

A&WMA Honors & Awards



2009



AIR & WASTE MANAGEMENT
ASSOCIATION



The Air & Waste Management Association (A&WMA) is a nonprofit, nonpartisan professional organization that provides training, information, and networking opportunities to environmental professionals. A&WMA's core purpose is to improve environmental knowledge and decisions by providing a neutral forum for exchanging information. The Association's goals are to strengthen the environmental profession, expand scientific and technological responses to environmental concerns, and assist professionals in critical environmental decision-making to benefit society.

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2009 Honors & Awards

Each year, A&WMA recognizes deserving individuals or companies for their outstanding accomplishments in the promotion of a clean environment. These awards were established by the Association to encourage environmental professionals to serve as models for others to emulate and to otherwise further A&WMA's mission and objectives. Please join us in celebrating their remarkable contributions.

Frank A. Chambers Excellence in Air Pollution Control Award

William C. Malm, Ph.D.

Richard Beatty Mellon Environmental Stewardship Award

F. Henry Habicht II

S. Smith Griswold Outstanding Air Pollution Control Official Award

John A. Paul

Lyman A. Ripperton Environmental Educator Award

William M. Auberle, P.E., BCEE, QEP

Charles W. Gruber Association Leadership Award

George T. Wolff, Ph.D.

Outstanding Young Professional Award

Ferdinand B. Alido, CHMM

Fawn W. Bergen, P.E.

Waste Management Award

Global Engine Manufacturing Alliance LLC (GEMA)

J. Deane Sensenbaugh Environmental Technology Award

Thermo Fisher Scientific for its Thermo Scientific Mercury Freedom System

Honorary Membership

Jay Willenberg, P.E.

Fellow Membership

Kay F. Bedenis, JD, P.E., CHMM, CEM

Louis Theodore, Sc.D.

Frank A. Chambers Excellence in Air Pollution Control Award

William C. Malm, Ph.D.



Frank A. Chambers (1885–1951) was a founder of the Smoke Prevention Association of America, a forerunner of the Air & Waste Management Association, and was instrumental in building the foundation for A&WMA. His pioneering ideas for smoke control were employed by many cities across the United States. The Frank A. Chambers Excellence in Air Pollution Control Award is presented annually by the Association for outstanding achievement in the science and art of air pollution control. It requires technical accomplishments considered to be major contributions, the merits of which have been widely recognized by persons in the field. The coverage is intentionally broad, since it recognizes achievement in any line of technical endeavor in air pollution control, from pure research to applied science.

A&WMA presents the 2009 Frank A. Chambers Excellence in Air Pollution Control Award to **William C. Malm, Ph.D.**, for his research contributions in the areas of visibility and air quality.

Dr. Malm is a research physicist in the National Park Service Air Resources Division, where he is program coordinator for the visibility/particulate research and monitoring program. He received his bachelor's of science degree in physics and a minor in mathematics from Mankato State University in 1965 and his master's and Ph.D. degrees in physics from the University of North Dakota (1968) and the University of Missouri (1972), respectively. He has previously worked as a U.S. Environmental Protection Agency (EPA) research scientist and a professor of environmental science at Northern Arizona University in Flagstaff. He is also an affiliated scientist at the Cooperative Research Institute for Research at Colorado State University.

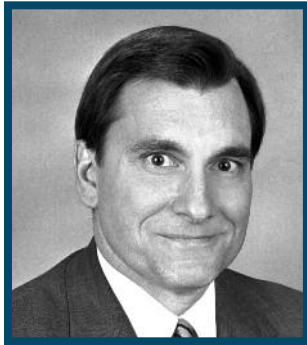
In addition to A&WMA, Dr. Malm is a member of the American Geophysical Union (AGU) and the American Association for Aerosol Research (AAAR). He has served as an organizing chair for special sessions in each of these associations and as a guest editor for the *Journal of Geophysical Research* and the *Journal of the Air & Waste Management Association*. He is also a topic editor for environmental monitoring for the *Encyclopedia of Earth*. He has received a number of awards for outstanding lectures and various research activities. He recently received the George Wright Society 2008 Director's Award for Natural Resources and the EPA Thomas W. Zosel 2008 Outstanding Individual Achievement Award for his research contributions in the areas of visibility and air quality. He is currently serving as a science advisor to EPA as a member of the Clean Air Scientific Advisory Committee.

Dr. Malm's expertise is in the general area of visibility and related topics. He made some of the first visibility and air quality measurements in the National Park Service system at the Grand Canyon in 1972. Since then, he has designed and built instrumentation to measure the effects of atmospheric aerosols on the scenic qualities of landscape features, as well as their optical and chemical properties; formulated radiation transfer algorithms that allow pictorial visualization of aerosol scattering and absorption effects on scenic landscape features; pioneered studies of visibility perception that elicit human responses, in terms of both psychophysical and value assessment, to changes in scenic quality as a function of aerosol optical properties; and initiated and carried out large field campaigns to better characterize aerosol physical and optical properties, especially as they relate to aerosol hygroscopic properties, and to assess the relative contributions of various source types to visibility impacts in a number of national parks and wilderness areas. He has also pioneered a number of back-trajectory receptor modeling methodologies that allow estimates of the relative contributions of source areas to aerosol concentrations or visibility effects at selected receptor sites. Many of the results from this work have been incorporated into the Interagency Monitoring of Protected Visual Environments (IMPROVE) program and EPA's Regional Haze Rule.

For 30 years, Dr. Malm has demonstrated leadership, outstanding achievement, and a lasting commitment to promoting clean air and helping to achieve better air quality. The steadily improving visibility we enjoy today in many parts of the United States is in large part due to his research and advocacy.

