



The Association of State Dam Safety Officials

Peer Review Program

For Dam Safety



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Providing professional
guidance to dam safety
programs in North
America.

The Association of State Dam Safety Officials (ASDSO) is a national 501(c)(3) non-profit professional organization dedicated to the improvement of dam safety through research, education, and communication. Established in 1984 by representatives of state agencies responsible for regulating thousands of non-federal dams in the U.S., ASDSO now serves the needs of over 3,300 members from all aspects of the North American dam safety community.

The Association of State Dam Safety Officials

Dam Safety Peer Review Program

ASDSO and the Dam Safety Peer Review Program

Through the cooperative efforts of the Association of State Dam Safety Officials (ASDSO), founded in 1984, and the Interagency Committee on Dam Safety (ICODS), a committee of six professionals representing state dam safety programs, electric utilities, and engineering firms developed a peer review program. The ASDSO Board of Directors adopted the Peer Review Program and conducted pilot reviews for the New Mexico, Tennessee, and Wisconsin dam safety programs. Based on the success of the pilot reviews, ASDSO began offering peer reviews as a regular service to states, federal agencies and private dam-owning companies in 1992.

The objective of an ASDSO Peer Review is to provide professional guidance to improve the performance and management of dam safety programs. A Peer Review evaluates the mission, objectives, policies and procedures of a dam safety agency or company/organization. The program is evaluated relative to the organization's own governing regulations, and other guidelines such as the FERC dam safety program guidelines for licensees, the Model State Dam Safety Program (FEMA 316), or the Federal Guidelines for Dam Safety (FEMA 2004), as well as commonly accepted standards of practice.

The Peer Review is limited in scope and cannot determine or guarantee that a program complies with all applicable state, federal or provincial regulations or standards of practice. The Peer Review is performed by a team of engineers and dam safety professionals who produce a technical opinion, not a legal opinion.

The Peer Review Team provides a written report that documents its findings and recommendations. The Team does not perform follow-up or impose sanctions for not following recommendations. Implementation of

recommendations is at the discretion of the organization's decision makers, its state legislature, Congress, or other enabling body. Peer Review teams do not inspect dams during reviews, and are therefore not involved in evaluating any Program's inventory of dams.

How to Obtain a Review

To get a cost quote or to schedule a peer review, contact Susan Sorrell at ASDSO. 855.228.9732 or sasorrell@damsafety.org

Qualifications of Reviewers

Reviewers are appointed by the ASDSO. Peer Review Committee. The reviewers are engineers, project managers and other experts with significant experience in the design, construction, and operation of dams. In addition, they must have made significant contributions to the profession through involvement with technical and professional societies, licensing boards, and/or other professional activities. Finally, they must have a keen interest in improving dam safety. While a reviewer is required to have a minimum of 15 years of dam safety experience, most have more than 30 years of experience. All reviewers receive training in the ASDSO Peer Review process.

ASDSO's Qualifications

Since 1990, ASDSO has completed peer reviews in **38** states and Puerto Rico. Since 1996, ASDSO has performed reviews for federal dam safety agencies including the US Army Corps of Engineers, the Mine Safety and Health Administration, the Tennessee Valley Authority, and the Department of Interior and its six bureaus including the Bureau of Reclamation; the Bureau of Indian Affairs; the Bureau of Land Management; the National Park Service; the U.S. Fish and Wildlife Service; and the Office of Surface Mining.

ASDSO has performed peer reviews for several private dam owning companies including Ontario Power Generation, BC Hydro, Seattle Public Utilities and Seattle City Light.



States in Yellow Have Sponsored Peer Reviews

The Benefit of a Peer Review

The philosophy behind ASDSO’s Peer Review Program is that a review by a group of dam safety experts – your peers – can help improve the management and execution of a dam safety program. The ASDSO program features a defined process that leads the agency or company through an introspective “self” evaluation by a team of experienced dam safety professionals.

State agencies and dam owners participating in the peer review process praise its value as a way to validate written dam safety program documents, policies and decisions, as well as to identify program improvements. For example, one agency director that went through the peer review said that the peer review not only helped his program improve, it also raised the department’s profile with the agency and state government.

