

**Register Now!**

**NOWRA**  
National Onsite Wastewater  
Recycling Association

**2008  
TECHNICAL  
CONFERENCE  
& EXPO**

# Water

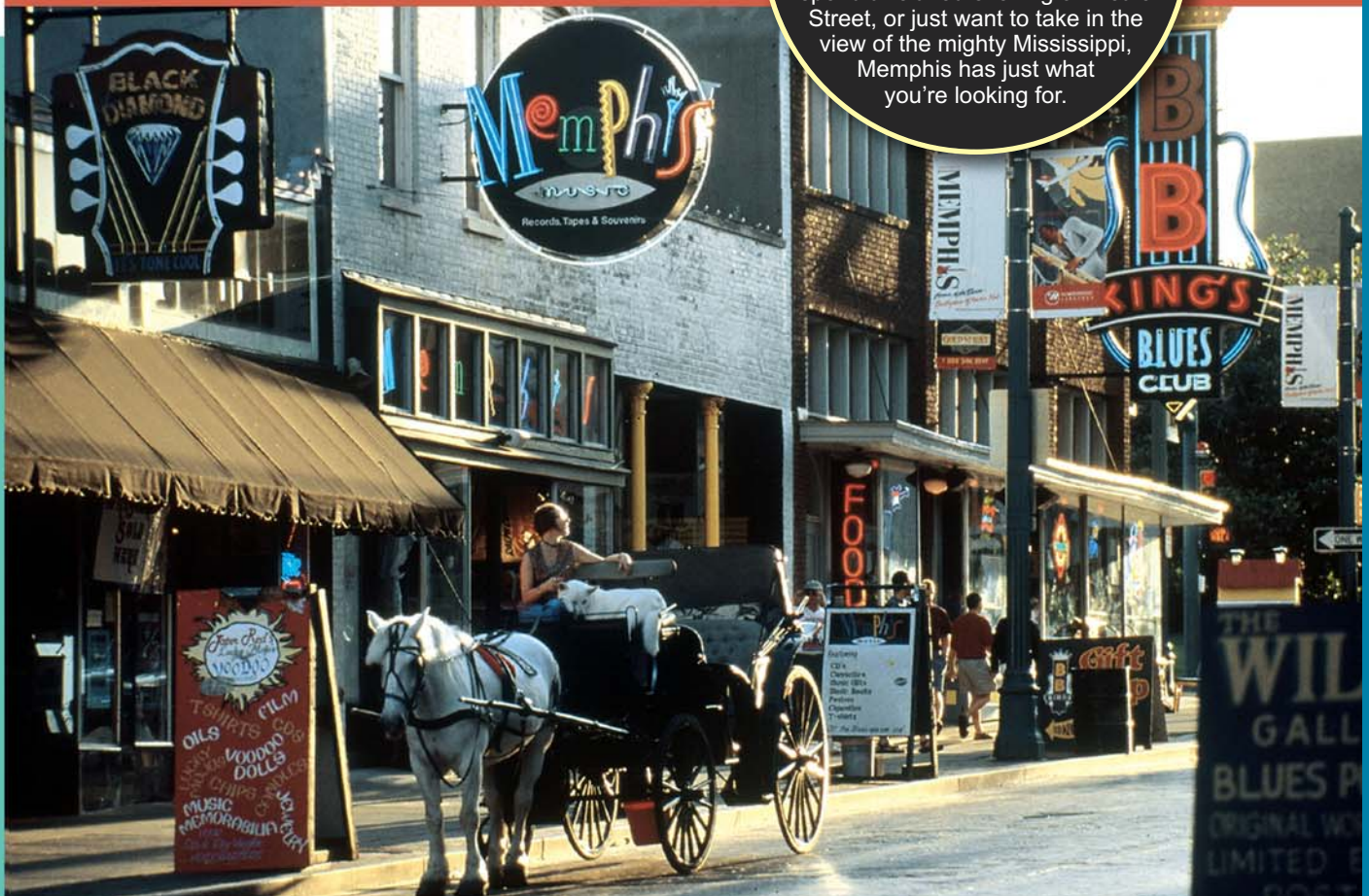
**MANAGE • REUSE • RENEW**  
NOWRA 17th Annual Technical Conference & Expo • Memphis 2008

