

Groundwater Wells: *Use and Shared Use Agreements in Arizona*

This one-day seminar is designed for attorneys, engineers, presidents, vice presidents, owners, project managers, developers, planners, builders, utilities directors, contractors, subcontractors, architects, principals, property managers, public works directors, real estate professionals and government administrators.

Phoenix, AZ
February 28, 2008

William H. Anger
Engelman Berger, P.C.

R. Brent Cain
Brown and Caldwell

Marvin F. Glotfelty, R.G.
Clear Creek Associates

Shilpa Hunter-Patel
Fennemore Craig

Scott Miller
Arizona Department of Water Resources

Stephen D. Noel, R.G.
Southwest Ground-water Consultants, Inc.

L. William Staudenmaier
Ryley, Carlock & Applewhite, P.A.

**Earn Your
Construction
Certificate
Now!**

Continuing education credit:

- AZ CLE 6.50
- PMI 6.50
- AIA 6.50
- CC 1.0
- IACET 0.65

See inside for details.

LORMAN[®]
EDUCATION SERVICES
A DIVISION OF LORMAN BUSINESS CENTER, INC.

Keeping You Current.

Helping You Succeed.[™]

www.lorman.com • customerservice@lorman.com

Critical Issues on the Agenda

- 8:30 AM – 9:30 AM **Overview of Arizona Groundwater Law** — *Shilpa Hunter-Patel*
- 9:30 AM – 10:15 AM **Subflow** — *L. William Staudenmaier*
- Update on Delineating Groundwater and Surface Water
- 10:15 AM – 10:30 AM **Break**
- 10:30 AM – 11:30 AM **Water Well Design and Site Selection** — *Marvin F. Glotfelty, R.G.*
- Techniques to Economically Address Water Quality and Quantity Challenges
- 11:30 AM – 12:15 PM **Development of the Arizona Department of Water Resources' Well Spacing and Well Impact Rules** — *Scott Miller*
- 12:15 PM – 1:15 PM **Lunch (On Your Own)**
- 1:15 PM – 2:00 PM **Well Sharing Agreements** — *William H. Anger*
- 2:00 PM – 2:45 PM **Where Has All the "Good" Groundwater Gone?** — *Stephen D. Noel, R.G.*
- Development of Limited Groundwater Resources at the Margins of the Alluvial Basins
 - Short-Term vs. Long-Term Groundwater Resources
- 2:45 PM – 3:00 PM **Break**
- 3:00 PM – 3:45 PM **Well Permits and Groundwater Rights: The Basics** — *Shilpa Hunter-Patel*
- 3:45 PM – 4:30 PM **Groundwater Pumping and Sustainability** — *R. Brent Cain*
- Sustainability Methodologies
 - Case Examples
 - Real-Time 3D Imagery

Past comments from other Lorman seminars:

"This will assist me with water conservancy board records of decision."

— *Mike Rhubright*
City of Tacoma



Keeping You Current.
Helping You Succeed.™

Lorman Education Services reserves the right to modify the agenda and the faculty when circumstances are beyond our control.

Register Now • www.lorman.com

Benefits for You

How to avoid the pitfalls of groundwater wells – what you don't know *could* hurt you.

As Arizona grows and continues to experience drought conditions, increasing demands are placed upon limited water resources, requiring government officials and private users to work together in creative ways to refine Arizona's existing and future groundwater uses and allocations. Attend this informative seminar and learn about the most recent developments and strategies in groundwater and well use and permitting, shared use agreements, water quality issues and management strategies.

In One Day, You'll Learn:

- The latest in the division of surface water and groundwater
- Strategies for the siting and design of water wells – increase production and reduce water quality problems
- Updates on well sharing agreements
- How to maximize the use and value of Arizona groundwater rights and resources
- Tips on managing groundwater basins in central Arizona

Professional Manual

You will receive a professionally prepared manual compiled by the faculty specifically for this seminar. The seminar will be recorded. Your registration constitutes your consent to such recording. If you cannot attend, you may order a set of CDs and the accompanying manual from this program by using the registration form on the back panel.

Continuing Education Credit

Please remember to bring your license number, ID or other necessary information to the seminar. This will ensure timely reporting of continuing education credit. Please see our Web site at www.lorman.com for further details about continuing education credit information.



