

Spring 2012 CEU Seminar

Presented by the Washington State Ground Water Association

Agenda

Speaker

7:30-8:00 Registration

8:00-8:15 Welcome

WSGWA

8:15-10:15 **Regulations Update**

Department of Ecology

This session will cover any new developments in Washington's well construction, licensing statutes and regulations.

10:15-12:15 **Bits, Bits n More Bits-It's
About Bits**

Steve Kaser: Forge Pacific

Choosing the right bit will enable the driller to successfully and efficiently drill through the various formations found in the state of Washington. Caring and using the bits correctly will extend their life.

12:15-1:00 Lunch

1:00-2:00 **The "Other" Side of Drilling: Resource
Protection Wells & Geotechnical Borings**

Mike Piechowski: Robinson Noble

A significant portion of the drilling done in Washington State is not related to water wells, but rather is done on environmental or geotechnical projects. This session will discuss drilling techniques, equipment tips, sampling protocols, health and safety concerns, and other lessons learned while watching over your shoulders for the past 20 years or so.

2:00-3:00 **Application of Downhole Geophysical
Surveys in Well Drilling**

Mike Piechowski: Robinson Noble

Downhole geophysical surveys are not often used in typical drilling projects, but can be an invaluable tool in the evaluation and correlation of formations drilled. A variety of logging tools are available, several are capable of logging formations through a cased borehole. This session will discuss techniques that are typically available, where they can be applied, the proper way to conduct a survey, and what can be interpreted from the results.

3:00-4:00 **How to Help Your Well
Avoid a Life of Slime**

Leroy Palmer: AmeriWest Water Services, Inc.

Comprehensive diagnosis and solutions for reoccurring coliform problems, fouling, and other slime issues. Noticing the formations and movement in the well along with proper well maintenance will be tools used to troubleshoot the problem.

Dates and Locations for Spring 2012:

3/9 La Quinta, 1425 E. 27th St., Tacoma, WA 98421

3/10 Kelso Red Lion, 510 Kelso Drive, Kelso, WA 98626

3/30 Mirabeau Park Hotel, 1100 North Sullivan Rd., Spokane, WA 99037

3/31 Pasco Red Lion, 2525 N. 20th Ave., Pasco, WA 99301



Continuing Education Unit Syllabus

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Instructor Name: (Last, First, MI)

Kaser, Steve D

Name of Approved Provider:

WSGWA c/o Colleen Mastro 206-351-6384
colleenmastro@hotmail.com

Contact Person: (If Different from Instructor)

Telephone: 503-538-2001

Cell 503-881-9255

Fax : 503-538-2004

Mailing Address:

Forge Pacific LLC
2601 Wynooski Road, Newberg Oregon 97132

Email: stevekaser@forgepacific.com

Part I: Statement of Qualifications

Please provide a statement about your qualifications.

I have been in the drilling industry continuously since 1968. My career started on the North Slope of Alaska drilling seismic holes. In 1971 I returned to Oregon and began drilling water wells. In 1976 I became the drilling product manager for Mitchell Lewis and Staver Company in Portland and later for Forge Welkin and currently with Forge Pacific. As a Drilling Product Manager it was and continues to be my responsibility to come up with drilling products making them available to the water well industry in the Western US, making sure they not only help the contractor do a better job but also conform to the various states regulations. Throughout my career I have acquired a vast knowledge and understanding of the drilling conditions in the Western US from interacting with the drilling contractor and am in constant contact with the majority of drilling contractors helping them solve their drilling problems. My 44 years experience in the drilling industry will serve me well in my presentations.

Part II: Course Description

Please provide a detailed summary for each question. (All questions must be answered.)

Course Title:

Bits, Bits n' More Bits-It's all about Bits*

Course Date(s):2012: 3/9, 3/10, 3/30, 3/31

Start Time: 10:15am Finish: 12:15pm

Course length in hours:

2 Hours

Cost for Workshop:

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Please provide listing of textbooks, supplemental readings, or equipment, such as calculators or safety equipment required.