How the Review Works

The peer review team starts by studying documents furnished by the client organization, including the written dam safety program guidance documents. The client also provides the peer review team with information on its mission, objectives, policies, and procedures. The team then examines evidence of compliance with those policies and procedures, and evaluates the competence of the program relative to the generally accepted standards of practice of dam safety. The team reviews areas of management, development, and maintenance of technical competence, as well as management of projects and resources. The team then solicits information from the client's management and staff involved in dam safety by reviewing confidential questionnaires and conducting interviews.

Next, the team visits the client's workplace to determine if the dam safety program's objectives and policies are clearly understood and are being uniformly implemented. At the heart of the process is a series of interviews of the Director of Dam Safety and all staff. The length of the on-site visit is determined based on size of the program and the number of staff. When the review process is completed, the team presents a confidential written report of its findings and recommendations to the program engineer/director.

**The Peer
Review Team
Pool of Experts**

Terrence (Terry) Arnold, P.E. is the Vice President and North America Practice Leader for Dams at MWH Americas, Inc. He has over 38 years of experience in dam safety and related fields. From 1978 to 2002, he held various positions at Woodward-Clyde Consultants/URS, from Staff Engineer to Vice President. Mr. Arnold participated in the safety evaluation of existing dams for the US Fish and Wildlife Service, Bureau of Indian Affairs, and more than 15 states and served as the technical reviewer for the development of an instrumentation monitoring program and dam safety inspection program for the South Florida Water Management District. Additionally, he served as designer of both new and existing dams in 5 states and multiple federal agencies, and completed a Risk Assessment Methodologies for multiple Reclamation dams.

Mark E. Baker, P.E. is the Dam and Levee Safety Officer for the National Park Service (NPS). He has more than 23 years of experience working with dams and pioneered the use of risk-informed dam safety practices for smaller dam safety programs with intermediate/small dams for the Bureau of Indian Affairs (BIA) and NPS. During his quarter century with the Bureau of Reclamation, he led the transition of the BIA Dam Safety Program from standards-based to risk-informed and participated in peer reviews for six agencies. Mr. Baker also authored the NPS dam safety reference manual guidelines and O&M guidelines for low hazard potential dams. From 2006 to 2011, he was the Project Manager of the Department of the Interior Reduce Dam Safety Risk (RDSR) Project, a multi-phase task to identify and adopt best dam safety practices across the six DOI bureaus with dams. Mr. Baker is the founder and chair of the ASDSO Dam Failures & Incidents Committee, as well as founder and leader of the Washington DC Silver Jackets flood risk management group.

Bill Bingham, P.E., is currently the Vice President of Gannett Fleming, Inc. and has more than 49 years of experience in the areas of dam and flood control engineering. He has been involved as Project Principal, Project Manager, Project Engineer, or Quality Team Leader on more than 20 flood control projects, 50 new dam projects, 100 dam rehabilitation projects, 150 annual dam safety inspections, 30 Phase 1 dam safety inspections, and numerous dam feasibility investigations and reports. He is experienced in studies, designs, and cost estimates on diverse assignments such as new dam and dam rehabilitation designs, basin wide flood control studies, water supply alternative studies, flood control investigation and reports, existing flood control project rehabilitation design, field surveys, water needs assessments, and flood damage assessments. Mr. Bingham received the "President's Award" in 1994 and 2012, and the "Award of Merit" in 1991 from the Association of State Dam Safety Officials

(ASDSO). He was named an Honorary Member in 2015. Additionally, he was as a member of the National Dam Safety Review Board and USSD Board of Directors (1998-2004), serving as President of USSD from 2001-2003. In 2009, he received the Lifetime Achievement Award recognizing his dedication, achievements and contributions to the dam engineering profession.

