

Association of State
Dam Safety Officials, Inc.

Annual Report 2005-06

ASDSO's 2005 National Rehabilitation
Project of the Year Award
Winner: Piute Dam, Marysville, Utah.
Shown here under construction.



**legislative advocacy ❖ educating engineers ❖
networking ❖ promoting dam safety ❖
supporting states ❖ guiding dam owners
❖ public awareness ❖ creating a unified voice
for the dam safety community**

The Association of State Dam Safety Officials 2006 Annual Report documents progress toward the financial and strategic planning goals set for this fiscal year. The fiscal year cycle takes into account activities from July 1, 2005 to June 30, 2006. The report follows the format of ASDSO's Strategic Plan.

Respectfully submitted,

2005-06 ASDSO Board of Directors

Kenneth E. Smith, P.E., (President), Indiana

James W. Gallagher, P.E. (President-Elect),
New Hampshire

Mark B. Ogden, P.E. (Treasurer), Ohio

Steven M. Bradley, P.E. (Secretary), South
Carolina

Meg M. Galloway, P.E. (Immediate Past
President), Wisconsin

James L. Alexander, P.E., Missouri

Jason Boyle, P.E., North Dakota

Robert B. Finucane, P.E., Vermont

David A. Gutierrez, P.E., California

Brian R. Long, West Virginia

Robert K. Martinez, P.E., Nevada

John H. Moyle, P.E., New Jersey

Stephen Partney, P.E., Florida

Elaine C. Pacheco, P.E., New Mexico

B. Dan Marks, Ph.D., P.E., Affiliate Member Advisory
Committee Chair

Staff

Lori C. Spragens, Executive Director

Susan A. Sorrell, Membership & Meetings Director

Sarah M. Mayfield, Information Specialist

Maureen C. Hogle, Promotions and Marketing



Members of the 2005-06 Board (Standing L to R) John Moyle (NJ), Steve Partney (FL), Steve Bradley (SC), Ken Smith (IN), Meg Galloway (WI), Mark Ogden (OH), Steve Verigin (CA)(2004 outgoing president); (Seated L to R) Jim Gallagher (NH), Bob Finucane (VT), Elaine Pacheco (NM), Rob Martinez (NV). Not pictured are Jason Boyle (ND), David Gutierrez (CA), Brian Long (WV) and Jim Alexander (MO).



ASDSO Headquarters (L to R): Susan Sorrell, Maureen Hogle, Lori Spragens, Sarah Mayfield

2005-06 IN SUMMARY

Training Dam Engineers

- ASDSO trained over 300 dam engineers.
- ASDSO distributed \$162,000 to states for training opportunities.
- Presented 7 technical seminars across the U.S.
- Provided a training calendar on the website.



Legislative Advocacy

- Testified for full funding and reauthorization of the National Dam Safety Program
- Created support for new bills introducing reauthorization of the National Dam Safety Act and the National Dam Rehabilitation and Repair Act
- Supported the establishment of a National Levee Safety Program
- Supported New York and Missouri with letters and testimony as lawmakers considered stronger dam safety policies.

Partnerships and Volunteerism

- Over 220 ASDSO members participated in moving projects forward in 2005-06.
- ASDSO volunteers served on thirty committees, task forces and outside project groups.
- ASDSO exchanged ideas and information with partner organizations and government agencies.

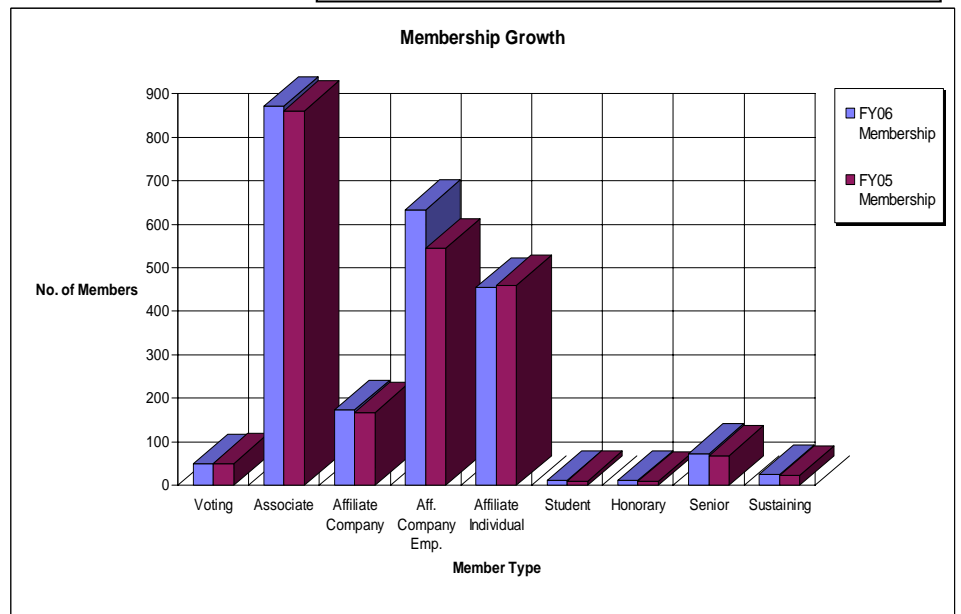


Educating Owners

- Over 230 dam owners educated through ASDSO's One-Day Workshop.

Fundraising

- ASDSO's campaign generated nearly \$27,000 in donations and \$60,000 in sustaining memberships.
- Undergraduate scholarship fund doubled in size as a result.



Thanks go to the ASDSO members who have taken an active role on many committees this year. Those who have served this past year are listed at the back of this report. (Appendix A)

ASDSO Mission Goal #1 - Improve the efficiency and effectiveness of state dam safety programs.

ASDSO Regional Projects

West Region

At the annual conference (September 2005), the Region elected Dave Gutierrez (California) to replace Steve Verigin (California) and Jason Boyle (North Dakota) to replace Guy Paul (Idaho). Guy left state service in 2005 to go into private consulting.

During the reporting period, the West held its 2006 conference in Overland Park, Kansas (May 7-9), with approximately 140 attendees. Beth Cooper of the KS Dept. of Agriculture served as host and local organizer. The conference included a field trip to the Lake Lenexa Dam. During its caucus meeting, the west representatives decided to hold the next regional conference in Omaha, NE in May of 2007.

The 2006 West Regional Technical Seminar was held in Las Vegas, Nevada on January 31-Feb. 2. The topic was *Hydraulic Analysis of Spillways* and it was presented by Dave Moore of Tetra Tech and David Ford and Johannes DeVries of David Ford Consulting.



Lake Lenexa Dam

Southeast Region

Steve Partney (FL) was elected by the region for his first full term after serving out the term vacated by Rob Millette (MS).

The 2005 Southeast Regional Technical Seminar was held in Charlotte, SC on December 5-7. The topic was *Hydraulic*

Analysis of Spillways and it was presented by Dave Moore of Tetra Tech and David Ford and Johannes DeVries of David Ford Consulting.

The region held its biennial regional conference on April 23-26 in Myrtle Beach, SC. Approximately 130 people attended. Thanks to Steve Bradley for acting as host and local coordinator. On the final day of the conference, the South Carolina DHEC sponsored a workshop on "Plant and Animal Penetrations of Earthen Dams" presented by Dan Marks Marks Enterprises) and Bruce Tschantz (University of Tennessee, retired).

Northeast Region

No new board members were elected last September.

The Northeast Regional Technical Seminar was held November 2-4, 2005 in Princeton, NJ. The topic was *Hydraulic Analysis of Spillways*, and it was presented by Dave Moore of Tetra Tech and David Ford and Johannes DeVries of David Ford Consulting. Thirty-five students attended.

The Northeast Region will hold its 2007 Biennial Conference in New Hampshire. The conference will be co-sponsored by the New Jersey/Pennsylvania Council for Safe Dams (CSD) and the New England Association for Dam Safety (NEADS).

Midwest

Ken Smith finished his second term at the end of the September 2005 but has remained on the Board as president. Meg Galloway also remained on the board as immediate past president. Jim Alexander was elected to the board in September 2005.

The Midwest Regional Technical Seminar was held on April 5-7, 2006 in Indianapolis, IN. The topic was *Safety Evaluation of Existing Dams*, presented by the US Bureau of Reclamation and 67 people attended.

The Midwest Region does not hold regional conferences.

Tracking State Dam Safety Program Improvements in 2005

ASDSO has been collecting data on state dam safety program performance for 20 years. Data on changes to state dam safety agency budgets, staffing, continuing education, public and owner awareness efforts, dam failures, laws and regulations, etc. is housed at ASDSO.

During the past year, efforts have begun to make this data more usable, by transferring it from paper files to an electronic database and by streamlining the way it is collected now.

In 2005, for the second year, states used the *Dam Safety Program Management Tools* (DSPMT) software to collect and send their program performance survey answers and data for the National Inventory of Dams into a centralized repository. This system was created by ASDSO, the US Army Corps of Engineers Tech Center and the DHS/FEMA National Dam Safety Review Board Performance Measures Workgroup. Mike Grounds (Beacon Resources) created the program and manages the database for the Corps and ASDSO.

The good news is that, in 2005, every state participated in the data collection processes, both for the National Inventory of Dams and for the Program Performance Review. Thanks to all the state volunteers who sent in data. (See Appendix C)

ASDSO staff utilized the same software to input years of older state data.

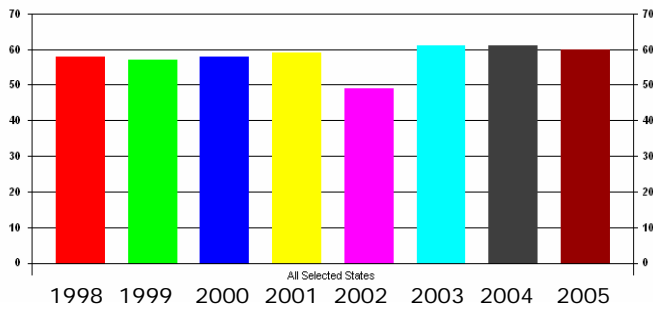
Now the data will be analyzed by ASDSO for internal reports to states and external public information, and by the National Dam Safety Review Board to track progress at the state level relative to distribution of the FEMA State Assistance Grant Program.

Performance Categories:

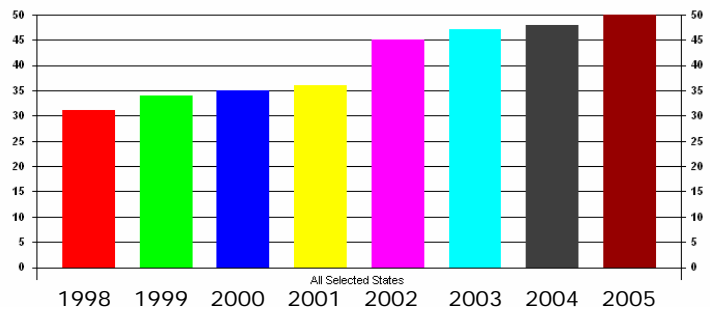
1. Point of Contact Information
2. Legislation and Regulations
3. Program Staffing and Budget
4. Changes in Dam Inventory
5. Permitting Processes
6. Dam Inspections
7. Enforcement Capabilities
8. Remediation Needs and Accomplishments
9. Emergency Action Planning and Response
10. Education and Training
11. Public and Owner Relations
12. Miscellaneous (includes collection of technical criteria, dam failure information)

