

2004 WEF ARTHUR SIDNEY BEDELL AWARD

...acknowledging extraordinary personal service to the Water Environment Association of Texas. The honoree must be a member of WEAT and should exemplify organizational leadership, administrative service, membership activity, stimulation of technical functions, or similar contributions to WEAT.

Cathy Henderson



Cathy Henderson was High School Valedictorian and was granted Valedictory and SAT scholarships to the University of Texas at Arlington, graduating with a B.S. Degree in Biology. She has been employed at the Trinity River Authority Central Regional Wastewater System (TRA-CRWS) laboratory for 25 years. She holds Texas Water Utilities Association Class "A" Lab Analyst Certification and Texas Commission on Environmental Quality (TCEQ) Class "A" Wastewater Certification and Class "A" Water License. She has been a TCEQ Certified Wastewater Instructor since 1984, providing training for operations personnel at Trinity River Authority and other municipalities in the surrounding area. She has served on the TCEQ Operator Licensing Advisory Committee for three years.

Since joining TRA in 1979, Ms. Henderson has been promoted to increasingly responsible positions (Laboratory Technician II, to Biologist, to Senior Biologist, to Laboratory Supervisor, to Laboratory Division Chief). She was promoted to the position of Quality Assurance/Quality Control Coordinator four years ago. Ms. Henderson was instrumental in setting up the TRA-CRWS Laboratory's bio-monitoring laboratory. For her expertise and dedication to her profession, she received the WEF Laboratory Analyst Excellence Award in 1999.

In addition to her professional duties, Ms. Henderson is involved in numerous professional associations. She has been a member of the Water Environment Federation and the Water Environment Association of Texas since 1992. As a WEAT member, she has acted as mentor of science fair competitors and has judged science fairs since the late 1980's. She served as the Co-Chair of the WEAT Public Education Committee for the last three years and has assisted with two mini-CAST meetings. She served as the Chair of the WEAT local host committee for the very first on-site national 2003 U.S. National Stockholm Junior Water Prize Competition. Her success as local organizer of this event led to her being asked to Chair the position for a second consecutive year. She and her many volunteers have set the benchmark for future SJWP on-site competitions in other states. She currently is a member of the Registration Committee for the Texas Water 2004 annual conference in Arlington, Texas. She has been very active in the North Texas Section of WEAT. She served as the Treasurer for the group for 2001 and 2002 and personally reorganized the accounting system and method of reporting. She has been the NTS WEAT Science Fair Committee Chair for the last six years and serves on the NTS WEAT Scholarship Committee.

Ms. Henderson is also a member of the American Water Works Association and two chapters of the Texas Water Utilities Association (TWUA) – the North Texas Lab Analysts Chapter and the White Rock Utilities Association. For the North Texas Lab Analysts Chapter, she has served as President, Secretary/Treasurer (twice), and on the Public Relations Committee. For the White Rock Association, she was the first "Woman of the Month", was the first woman President, and also served as Membership Committee Chair. She teaches Basic Wastewater Lab for student attendees at the TWUA North Central Texas Regional School, has chaired the Wastewater Laboratory Course at the School for the last six years, and has been responsible as Vice-Chair for personally organizing all 18 training courses. In 1997, she was the recipient of the TWUA Public Education Award for her efforts toward improving public awareness of the importance of water and the water utilities industry.

For approximately ten years, Ms. Henderson worked with the "Expanding Your Horizons" program held annually at the University of Texas at Arlington, helping provide hands-on training to adolescent girls in grades 6 through 8 in the areas of math and science. She has participated in numerous career day presentations at all grade levels in the public school system to encourage students to pursue environmental careers. Since 1992, she has been involved with the Texas Watch Citizen's Monitoring group helping monitor water quality in water bodies throughout Texas. She conducts plant tours at the TRA facility for public schools and other groups.

2004 WEF GEORGE W. BURKE, JR. AWARD

...acknowledging an active and effective safety program in municipal and industrial wastewater facilities. The facility must have a documented and illustrated safety program and safety record for the preceding calendar year.

Medio Creek Water Recycling Center (San Antonio Water System)



The Medio Creek Water Recycling Center was initially completed in 1972, with the original plan involving construction of two oxidation ditches. The facility was expanded in 1982 using the carrousel biological oxidation process. In 1988, new carrousel basins were built on top of the footprints of the original oxidation ditches, marking the first time in the United States that oxidation ditches were converted to aerobic carrouseles. Another expansion was completed in 2002 bringing the plant capacity up to 8.5 MGD. Wastewater flow is primarily domestic from residential communities with some recent contributions from increasing commercial activity. In 1999, construction of ultraviolet disinfection facilities replaced the use of chlorine and sulfur dioxide. In 2002, a solids transfer line was completed to transfer sludge to the Leon Creek collection system and eliminate solids handling at Medio Creek WRC. The Medio Creek WRC operations crew staffs the facility 24 hours a day, 7 days a week, and 365 days a year, on 12-hour shifts. The maintenance staff - consisting of welders, mechanics, instrument

technicians, and electricians - works a five-day week, Monday through Friday, with on-call personnel available at all times.

Medio Creek WRC has accumulated **ZERO** lost time injuries since 1999. This safety record can be attributed to the comprehensive and multi-faceted safety program described below.

The facility utilizes a comprehensive Employee-Driven Safety Program (ESP) that strives for continuous improvement in safety-related practices with the intent to promote best safety practices. Encompassed in an easy-to-read manual, the Program is designed to provide both pro-active and reactive strategies to reduce variability in safety performance and is focused on employee participation, input, and feedback. It includes multiple action activities on job safety enhancements for employees and contractors and offers numerous comprehensive safety-training opportunities. The program's elements include upstream prevention activities including hazard assessment and correction. Motivation and recognition programs are designed to promote employee and management involvement as well as recognize group and individual contributions to the safety process. This involvement requires attention to and promoting changes in both mental and physical behavior when performing everyday work duties. The emphasis is on building processes that have an upstream focus, fostering employee involvement and participation, and analyzing data to solve problems. Identifying work process variability sources and ways to manage the variability is also fundamental to the overall process.

The Medio Creek WRC has an active facility employee-run Safety Committee that meets monthly to address safety concerns and to formulate corrective actions. The purpose of the meetings is to capture safety-related ideas and track the progress of ongoing safety improvements. The committee maintains a list of pending items that indicates who is responsible for the implementation of corrective action and the expected completion date. The committee also maintains a list of completed safety improvements. This innovative approach has been used as a pilot for other facilities in the SAWS. The committee has developed the Safety Observation Checklist, a tool used to provide employees feedback on safety improvements they can make in their work place. Another innovation is the Supervisor Inspection Form used by management to document workplace safety. From this form, management conducts an all-hands meeting to discuss the inspections and provide safety talks. Other committee accomplishments are the Job Safety Analysis and an Employee Driven Safety Process Quality Review.