Jason R. Campbell, P.E. is Dam Safety Manager at Dynegy Inc and has more than 10 years of experience in dam safety/dam engineering and related fields. Between 2005 and 2015, he served as dam safety engineer for the Illinois Department of Natural Resources Office of Water Resources, where he was one of two dam safety engineers in Illinois's Dam Safety Regulatory Program and responsible for inspection and plans/specifications reviews of nearly 3000 permitted and un-permitted structures. Mr. Campbell is a past Board member of ASDSO and served as president in 2012-2013. He currently chairs the Owner Education Committee. At Dynegy, Inc., he is responsible for approximately 130 separate impoundments at 15 plant locations. Of those impoundments over half are considered to be CCR impoundments, of which he has been working through the recent US EPA rule regarding CCR impoundments. Mr. Campbell is currently developing updated or new Emergency Action Plans and Operation & Maintenance Manuals for the complete fleet of impoundments owned by Dynegy, Inc.

Ying-Kit Choi, Ph.D., P.E. specializes in geotechnical engineering, dam design and construction services, embankment dam engineering, and roller compacted concrete (RCC). He has two years of university teaching experience and over 30 years of experience in consulting engineering practice. He is currently an independent geotechnical consultant. Dr. Choi has performed safety evaluations of over 100 existing dams throughout the United States and overseas, including static and seismic stability, seepage evaluation, settlement analysis, filter and drain improvements. He has prepared feasibility-level designs, conceptual-level designs, and final designs for over 50 embankment and RCC dam projects. He was the principal designer for final designs of modifications to new embankment dams, new RCC dams, RCC overtopping protection, embankment dam raise, static and seismic stability berms, post-tensioned anchors, seepage controls, wave erosion protection, outlet works replacements, and new spillways.

John Cima, P.E. is currently a Senior Consultant at Schnabel Engineering. Mr. Cima graduated from Clarkson University with a BSCE in 1974. He has been in the geotechnical engineering profession for 42 years; the last 31 with Dominion

Generation. While at Dominion, he was responsible for geotechnical engineering/design and consultation on a variety of O&M and capital projects across Dominion's fossil-fueled generation fleet, and all annual dam safety inspections required by state and federal regulatory agencies at the stations which had dams. This included preparing and coordinating all required inspection reports and periodic re-certifications associated with state regulated dams, as well as coordination and technical support for FERC Part 12 Inspections for federally regulated dams. Mr. Cima was Project Engineer for various dam improvement projects, including Roanoke Rapids Dam (NC) and Mt. Storm Lake Dam (WV)). He is a registered P.E. in the states of Virginia and West Virginia, a member of the Association of State Dam Safety Officials (ASDSO) and Chairperson of ASDSO's Peer Review Committee.

Bob Dalton, P.E. received his BSCE from the Missouri University of Science & Technology in 1970. He has worked as an Engineer with Vasconcelles Engineering Corporation since 2003. His assignments focused on hydrology, hydraulics, dam inspections, dam design, construction, and modification projects. Previously, Mr. Dalton worked for the Illinois Office of Water Resources with more than 30 years in the design, inspection, and regulation of dams. He has supervised and conducted over 400 dam field inspections and site visits (including those on underground and surface mining sites), computed and evaluated the hydrology, flood inflow hydrographs, spillway ratings, reservoir routings, energy dissipation, and dam breach wave analysis of existing and proposed dams. Mr. Dalton was also involved in the preparation of Illinois' dam safety regulations and guidelines and has assisted in the development of the TADS modules, served on the Executive Committee and now the Advisory Committee of ASDSO, and served on FEMA's National Dam Safety Review Board and on its Research Work Group.

Dennis Dickey, P.E. graduated from The Pennsylvania State University in 1975 with a BS Degree in Civil Engineering. His professional experience includes over 40 years in hydrologic, hydraulic, and dam safety engineering. Mr. Dickey currently is a Senior Engineer with Gannett Fleming where he is responsible for areas of water resources engineering, including managing and mentoring project teams, performing quality assurance and peer reviews, providing dam analysis and design, and conducting field reconnaissance. He was a member of the Dam Safety Program Peer Review Panel for the CT Department of Energy and Environmental Protection in 2013, and worked as Senior Engineer for dozens of rehabilitation projects, most recently the Western Reservoirs (VA), Bear Gap No 2 Dam (PA), and Elmhurst Dam (PA) projects. He also managed

Pennsylvania's Dam Safety Program and served as Pennsylvania's state representative to ASDSO. Mr. Dickey has also served on the ASDSO Board of Directors and on ASDSO's Training, Dam Owner Outreach, Nominating, Awards and Peer Review Committees. In addition, he has served as a member of the US Department of Homeland Security's Dams Sector, Government Coordinating Council.