2006 State Program Performance Data Examples*

% State Regulated High Hazard Potential Dams which were Inspected

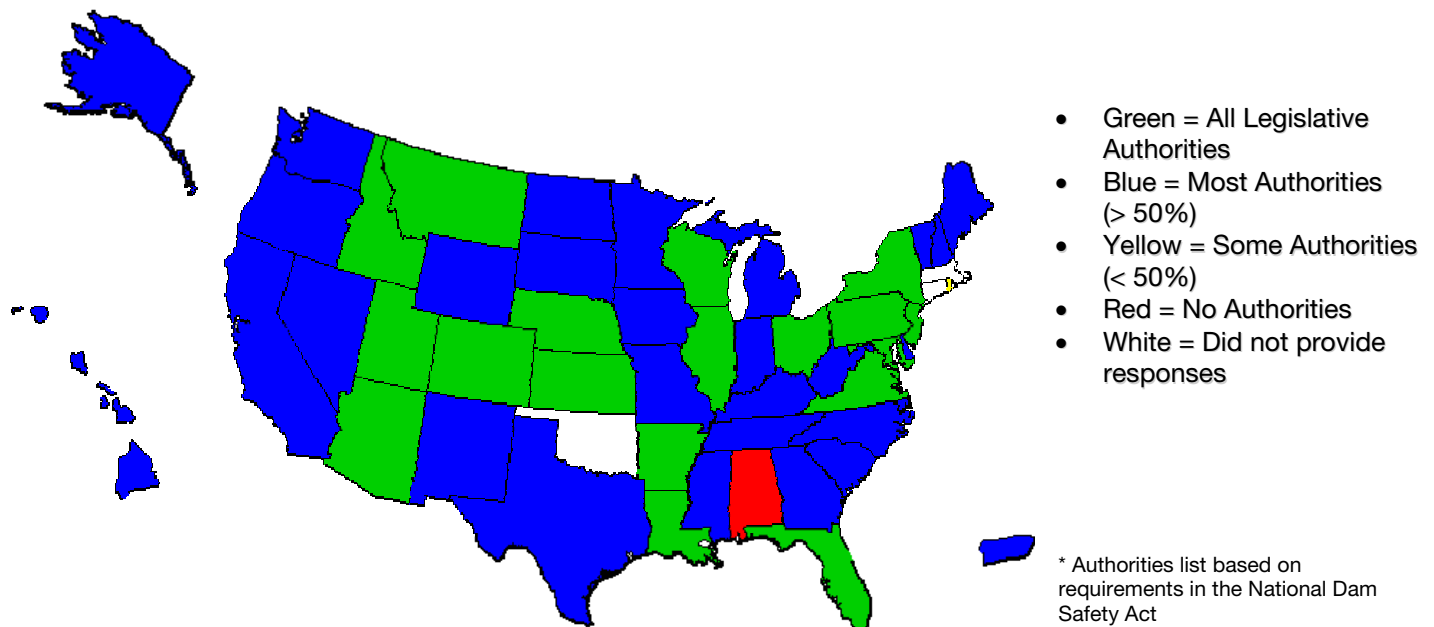


EAP Completion Percentage for High Hazard Potential Dams



* Data collected shows progress through Calendar Year 2005

Legislative Authorities to Carry Out an Adequate Dam Safety Program*



Statistics Sample from 2005 Data Submittal to the National Inventory of Dams

- All 50 States submitted data to the National Inventory of Dams on 78,787 dams. (Thirteen Federal agencies submitted an additional 5,348 dams to the NID.)
- The NID tells us that there are 7,657 dams in the U.S. submitted to the NID (meeting the NID dam size definition) that are not regulated.
- The NID tells us that 45,523 dams in the US do not have Emergency Action Plans (EAPs). (Many could be low hazard; many states do not require EAPS for state regulated dams.)
- There are 1,372 new dams completed since 2000.

Mentoring Makes State Programs Stronger: The ASDSO Peer Review Program

Since 1990, ASDSO has performed Peer Reviews—rigorous dam safety program performance reviews for state agencies, many of the largest federal dam safety programs and private sector utility companies.

Year in Review

1. Public Relations: The committee continued to find ways to get the word out to non-state dam safety programs about the ASDSO Peer Review Program. Plans are underway to focus new exhibit materials on the program.

2. Organizational Reviews: There have been no requests by “non-state” organizations for peer review since the last conference.

3. State Peer Reviews: The Michigan Dam Safety Program, getting back on its feet after being virtually eliminated in 2005, underwent a Peer Review on March 20-24, 2006. Team members included Tom Kelly, Al Davis, and Greg Hammer. Minnesota had a review on June 26-29, 2006. The team of Jim Weldon, Bill Bingham, and Steve Verigin conducted the Minnesota review. Hawaii has requested a review to be conducted in late October of 2006.

4. Peer Review Committee Report: Committee Chair Bill Bingham (Gannett Fleming) wishes to thank the ASDSO Board for the privilege of chairing the Peer Review Committee and sincerely thanks all who served on the Peer Review Panels and willingly contributed time and expertise.

Continuing Education Programs for State Officials

Through the National Dam Safety Program at FEMA, ASDSO received funding to hold four regional technical seminars and two advanced seminars, and provided travel and registration assistance to states for attending other technical training of their choice.

Regional Technical Seminars

Advanced Course on Dam Failure Analysis

Presented by Dan L. Fread, Michael Gee, and Wayne Graham. July 12-14, 2005 in Columbus, Ohio – Completed with 54 participants.

October 25 – 27, 2005 in Salt Lake City, Utah – Completed with 63 participants.

July 25-28, 2006 – Burlington, Vermont

October 24-27, 2006 – Portland, Oregon

Northeast Regional Course on Hydraulics of Spillways

Presented by David Moore, David Ford, and Richard Hayes. November 2-4, 2005 in Princeton, New Jersey – Completed with 35 participants.

Southeast Regional Course on Hydraulics of Spillways

Presented by David Moore, David Ford, and Johannes DeVries

December 6-8, 2005 in Charlotte, North Carolina – Completed with 40 participants.

West Regional Course on Hydraulics of Spillways

Presented by David Moore, Johannes DeVries, and Richard Hayes.

January 31 – February 2, 2006 in Las Vegas, Nevada – Completed with 69 participants.

Midwest Course on Safety Evaluation of Existing Dams

Presented by the US Bureau of Reclamation.

April 5-7, 2006 in Indianapolis, Indiana. Completed with 67 participants.

Under the pending contract extension with FEMA for FY06, planning is underway for four regional seminars and one new

advanced course. Already on the schedule are the following two regional seminars:

Northeast Regional Seminar on Emergency Action Planning

To be presented by URS Corporation and W.W. Wheeler & Associates.

November 8-9, 2006 in Wilmington, DE

Southeast Regional Seminar on Emergency Action Planning

To be presented by URS Corporation and W.W. Wheeler & Associates.

December 5-6, 2006 in Jacksonville, FL

West Regional Seminar on Safety Evaluation of Existing Dams

To be presented by the US Bureau of Reclamation.

February, 2007, in Phoenix, AZ

Midwest Regional Seminar on Hydraulics of Spillways

To be presented by Tetra Tech, Inc. and David Ford Consulting.

March 2007, location TBA.

Report from the Technical Training Committee

Committee Chair Randy Bass (Schnabel Engineering) reports that, during the year, the RFP for the EAP seminar was finalized and distributed. Following a review process, the committee announced that a proposal by URS Corporation and W.W. Wheeler & Associates was selected for the development of the course. A joint meeting was held with the National Dam Safety Review Board Training Workgroup to discuss a joint plan for training. A representative of the newly formed Interagency Committee on Dam Safety (ICODS) training subcommittee was there to discuss how we can all work together to deliver dam safety training. The dialogue on training continued into the Spring of 2006 as point of contacts (POCs) were tapped from the US Society on Dams (USSD) to work with the ASDSO Training Committee on continuing education.

Post-seminar critiques of the Hydraulics of Spillways course and the Safety Evaluation of Existing Dams (SEED) course were held with the committee and instructors. The ASDSO regional representatives selected Slope Stability Analysis for Embankment Dams as the topic for the 2007 advanced course. The committee is writing a course outline and will distribute the RFP for this seminar in August.

The committee and ASDSO continue to work with the National Dam Safety Review Board and other organizations offering continuing education courses to push for mutual adoption of the ASDSO Program of Study, a comprehensive listing of dam safety engineering courses.

Training Assistance

The Technical Training Assistance Program continues. States are taking advantage of university courses, federal courses and courses offered by organizations such as ASCE, PCA and ASDSO. The state grants are provided through the FEMA National Dam Safety Program.

ASDSO is also represented on the National Review Board's Training Work Group. A report from the Work Group is provided later in this report.

Association of State Dam Safety Officials - Web Site

Association of State Dam Safety Officials

Search the ASDSO Website

Conferences and Training | Legislative Advocacy | Oiving Program | What We Do | Press Room | Membership Resource Center | Kids & Careers | Publications | Members Only | Home

Conferences and Training

Training Calendar

Search:

Start date: Calendar... End date: Calendar...

| Event | Start Date | End Date | Organization |
|--|------------|------------|---|
| Waterpower XIV Chattanooga, TN | 7/23/2007 | 7/26/2007 | Waterpower |
| Geo-Denver 2007 Denver, CO | 2/18/2007 | 2/21/2007 | Geo-Institute of ASCE |
| 5th International Conference on Dam Engineering Lisbon, Portugal | 2/14/2007 | 2/16/2007 | Laboratorio Nacional de Engenharia Civil (LNEC) |
| Geosynthetics 2007 Washington, DC | 1/16/2007 | 1/19/2007 | Industrial Fabrics Association International (IFA1) |
| 1st Geotechnique Week Programme Singapore | 12/11/2006 | 12/15/2006 | CI-Premier Ltd |
| 11.2th Annual Meeting and Exposition Reno, NV | 12/4/2006 | 12/8/2006 | Northwest Mining Association |
| 2nd International Conference on Problematic Soils Malaysia | 12/3/2006 | 12/5/2006 | CI-Premier Ltd |
| Collecting and Managing Hydrologic Data for Effective Water Use Planning Portland, OR | 11/15/2006 | 11/16/2006 | CEA Technologies Inc. |
| 26th NALMS Annual International Symposium Indianapolis, IN | 11/8/2006 | 11/10/2006 | North American Lake Management Society |
| AWRA 2006 Annual Conference Baltimore, MD | 11/6/2006 | 11/9/2006 | American Water Resources Association (AWRA) |

http://www.asdsociety.org (11/3/07 14:20:06 2:18:22 PM)

ASDSO manages and hosts an on-line Calendar of Training for Dam Safety.

Educational Tools for States

ASDSO continues to maintain many publications, DVDs and videotapes that serve to assist state dam safety inspectors and others within the dam safety community. Technical tools are available for purchase and by loan.

The State Dam Security and Anti-Terrorism Program Workshop

ASDSO, working with FEMA and BRI Consultants, upgraded and conducted a workshop, previously held through FEMA in 2004, on developing a state dam security program. This workshop was held on July 27-28, 2005 in Phoenix. ASDSO trainers were Carl Montana of French & Parrello Associates

and Joachim Gloschat of Security Solutions. Training was provided to 35 dam safety officials, representing 19 different states. When combined with the first workshop last April in Washington, D.C., a total of 45 state dam safety officials participated in the training. The workshop guidance manual will be distributed to all state dam safety programs through FEMA.

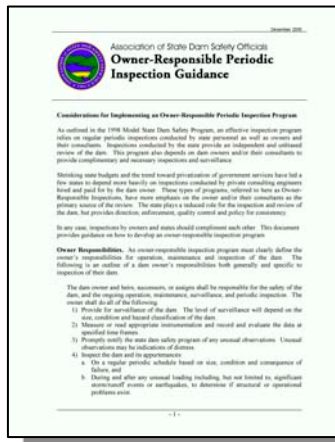
New Guidance Documents for the Model State Dam Safety Program

At the end of last fiscal year, it was reported that an ASDSO task force has spent time researching four issues in hopes of making recommendations to update the *Model State Dam Safety Program* document (FEMA 316). The issues were:

- 1) owner-responsible inspections,
- 2) real-estate disclosure for homeowners buying within a dam failure flood inundation zone,
- 3) state dam rehabilitation loan programs, and
- 4) dam security programs for states.

This task force began FY06 by finalizing two guidance documents, and making recommendations on the other two topics.

Issued in 2006 were two documents (available from ASDSO and downloadable at the website):



1. *ASDSO Guidance Document on Owner Responsible Inspection*
2. *ASDSO Guidance Document on a Model Dam Rehabilitation Loan Program*

The Board accepted the task force's recommendation on the remaining two tasks to: 1) utilize the pending manual on dam security programs to be issued through the

Department of Homeland Security Dams Sector Coordinating Council (not yet available); and, 2) not to pursue the development of a guidance document on real estate disclosure, as this was determined to be a non-dam safety issue.

Beginning in the spring of 2006, a new task force began a FEMA-sponsored project to take the work of the first task force and integrate the new guidance documents into the FEMA *Model State Dam Safety Program*. That project will be completed in FY07.

