

ASDSO Press Release

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FOR IMMEDIATE RELEASE

State Dam Safety Officials Present Annual Awards

Lexington, KY: 10/27/2009

At each annual conference, the Association of State Dam Safety Officials (ASDSO) recognizes individuals who have made outstanding contributions to the field of dam safety. The following award winners were recognized on September 29th, at the 2009 ASDSO Awards Banquet, held at the Westin Diplomat Resort in Hollywood, Florida.

ASDSO HONORARY MEMBERS

ASDSO's Board of Directors selected three new ASDSO Honorary Members in 2009: Kenneth Hansen, Danny K. McCook, and Charles Pearre.



Kenneth Hansen is probably the nation's most widely recognized author, lecturer, and consultant on roller-compacted concrete for dams. Prior to joining Schnabel Engineering in 1997, Mr. Hansen worked for the Portland Cement Association for nearly 37 years. He has provided consulting and technical review for RCC and soil-cement projects throughout the world, giving more than 400 presentations throughout the U.S. and in Canada, Mexico, Brazil, Chile, Australia, China, Argentina, India, Spain, Turkey, and Peru. Mr. Hansen co-chaired ASCE specialty conferences on RCC in 1988 and 1992, and edited or co-edited the proceedings of these conferences as well as a third. He has authored or co-authored more than 50 papers on RCC for and is the primary author of the book "Roller-Compacted Concrete

Dams” published by McGraw-Hill. He organized and taught at 16 PCA-sponsored RCC dam short courses/tours in ten states, and developed Schnabel’s International RCC Dams Seminar and Study Tour series, which has involved more than 40 dam engineers as faculty since 1998. Through speaking engagements, journal articles, ASDSO conferences and other venues, Mr. Hansen has advanced dam safety. His advocacy in promoting technological advances and practical and thoughtful application of RCC technology to the benefit of the mankind distinguish him as a visionary and a credit to the profession.



Danny McCook is an independent consultant specializing in geotechnical review and design of earthen embankments and levees. He retired in October 2008 after working for over 40 years as a Civil Engineer and Geotechnical Specialist with the National Design, Construction, and Soil Mechanics Center of the USDA Natural Resources Conservation Service in Fort Worth, Texas. He has extensive experience in filter design, modeling for stability, seepage, and consolidation analyses. Mr. McCook has participated in numerous forensic evaluations and has designed over 500 small earthen embankments in the NRCS programs. He has presented papers at 16 ASDSO meetings and presented ASDSO Webinars on reviews for embankment projects. He has authored numerous publications used by the NRCS for criteria and guidance in the design of earthen embankments including ones on dispersive clays, design of clay liners for animal waste storage ponds, and filter diaphragms for conduits through embankments. He has presented many workshops and training courses on subjects such as shear strength, compaction, selection of parameters to represent soils in the SITES model, and others. Mr. McCook received a BS degree from Texas Tech University in 1965 and a MS degree from the University of Nebraska in 1967. He is a registered Professional Engineer in Texas and a member of ASCE, USSD, and ASDSO.



Charles Pearre, longtime Dam Safety Program Manager for the U.S. Army Corps of Engineers, retired on August 1 after 41 years of public service. Since 1996, Mr. Pearre served as the National Program Manager for the Corps Dam Safety Program. He was responsible for coordinating Headquarters' oversight

and direction of the dam safety program, developing policy and technical criteria guidance, ensuring adequacy of engineering policy and technical methodology for proposed projects, and resolving project specific policy issues. Mr. Pearre established the Corps of Engineers Dam Safety Steering Committee comprised of regional dam safety program managers from across the Corps and was responsible for setting the agenda for committee meetings and bringing issues for resolution before the committee. He developed recommendations for USACE positions on technical criteria and policy for the National Dam Safety Program. He served as the Department of Defense (DOD) representative on the Interagency Committee for Dam Safety other national teams. Mr. Pearre was responsible for preparation of biennial reports to Congress on the status of all DOD dam safety programs. He served as Corps of Engineers point of contact with national and international professional associations (USSD, ASDSO, DSIG) for the exchange of Dam Safety technology and worked with other federal dam safety agencies to develop joint programs for improving national dam safety.

