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## **NORTHWEST ON-SITE WASTEWATER TRAINING CENTER**

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# **ON-SITE SEWAGE SYSTEMS 2009 - 2010 Class Schedules**

**Sponsored by:** Washington On-site Sewage Association (WOSSA) and the Washington State Department of Health

**In Cooperation With:** Washington State University

The training center is located at the  
Washington State University Research & Extension Center  
7612 Pioneer Way E., just west of Puyallup, Washington

WOSSA  
PO Box 9279  
Tacoma, WA 98490-0279



## CLASS DESCRIPTIONS:

### GENERAL CLASSES FOR ALL ON-SITE SEWAGE PROFESSIONALS & INTERESTED PARTIES

#### **Onsite 101: Basics of On-site Sewage #1 *(Revised)***

- ❖ General definitions
- ❖ Regulations
- ❖ General soils
- ❖ Roles and responsibilities
- ❖ General system information
- ❖ Microbiology of sewage
- ❖ Basic mathematics
- ❖ General safety issues

#### **Onsite 201: Using & Interpreting WAC 246-272-A**

- ❖ An in-depth look at WAC 246-272-A
- ❖ Organization
- ❖ What it says/intends
- ❖ Includes brief discussion of waivers
- ❖ Interpretation of various requirements
- ❖ Review of changes
- ❖ How was it developed
- ❖ What it doesn't say/intend

**Prerequisites:** *Onsite 101 & 102*

**Day one**

#### **Onsite 201-Technology Guidance (RS&G) Update *(NEW)***

- ❖ Discussion of status of guidance documents (RS&Gs - Recommended Standards & Guidance) developed using the Technical Review Committee for various technologies
- ❖ General information on each RS&G, including the latest one on subsurface drip systems
- ❖ **Worked examples with designs completed and reviewed in class**

**Prerequisites:** *Onsite 101 & 102*

This program will be combined with Onsite 201

### CLASSES FOR DESIGN PROFESSIONALS

#### **Design 101: Principles of Designing #1 *(Revised)***

- ❖ Total design package
- ❖ Construction inspections
- ❖ As-built drawings
- ❖ Design development steps
- ❖ Final inspections
- ❖ Operation manuals

**Prerequisites:** *Onsite 101 & 102*

#### **Design 103: Site Evaluation & Assessment *(Revised)***

- ❖ Water table assessment
- ❖ Advanced soils
- ❖ **Prerequisites:** *Onsite 101 & 102; Design 101 & 10*
- ❖ Landscape assessment
- ❖ Field visit - see test pits

*D-109 Design Siting may be substituted for this class*

#### **Design 105: Design of Pressure Distribution Systems**

- ❖ History & application
- ❖ Design steps & concerns
- ❖ Monitoring/Maintenance
- ❖ Principles of operation
- ❖ Construction concerns
- ❖ Problem-solving

**Prerequisites:** *Onsite 101 & 102; Design 101 & 104*

#### **Onsite 102: Basics of On-site Sewage #2 *(Revised)***

- ❖ Characteristics of domestic wastewater
- ❖ Review of alternative systems
- ❖ Summary of system components

**Prerequisite:** *Onsite 101*

#### **Onsite 202: Proprietary Systems *(Revised)***

- ❖ Different Proprietary systems including: **gravelless, aerobic, packed-bed filters & Glendon** systems
- ❖ Theory relating to the operation of different technologies
- ❖ Washington State requirements/allowances
- ❖ Design, installation & monitoring requirements/suggestions
- ❖ Brief discussion of each proprietary system permitted in Washington State

**Prerequisites:** *Onsite 101 & 102*

#### **Onsite 204: Electrical Control Panels *(NEW)***

- ❖ Description purposes of control panels
- ❖ Description of how different panels work, how timers are set, etc.
- ❖ Presented by the primary companies marketing and/or manufacturing panels for use in Washington State
- ❖ **For those** wanting to know about the different panels used

**Prerequisites:** *Onsite 101 & 102*

#### **Design 102: Exploring & Understanding Soil**

- ❖ Soil texture & structure
- ❖ Soil color
- ❖ Soil forming factors
- ❖ Water movement in soil
- ❖ Wastewater treatment in soil
- ❖ Hands-on field texturing

**Prerequisites:** *Onsite 101 & 102*

#### **Design 104: Basics of Designing #2**

- ❖ Stub-outs, building sewer
- ❖ Collection/transmission
- ❖ Drainfield design options
- ❖ Septic tanks theory & design
- ❖ Drainfield design theory
- ❖ Disposal/discharge options
- Prerequisites:** *Onsite 101 & 102; Design 101 & 102*