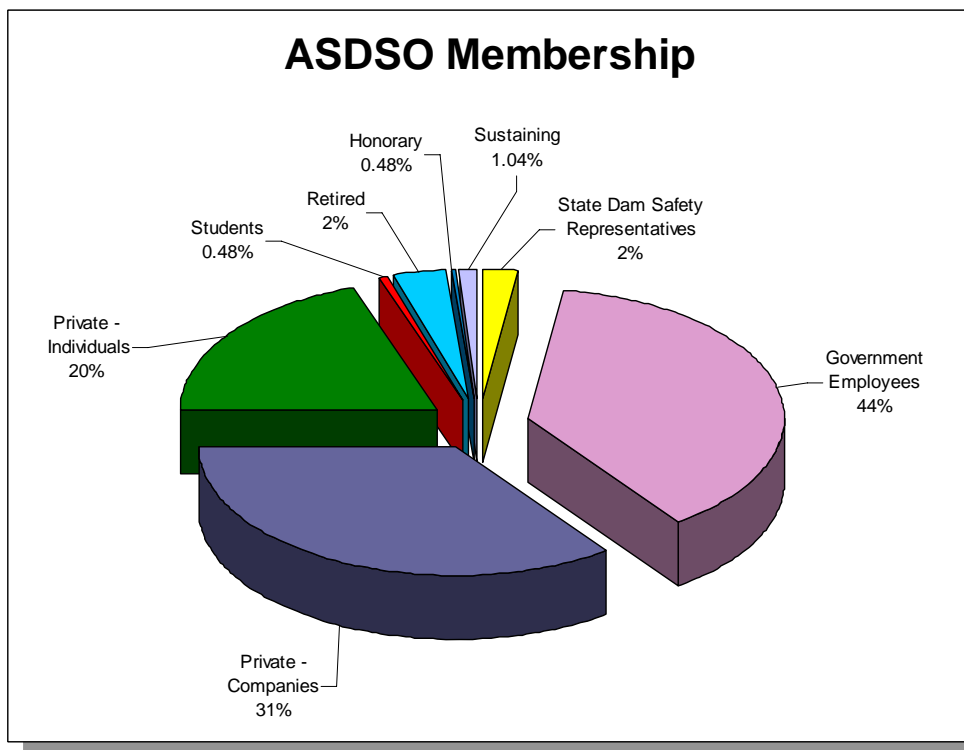
Goal #2 - Bringing dam safety to a higher level of awareness among the general public, state and federal legislatures, specific organizations and other stakeholders

ASDSO Membership

ASDSO ended FY06 with 2,298 members. Thanks go to all those who recruited members this past year.

| | FY03 (Final) | FY04 (Final) | FY05 (Final) | FY06 (Final) |
|------------------|--------------|--------------|--------------|--------------|
| Full Voting | 50 | 50 | 50 | 46* |
| Associate | 985 | 898 | 853 | 871 |
| Affiliate | | | | |
| Company | 197 | 194 | 171 | 173 |
| Company Employee | 495 | 505 | 556 | 634 |
| Individual | 442 | 422 | 438 | 455 |
| Student | 17 | 8 | 14 | 11 |
| Honorary | 9 | 10 | 11 | 11 |
| Senior | 46 | 58 | 71 | 73 |
| Sustaining | NA | 21 | 22 | 24* |
| Total | 2241 | 2166 | 2186 | 2298 |

*Three Sustaining Members are states.



Public & Media Awareness

Information Services – ASDSO continues to build its database of reporters who write about dam safety. Communication is a two-way process, consisting of ASDSO press releases and responses to media information requests. Most requests in the past year were in response to:

1. Several well-publicized dam failures and incidents, including:

- Failures of New Orleans levees during Hurricane Katrina
- Severe erosion of Livingston Dam, in Texas, during Hurricane Rita
- The failure of Taum Sauk dam in Missouri
- The near failure of Whittenton Pond Dam, upstream of Taunton, Massachusetts
- Public concern about the integrity of Gilboa Dam, in New York
- Failure of Kaloko Dam, in Hawaii
- Extreme rainstorms in the Northeast U.S. during early summer 2006
- Evacuation of El Paso because of concerns over a dam across the Mexican border

2. Proposed changes in dam safety programs in several states, including Maine, Missouri, Michigan, Rhode Island, New York, and Virginia.

3. Proposed legislation on levees, dam rehabilitation funding, and reauthorization of the National Dam Safety Program

Press releases sent in the past year were:

- *Engineers Agree: Proposed Dam Safety Legislation Will Save Lives, Protect Property*, April 19, 2006

- *National Association of Dam Safety Officials Recommends Oversight of All Potentially Hazardous Dams*, April 10, 2006
- *Engineers Say Proposed Legislation Could Prevent Devastating Dam Failures*, March 17, 2006
- *Policymakers Urged to Examine Dam Safety Across the Nation after Week's Events at Dam in MA*, October 21, 2005
- *ASDSO's 2005 Dam Safety Award Recipients Recognized*, October 14, 2005
- *2005-2006 ASDSO Dam Safety Scholarship Winners Announced*, July 25, 2005

ASDSO continues its efforts to:

- Post news alerts on its Web site
- Work with the Dam Safety Coalition to raise public and media awareness of dam safety issues
- Work closely with fellow dam safety data gatherers to provide information through the NID, DSPMT, NPDP, and ASDSO bibliography.

New public/media awareness efforts include:

- Sending "alerts" on dam safety issues and events to the media, to members, and to political action groups.
- Becoming a Geoengineer.org Press Affiliate, a service of Geoengineer.org, a center for geoen지니어ing information. It is visited each month by more than 20,000 visitors and publishes the Geoengineer Newsletter which currently includes more than 3700 subscribed members. The Geoengineer.Org Press Release Distribution Center promotes the press releases of Organizations and Companies affiliated with Geoengineer.org.

Outreach

ASDSO continues its development of grass-roots communication with the dam safety community by partnering with state organizations and cultivating sub-groups within the regions. Currently two groups work closely with ASDSO. They are the New Jersey/Pennsylvania Council for Safe Dams—a committee of the ASDSO Northeast Region—and the Ohio Dam Safety Organization—a committee of the Water Management Association of Ohio.



*New Jersey/Pennsylvania
Council for Safe Dams
(CSD)(Eric Ditchey
[McCormick and Taylor],
Chair):*

CSD continues to work with the State of New Jersey to implement the "Dam, Lake,

Stream, Flood Control, Water Resources, and Wastewater Treatment Project Bond Act of 2003." A total of \$95 million was made possible through the program. During the reporting cycle, an effort was launched to mirror the New Jersey funding program in the Commonwealth of Pennsylvania.

Ohio Dam Safety Organization (Submitted by Dave Moore and Joe Stock)

The mission of ODSO shall be to promote dam safety in the State of Ohio by establishing a partnership between dam owners, operators, engineers and regulators. The organization shall provide a forum for education and discussion on dam safety related issues and provide a voice for all concerned in the formation and implementation of dam safety policy in the State of Ohio.

Annual Conference

The 2005 ODSO conference was held jointly with the annual Water Management Association of Ohio (WMAO) in November 2005.

Dam Owner Workshop

The Ohio Dam Safety Organization (ODSO), with support from ASDSO, sponsored a dam owner workshop. The workshop was held on August 10, 2005 at the Ohio Department of Natural Resource's (ODNR's) Columbus, Ohio offices and was open to all dam owners and operators in Ohio. A total of 52 registered dam owners/operators attended the workshop.

ODSO Best Maintained Dam Awards

ODSO annually presents the "Best Maintained Dam Award" to dams that have been judged to be the best cared for in Ohio. To qualify for this award the dam must be at least five years old and must be in compliance with all Ohio Department of Natural Resources dam safety regulations.

2005 Winners

Conservancy District: Taylorville Dam, Miami Conservancy District

Local Public: East Cold Run Reservoir Dams, City of Salem

Private: Lake Stroman, Jake and Terry Conley

Communications

The Journal of Dam Safety

During the 2005-2006 year, the Editorial Committee is proud to have published four issues of the popular technical journal. We want to offer a thank you to each of the authors for their efforts and the high quality of the papers.

Finally, we would like to make special mention of the efforts by the ASDSO staff. Although the Editorial Committee takes pride in the quality of the papers, the very high quality of the final publication is due to the efforts of Lori Spragens, Susan Sorrell, Sarah Mayfield, and Maureen Hogle. Thank you all!!!

Respectfully submitted:

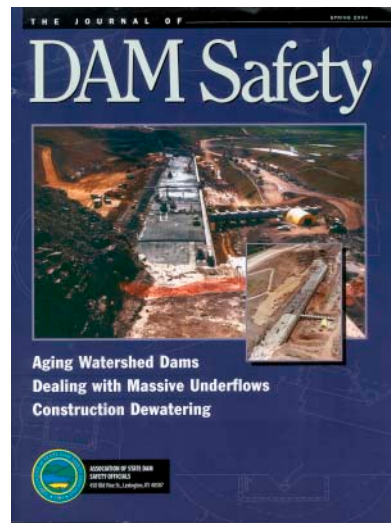
Editorial Committee: Alton P. Davis, Jr., Chair; John W. France, James W. Gallagher, Jr., Guy E. Paul, David Clark, Donald L. Millikan

Thanks go to outgoing chair Alton Davis (A.P. Davis, Jr Engineering Consulting) for serving as the first chair to this new committee.

ASDSO is equally pleased to welcome Keith A. Ferguson (Kleinfelder, Inc.) as new chair.

ASDSO E-News

ASDSO continued its monthly electronic news delivery system to all members. This is a timely and efficient way to get information out to our members.



Web Site

The ASDSO website continues to expand and educate people around the world. The searchable bibliography and training calendar are valuable pieces of ASDSO's Information Clearinghouse. Finally, the on-line meetings registration feature allows individuals to register for ASDSO conferences and technical seminars on the web, then receive instant confirmation of their registration via email.

New this coming year will be a complete re-format with new and improved features including the ability to join ASDSO and make a Patron donation, an on-line bookstore, better search capabilities, and more information.

Goal #3: Providing leadership through facilitation of inter-organizational, intergovernmental and interstate cooperation.

The Emerging Levee Issue

The levee issue has brought several interested groups together to find ways to make levees in the U.S. safer. This year, the US Army Corps of Engineers was tasked with launching a national levee inspection program, while Congress debated the creation of a National Levee Safety Program, similar to the National Dam Safety Program (currently HR 4650). Mark Ogden (Ohio) is acting as ASDSO point person on this activity and has had discussions with Corps point person Steve Durrett on how much input they want from ASDSO.

As part of ASDSO's new initiative to include the levee safety issue within its cadre of projects, the voting membership passed a resolution endorsing the concept of a national levee safety program (Appendix B).

Additionally, a survey of states found that some but not most states had laws on their books requiring them (the dam safety units) to regulate levee safety. Very few if any had resources to carry out this provision.

The NFIP Community Rating System

ASDSO continues to assist the FEMA, National Flood Insurance Program (NFIP) by offering expertise to its Community Rating System. Through a series of data requests/application processes, the CRS determines whether a state has an adequate dam safety program, which provides an additional incentive for municipalities or flood insurance policyholders to gain premium reductions in their flood insurance premiums.

This year, ASDSO has been discussing with the NFIP how to integrate CRS data calls to states with the Dam Safety Program Management Tools (DSPMT) effort used to collect state program data and the National Inventory of Dams data.

National Inventory of Dams Data Submittal

ASDSO assists the Corps of Engineers' TEC Center as it collects data from the states for the NID. The Corps plans to submit an updated NID during 2006. ASDSO will be assisting the Corps in upgrading and updating this effort.

FEMA's National Dam Safety Program

The Department of Homeland Security, Federal Emergency Management Agency administers the National Dam Safety Program (authorized by the National Dam Safety and Security Act of 2002). Thanks to the generous support from this program, ASDSO was able to carry out the following projects during FY06.

1. Technical Training Assistance to States
2. Continuing Education Seminars for State Inspectors
3. Dam Owner Education Program
4. Update of the ASDSO Information Clearinghouse
5. Update of the Model State Dam Safety Program

Training and Seminars (1 and 2)

Described in Goal 1.

Dam Owner Education Coordinators (3)

Described in Goal 6

Update of the ASDSO Information Clearinghouse (4)
Described above in Goal 4.

Update of the Model State Dam Safety Program (5)
Described in Goal 1.

The National Dam Safety Program also sponsors research projects and training programs at FEMA's Emergency Management Institute in Emmitsburg, Maryland. For more information on the National Dam Safety Program contact FEMA or go to:

<http://www.fema.gov/plan/prevent/damfailure/>

See Appendix D for a list of available information and guidelines from the National Dam Safety Program.

Working Relationships

Organizations

ASDSO continues its partnering arrangements and has signed agreements with the following organizations and federal agencies:

- Interagency Forum on Infrastructure Protection
- National Emergency Management Association
- ASCE Environment and Water Resources Institute
- Canadian Dam Association
- National Watershed Coalition
- U.S. Society on Dams
- USDA Natural Resources Conservation Service
- US Army Corps of Engineers
- Western State Engineers

ASDSO exchanges information and coordinates projects with these organizations including trading conference information, publications, research information, etc.