STUDENT AWARDS

ASDSO 2009-2010 Undergraduate Scholarship: James Woidt



ASDSO's Scholarship Committee awarded a \$7,500 scholarship to James Woidt, a University of New Hampshire senior undergraduate majoring in Civil engineering and minoring in Business Administration. Mr. Woidt's activities at UNH include Tau Beta Pi Engineering Honor Society and student chapter memberships in the National Society of Professional Engineers and the American Society of Civil Engineers. Earlier this year, he was selected to represent UNH in an Engineering Exchange with Heriot-Watt University in Edinburg, Scotland. Over two summers, Mr. Woidt worked for the New York State Department of Transportation, assisting with Hydraulic Vulnerability Assessments and bridge and transportation construction inspections. Additional work experience with a small engineering company that specializes in dam inspections and design exposed him to dam inspection, HEC-RAS analysis and design flood calculations. Mr. Woidt plans to concentrate on Water Resources in his senior year of study.

The New Jersey-Pennsylvania Council for Safe Dams: Vinoth Muthia



The New Jersey-Pennsylvania Council for Safe Dams awarded a \$2,500 scholarship to Vinoth Muthia, a senior undergraduate at Pennsylvania State University, where he is pursuing degrees in Civil Engineering and Economics. In addition to his coursework, Mr. Muthia assumed the lead water resources student design position on a dam rehabilitation and hydropower retrofit for a dam in Kenya. He undertook similar design work in Honduras as president and founder of the Global Water Brigades at Penn State. Mr. Muthia is applying his interest in global development and social entrepreneurship in designing a business model to develop water resources in underdeveloped countries by partnering with domestic firms, host universities, and local governments to empower villages to organize municipal water authorities. He has interned with the Pennsylvania DEP and Gannett Fleming, and presented at Dam Safety 2008 on “Dam Risk Assessment in a Regulatory Environment.” Other activities include volunteering as a crisis counselor with the Community Help Centre, and active membership in ASDSO, USSD, and ASCE.

Dam Safety 2009 Student Paper Competition

ASDSO’s Committee on Education Outreach chose three winners for its first Student Paper Competition. The winners presented their papers at Dam Safety 2009, and each received a \$500 prize.



Rachael Bisnett, Graduate Student, Civil Engineering, Purdue University

Paper title: *A Simplified, Probability-Based Risk Analysis for Small Embankment Dams*



David Judi, PhD Candidate, Civil and Environmental Engineering, University of Utah

Paper title: *Impacts of Elevation Data Spatial Resolution: Two-Dimensional Dam Break Flood Modeling and Socio-Economic Impacts*



Abouzar Sadrekarimi, Graduate Student, Civil and Environmental Engineering, University of Illinois at Urbana-Champaign

Paper title: *Influence of Sand Particle Mineralogy on the Earthquake-Induced Displacement of Embankment Dams*

MERIT AWARDS

National Award of Merit: Federal Energy Regulatory Commission Division of Dam Safety



The Federal Energy Regulatory Commission Division of Dam Safety received the 2009 ASDSO National Award of Merit. As one of many federal agencies involved in dam safety, the FERC is unique in its mission as a regulatory body, a role that mirrors state dam safety programs. The dam safety team at FERC headquarters in Washington DC, led by director Dan Mahoney, and FERC regional offices demonstrate the highest level of excellence in carrying out this national regulatory program.

The FERC has supported the mission and goals of ASDSO since its formation in the 1980s. FERC leadership has always encouraged its dam safety staff and licensees to become active members of ASDSO. Many FERC representatives have served on ASDSO committee and task forces over the years.

The FERC began its dam security program shortly after 9/11. The program, led by Frank Calcagno, serves as a template as the DHS Dams Sector Coordinating Council develops model dam security guidelines. Recently ASDSO and FERC entered into a joint venture, with the Department of Homeland Security, to combine two separate national security conferences into one, held at Dam Safety 2009.

Continuing education for dam safety engineers is important to ASDSO and FERC. For the past two years, the FERC has bolstered ASDSO's Training Program by bringing technical courses to state dam safety offices. Through this arrangement, several states have held in-house training organized and conducted by FERC experts.

FERC officials understand that support by policymakers depends on effective conveyance of the importance of dam safety and strong regulatory programs. Envisioning an opportunity to showcase not only the FERC Division of Dam Safety but dam safety initiatives by ASDSO, the states and other federal programs, Dan Mahoney organized an internal Dam Safety Conference on December 4, 2008 in Washington, DC. The conference created a rare opportunity for the dam safety community to tell its story to FERC Commissioners.

