

# EDWARDS WATER RESOURCES IN CENTRAL TEXAS: RETROSPECTIVE AND PROSPECTIVE

**Symposium and Field Trip Co-Hosted by  
South Texas Geological Society and Austin Geological Society**

**Friday, May 21, 2004: Oral & Poster Sessions, Omni Hotel, San Antonio, Texas**  
**Saturday, May 22, 2004: Field Trip, Edwards Outcrops in San Antonio Area**

This symposium celebrates, reviews, and synthesizes more than 250 years of cultural, geological, hydrological, economic, and political history of the Edwards Aquifer systems, arguably the most important natural resource in Central Texas.

Speakers in the Friday morning session will include influential geoscientists who personally carried out key research on the Edwards during the 1950-1980 period, as well as knowledgeable observers who will discuss the evolution of aquifer regulation. These speakers will provide a retrospective view about how our current level of understanding evolved about this essential source for the region's groundwater and how its management and regulation have come about.

Friday afternoon speakers will be geoscientists, hydrologists, and other specialists who will describe the current state of knowledge, as well as present and future Edwards research and its implications for sustainability and management. In addition to the oral program, poster presentations primarily concerning current research projects will be available for viewing throughout the day.

A late afternoon session will feature the demonstration of an animated, time-sequenced model of the regional Edwards Aquifer systems, as well as reminiscences by some veteran Edwards geoscientists. This session will also provide a time for informal discussions while attendees enjoy hors d'oeuvres and their favorite beverages.

On Saturday, participants in an all-day field trip will examine important Edwards outcrops in the Balcones fault zone in the San Antonio area. Stops will include (1) Georgetown/Person Formation contact, (2) Person Collapsed Member, (3) Comal Springs, (4) lunch at historic Clear Springs Café, (5) Person Dense Member and Kainer Formation Grainstone Member, (6) Kainer Basal Nodular Member, (7) upper Glen Rose Formation, and (8) Kainer Basal Nodular Member and Dolomitic Member. The trip will be led by Ted Small, well-known Edwards authority who carried out and supervised numerous studies and research projects over more than 40 years during his tenure with the USGS.

The purposes of this symposium are (1) to provide historical continuity between past and present Edwards researchers and regulators and (2) to provide historical perspective for the general public, news media, and community leaders who want to know more about this essential regional resource.

The Friday **symposium registration fee is \$100 through April 29, 2004** and \$125 after April 29, 2004. The fee includes lunch, refreshments, "happy hour" reception, notepad portfolio, and CD publication containing papers from all symposium presenters. The Omni Hotel is located at 9821 Colonnade Boulevard, just off of I-10 in northwest San Antonio. The Saturday **field trip fee is \$50** and will include transportation, lunch, and guide materials. The trip will be limited to 50 participants, who must also be registered for the symposium.

*Information and registration forms are also available on the STGS website ([www.stgs.org](http://www.stgs.org)). Corporate and institutional sponsorships are welcome.* If your organization would like to be advertised as a funding sponsor, please contact Randy Williams ([randy.williams@tcb.aecom.com](mailto:randy.williams@tcb.aecom.com)) in Austin or Ed Miller ([egmsat@cs.com](mailto:egmsat@cs.com)) in San Antonio. For program information, please contact Bonnie Weise ([bweise1@sbcglobal.net](mailto:bweise1@sbcglobal.net)), Pete Rose ([prose@roseassoc.com](mailto:prose@roseassoc.com)), or John Waugh ([jwaugh@saws.org](mailto:jwaugh@saws.org)).