**April 7-10, 2008**  
**Cook Convention Center**  
**Memphis, Tennessee**

As the industry leader, the 2008 NOWRA Conference offers an unparalleled educational and training experience to individuals committed to achieving water quality results with decentralized systems.

- NOWRA provides the most comprehensive venue in which to present manufacturers and their products and services, with quality time available for discussions with representatives and trainers.
- You get the real answers to the real issues facing you in today's water quality industry, without dealing with over-crowded conditions.

This year's conference takes place in exciting Memphis, Tennessee—known for its great music, fabulous restaurants, historic landmarks and of course, Elvis' Graceland! There's always something going on in Memphis. Whether you spend a relaxed evening on Beale Street, or just want to take in the view of the mighty Mississippi, Memphis has just what you're looking for.



# Join onsite industry professionals at the most important and influential water quality event of the year!

NOWRA's annual technical education sessions are widely recognized, both nationally and internationally, for the in-depth expertise provided by leading educators and speakers who have years of experience in establishing onsite wastewater systems for homes, communities, commercial developments and businesses. There is a distinct lineup of educational opportunities, interest group sessions, great speakers, an exhibit hall full of the latest technology—and much more! NOWRA works with many states to

secure approved CEU credits for its members. This information is provided on NOWRA's website.

The conference this year again offers numerous opportunities for networking with suppliers of the latest technology and equipment from all over North America. Where else can you learn about new industry products and services all in one location. All exhibit events and non-session activities occur in the Southwest Hall at the Cook Convention Center.



Get the real answers to the real issues facing you in today's water quality industry.

**TECHNICAL EDUCATION SESSIONS** provide a valuable opportunity to become knowledgeable about the latest technology from industry leaders. All theories need to be applied in the field and these professionals value your input. After all, the best systems are the ones developed in the classroom and laboratory by the universities and proven in the field by the contractor. Preliminary technical sessions focus on:

- Basics of Onsite Systems
- Cluster System Design and Application
- Performance and System Evaluation
- Standards, Regulations and Policy
- Successful Planning and Management
- WERF Projects Update
- Treatment Process Evaluations
- Innovative Technologies and Solutions
- Plus, an on-site tour of decentralized systems in the Memphis area!

These sessions are presented in several formats including panel presentations, research, case studies and workshops.

**NETWORK** with onsite industry colleagues throughout the United States who share your commitment to protecting and enhancing water quality.

**MAKE IMPORTANT CONTACTS** through interaction with colleagues, manufacturers and representatives in the onsite industry. The nation's leading companies within the exposition are available to answer questions and demonstrate cutting-edge technologies and services.

**EARN CONTINUING EDUCATION CREDITS** at sessions that provide experiential learning from comprehensive technical lectures and workshops. Experts in the onsite industry present the latest information necessary to advance your professional development.

**GREAT LOCATION** This year, NOWRA's conference attendees will stay at the beautiful Memphis Marriott Downtown Hotel. The hotel is directly connected to the Cook Convention Center. From the Marriott Hotel Lobby, you step into downtown Memphis to enjoy shopping, historical buildings and museums, and the sounds of music. A trolley system is also available to link with visits to blues clubs, museums, botanical gardens and more! All conference program events occur at the Cook Convention Center, located less than 15 miles from the Memphis International Airport. A variety of transportation methods exist for attendees traveling from the airport to the hotel, including taxi (approx. \$25 one-way), shuttle, bus and Amtrak train.



