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**August 2015
Onsite Wastewater Unit
Newsletter No. 38**

Certification Renewal

All onsite certificates expire December 31st of every odd numbered year. All current certifications will expire on December 31, 2015. Renewal information will be mailed out in early November.

Professional Development Hours

Below is a list of current opportunities to obtain professional development hours if you need them for renewal. Remember, if you obtained your initial certification in 2014 you will need 12 professional development hours. If you obtained your initial certification in 2015, for the first renewal, you will need 6 professional development hours. Thereafter you will be required to obtain 12 PDH in order to renew. You may carry over a maximum of 6 professional development hours in excess of the required into the next renewal period.

Location	Date	Title	Registration Information	Approved PDH
Dakota City	Sept 17, 2015	NOWWA Fall Training	NOWWA 402-476-0162	3
Lincoln	Sept 19, 2015	NOWWA Fall Training	NOWWA 402-476-0162	3
Valentine	Sept 21, 2015	NOWWA Fall Training	NOWWA 402-476-0162	3
Ogallala	Sept 23, 2015	NOWWA Fall Training	NOWWA 402-476-0162	3
Norfolk	Oct 12, 2015	Vulnerable Landscapes	UNL Extension 402-472-9390	6
Norfolk	Oct 13, 2015	Layout of Onsite Systems	UNL Extension 402-472-9390	6
Broken Bow	Oct 2, 2015	NOWWA Fall Training	NOWWA 402-476-0162	3
Holdrege	Oct 28, 2015	NOWWA Fall Training	NOWWA 402-476-0162	3
Scottsbluff	Dec 1, 2015	Vulnerable Landscapes	UNL Extension 402-472-9390	6
Scottsbluff	Dec 2, 2015	Layout of Onsite Systems	UNL Extension 402-472-9390	6
North Platte	Dec 3, 2015	Vulnerable Landscapes	UNL Extension 402-472-9390	6
North Platte	Dec 4, 2015	Layout of Onsite Systems	UNL Extension 402-472-9390	6
ARDC-Mead	Dec 10, 2015	Vulnerable Landscapes	UNL Extension 402-472-9390	6

When training is approved for PDH, it is put on our website (<http://deq.ne.gov>) under Onsite Program, Continuing Education, Programs Approved for Continuing Education Hours.

**U.S. Environmental Protection Agency's Third Annual
SepticSmart Week is September 21 – 25, 2015!**

Did you know that one-quarter of all U.S. homes have septic systems? EPA's SepticSmart initiative is a nation-wide public education effort that aims to inform homeowners living on properties serviced by septic systems on the importance of properly maintaining their septic system and provide valuable resources to help homeowners make important decisions regarding their wastewater management needs. The initiative also provides resources for outreach organizations and government leaders who seek to promote this message locally.

For more information on the **SepticSmart** Program, please visit the EPA web site at: <http://water.epa.gov/infrastructure/septic/septic-smart-week.cfm>, and for additional information at: <http://water.epa.gov/infrastructure/septic/septic-smart.cfm>.

These web pages contain information for homeowners on septic system maintenance and proper care, as well as information on additional resources. There is also an Outreach Toolkit, with printable PDF files of public education materials for your use and for distribution to customers and the general public. Take A Look!

Gravelless Chambers:
Determination of Inside Bottom Width, Calculation of Effective Width,
and Calculation of Soil Absorption Area

This issue was last discussed in detail in the January 2014 edition of the Onsite Wastewater Newsletter. There still appears to be some confusion within the Nebraska Onsite Wastewater community regarding the NDEQ's accepted method for determining the "inside bottom width" of gravelless chambers, calculating the "effective width" of various makes and models of chambers, and calculating the soil absorption area based on the effective width.

1. The determination of inside bottom width and effective width for gravelless chambers is used when filter material (crushed rock, gravel, tire chips, etc.) **IS NOT USED** for backfill around the chambers, and the chambers are backfilled with the native soil material from the trench area. See Title 124, Chapter 14, Section 018.02B.
2. When filter material **IS NOT USED** in the trench, the "effective width" of the chambers is equal to the actual "inside bottom width" of the chambers multiplied by 1.5.
3. Calculation of the soil absorption area is then determined by multiplying the "effective width" of the trench by the total length of all trenches. For example:

Inside Bottom Width of Chamber	Multiply By 1.5	Effective Width of Chamber	Number Of Trenches	Length Of Each Trench	Total Trench Length	Soil Absorption Area
29 inches or (2.42 feet)	X 1.5 =	43.5 inches or (3.63 feet)	3	60 feet	(3 x 60) 180 feet	3.63 x 180 = <u>653.4 square feet</u>

4. The soil absorption area calculated above must be at least as large as the required soil absorption area, as determined in Title 124, Chapter 14, Section 019. The required soil absorption area is based on the design flow (gallons per day) and the soil percolation rate (minutes per inch).
5. When filter material is used in the trench backfill, the actual trench width is used to calculate the soil absorption area. See Title 124, Chapter 14, Section 017.03.

In order to standardize gravelless chamber measurements and avoid confusion on field measurements, the NDEQ Onsite Wastewater Unit has conferred with the manufacturer's representatives on a list of standard gravelless chamber width dimensions. **These dimensions are to be used for the Inside Bottom Width of each make and model of chamber listed below.** For any chambers not listed, please contact the NDEQ Onsite Wastewater Unit.