Richard Beatty Mellon Environmental Stewardship Award

F. Henry Habicht II



Richard Beatty Mellon (1858–1933), in the desire to benefit mankind, along with his brother Andrew William Mellon, established the Mellon Institute of Industrial Research in 1913. Mellon showed great interest in the abatement of urban smoke and air pollution and led in instituting and sustaining the first modern investigations looking to ways and means for controlling the atmospheric pollution. The Richard Beatty Mellon Environmental Stewardship Award honors an individual whose civic contributions, whether administrative, legislative, or judicial, have aided substantially in the mission and objectives of the Association.

A&WMA presents the 2009 Richard Beatty Mellon Environmental Stewardship Award to **F. Henry (Hank) Habicht II**, managing partner of SAIL Venture Partners, Washington, DC.

Habicht possesses an extensive environmental and energy background in both the public and private sectors. He currently serves as managing partner of SAIL Venture Partners, a venture capital fund investing in leading-edge clean energy, water, and related technologies. Prior to his SAIL affiliation, he served as chief executive officer of the Global Environment & Technology Foundation (GETF), where he now serves as vice chairman. GETF is a 501(c)3 not-for-profit corporation that fosters innovation in environmental management and applications of clean technology that make business and environmental sense. He is a founding principal of Capital E LLC, a firm that promotes investment in new energy technology, and also serves as commissioner on the National Commission on Energy Policy.

Previously, Habicht was senior vice president of Safety-Kleen Corp., a provider of industrial and recycling services. Habicht's responsibilities included the three business and functional units of corporate development; corporate account sales; and environment, health, and safety operations. Habicht also acquired or assisted in the startup of several successful businesses, which helped grow sales by over US\$100 million. His team also established environmental performance indicators and made dramatic improvements in all categories.

Prior to his position with Safety-Kleen, Habicht was chief operating officer of the U.S. Environmental Protection Agency (EPA) under Administrator William K. Reilly. Habicht's responsibilities included budget and program

management authority for a US\$7 billion budget and 18,000 employees. Direct reports included all regional, financial, and program operations. Habicht initiated quality-oriented management improvements to improve planning and integrate EPA's diverse science, policy, and enforcement functions. In addition, Habicht chaired or served on several interagency workgroups concerning risk assessment, energy, transportation, trade, and technology promotion.

From 1987 to 1989, Habicht worked for William D. Ruckelshaus Associates as vice president and counsel. His responsibilities included counsel for companies on environment-related operational, legal, and financial issues, along with assisting in development of new business ventures. Prior to this position, Habicht was Assistant Attorney General of the United States, where he directed the Land and Natural Resources Division with responsibility for all federal environmental enforcement, energy, and natural resource litigation.

Habicht is a member of numerous boards and advisory councils. He has served as a member of the Secretary of Energy Advisory Board, and is currently serves as a member of the Steering Committee of the Energy Future Coalition; chairman of Board of Resolve Inc.; director of 3E Company; and as a member of the National Renewable Energy Laboratory's National Advisory Board, the President's Advisory Committee on Trade Policy and Negotiation, and the Advisory Board for the National Leadership Summits for a Sustainable America. In addition, Habicht also serves on the Chesapeake Bay Blue Ribbon Financing Panel, the Dow Chemical Corporate Environmental Advisory Council, WaterHealth International, and the Advisory Boards for the Princeton Environmental Institute and the National Pollution Prevention Roundtable.

S. Smith Griswold Outstanding Air Pollution Control Official Award

John A. Paul



S. Smith Griswold (1909–1971) served as chief air pollution control officer for the Los Angeles Air Pollution Control District between 1954 and 1965. In 1965, he became chief of the Abatement Branch of the Division of Air Pollution Control in the U.S. Department of Health, Education, and Welfare, and later served as associate director for abatement and control before leaving in 1967 to work as a consultant. As President of the Association in 1962, he focused international attention on air pollution control officials' activities, problems, and achievements. The S. Smith Griswold Outstanding Air Pollution Control Official Award is presented by the Association for outstanding accomplishments in the prevention and control of air pollution. The recipient must be or have been a government agency staff member whose contributions to the prevention and control of air pollution have been widely recognized.

A&WMA presents the 2009 S. Smith Griswold Outstanding Air Pollution Control Official Award to **John A. Paul**, Administrator, Regional Air Pollution Control Agency, Dayton, OH.

Paul has served the Regional Air Pollution Control Agency of Dayton, OH, a six-county local agency in Southwest Ohio that serves its citizens as a full-service agency by conducting inspections, drafting permits, monitoring air quality, and conducting enforcement, for 35 years; the past 23 years as agency director. Early in his career, he became involved with the National Association of Clean Air Agencies (NACAA; formerly known as STAPPA/ALAPCO) and has served that association in a number of ways, including chairing several committees, serving on the board of directors, and serving as co-president of the association on two separate occasions.

Paul has represented state and local agencies in a number of formal settings, including various ad hoc committees, the Clean Air Act Advisory Committee, the Industrial Combustion Coordinating Committee, the National Air Pollution Techniques Advisory Committee, the Environmental Technology Verification Committee, the Utility MACT Working Group, and a number of New Source Review (NSR) reform committees. He frequently represents state and local agency views on air pollution issues at public hearings on rules and before Congress on proposed legislation.

Since the origin of the NSR program under the U.S. Clean Air Act, Paul has worked with stakeholders on the proper implementation of the rules and their simplification. He is a frequent presenter of state and local agency views on NSR at meetings of national trade associations, the American Bar Association, A&WMA chapter meetings, and the semi-annual meetings of the NACAA.