# Preliminary Conference Schedule

## MONDAY April 7, 2008

- Pre-Conference Nitrogen Symposium
- NOWRA Committee & Organization Meetings
- Conference Registration
- Registration and Set-Up for Exhibitors

### Pre-Conference Symposium Focuses on Nitrogen

As a prelude to its 17th Annual Conference in Memphis, Tennessee, the NOWRA Technical Practices and Education Committees are featuring their second Nitrogen Symposium. This unique forum is designed to bring the onsite wastewater community together with the scholarly research community in order to create a pathway of communication. The Symposium begins Monday, April 7, 2008, with invited speakers, who are experts in their field, addressing nitrogen issues related to the onsite industry.

Among the topics being considered is a basic understanding of Nitrogen concepts such as: Nitrogen fate and dissipation; environmental risks; basic chemistry; atmospheric processes; effects on rivers, lakes and oceans; and sources. Also included will be: onsite sources and loads; fate and dissipation; nitrogen and engineered treatment processes; nitrogen and modeling; a mathematical process to estimate loads and risks; model processes; modeling fate in marine ecosystems and inland watersheds; and the latest efforts by this group experts.

At the end of the plenary presentations, a panel discussion will address questions from the audience. In the afternoon, conference attendees will present their questions and comments, with the invited experts in the audience. Additional questions or participation requests should be directed to Matt Byers, Ph.D, Technical Practices Committee Chair (mattb@zoeller.com).

## TUESDAY April 8, 2008

- NOWRA's President's Message
- Keynote Address:** Dimensions in Decentralization: From Innovative Technologies to Distributed Water Resources Management, *Craig Lindell*

### TECHNICAL SESSIONS

#### NOWRA Decentralized Systems Overview: A to Z

- The Evolution of Decentralized Wastewater Treatment Philosophy
- Wastewater Chemistry, Biology & Characteristics
- Soils and Site Evaluation Overview

#### Education & Training

- Examining Onsite Management in Lee County, Florida, *Bob Himschoot*
- Analyzing Wastewater Treatment System, *Bruce Lesikar*
- How Can the Engineering Community Increase the Use of Decentralized Technologies & Mngt? *Amy Macrellis*
- Dealing with Difficult People... How to Survive Life in the CAVE, *LuAnn Watson*

#### Cluster System & Application

- Cluster System Application: Case Study, *Roger Lacasse*
- Zero-Discharge Design for Onsite Wastewater, *Chia Shun "Rocky" Shih*
- The Need-To-Know's of Cluster System Design, *Larry Stephens*
- Bluff, Utah—Distributed Wastewater Management Concepts Prove Superior, *David Venhuizen*

#### Performance & System Evaluation

- Field Performance Assessment of Soils/Systems, *Mary Clark*
- Drip Dispersal in Imported Soils, *Randy Miles*
- Characterization of pH variations in Septic, *Clement Solomon*
- Microbial Fate and Transport of Seasonally Saturated Soil, *Chris Stall*

#### Evening Reception—Hosted by NOWRA Businesses & Exhibitors

## SPECIAL EVENT: BEALE STREET RECEPTION SILKY O'SULLIVAN'S — Wednesday, April 9, 2008

- Free trolley ride to Beale Street (3-day pass)
- Live music from 6:30–9:30 pm
- 2 drinks provided for reception

Silky O'Sullivan's present location on Beale Street, formerly the Gallina building, is over 100 years old and has more recorded history than any other building on Beale Street—formerly a saloon, bar and restaurant, poker room, racehorse room and hotel. A documented piece of the Blarney Stone from the Blakey Castle, Ireland, now resides in the south wall of the bar. So before you leave, join the millions who have kissed the Blarney Stone for good luck.

While visiting Silky O'Sullivan's, check out the Walk of Fame, which includes hand prints and signatures of such greats as Bob Hope, Ella Fitzgerald, Carl Perkins, and Johnny Cash. Also visit our Irish, beer-drinking goats, a mainstay of Beale Street. And don't miss the best of Memphis' live music, provided on the patio when the weather is ripe for dancing under the stars.