Dean B. Durkee, Ph.D., P.E. has over 25 years of engineering experience as a geotechnical and dam safety engineer and is currently Vice President and West Regional Director of Earth Science and Hydraulics for Gannett Fleming, Inc. He has been responsible for evaluation and design of new dams and for developing rehabilitation and modification designs for existing dams, including earth embankment, roller-compacted concrete, moveable crest, and lined rockfill dams for hydroelectric power generation, flood control, water supply, recreation, and tailings management. Dean has provided inspection and assessment, geotechnical investigation, engineering evaluation, design, construction phase, and dam safety review services for over 350 dams. His work has taken him across the country from Oregon, California, Arizona, and Hawaii to Louisiana, Florida and Puerto Rico, and Colorado, Wyoming, New Mexico, Texas, and Arkansas. He is a member of ASDSO and serves on the Peer Review Committee and as an instructor for ASDSO's Dam Owner Training Program. Dean is also a member of USSD and serves on its Board of Directors.

John W. France, P.E., D.WRE is a registered professional engineer and Diplomat, Water Resources Engineer, who is currently the Dams and Hydropower Technology Practice Network National Leader for AECOM. He received his BS degree in civil engineering from Cornell University in 1973 and received an MS degree in geotechnical engineering from the same institution in 1976. Mr. France has over 40 years of consulting engineering experience, during which time he has been responsible for the analysis, design, and construction of embankment and roller compacted concrete dams and their appurtenant structures. He has served on Consultant Review Boards for the Bureau of Reclamation for more than a dozen dam safety rehabilitation projects, Advisory Panels for four Corps of Engineers dam safety projects, Advisory Boards for BC Hydro for dam safety studies and modifications of three of its dams, and a Board of Consultants for Brookfield Renewable Energy for an evaluation of seepage concerns at one of its dams. Mr. France has been a consultant to the dam safety programs of the Bureau of Reclamation and the U.S. Fish and Wildlife Service for over 30 years. He served for five years on an Independent Expert Review Panel, which conducted an annual review of Reclamation's dam

safety program, and he served on review panels for the dam safety programs of the National Park Service and the Bureau of Indian Affairs. Mr. France serves on several committees for ASDSO, and he is an Ex-Officio Member of the Board of Directors and past vice president of USSD. He also served as the sole private sector member on the National Dam Safety Review Board for several years. Mr. France is proud to have been selected for the 2010 Joseph J. Ellam President's Award from ASDSO for his contributions to dam safety.

Meg M. Galloway, P.E is the Chief of the Dam and Floodplain Section for the Wisconsin Department of Natural Resources. She is responsible for implementation of the Dam Safety, Floodplain Management and Floodplain Mapping programs in the state. Ms. Galloway has over 30 years of experience in dam safety and related fields including conducting dam inspections, issuing compliance directives, preparing, review and approval dam plans and dam failure analyses, initiating enforcement actions for non-compliant dams and providing technical expertise during dam failure and flooding emergencies. Ms. Galloway has been very active in dam safety issues at both the state and national level. She has planned and participated in dam safety workshops in the state for the past 25 years. Ms. Galloway has also been very active in the Association of State Dam Safety Officials, serving several terms on the Board of Directors and completing a term as President. She has also participated on several committees including estimating the cost of dam rehabilitation, strategic planning, communication and legislation. Ms. Galloway also participated in the Aspen Institute Dialogue on Dam Removal project.