Partnering Highlights



American Society of Civil Engineers

American Society of Civil Engineers (ASCE)

Coordination between ASDSO and ASCE remains a key goal for both organizations—from working on legislative affairs in Washington, DC to exchanging information and talents with the ASCE Institutes.

ASCE members touted the importance of the reauthorization of the National Dam Safety Program and the new Dam Rehabilitation and Repair Act at their March Policy Week in DC. ASCE Government Relations Director Brian Pallasch organized Capitol Hill visits by over 200 ASCE and ASDSO members to talk about dam safety and infrastructure improvement needs. ASDSO Board members visited Congressmen and Senators to push for stronger dam safety programs at the federal level.



USSD

The ASDSO Finance and Executive Committees met at the USSD Annual Conference in San Antonio in April/May. During these meetings, the USSD Board invited the ASDSO

Executive Committee to join them at their board

meeting to hear about USSD strategic planning efforts. A good discussion ensued regarding coordination on various projects such as student outreach and training. ASDSO President Ken Smith (Indiana) participated in the opening general session reporting on ASDSO activities and urging USSD members to become involved in pushing for federal legislation that would improve dam and levee safety.



National Watershed Coalition

The partnership between ASDSO and the NWC goes back to the establishment of this group out of the National Association of Conservation Districts. Now, ASDSO currently serves on the Steering Committee of the NWC. This year, ASDSO and the NWC opened dialogue with the Natural Resources Conservation Service (NRCS) over issues concerning the NRCS's continued technical involvement with NRCS-constructed dams (those dams built under federal programs administered by the NRCS). The goal is to mutually agree to solutions regarding the challenges surrounding a) who owns or is responsible for these dams b) who will be responsible for them when the NRCS's project agreements have expired.



Association of State Floodplain Managers (ASFPM)

ASDSO and ASFPM began working closely this past year on the levee safety issue. As federal legislation and programs are put into place, ASDSO and ASFPM leaders will continue to work together to assist with how these programs are designed and implemented.

The Natural Resources Conservation Service (NRCS)

During 2005-06, ASDSO continued to provide technical and logistical support for the NRCS's update of its technical guidelines on emergency action planning (EAP). A new sample EAP was made available, through this project, for ASDSO use at the end of the fiscal year. The NRCS is working toward integrating the new version into its guidelines.

The US Army Corps of Engineers

ASDSO and the Corps of Engineers continue to honor the joint memorandum of understanding, signed in

2003. This MOU began a joint mission to improve dam safety nationwide. During 2005-06, coordination continued, through the Corps Tech Center, on collecting data from the states, not only for the National Inventory of Dams, but for general state program performance analysis and reporting. The Corps and ASDSO also exchange continuing education information and mutually post dam safety announcements. ASDSO wishes to thank Charles Pearre, USACE Dam Safety Program Manager, for providing USACE mailing lists to ASDSO and keeping the lines of communication open with ASDSO; and Eric Halpin, USACE, Chief of Geotechnical Engineering, for volunteering his time to the ASDSO Annual Conference Program Committee.

Federal Agencies

Interagency Committee on Dam Safety (ICODS):

ICODS, which was established in 1980, encourages the establishment and maintenance of effective federal programs, policies, and guidelines to enhance dam safety and security. ICODS serves as the permanent forum for the coordination of federal activities in dam safety and security. FEMA also chairs ICODS. Member agencies include the following:

ICODS agencies:

- Department of Agriculture
 - Agricultural Research Service
 - Natural Resources Conservation Service
 - Forest Service
- Department of Defense, Army Corps of Engineers
- Department of Energy
- Department of the Interior
 - Bureau of Indian Affairs
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - National Park Service
- Department of Labor, Mine Safety and Health Administration
- Federal Energy Regulatory Commission
- Department of State, International Boundary and Water Commission

Nuclear Regulatory Commission Tennessee Valley Authority

ASDSO continues to meet frequently with the members of ICODS.

FEMA and the National Dam Safety Review Board

Five ASDSO representatives continue to serve on FEMA's National Dam Safety Review Board and on the Work Groups, Research, Training, Security, Emergency Action Planning, Performance Measuring, and National Inventory of Dams. This past year Guy Paul (ID) was replaced by Brian Long (WV). Meg Galloway (WI) stepped down and was replaced by Jack Byers (CO). Other state members serving include Ken Smith (IN), Laurence Siroky (MT) and John Moyle (NJ).

This year, the Review Board has been focusing on research projects such as the development of a technical guide on conduits and seepage and new projects to update dambreak analyses and a manual on gates and valves; reauthorization of the National Dam Safety Program Act; the development of performance measures for states participating in the State Assistance Grant Program; issuance of a position paper on the need for EAPs on all high-hazard potential dams; and, improvement in the training delivery program.

[The *Guidance Document on Conduits Through Dams* is available. Print copies of the document are available from FEMA. Copies are also available in CD and DVD formats. All formats can be directly ordered from the FEMA Publication Distribution Center at 1-800-480-2520. The document numbers are as follows: For DVD: FEMA 484DVD; For CD: FEMA 484CD; For print copy: FEMA 484; For informational brochure: FEMA L-266]

New Partnerships

ASDSO staff continue to locate new partners. This past year has been devoted to securing liaisons with agriculture engineering schools and organizations to further our outreach efforts.

The Affiliate Member Advisory Committee (AMAC)

The AMAC is a select group of private sector (Affiliate) members who have had outstanding careers and experience in dam safety related fields. This 27-member group provides expert advice to the ASDSO Board and

continues to lead through its work on many of ASDSO's most important projects and programs. The AMAC welcomed new member Dave Eichelberger (Christopher R. Burke Engineers) to its ranks in FY06.

AMAC support this year:

- Al Davis chaired the editorial committee for the ASDSO *Journal of Dam Safety*. Keith Ferguson will take over as chair in FY07.
- Bill Bingham chairs the Peer Review Committee. Tom Kelly, Jim Weldon and Bill Bingham served on peer review teams in FY06.
- John France is serving on the Finance and Technical Journal Committees, and served on the Program Committee for Dam Safety '06.
- Steve Snider organized moderators at Dam Safety '06.
- Randy Bass continues to chair the Technical Training Committee
- George Mills continues to chair the Dam Owner Education Committee.
- Dan Marks served as an owner education instructor.
- Eric Ditchey chairs the NJ/PA Council for Safe Dams.
- Dave Eichelberger serves on the Finance Committee.

AMAC Membership

Dan Marks, Chair, Schnabel Engineering, NC
Randy Bass, Vice-Chair, Schnabel Engineering, GA
Terry Arnold, MWH America, CO
Bill Bingham, Gannett Fleming, PA
Bob Dalton, Vasconcelles, IL

Al Davis, Independent Consultant, NH
Eric Ditchey, McCormick Talyor, NJ
Dave Eichelberger, Christopher R. Burke Engineers, IN
Keith Ferguson, Kleinfelder, CO
Craig Findlay, Findlay Engineering, ME
John France, URS Corp. CO
Steve Fry, Avista Corp., WA
John Garland, Brazos River Authority, TX
Tom Kelly, Independent Consultant, CA
Marty McCann, Jack R. Benjamin & Associates, NPDP, CA
Art Miller, Penn State University, PA
Don Millikan, Southern California Edison Co., CA (retired)
George Mills, GEM Consulting, OH
Carl Montana, French & Parrello, NJ
Karl Myers, Piedmont Geotechnical Consultants, GA
Kurt Rinehart, Miami Conservancy District, OH
Richard Rudolph, Xcel Energy., WI
John Rutledge, Freese & Nichols, TX
Mel Schaefer, MGS Engineering Consultants, WA
Steve Snider, Independent Consultant, NY
Ed Tomlinson, Applied Weather Associates, CO
Jim Weldon, Denver Water Board, CO

Dan Marks will step down as chair in 2006. ASDSO thanks Dan for his time and talents chairing the AMAC and welcomes Randy Bass as the new chair.

Goal #4: - Strengthening the dam safety community and providing a forum for the exchange of information

Annual Conference

The 2005 Annual Conference was held at the Walt Disney World Dolphin Resort in Orlando, Florida. The conference was originally scheduled to occur in New Orleans, but had to be changed after Hurricane Katrina virtually destroyed the city in late August. Approximately 550 attendees and guests participated, an astounding number considering the last-minute date and location change.

The conference's opening general session featured initial reports and commentary by the US Army COE and a panel of levee experts on the structural failures in New Orleans. A portion of the proceeds from the conference's auction fundraiser was donated to the hurricane relief effort.

ASDSO and the conference program committee would like to thank the speakers, exhibitors, and attendees who made the significant extra effort to attend Dam Safety 05 despite the last-minute changes.

2005 Award Winners

New Honorary ASDSO Member: Bruce A. Tschantz

Since its formation in 1984, ASDSO has honored a select few individuals by naming them Honorary Members. Dr. Bruce A.

Tschantz, Professor Emeritus at the University of Tennessee, is the eleventh ASDSO member so recognized.

After 37 years as a professor of Civil and Environmental Engineering, Dr. Tschantz retired in 2002. Since then, he has continued to teach, to learn, and to contribute his time and talents to the mission of dam safety.

Dr. Tschantz was instrumental in the development of both the National Dam Safety Program and ASDSO. From 1977 to 1979, Dr. Tschantz coordinated the



New Honorary Member Bruce Tschantz (center) pictured with outgoing ASDSO president Meg Galloway and incoming president Ken Smith.

executive office review of federal agency dam safety procedures, which in 1979 resulted in new federal guidelines for dam safety.

In 1980, on a one-year leave from the University of Tennessee, he developed FEMA's Federal Office of Dam Safety and served as its first Chief. During this time, he also chaired the Federal Interagency Committee on Dam Safety and served on the ICODS Interagency Communications and Research subcommittees.

From 1981-1982, Dr. Tschantz chaired the National ASCE Water Policy Subcommittee on Dam Safety, and, in 1983, he served as advisor to the organizing Committee for Establishment of a National Association of State Dam Safety Officials.

He has made numerous contributions to ASDSO over the past twenty-two years. Since 1999, he has served on ASDSO's Model Library Committee, Annual Conference Program Committee, and the ASDSO Committee for Educational Outreach, which he currently chairs. He is also an instructor for the ASDSO Technical Seminar on Plant and Animal Penetration of Earthen Dams.

A registered professional engineer in Tennessee, Ohio, and Virginia, Dr. Tschantz is now an engineering consultant and technical expert to several local, regional, and national engineering firms, industries, government agencies, citizen groups, private individuals, and attorneys.

Outside the office, Dr. Tschantz enjoys biking, camping, fly-fishing, and spending time with his wife, Penny, and three grandchildren.

ASDSO is immensely grateful to Dr. Tschantz for extraordinary contributions and dedication to the mission of dam safety, and proud to recognize him as an Honorary Member.

President's Award: Alton P. Davis

Outgoing ASDSO President Meg Galloway (pictured in photo at left)



selected Alton P. Davis, Jr. (*center*) as the winner of the 2005 President's Award, which recognizes individuals who have significantly assisted ASDSO's elected leaders throughout the year. (*Also pictured is ASDSO director Lori Spragens.*)

A private engineering consultant from West Ossipee, New Hampshire, Mr. Davis has 35 years of experience in design, construction, and safety inspections of dams.

"Selecting one individual was an overwhelming thought because there are so many great people who have helped make my year as president run so smoothly," commented Galloway. "Al stood out as someone who has done a lot to enhance the reputation and visibility of ASDSO."

Mr. Davis was instrumental in the decision to transform the ASDSO quarterly newsletter into The Journal of Dam Safety. In a short period of time, this impressive publication has enhanced ASDSO's reputation in the engineering community. Since its inception, Mr. Davis has served as the chairman of the editorial committee. As of September 2005, he is taking a well-deserved rest from his editorial duties.

Mr. Davis also played a large role in the success of Dam Safety 2005. After Hurricane Katrina forced the relocation of the conference from New Orleans to Orlando, it became apparent that the previously planned opening session was no longer viable. Mr. Davis volunteered to reconstruct the opening session with presentations and discussion stemming from the New Orleans levee failures. "It is ironic that I had not had many opportunities to work closely with Al during the year, until after I decided the recipient of this award," said Galloway. "The necessity of reorganizing the opening session allowed me an opportunity to work closely with him in the weeks preceding the conference. Amongst the chaos of reorganization, he was a sea of calm. In his quiet and unassuming manner, he exemplifies the best of volunteerism to this organization."