Lorman Business Center, Inc. is registered with the AIA Continuing Education System (AIA/CES). This 6.50 hour program offers 6.50 Learning Unit hours, which will be reported directly to the AIA/CES for AIA members.



This seminar has been reviewed and approved for inclusion in the Construction Compliance™ Certification Program and qualifies for 1.0 credit. It has been approved by an advisory board consisting of leading professionals from Duane Morris LLP, Kirkpatrick & Lockhart Nicholson Graham LLP, Exponent, Inc. and PinnacleOne, Inc. Please visit www.lorman.com/certification/cc for more information.

Lorman Business Center, Inc. is a recognized provider registered with the PMI Registered Educational Provider Program (PMI R.E.P.). Lorman Business Center, Inc. accepts and adheres to all PMI R.E.P. Program policies, requirements and rules concerning the provision of professional education activities and materials. This course qualifies for 6.50 PDUs.



Lorman Business Center, Inc. is an Authorized Provider by the International Association of Continuing Education and Training (IACET). Lorman Business Center, Inc. will award 0.65 CEUs to participants who successfully complete this program. Participants must complete an evaluation in order to receive CEUs. Please verify applicability with your professional board before attending.

IACET Learning Objectives

- The attendee will be able to discuss Arizona groundwater law.
- The attendee will be able to review water well design.
- The attendee will be able to identify hidden value in groundwater rights.

Phone 866-352-9539 • Fax 715-833-3953

Our Distinguished Faculty

William H. Anger is a shareholder with Engelman Berger, P.C., in Phoenix, where he practices in water, real estate and business law. His water law practice includes representing clients in acquiring water rights in the development of property, developing assured water supplies, meeting groundwater code requirements, drafting and negotiating water service and effluent service agreements, negotiating American Indian water rights claims and litigating disputes. Mr. Anger received his B.A. degree, with honors, from Denison University in both economics and political science, and his law degree from DePaul University, where he was an author and member of the *DePaul Law Review*. Recently he served as president of the Arizona Association of Defense Counsel.

R. Brent Cain is a staff hydrologist with Brown and Caldwell. He has over 10 years of experience in hydrology with an emphasis on groundwater flow modeling, hydrogeologic litigation support groundwater resource investigations, sustainability analyses, aquifer testing, contaminant/solute fate and transport, well installation, groundwater-surface water interactions, GIS applications, and field and modeling project management. Mr. Cain has overseen the development of multiple basin scale hydrologic studies, as well as numerous environmental assessments. His expertise includes the conceptualization of complex hydrogeologic systems and the application of innovative approaches to address water supply, legal and permitting issues. Mr. Cain has led the development of the diagnostic method of hydrogeologic modeling, sustainability modeling and GIS integration for Brown and Caldwell.

Marvin F. Glotfelty, R.G., co-founded the consulting firm of Clear Creek Associates in 1999 along with Doug Bartlett, R.G. Mr. Glotfelty received his B.S. and M.S. degrees in geology from Northern Arizona University, and is a registered professional geologist in Arizona and California. He is also a licensed well driller and licensed contractor (Type A-4) in Arizona. During his 24-year career, Mr. Glotfelty has participated in almost every aspect of the hydrogeologic sciences. He has been involved with the design, installation, rehabilitation or abandonment of over 600 water wells, and has served as technical director of the Arizona Water Well Association for the past 17 years. Mr. Glotfelty has given over 45 presentations on hydrogeologic and water well topics, and he has authored over 20 publications. In 1995, he received the City of Phoenix Mayor's Environmental Award for his work with rehabilitation of municipal wells to improve their water quality.

Shilpa Hunter-Patel is with Fennemore Craig, where she practices in the areas of environmental, natural resources and water law. Ms. Hunter-Patel is the former deputy counsel of the Arizona Department of Water Resources (2000 to 2004). Her experience also includes serving as the lead attorney for the Assured Water Supply and Recharge programs. Ms. Hunter-Patel also served as chief enforcement attorney of the Arizona Department of Water Resources. She is a member of the State Bar of Arizona. Ms. Hunter-Patel received her B.A. degree from the University of Texas at Austin and her J.D. degree from the University of Maryland.