Paul also has spent considerable time working on national policies with regard to attainment of the National Ambient Air Quality Standards for ozone and fine particulate and the control of mercury from coal-fired electric generating units. He served as co-chair of the Utility MACT Working Group (under the overview of the Clean Air Act Advisory Committee), which convened all the various stakeholders and met 18 times over a period of 21 months, resulting in a report of issues and stakeholder positions to the U.S. Environmental Protection Agency.

Lyman A. Ripperton Environmental Educator Award

William M. Auberle, P.E., BCEE, QEP



Lyman A. Ripperton (1921–1978) spent his career as a practitioner in education and research for air pollution control. He left the Los Angeles County Air Pollution Control District in 1958 to assume a teaching and research position in the Department of Environmental Science at the University of North Carolina at Chapel Hill. There, he initiated an air pollution education program that developed into one of the foremost of its kind in the United States. The Lyman A. Ripperton Environmental Educator Award is presented to an individual who has inspired students to achieve excellence in their professional and social endeavors. It recognizes the ability that only a few educators possess: to teach with rigor, humor, humility, and pride. Recipients of this award are educators we would have chosen as our teachers if we had a choice. They are known by the accomplishments of their students.

A&WMA presents the 2009 Lyman A. Ripperton Environmental Educator Award to **William M. (Bill) Auberle, P.E., BCEE, QEP**, professor of civil and environmental engineering at Northern Arizona University's College of Engineering, Forestry, and Natural Sciences, Flagstaff, AZ.

Auberle was born and raised in West Virginia. His education there culminated with baccalaureate and master's degrees in engineering from West Virginia University. In 1967, Auberle began his professional career as an air pollution control specialist with the Missouri Air Conservation Commission. He continued his work as an environmental regulatory official as the first Supervisor of the Regional Air Pollution Control Agency in Dayton, OH. From 1977 to 1980, Auberle served the Colorado Department of Health, first as Director of the Air Pollution Control Division and later as Associate Director of Health with responsibility for all of the state's environmental protection programs. Throughout his governmental career, Auberle was engaged in both academic life and public education. He was a frequent lecturer at universities and served on the faculties of the University of Colorado and Red Rocks Community College. In addition, Auberle had a weekly radio show on the environment in Dayton during the very early years of "talk radio."

In 1980, Auberle moved from government service to a management position with Kemron Environmental Services, a division of Borg Warner Corp. Four years later, he joined John Yates to form Yates & Auberle Ltd., a nationwide environmental engineering and consulting firm with headquarters in Oak Brook, IL. Auberle continued his commitment to education throughout this period, serving as a guest lecturer at colleges and universities, including Ohio University and the University of Illinois, Chicago. He also served as an instructor for the U.S. Environmental Protection Agency's Air Pollution Training Institute.

Auberle's full-time career in environmental education began as an associate professor of civil and environmental engineering at Northern Arizona University in Flagstaff. In 1995, Auberle was promoted to full professor. Concurrently with his academic appointment, Auberle has served the university in several administrative capacities, including Director of the Center for Sustainable Environments and Interim Dean of the College of Engineering. He currently serves as Research Director of the Ecological Monitoring & Assessment Program, while teaching undergraduate and graduate courses in environmental engineering and management.

At the encouragement of Past President Benjamin Linsky, Auberle joined the Association as a student member in 1967. He has maintained continuous membership since that time. Beginning with a technical presentation at the Annual Meeting in 1968, Auberle has been a frequent contributor to chapter, section, specialty, and annual meetings of the Association. He has been a member and chair of several technical and education council committees, served as Chair of the East Central Section, and was elected to the Board of Directors and Vice President of the Association. Auberle became a Fellow Member in 1999. The Association has been a strong and important influence throughout his professional life.

Auberle is a licensed professional engineer, a board certified environmental engineer, and a qualified environmental professional. His professional life extends to his personal interests through his current membership on several boards of directors, including Audubon Arizona; Sustainable Economic Development Initiative LLC; Center for Environmental Innovation Inc.; and the Ecological Monitoring & Assessment Foundation. He also remains active as a practicing environmental engineer as a principal of EN3 Professionals LLC.

Charles W. Gruber Association Leadership Award

George T. Wolff, Ph.D.



Charles W. Gruber (1910–2001) was a pioneer in the field of air pollution control. His contributions to the field of air pollution control and the Association were numerous and significant. He joined the Association in 1938 and made important contributions during the transitional years from 1948 to 1952, when the Association was transformed from a relatively closed smoke-oriented organization to one that addressed in name, philosophy, and structure the broader dimensions of air pollution control. In 1950, he became the first president of the reorganized and renamed Air Pollution Control Association. During his term of office, he conceived of the present technical committee structure and guided its development through the early years. In 1980, the Association awarded Honorary Membership to Gruber for more than 40 years of leadership and continuing contributions to the organization. The Charles W. Gruber Association Leadership Award is presented to

an individual who has provided outstanding service to the Association through leadership positions at both international and local levels and who has contributed toward the achievement of the mission and objectives of the Association. The recipient will have demonstrated sincere, constant, and unselfish efforts over the course of his or her membership toward the betterment of the Association.

A&WMA presents the 2009 Charles W. Gruber Association Leadership Award to **George T. Wolff, Ph.D.**, a past Director and Vice President of the Association.

Dr. Wolff became a member of the Association in 1970 as a graduate student in meteorology at New York University (NYU). After receiving a master's degree from NYU, he began a Ph.D. program in environmental sciences at Rutgers University under the tutelage of Drs. Raymond Manganelli (the "Father" of the Mid-Atlantic States Section; MASS-A&WMA) and Joseph Soporowski, both of whom encouraged him to become involved with MASS-A&WMA.