#### **Design 106: Design of Mound Systems**

- ❖ Description & history
- ❖ System components
- ❖ Expected treatment
- ❖ Principles of operation
- ❖ Location requirements
- ❖ Design steps & concerns

**Prerequisites:** *Onsite 101 & 102; Design 101, 102, 104, & 105*

### **Design 107: Design of Sand Filter Systems (UPDATED)**

- ❖ Different types - intermittent, recirculating, sand-lined trench
- ❖ Principles of operation    ❖ System components
- ❖ Expected treatment        ❖ Design steps & concerns

**Prerequisites:** *Onsite 101 & 102; Design 101, 102, 104, 105*

This class may be combined with D-106 Mounds

### **Design 109: Matching System to Site Conditions**

- ❖ Process for making the best selection of a system of treatment and disposal components based on the soil and site conditions found during the site's evaluation

**Prerequisites:** *Onsite 101 & 102, Design 101 through 108*

### **Design 301: Design of High Strength Waste Systems**

- ❖ Definition of high strength waste    ❖ Loading rates
- ❖ Affects on design choices
- ❖ Hints on designing for different sources of waste

**Prerequisites:** *Onsite 101 & 102, Design 101, 104*

### **Design 108: Design of Alternative Systems (NEW)**

- ❖ Brief description of design requirements for most alternative systems permitted in Washington State, including mounds, sand filters, gravelless technologies, ATUs, disinfection, etc.
- ❖ **For those** who don't need the design detail found in other design classes pertaining to alternative systems
- ❖ Does not include pressure distribution

**Prerequisites:** *Onsite 101 & 102; Design 101, 102, 104*

### **Design 201: Design of Subsurface Drip Systems (NEW)**

- ❖ Theory of subsurface drip systems
- ❖ What the Washington State guidance documents say
- ❖ Detailed discussion of design procedures of different types of drip systems, presented by companies marketing them

**Prerequisites:** *Onsite 101 & 102, Design 101 through 104*

### **Design 302: Design of Large On-site Sewage Systems**

- ❖ Flows
- ❖ Requirements of regulations and guidance document
- ❖ Other design hints

**Prerequisites:** *Onsite 101 & 102, Design 101 & 104*

### **Install 101: Basics of Installing #1**

- ❖ Certification requirements
- ❖ Safety concerns/issues
- ❖ Installing conventional gravity systems
- ❖ Specific authorities & responsibilities
- ❖ Equipment requirements
- ❖ Material requirements

**Prerequisites:** *Onsite 101 & 102*

### **Install 103: Basics of Installing #3**

- ❖ Mounds
- ❖ Sand filters
- ❖ Disinfection
- ❖ Gravelless systems
- ❖ Aerobic systems
- ❖ Other systems

**Prerequisites:** *Onsite 101 & 102; Install 101, 102*

### **Install 202: Contemporary Installation Issues (NEW)**

- ❖ Discussion of wide variety of contemporary installation issues
- ❖ Discussion led by panel of installers
- ❖ Class participants will determine issues - **Please note issues you would like discussed on the registration sheet!**

### **Install 102: Basics of Installing #2**

- ❖ Pressure distribution

**Prerequisites:** *Onsite 101 & 102; Install 101*

May be combined with I-101

### **Install 201: Installation of Subsurface Drip Systems (NEW)**

- ❖ Theory of subsurface drip systems
- ❖ What the Washington State guidance documents say
- ❖ Detailed discussion of installation procedures of different types of drip systems, presented by companies marketing them

**Prerequisites:** *Onsite 101 & 102; Install 101*

**COUNTY CERTIFICATION TESTING IS NOW AVAILABLE AT THE TRAINING CENTER ON A LIMITED BASIS.**

**CALL: 253-297-2837 FOR DETAILS**

## **CLASSES FOR MONITORING & MAINTENANCE PROFESSIONALS**

### **Maintain 101: Monitoring of OnSite Systems (1 or 2 days)\***

- ❖ Purpose & principles of operation, maintenance, monitoring
- ❖ Safety issues
- ❖ Monitoring each component
- ❖ Dye testing
- ❖ Client contracts
- ❖ Monitoring equipment
- ❖ Case Studies