In addition to honoring Dan Mahoney, Director of the FERC Division of Dam Safety and Frank Calcagno, Senior Engineering Geologist, ASDSO also recognized Bill Allerton, Deputy Director, and the FERC Regional Office dam safety representatives: Charles Wagner, Atlanta; Peggy Harding, Chicago; Peter Valeri, New York; Patrick Regan, Portland; and Ron Adhya, San Francisco.

ASDSO REGIONAL AWARDS OF MERIT

West Region Award of Merit: Ute Water Conservancy District, Grand Junction, CO



ASDSO's West Region selected Ute Water Conservancy District as its Merit Award winner. Ute Water has provided treated water to more than 80,000 people in western Colorado's Grand Valley for more than 50 years. As owner of eight raw water reservoirs and major water supplier to the

Valley, Ute Water strives to proactively maintain its dams to the highest standards; accordingly, it completed several dam safety projects in 2008 and 2009.

In addressing insufficient storage and inadequate spillway capacity at its Jerry Creek reservoir dams, Ute Water worked with RJH Consultants and the State Engineer's Office to develop a unique multi-reservoir routing concept that reduced construction costs. Ute Water also funded a site-specific hydrometeorologic study to reduce the extreme storm precipitation contributing to the IDF storm event, which provided value engineering to the project and helped promote the application of this science in the field of water resources planning and development.

Several additional Ute Water projects addressed dam safety concerns and avoided imposed storage restrictions and potential loss of storage rights that would have adversely impacted Ute Water's ability to deliver reliable water to the Grand Valley.

Ute Water's dedicated staff continually monitors its dam and reservoir operations and maintenance, and has updated the Emergency Action Plans (EAPs) for Ute's significant and high-hazard dams. Ute Water has prepared four EAPs over the past year, and has facilitated a number of dam owner workshops.

Ute Water reaches out to the community through water education programs. Its 16-year-old Annual Children's Water Festival exposes Grand Valley school district fifth graders to all facets of water—conservation, protection, pollution control, provision, treatment—and the importance of water in the world, the state, the community and their individual lives.

Southeast Region Award of Merit: Mississippi Soil and Water Conservation Commission, Jackson, MS



ASDSO's Southeast Region recognized the Mississippi Soil and Water Conservation Commission (MSWCC) for its creation of the Mississippi Watershed Repair and Rehabilitation Cost Share.

Watershed dams constructed with USDA Natural Resources Conservation Service (NRCS) funding and technical assistance are eligible for continued NRCS assistance and funding for rehabilitation and repairs; however, NRCS funds are provided on a cost-share basis, requiring local watershed districts to provide matching funds and to compete for limited funding with projects nationwide. These requirements kept many watershed dams in Mississippi from being repaired and rehabilitated in a timely manner.

The MSWCC worked with the Mississippi State Legislature to create a state program that provides funds for repairing and rehabilitating watershed dams and for matching NRCS funding. The program began in 1998 with an authorization of \$5 million. MSWCC worked closely with the NRCS to coordinate the watershed structure rehabilitation and repair efforts.

That funding was depleted in 2008 with the rehabilitation of 197 watershed dams in Mississippi. This year, thanks to MSWCC, the state legislature provided \$1 million to continue the program.

Northeast Region Award of Merit: Pennsylvania American Water, Mechanicsburg, PA



ASDSO's Northeast Region selected Pennsylvania American Water (PAW) as its Merit Award winner. PAW owns 64 dams and reservoirs that supply water to more than two-million customers. Twenty-nine of its dams are classified as high hazards. Several were rehabilitated in the 1980s by their former owner. In 1996, when PAW assumed ownership of the dams, it immediately conducted detailed surveys of all, including risk assessments and rehabilitation prioritizations of the high hazard dams.

PAW recognizes the importance of proper dam management in ensuring public safety and is committed to abiding by dam safety regulations administered by the Pennsylvania Department of Environmental Protection (PADEP). Professional engineers and supporting staff of the company regularly inspect each dam to identify and tend to maintenance needs. Written condition assessments, including maintenance recommendations, are compiled to record inspections and submitted to PADEP. Using

this information and engineering studies assessing each high-hazard dam's level of compliance with safety criteria, PAW engineers and PADEP personnel work together to prioritize dam rehabilitation projects.

Another important facet of PAW's dam safety program is the company's commitment to the development and distribution of updated Emergency Action Plans (EAPs). Over the last several years, PAW has identified and mapped flood hazard inundation areas downstream of each of its 29 high-hazard dams. These efforts included hydrologic analyses of approximately 115 sub-watersheds, and flood-wave routings and hazard area mapping of over 375 stream miles. As a result of this significant effort, EAPs for all of PAW's high-hazard dams are current and compliant with PADEP requirements.