National Award of Merit: ASDSO Technical Training Program Committee

ASDSO has long recognized the need to establish a comprehensive technical training program. In March of 2001, four individuals—Randy Bass, Chair (Schnabel Engineering); Paul Schweiger (Gannett Fleming); Dave Gutierrez (California Division of Safety of Dams); and Rodney Tornes (Ohio Dam Safety Program)—met with ASDSO staff in Lexington. Since this initial meeting, these same four individuals have worked together to develop and deliver a comprehensive program of study across the nation. In recognition of the enormity of this

task, the ASDSO Board of Directors bestows the ASDSO National Award of Merit to the ASDSO Technical Training Committee. Its members' dedication and expertise have had tremendous impact on dam safety practices nationwide.



[L to R] President Meg Galloway, Dave Gutierrez (California Division of Safety of Dams), Randy Bass, Chair (Schnabel Engineering), Rodney Tornes (Ohio Dam Safety Program) and Paul Schweiger (Gannett Fleming)

Northeast Region Award of Merit: Anthony Fernandes and Aqua Pennsylvania, Inc.

Over the past five years, Aqua Pennsylvania has made great strides in rehabilitating its network of dams. Much of the effort to accomplish this task has been led by Tony Fernandes, Aqua's Manager for Engineering, Design and Construction.



Tony Fernandez (left) pictured with PA state rep. Dennis Dickey.

Mr. Fernandes is in charge for maintenance and upgrades to the company's dams. Since taking this role about four years ago, he has worked tirelessly to bring Aqua Pennsylvania's six Category I dams and four category III dams into compliance with the PA DEP dam safety regulations.

Aqua's dam safety efforts and accomplishments include enclosure of Pickering Dam buttresses to prevent freeze-thaw damage to concrete; raising Township Line Dam abutments to prevent end-cutting; survey and video inspection of submerged downstream toes of

Wetherill and Neshaminy dams; rehabilitation of Ridley Creek Dam with a concrete overlay to stem deterioration of loosely-grouted masonry; adding instrumentation to all six Category I dams to aid in the detection of potentially hazardous conditions; and evaluation and design of a post tensioning system to stabilize Green Lane Dam for the PMF. Currently, Aqua is contracting for PMF upgrades at two projects: armoring Springton Dam with RCC to protect it during overtopping, and expanding the emergency spillway and raising the crest parapet at Ironworks Dam.

Tony Fernandes has spearheaded these efforts, and has been involved in the upgrade and repair of numerous water supply dams in other states where Aqua America owns water systems. Tony is cognizant of the issues that influence the safety of dams and is an ardent record keeper with regard to photographic documentation, logging of field data, and noting changing site conditions. He is active in ASDSO and, for the past three years, has been a member of the ASDSO Council for Safe Dams, which is currently pursuing legislation for funding dam repairs in Pennsylvania.

Aqua Pennsylvania has made exemplary contributions to dam safety over the past five years, both in the southeastern Pennsylvania community and the larger Northeastern region. Aqua Pennsylvania has provided broad corporate support for dam safety, systematically earmarking funds to upgrade their dams for public safety, and supporting Tony's involvement in ASDSO. For these reasons, ASDSO's Northeast Region is proud to honor Aqua Pennsylvania and Tony Fernandes.

Southeast Region Award of Merit: Culpeper Soil and Water Conservation District

ASDSO's Southeast Region recognizes the Culpeper Soil and Water Conservation District for exemplary operation and maintenance of its eleven dams in Culpeper and



[L to R] Steve Bradley, South Carolina state rep., Robert Bradford, Culpeper Soil & Water CD, Steve Partney, Florida state rep.

Madison counties. These dams—one high-hazard- and ten low-hazard-potential structures—were built by the U.S. Department of Agriculture Soil Conservation Service (now the NRCS) in cooperation with sponsorship by the district and county government under the PL 83-566 federal program.

These dams were built in the mid 1960s through the 1970s for flood control and/or water supply and are nearing the end of their 50-year design life.

The District has done a good job operating and maintaining these dams and in the last 6 year cycle has made tremendous improvements in their operation and maintenance program. Those improvements include: Ground covers, generally, are thick fescue sod. No trees are encroaching on the dams themselves and tree canopies adjacent to the groins and toe do not extend over the embankments. Plunge pools and outfall channels are stable. Low level gates have been repaired when they became inoperable and the concrete riser towers, while starting to show their age on the surface, are in good condition. The District has responded positively to maintenance and monitoring requests by their consultant.

The District also owns an easement on lands held by other landowners and has defended this easement in one precedent-setting court case, where one local land owner challenged the District's right to ownership of the easement. Several other landowners have violated the District's easement with the outcome being that each landowner returned the dam or emergency spillway to its pre-existing condition. The District maintains a cordial working relationship with most of the dams' landowners.

Culpeper Soil and Water Conservation is also a good neighbor to the town of Culpeper. They use their dam safety expertise to provide courtesy inspections to the town on two water supply dams. These owners' annual inspections are required under the Commonwealth of Virginia Dam Safety Act and are provided at no expense to the town.

Midwest Region Award of Merit: Hal Harper, Park Manager, and the staff of Salt Fork Lake State Park, Ohio

Salt Fork Lake Dam is a 60-foot high, high-hazard potential earthen embankment dam that impounds the 3000-acre Salt Fork Lake, the centerpiece of Salt Fork State Park. On February 15, 2005 Salt Fork State Park staff noticed a seepage boil at the downstream toe of the dam. This boil was the likely first sign of a piping failure of the dam. The park staff has worked diligently to protect the public and the resource of Salt Fork Lake.

While undergoing routine dam safety maintenance, the staff of Salt Fork State Park discovered what they believed to be a seepage boil. Upon their discovery of the seepage boil, Parks staff contacted the Dam Safety Program of the Division of Water, and Water staff immediately responded by going to the site to investigate the seepage. Inspection of the seepage boil



Midwest Reps with Award Winner [L to R]: Ken Smith (IN), Meg Galloway (WI), Mark Ogden (OH), Hal Harper (Salt Fork Lake State Park), Rodney Tornes (OH), Mia Kannik (OH)

revealed two seepage areas with steady flow and the deposition of soil particles around the boil area. Given the potential severity of the situation, Water and Parks staff took immediate action to control the seepage and monitor the situation. Sudden failure of Salt Fork Lake Dam would impact homes, businesses and public infrastructure for many miles downstream of the dam with probable loss of life.

Parks staff began a 24-hour, constant monitoring and operation schedule at the dam that lasted for many days including through rain and snow, weekends, and the President's Day Holiday. Throughout the initial stages of the emergency, the Salt Fork staff was at the dam around the clock monitoring the seepage conditions and operating pumps to facilitate the operation of an existing embankment toe drain. Through their tireless efforts, additional seepage areas were discovered and remediated, and the pumps and lake drain valves and gates were operated to relieve pressures on the dam.

The emergency situation at the dam persists as a seepage analysis and design for permanent repairs is underway. Hal and his staff continue following the emergency monitoring and operation procedure to help assure that the dam is safe. Failure of the Salt Fork Lake Dam would have been catastrophic for the state of Ohio through the loss of life and property, and specifically the loss of the lake. The efforts of Hal Harper and his staff have been remarkable in their effectiveness in implementing emergency actions to prevent the failure of the dam.

West Region Award of Merit: John W. France

John France is Vice President and Senior Principal in the Denver Office of URS Corporation and URS National Technology Leader for Dams.

With over 30 years of experience in engineering consulting and design, Mr. France has worked on hundreds of civil engineering projects, including dam safety inspections and analyses, geotechnical and geological field and laboratory investigations, hazard classification, seepage and stability analyses and evaluations, seismic analyses, conceptual and final designs of new structures, rehabilitation of existing structures, and consultation during construction.

Mr. France generously gives his time to the dam safety cause. Not only is he a current member of four ASDSO committees (Affiliate Member Advisory, Technical Journal Editorial, Annual Conference Program, and Finance), he is also serving a second term on the Board of the U.S. Society on Dams and a second two-year term as the private sector representative on the National Dam Safety Review Board.

Mr. France has regularly authored papers and made presentations for the professional meetings of ASDSO and USSD. He was a principal instructor for ASDSO's Advanced



West Regional Reps with Mr. France (second from left). [L to R] Steve Verigin (CA), John France, Elaine Pacheco (NM), Rob Martinez (NV).

Training Course on Stability Analysis and Project Manager for ASDSO/FEMA research workshops on Seepage Through Embankment Dams and Outlet Works for Dams. He was also an invited member and presenter in an ASDSO/FEMA Workshop on Risk Analysis for Dams.

Mr. France has provided continuous consulting services to the U.S. Department of Interior since 1983, and recently completed security risks prioritization of U.S. Fish and Wildlife Service dams. He now serves on the three-member Independent Panel that provides annual reviews of Bureau of Reclamation dam safety programs, and is also on an advisory/review boards for BC Hydro and the U.S. Army Corps of Engineers.

Mr. France received his BS degree in civil engineering and MS degree in geotechnical engineering from Cornell University.

Rehabilitation Project of the Year Award: Piute Dam, Franson Noble Engineering

ASDSO congratulates Franson Noble Engineering, of American Fork, Utah, for its design of the 2005 ASDSO National Rehabilitation Project of the Year.

Piute Dam, located in central Utah, dates from the early 1900s. Built to store the waters of the Sevier River for irrigation, the rolled earthfill and puddle core structure went through several periods of repair and reconstruction through 1935. The dam is approximately 90 feet high with a crest length of 1,200 feet and storage capacity of 72,000 acre-feet.

Franson Noble Engineering designed creative rehabilitation solutions that brought the Piute Dam into compliance with current dam safety standards, while saving its owner, the Piute Reservoir and Irrigation Company, millions of dollars.

The rehabilitation design addressed several deficiencies:

- Inadequate spillway capacity - A four-bay fuse plug was designed to pass the design flood of 106,000 cfs. Four 50-ft wide bays include incrementally higher crests so that fuse plugs will sequentially erode, based on flood severity. This system ensures that outflows will more closely match flood inflows.
- Upstream slope stability problems - Existing riprap was removed and the downstream slope was flattened from a 2:1 slope to 2.5:1 with a 40-foot wide berm at the maximum section to improve stability.
- Inoperable and unstable outlet works gates - Remains of the original guard gate and the existing control gate were removed and new hydraulic-controlled guard and control gates were installed. Extensive lab modeling of the outlet works optimized the configuration of a unique stilling basin within the outlet tunnel.
- An inadequate toe drain - The most unusual feature of the drainage system upgrade was the use of a 455-ft long by 30-ft deep, bio-polymer slurry trench at the dam toe to install an internal drain filter and collection system. This state-of-the-art construction method represented a cost savings of \$2 million.
- Outdated instrumentation - Rehabilitation included installation of improved instrumentation, such as automated vibrating wire piezometer and weir monitors for remote observations.

Construction of the dam was completed in two construction periods from 2002 through 2005. The total project cost of the rehabilitation— the largest completed under the Utah Dam Safety program—was \$8.2 million. Unique and innovative engineering design created savings of an estimated \$4 to \$6 million compared to standard construction methods that had been proposed during preliminary design stages.



Rehabilitation Project of the Year Award Winners pictured with President Galloway (top left). (Back row [L to R]) Richard Noble (Franson & Noble), Kurt Sorenson (Piute Irrigation Company), Jason Bradford (Franson & Noble). (Front row [L to R]): Eric Dixon (Franson & Noble), Phil Gerhart (Gerhart Consultants), Matt Lindon (UT), David Marble (UT).

Future Conference Planning

ASDSO's 2006 annual conference planning committee met in March and developed the agenda for this year's conference. It was no easy task with over 140 abstracts submitted. The committee was chaired by John Ritchey (New Jersey Dam Safety). The Advisory Group assisted the planning committee and was composed of representatives from state and federal agencies as well as private industry:

Program Committee

John Ritchey, NJ
 John France, URS Corp.
 Matt Lindon, UT
 Michele Lemieux, MT
 Eric Halpin, USACE
 Eric Ditchey, McCormick Taylor
 Lori Spragens, Executive Director, ASDSO
 Susan Sorrell, Conference Director, ASDSO
 Sarah Mayfield, Information Specialist, ASDSO

The location for Dam Safety '08 was chosen during the reporting cycle. It is Palm Springs, California.