David Gutierrez, P.E. is the Chief of the Division of Safety of Dams (DSOD) within the California Department of Water Resources (DWR). He has also served as the Deputy Director for Public Safety and Deputy Director for Business Operations for DWR. As Deputy Director, David oversaw the development of FloodSAFE California, a \$5 billion program designed to help improve integrated flood management. He has over 35 years of civil engineering experience, specializing in dams and levees. He has a Bachelor of Science Degree in Civil Engineering and Master of Science Degree specializing in Geotechnical Engineering from California State University, Sacramento. He is a registered professional civil and geotechnical engineer in the State of California. Mr. Gutierrez has served on the Board of Directors and as president of the Association of State Dam Safety Officials. He is also a member of the National Dam Safety Review Board, Dams Sector Government Coordinating Council and the Strong Motion Instrumentation Advisory Committee of the California Division of Mines and Geology.

Brad Iarossi, P.E. is a civil engineer who has been actively involved in dam safety for over 30 years. He has a Bachelor's Degree in Civil Engineering, and a Master's Degree in Geotechnical Engineering, both from the University of Maryland. Mr. Iarossi served as Chief of the Dam Safety Program for Maryland's Department of the Environment for over 18 years and is currently dam safety officer for the U.S. Department of Interior, U.S. Fish and Wildlife Service where he manages the daily operations of the Service nationwide dam safety program which conducts dam safety inspections, exercises Emergency Action Plans (EAPs), performs investigations and evaluations of dams and make necessary repairs or modifications of Service dams to assure their safety. Mr. Iarossi also manages the U.S. Fish and Wildlife Service Bridge Inspection program and the Seismic Safety Program. He is a past president and Board member of the Association of State Dam Safety Officials (ASDSO) and served as Chairman of ASDSO's Legislative Committee for 15 years, working on state and federal legislation to advance dam safety. Brad has participated in ASCE's Infrastructure Report Card committee since 1998.

Matthew Lindon, P.E. retired from the State of Utah in 2011 as Assistant State Engineer and currently works as a consulting engineer with Loughlin Water Associates and Otis Bay Ecological Consultants. He is also an Adjunct Professor at the University of Utah. He was a Senior Hydrologic and Hydraulics Engineer for Utah State Dam Safety for 23 years and spearheaded the Emergency Action Plan program, State Specific PMP and PMF research and regulations as well as the Failure Mode and Risk Analysis concept implementation. Mr. Lindon was responsible for inspection and evaluation of all existing state-regulated dams as well as design and construction review of all new structures, repairs and retrofit. He performed hydro-meteorological and hydraulic HEC-HMS and HEC-RAS computer modeling for the State Engineer's decisions on dam safety, water rights, stream morphology, permitting, alterations, wetlands, riparian and groundwater programs. He was Assistant to the Director responsible for section management, policy and legislation development, personnel scheduling and education, computer applications, emergency response planning, public information, and professional liaisons. As Assistant State Engineer for Technical Services, Mr. Lindon managed the special investigation and IT sections for the Division of Water Rights and served on the management team for the State Engineer's Office as part of the Department of Natural Resources. Mr. Lindon also worked with design teams and provided regulation and construction supervision of many dams, including; Red Butte, Mountain Dell, Little Dell, Quail Creek, Sand Hollow, Piute, Otter Creek, DMAD, Gunnison, Ouray, Blue, Gorgoza, Smith Morehouse, Wasatch, Silver Lake, Tony Grove, St George Debris, Kolob,

Twin, Mary–Phoebe, Deer Valley Blanding, Baker, Adams, Abes Anchor, Sand, Fish Ash and 17 stabilized dams on the Provo and Duchesne River basins.

Daniel J. Mahoney has 42 years of dam safety program experience with the US Army Corps of Engineers (USACE) and the Federal Energy Regulatory Commission (FERC), including 25 years in leadership and supervision of the nationwide FERC dam safety program. As Director, he supervised 130 engineers and support staff in the Washington office and 5 regional offices nationwide, and managed dam safety matters such as the day to day operation of the FERC dam safety program, management and supervision of the Regional Offices, dam safety inspection program, all engineering analyses and evaluations, the emergency action program, dam site security program, and the need for remedial dam safety improvements and repairs. He is on the ASDSO Peer Review Committee and is a Technical Advisor to the Dam Failure Investigation Committee. Mr. Mahoney is also the USSD Vice Chair for the Committee on Dam Safety and Security. He received the ASDSO National Award of Merit in 2009 and the Joseph J. Ellam Presidential Award in 2011.