Upon graduation from Rutgers, Dr. Wolff took a position with the Interstate Environmental Commission, which had regulatory responsibilities over interstate pollution in New Jersey, New York, and Connecticut. During his time at the Commission, Dr. Wolff conducted pioneering studies that demonstrated the interstate and long-range transport of ozone and fine particles. He presented his first paper on ozone transport at the 1974 Annual Meeting in Denver.

In 1977, Dr. Wolff began a 31-year career with General Motors, spending 16 years as a research scientist at GM's research laboratories in Warren, MI, and then 15 years as principal scientist for GM's Public Policy Center at the company's headquarters in Detroit. As a scientist, he has authored more than 100 peer-reviewed publications on air quality science.

During the same period, Dr. Wolff was involved with many Association activities. He began 23 years of service with the *Journal's* Editorial Review Board in 1984 and served as Secretary (1984–1992), Vice-Chair (1992–1994), and Chair (1994–1996). Simultaneously, he served on the Publications Committee (Chair, 1988–1992). During this tenure, he was instrumental in the reinvention of the technical *Journal* and the birth of *EM*.

Dr. Wolff was the Technical Program Chairman for the Association's 78th Annual Meeting in Detroit in 1985.

This was the first meeting that included sessions on waste management. In 1986, he was elected to the Association's Board of Directors and served from 1986 to 1989, including one year as Vice President. He also served on the Association's Planning Committee and participated in the strategic planning sessions that led to the renaming of the Association from the Air Pollution Control Association to the Air & Waste Management Association.

In 1985, he was appointed to the U.S. Environmental Protection Agency's Science Advisory Board. This appointment continued until 2006 and included participation on numerous scientific committees, including the Clean Air Scientific Advisory Committee (1987–1997), where he served as chair from 1992 to 1996. During those four years, Dr. Wolff presided over the National Ambient Air Quality Standards reviews for ozone, particulate matter, carbon monoxide, and nitrogen oxides.

In 1991, the Association honored Dr. Wolff by selecting him as one of the first Fellow Members. And in 1997, he was bestowed with the Frank A. Chambers Excellence in Air Pollution Control Award for his scientific achievements.

Although Dr. Wolff retired from GM in 2008, he still remains active with the Association and the environmental field. He recently served as an advisor to the 2009 Annual Conference Local Host Committee—and was key in GM's decision to be the conference sponsor—and he continues to serve as Co-Chair of the Scholarship Committee of A&WMA's Southeast Michigan Chapter. Dr. Wolff is now affiliated with Air Improvement Resource Inc. in Novi, MI, as a principal scientist.

Outstanding Young Professional Award

Ferdinand Alido & Fawn Bergen



The Outstanding Young Professional Award was inaugurated in 2008 and recognizes an individual or individuals who are pursuing excellence in their careers and have made a valuable contribution to A&WMA by serving in a leadership position. To be eligible, a candidate must be a young professional working in the environmental profession. A young professional is defined by the Association as being 35 years of age or younger.

A&WMA commends the following individuals and awards them the 2009 Outstanding Young Professional Award:

Ferdinand B. Alido, CHMM

Alido is manager of environmental affairs with Navistar Inc., a Warrenville, IL-based global manufacturer of commercial and military trucks, school buses, and diesel engines, where he has worked for 13 years. He is currently responsible for leading the company's environmental compliance audit program and providing technical and regulatory assistance to all company locations and operations. This includes providing direct support to the ISO 14001 environmental management system development and implementation efforts at the company's manufacturing plants.

During the past few years, Alido has managed Navistar's Web-based environmental and energy management information system, which has standardized and simplified several processes. In addition, he has coordinated numerous meetings and training programs for the entire environmental and energy organization, promoting the sharing and implementation of company and industry best management practices. Some of these meetings have been held in conjunction with A&WMA's Annual Conference & Exhibition.

A member of A&WMA since 1996, Alido currently serves as Chair of the Lake Michigan States Section, and was elected to the Section's Board of Directors in 2006. He is also a member of *EM's* Editorial Advisory Committee and A&WMA's Partnership Committee.

Alido received a bachelor's of science degree with honors in chemical engineering and a master's of science degree in environmental management and sustainability, both from Illinois Institute of Technology. He also has a master's of business administration degree in strategic management from DePaul University's Kellstadt Graduate School of Business. He is a certified hazardous materials manager.

Alido lives in Chicago, IL, and is preparing for an August wedding with his fiancée Judy.

Fawn W. Bergen, P.E.

Bergen is a senior consulting engineer, specializing in air quality, for Koogler and Associates Inc., Gainesville, FL. A graduate of the University of Florida's Environmental Engineering program, Bergen has worked in the environmental field for more than 10 years, and has been an active participant in A&WMA since 1998.

Bergen's experience with A&WMA began as Treasurer of the University of Florida's (UF) Student Chapter in 1998. In 1999, as UF Student Chapter President, she began the annual UF A&WMA Student Poster Symposium (a program that continues today) and accepted the 1999 A&WMA Student Chapter of the Year Award on behalf of UF at A&WMA's Annual Conference in St. Louis.

Bergen has continued her involvement with A&WMA by participating on the boards of the Northeast Florida Chapter and the Florida Section of A&WMA (FL A&WMA). She currently serves as Immediate Past Chair, Student Program Director, 2009 General Conference Chair, and Webmaster for FL A&WMA, and as Director for the Northeast Florida Chapter. Bergen participated in the Young Professional Advisory Committee in 2008 and has assisted the Education Council in updating the high school-level Environmental Education Resource Guides. In 2008, she was the recipient of the FL A&WMA Section's Young Professional of the Year Award.