**Prerequisites:** *Onsite 101 & 102*

\* Depending on Registration

### **Maintain 201: Evaluating & Repair of OSS (1 or 2 days)\***

- ❖ Symptoms indicating problems for each system
- ❖ Potential causes of symptoms/problems
- ❖ Systematic process for finding contributing causes of failure
- ❖ Repair considerations
- ❖ Case studies

**Prerequisites:** *Onsite 101 & 102; Maintain 101*

\* Depending on Registration

### **Maintain 102: Maintenance of Onsite Systems**

- ❖ What is “maintenance”
- ❖ Safety review
- ❖ Equipment requirements
- ❖ Septage disposal
- ❖ Importance of maintenance
- ❖ Pumping process & reports
- ❖ Maintaining all components
- ❖ Cleaning plugged lines

**Prerequisites:** *Onsite 101 & 102, Maintain 101*

### **Maintain 202: Wastewater Sampling**

- ❖ When is sampling needed
- ❖ Proper containers & holding times/temperatures for samples
- ❖ How to “grab” a sample for different systems & components
- ❖ What a “representative” sample is and how to obtain one
- ❖ Proper labeling, quality control and quality assurance

**Prerequisites:** *Maintain 101 and classes required for it*

**CLASSES TO HELP DESIGN AND REGULATORY PROFESSIONALS PREPARE FOR THE STATE DESIGNER LICENSE OR CERTIFICATE OF COMPETENCY EXAMINATION OFFERED BY THE DEPARTMENT OF LICENSING**

**Exam 101: This is a two day class covering the following**

- ❖ Review of licensing process
- ❖ Review of **DATA GATHERING** content area (from the department's "Licensing Examination Content Outline")
- ❖ Practice taking multiple choice tests, including take-home quiz
- ❖ Go over answers for each quiz, making them an integral part of the learning process
- ❖ Review of **DESIGN** content area - includes brief overview of the design of the various technologies
- ❖ More multiple choice quizzes, sample problems, including take-home quiz
- ❖ Finish **DESIGN** content area
- ❖ Review of **CONSTRUCTION MANAGEMENT & POST CONSTRUCTION ACTIVITIES** content areas
- ❖ Take, simulated, timed Examination

**Important Note:** The noted prerequisites are just recommendations. An individual taking any class should have the basic knowledge needed to take that class. Classroom time will not be spent bringing an individual up to the beginning level of knowledge required for that class.

**SPECIALTY CLASSES FOR BUSINESS AND SAFETY MANAGEMENT**

**Safety 101: Basics of Safety**

- ❖ General introduction to safety principles
- ❖ Safety issues
- ❖ Workplace Hazard Awareness
- ❖ Lifting
- ❖ Safety Awareness
- ❖ PPE's
- ❖ Case Studies

*None- this course is designed for all workers in the onsite industry.*

**Available for individual companies on request**

**Safety 102: Safety Management Systems**

- ❖ Develop a Safety Management system for your company
- ❖ Review of safety standards
- ❖ Systematic process for safety management and prevention of accidents in the workplace
- ❖ Company Specific Evaluation tools and reporting
- ❖ Managing L&I claims and fines

**Available for individual companies on request**

**E – 200 Basics of Electrical Applications in OSS Wastewater**

- ❖ DAY 1
- ❖ Overview of OSS Orientation to electrical applications in OSS
- ❖ DAY 2
- ❖ Review applicable code
- ❖ Electrical Theory and Terms
- ❖ Practical hands on wiring for Panels, Pumps, Blowers, ATU components, UV

*None- This course is approved by L&I for 16 hours CEU for your Administrator and Electrical license 02,03,03-A*

**Business 102: Contracts**

- ❖ Defining customers needs
- ❖ Developing a contract that works for you
- ❖ Legal aspects and how contracts can protect you
- ❖ Contracts with suppliers
- ❖ Managing changes in "scope of work" to existing contracts profitably

If you're not collecting your money, learn how to protect your claim in court. Legal review of your company contract included.

