoining properties. Your drawing needs to locate all of the neighboring wells and/or septic systems that will be impacted by your proposed design. If your drawing is inadequate it will be rejected and then you will need to start over again. Consider the amount of delay that will be involved; approval will be faster if you submit a good drawing than it will be if you make a sloppy drawing and have to resubmit it. Also, consider how you (and the local sanitarian) will explain the delay to your customer.

Knowing the details and being able to communicate them well are two different things. A true professional can do both.



## DATES TO REMEMBER

The Pumper & Cleaner Environmental Expo begins in Louisville Kentucky on February 25-28, 2009.

For a complete list of educational seminars visit them on the web at: [www.pumpershow.com](http://www.pumpershow.com)

## INSTALLER & CLEANING/PUMPER SCHOOL

Registration for COWRA's Installer & Pumper/Cleaner School's has begun. Registration forms must be returned by January 9, 2009.

## SAVE THIS DATE

April 25, 2009

COWRA will be holding our 2009 Annual Meeting on April 25, 2009 at the La Trattoria in Canton, Connecticut. Many of you may remember comedian David Reilly, who entertained us a few years back. He has graciously agreed to entertain us once again, as our industry provides him excellent material. Don't miss the laughs! Details will be mailed to all of you.

## MEMBERSHIP RENEWAL

Please fill out your 2009 Membership Renewal Form and return it promptly; the Form is enclosed.



**COWRA**  
**P.O. Box 116**  
**East Hampton, CT. 06424**  
Phone: (860) 267-1057  
Fax: (860) 267-1557  
[info@cowra-online.org](mailto:info@cowra-online.org)  
[www.cowra-online.org](http://www.cowra-online.org)



**Happy Holidays and a  
Wonderful New Year  
To All Our Members**

## **FORWARDING SERVICE REQUESTED**

**UPDATES!!** Registration Information for 2009 State Installers & Cleaners-Exams:  
You **MUST** contact the Department of Public Health to register for the Installers & Cleaners Exams.  
Attendance at the COWRA Installer School **DOES NOT** register you for the State exam.  
Please contact D.P.H. at 860-509-7559 for any information pertaining to your results and license.  
You may also contact them by going to [www.dph.state.ct.us/licensure/apps/subsew.pdf](http://www.dph.state.ct.us/licensure/apps/subsew.pdf)

**PLEASE NOTE:**  
COWRA is accepting application for our Installers and Pumper/Cleaner schools which will be held in January - February of 2009,  
(See application inserts in this newsletter for details).

### **2009 Examination Schedule Subsurface Sewage Installer/Cleaner**

<b>Exam Dates</b>	<b>Application Deadlines</b>
March 06, 2009	January 30, 2009
June 19, 2009	May 08, 2009
September 11, 2009	August 07, 2009
December 18, 2009	November 13, 2009

**Connecticut Onsite Wastewater Recycling Association**  
For a copy of COWRA's 2009 Study Guide please call (860 267-1057)