Scott Miller is a water resources manager for the Arizona Department of Water Resources and manages the Office of Assured and Adequate Water Supply. His responsibilities include managing the review and analysis of designations and certificates of assured water supply and determinations of water adequacy. Mr. Miller also took the lead on developing the department's well spacing and well impact rules. He earned a B.A. degree from the University of Iowa.

Stephen D. Noel, R.G., is a registered professional geologist in Arizona and California and president of Southwest Ground-water Consultants, Inc. He has extensive experience in the evaluation of the quantity and quality of groundwater resources, including the design and implementation of exploratory and production well installation programs. He has been responsible for a wide variety of hydrogeologic investigations throughout Arizona and the Southwest and has 30 years of experience in Arizona hydrogeology. Mr. Noel is well-versed in working with the 1980 Arizona Ground-water Code, USF permitting requirements, and the technical requirements of ADEQ's Aquifer Protection Permit program. He received a B.A. degree in environmental studies and history from Franklin & Marshall College and an M.S. degree in geology from Purdue University.

L. William Staudenmaier is a shareholder with Ryley, Carlock & Applewhite, P.A., in Phoenix, Arizona, where he concentrates his practice on water, natural resources and environmental law. Mr. Staudenmaier represents clients in general stream adjudications, negotiations for the settlement of American Indian water rights claims, transactions involving transfers of water and water rights, litigation and administrative proceedings concerning navigability of watercourses and ownership of streambeds, and compliance counseling on a broad range of federal and state environmental quality laws. He received his B.S. degree in forestry and soil science from the University of Wisconsin and graduated magna cum laude from the University of Michigan Law School. Mr. Staudenmaier is a member of the American Bar Association, the State Bar of Arizona and the Maricopa County Bar Association.

You could earn a referral bonus by becoming a Lorman partner. Visit www.lorman.com/contact/associations.php or call Nicki Wolff at 800-678-3940.

General Information

Phoenix, AZ • February 28, 2008

Phoenix Inn Suites • 2310 E Highland Ave

Registration: 8:00 am – 8:30 am • Session: 8:30 am – 4:30 pm

Lunch Break: 12:15 pm – 1:15 pm (On Your Own)

Contact Lorman for hotel/seminar information at **866-352-9539** (please call hotel for accommodations or directions only). **The facility is wheelchair accessible. Please contact us with any questions.**

Walk-Ins: Call Lorman for final schedule information.

Cancellations: Substitute registrants are welcome and may be named at any time. If you cancel six or more business days in advance, you will receive a full refund, less a \$20.00 service charge. If you cancel within five business days you are not entitled to a cash refund. However, as a courtesy, we will allow you to apply your payment toward any future Lorman seminar within one year from the date you cancel. Your payment is transferable. Please note that if you do not attend and you do not cancel as described above, you are responsible for the entire payment. If Lorman cancels a program, you will receive a full refund. Lorman disclaims any liability for any other direct or compensatory payment.

Copyright Statement: Lorman seminars are copyrighted and may not be recorded or transcribed in whole or part without its express prior written permission. Your attendance at a Lorman seminar constitutes your agreement not to record or transcribe all or any part of it.

Additional Educational Opportunities

Teleconferences: Not able to commit to a full day? Teleconferences are now available. Visit us at www.lorman.com/teleconference for a complete listing of teleconferences.

On-Site Seminars: If you have a group of 10 or more, it may be financially beneficial for you to schedule a seminar at your facility. Contact Lorman or e-mail us at onsite@lorman.com to inquire about on-site seminars on this or other topics.

Electronic Products: To DOWNLOAD the most current information IMMEDIATELY and avoid shipping costs, visit us at www.lorman.com for a complete listing of electronic products.

Lorman Bookstore

Visit our online bookstore at www.lorman.com for the thousands of manuals and audio recordings that are available from other Lorman seminars. Our policy is to fill all orders with the most recent editions available. Your bookstore item(s) will be shipped within 3-5 business days, upon receipt of your order.

To order the bookstore items below, see the back panel of the brochure or visit us online for complete ordering capabilities. CE credit information is also available online.

Plat and Subdivision Law – The Statutory Framework; Development Issues – Leading Arizona Cases; Vested Development Rights; Developing and Interpreting Survey Drawings.