## CLASS & REGISTRATION INFORMATION

- Scope of classes:** The “100” level classes in this curriculum are designed for **beginning** on-site sewage professionals. The classes are intended to provide training regarding current technologies and methods for regulators, designers, installers, pumpers, maintenance/monitoring specialists and other interested parties. The “200” and “300” level classes are intended for individuals who have worked in the on-site sewage industry for some time.
- Registration:** Determine which class or classes you desire to take. Fill out both sides of the registration form (make photocopies for other individuals in your office), add up the total registration fee (there is a \$50/day discount for members of WOSSA/NOWRA - **you must supply evidence of membership**). Make out a check for the amount payable to **WOSSA**, and mail the check and registration form to the address noted on the form. Sorry, we cannot accept credit cards. You will receive a letter of confirmation and map/instructions to the training site.
- Cancellations:** Cancellations will be accepted up to ten (10) days prior to the class. A refund, minus a handling fee of \$25, will be made. You may transfer your registration to another class or to another individual. Individuals who do not show on the day of the class will forfeit their registration fee.
- Maximums & Minimums:** Each class will have a maximum number of students that can be accepted. Registration will be accepted on a first-come, first-served basis. Each class will also have a minimum number of registrations that must be received. If the minimum is not reached, the class may be canceled or rescheduled. If NWOTC cancels a class, you may receive credit toward another class. If you are a “no show” and the class is held, no refunds will be given.
- CEUs:** Each class will offer continuing education unit (CEU) and/or the number of hours for each class. Each class participant will receive a certificate of completion noting the number of CEUs **and/or** hours for that class.
- Information:** **For further information, please call (253) 770-6594**
- WOSSA/NOWRA:** The Washington On-site Sewage Association (WOSSA) is a professional organization representing all professions involved in the installation and use of on-site sewage systems that treat and dispose of sewage in safe, reliable and cost-effective ways. Members include designers, installers, pumpers, regulators, maintenance specialists, equipment manufacturers/representatives and other related interests. The National On-site Wastewater Recycling Association (NOWRA) is the national organization for on-site wastewater professionals, of which WOSSA is a state affiliate member.
- NOWTC:** The Northwest On-site Wastewater Training Center and its classes were developed by and for the on-site sewage industry. Its facilities and classes are available to all who are interested in learning about various aspects of on-site sewage systems. While it contains a classroom facility and a demonstration site containing many of the system types and components usable in Washington, the center’s primary component is its classes. These classes seek to provide learning opportunities to those entering the industry, as well as continuing education opportunities to those currently in the industry. ***The mission of the center is to promote professional excellence, to raise the industry’s standards, to serve as a resource center and to educate to the highest level all persons involved in the on-site wastewater industry to protect the public health and the environment.***

Website information;

WOSSA has also posted this schedule on its WEBSITE at [wossa.org](http://wossa.org). You may also check there for updates to the program as well as “Special Event” training and lectures.

The training center has gone through a recent upgrade and has added several new technologies. WOSSA/NOWTC continues to operate with instructors for each class that include hands-on instruction from industry and regulatory professionals.

Should you have any questions, please feel free to contact the WOSSA office at:  
(253) 770-6594

## 2009-2010 Schedule of Classes - Registration Form

Name: \_\_\_\_\_

Member Number: \_\_\_\_\_

Company: \_\_\_\_\_

Telephone: (\_\_\_\_\_) \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

<u>Date</u>	<u>Class</u>	<u>Location</u>
<b><u>September 2009</u></b>		
23	O 101 Onsite Basics 1	Puyallup
24	O 102 Onsite Basics 2	Puyallup

<b><u>October 2009</u></b>		
7 & 8	E 101 Exam Review	Puyallup
14	M-102 Basics of Maintenance	Puyallup
21	I-201 Installation SSD	Mt Vernon
27-28	E-200 Wiring of Control Panels	Puyallup

<b><u>November 2009</u></b>		
4	M-201 Evaluating & Repair of OSS	Mt Vernon
12	D 102 Basics of Soils	Puyallup
18	D 201 Subsurface Drip Design	Mt Vernon

<b><u>December 2009</u></b>		
2	Troubleshooting OSS	Puyallup
3 <sup>th</sup> – 4 <sup>th</sup>	Advanced Soils	Puyallup
9-10	O-201 WAC/RS&G Review	Moses Lake
Starts at 11:00AM on 9 <sup>th</sup>		
16 <sup>th</sup>	Trouble Shooting OSS	Mt Vernon

<b><u>January 2010</u></b>		
6	M 102 Maintenance of OSS	Puyallup
7	O 202 Propri. Systems	Puyallup

***29<sup>th</sup>-30<sup>th</sup> WOSSA 14<sup>th</sup> Annual Conference  
In Yakima, WA***

**February 2010**

11	OSS Pump Review for Designers	Puyallup
16-17	E200 Basis of Electrical App's in Onsite Wastewater Systems	Puyallup
24	D-102 Soils	Moses Lake