Carl Montana, P.E. has been involved in the planning, design, and construction of water resources projects, including dams, since 1963. Prior to forming his own company in 2010, Mr. Montana was a Senior Vice President responsible for dam and water resources projects with French and Parrello Inc., Principal and Senior Vice President at Schnabel Engineering, and worked for Ebasco Infrastructure Services in various roles. Mr. Montana also worked for the USDA Soil Conservation Service (now NRCS) working primarily in the Federal PL 566 Watershed Protection and Flood Control Program in New Jersey. He is Past President of his local chapter of New Jersey Society of Professional Engineers and New Jersey ASCE's Civil Engineer of the Year in 2008. Mr. Montana has been Project Manager and Lead Engineer in the planning, design, and construction of major projects throughout the United States and has taught numerous courses on dam inspection and design. He most recently was a member of the team that drafted the "State of New Jersey Best Practices Guidelines for Dam Security" and has conducted a number of Vulnerability Assessments on High Hazard (Tier 1) Dams using both the RAM-D and DAMSVR methodologies. He was an instructor for the DHS/FEMA National Dam Security Training Workshop on DAMSVR and State Dam Anti-Terrorism Security Guidelines. Mr. Montana is a member of the Association of State Dam Safety Officials (ASDSO) Affiliate Advisory, Training, Student Outreach and Peer Review Committees. As a member of the Peer Review Committee he has participated

in Peer Reviews of the State Dam Safety Programs in Pennsylvania, Massachusetts, Kansas, Utah Kentucky and Mississippi.

John H. Moyle, P.E. has a Bachelor of Science degree in Civil Engineering from New Jersey Institute of Technology (NJIT) and has been working on dam and flood control projects in New Jersey for more than 37 years. As Chief for the Department's Bureau of Dam Safety and Flood Control, he is responsible for engineering, economic, environmental, administrative and emergency response for New Jersey's flood control and dam safety program. John currently is the National Flood Insurance Program coordinator for New Jersey and is also responsible for administering the 110 million-dollar Dam Restoration Loan Program and 25 million-dollar Flood Control Grant Program for New Jersey, as well as the non-federal sponsor on Army Corps of Engineers Flood Reduction Projects. John has been a Board Member and past president of the Association of State Dam Safety Officials, and is also a member of the Department of Homeland Security, Dams Government Coordinating Council.

Anthony Nokovich, P.E. is the Engineering Practice Lead responsible for the dam safety program for Pennsylvania American Water Company (PAW), the largest investor-owned water utility in the state. Mr. Nokovich's duties and responsibilities include reviewing the design and construction procedures for PAW-owned dams and their appurtenances, reviewing performance and maintenance records, making annual visual inspections and preparing written reports, preparing and updating emergency action plans, providing design support for remedial measures which includes construction phase services for rehabilitation of existing structures, coordinating dam safety related actions with State and Federal agencies, supervising a comprehensive instrumentation program, coordinating dam safety related activities with local supervisors, and managing consultant contracts as they relate to dam safety. Prior to joining PAWC, Mr. Nokovich worked for eleven years as a geotechnical engineer for Gannett Fleming Inc. where he worked on numerous dam design and rehabilitation projects including RCC, masonry, concrete, and embankment dams. He received a BS degree in Civil Engineering from the Pennsylvania State University in 1995. He is a registered PE in Pennsylvania and a member of ASCE, AWWA, ASDSO, and USSD.

Larry K. Nuss, P.E. retired from the Bureau of Reclamation in Jan 2012 with 36 years' experience in the design, structural analyses (static, thermal, and seismic), dam safety, risk analysis, and security of concrete dams (gravity, arch, spillway, and buttress dams). Duties have also included Team Leader on

concrete dam rehabilitations, Technical Approval, Peer Review, mentoring, site inspections; Comprehensive Facility Reviews, risk analyses facilitator, and member of senior level dam safety and security advisory teams. He developed and directed numerous research projects related to the seismic stability and blast effects on concrete dams and spillways. In 2012, he formed Nuss Engineering, LLC and has consulted for New Brunswick Power, Tennessee Valley Authority, Panama Canal Authority, AGL in Australia, Trust Power in New Zealand; taught classes for Japan Dam Engineering Center, Three Gorges Project, USACE, and Intertechne in Brazil; and wrote dam safety guidance documents for EnergiSA in Turkey.