As a result of this interactive approach, Medio Creek WRC instituted many safety enhancements. For example, the facility installed an ultraviolet disinfection system to eliminate the hazards of chlorine and sulfur dioxide. This improved workplace safety and also ended the transportation of chlorine cylinders through adjacent neighborhoods and past local schools. Another safety improvement has been the replacement of a manual jib crane that required several people to operate and that was very risky in windy conditions. A motorized jib crane has now been installed to improve workplace safety. In addition, contractors involved in projects at Medio Creek WRC must submit a company safety plan and documentation of safety meetings. Some construction safety measures at the facility include: consistent use of safety harnesses during work in progress; installation of scaffolding for wall-braces; excavation safety netting and trench-stepping to eliminate the need for wall shoring; the addition of red chalk coloring to concrete to identify

buried power lines; and use of blowers /safety lines/gas detectors/standby personnel during confined space entry into wet wells. These are only a few of the positive results of the Safety Committee's work.

The Employee-Driven Safety Program places an emphasis on safety training and practical application in real-life situations. The training received is applied in programs such as lock-out/tag-out procedures and the fire extinguisher inspection program. Emergency Response Plans are an important aspect in the facility's operations. Medio Creek has comprehensive Emergency Evacuation and Shelter-in-Place Procedures. Each employee receives training and a complete copy of the Procedures to ensure they can respond appropriately in the event of an emergency. Medio Creek WRC personnel are trained to support and respond to chemical releases at any of SAWS' Water Recycling Centers. Periodically, they participate in joint exercises with the San Antonio Fire Department Haz-Mat team to practice their emergency skills. The facility has also developed an in-depth Emergency Response and Evacuation Plan to include a comprehensive tracking system that monitors safety related work orders.

2004 WEF SERVICE AWARD OUTGOING DIRECTOR

...for distinguished service to the Member Association (WEAT)

Carolyn Ahrens Wieland



As elected by the Executive Board of the Water Environment Association of Texas, Carolyn Ahrens Wieland served as a Director on the Board of the Water Environment Federation during the years 2000-2003. Her work with WEF also has included serving as Vice-chair of the WEF Government Affairs Committee's Legislative Subcommittee, and as a member of the 2003 Nominating Committee, the Water Reuse Committee, and the Constitution and By-Laws Committee. She has been a member of the WEAT Executive Board since 1995, including positions as Secretary and as a member of the Management Review Committee. Her participation in WEAT at the State level began after finishing her term as President of the WEAT Central Texas Section. She also is active with the American Water Works Association, for which she is incoming chair of the Water Allocation and Regulation Committee, and as a Board Member of the Texas Water Conservation Association (TWCA) for which she served as Water Laws Chair for three years. She is a past recipient of the TWCA President's Award for outstanding dedication, contribution, and service to the water

resources of the State of Texas, of the WEAT President's Service Award, and of two Watermark awards for raising the public's level of understanding of Texas water issues. Ms. Ahrens Wieland practices law in the areas of water, environmental law, and government affairs with Booth, Ahrens & Werkenthin, P.C., in Austin, Texas.

2004 WEAT PILLARS OF THE PROFESSION AWARD

...honoring an individual who has demonstrated meaningful and substantial contributions toward the improvement of the water environment via a distinguished career in the wastewater or water quality industry. The honoree shall be a person of proven preeminence in the water environment profession whose career has positively impacted the success and growth of these fields within the State of Texas.

W. Wesley Eckenfelder, Jr., D.Sc., P.E.



Dr. W. Wesley Eckenfelder, Jr. earned a B.C.E. in Civil Engineering at Manhattan College-New York City in 1946. He attended post graduate classes at North Carolina State University-Raleigh in 1947 and studied Chemical Engineering. He earned an M.S. in Sanitary Engineering at Pennsylvania State University –University Park in 1948. He earned an M.C.E. in Sanitary Engineering at New York University-New York City in 1954. He was awarded D.Sc. Honorary Doctorate from Manhattan College-New York City in 1990. He is a registered Professional Engineer in the State of Texas.

With a career spanning several decades, Dr. Eckenfelder has had a wide and distinguished professional career in the water environment arena beginning as a Junior Civil Engineer in New York City in 1946. Since then, he has worked as a control chemist and a sanitary engineer for two different industries; as a principal in two engineering firms; founder and president of two separate companies; and

Research Associate and Professor at four different universities including New York University-New York City, Manhattan College-New York City, the University of Texas at Austin, and Vanderbilt University-Nashville. Currently he is Senior Technical Director for Brown and Caldwell in Nashville, Tennessee. In this position, he provides technical direction and overview of projects, particularly those encompassing evaluation and design of industrial treatment facilities, evaluation and development of unique processes, and process applications to municipal and industrial waste treatment. He has extensive industrial consulting experience in all manufacturing industries including chemicals, pulp and paper, food processing, brewing, pharmaceuticals, paint, rubber, textiles, steel, and metal finishing. In the pharmaceutical industry, he has served as process consultant to Merck, SmithKline-Beecham, Pfizer, Ciba-Geigy, and American Cyanamid.

Recognized as one of the world's foremost authorities on industrial water quality management, Dr. Eckenfelder has been responsible over the last forty years for the development of many treatment processes and design principles used throughout the world. He has initiated and conducted many technical training courses for professional engineers on behalf of professional organizations, industries, and governments including 20 continuing education programs in the United States, Europe, South America, Australia, the Middle East, and Asia. His numerous texts and papers are used as fundamental references in the water environment profession. He has served as editor of journals and books, has authored 24 books, has authored 27 chapters in other books, and has authored over 200 scientific and technical papers. He was a founding member and President of the International Association for Water Pollution Research. He has served on 33 state, national, and international committees, boards, and advisory committees for the purpose of environmental engineering, water quality, and environmental standards and research. He has served as consultant for over 100 major U.S. corporations.

Dr. Eckenfelder is affiliated with eighteen different professional organizations related to engineering and the water environment. He has received over thirty-two different awards, honors, and citations from national and international associates for his contributions to environmental protection, innovation, and excellence in environmental chemistry and engineering. Among those are Water Environment Federation awards including the prestigious Honorary Membership and the Thomas R. Camp Medal for Basic Research Contributions to Wastewater Applications.