During her involvement with FL A&WMA, Bergen has worked to establish a student program in Florida that promotes student and young professional involvement in A&WMA and assists students with funding to participate in A&WMA and FL A&WMA conferences. She will continue this involvement as part of the Local Host Committee for the 2011 A&WMA Annual Conference in Orlando, FL, as Student Program Chair.

Waste Management Award

Global Engine Manufacturing Alliance LLC (GEMA)



The Waste Management Award, established by A&WMA in 1989, is awarded for outstanding technological achievement in the science and art of waste management; outstanding achievement in the management, prevention, and regulation of wastes leading to minimizing the impact of waste in the environment; or distinguished achievement as an educator in the field of waste management.

A&WMA presents the 2009 Waste Management Award to **Global Engine Manufacturing Alliance LLC (GEMA)**, Dundee, MI.

GEMA is a joint venture of Chrysler LLC, Hyundai Motor Co., and Mitsubishi Motors Corp. Launched in 2005, GEMA manufactures four-cylinder engines for a wide variety of Chrysler products. Flexible manufacturing processes and lean manufacturing techniques allow GEMA to build a variety of engine displacements, while still maintaining high efficiency and the ability to react to sudden shifts in customer demand. Currently, GEMA manufactures 1.8-, 2.0-, 2.4-, and 2.4-liter turbo engines. GEMA produced more than 400,000 engines in 2008.

GEMA's focus on lean manufacturing techniques and environmental sustainability help define the alliance's operational philosophy. At GEMA, the motto is "Clean, Green, and Lean." This commitment is seen in the sustainable building techniques and materials used during the initial construction, maintenance, and upkeep of the 276 acres of natural Michigan Prairie grassland surrounding GEMA's Dundee facility; a commitment to zero waste to landfill; efforts to reduce energy usage; and facility-wide pollution prevention activities. Since 2005, GEMA has been registered to ISO: 9001 and ISO: 14001.

Recent environmental initiatives include:

- Reductions in energy cost per unit, including
 - Reduction in parking lot lighting by 50%
 - Elimination of landscape lighting
 - Elimination of 150 interior light fixtures that were underutilized
 - Installation of task lighting in office areas to reduce overhead lighting

- Reduction in number of fluorescent light bulbs used in light fixtures from 3 to 1
- Installation of motion sensors for lighting in conference rooms
- Elimination of vending machine lighting
- Use of infrared photography to identify and repair air leaks
- Use of high-efficiency belt drives and variable frequency motors in manufacturing
- Installation of insulation blankets on all water heaters
- Reductions in waste generated per engine, including
 - Zero waste to landfill since 2005
 - Prohibition of aerosol use
 - Minimization of hazardous waste generation (Conditionally Exempt Small Quantity Generators [CESQG] status)
 - Recycling program for all mixed plastics, including cafeteria plastics, black packaging banding used in shipping and receiving, and plastic tool packaging
 - Recycling of wood pallets, cardboard, and paper
 - Recycling of rubber seals and grinding wheels
 - Recycling and reuse of floor scrubber and dunnage washing water
 - Rewash and reuse of gloves and rags
 - Donation of pop can refunds to charity
- Increase in environmental outreach activities, including
 - Adopt-a-road program participant
 - Car pooling program participant
 - Supporter of the Monroe County Earth Day Fair (in 2008, GEMA gave away more than 3000 Colorado Blue Spruce saplings to employees and patrons at the Earth Day Fair)

J. Deane Sensenbaugh Environmental Technology Award

Thermo Fisher Scientific



The J. Deane Sensenbaugh Environmental Technology Award was instituted by A&WMA in 1986 to recognize a company's (or individual's) outstanding achievement in the fields of air pollution control or waste management. The award was established to honor J. Deane Sensenbaugh, an environmental engineer, who was active in the Association for more than 25 years before his death in 1982. He served as Chair of the Technical Council from 1976 to 1979 and completed a term as Association Vice President and member of the Board of Directors only few months prior to his death.

A&WMA presents the 2009 J. Deane Sensenbaugh Environmental Technology Award to **Thermo Fisher Scientific for its Thermo Scientific Mercury Freedom System**, a real-time mercury continuous emissions monitoring system.

Launched in 2005, the Thermo Scientific Mercury Freedom System was designed to meet the strict guidelines of the Clean Air Mercury Rule (CAMR). This legislation, passed in 2005, required most U.S. coal-fired power generation plants to monitor their total mercury gaseous emissions. The rule also stipulated that the monitoring systems must be in place by January 1, 2009.

Thermo Fisher Scientific aggressively focused its resources to meet the deadlines and worked closely with customers to design a user-friendly system that was easy to operate and maintain. The involvement of regulatory agencies also ensured that the system would meet all the requirements of the new law.

A key objective for the team was to keep the design simple. This required integrating a complex technology into a package that was easy to operate and in a layout that was consistent with existing continuous emissions monitoring systems (CEMS). The result was the Mercury Freedom System, the only commercial real-time mercury fluorescence CEMS.

In 2006, the utility industry began to evaluate mercury monitoring systems. In conjunction, Thermo Fisher held a series of meetings designed to enhance communications among manufacturers, utilities, regulators, consultants, and stack testers. During these open forum meetings, participants were encouraged to share their knowledge and experiences about mercury monitoring and the challenges facing the industry. The company was lauded by the industry for facilitating this valuable exchange of information.

As a key participant in the U.S. Environmental Protection Agency's Mercury CEMS Field Evaluation Program, conducted at a coal-fired power plant burning eastern bituminous coal and equipped with selective catalytic reduction technology and a wet scrubber, the Mercury Freedom System has met and/or exceeded all performance requirements reviewed thus far. Other successful field tests were also conducted with a variety of coals and a full range of concentration ratios of elemental to ionic mercury.