Faculty: Andrew E. Moore, Esq., Earl, Curley & Lagarde, P.C.; Stephen M. Kemp, Esq., City of Peoria; Thomas A. Liuzzo, RLS, RST Land Surveying, Inc.; Monica C. Michelizzi, Esq., Snell & Wilmer. ©2007. 92 pages.

Item: 364448TMX	CD and Manual	\$149
364448MAN	Manual Only	\$69
364448EMN	E-Manual Only	\$69

Construction Management/Design-Build – Alternative Project Delivery; Arizona Procurement Law; Case Law on Alternative Delivery; Contracts; Ethical Issues.

Faculty: Edward R. Gladly Jr., Shughart Thomson & Kilroy; Marty Harper, Shughart Thomson & Kilroy; Thomas K. Irvine, Shughart Thomson & Kilroy; G. William Quatman, FAIA, Esq., Shughart Thomson & Kilroy. ©2007. 136 pages.

Item: 361518TMX	CD and Manual	\$149
361518MAN	Manual Only	\$69
361518EMN	E-Manual Only	\$69

Managing Construction Projects – Design Quality Trends; Indemnity/Law; Errors and Omissions in Plans and Specifications; Important Clauses; Ethics, Arbitration and Mediation.

Faculty: Pam Dullum, P.E., CCA, Joseph A. Gervasio, P.E., Gervasio & Assoc., Inc.; Donald J. Fredlund Jr., Gui Ponce de Leon, P.E., PMA Consultants LLC; Scott Macpherson, Rider Hunt Levett & Bailey; David C. Tierney, Sacks Tierney P.A. ©2006. 364 pages.

Item: 363077MAN	Manual Only	\$69
363077EMN	E-Manual Only	\$69

Groundwater Wells: Use and Shared Use Agreements in Arizona • Phoenix, AZ • February 28, 2008



Mail: Detach or photocopy this panel and mail with payment information to:
Lorman Education Services, P.O. Box 509, Eau Claire, WI 54702-0509

Fax: Complete this form, fax entire panel including payment; information to 715-833-3953

Phone: 866-352-9539 (to register or for general questions)

Internet: www.lorman.com **E-mail:** customerservice@lorman.com

If you need special accommodations, please contact us two weeks in advance of the program.

Seminar Tuition (includes manual)

\$339 for a single registrant \$329 each for two or more from the same organization

To Order Products From This Seminar

Please allow four to six weeks after the date of the seminar for delivery.

\$359 CD/manual package + \$7 shipping/handling + applicable sales tax = \$ _____

\$109 manual only + \$7 shipping/handling + applicable sales tax = \$ _____

(If tax-exempt, please include your certificate.)

Names of Attendees (Please print or type)

1. **Name** _____ **Title** _____
E-mail _____
2. **Name** _____ **Title** _____
E-mail _____
3. **Name** _____ **Title** _____
E-mail _____

Firm Name _____
Address _____
City _____
State/Zip _____ **Telephone** (_____) _____ **Fax** (_____) _____

Approving Manager

Name _____ **Title** _____
E-mail _____

Check enclosed payable to **Lorman Education Services**

Charge to credit card ___ AE ___ MC ___ VISA Signature _____

Card number _____ **Exp. Date** _____
© 2007 Lorman Education Services. All rights reserved. ID#377208

Order online today!

Lorman Bookstore (see inside for detailed descriptions)

Please include street and e-mail address for timely and accurate delivery.

Plat and Subdivision Law
CD and Manual ___ @ \$149 Manual ___ @ \$69 Item Number: 364448
E-Manual ___ @ \$69

Construction Management/Design-Build
CD and Manual ___ @ \$149 Manual ___ @ \$69 Item Number: 361518
E-Manual ___ @ \$69

Managing Construction Projects
Manual ___ @ \$69 Item Number: 363077
E-Manual ___ @ \$69

Subtotal from above \$ _____
Shipping & handling (excludes e-manuals) \$ _____
(\$.00 first item, \$1.00 each additional)
Sales tax \$ _____
TOTAL \$ _____

Seminar ID: 377208

Please do not remove mailing label even if incorrect.

Presorted Standard
U.S. Postage Paid
Permit No. 1877
Eau Claire, WI

Please Return Entire Panel

Priority Code: 17129