Dr. Eckenfelder has contributed to the advancement of the water environment profession for nearly six decades in the fields of wastewater research and academia and practice, especially within the State of Texas. As a professor of Environmental Engineering at the University of Texas at Austin, he significantly increased the quality of higher education in the state's wastewater industry, and his role in recruiting and developing scores of graduate students during his tenure at the University directly impacted the future of the profession in our State. Reference books and textbooks authored by Dr. Eckenfelder are commonly used in engineering offices and universities throughout Texas as well as around the nation and world. He has initiated and conducted numerous technical training courses for Texas professional engineers of behalf of industry and government, and his technical presentations of Municipal and Industrial Wastewater Treatment Work Sessions at annual WEAT conferences has contributed to the growth and credibility of the Water Environment Association of Texas.

2004 WEAT MUNICIPAL WASTEWATER TREATMENT PLANT OF THE YEAR Category 1 (<1 MGD)

...presented to a municipal wastewater treatment plant in Texas that has consistently exhibited outstanding performance of daily activities beyond the normal call of duty.

PALOS VERDES WATER RECYCLING PLANT (LAKEWAY MUNICIPAL UTILITY DISTRICT)



The Lakeway Municipal Utility District was formed in 1972 to provide water and wastewater services and other authorized services to the area within the District. Located in central Texas, Lake Travis is the source of the District's water supply. Serving a population of 7,200, the District operates three water treatment plants and two water recycling plants (Palos Verdes and Trophy). Since the District cannot discharge wastewater, all recycling plant production is stored and reused. Three lined ponds for seasonal reuse storage total 97 million gallons. Both District plants operate under two types of permits. With Chapter 305 Permit for land disposal at 20/20 quality limits, the District irrigates 235 acres of golf courses and 11 acres of Lakeway Boulevard median as well as 98 acres of cedar canopy irrigation for excess reuse disposal. With Chapter 210 Permit Notification (Reuse Permit) for unrestricted landscape irrigation, only Type 1 water is allowed. The Texas Commission on Environmental Quality (TCEQ) defines Type 1 Water as allowable for irrigation or other non-potable service where the public may be present at the time of use. Consequently, the District produces only Type 1 water for all irrigation uses. The District's 15 large reuse customers include homeowner associations, commercial areas, churches, and condominiums. Over 22% of all wastewater is sold under the Reuse Permit with the remainder recycled to the Chapter 305 areas.

The Palos Verdes Water Recycling Plant was originally constructed in 1975 with a capacity of 250,000 GPD. The activated sludge plant was state-of-the-art at that time with a concrete concentric activated sludge unit with chlorination, open-air sludge drying beds, and a laboratory building. It was one of the first plants on the Highland Lakes to completely recycle all of the wastewater by irrigating the area that soon became the back nine holes of the Yaupon Golf Course. In 1995, the second concentric plant was constructed with a capacity of 520,000 GPD and included larger aeration blowers in a sound attenuating building, a larger raw wastewater pumping station, a belt filter press to replace open-air sludge drying beds, and paved parking. The original plant was converted to a thickening and digestion unit. In 1999, a multi-use field office was completed. In 2002, the latest expansion increased the capacity to 810,000 GPD. The expansion upgraded the raw wastewater pumps, added new fine screening and residuals compaction, replaced the 1995 coarse bubble aeration with fine bubble aeration, added two new clarifiers/return sludge pumps/new filters/new liquid hypo-chlorination storage and metering/disinfection tanks/recycled water transfer pumps/improved instrumentation. This last expansion once again brought the plant to state-of-the-art status. The plant's current flow varies from 485,000 to 650,000 GPD. The plant has a primary operator who receives assistance from his supervisor and two other assisting operators. Palos Verdes boasts dual certification among its operators. The plant operations supervisor holds Grade "A" wastewater and Grade "B" water certification. The Primary Operator holds Grade "B" wastewater and Grade "B" water certification. The two secondary operators hold Grade "C" wastewater/"D" water and "D" wastewater/"D" water certifications respectively.

The Palos Verdes WRP has had **no compliance violations since 1995.**

The plant places a strong emphasis on the District's Safety Program. Operators attend monthly safety meetings covering a different safety subject every month. A 58-page Safety Manual assists and encourages the staff with safety practices. The Safety Program calls for readily accessible Material Safety Data Sheet stations at many locations. All staff members are certified in CPR and first aid and receive defensive driving education. Field and plant staff members are certified in SCBA use and HazMat response. All equipment is tested quarterly with a staff drill. All field and plant staff members are immunized against Hepatitis A & B and are offered annual flu shots. Annual recertification is required for confined space, competent person, and trench safety. The District Safety Program also has policies on drug and alcohol usage, use of cell phones, and use of hard hats. Additionally, the Program details a Risk Management Plan and an Emergency Notification Plan coordinated with the local fire and police departments. The District hosts an Annual Awards Luncheon for staff with Safety Awards recognition. Palos Verdes goes further by displaying a large sign outside its field office that displays its "No Lost Time Accidents" goal and lists the names of employees who are meeting that goal. In addition, the plant supervisor donates his time to serve on the WEAT Safety Committee to promote safety awareness across the State. As a result of this stringent safety program and management encouragement, **no District staff member has had any reportable lost time incident in the last two years.**

The Palos Verdes facility is a good neighbor. It has an excellent community relations program as sponsored by the Lakeway MUD. Local citizens are encouraged to participate in security at the plants via the Lakeway MUD "Become a Water Watcher" program that urges all neighborhood residents to watch for suspicious activities and report such activities to authorities, thereby working together with the District to keep their municipality safe. The plant offers plant tours for local schools and participates in programs at Homeowners' Association Meetings as well as at various other special meetings for the public. Open Houses with plant tours have been held for area citizens. Information on facility activities is frequently included in municipal billing mail outs, and special public service announcements are furnished periodically to the local news media.

2004 WEAT MUNICIPAL WASTEWATER TREATMENT PLANT OF THE YEAR Category 2 (1 - 15 MGD)

...presented to a municipal wastewater treatment plant in Texas that has consistently exhibited outstanding performance of daily activities beyond the normal call of duty.