Mark your calendars for:

*Dam Safety '07 – September 9-13 – Austin
 Dam Safety '08 – September 7-11 – Palm Springs*

The Resource Center

Online Bibliography - ASDSO's bibliography now includes over 17,800 records in ten separate databases that can be searched individually or collectively.

- ASDSO publications (conference proceedings, technical seminars, newsletter articles, special publications) – 2018 records
- Journal Articles – 2,781 records
- News Sources – 3,987 records
- Research (information about current and recent dam-related research) – 574 records
- Conference Proceedings (NEW) – 1,369
- Federal Resources (NEW) - 2,447
- Audiovisual (NEW) – 139
- Websites (NEW) – 396
- For Kids (NEW) - 36
- Miscellany (other books, reports, etc. published by organizations other than ASDSO and federal agencies) – 4,109 records

ASDSO has electronic versions of most articles in the News database and electron access to many articles in the Journals database.

Information Services – ASDSO responded to a large number of information requests from reporters, states, and legislative researchers following:

1. Several well-publicized dam failures and incidents, including:
 - Failures of New Orleans levees during Hurricane Katrina
 - Severe erosion of Livingston Dam, in Texas, during Hurricane Rita
 - The failure of Taum Sauk dam in Missouri
 - The near failure of Whittenton Pond Dam, upstream of Taunton, Massachusetts

- Public concern about the integrity of Gilboa Dam, in New York
- Failure of Kaloko Dam, in Hawaii
- Extreme rainstorms in the Northeast U.S. during early summer 2006
- Evacuation of El Paso because of concerns over a dam across the Mexican border

2. Proposed changes in dam safety programs in several states, including Missouri, Michigan, Rhode Island, New York, and Virginia.

3. Proposed legislation on levees, dam rehabilitation funding, and reauthorization of the National Dam Safety Program

Library Acquisitions/Loans – ASDSO maintains a comprehensive library of dam safety references in various format. Members may borrow various items from the collection, which includes books, magazine and newspaper clippings, videocassettes, CD-ROMs, and DVDs.

ASDSO subscribes to several industry publications and has access to Lexis-Nexis, and technical databases, including EiCompendex, GeoRef, and Cambridge Scientific Abstracts. Relevant papers and articles from these print and electronic resources are catalogued in the ASDSO Bibliography.

Promotion of Dam Engineering as a Profession

Undergraduate Scholarship

The ASDSO Scholarship Committee, chaired by John Moyle, recommended three seniors for the 2006-2007 scholarship. Ian Toohey, University of Oklahoma; Corey Clark, University of Maine; and Nathan Chase, Northeastern University were approved at the Board of Directors June meeting. Each will receive a free ASDSO membership and \$3,000 for the 2006-2007 school year.

Thanks to generous contributions to the ASDSO Memorial Scholarship Fund, the ASDSO Board of Directors has increased the total award from \$5,000 to \$10,000. The extra \$1,000 will be put toward bringing the three winners to Dam Safety 2006.

Applications for the 2007-2008 Dam Safety Scholarships will be available at ASDSO's Web site, www.damsafety.org in late Fall 2006.



2006-07 Scholarship Winners (from L to R) Nathan Chase, Corey Clark and Ian Toohey.

Student Outreach

In Fall 2005, the ASDSO Board of Directors approved the Committee for Educational Outreach (CEO) as a standing ASDSO committee. The committee developed a mission statement and chose student involvement in ASDSO's national conference as its initial focus.

With the help of the NJ-PA Council for Safe Dams and the U.S. Army Corps of Engineers-St. Louis District, the CEO invited ASDSO's 2005-2006 scholarship winners, Theresa Andrejack (Drexel) and Keith Thole (Southern Illinois University) to Dam Safety 2005 in Orlando. Both Theresa and Keith participated in the CEO meeting at that conference.

The CEO expanded its plans for the 2006 conference in Boston, inviting not only ASDSO's three scholarship winners, but also students from 15 universities in the Boston area. The CEO also arranged for student



2005-06 Scholarship winners participate in Dam Safety '05 pictured (L to R) is Theresa Andrejack with Scholarship Committee Chair John Moyle, and Keith Thole with President Ken Smith.

admission to the field trip and set up a Student Hospitality Room where students and prospective employers can meet.

One of the CEO's plans for the coming year is to establish a joint ASDSO-USSD Speakers Bureau to spur increased student interest in dam safety. Peggy Harding, Donald Basham, and Dan Johnson are the USSD liaisons working on this project with the CEO.

Student Education Outreach Committee

Bruce Tschantz, Chair, Professor Emeritus, UT
 Fares Abdo, Portland Cement Assoc., Birmingham, AL
 Donald Basham, USACE, Washington, D.C.
 Ken Bosar, Christopher Burke Engr., Indianapolis, IN
 Meg Galloway, Wisconsin DNR
 Bill Irwin, USDA- NRCS, Washington, D.C.
 John Livingston, CH2M Hill, Redding, CA
 Dan Marks, Schnabel Engineering Consultants, Arden, NC
 Marty McCann, Stanford University, Stanford, CA
 Sky Medors, Lawson-Fisher Assoc., South Bend, IN
 Art Miller, Penn State University
 John Moyle, New Jersey DEP
 Milton Myers, USACE-WES, Vicksburg, MS
 Peter Nicholson, University of Hawaii
 Ken Smith, Indiana DNR
 Kelechi Uzochukwu, 2003-2004 ASDSO Scholarship winner (North Carolina A&T State University), Schnabel Engineering, Alpharetta, Georgia 30005
 Sarah Mayfield, ASDSO, Lexington, KY

USSD Liaisons to Student Outreach

Don Basham, Corps
 Peggy Harding, FERC
 Dan Johnson, MWH

Engineering Day

For the fourth year, ASDSO participated in Engineering Day, held at the University of Kentucky on Saturday, February 25, 2006. The youngest visitors picked up instructions for building a "bathtub dam" while older attendees snapped up ASDSO scholarship applications, brochures and pens provided by Schnabel Engineering, and flyers about the California Division of Safety of Dams. This well-attended event provided a great opportunity to spread the dam safety message to the general public, to network with university engineering faculty and staff, and to recruit future dam engineering professionals.



Goal #5: - Providing representation of dam safety interests before state legislatures and before Congress

Legislative Issues in 2005-06

It has been a very busy and rewarding year for the ASDSO's legislative efforts. Legislation has been introduced in both the House and Senate for the reauthorization of the National Dam Safety Program (HR 4981 and S. 2735) and for providing modest funds to rehabilitate unsafe publicly owned high hazard dams (HR 1105 and S. 2444). The successes have been due to the partnership with the American Society of Civil Engineers and the hard work of Brian Pallasch. The majority of the meetings and milestones are listed below:



Brian Pallasch (left), ASCE Government Relations Director, and Brad Iarossi, ASDSO Legislative Committee Chair

- November 16, 2005: Meeting with Senator Christopher “Kit” Bond’s (MO) staff Brian Klippenstein and Mike Dubois as well as a staff member from the Senate Environment and Public Works (EPW) Committee to request Senator Bond’s assistance in reauthorizing the NDSPA and creating a funding source for dam rehabilitation.
- Many meetings and conference calls with the Senate EPW Committee staff regarding the reauthorization language.
- February 28, 2006: Meeting with Senator Christopher “Kit” Bond’s (MO) staff Mike Dubois as well as a staff member from the Senate Environment and Public Works (EPW) to discuss reauthorization.
- ASDSO provided written testimony to the relevant House and Senate Appropriations Committees in support of funding for the National Dam Safety Program, National Inventory of Dams and the Small Watershed Rehabilitation Program.
- ASCE staff made more than 40 congressional visits in support of the Dam Safety Act and the Dam Rehabilitation and Repair Act.
- The Dam Safety Coalition continued to operate under the leadership of ASDSO and ASCE. The group launched its website – www.damsafetycoalition.org, and produced a brochure to promote the rehabilitation legislation.
- March 28- 29, 2006: ASCE Policy Week and Capitol Hill Visits. Dam safety was a key issue in ASCE’s Policy Week. The ASDSO Board of Directors and more than 120 ASCE members visited Capitol Hill in support of the dam safety and rehabilitation legislation.. Each year ASCE selects 3 or 4 important engineering issues and critical legislation, provides a short issue briefing to the members and schedules visits with Senators and House members in order to educate and seek their support for the legislation advancing the ASCE issues. This year there were two major dam safety issues on ASCE’s legislative agenda, including the need to reauthorize the National Dam Safety Program and to establish a funding source for the repair of unsafe dams. This lobbying opportunity and event represents another example of the unique and mutually beneficial partnership that exists between ASDSO and ASCE. There were over 100 professional engineers on Capitol Hill arguing for dam safety and seeking co-sponsors for critical dam safety legislation including:
 - HR 1105, The Dam Rehabilitation and Repair Act of 2005 introduced by Congresswoman Sue Kelly (NY), which provides \$350 million for rehabilitation of unsafe public owned high hazard dams;
 - HR 4981, The Dam safety Act of 2006 introduced by Mr. Kuhl (NY), Mr. Matheson (UT), Mr. Abercrombie (HI) and Mr. Shuster (PA) to reauthorize the National Dam Safety Program;

- S. 2444, The Dam Rehabilitation and Repair Act of 2006 introduced by Senator Bond (MO) and Senator Inhofe (OK), which is a companion bill to HR 1105 providing 350 million for rehabilitation of unsafe publicly owned high hazard dams;
- S. 2735, The Dam Safety Act of 2006 introduced by Senator Bond (MO) and Senator Akaka (HI), which is a companion bill to HR 4981 which reauthorizes the National Dam Safety Program.

Support for dam safety and these bills as well as educating the members of Congress and additional co-sponsors were the result of these "Hill visits."

- May 27, 2006: Attended the Senate markup of S. 2737 by the EPW Committee.
- July 20-25, 2006: Preparation for the House Hearing on Dam Safety.

July 26, 2006 The House Transportation and Infrastructure Committee Subcommittee on Economic Development, Public Buildings and Emergency Management held a Hearing to address the safety of the nation's dams. Ken Smith presented the Subcommittee with forceful and compelling testimony describing the status of the nation's dams and a clear vision of the essential role that Congress has in assuring the safety of the dams in the US. Ken's presentation requested that the Subcommittee reauthorize the national dam safety program by passing HR 4981 "The Dam Safety Act of 2006." However, the ASDSO President advised the members of the Subcommittee that dam safety requires "MORE than what the National Dam Safety Program provides through inspections and education", it requires a funding source for public and private dams.

The other witnesses who presented testimony included Steve Stockton, Deputy Director of Civil Works, US Army Corps of Engineers; David Maurstad, Director of the Mitigation Directorate, FEMA; Larry Roth, Deputy Executive Director, American Society of Civil Engineers; Ruth Moore, New York State Department of Environmental Conservation; and David Kelly, County Legislator, Dutchess County, New York.

The hearing was an enormous success as it brought attention to condition of the Nation's dams as well as to the significant hurdles that impede progress to assure the safety of the dams in the United States and the prevention of future dam tragedies. The hearing also provided an opportunity for the dam safety engineers and program managers to place on the record their concerns and their vision of the Federal role and how Congress needs to respond to this critical public safety concern.

(Submitted by Brad Iarossi, Legislative Committee Chair and Brian Pallasch, Government Relations Director, ASCE)

The Dam Safety Coalition

Several influential national organizations came together in 2005 to support passage of the Dam Rehabilitation and Repair Act (HR 1105). An idea spearheaded by ASCE Director of Government Relations Brian Pallasch, the group currently includes the following:



American Society of Civil Engineers - www.asce.org
Associated General Contractors of America - www.agc.org
Association of State Dam Safety Officials - www.damsafety.org
National Society of Professional Engineers - www.nspe.org
National Stone, Sand & Gravel Association - www.nssga.org
National Watershed Coalition - www.watershedcoalition.org
Portland Cement Association - www.cement.org
United States Society on Dams - www.usstdams.org

Go to the Coalition website (www.damsafetycoalition.org) to find out more about the group's goals, updates on news of interest, status of the legislation, links, etc. New members are welcome; see the website for details.

ASDSO Supports States' Programs

New York - ASDSO submitted written testimony to the Assembly Standing Committee on Environmental Conservation & Assembly Standing Committee on Governmental Operations. The purpose of the hearing was to examine various public safety concerns and potential problems of dams within the State of New York. ASDSO urged the committees to increase staffing, funding and support for New York's dam safety regulatory program.