Please provide driving directions:

- 3/9/12 LaQuinta Inn, 1425 E. 27th St., Tacoma, WA 98421
- 3/10/12 Red Lion Kelso, 510 Kelso Drive, Kelso, WA 98626
- 3/30/12 Mirabeau Park Hotel, 1100 North Sullivan Road, Spokane, WA 99037
- 3/31/12 Red Lion Pasco, 2525 N. 20th Ave., Pasco, WA 99301

If you require this document in an alternate format, please contact the Water Resources Program at (360) 407-6600 or TTY (for the speech or hearing impaired) at 711 or 1-800-833-6388.

Please provide a course outline which details the specific subjects to be taught and any testing required. Use additional pages if needed.

*This class deals with all the different types of drill bits available today, their care and use.

A-Tri cone Bits, TCI and mill tooth

B-Drag bits, 3 & 4 way chevron and blade

C-Claw

D-Hammer-CC,DC and FF

E-PDC

F-Overburden, winged type and concentric

Part III: Statement of Relevance

How does this course pertain to the business, technical, regulatory, or safety aspects of well construction? Please include the goals and objectives of this class.

CLASS GOAL

**This class deals with all the different types of drill bits available today that will enable the driller to successfully and efficiently drill the varied formations found in the State of Washington.

CLASS OBJECTIVES

* To present the drilling community with information on bit characteristics, dimensional data and performance which will give him the knowledge to select the best bit possible to use which will aid him in meeting the many constructions standards he is faced with.

Will this class be open to all who desire to attend? Yes No

What is the minimum number of students required to put on this class? No minimum

Part IV: Comments and Signatures

Comments:

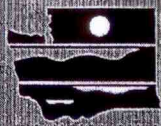
The information provided in this application is true and accurate.

Instructor Signature: Steve D Kaser

Title: Drilling Product Mgr.

Date : 1/31/2012*

If you require this document in an alternate format, please contact the Water Resources Program at (360) 407-6600 or TTY (for the speech or hearing impaired) at 711 or 1-800-833-6388.



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Instructor Name: (Last, First, MI) Piechowski, Michael F.	Name of Approved Provider: WSGWA c/o Colleen Mastro 206-351-6384 colleenmastro@hotmail.com
Contact Person: (If Different from Instructor)	Telephone: 253-475-7711 Cell : 253-686-0319 Fax : 253-472-5846
Mailing Address: Robinson Noble, Inc. 3011 South Huson, Suite A, Tacoma, WA 98409	Email: mpiechowski@robinson-noble.com

Part I: Statement of Qualifications

Please provide a statement about your qualifications.

I am a licensed Hydrogeologist in Washington State. I have a Master's Degree in Geology, as well as approximately 20 years of practical experience working with water wells, resource protection wells, and geotechnical and environmental borings, completed with most types of drilling rig in a variety of geologic settings. I have completed and interpreted a number of geophysical logs during my career, in wells as deep as 1,500 feet.

Part II: Course Description

Please provide a detailed summary for each question. (All questions must be answered.)

Course Title:	Course Date(s):2012: 3/9, 3/10, 3/30, 3/31	Course length in hours:	Cost for Workshop:
Application of Downhole Geophysical Surveys in Well Drilling	Start Time: 1:00pm Finish: 2:00pm	1 Hour	///

Please provide listing of textbooks, supplemental readings, or equipment, such as calculators or safety equipment required.

Supplemental Reading – Chapter 4 of Groundwater and Wells, Third Edition, Robert J. Sterrett

Please provide driving directions:

- 3/9/12 LaQuinta Inn, 1425 E. 27th St., Tacoma, WA 98421
- 3/10/12 Red Lion Kelso, 510 Kelso Drive, Kelso, WA 98626
- 3/30/12 Mirabeau Park Hotel, 1100 North Sullivan Road, Spokane, WA 99037
- 3/31/12 Red Lion Pasco, 2525 N. 20th Ave., Pasco, WA 99301

Please provide a course outline which details the specific subjects to be taught and any testing required. Use additional pages if needed.