BLACKHAWK REGIONAL WASTEWATER TREATMENT FACILITY (GULF COAST WASTE DISPOSAL AUTHORITY)

The Gulf Coast Waste Disposal Authority (GCWDA) Blackhawk Regional Wastewater Treatment Facility is a regional facility receiving wastewater from four distinct entities: the City of Friendswood; Municipal Utility District No. 55; Baybrook Municipal Utility District No. 1; and a portion of the City of Houston. The facility is permitted to process a maximum of 9.25 MGD and averages about 5 MGD. Six operators manage the Blackhawk facility. The Supervisor holds Grade "A" Certification; the Chief Operator holds Grade "B" Certification; remaining operators hold Grades "B" and "C" Certifications.

The Blackhawk facility utilizes activated sludge with filtration ahead of ultraviolet disinfection. Municipal waste is received at the headworks from various lift stations throughout the Cities of Friendswood and Houston before passing through two mechanical comminutors and/or a set of bar screens. Return activated sludge is then mixed with the raw wastewater as it is distributed to five aeration basins. After aeration, the MLSS goes into two clarifiers for settling and separation. Settled MLSS from the clarifiers is returned to the headworks for reseeded and wasting to the thickener. From the thickener, sludge moves to five digester basins using open air and diffused air for mixing. After several days of settling, water is decanted from the digester surfaces and pumped to the headworks. Digested sludge is pumped to belt presses for dewatering and then hauled to permitted landfill. Centrate from the press is returned back to the headworks. Supernatant from the clarifiers goes over the weirs and into five sand filters to remove any fine solids that may be present. The filters constantly backwash and recycle themselves. The wash water returns to the headworks. Final treatment is disinfection via three separate channels, each with an independent set of UV lights.

Blackhawk is about to complete **eight years of perfect permit compliance**. The facility has received numerous Gold Awards from the Association of Metropolitan Sewerage Agencies (AMSA). In recognition of five consecutive years of perfect permit compliance, the plant qualified for the very first round of Platinum Awards made by AMSA. It was one of the first plants in the nation to qualify for this honor. The achievement is more remarkable in that Blackhawk receives influent from four separate, distinct entities and that it has an especially tight set of parameters due to its discharge into Clear Creek, a contact recreation designation. Clear Creek is also considered to be affected by tidal flow from Galveston Bay via Clear Lake. The plant's discharge limits are 5 mg/L cBOD, 12 mg/L for total suspended solids, 2 mg/L for ammonia nitrogen, and 200 colonies per 100 mL for fecal coliform bacteria. The final effluent must also contain a minimum of 4.0 mg/L dissolved oxygen. In spite of these tight parameters and multiple users and frequency of street-flooding downpours in the coastal area, Blackhawk has maintained its perfect compliance record since 1996.

GCWDA safety records are maintained as part of a total GCWDA data base managed by a field supervisor designated the Safety Officer. These records include information on training and education as well as daily plant operational data. Each individual operating system stands on its own in establishing a "safety year". A safety year begins counting from the last reportable injury. As of December of 2003, Blackhawk had completed **2 years without a lost time injury**, the only accident in recent memory being a mashed finger in a vehicle door which resulted in the employee missing the next shift only. The safe working habits at Blackhawk can be attributed to the dedicated adherence of its employees to the overall Safety Program of the Gulf Coast Waste Disposal Authority. Each plant in the GCWDA chooses its own Safety Coordinator who is the first on-site contact for its employees. On a monthly basis, the GCWDA Safety Officer meets with the Blackhawk Safety Coordinator to provide research and resources applicable to update the Coordinator on topics discussed in the professional safety community. Some typical examples of recent topics include hands-on fire extinguisher training, safe driving related to plant construction, and updates on emergency operation plans for operation during weather emergencies. After meeting with the Safety Officer, the Blackhawk Safety Coordinator convenes informal "tail-gate" meetings and schedules formal monthly safety meetings for employees. At these meetings, employees are encouraged to report any operating practices or plant physical conditions which they believe should be evaluated for safety concerns. All such items are documented, studied, and reported back to the concerned group. Where possible, outside experts are invited to the monthly meetings to present topics such as fire safety, electrical safety, holiday safety, proper lifting, first aid, etc. On a general basis, the GCWDA makes available to its facilities a safety library in excess of 300 videotapes related to safety issues. The Authority also has established a web site accessible by all employees at its facilities which contains the entire Safety Manual, all Material Safety Data Sheets for any location in the Authority, various safety-related Power Point presentations, and Right-To-Know training and orientation for new hires. On this web site, employees can also register for the Authority's in-

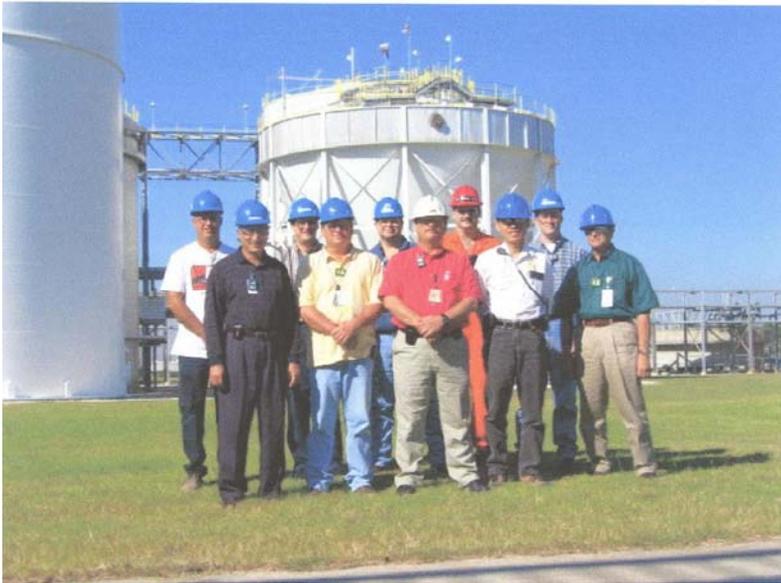
house defensive driving course. With all of the above mentioned inducements to promote a safe work environment, the overall positive attitude of the employees at the Blackhawk facility remains their most valuable asset in safety management, as reflected in their excellent safety record at the plant.

In addition to running a first-class facility, the staff at Blackhawk are always ready take the time to promote public awareness of the importance of treatment facilities to our environment. School groups, civic groups, and the general public are always welcomed with pleasure at Blackhawk.

2004 WEAT INDUSTRIAL WASTEWATER TREATMENT PLANT OF THE YEAR

...presented to an industrial wastewater treatment plant in Texas that has consistently exhibited outstanding performance of daily activities beyond the normal call of duty.