Missouri - Missouri Governor Matt Blunt worked for tighter control of thousands of dams that now escape state oversight, including those on farms and at federally regulated power plants. Governor Blunt's call for a tougher dam safety law came two months after the Taum Sauk reservoir collapse, where a 1.3 billion-gallon water surge leveled a home and swept away a family of five, who survived. Missouri current law leaves more high-hazard potential dams unregulated than any other state. Funding dam safety has been a challenge for more than two decades. The Department of Natural Resources has the equivalent of four full-time employees and a \$281,000 budget.

Unfortunately the proposed revisions to Missouri's dam safety law did not pass the state's General Assembly this year. ASDSO sent letters endorsing the revisions to Governor Blunt and legislative leaders in Missouri.

Hawaii--ASDSO staff has had recent conversations with Hawaii dam safety working on ways to assist after the dam failures in that state. Hawaii will schedule a peer review in the fall of 2006 and is looking for help developing a list of consulting firms to bid on doing dam inspections using emergency relief funds.

Pennsylvania State Dam Repair Funding Bill

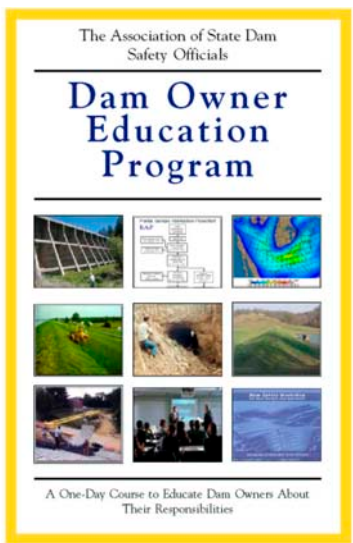
No further updates to report for FY06.

Goal #6: - Providing quality outreach programs for dam owners/operators, members and non-members, about the need to maintain safe dams

Dam Owner Education Program

FY06 marked the fifth year for the ASDSO Dam Owner Education "road-show." Four states held the ASDSO one-day workshop during the reporting cycle:

- New Jersey: August 25, 2005 (Trainer: Carl Montana, French & Parello; and Eric Ditchey, McCormick & Taylor)
- Arkansas: October 6, 2005 (Trainer: Dan Marks, Marks Enterprises)
- Puerto Rico: November 22-23, 2005 (Trainer: Puerto Rico Dam Safety Staff)
- New Mexico: April 19, 2006 (Trainer: Dan Lawrence, Maricopa County, AZ)



The Dam Owner Education Committee met at the 2005 Annual Conference to announce the expansion of the mission of the committee and to bring in new volunteers to work on additional owner outreach projects. About 30 people attended the meeting. Subcommittees will be formed from these volunteers to work on new project ideas.

The core committee spent much of the rest of FY06 working to refine the one-day dam owner workshop and training new instructors. A survey of states and of dam owners was conducted and confirmed for the committee the concept of focusing only on

developing more training sessions for dam owners and more flyers. The committee will be asking the board to approved start-up funds for a subcommittee which will develop an advanced course on dam safety for owners.

New instructors trained this year include Greg Hammer (Colorado), John Rutledge (Freese & Nichols) and Phil Moreschi (Fuss & O'Neil).

The workshop is designed to provide practical, straightforward information on topics of importance to anyone that owns or operates a dam. Topics focus on the following:

- State dam safety laws and regulations
- Dam failure modes and case histories
- Owner responsibilities and liabilities
- Dam operations, maintenance, and inspections
- Developing and implementing emergency action plans
- Potential sources of funding for remedial dam repair, design and construction
- Dam repair projects

Planning is underway to hold several in FY07 in the following states:

- Illinois
- New England (including Massachusetts, New Hampshire and Vermont)
- Louisiana
- Rhode Island
- Nevada

Thanks go to the National Dam Safety Program and FEMA for underwriting a portion of this project.

Tools for Dam Owners on the Web

The Dam Owners section of the web site is running and features some downloadable tools and basic information on dam ownership. The site has a special owners section in the "Members Only" section and more tools in the general section.

Dam Security

Dams Sector Coordinating Councils

HSPD-7 issued in November 2003, tasks the Department of Homeland Security (DHS) and Sector Specific Agencies (SSA) to work with sector owners and operators to develop Sector Coordinating Councils (SCC) to identify, prioritize and coordinate sector programs to protect Critical Infrastructure and Key Resources. It is critical to the implementation of the National Infrastructure Protection Plan (NIPP) that this effort be coordinated with DHS in a public-private partnership.

Now two councils are set up and running. The Government Coordinating Council (GCC) is made up

of federal and state officials. The Sector Coordinating Council (SCC) is made up of private sector companies and organizations.

The objective of both is to provide effective coordination of dams security and other security-related strategies and activities, policy, and communication across and between government and between the government and the sector to support the nation's homeland security mission. The councils are developing plans to implement and execute sufficient and necessary key resource-wide security programs for the nation's dams.

SCC Membership

Lyman Shaffer
Pacific Gas & Electric Company
Alfred Hancock
Xcel Energy Corporation
Michael Hagee
Duke Energy Corp.
Mike Akridge (Primary)
Southern Company Generation
John W. Albert (Alternate)
Dominion Resources
Paul Bennett, M.P.H
NYC Dept. of Environmental
Protection
Steve Burnett (Alternate)
Ameren Services Company
Scott Cleary (Alternate)
Scana Corporation
Hal Dalson (Primary)
CMS Energy
Larry Dunlap (Alternate)
Southern Company Generation
Mike Dunn
American Electric Power
Gary Eaton (Primary)

U.S. Society of Dams
Ron Goebel (Primary)
Scana Corporation
Betsy Hostert (Primary)
Allegheny Energy
Barry Hurndall, P.Eng
Canadian Dam Association
Jeff Leahey
National Hydropower Association
Duane Lewis
South Carolina Public Service
Authority (Santee Cooper)
Richard McCoy (Alternate)
Xcel Energy Corporation
Tom McNamee
Exelon
Joe Mullenschlader (Primary)
Ameren Services Company
Ron Newman (Alternate)
PPL Corporation
Karl Perman (Primary)
Southern California Edison
Richard F. 'Dick' Robert

Public Utility District #1 of Chelan
County
Peter Scalici
New York Power Authority
Vic Slade (Primary)
Dominion Resources
Lori Spragens
Assn. of State Dam Safety
Officials
Ken Steele (Alternate)
U.S. Society of Dams
Robert L. Sypult (Alternate)
Southern California Edison
Rosemead, CA 91770
Bruce Watzman
National Mining Association
Scott D. Webber (Alternate)
Allegheny Energy
Steve Wenke
AVISTA Utilities
Michael Williams (Alternate)
CMS
Darryl Zdanavage (Primary)
PPL Corporation

GCC Membership

Keith Banakowski, State of Ohio
Roy Braden, USACE
Mark Burns, Energetics
Bryan Cisar, USACE
Julie Detter, SRA
Ike Eisentrout, DHS/USCG
William Flynn, DHS
Bruce Heide, USACE
Dave Hinchliff, DOI/BOR

William Irwin, USDA
Doug Johnson, State of
Washington
Martin Juenge, DHS
Don Kirkwood, DOL/MSHA
Gayle Kline, ICF
Salvatore Lauro, DOI
John Laws, DHS
Enrique Matheu, DHS

John Moyle, State of New Jersey
Rich Sanchez, State of California
Michael Sharp, USACE
Justin Smith, FERC
Larry Stanton, DHS
Don Taussig, DOI/BOR
Constantine Tjoumas, FERC
Harry Watkins, SPA

During the reporting cycle, the councils established five Work Groups:

- Information Sharing and Communication
- Research and Development (R&D)
- Threat Assessment and Terrorist Activity Indication
- Identification of Assets
- Implementation of RAM-CAP

The Asset Identification Work Group is focusing on how to feed data into the National Asset Database (NADB). The NADB contains data on all infrastructure, including the top 100 critical dams.

The Work Group on Information Sharing and Communication is discussing the development of federal guidelines or standards to establish the Homeland Security Information Network-Dam Sector (HSIN-DS). Two of the primary issues are how to classify consequence information and information sharing with the private sector.

Deployment of Protective Security Advisors

DHS has rolled out a new resource to infrastructure. These are the Protective Service Agents (PSA). They are located around the country and their mission is to support the nation's infrastructure at the local level and to provide assistance to owners and to provide information back to DHS headquarters in Washington, DC. ASDSO and DHS have been looking at ways to coordinate dam safety training for new PSAs.

The National Infrastructure Protection Plan (NIPP) and Sector Specific Plans

A key requirement of HSPD-7 is development of a National Infrastructure Protection Plan (NIPP). The NIPP will include:

- Identify Critical Infrastructure/Key Resources (CI/KR)
- Reduce the vulnerability of CI/KR
- Prioritize CI/KR
- Coordinate the protection of CI/KR; and
- Share information

A Sector-Specific Plan (SSP) for dams provides the informational foundation for the NIPP. The SSP must follow and support the NIPP.

Members of the GCC and SCC spent the year working on rewrites to the chapters of the SSP-NIPP for Dams. The first draft SSP-NIPP for all of the sectors, including dams, was completed about one year ago and was scheduled for completion by the start of this year. However, DHS determined that greater input was

needed from the private sector including ASDSO. As a result, the writing team for the SSP-NIPP for Dams continued, through the year, to revise the Plan and to develop new sections according to the revised template created by DHS.

As part of this process DHS has also attempted to identify a list of critical dams in the United States. Information has been collected from the states to develop a list of critical infrastructure dams to be compiled by DHS. This information will be used for the development of a grant program on buffer zone protection so that funds can be provided to first responders and law enforcement personnel for the protection of critical infrastructure.

The Buffer Zone Protection Program

The Buffer Zone Protection Program is a \$50 million a year grant program to fund local law enforcement for developing plans for the protection of 13 mandated critical infrastructure areas. There are a number of dams on the list this year. The Program covers any area outside of the dam where a terrorist could launch an attack. The grant guidance provides up to \$1 million per dam. The grant guidance has been sent to state administrative agencies and state homeland security departments. This is the third year of the Program.

State Dam Security Workshop

The second Security and Anti-Terrorism (S/AT) Workshop for state dam safety officials was held in Phoenix, Arizona, on July 27-28, 2005, at the Millennium Resort Scottsdale McCormick Ranch. This training was conducted as a joint effort between FEMA/ASDSO. BRI Consulting under contract with FEMA entered in an agreement with ASDSO to provide conduct the training. ASDSO trainers were Carl Montana of French & Parrello Associates and Joachim Gloschat of Security Solutions. Training was provided to 35 dam safety officials; 19 represented states. When combined with the first Workshop last April in Washington, D.C., a total of 45 state dam safety officials will have participated in the training. This Workshop in Phoenix concluded the FEMA-sponsored security training for state dam safety officials. ASDSO will be contacting DHS- Infrastructure Coordination Division, Information Analysis and Infrastructure Protection to determine if additional training efforts can be implemented. FEMA also will determine the mechanism for distributing the training materials, either through a CD-ROM or through a web site such as the Homeland Security Information Network (HSIN-DS).

(Submitted by John Moyle, Chair)

Goal #7: - Managing the association effectively through internal policies and procedures.

ASDSO Leadership

Transitions

It is with profound sadness that we pass along the news that Terry Hampton passed away on June 6 while awaiting a liver transplant at the University of Wisconsin-Madison hospital.

Terry was born in Madison on May 12, 1947, the oldest of three sons of Lowell and Gladys (Alton) Hampton. After graduating from Madison West High School, Terry received his civil engineering degree from UW- Madison. He began his engineering career at the Wisconsin Department of Natural Resources, and worked with Mead and Hunt for many years. He was currently employed with Gannett Fleming Inc., as manager of dams and water resources engineering.

As chairman of ASDSO's Affiliate Member Advisory Committee, Terry served on the ASDSO Board of Directors. He received the President's Award in 1996, and the Midwest Regional Award of Merit in 2003.

He was a past president of the Wisconsin Association of Consulting Engineers, and served on the American Consulting Engineers Council, American Society of Civil Engineers, task committees for the Federal Energy Regulatory Commission, visiting committees at UW-Madison and Penn State, and on the National Dam Safety Board of Review.

Terry truly enjoyed his work, but valued most the many great friends it brought into his life. Terry was a man with a caring heart and true integrity, and always put the wants and needs of others ahead of his own. He cared so much for his wonderful family and many dear friends, and will be greatly missed by them all.

Survivors include his wife, Alice Jean; his daughter, Mandy of Los Angeles, Calif.; and his son, Kevin, at home. He is also survived by his brothers, Dennis (Jennifer) of Warrenville, Ill., and Stephen (Joni) of Verona.