## ORAL PRESENTATIONS

**Peter R. Rose** – Regional Perspectives on the Edwards Group of Central Texas: Geology, Geomorphology, Geohydrology and Their Influence on Settlement History

**Thomas E. Ewing** – Discovery and Early use of the Edwards Confined Aquifer in Central Texas, and How Geologists Understood It

**C. I. Smith** – History and Results of Geological Research, Edwards and Related Formations in West Central Texas

**Charles M. Woodruff, Jr. and Patrick L. Abbott** – Coevolution of the Edwards Aquifer and Landscapes of the Edwards Plateau Region – a Restrospective

**George Ozuna, Robert W. Maclay, and Ted A. Small** – Conceptualization of Flow and Storage within the Edwards Aquifer, San Antonio Region

**Larry Land** – Evolution of Groundwater Modeling in the Edwards Aquifer

**Joe Moore** – Management of the Edwards Aquifer: A Work in Progress?

**Michael Albach** – Policy Drivers and Aquifer Management Issues

**John R. Waugh** – Applied Research Related to Water Resources of the Edwards Aquifer Region, South-Central Texas

**Bruce D. Smith, David V. Smith, and Jeffery G. Paine** – New Geophysical Applications for Hydrologic Characterization of the Edwards Aquifer

**Susan D. Hovorka and Ronald T. Green** – Role of Conduits in Edwards Aquifer Evolution and Flow

**Nico Hauwert, David Johns, Brian Hunt, Joseph Beery, and Brian Smith** – The Flow System of the Barton Springs Segment of the Edwards Aquifer as Interpreted from Groundwater Tracing and Associated Field Studies

**Robert Mace, Alan Dutton, Rick Lindgren, and Ronald T. Green** – Silicon Chips and Crystal Balls: The Current Status (and Future Paths?) of Modeling the Edwards Aquifer

## POSTER PRESENTATIONS

**René A. Barker and Ann F. Ardis** – Stratigraphy, Geologic History, and Hydrogeologic Units of the Edwards-Trinity Aquifer System, West-Central Texas

**Dena Chenault and Lance L. Lambert** – Facies Transitions from the Devil's River Trend to the Edwards Formation (Shelfward) and the Maverick Basin (Basinward) in a Sequence Stratigraphic Framework

**David A. Ferrill** – Update on Structural Interpretation of the Edwards

**Edward W. Collins, Thomas A. Tremblay, Jay A. Raney, Jeffery G. Paine, Susan D. Hovorka, Roberto Gutierrez, and Rebecca C. Smyth** – Geologic Mapping and Construction of Digital Map Data Sets of the Edwards Aquifer Region, Central Texas

**George Veni** – Karst Research in Texas and the Edwards Aquifer: Past, Present, and Future

**Adrien L. Lindley and Susan D. Hovorka** – Applying Statistical Analysis to Cave Maps to Infer Controls on Conduit Development in the Edwards Aquifer of Central and South Texas

**Brian E. Lock and Francisco Cardona Sanchez** – Edwards Porosity and Permeability: Observations Based on Interstate 10 Exposures

**Alvin L. Schultz, Scott R. Halty, Grant L. Snyder, and Kirk M. Nixon** – The Edwards Aquifer Freshwater / Saline-Water Interface and Its Relationship to Downdip Anhydrite Beds (Del Rio to Kyle, Texas)

**Ian C. Jones** – Groundwater Availability in the Northern Segment of the Edwards Aquifer, Texas

**Brian A. Smith and Brian B. Hunt** – Sustainable Yield Analysis of the Barton Springs Segment of the Edwards Aquifer

**Beatriz Garcia-Fresca and John M. Sharp** – Urban-enhanced Recharge to the Edwards Aquifer

**Clyde Munster, Yuli Suhamoto, Lilly Shen, and Bradford P. Wilcox** – The Effects of Land Cover, Geology, and Groundwater Levels on Spring Discharge in the Pedernales River Basin

**Bradford P. Wilcox, Clyde Munster, Keith Owens, Binayak Mohanty, and Rob Jackson** – Large-scale Rainfall Simulation for Understanding the Role of Shrubs in the Edwards Plateau

## SPECIAL EXHIBIT – Animated 3D Edwards Aquifer Model

**REGISTRATION FORM**  
**STGS / AGS EDWARDS WATER RESOURCES SYMPOSIUM AND FIELD TRIP**  
May 21-22, 2004 — San Antonio, Texas