Since its launch, more than 450 systems have been shipped to coal-fired utilities in the United States. Many of the installed systems have been successfully tested in accordance with CAMR. These tests include the crucial relative accuracy test audit (RATA) that compares the continuous monitor reading with various acknowledged manual methods, including the Ontario Hydro Method and recently promulgated Reference Method 30B.

Despite CAMR being vacated in March 2008, Thermo Fisher has continued to support installed systems and hold user group meetings. In addition, there has been international interest in the system. The recent sale of a Mercury Freedom System to Tsinghua University, a leading polytechnic institution in Beijing, will result in preliminary testing of mercury emissions monitoring in China. Future plans also include the installation of demonstration equipment at a European utility and incineration industries in 2009.

Thermo Fisher Scientific Inc. (www.thermofisher.com) has annual revenues of US\$10.5 billion, more than 34,000 employees, and serves over 350,000 customers through two brands: Thermo Scientific and Fisher Scientific. Thermo Scientific offers customers a complete range of high-end analytical instruments, as well as laboratory equipment, software, services, consumables, and reagents to enable integrated laboratory workflow solutions. Fisher Scientific provides a complete portfolio of laboratory equipment, chemicals, supplies, and services used in healthcare, scientific research, safety, and education.

Honorary Membership

Jay Willenberg, P.E.



*Honorary Membership in A&WMA is conferred upon persons who have attained eminence in some field related to the mission and objectives of the Association or who have rendered valuable service to the Association. Honorary membership in 2009 is awarded to **Jay Willenberg, P.E.***

A senior air quality engineer with CH2M HILL in Bellevue, WA, Willenberg has been with CH2M HILL for more than seven years. Previously, he worked as a senior permit engineer for the Puget Sound Clean Air Agency and Washington State Department of Ecology. He has experience and knowledge of air quality control programs from many different perspectives, ranging from the development of regulations, to implementation, to assisting new source review applications, and conducting compliance audits for sources.

Willenberg has been an active member of A&WMA for more than 35 years. He was a Charter Member of the Puget Sound Chapter and its first Treasurer. At the local chapter and section level, Willenberg has served in several elected positions, including Puget Sound Chapter Chair (twice) and Pacific Northwest International Section (PNWIS) President. In addition, he has frequently been a presenter and member of the organizing committee for chapter and section meetings and workshops. In 2005, Willenberg chaired a workshop on seaport emissions that was cosponsored by PNWIS, the West Coast Section, and the Golden West Section.

During his tenure as Sections & Chapters Council Chair, the council expanded to include chapters, changed its name to the current one, established uniform dues for sections, instituted performance criteria for sections and chapters, and initiated an award for outstanding chapters. Willenberg has served on A&WMA's Board of Directors and Executive Committee. In addition, he has twice served on the Fellow Members Committee, once as Chair. Willenberg has also been an active member of several Technical Coordinating Committees.

Fellow Members

Kay F. Bedenis & Louis Theodore



The Fellow Grade of Membership was inaugurated in 1986 to recognize professional attainment and accomplishments related to the mission and objectives of A&WMA. A candidate for fellowship has a minimum of 15 years of experience in an area served by the Association and has been a member of the Association for at least 10 continuous years. Fellows are recognized for their professional accomplishments and service to the Association based on a process, product, or regulatory development;

project leadership; managerial achievement; the education of specialists; peer-reviewed technical publications; patents; and research or theoretical developments.

A&WMA commends the following individuals and awards them the Fellow Grade of Membership in 2009:

Kay F. Bedenis, JD, P.E., CHMM, CEM

A member of A&WMA since 1986, Bedenis has served the Association in many capacities. Her introduction to the Association came during the 1985 Annual Conference & Exhibition held in Detroit. Since then, she has served the Association's East Michigan Chapter as Conference Chair, Treasurer, Vice Chair, and Chair. She has also served on A&WMA's Board of Directors (2002–2004), where she was involved in the Family Friendly Committee, and served as a Vice President of the Board, representing Industry (2003). Currently, Bedenis is the General Conference Vice Chair for A&WMA's 2009 Annual Conference & Exhibition in Detroit.

Bedenis has more than 20 years of experience in the environmental field, specializing in air quality management. She has worked in government for the Wayne County Air Quality Management Division as Enforcement and Engineering/Permitting Chief, as a consultant, and in private industry for the waste management sector and the automotive industry. Most recently, Bedenis was the Supervisor of Environmental and Infrastructure in Paint Operations—Advance Manufacturing Engineering at Chrysler LLC.

Louis Theodore, Sc.D.

A member of A&WMA since 1965, Dr. Theodore is an Emeritus Member. In 1996, he received the Association's prestigious Lyman A. Ripperton Environmental Educator Award that is presented to an outstanding educator who through example, dedication, and innovation has inspired students to achieve excellence in their professional endeavors.

Dr. Theodore cofounded A&WMA's Energy-Environmental Interactions Committee in the mid-1970s and served as Program and Technical Chair of four of the seven meetings conducted by the committee. He has attended every Association Annual Conference since 1966, presenting at least one paper at each meeting, while also providing lectures for 31 continuing education courses during that period. Dr. Theodore has also co-authored numerous texts and papers with A&WMA members, and two of his former students have served as President of the Association.