**March 2010**

11	D-109 Design Siting	Puyallup
17	D-201 Subsurface Drip Design	Moses Lake
24 & 25	E 101 Exam Review	Puyallup

**MAIL TO: PO Box 9729, Tacoma, WA 98490-0279**

<u>Date</u>	<u>Class</u>	<u>Location</u>
<b><u>April 2010</u></b>		
7	M 102 Maintenance of OSS	Puyallup
15	P 101 Pumper	Puyallup
21,22	E200 Basis of Electrical App's in Onsite Wastewater Systems	Puyallup

<b><u>May 2010</u></b>		
5	Electrical Control Panels	Puyallup
6	I-103 Installation Mounds/SF	Puyallup
13	D-109 Design Siting	Centralia
19	M 201 OSS Evaluation and Repair	Bremerton

WOSSA is proctoring some county Testing. Take approved classes and exam for your license at the NWOTC. Call for information and Costs.

**Check the boxes by the classes you wish to attend.  
Class Cost: \$175.00 Per Day, Per Class.**

**TOTAL REGISTRATION FEES:**

# of classes \_\_\_\_\_ X \$175: \_\_\_\_\_

**Members Deduct \$50/Class X Number of Classes:**

**Total of deductions:** \_\_\_\_\_

**GRAND TOTAL:** \_\_\_\_\_

**Directions to the training center:**

From I-5 South, take Exit 129 (S 84th Street/S 72nd Street). Cloverleaf onto 72nd Street – head due east on 72nd for 8 miles. Watch for WSU-Puyallup Campus Sign – turn right at the sign and proceed to training center at the end of the campus road (Building 1045).

From I-5 North, take Exit 129 (S 72nd Street) – head due east on 72nd for 8 miles and follow remaining directions above.

**All classes begin at 8:30 AM**

**What to bring:**

Lunch is on your own, morning and afternoon breaks provided. Bring writing pad and pen and calculator.

**WOSSA Office Phone: (253) 770-6594**

DB \_\_\_\_\_  
SL \_\_\_\_\_  
CONF \_\_\_\_\_  
QBP \_\_\_\_\_

# \_\_\_\_\_  
\$ \_\_\_\_\_  
Date \_\_\_\_\_  
Type \_\_\_\_\_

### Membership Application or Renewal Form

Please print legibly. Use one form per registrant. Make photocopies for multiple registrations.

Name: \_\_\_\_\_ Company: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_ Fax: (\_\_\_\_) \_\_\_\_\_ Email: \_\_\_\_\_

Check if you would like to receive on-site related information via e-mail

#### WOSSA Membership

Membership Card # \_\_\_\_\_

Individual Annual Membership - \$135.00

Group Annual Membership - \$335.00

My **primary** profession:  Designer  Engineer  Installer  Pumper  
(Please check one)  Maintenance/Monitoring Specialist  Registered Sanitarian (but not a regulator)  
 Regulator – In which county: \_\_\_\_\_  
 Other (please specify) \_\_\_\_\_

Counties of Operation \_\_\_\_\_

#### Please check any of the following, if applicable:

- I am not on your mailing list. Please add me to your mailing list for future class announcements.
- Please change the name or address on your mailing list so it reflects the information noted above.
- Please send me a CLASS INFORMATION PACKET.
- Please remove me from your mailing list.

#### ATTENTION MEMBERS:

**DISCOUNTS** are available to WOSSA and/or NOWRA Members for all classes. A **\$50 discount** per class is applied when registering for a WOSSA-sponsored class.

**COSTS:** All classes are **\$175 for non-members** per day. **JOIN WOSSA NOW** to receive discounts on all upcoming classes. Classes are held from **8:30 am until 5:00 pm**, unless otherwise noted.

**PLEASE NOTE:** The Designer Exam Review class (**E-101 – E 103**) is now simply **E-101** and is a 2-3 day class depending on registration.

When registering for membership or classes, please make check payable to WOSSA.

Annual Dues \$ \_\_\_\_\_

Total costs from class registration sheet\* \$ \_\_\_\_\_

Deduct \$50.00 X \_\_\_\_\_ (No. of classes) only for WOSSA members - (\$ \_\_\_\_\_)

**TOTAL DUE** \$ \_\_\_\_\_

\*Please fill out the Class Registration form following this page to determine the total amount of registration fees.

Enclose a check and mail to: .....WOSSA Classes

If you have any questions, please call or (253) 770-6594

PO Box 9279

Tacoma, WA 98490-0279