Name (Last, First, Middle Initial) \_\_\_\_\_ Nickname for Badge \_\_\_\_\_

Company \_\_\_\_\_

Mailing Address (Street or P.O. Box) \_\_\_\_\_ Day Phone (Include area code) \_\_\_\_\_

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

E-mail Address: \_\_\_\_\_

- Symposium Registration through April 29, 2004: \$100  
 Late Registration after April 29, 2004: \$125  
 Field Trip Registration: \$50 (Trip limited to 50 registrants) Total Amount Due \$ \_\_\_\_\_

Check enclosed     Visa     MasterCard     American Express  
Credit Card Account Number \_\_\_\_\_

Card Expiration Date \_\_\_\_\_ Printed Name of Card Holder \_\_\_\_\_ Authorized Signature for Card \_\_\_\_\_

**Mail this form with payment to the STGS, 900 N. E. Loop 410, Suite D-100, San Antonio, Texas 78209 or Fax to (210) 822-7375 (Credit Cards only). Checks or money orders must be drawn on U.S. banks in U.S. funds only.**

-----CUT ON THIS LINE TO SEPARATE FORMS-----

**OMNI SAN ANTONIO HOTEL RESERVATION FORM**

STGS / AGS EDWARDS SYMPOSIUM — May 21, 2004

**MAIL OR FAX HOTEL RESERVATION FORM DIRECTLY TO THE OMNI SAN ANTONIO HOTEL**

Omni San Antonio Hotel – Attn: Reservations    Fax (210) 699-5844 (Attn: Debra)    or Call (800) 843-6664 (Reference STGS)  
9821 Colonnade Blvd., San Antonio, TX 78230

Arrival Date: \_\_\_\_\_ Approximate Time: \_\_\_\_\_ Departure Date: \_\_\_\_\_

Guest's Name: \_\_\_\_\_ Additional Occupants' Names: \_\_\_\_\_

Street Address: \_\_\_\_\_ Day Phone (Include area/country code): \_\_\_\_\_

City: \_\_\_\_\_ State/Country: \_\_\_\_\_ ZIP/Postal Code: \_\_\_\_\_

**Rate – Circle one: \$92 single (one bed) \$92 double (one bed) \$92 double (two beds) \$92 triple (two beds) \$92 quad (two beds)**

**Special Requests:**  Smoking room     Non-smoking room     Accessible room     Other \_\_\_\_\_

I have enclosed a check or money order in the amount of one night's room rate plus 16.75% occupancy tax, payable to Omni San Antonio.

Please charge one night's room rate plus 16.75% occupancy tax to the following credit card:

Visa     MasterCard     American Express     Carte Blanche     Diners Club     Discover

Credit Card No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

I understand that (1) I am liable for one night's room rate plus occupancy tax (currently 16.75%), which will be covered by my deposit, in the event that I cancel reservations less than 24 hours prior to my scheduled arrival; (2) upon check-in I must verify departure date (3) a \$50 fee will be assessed on any early departure not verified at check-in; and (4) special requests are subject to room availability.

Name on Card (Print or type): \_\_\_\_\_ Authorized Signature: \_\_\_\_\_

This hotel reservation request form must be accompanied by a deposit of one night's room rate plus 16.75% occupancy tax either by check, money order or with a major credit card. This deposit will be applied to the first night of the reservation. Deposits made via a credit card will be considered guaranteed and billed accordingly in case of a no-show. Occupancy tax is subject to change without notification. Check in time is 3:00 PM. Check out time is 12:00 Noon.

**A LIMITED NUMBER OF ROOMS ARE AVAILABLE AT THIS SPECIAL SYMPOSIUM RATE – RESERVE EARLY!  
HOTEL MUST RECEIVE ROOM RESERVATION BY MAY 5, 2004 TO GUARANTEE SPECIAL RATE.**