Downhole Geophysical Surveys
Types of data collected

- Resistivity
- Natural Gamma
- Temperature
- Conductivity

Caliper
Induction
Others

What these data tell us
Where is logging applicable/where won't it work
Proper hole preparation
Additional information necessary for interpretation
Accuracy (or lack thereof)
Other lessons learned

Part III: Statement of Relevance

How does this course pertain to the business, technical, regulatory, or safety aspects of well construction? Please include the goals and objectives of this class.

CLASS GOAL

Explain how and where downhole geophysical logging can be applied to enhance the understanding of the subsurface.

CLASS OBJECTIVES

Explain the techniques typically used and how they can add to the understanding of the subsurface. Explain where geophysical logging can be used and what steps are necessary to get the most benefit from logging. Explain that the interpretation of the geophysical data hinges upon the other available data.

Will this class be open to all who desire to attend? Yes No

What is the minimum number of students required to put on this class? No minimum

Part IV: Comments and Signatures

Comments:

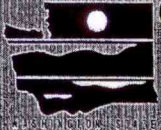
I'll certainly be talking with others, including well drillers and other hydrogeologists, as I research material for this class and prepare my presentation.

The information provided in this application is true and accurate.

Instructor Signature:  Title: Senior Hydrogeologist Date: Feb 3, 2012

I have reviewed this report and, in my judgment, the process has been properly followed.

Reviewer's Signature: _____ Title: _____ Date: _____



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Instructor Name: (Last, First, MI)
Piechowski, Michael F.

Name of Approved Provider:
WSGWA c/o Colleen Mastro 206-351-6384
colleenmastro@hotmail.com

Contact Person: (If Different from Instructor)

Telephone: 253-475-7711
Cell : 253-686-0319
Fax : 253-472-5846

Mailing Address:
Robinson Noble, Inc.
3011 South Huson, Suite A,
Tacoma, WA 98409

Email: mpiechowski@robinson-noble.com

Part I: Statement of Qualifications

Please provide a statement about your qualifications.

I am a licensed Hydrogeologist in Washington State. I have a Master's Degree in Geology, as well as approximately 20 years of practical experience working with water wells, resource protection wells, and geotechnical and environmental borings, completed with most drilling techniques in a variety of geologic settings.

Part II: Course Description

Please provide a detailed summary for each question. (All questions must be answered.)

Course Title:	Course Date(s):2012: 3/9, 3/10, 3/30, 3/31	Course length in hours:	Cost for Workshop:
The "Other" Side of Drilling: Resource Protection Wells and Geotechnical Borings	Start Time: 2:00pm Finish: 3:00pm	1 Hour	///

Please provide listing of textbooks, supplemental readings, or equipment, such as calculators or safety equipment required.

Supplemental Reading – Chapters 3 and 14 of Groundwater and Wells, Third Edition, Robert J. Sterrett

Please provide driving directions:

- 3/9/12 LaQuinta Inn, 1425 E. 27th St., Tacoma, WA 98421
- 3/10/12 Red Lion Kelso, 510 Kelso Drive, Kelso, WA 98626
- 3/30/12 Mirabeau Park Hotel, 1100 North Sullivan Road, Spokane, WA 99037
- 3/31/12 Red Lion Pasco, 2525 N. 20th Ave., Pasco, WA 99301

Please provide a course outline which details the specific subjects to be taught and any testing required. Use additional pages if needed.

- Environmental and Geotechnical Drilling Techniques:
 - Auger, hollow stem auger, direct push, mud rotary
- Sampling technology and protocols:
 - Split Spoon, Dames & Moore, Shelby Tube, Hammer size and type, "N" values and Blowcounts
- Equipment and tooling tips
 - How hard does that hammer actually hit?
- Health and safety precautions
- Decontamination of equipment
- Well design, construction, and completion
- Wellhead construction

If you require this document in an alternate format, please contact the Water Resources Program at (360) 407-6600 or TTY (for the speech or hearing impaired) at 711 or 1-800-833-6388.

Other lessons learned over approximately 20 years of working in the field

Part III: Statement of Relevance

How does this course pertain to the business, technical, regulatory, or safety aspects of well construction? Please include the goals and objectives of this class.