Dr. Theodore is a professor of chemical engineering at Manhattan College in Riverdale, NY. He has been a successful educator, researcher, and communicator in the engineering field for more than 45 years. He is an internationally recognized lecturer, who has provided nearly 200 courses to industry, government, and technical associations, and has appeared on television as a guest commentator. Dr. Theodore has developed training materials and served as the principal moderator/lecturer for the U.S. Environmental Protection Agency's courses on hazardous waste incineration, pollution prevention, and air pollution control equipment.

Dr. Theodore is also the cofounder of Theodore Tutorials, a company specializing in providing training needs to industry, government, and academia; included in this series of 21 texts are 4 tutorials concerned with the Professional Engineers (P.E.) exam. In addition, he was recently involved with the development of a nontechnical environmental calendar that serves as a consumer and youth outreach product. The calendar can be found on A&WMA's Web site at www.awma.org.

Long-Term Members

A&WMA continues its tradition of recognizing members for their continuous service to the Association by acknowledging those individual members with 30+ years of service. In particular, we would like to salute 15 members who have dedicated 50 or more years of continuous membership and we salute our long-term organizational members by recognizing nearly 70 organizations with five or more years of continuous membership in the Association. Many of those listed below have volunteered countless hours to aid the Association in providing members with training, education, technical information, publications, and networking opportunities. It is with great pride that A&WMA acknowledges their years of service and dedication.

Member Name, Membership (in years)

Harold F. Elkin, 59	John B. Koogler, 42	Paul E. Fredette, 38	William G. Swofford, 37	Michael H. Naylor, 35
Peter K. Mueller, 57	Theodore M. Polychronis, 42	Douglas J. Fulle, 38	Eric G. Walther, 37	Walter R. Niessen, 35
Amos Turk, 57	Karl B. Schnelle, 42	Thad Godish, 38	Richard H. Baldwin, 36	Ronald L. Ostop, 35
Melvin W. First, 55	Harry D. Williams, 42	Howard R. Hammond, 38	Kenneth A. Barrett, 36	Richard L. Perrine, 35
Herbert C. McKee, 55	R. Kinnan Golemon, 41	Robert L. Henricks, 38	Kenneth S. Basden, 36	Norman D. Radford, 35
Frank P. Terraglio, 55	W.L. Hagar, 41	David W. Hoffman, 38	Albert H. Berst, 36	Roger K. Raufer, 35
Charles A. Licht, 54	Lorenzo R. Iglesias, 41	Gale F. Hoffnagle, 38	Thomas R. Blackwood, 36	Ralph L. Roberson, 35
Victor H. Sussman, 54	Richard C. Scherr, 41	Robert B. Jacko, 38	Jack D. Brady, 36	Amiram Roffman, 35
Robert G. Lunche, 53	Richard A. Walli, 41	William R. King, 38	Gary R. Brown, 36	Richard A. Schwartz, 35
Albert W. Spitz, 53	Thomas M. Young, 41	Robert G. Kunz, 38	David A. Buff, 36	Larry H. Strachan, 35
Morton Sterling, 53	William C. Achinger, 40	Gregory Leonardos, 38	Mary E. Coffey, 36	Richard T. Wales, 35
Harry H. Hovey, 51	William M. Auberle, 40	Michael E. Lukey, 38	Roger A. Dhonau, 36	Warren H. White, 35
John S. Lagarias, 51	Sol P. Baltimore, 40	John D. McKenna, 38	David R. Draper, 36	Mitchell M. Wurmbrand, 35
David Standley, 51	Walter G. Biggs, 40	Joseph J. Merenda, 38	John D. Elias, 36	Samuel L. Altshuler, 34
D. Bruce Turner, 51	William M. Delaware, 40	Conrad F. Newberry, 38	Paul S. Farber, 36	Keith M. Bentley, 34
	Alan Eschenroeder, 40	Wayne R. Ott, 38	Peter F. Hess, 36	David V. Bubenick, 34
	Marcel L. Halberstadt, 40	Surendra C. Pancholi, 38	Robert F. Hodanbosi, 36	John C. Caine, 34
	Robert E. Hall, 40	John C. Reed, 38	Michael R. Hoyles, 36	Hess M. Carisse, 34
	Lawrence D. Kornreich, 40	Hugo H. Rogers, 38	William F. Hunt, 36	Eugene R. Cox, 34
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 T.W. Tesche, 31
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 David J. Wackter, 31

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 Philip K. Hopke, 30
 Keith Howard, 30
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 Ashok Kumar, 30
 Frederick W. Lipfert, 30
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 Rory S. MacArthur, 30
 Thomas J. McCabe, 30
 Peter H. McMurry, 30
 Ronald Methier, 30
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 Gerald J. Reier, 30
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 Michael A. Sandell, 30
 Joseph A. Santovasi, 30
 Martin J. Savoie, 30
 Jacob J. Scheffer, 30
 Frank Sciremammano, 30
 David A. Stein, 30
 Richard O. Turner, 30
 Gregory A. Vanderlaan, 30
 Roger L. Wayson, 30
 Lewis Weinstock, 30
 Daniel J. Wheeler, 30
 Douglas R. Wilson, 30
 Stephen B. Wood, 30
 Mildred M. Yamada, 30

Organizational Members

Organization Name, Membership (in years)