Silky O'Sullivan's—Where everyday is St. Patrick's Day!

For more information, visit Silky O'Sullivan's website: [www.silkyosullivans.com](http://www.silkyosullivans.com).



## WEDNESDAY April 9, 2008

### NOWRA Decentralized Systems Overview: A to Z

- Water Movement in Soil
- Application of Soil Surveys to Decentralized Wastewater Systems
- Septic Tank Overview: Function, Design, Construction, Inspection and Troubleshooting
- Aerobic Treatment Unit and Media Filter Overview
- Soil Treatment Principals and System Types

### Standards, Regulations & Policy

- Demand Response for the Water Industry, *Arpine Babloyan*
- Recent Trends in Decentralized Wastewater Management, *Valerie Nelson*
- On-site Systems in Tennessee, *Robert O'Dette*
- NSF/ANSI Standards Update, *Sharon Steiner*

### Successful Planning and Management

- Planning a Distributed Wastewater Management Concept in Flora Vista, New Mexico, *David Venhuizen*
- Developing Onsite Wastewater Management Programs, *Bruce Douglas*
- Innovative Loans Stimulate Septic System Renovation, *Terry Hull*
- Development & Deployment of IDNR's Database, *David Olson*

### WERF Projects Update

- NDWRCDP Overview & the Role of WERF in the Decentralized Field
- Analysis of Existing Community-Sized Decentralized Systems: Findings & Next Steps, *Victor D'Amato*
- Influent Constituent Characteristics of the Modern Waste Stream from Single Sources, *Mia Tucholke*
- Users Guide for Watershed Scale Modeling of Decentralized Wastewater Systems, *Mergistu Geza*
- Installation Training Curriculum, *Bruce Lesikar*
- Long Range Planning for Decentralized Wastewater and Stormwater Treatment Research: Workshop, *Valerie Nelson*
- Stormwater Benefits of Greenroofs and the Relative Contribution of Plants, *Robert Berghage*
- Sustainable Water Resources Management, *Robert Goldstein*

### Treatment Process Evaluations

- Treating Septage with Aerobic Micro Organism, *John Campbell*
- A Protocol for Evaluating the Effects of the Use of Water Softeners on Septic System Function, *Nancy Deal*
- Effluent Quality After Geotextile Filters Using Timed Pressure and Dosed Distribution, *Steve Dix*
- Biofilm Processes in Decentralized Wastewater Treatment Systems, *Isolde Roeske*

### Innovative Technologies and Solutions

- A New and Improved Septic Tank, *Kevin Chaffe*
- Flexible Solutions for Small WWTPs, *Micro Koppmann*
- Wastewater Renovation and Hydraulic Performance, *David Potts*
- Waste Water Treatment Through Aquaculture at Varanasi, India, *Priti Pandey*

**Evening Reception**—Silky O'Sullivan's

## THURSDAY April 10, 2008

### NOWRA Decentralized Systems Overview: A to Z

- Pumps and Controls for Decentralized Systems
- Gravity & Pressure Soil Based Distribution Methods
- Operations & Maintenance of Decentralized Systems

### Miscellaneous Topics

- Sustainable Management of Wastewater, *Nanthi Bolan*
- Creating a Public-Private Partnership, *William Freed*
- Commercial OWWTS Failures and Solutions, *David Kalen*
- Reuse with Subsurface Drip Irrigation Fields—Issues & Opportunities, *David Venhuizen*
- Dimensions in Decentralization: From Innovative Technologies to Distributed Water Resource Mngt, *Craig Lindell*

### Innovative Technologies and Solutions

- The High Performance Biofiltration Concept the "Workhorse" Technology, *David Venhuizen*
- Evolution of Innovate and Alternative OWWS Use in Rhode Island, *George Loomis*
- The Evolution of Trickling Filter Media, *Ted Cotton*
- Pressure Dosed Drainfield Design & Analysis, *Thomas Kallenbach*

### Memphis Area Education Tour of Decentralized Systems

### Plenary Sessions

- NOWRA Vice President Message
- Federal Policies for Decentralized Solutions, *Valerie Nelson*
- Closing Keynote Addresses

**Make this Conference a Special Visit—  
and bring the family for spring break!**

Memphis has numerous day trips to entertain the entire family. All of these outings can be accomplished in a day, bringing you back to the city for an exciting evening.