ENVIRONMENTAL CONTROL DEPARTMENT BAYER POLYMERS LLC Baytown, Texas



Bayer Polymers LLC operates a wastewater treatment facility known as the Environmental Control Department (ECD) at their location in Baytown, Texas. The facility currently treats an average of 5 MGD of process water from the various chemical units at the Baytown plant site. The treatment process consists of wastewater segregation and delivery to the facility, primary settling and clarification, neutralization and equalization, denitrification/biological treatment, carbon absorption of biological effluent and brine wastewater, filtration of carbon treated effluent and outfall discharge, and activated carbon regeneration. The heart of the system is the innovative biological system consisting of a denitrification reactor and two biological reactors. The use of these above ground biological reactors allowed ECD to close its wastewater treatment basins and trenches and thus reduce possible future groundwater contamination. The treatment plant has averaged over 96% removal

of the BOD load for the past three years, and its denitrification system nitrate removal has averaged over 96% since startup.

Bayer Polymers LLC has a strong commitment to environmental excellence in both its environmental record and its ideals used to operate the facility. Their constant refrain is "We will **not violate** our wastewater permit." The plant's written goal is zero permit violations, and each production unit is expected to assist in achieving this goal. As a result of this emphasis, the Baytown facility has an excellent environmental record. The last single wastewater permit violation, including both treated process water and storm water, was more than four years ago. The last storm water violation (4 storm water outfalls) was over ten years ago.

One reason that ECD has experienced so few violations is its innovative Action Limit System. ECD created the equivalent of a permit for each production unit. Each production unit has a list of chemicals and maximum daily concentration/quantity limits. Any unit exceeding its limit has to take immediate corrective action including reducing or stopping their water flow. A recently added on-line high-pressure liquid chromatograph and on-line gas chromatograph has allowed ECD to react to upsets much more quickly and identify out-of-specification chemicals before they enter the wastewater system. For example, the previously mentioned violation in 1999 was due to a specific compound, phenol. Steps have been instituted to prevent reoccurrence including better communication with the production unit and increased testing upstream of the process by the wastewater operators and the production unit using simplified phenol test kits. Years earlier, another violation occurred when a polyelectrolyte pump froze during cold temperatures resulting in bacterial not settling in the secondary clarifier. As a result of this experience, an improved polyelectrolyte was found and steps were taken to prevent future pump freezing.

In May of 2002, ECD experienced the ultimate test of its commitment to **no violations**. Operational upsets occurred at two production facilities simultaneously when two undetected chemicals were released into the wastewater system causing the bacteria to go into shock and TOC removals to drop dramatically. Plant and corporate management responded quickly to shut off the flow to the wastewater biological system and to shut down many of the production units. Immediate corrective actions were implemented to bring the bacterial activity back to normal. On the advice of experts, dried bacteria were added to the system along with other nutrients. Live bacteria were brought from sister plants in Virginia and South Carolina to speed up the recovery. Within ten days, the wastewater treatment plant was back to normal and production units were operating normally. During this entire incident, not a single wastewater permit parameter was exceeded.

When EPA added nitrates to the Toxic Release Inventory list in 1995, Bayer's Baytown Plant addressed the challenge by initiating several multi-divisional/multi-site teams. The objective of the initiative was to minimize the generation of nitrates at the generation point sources and to field test, construct, startup, and optimize the best removal technology for nitrates in the wastewater treatment process. The result was to remove nitrates prior to aerobic digestion while complementing the existing Tower Biology wastewater treatment process. These process improvements have resulted in Bayer's reduction in excess of 96% for NO₃ discharges.

In 1988, Bayer ECD implemented the facility-management program Opswin to store and process regulatory records. This database allows the facility to store variables such as flow, pH, organics, metals, etc. at every step in the treatment process. An ECD support laboratory analyzes approximately 800 upstream process samples per month. With this information, operators can view trends and take preventative action upstream in the treatment process. Opswin has also enabled ECD to better educate the production units as to the effects various compounds have on the wastewater treatment system. It has proved to be an effective tool in establishing internal action limits for production units and influencing production units to control the wastewater as much as the chemical they produce. Opswin stores all regulatory permit parameter results for the facility including custom monthly and annual reports for all of the TPDES Outfalls available through a single automated "one button" process. The system is also used to store on-site laboratory data.

Bayer ECD takes pride in excellent safety records. The Baytown facility achieved OSHA VPP Star status in 1998 and achieved Star Among Stars rating in 2002. The last recordable injury for ECD occurred in 1996. The facility's safety record is attributed to a strong management commitment and stringent safety programs and safety best practices. The Baytown site follows all OSHA guidelines and has implemented programs such as Management of Change (MOC), lockout/tag out, job safety analysis, safety inspections, process hazard analysis, and risk management. Beyond OSHA requirements, the plant has implemented the American Chemical Council's Responsible Care initiatives. In addition, the facility has implemented an internal quality/safety/environmental standard called Operational Excellence. The program is based on the proactive safety programs, task safety observations, job safety behavior observations, and OASIS. Observations of routine tasks are done on a scheduled basis to improve safety of those tasks. Also, the facility tracks all near-hit incidents that do not have a consequence but do have potential for a safety-related occurrence. These incidents are then analyzed to discover root causes of the occurrences. With the philosophy that this analysis will result in fewer potential incidents in the future, near hit reporting is strongly encouraged among staff. ECD uses an Integrated Information Management System developed in Lotus Notes to record, track, and analyze the incidents. The system allows users to input all types of observations, near hits, or incidents. The system notifies the appropriate people when incidents occur, is used to record root cause analysis findings and corrective actions, notifies the appropriate people of their corrective action due date, and sends e-mails if the corrective action is not completed by the due date.

Although not required by TCEQ to certify wastewater treatment operators, the Bayer facility has developed its own internal training program. The program is a web-based database that tracks the required training for an operator, the due date for both training and refresher training, and includes computer based training modules. The training consists of OSHA required training, EPA required training, and unit specific training. Each operator must pass a test to be qualified and then certified. Re-certification must be repeated every three years.

2004 WEAT OUTSTANDING MUNICIPAL OPERATOR OF THE YEAR

...presented to a municipal wastewater treatment plant operator in the State of Texas who has demonstrated outstanding professionalism at his/her facility and has performed his/her duties tirelessly and with dedication to the betterment of the water environment. The nominee must be a member of WEAT and must maintain a current operator's license in the State of Texas. He/she shall be involved in the day-to-day activities at a single plant for at least one year preceding the nomination. The operator shall continually strive to improve professionally through training seminars and classes and shall actively participate in education of the public.