Olympic Region Clean Air Agency, 40
 San Diego County Air Pollution Control District, 31
 Colorado Springs Utilities, 18
 Southwest Clean Air Agency, 15
 Allegheny County Health Department Air Quality Program, 12
 California Environmental Protection Agency, 10
 Department of Environment & Conservation—Perth, Australia, 10
 The Mosaic Company, 10
 Maryland Department of the Environment, 9
 Idaho Department of Environmental Quality, 8
 U.S. Navy Engineering Service Center, 8
 Mecklenburg County Air Quality, 7
 Louisiana Department of Environment Quality, 6
 3M Environmental Operations, 5
 AECOM – Camarillo, 5
 AECOM – Houston, 5
 AECOM – Westford, 5
 AECOM Environment, 5
 American Petroleum Institute, 5
 ARCADIS Inc., 5
 Archer Daniels Midland Company, 5
 Barr Engineering Company, 5
 Battelle, 5
 Bay Area Air Quality Management District Technical Library, 5
 BP Exploration (Alaska) Inc., 5
 Capital Regional District Environmental Services, 5
 Clark County Department of Air Quality Management, 5
 Department of Environmental Quality, Portland, OR, 5
 Desert Research Institute, Division of Atmospheric Sciences, 5
 Eastern Research Group, 5
 Eli Lilly and Company, 5
 ENVIRON, 5
 Environmental Quality Management, 5
 Epsilon Associates Inc., 5
 Golder Associates Inc., 5
 Indiana Department of Environmental Management, 5
 MACTEC Engineering and Consulting Inc., 5
 Maricopa County Air Quality Department, 5
 METCO Environmental, 5
 Mid-Atlantic Regional Air Management Association, 5
 Minnesota Pollution Control Agency, Majors and Remediation Division, 5
 Mojave Desert Air Quality Management Division, 5
 Navistar Inc., 5
 North Carolina Department of Environment and Natural Resources, Division of Air Quality, 5
 New United Motors Manufacturing Inc. (NUMMI), Environmental Affairs, 5
 O'Brien & Gere Engineers Inc., 5
 Ontario Ministry of the Environment, Environmental Assessment and Approvals Branch, 5
 Ontario Ministry of the Environment, Integrated Environmental Planning Division, 5
 ORTECH, 5
 Parsons, 5
 PPG Industries Inc. – Allison Park, PA, 5
 PPG Industries Inc. – Lake Charles, LA, 5
 Research Triangle Institute, 5
 San Joaquin Valley Air Pollution Control District, 5
 Santa Barbara County Air Pollution Control District, 5
 Schreiber, Yonley, and Associates, 5
 Sierra Research Inc., 5
 Sonoma Technology Inc., 5
 Southern California Edison, 5
 Southern Company, 5
 Tennessee Air Pollution Control, 5
 TRC Environmental Corporation, 5
 Tucson Electric Power Company, 5
 URS Corp. – Salt Lake City, UT, 5
 U.S. Environmental Protection Agency, Region 4, Air, Pesticides, and Toxics Management Division, 5
 Utah Division of Air Quality, 5
 Virginia Department of Environmental Quality, 5
 Wenck Associates Inc., 5
 Xcel Energy, 5

2009–2010 Scholarship Award Recipients

A&WMA takes great pride in supporting the future environmental leaders of our world. For more than a decade, the Association has awarded scholarships to the most promising environmental students on the basis of academic record, plan of study, career goals, recommendations, and extracurricular activities without consideration of sex, race, national origin, financial need, age, or physical disability. Full-time graduate students who are pursuing courses of study and research leading to careers in air quality, waste management, environmental management/policy/law, and sustainability are eligible to apply. This year, A&WMA is pleased to award US\$35,000 in scholarships by recognizing the 10 students below chosen by the Scholarship Awards Committee.

In recognition of excellence in air quality research and study:



Kaitlin Mallouk, Ph.D., Civil and Environmental Engineering, University of Illinois, Urbana-Champaign — \$7500 and the Milton Feldstein Memorial Scholarship



Neelakshi Hudda, Ph.D., Civil and Environmental Engineering, University of Southern California — \$2000



Eunice Omanga, Ph.D., Industrial Pollution and Public Health, Drexel University — \$2000

In recognition of excellence in waste management research and study:



Ming Chai, Ph.D., Civil and Environmental Engineering, University of Cincinnati — \$5000 and the Jacqueline Shields Memorial Scholarship



Stanislaw Lozecznyk, Ph.D., Civil and Environmental Engineering Environmental University of Manitoba — \$5000 and the Richard Stessel Memorial Scholarship



Sudeep Popat, Ph.D., Chemical & Environmental Engineering, University of California, Riverside — \$2500

In recognition of excellence in environmental management/policy research and study:



Tingting Gao, Ph.D., Environmental Engineering, Arizona State University — \$5000 and the David M. Benforado Memorial Scholarship

In recognition of excellence in sustainable development research and study:



Woo Jin An, Ph.D., Energy, Environmental, and Chemical Engineering, Washington University in St. Louis — \$2000



Matthew Eckelman, Ph.D., Green Engineering/Industrial Ecology, Yale University — \$2000



Umakanta Jena, Masters, Agricultural and Food Engineering, University of Georgia — \$2000

Scholarship Donations

A&WMA gratefully acknowledges all of the contributions made to the Scholarship Endowment Trust Fund from January 1, 2008, through March 31, 2009, with special appreciation to the following contributors of US\$100 or more.

Milton Feldstein Scholarship

Margaret Feldstein, \$10,000
Susan S.G. Wierman, \$150

Richard Stessel Scholarship

Brent Nixon, \$400

General Scholarship

Proceeds from the 2008 Silent Auction in Portland, \$6,500

Proceeds from the 2008 Golf Outing in Portland, \$11,400

Bechtel Group Foundation, \$19,000

Gary Gasperino, \$135
Melanie Sattler, \$100

Make a Donation

To date, more than \$400,000 have been awarded in scholarships. If you are interested in making a donation to the A&WMA Scholarship Endowment Trust Fund, please contact Sandi Spratt at sspratt@awma.org. Contributions are tax deductible.





AIR & WASTE MANAGEMENT
ASSOCIATION

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