Mark B. Ogden, P.E. is currently a Project Manager for the Association of State Dam Safety Officials and has over 30 years of experience in dam safety. His work with ASDSO includes compiling state program performance data and working as a liaison with the state dam safety programs. He worked for 25 years for Ohio's dam safety regulatory program, including 15 years as the head of the program, during which he led and/or participated in hundreds of dam safety inspections, authored several updates to Ohio's dam safety statutes, administrative rules and regulations, and prepared the biennial budget for the program for his years spent as program head. He is a member of the American Society of Civil Engineers, Canadian Dam Association, Water Management Association of Ohio, and Association of State Floodplain Managers.

Richard Sanchez, P.E has over 38 years of experience in water resources engineering projects with an emphasis on project management, design, construction management, and dam safety. Mr. Sanchez oversees and manages civil engineering, geotechnical, dam safety, construction management, and special project work at GEI. Prior to joining GEI, Mr. Sanchez held numerous engineering and management level positions during his career at California's Department of Water Resources (DWR) including Chief of the Division of Engineering, Assistant Chief of the Division of Operations and Maintenance, Chief of Construction, and Regional Southern Engineer with California's Division of Safety of Dams.

Boris E. Slogar, P.E., M.P.M., is the Chief Engineer of the Muskingum Watershed Conservancy District and is responsible for operating and maintaining the 8-dam Chippewa flood protection system in northeast Ohio, as well as working closely with the U.S. Army Corps of Engineers in the operation and maintenance of the Muskingum flood control system. Boris is also responsible for general supervision of operations as superintendent of all the

works and improvements of the MWCD, its parks, facilities, and its sub-districts. A 25-year veteran of public service, Boris previously served as a manager of the dam safety repair program at the Ohio Department of Natural Resources. While working for Ohio's dam safety program, Boris provided program and project-level direction to a staff of 15 engineers and performed and oversaw engineering analyses including hydrologic, hydraulic, stability and hazard potential calculations; flood plain delineation and encroachment analyses; and construction field inspection. Boris was the lead in implementing Ohio's Dam Safety Repair Program - In addition, Boris also worked with U.S. Army Corps of Engineers, U.S. Natural Resources Conservation Service, U.S. Bureau of Reclamation, Ohio EPA, and Ohio's Soil and Water Conservation Districts on dam safety projects throughout Ohio. Boris has a BS degree in civil engineering, a Master of Project Management degree, and is a licensed professional engineer in the State of Ohio. Professional affiliations include the Association of State Dam Safety Officials serving as a member of the state dam peer review team; board member for the Ohio Dam Safety Organization; president of the Water Management Association of Ohio; and, member of the American Society of Civil Engineers.

Kenneth E. Smith, P.E. is a graduate of Valparaiso University with a Bachelor of Science in Civil Engineering, and Butler University with a Master's Degree in Business Administration. He is a Registered Professional Engineer in the State of Indiana and has thirty seven years of experience in water resources engineering. Mr. Smith, an Assistant Director of the Division of Water, Indiana Department of Natural Resources, is responsible for the Division's Compliance and Projects Branch, which includes the State's Dam and Levee Safety Section, the Project Development Section, the Surveying and Mapping Section, and the Compliance and Enforcement Section. Mr. Smith is a past-President of ASDSO, and currently serves on several committees, including the Peer Review Program Committee. He was a member of the team that developed the new Peer Review manual and has participated in several program reviews using the new tools. He further has served on the National Dam Safety Board of Review. Currently, Mr. Smith is a member of Indiana Silver Jackets, an inter-agency natural hazard mitigation team, working together to protect life, property, and resources, with the vision "Many Agencies, One Solution."