EARL FOSTER



Earl Foster is currently enrolled in evening classes at Central Texas Community College. He has attended and completed the following training schools: Unit I Wastewater (Kingsland 1989); Lab Wastewater (Lago Vista 1989); Unit I Wastewater (Kingsland 1990); Unit II Wastewater (Marble Falls 1990); Unit II Wastewater (Kingsland 1990); Unit I Wastewater (Kingsland 1991); Unit II Wastewater (Kingsland 1991); Lab Wastewater (Marble Falls 1991); Unit III Wastewater (Burnet 1991); Wastewater Calculations (Kingsland 1992); Utilities Management (A&M University 1993); Wastewater Technology (A&M University 1994); Wastewater Advanced Process Control (A&M University 1995); Instructor Course (A&M University 1996); Methods of Teaching (TEEX 1996); Instructional Aids (TEEX 1996); Human Relations (TEEX 1997); Advanced Management (A&M University 1998); Lab Wastewater (Austin 1998); Basic Water (Kingsland 1999); Surface Water Production (A&M University 2001); Water Distribution (A&M University 2002); Water Laboratory (A&M University 2003). He is certified through Texas Commission on Environmental Quality to teach Basic Wastewater, Wastewater Treatment, Wastewater Collection, and Water and Wastewater Calculations. Since

1997, he has been an instructor at 13 different training sessions around the state. He holds Grades A, B, C, and D Wastewater Licenses. He holds Grades B, C, and D Water Licenses.

Mr. Foster began his career with Layton Construction before joining Kingsland MUD first as a Plant Operator and later as Assistant General Manager. He joined Lakeway MUD in February of 2000 as Chief Wastewater Operator and was promoted later that year to his current position as Wastewater Supervisor. In this position, he is involved in the day-to-day activities at the two Recycling Plants including general plant and office operations, plant equipment operation and maintenance, and laboratory plant operations testing. He has exhibited the dedication and initiative necessary to learn how to operate the plant's state-of-the-art processes for the production of reuse water of the highest quality. He also is responsible for Texas Commission on Environmental Quality (TCEQ) monthly reports, permit renewal applications, and personnel scheduling. He is fully knowledgeable of all types of pumps, laboratory instrumentation, and S.C.A.D.A. applications. During recent plant expansion and improvements, he was consulted for his opinions and recommendations. As plant superintendent, Mr. Foster personally encourages his plant's operators to pursue professional improvement through certification programs. He privately counsels employees about available training classes and the importance of constantly pursuing licensing accreditation. He explains the programs and how they work to improve the employees' job opportunities. He conducts one-on-one learning sessions about class material and personally advises new employees about the benefits of certification. He stresses the "personal" approach to avoid peer pressure that might discourage an employee. On a daily basis, he conducts informal meetings with his staff to discuss plant operations, potential problems, and suggested improvements. In addition to discussing safety issues during these daily impromptu meetings, a formal Safety Meeting is scheduled at the plant every Friday. The plant has suffered no lost time accidents in the four years Mr. Foster has been associated with Lakeway MUD.

Mr. Foster is responsive to all inquiries from the general public and has directed and participated in numerous plant tours for school field trips and facility open houses. He personally directs visits from local 4th and 5th grade students at the plant. The students receive written descriptions of the plant's processes and equipment before separating into smaller groups with individual operators to see the plant in action. His enthusiasm, energy, and commitment are obvious to all his co-workers, and his efforts are reflected in the high level of performance at the two plants he oversees. There have been no permit violations at the facilities during his tenure.

Mr. Foster is a member of the Texas Water Utilities Association and has served as the organization's Secretary/Treasurer (1991-1995), President Elect (1995-1996), and Scholarship Chair (1997 to present). He is a member of the

Water Environment Association of Texas and serves on the WEAT Safety Committee. In his community, he is a member of the local Lions Club and has served the club as President, Zone Chairman, and Leader Dog Training.

2004 WEAT EMERGING LEADER AWARD

...presented to a young member of WEAT who has provided outstanding service in support of the Association in the form of committee involvement, recruiting, volunteer time, event participation, or other contributions. The recipient shall be under 36 years of age at the time of nomination, shall have served on at least one state or section or ad-hoc committee, and shall have not previously won a WEAT award.

Heather G. Harris



Heather Harris earned a Bachelor of Science degree in 1997 and a Master of Science degree in 1999 from Texas A&M University, both degrees in Agricultural Engineering with an emphasis in Environmental Studies. Upon leaving Texas A&M, Ms. Harris accepted a position in the Phoenix office of CH2M HILL and began her career as an environmental engineer. After a year in Phoenix, a temporary stay in the Austin office of CH2M HILL was proposed to help the overloaded office with Senate Bill 1 work. That temporary stay became permanent in October of 2000. As an engineer for CH2M HILL, Ms. Harris has supported a wide variety of projects, with an emphasis on water resources work. She enjoys the marketing and business development aspect of consulting engineering, is involved in project management, and is the only Junior level engineer in the Austin office with Client Service Management responsibilities. Her roles in the local and state level of the Water Environment Association of Texas further her technical and networking abilities. CH2M HILL provides great support for her activities in WEAT. For example, she gets to coordinate their

presence at annual Texas Water conferences which ensures her ability to attend.