- **Mud Island**—A tram ride takes you to the unique Mud Island located on the Mississippi River. Here you can cool off in a giant replica of the Mississippi or tour the museum to learn the history of the river.
- **Sun Studio**—Tour the birthplace of Rock 'n' Roll! Tour guides take visitors through the rich history of rhythm, blues and its most famous acts including B.B. King, Ike Turner and of course Elvis Presley.
- **Graceland**—Visit Elvis' home, just minutes from the Convention Center! After your tour of the mansion, head down the street to the Heartbreak Hotel.

## CONFERENCE REGISTRATION INFORMATION



### Included with the Registration Fees

- **Full-conference** registration includes access to all education sessions, the technical exposition, break refreshments, Exhibitors Networking receptions, the Post Conference Session, Conference Proceedings and Wednesday's Special Event at Silky O'Sullivan's.
- **Daily** registration fee covers specific one-day access to education sessions and seminars, the Exposition, refreshment breaks, and Conference Proceedings.
- **Student** fee includes full conference registration and a student membership in NOWRA through 2007. Students must be attending college or graduate school full-time in a course of study related to onsite wastewater technology.
- **Guest** fee includes access to the technical exposition, hospitality area, refreshment breaks and that day's activities.

## REGISTRATION PROCEDURES

### DATES AND DEADLINES

- Registration must be RECEIVED with payment in full by the dates listed.
- Early registration: on or before **February 29, 2008**, no reduced-rate registrations will be accepted after **March 1, 2008**
- Regular Registration Fees begin March 1, 2008.
- No phone-in registrations are accepted. Changes in previously made registrations must be made in writing by email or fax.
- Registration forms may be mailed with payment by check (payable to NOWRA) or with credit card payment information, or faxed with credit card information. All pre-registration forms must be received by **April 1, 2008**, and accompanied by payment in full in order to be processed. Please visit our website [www.nowra.org](http://www.nowra.org) to register online.

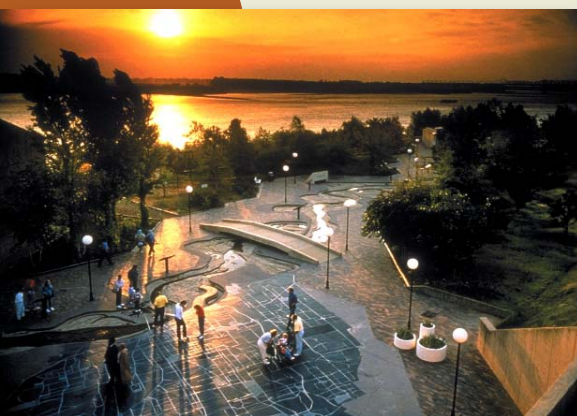
### CANCELLATION POLICY

- Registration cancellations must be in writing, and are refundable only until **March 31, 2008**, but will be charged a processing fee of \$50.00. **No cancellations are accepted after April 1, 2008, and no refunds will be given after that date.** Returned check fee: \$30.00.

### NOWRA MEMBERSHIP

If you are not a current NOWRA member in an affiliated state association\* but would like to become one, you may purchase a 2008 membership through NOWRA at \$140/year and save on the full conference price! NOWRA individual membership forms are available on our website [www.nowra.org](http://www.nowra.org). This annual membership is for one year, and ends December 31, 2008.