CLASS GOAL

Share my insights (as well as those of the attendees) in a discussion of environmental and geotechnical borings in an effort to improve the understanding of the purposes and procedures required for a successful and safe project.

CLASS OBJECTIVES

Raise awareness of proper tooling choices, proper sampling technique, decontamination, cross-contamination, and well construction from a resource protection/geotechnical point of view.

Will this class be open to all who desire to attend? Yes No

What is the minimum number of students required to put on this class? No minimum

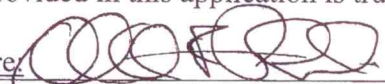
Part IV: Comments and Signatures

Comments:

I'll certainly be talking with others including well drillers; other hydrogeologists, environmental scientists, and engineers; and Bill Lum at Ecology as I research material for this class and prepare my presentation.

The information provided in this application is true and accurate.

Instructor Signature:



Title:

Senior Hydrogeologist

Date:

Feb 3, 2012

I have reviewed this report and, in my judgment, the process has been properly followed.

Reviewer's Signature: _____

Title: _____

Date: _____



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Instructor Name: (Last, First, MI)
Palmer, LeRoy Y.

Name of Approved Provider:
WSGWA c/o Colleen Mastro 206-351-6384
colleenmastro@hotmail.com

Contact Person: (If Different from Instructor)

Telephone: 208-658-8066
Cell : 208-861-3410
Fax : 208-658-8066

Mailing Address:

*P.O. Box 44683
Boise Idaho, 83711-0683

Email: ameriwestwater@aol.com

Part I: Statement of Qualifications

Please provide a statement about your qualifications.
See attached speaker Profile.

Part II: Course Description

Please provide a detailed summary for each question. (All questions must be answered.)

Course Title: Iron Bacteria in the Well Environment: How to Help Your Well Avoid a Life of Slime	Course Date(s):2012: 3/9, 3/10, 3/30, 3/31 Start Time: 3:00pm Finish: 4:00pm	Course length in hours: 1 Hour	Cost for Workshop: ///
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Please provide listing of textbooks, supplemental readings, or equipment, such as calculators or safety equipment required.

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Please provide driving directions:

3/9/12 LaQuinta Inn, 1425 E. 27th St., Tacoma, WA 98421
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 3/31/12 Red Lion Pasco, 2525 N. 20th Ave., Pasco, WA 99301

Please provide a course outline which details the specific subjects to be taught and any testing required. Use additional pages if needed.

We define the type of fouling that occurs in a well, like iron and biological fouling, its formation and movement in the well.
 We cover the most important diagnostic steps with proper sampling techniques, and lab testing and interpretation of results.
 We discuss the physical and chemical treatment strategies using the right chemicals in the right way.
 We discuss the importance of proper disinfection and why chlorine disinfection fails 70% of the time.
 We give you help for proper well maintenance and record keeping practices

If you require this document in an alternate format, please contact the Water Resources Program at (360) 407-6600 or TTY (for the speech or hearing impaired) at 711 or 1-800-833-6388.

Part III: Statement of Relevance

How does this course pertain to the business, technical, regulatory, or safety aspects of well construction? Please include the goals and objectives of this class.

CLASS GOAL

It provides the tools for diagnosing and treating well problems while avoiding costly mistakes.

CLASS OBJECTIVES

Students will know the necessary steps to properly diagnose and treat well problems

Will this class be open to all who desire to attend? Yes No

What is the minimum number of students required to put on this class? No minimum

Part IV: Comments and Signatures

Comments:

The information provided in this application is true and accurate.

Instructor Signature LeRoy W. Palmer Title: President, AmeriWest Water Services Date 1-30-12

I have reviewed this report and, in my judgment, the process has been properly followed.