Ms. Harris first became involved in the local section of WEAT in 2002 when Michael Bloom, then current Co-chair of the Young Professionals Committee, suggested she would be a good replacement for him when his age placed him outside the parameters of the YP group. He suggested she become active with the local section for a year before making her decision. As the Austin section had not had an official Young Professional section representative before, she introduced herself to the local Section Board and stated that she would like to form a Young Professional Committee. The Board accepted this proposal, and she made the call for committee members and those who simply wanted to be made aware of the goings on of the YP's. Ms. Harris has since played an essential role in developing and organizing the Austin YP Section. She has worked with the Texas Section American Water Works Association (TAWWA) representatives to plan joint events and encourage membership. With a great volunteer group to help, she and the YP Committee have been very successful. The Committee set goals and took on the task of making people aware of their presence and recruiting more young professionals to join and become involved in WEAT. Some goals set by the Committee under Ms. Harris's leadership include using University of Texas ties to increase student participation and develop a student chapter, organizing P.E. application process seminars, and coordinating a winery tour that included water/wastewater processes. The Committee has supported Habitat for Humanity (as seen in a recent Texas WET), held well-attended happy hours, posted fliers around the University of Texas campus to encourage student attendance at their meetings, and simply provided a venue for young professionals to be more active than they potentially would have been. In addition to her YP work and Board Membership in Austin, she has also been a key member of the annual Boat Trip Committee for the Austin Section - being a critical part of the planning, accepting all RSVP's, and taking on the responsibility of choosing the band for the event in 2003. At Texas Water 2003, she had the honor of being officially asked to take the place of Michael Bloom and join Becky Guthrie as a Co-chair for the WEAT Young Professional Committee. She has since remained the Austin YP section representative for young professionals. She and fellow Co-chair Guthrie continue their target goal to form student chapters on college campuses in a joint effort with TAWWA and coordinate student chapters around the state. A great deal of research and planning has been done to this point, and resulting strategies are currently in the works. In addition, they have instated a new award to recognize employers that encourage young professional participation in WEAT and have had an abstract accepted and planned for a Young Professional Session at Texas Water 2004. All of this, of course, is in addition to their typical duties of acquiring status of activities from the YP section representatives and presenting their efforts to the WEAT Board. Additionally, Ms. Harris was sponsored by Richard Eason to join the WEAT Long Range Planning Committee in 2003 and attended their 2003 meeting in Austin. She has also recently become a member of the WEAT Membership Committee. Most recently, she made a presentation to the Austin Alumni Chapter of the National Society of Black Engineers as part of their Environmental Awareness Night. Asked to speak about her membership and participation in WEAT, she discussed numerous technical issues as well as the benefits she has received from her WEAT and YP membership.

Outside of the office, Ms. Harris enjoys giving back to the community. She has mentored through the Youth at Risk Program in Phoenix, Arizona, and has tutored through the Austin Chamber of Commerce Partners in Education Program. Numerous other causes are supported by Ms. Harris, including one of her favorites, the Susan G. Komen Breast Cancer Research Foundation. She has organized the Susan G. Komen Breast Cancer Foundation's Lee National Denim Day activities for her local CH2M HILL office since 2000.

2004 WEAT T. L. SATTERWHITE AWARD

...acknowledging an individual person, an engineering firm, or an industrial entity for the development of a solution to an industrial wastewater treatment problem originating within the boundaries of the State of Texas. A detailed description of the specific problem and the solution to that problem demonstrating innovative design or new methodology must be provided, and the solution to the problem shall demonstrate significant and lasting water quality improvement.

BAYPORT INDUSTRIAL WWTP (GULF COAST WASTE DISPOSAL AUTHORITY)



The Gulf Coast Waste Disposal Authority (GCWDA) Bayport Industrial Wastewater Treatment Plant is a publicly owned treatment facility that treats primarily industrial wastewater from chemical manufacturing facilities in the Bayport Industrial Complex in Pasadena, Texas. The facility treats approximately 10.5 MGD of high strength wastewater with a domestic contribution averaging less than .5 MGD. Several of the waste streams accepted for treatment are subject to Maximum Available Control Technology (MACT) standard for Hazardous Air Pollutants (HAP) under the SOCMHON. Additionally, since the facility is in a non-attainment area, several of the waste streams are subject to Volatile Organic Compounds (VOC) control standards. The treatment works is a permitted major source and is subject to the same controls that would otherwise apply to the industries generating the waste streams. The facility was designed

and constructed to meet the control standards for compounds using biological treatment. The facility encourages state licensing for its operators and currently boasts two holders of Grade "A" licenses, four holders of Grade "B" licenses, four holders of Grade "C" licenses, and one holder of Grade "D" license.

The Bayport Facility recently started up an innovative system to control aeration basin summer operating temperatures in an activated sludge system. The system was installed in a facility subject to air emission control requirements for HAP and VOC under Synthetic Organic Chemical Manufacturing Industry Hazardous Organic NESHAP regulations and Texas Regulation V. The wastewater treatment efficiency at the Bayport facility was beginning to be limited by the occurrence of high operating temperatures in the activated sludge system during the summer months. This situation could have seriously compromised the ability of the Bayport plant to continue treating wastewater at its design capacity. Traditional methods of cooling aeration basins could not be used because they resulted in increased emissions of volatile organic compounds (VOC) from the facility. The new system used a cooling tower during the summer months when cooling is required. Instead of using the traditional methods of directly cooling the aeration basins or cooling the inlet to the aeration basins, the return sludge stream (which contained very low levels of VOC) was cooled via the cooling tower. When the return sludge stream was mixed with the influent waste in the aeration basins, the result was satisfactory operating temperatures. The new system proved successful. Since the cooling tower was started in the summer of 2000, there have been no temperature related operating issues in the Bayport activated sludge facility, and the facility has maintained its operating efficiency and capacity. Performance testing witnessed by the Texas Commission on Environmental Quality (TCEQ) verified that the project met permit requirements. Subsequent monitoring by the Gulf Coast Authority confirmed that there have been no significant VOC emissions from the cooling tower.

Note: A detailed description of this problem and its solution can be found in the technical paper *Temperature Control of the Activated Sludge Process at a SOCMHON Regulated Industrial POTW – The Search for Baby Bear's Porridge*, co-authored by Leonard Levine, P.E., Carl Hennagir, P.E., and Jim Kowalik. The paper was presented formally during WEFTEC 2001.

WEF QUARTER-CENTURY OPERATORS' CLUB

Membership honors operators of wastewater treatment plants for service and dedication in a difficult and dangerous field. The honoree must be a member of WEF and must have been a significant, full-time participant in the water environment industry for a period of 25 years, 10 years of which must have been actively involved in the day-to-day collections, maintenance, operations, laboratory, or management of a wastewater treatment facility.

Richard W. Eason



Richard W. Eason earned a Bachelor of Arts degree in Biology/Chemistry at The University of Texas at Austin. He began his career in 1974 in water and wastewater product development with Enviroquip, a plant equipment manufacturer. He later became involved in facility start-up and troubleshooting and eventually became head of field operations. He spent almost 2 years with the company in Puerto Rico building eighteen wastewater plants and developing bi-lingual O&M manuals for each of the plants along with a training program for their operators. In the 1980's, he owned and managed Eason Services, a plant operations company that operated several water and wastewater systems north and west of Austin. He has held Double "A" Certification in Water and Wastewater Operations since 1980.

Mr. Eason has been the General Manager for Lakeway Municipal Utility District for the last eleven years. In that capacity, he manages a staff of twenty who serve over 3,600 connections with a service population over 9,500. The District operates water treatment facilities to produce 6 million gallons of drinking water per day for distribution to three pressure planes. The District's wastewater recycling facilities collect and treat over 1.2 MGD for total reuse as landscape irrigation. As General

Manager, he has recently overseen the development of a land use plan, a facilities needs assessment, bond elections and sales, a capital improvements plan, and the construction of District plant upgrades in excess of \$15,000,000.00. As a result of his strong advocacy for water reuse, he has developed an innovative and practical automated evapotranspiration analysis and control system for the District's landscape irrigation.