Manoshree Sundaram, P.E., PMP is a Vice President and Principal for MWH in Chicago, Illinois. From 1996 to 2006 she was employed as a Geotechnical Engineer by MWH (formerly Harza Engineering Company) and was responsible for dam design and analyses; seismic safety studies; dam safety inspections and

modifications; surveillance and monitoring; dam safety training. From 2006 to mid-2011, she served as a Civil Engineer for the FERC Chicago Regional Office, Division of Dam Safety and Inspections. In that capacity she was responsible for dam safety inspections as well as review of analysis and design, instrumentation plans, and dam safety programs for hydropower projects in the Midwest. In her current position as Principal Geotechnical Engineer and Project Manager for MWH, she has been responsible for supporting and managing dam design, dam safety, and dam rehabilitation projects. Manoshree is a Member of ASDSO, a Board Member and Secretary-Treasurer for USSD, as well as a member of USSD's Monitoring of Dams and their Foundations Committee. She is currently a member of the ASCE committee authoring the forthcoming 2nd Edition of ASCE's Guidelines for Instrumentation and Measurements for Monitoring Dam Performance.

Stephen W. Verigin. P.E., G.E. is a Senior Vice President for GEI Consultants. He is also a leader and senior consultant in the Western Region's geotechnical engineering practice which is devoted almost entirely to dams, levees and other water resources projects. Prior to joining GEI Consultants, Mr. Verigin worked at numerous engineering and management levels as the California Department of Water Resources (DWR) Chief of the Division of Safety of Dams, Deputy Director and Acting Chief Deputy Director. As a deputy director he provided policy direction for the divisions of Flood Management and Safety of Dams and ran the day-to-day operations of the 2,500 employee agency. Mr. Verigin has over 35 years of experience in nearly all aspects of water resources engineering with an emphasis on design and construction. He is nationally recognized as an expert and leader in dam safety engineering with extensive project, program and executive management experience.

John Yen P.E. is currently a dam safety consultant in Power Supply Organization, Southern California Edison (SCE) where he manages its long-term strategic plan for dam safety. His primary responsibilities include interfacing with the FERC- DSOD in development of Risk & Performance Based Criteria for Dam Safety, and development of new leadership in the Dam Safety Group. He was selected by the FERC in 2011 as committee member for the "Risk Informed Decision Making (RIDM) Based Engineering Guidelines." In addition to performing the duty of the Dam Safety Consultant, he was recently assigned as the Acting Manager of the Dam & Public Safety (D&PS) Team for daily operations of the team in meeting the compliances and planning of the long-term strategic plan for D&PS. John is the co-initiator of "Advanced Dam Performance & Response Integration Program" which is intended to improve

dam safety with real-time performance indicators of dam and effectiveness of decision making for dam incidents. Additionally, John had 35 years of experience in civil and structural engineering, project management, and construction management for various power generation projects. John is a Registered Civil Engineer in California, and has a Master's Degree in Civil Engineering. He is a member of several organizations, including the American Concrete Institute, USSD, and ASDSO.

State agencies and dam owners participating in the peer review process praise its value as a way to validate policies and decisions, as well as to identify program improvements.

The Peer Review of the U.S. Army Corps of Engineers was extensive and thorough. The recommendations provided a solid foundation (for) improvement. - Charles L. Baldi, Special Assistant for Dam Safety with the U.S. Army Corps of Engineers

I want to thank ASDSO for preparing this comprehensive and thorough peer review report. We really appreciate the opportunity to benefit from the team's great experience and insight, and are looking forward to delving into the recommendations. – Dara Parker, Tennessee Valley Authority

Quotes from state officials:

We used the peer review recommendations to justify a proposal for using revenue from inspection fees to hire additional inspection staff in order to increase our inspection cycle on high-risk dams to five years.

The fact that this recommendation was in the peer review carried a lot of weight with our agency's management as well as with the governor's office. As a result, the governor's budget included the monies for additional staffing.

This was like a "booster shot" in the arm of dam safety with added weight coming from ASDSO peer review.

It enabled agency management to make changes and become "energized" to dam safety. It resulted in a greater commitment from our director. The entire visit was a tremendous help, not only in re-thinking how our unit operates, but it gave an excellent opportunity to express our concerns for dam safety to management.

Association of State Dam Safety Officials
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