Reviewer's Signature: _____ Title: _____ Date: _____

Speaker Biography

Name: LeRoy Y. Palmer
Company: AmeriWest Water Services Inc.
P.O. Box 44683
Boise Idaho 83711
Phone: 208-861-3410

Biography:

- LeRoy Palmer was born and raised in Brigham City Utah.
- After receiving a Bachelors degree in microbiology at Weber State College, he received a Masters degree from Brigham Young University in microbiology. His research at BYU was related to the movement and disappearance of virus particles in Dear Creek Reservoir.
- After graduation, he worked for Boise Water Corporation in Idaho as the laboratory director and water quality specialist from 1977 to 2000.
- While employed by Boise Water, he maintained a State Certified Microbiology Laboratory where he performed over 50,000 total coliform water tests in over 22 years.
- In 2000, he co-founded AmeriWest Water Services, where he has formulated and developed over 40 NSF Standard 60 Certified water treatment chemicals. Working with municipalities from Seattle to Denver, he does extensive consulting on water quality issues and groundwater well maintenance and rehabilitation.
- He holds an Idaho Class IV-Drinking Water Treatment Operator License and has been certified as a Cross-Connection Control / Backflow Assembly Tester since 1978.
- He has served on the Pacific Northwest Section of the American Water Works Association (AWWA) Water Quality Committee and is a board member of the South East Idaho Sub Section of AWWA.
- He is serving a 3-year term on the Ground Water Protection and Management Subcommittee which serves under the Government Affairs Committee, with the National Groundwater Association.
- He is a member of the American Water Works Association, the Idaho and Utah Ground Water Associations, the Nation Groundwater Association and has participated in numerous AWWA, Idaho and Utah Rural Water Conferences, teaching such topics as customer complaints, reservoir water quality, valve maintenance, corrosion control, chlorination, iron and manganese control and well maintenance and rehabilitation.



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- Group - 5 CEU Value _____
- Group - 6 CEU Value _____
- Group - 7 CEU Value _____

Instructor Name: (Last, First, MI)
*Roger Chick

Name of Approved Provider:

WSGWA c/o Colleen Mastro 206-351-6384
colleenmastro@hotmail.com

Contact Person: (If Different from Instructor)
Roger Chick

Telephone: *360-265-6994

Mailing Address:
POB 2432
Poulsbo, WA 98370

Fax *

Email: *roger@trainingelectricians.com

Part I: Statement of Qualifications

Please provide a statement about your qualifications.

*17 years as Electrical Inspector with L&I, certified Master Electrician, International Association of Electrical Inspectors, owner/instructor of Electrical Training Institute

Part II: Course Description

Please provide a detailed summary for each question. (All questions must be answered.)

Course Title:	Course Date(s) 3/9, 3/10, 3/30, 3/31 2012	Course length in hours:	Cost for Workshop:
Pump Troubleshoot/Electrical Theory	Start Time: 8am Finish: 5pm	8 Hours	///

Please provide listing of textbooks, supplemental readings, or equipment, such as calculators or safety equipment required.

Please provide driving directions:

- 3/9/12 LaQuinta Inn, 1425 E. 27th St., Tacoma, WA 98421
- 3/10/12 Red Lion Kelso, 510 Kelso Drive, Kelso, WA 98626
- 3/30/12 Mirabeau Park Hotel, 1100 North Sullivan Road, Spokane, WA 99037
- 3/31/12 Red Lion Pasco, 2525 N. 20th Ave., Pasco, WA 99301

Please provide a course outline which details the specific subjects to be taught and any testing required. Use additional pages if needed:

Diagnosing with a variety of meters, safety, basics of matter, electrical theory, pump and motor problems, and some show and tell hands on.

Part III: Statement of Relevance

If you require this document in an alternate format, please contact the Water Resources Program at (360) 407-6600 or TTY (for the speech or hearing impaired) at 711 or 1-800-833-6388.

How does this course pertain to the business, technical, regulatory, or safety aspects of well construction? Please include the goals and objectives of this class.

The right pump and motor calculations that are compatible with your well system will make the whole system work in unison. Using electrical theory, pump basics and connections will make this easier.

Will this class be open to all who desire to attend? Yes No

What is the minimum number of students required to put on this class? No minimum

Part IV: Comments and Signatures

Comments:

The information provided in this application is true and accurate.

Instructor Signatures : Roger Chick L&I Inspector Date: 2-1-12

I have reviewed this report and, in my judgment, the process has been properly followed.

Reviewer's Signature: _____ Title: _____ Date: _____