Gravelless Chamber Make / Model		Inside Bottom Width <i>Inches (Feet)</i>	Effective Width <i>Inches (Feet)</i>
Infiltrator	Quick4 Standard	27" (2.25')	40.5" (3.375')
	Quick4 High Capacity	29" (2.42')	43.5" (3.625')
	Quick4 Equalizer 36	19" (1.58')	28.5" (2.375')
	Quick4 Equalizer 24 HD	13" (1.08')	19.5" (1.625')
	Quick4 Equalizer 24 Low Profile	12" (1.00')	18" (1.00')
Infiltrator	Quick4 Plus (Std., HC, & LP)	29" (2.42')	43.5' (3.625')
	Quick4 Plus Equalizer 36 LP	19" (1.58')	28.5" (2.375')
Infiltrator	High Capacity H-20	29" (2.42')	43.5' (3.625')
ADS	Arc 18	13" (1.08')	19.5" (1.625')
	Arc 24	19" (1.58')	28.5" (2.375')
	Arc 36 (Std., HC & LP)	29" (2.42')	43.5' (3.625')
BioDiffuser	11" Standard	27" (2.25')	40.5" (3.375')
	14" HC & 16" HC	29" (2.42')	43.5' (3.625')
	Bio 2	12" (1.00')	18" (1.00')
	Bio 3	19" (1.58')	28.5" (2.375')

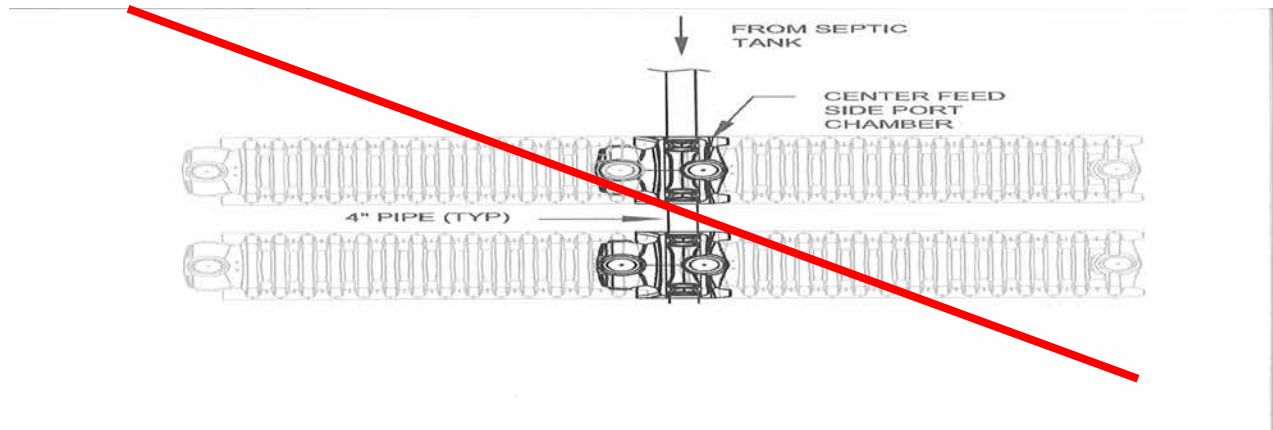
Bundled Expanded Polystyrene

The effective width of the trench for a system using bundled expanded polystyrene synthetic aggregate contained in high-strength polyethylene netting may be up to 1.5 times the maximum outside width of the bundle if the bundle is used **without** filter material. If filter material is used, the width of the trench is used to calculate the total effective trench bottom area. The effective width of the trench cannot exceed five feet for design purposes.

Effluent Distribution

Effluent may be gravity distributed to the soil absorption system through the use of a distribution box, drop box or header pipe.

Effluent **may not** be distributed through a center feed side port chamber as shown in the picture below.



Reconstruction or Modifying a Septic System

An existing onsite wastewater treatment system must meet the current design requirements of Title 124 if the system is being replaced, reconstructed, altered or modified. If you replace a septic tank, the entire septic system, including the drainfield, must meet current requirements. If you add on to the drainfield, the tank must meet current size requirements, to include setbacks. When you register a septic system as a modification, all the required information on the registration form must be filled out or the system cannot be registered.

Underground Injection Control Authorization

All septic systems having the capability to accept sanitary waste generated by 20 or more persons, or having a design flow of greater than 1,000 gallons per day, may be subject to Nebraska Administrative Code Title 122 – Rules and Regulations for Underground Injection and Mineral Production Wells.

Floor Drains

Discharge of motor vehicle wastes or maintenance shop wastes to a septic system or to a soil absorption system is prohibited. The connection of a floor drain from a maintenance shop, motor vehicle and equipment repair shop to a soil absorption system is prohibited.

Soil Absorption Systems in Fill

A soil absorption system may not be installed in fill, except when the fill material is sand, or when the bottom 12 inches or more of any trench or bed is located in undisturbed native soil below the fill. When constructing a system in sand fill, sufficient time shall be allowed after placement of the fill, or sufficient compaction effort applied to the fill to prevent settlement after the system is installed.

IMPORTANT PROGRAM INFORMATION

84-30-29

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