PAW has embarked on an aggressive program to upgrade its high-hazard dams. Last year, PAW completed a \$10.2 million rehabilitation of Watres Dam and Reservoir near Wilkes-Barre. The project increased the dam's spillway capacity and embankment stability while incorporating mitigation measures to compensate for wetlands impacted by modifications to the embankment slope. Currently, PAW is conducting design services for major rehabilitation of three additional high-hazard dams in 2010. In addition to the planning, monitoring, inspection, and rehabilitation components of their dam safety and maintenance program, PAW is proactive in decommissioning dams that are determined to be no longer necessary for water supply. In recent years, the Hillside Intake and Maple Lake dams near Scranton and the Claysville Dam near Pittsburgh were breached. Two additional dams are scheduled for removal later this year.

Midwest Region Award of Merit: Mia P. Kannik, Ohio Department of Natural Resources, Columbus, OH



The Midwest Regional Award of Merit was presented to Mia P. Kannik, P.E. of the Ohio Department of Natural Resources for her service to the region in promoting and writing technical articles for the "The Journal of Dam Safety." The Journal annually publishes an article from each region and Ms. Kannik has coordinated this effort for the Midwest Region since its inception. Her efforts on this task have resulted in quality technical articles on dam safety topics from the Midwest

states including this year's article "Midwest Flooding in 2008: State Dam Safety Officials' Response." Ms. Kannik put in many hours for this article in collecting and editing a summary of the response to this flooding event from each state and writing Ohio's portion and the introduction and summary. This year's article is a good example of the effort put forth by Ms. Kannik to ensure quality articles for the Journal from a Midwest states' perspective.

In addition to her volunteer hours for the Midwest Region, Ms. Kannik is a registered professional engineer with Ohio's Dam Safety Engineering Program where she has worked for over 11 years on hundreds of dams. She specializes in the geotechnical and structural stability aspects of embankment dams and appurtenant structures including the training of other staff. She has a Bachelor's Degree in Civil Engineering from the University of Cincinnati and a Master's Degree in Geotechnical Engineering from Virginia Tech University.

2009 NATIONAL REHABILITATION PROJECT OF THE YEAR:

Lake Burnt Mills Dam Rehabilitation, Suffolk, VA



Lake Burnt Mills Dam, a high hazard, earth embankment dam built in 1942, is one of a series of water supply reservoirs and dams owned and operated by the City of Norfolk. Lake Burnt Mills impounds 10,300 acre-feet of water; it is one of seven reservoirs that supply fresh water to Norfolk and adjacent communities.

Beginning in 2006, the City constructed several remedial measures at Lake Burnt Mills Dam to address several dam safety deficiencies based on hydrologic/hydraulic, geotechnical and structural investigations and analyses. The most urgent deficiencies included the inability to safely pass the Probable Maximum Flood, inadequate safety factor of the intake tower and training walls, severe deterioration of concrete below the waterline, and improper design for the spillway crest.

Remedial measures included spillway and embankment modifications and low-level outlet replacement. The spillway and embankment were modified by extending and

raising the existing parapet wall and the ends of the embankment to prevent overtopping; a partial demolition and reconstruction of the existing ogee crest to match the for the high flow expected from the PMF; repair of the spillway channel floor and walls to include filtered seepage collection and drainage interceptor trenches; and replacement of the riprap on the upper channel side slopes to provide suitable erosion protection and repair of the deteriorated concrete. Due to the condition of the low-level outlet, the entire system was replaced. The replacement system included a new intake tower and a micro-tunneled low-level outlet.

The major challenge of this project was to maintain dam safety and allow continued operation of the reservoir during remedial construction. The use of cofferdams at the upstream and downstream ends of the spillway maintained the required high water levels of the dam while construction was underway. Another major challenge of this project was the change of design for the low-level outlet during the design phase. The originally designed siphon low-level outlet was changed due to concerns about safe-yield during times of low reservoir levels. The siphon low-level outlet was replaced by a large diameter micro-tunneled low-level outlet. The micro-tunnel was specified by the City, not the consultant, which placed greater risk on the City, but greatly reduced expenses.

The design and construction of these remedial measures successfully addressed the dam deficiencies and the requirement to maintain the use of the reservoirs and to maintain dam safety during construction.