\*NOWRA membership is held on an individual, nontransferable basis. To register at member rates, you must have a current (2007) membership paid in full. All current members have been sent 2007 membership cards and numbers. To verify your membership, check with your State group or call the NOWRA office at 800-966-2942.



## IMPORTANT DATES TO NOTE!

Online Conference Registration begins on NOWRA's website on December 1, 2007.

### NOWRA Pre-Conference Activities

Sunday, April 6, 2008	NOWRA Board & Committee Chairs Meeting
Monday, April 7, 2008	Nitrogen Symposium (separate fee)
Monday, April 7, 2008	Committees and States Leaders Meetings

### NOWRA Conference Activities

<b>Tuesday, April 8, 2008</b>	NOWRA Technical Education Conference Program NOWRA Exposition Opens Exhibitor Reception
<b>Wednesday, April 9, 2008</b>	NOWRA Exposition – Contractor Open House Beale Street Reception at Silky O'Sullivan's <i>(fee included in full conference registration)</i>
<b>Thursday, April 10, 2008</b>	NOWRA Field Education Session <i>(separate fee)</i> Special Conference Closing with Keynote Speakers

Exhibitor Registration materials are available for pick-up: Sunday, April 6, 2008 at 12 noon

Conference Registration opens: Sunday, April 6, 2008, 12 noon to 6 p.m.

Conference Registration opens: Monday, April 7, 2008 at 7:00 a.m.

## CONFERENCE FEES

### Full Conference - NOWRA Members and Partnering Organizations\*

Early (by February 29, 2008)	\$395.00
Regulators	\$295.00
Regular Member Rate (March 1, 2008)	\$495.00

### Full Conference – Non- Members

Early (by February 29, 2008)	\$495.00
Regulators	\$395.00
Regular Non-Member Rate (March 1, 2008)	\$595.00

### Daily Conference Rate (NOWRA Members and Partnering Organizations)

Early (by February 29, 2008)	\$250.00
Regulators	\$225.00
Regular Member Rate (March 1, 2008)	\$350.00

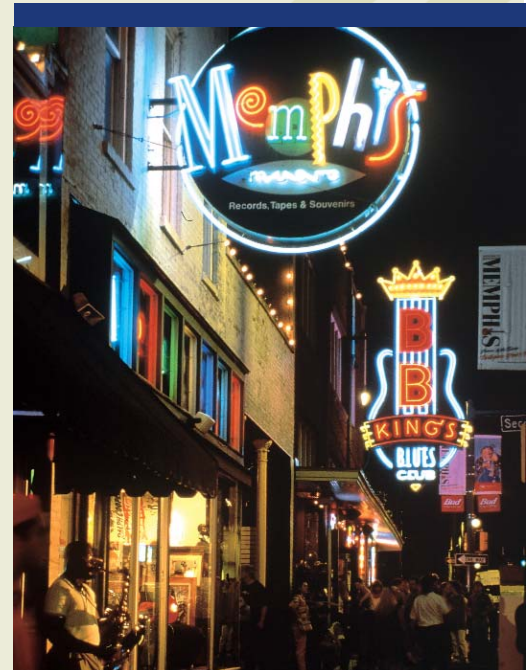
### Daily Conference Rate (Non-Member)

Early (by February 29, 2008)	\$350.00
Regulators	\$325.00
Regular Member Rate (March 1, 2008)	\$450.00
Special Student Fee	\$175.00
<i>(includes NOWRA membership)</i>	
Spouse/Guest	\$125.00
<i>(includes awards lunch &amp; opening reception, hospitality room and gift)</i>	