Mr. Eason is active in organizations supportive of the water environment industry. He is Past-President of the Highland Lakes Water Utilities Association. A WEF member since 1976, he has served WEAT as President of the Central Section and as current WEAT Vice-President and served two years as the Technical Program Chair for the annual Texas Water conferences. He has been a member of the American Water Works Association since 1939. He has presented technical papers at several Texas Water Utilities Association meetings as well as at the annual Texas Water conferences on the topics of water reuse, distributed control systems, and on the demonstration project for an aerial effluent disposal system on cedar breaks at Lakeway.

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Meg Conner



Meg Conner earned a B.A. in Biology from the University of Texas at Austin and an M.S. in Environmental Sciences from the University of Texas at Dallas. She holds Wastewater Treatment Operator "A" and Water Treatment Operator "A" certifications. Ms. Conner began her career in the water environment sector in 1977 as a Wastewater Treatment Plant Operator in San Marcos, Texas. She has continued in the profession as a Surface Water Plant Operator in Sherman, as a Physical Science Aide for U.S.EPA Region VI, as Project Coordinator for the Greater Texoma Utility Authority, as Public Works Director for the City of Kingsville, and presently as Water Recycling Center (WRC) Operations Director for the San Antonio Water System (SAWS) where she is in charge of the operation of four major Water Recycling Centers (the largest wastewater effluent reuse system of its type in the United States) and six minor facilities. As WRC Operations Director, she is responsible for operation and administration of all SAWS Water Recycling Centers totaling over 225 MGD capacity; operation of the 30 MGD capacity Aquifer Storage and Recovery Facility; direct oversight for operational, managerial, and staff employees and indirect oversight of 100 staff members; coordination and management of large construction projects; communication and

reporting with Regulatory Agencies for eight wastewater permits; monitoring of progress and revision of internal programs; development of master planning long range initiatives for both water and wastewater; Corporate Strategic Planning and Business Planning for SAWS Treatment Group; employee training programs/SAWS job family programs; chairmanship and active participation with SAWS safety committees; development of disaster and emergency planning documents; chairmanship and organization of public meetings; implementation of SAWS personnel policies; coordination of projects between City, County, State, and Federal agencies; construction planning, coordination, and oversight; supervision of professional, technical, and labor teams; and development and participation in environmental initiatives such as the Salado Creek Restoration Council and the TMDL Steering Committee. Ms. Conner led SAWS in the development, management approval, and implementation of the Treatment Group Job Family Program that allows employees to advance on the basis of their education, experience, and skill levels at SAWS facilities. This program has led to higher skill levels for employees, improved performance at the workplace, and lower staffing levels and operational costs. She has been instrumental in the development of the Treatment Group Training Facility where she won management approval for an interactive Training Program which led to significant improvement in the number of upper level certified operators in SAWS. She champions the SAWS Good Neighbor Policy and chairs and promotes an active Neighborhood Relations Program.

Ms. Conner has been a member of WEF and WEAT since 1985 and has chaired the local WEAT/TAWWA Chapter of the WATER FOR PEOPLE fundraising committee, has served as a moderator and monitor at WEAT conferences, has regularly attended technical presentations in the local WEAT section, has been a speaker at WEF conferences, and has authored papers for WEAT conferences. She is a member of the American Water Works Association and the Texas Water Utilities Association and holds membership in TWUA's Double-A Club. In recognition of her dedicated career in wastewater operations, Ms. Conner was honored with the Water Environment Federation's William D. Hatfield Award in 2003.

WEF SERVICE AWARD OUTGOING WEAT PRESIDENT

...for distinguished service to the Member Association (WEAT)

Ronald B. Sieger



Ronald B. Sieger earned a B.S. Degree in Civil Engineering at Iowa State University. He holds professional engineer registrations in Texas and California. As a Vice-President at CH2M HILL, he is involved with wastewater and residuals projects world-wide through his position as Principal Technologist for Residuals Management.

Mr. Sieger is a member of the Water Environment Federation (WEF), the American Water Works Association (AWWA), the American Society of Civil Engineers (ASCE), the Texas Water Utilities Association (TWUA), the International Water Association (IWA), and a Diplomate of the American Academy of Environmental Engineers (AAEE). He has served WEF in many capacities including Chair of the Residuals and Biosolids Specialty Conference (1993 in Phoenix, AZ and 2002 in Austin, TX), Vice Chair of the Residuals and Biosolids Committee (RBC) from 2003 to 2006, founder and Past Chair of the Bioenergy Subcommittee of the RBC from 2002 to 2004, member of the Specialty Conference Committee, member on the Program Committee for the Residuals and Biosolids Symposium, member of the Technical Practice Committee for updating MOP 8 and MOP 11, and member of the Awards Committee. He served three-years as a WEF Director. He has presented numerous technical papers

at national and specialty conferences and authored chapters of three books. He is and has been Project Subcommittee member on several Water Environment Research Foundation projects.

He has enthusiastically contributed his time and expertise to the Water Environment Association of Texas and the North Texas Section of WEAT. Prior to his position as 2003-2004 President, he served WEAT as Vice-President and President-Elect. He has been a member on WEAT's Program Committee for many years and served as the Committee Chair for two terms. He chaired the WEAT Audit Committee for two terms, chaired the Residuals and Biosolids Committee for two terms, and chaired the Research Committee for three terms. He has contributed several articles to WEAT publications and has presented technical papers at numerous state conferences and specialty conferences and has been the featured speaker on many occasions for both WEAT and NTS WEAT functions. For the North Texas Section of WEAT, he has held the offices of President, President-Elect, Vice-President, Secretary, and Treasurer. He was Chair of the Section's Specialty Conference for two years and Chair of the Audit Committee for three years. He originated the Section's newsletter and served as Chair of the Newsletter Committee for over ten years, winning a Watermark Award for his work. He originated the Section's Photography Committee and History Committee and helped organize several other standing committees for the organization. His early and continued support of the North Texas Section Scholarship Fund has helped insure the success of this worthy program.

For his many years of dedicated service in support of WEF and WEAT, Mr. Sieger was honored with the WEF Arthur Sidney Bedell Award in 2000. In addition, he received the ASCE Samuel Arnold Greeley Award for his technical paper on nutrient removal.