SPECIAL RECOGNITION: National Committee on Levee Safety

The ASDSO Board of Directors unanimously agreed to formally recognize the work this past year of the National Committee on Levee Safety. Mandated by the National Levee Safety Act (Title IX, WRDA 2007) and led by the US Army Corps of Engineers, this team of federal, state and private volunteer committee members created the *Report to Congress on Recommendations for a National Levee Safety Program*. From October 6, 2008 to January 15, 2009, the team members sacrificed work and private life to develop this 104-page, comprehensive strategic plan for standing up a National Levee Safety

Program—a monumental feat in the view of the ASDSO Board. The draft report was endorsed by the ASDSO Board in March 2009.

ASDSO recognized the following Committee members:

Voting Members: Steven L. Stockton, Chairperson; Eric C. Halpin, Vice-Chair; Bill Blanton, FEMA Representative; Don Basham, Private Sector Representative, USSD, ACEC, NSPE; Les Harder, Private Sector Representative, ACEC; Karin Jacoby, Local/Regional Representative, City of Kansas City, MO; Dusty Williams, Local/Regional Representative, Riverside County Flood Control District, CA; John Dorman, State Representative, North Carolina; Edwin Matsuda, State Representative, Hawaii; Rod Mayer, State Representative, California; Paul Perri, State Representative, Colorado; Mike Stankiewicz, State Representative, New York; Jon Sweeney, State Representative, Arkansas; Marilyn Thomas, State Representative, Kentucky; Robert Turner, State Representative, Louisiana.

Non-Voting Members: David Garcia, City of Dallas; Sam Riley Medlock, Association of State Floodplain Managers, Inc; Steve Verigin, GEI Consultants, Inc; Susan Gilson, National Association of Flood & Stormwater Management Agencies.

TERRY L. HAMPTON MEDAL: Darrel Temple



ASDSO's Affiliate Member Advisory Committee (AMAC) established the Terry L. Hampton Medal in 2007 to honor its namesake, who chaired the AMAC from 1998-2002, and to recognize outstanding achievements in the field of hydrology and hydraulics.

Darrel Temple is recognized as a national and international authority in the hydraulics of vegetated open channels, spillways, and earthen embankments. He has a sustained record of outstanding research productivity and impact, including benchmark work in protection and performance of vegetated open channels, analysis of vegetated earth spillway performance, and embankment dam overtopping. He has authored or co-

authored over 100 publications and has participated as a speaker and/or leader in numerous meetings, workshops, and seminars, including ASDSO conferences.

In over 30 years of service at the USDA Agricultural Research Service Hydraulic Engineering Research Unit in Stillwater, Oklahoma, Mr. Temple expanded the understanding of the interaction of the flow field with the vegetation in grass-lined water conveyance channels and used that understanding to develop improved procedures for grass-lined channel design. The computational approach was placed in the context of a design procedure and documented in a widely distributed USDA Agriculture Handbook along with example application software. He served in a leadership role in the development of the SITES software used by the Natural Resources Conservation Service and others for the design of small earthen dams with vegetated spillways. This involved a major effort of data collection over a 10-year period from large-scale laboratory tests and from field spillways experiencing flood events. Even after his retirement from federal service, he has remained active in the area of dam overtopping. He continues to be a key member of a team of engineers and scientists in the development of a computational model for allowable overtopping.

PRESIDENT’S AWARD: Michele Lemieux, P.E.



The ASDSO President’s Award is given annually to an individual or group who has assisted the President of ASDSO during his or her term in office. Outgoing ASDSO President Robert Martinez selected Michele Lemieux, Civil Engineer with the Montana Department of Natural Resources and Conservation, citing her years of contributions and value to ASDSO. Ms. Lemieux has contributed time and tireless effort to improve dam safety—not only in a daily professional capacity, but also by actively participating in ASDSO for more than twelve years. She serves on the Conference Planning Committee, the Technical Training Committee, and the Editorial Committee of The Journal of Dam Safety. She is rated highly by her peers as a presenter at ASDSO’s annual and regional conferences, and has engaged attendees in a hands-on soils workshop that received rave reviews. Ms. Lemieux’s outstanding volunteerism and positive attitude set an example for the entire profession.

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Since its formation in 1984, the Association of State Dam Safety Officials (ASDSO) has served as one of the premier professional organizations for individuals committed to ensuring the safety of dams in the U.S., including government officials, engineering consultants, contractors, manufacturers and suppliers, researchers, teachers, dam owners and operators and students.