### Other Fees

Monday, April 7, 2008— <b>Pre-Conference Nitrogen Symposium:</b>	\$125.00 <i>(not included in full conference registration)</i>
Tuesday, April 8, 2008— <b>Exhibitor Reception:</b>	\$40.00 <i>(included in full conference registration)</i>
Wednesday, April 9, 2008— <b>Off-site Reception:</b>	\$65.00 <i>(included in full conference registration)</i>
Thursday, April 10, 2008— <b>Onsite Systems Field Trip:</b>	\$95.00 <i>(includes transportation and lunch)</i>

\*NOWRA Partnering Associations include: The National Association of Wastewater Transporters, the National Environmental Health Association, the National Groundwater Association, Rural Community Partnership, National Small Flows Clearing House, U.S. Environmental Protection Agency, Water Environment Research Foundation, National Association of Towns and Townships, Water Environment Federation.





# REGISTRATION FORM

Register online at [www.nowra.org](http://www.nowra.org)

Mail this form with check (payable to NOWRA) or fax your registration with credit card information. Registrations are only accepted with full payment in U.S. dollars. After **April 1, 2008**, registrations are **only** accepted onsite at the Conference.

Please print the following information

Membership Number \_\_\_\_\_

Full Name \_\_\_\_\_

Name for badge (if different from first name) \_\_\_\_\_

Company/Organization \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_ Country \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

## FEE SELECTION

**Monday Pre-Conference Nitrogen Symposium** (Separate from the Full Conference Fee): \$125.00 \$ \_\_\_\_\_

**Full Conference** (Tuesday–Thursday) Does not include field trip; but does include opening reception & Wed. function

NOWRA Member: \$395 (by 02/29/2008) • \$495 (after 02/29/2008) \$ \_\_\_\_\_

Non-NOWRA Member: \$495 (by 02/29/2008) • \$595 (after 02/29/2008) \$ \_\_\_\_\_

**Regulator (only)—Full Conference** (Tuesday–Thursday) \$ \_\_\_\_\_

NOWRA Member : \$295 \$ \_\_\_\_\_

Non-NOWRA Member: \$395 \$ \_\_\_\_\_

**Student Conference/Membership** (Does not include field trip, or receptions): \$175 \$ \_\_\_\_\_

**2008 NOWRA Membership Fee:** \$140 \$ \_\_\_\_\_

Only for those individuals who reside in a state without an affiliated state association.

**Daily Conference Rate:**  Tuesday  Wednesday  Thursday

NOWRA Member: \$250 (by 02/29/2008) • \$350 (after 02/29/2008) \$ \_\_\_\_\_

Non-NOWRA Member: \$350 (by 02/29/2008) • \$450 (after 02/29/2008) \$ \_\_\_\_\_

Regulator (NOWRA member): \$225 \$ \_\_\_\_\_

Regulator (Non-NOWRA member): \$325 \$ \_\_\_\_\_

**Exposition Pass** (Access to Exposition Ballroom and Exposition Hall only): \$50 \$ \_\_\_\_\_

**Spouse/Guest** (Spouse/Guest Name \_\_\_\_\_): \$125 \$ \_\_\_\_\_

**Tuesday Exposition Reception** (Included in full conference fee): \$40.00 \$ \_\_\_\_\_

**Wednesday Offsite Reception** (Included in full conference fee): \$65.00 \$ \_\_\_\_\_

**Thursday Field Trip** (NOT included in full conference fee): \$95.00 \$ \_\_\_\_\_

**I plan to attend the Onsite A to Z Systems Course**  
(Included in full conference fee, but **ADVANCED SIGN UP IS REQUIRED**)

**Total Amount Enclosed** \$ \_\_\_\_\_

## PAYMENT INFORMATION (NOWRA EIN # 593099430)

My check in the amount of \$ \_\_\_\_\_ is enclosed (Check #: \_\_\_\_\_)

Please charge my:  Visa  MasterCard | Credit Card Number \_\_\_\_\_

Exp. Date: \_\_\_\_\_ Security Code \_\_\_\_\_ Name on Card \_\_\_\_\_

Billing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Signature (required) \_\_\_\_\_



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