The dam safety profession has lost a true champion, and many of us have lost a great friend.

Board

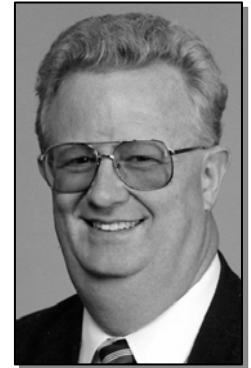
During the annual conference in September, the state voting members elected new officers and new regional representatives to sit on the Board of Directors. The 2005-06 officers include the following:

- President: Ken Smith, Indiana
- President-Elect: Jim Gallagher, New Hampshire
- Treasurer: Mark Ogden, Ohio
- Secretary: Steve Bradley, South Carolina

These officers, along with immediate past president Meg Galloway (Wisconsin) and executive director Lori Spragens made up the Executive Committee in 2005-06.

Thanks go to outgoing president Meg Galloway for her outstanding contribution and extensive time devoted over 2004-05 to ASDSO. New Board members elected in 2005 include the following:

- Jason Boyle, North Dakota (representing the West Region)
- David Gutierrez, California (representing the West Region)
- Jim Alexander (representing the Midwest Region)



*David
Gutierrez*

Jason Boyle



The following member was elected to a second consecutive term:

- Steve Bradley, South Carolina (representing the Southeast)

These elected officials join the following members to complete your Board of Directors:

- Robert B. Finucane, Vermont (representing the Northeast)
- Brian R. Long, West Virginia (representing the Southeast)
- Robert K. Martinez, Nevada (representing the West)
- John H. Moyle, New Jersey (representing the Northeast)
- Stephen H. Partney, Florida (representing the Southeast)
- Elaine C. Pacheco, New Mexico (representing the West)

Dan Marks (Schnabel Engineering) sits on the Board representing the AMAC.

State Reps

Arizona has a new voting representative, Michael Johnson, Ph.D., P.E., Dam Safety Section Manager with the state Department of Water Resources. Mike replaced long-time rep and former Board member Bill Jenkins, who now oversees the Department's Office of Dam Safety & Flood Mitigation.

Idaho is now being represented by Mike Stubblefield, Dam Safety Section Manager for the Idaho Department of Water Resources. Mike stepped in for Guy Paul, former state rep and Board member, who joined Avista Corporation in November, 2005.

M.Q. "Cas" Taherian, Dam Safety Division Chief for the Maryland Water Management Administration is now serving as the Maryland voting representative. Cas replaced Hal Van Aller, who is still with the state WMA..

James MacLellan, P.E. Dam Safety Engineer with the Mississippi Department of Environmental Quality has been appointed the new voting member from Mississippi. James stepped in to fill the spot vacated by Gaylan McGregor.

Alon Dominitz, Environmental Engineer with the New York Department of Environmental Conservation, Dam Safety Section became the New York voting member in October, 2005 when Mike Stankiewicz moved to a different division within the department.

Larry Stockdale has been appointed to fill the Wyoming voting representative seat to replace long-time state rep and former Board of Directors member Dave Benner. Dave is retiring from state government this year.

ASDSO Nominations Committee

The Nominations Committee was formed in early 2006 to identify potential candidates for future office (from 2006-07). At the summer Board meeting, the committee gave the following report.

The following is the final committee report from the Nominations Committee: President-elect: Mark Ogden, OH; Secretary: Rob Martinez, NV, Treasurer: Steve Bradley, SC

The State Voting Representatives will consider these nominations at the Annual Business Meeting in September 2006.

Finance Committee

The Finance Committee met several times this reporting cycle to implement the newly approved investment plan, developed by the Board. As part of a more effective fundraising program, the committee launched a Silent Auction program, which was unveiled with great success at Dam Safety '05. Over \$6,000 was raised from this new and very popular event. The committee spent much of FY06 working on the second annual event to be held at Dam Safety '06.

Due to the outpouring of giving by many members and the hard work of volunteers across the country, the third year of the ASDSO Annual Fundraising Drive exceeded its goals. Our 2005-06 campaign generated nearly \$21,000 in donations and \$60,000 in sustaining memberships.

Thanks go to all supporters. See Appendix E for a listing of ASDSO's 2005-06 Patrons. Our Founders' Circle members, those who launched the fundraising program in 2003, are also acknowledged in Appendix F.

Constitution and Bylaws

At the beginning of FY06, the C&B Committee provided a recommendation for the Board's consideration, which would require the Board to make an annual recommendation to the voting membership on dues amounts for the next fiscal year. The voting membership voted to approve this recommendation at their Annual Business Meeting in 2005. Therefore, dues increases will be considered annually by the 50 state voting members.

FY2006 Action Plan

Out of the 30 action items described in the FY2006 Action Plan, all were complete or underway at the end of the year.

Budgeting and Income

An un-audited statement of revenues and expenditures is included in Appendix G. During FY06, ASDSO signed or carried out project contracts with the following:

- DHS, FEMA (National Dam Safety Program projects)
- US Army Corp of Engineers Tech Center (coordination of state data collection)
- State of Arkansas (dam owner workshop)
- State of Florida (technical seminar)
- State of New Mexico (dam owner workshops)
- BRI Consultants (dam security workshop for states)

Due to the annual conference move to Orlando from New Orleans, ASDSO filed an insurance claim under its cancellation insurance policy and received the claim in the spring of 2006, which covered losses from the move.

ASDSO is a GSA Multiple Award Schedule contractor.

Appendix A

ASDSO Committees, Task Forces and Liaisons

ASDSO STANDING COMMITTEES

Affiliate Member Advisory Committee

Affiliate Member Advisory Committee: The AMAC is a technical advisory committee, made up of private sector members. Members are chosen by the ASDSO Board of Directors.

Dan Marks, Chair, Schnabel Engineering, NC
 Randy Bass, Vice-Chair, Schnabel Engineering, GA
 Terry Arnold, MWH America, CO
 Bill Bingham, Gannett Fleming, PA
 Bob Dalton, Vasconcelles, IL
 Al Davis, Independent Consultant, NH
 Eric Ditchey, McCormick Talyor, NJ
 Dave Eichelberger, Christopher R. Burke Engineers, IN
 Keith Ferguson, Kleinfelder, CO
 Craig Findlay, Findlay Engineering, ME
 John France, URS Corp. CO
 Steve Fry, Avista Corp., WA
 John Garland, Brazos River Authority, TX
 Tom Kelly, Independent Consultant, CA
 Marty McCann, Jack R. Benjamin & Associates, NPDP, CA
 Art Miller, Penn State University, PA
 Don Millikan, Southern California Edison Co., CA (retired)
 George Mills, GEM Consulting, OH
 Carl Montana, French & Parrello, NJ
 Karl Myers, Piedmont Geotechnical Consultants, GA
 Kurt Rinehart, Miami Conservancy District, OH
 Richard Rudolph, Xcel Energy., WI
 John Rutledge, Freese & Nichols, TX
 Mel Schaefer, MGS Engineering Consultants, WA
 Steve Snider, Independent Consultant, NY
 Ed Tomlinson, Applied Weather Associates, CO
 Jim Weldon, Denver Water Board, CO

Subcommittee to Update the "National Concern" brochure

Bill Bingham, Gannett Fleming
 Marty McCann, Jack R. Benjamin
 Richard Rudolph, Excel Energy
 John Rutledge, Freese & Nichols
 Art Miller, Penn State

Annual Conference Program Committee

2006

John Ritchey, New Jersey, Chair
 John France, URS Corp.
 Eric Halpin, USACE
 Eric Ditchey, McCormick Taylor
 Michele Lemieux, Montana
 Matt Lindon, Utah

Annual Awards Committee

Tim Schaal (Chair), South Dakota
 Bob Finucane, Vermont, Northeast Region
 Lyle Bentley, Tennessee, Southeast Region
 Bob Dalton, Illinois (Retired), Midwest Region

Jason Boyle, North Dakota, West Region
 John Falk, Oregon, West Region
 Cecil Bearden, Oklahoma, West Region (alternate)

Constitution & Bylaws Committee

Brian Long, Chair, West Virginia

Jim Gallagher, New Hampshire
 Dave Benner, Wyoming
 Ed Fiegle, Georgia
 Jim Leumas, City of Raleigh, NC
 Ken Smith, Indiana
 Jim Alexander, Missouri
 Mike Stankiewicz, New York
 Bill Jenkins, Arizona
 Charles Cobb, Alaska
 Elaine Pacheco, New Mexico

Dam Owner Outreach Advisory Committee

George Mills, Chair

Richard DeBold, New Hampshire
 John Moyle, New Jersey
 Raul Silva, Massachusetts
 Brad Iarossi, US Fish & Wildlife Service

Finance Committee

Mark Ogden (Chair), Ohio

Jim Gallagher, New Hampshire
 Ken Smith Indiana
 John France, URS Corp., Colorado
 Eric Ditchey, McCormick Taylor, New Jersey
 Matt Lindon, Utah
 Dave Eichelberger, Christopher Burke Engineering, Indiana
 Meg Galloway, Wisconsin
 Rob Martinez, Nevada
 Steve Bradley, South Carolina

Legislative Activities

Brad Iarossi, Chair, Maryland

Jim Gallagher, New Hampshire
 John Moyle, New Jersey
 John Falk, Oregon
 Raul Silva, Massachusetts
 Meg Galloway, Wisconsin
 Cecil Bearden, Oklahoma
 Dan Lawrence, Maricopa County, AZ
 Eric Ditchey, McCormick Taylor, NJ
 John Ritchey, New Jersey
 Ken Smith, Indiana
 George Mills, GEM Consulting
 Joe Kula, URS

Officers Nomination Committee**Meg Galloway, Chair, Wisconsin**

Elaine Pacheco, New Mexico
 Brian Long, West Virginia
 Jim Gallagher, New Hampshire

Peer Review Committee**Bill Bingham, Chair, Gannett Fleming Engineers (Affiliate Member)**

Carl Montana, French & Parello (Consultant)
 Jim Weldon, Denver Water (Owner)
 Tom Kelly, Southern Cal Edison (Owner - retired)
 George Mills, Ohio (State-retired)
 Jim Simons, North Carolina (State)

Scholarship Committee**John Moyle, Chair, New Jersey**

Dave Benner, Wyoming
 Raul Silva, Massachusetts
 Jeris Danielson, Danielson
 & Associates
 George Mills, GEM Consulting

Regional Reviewers

NE: Bob Finucane
 SE: Steve Partney
 MW: Jim Alexander
 W: Jason Boyle

Student Education Outreach Committee

Bruce Tschantz, Chair, Professor Emeritus, Univ. of Tennessee
 Fares Abdo, Portland Cement Assoc., Birmingham, AL
 Theresa Andrejack, 2005-2006 ASDSO Scholarship winner,
 Drexel, Philadelphia, PA
 Ken Bosar, Christopher Burke Engr., Indianapolis, IN
 Meg Galloway, Wisconsin DNR
 Bill Irwin, USDA- NRCS, Washington, D.C.
 John Livingston, CH2M Hill, Redding, CA
 Dan Marks, Schnabel Engineering Consultants, Arden, NC
 Marty McCann, Stanford University, Stanford, CA
 Sky Medors, Lawson-Fisher Assoc., South Bend, IN
 Art Miller, Penn State University
 John Moyle, New Jersey DEP
 Milton Myers, USACE-WES, Vicksburg, MS
 Peter Nicholson, University of Hawaii
 Ken Smith, Indiana DNR
 Keith Thole, 2005-2006 ASDSO Scholarship winner (S. Illinois
 Univ), USACE - St. Louis
 Kelechi Uzochukwu, 2003-2004 ASDSO Scholarship winner
 (North Carolina A&T State University), Schnabel Engineering,
 Alpharetta, Georgia 30005
 Sarah Mayfield, ASDSO, Lexington, KY

USSD Liaisons to Student Outreach

Don Basham, USACE
 Peggy Harding, FERC
 Dan Johnson, MWH

Technical Journal Editorial Committee**Keith Ferguson, Kleinfelder**

Don Millikan, Southern Cal Ed., retired, CA
 Al Davis, Alton P. Davis, Jr. Consulting Engineers
 Michele Lemieux, Montana
 Jim Gallagher, State of New Hampshire
 John France, URS Corp.
 Mark Schultz, California

Technical Training Program Committee**Randy Bass, Chair, Schnabel Engineering**

Paul Schweiger, Gannett Fleming
 Dave Gutierrez, California
 Rodney Tornes, Ohio

USSD Liaisons to Training

Walt Davis, Seattle City Light
 Doug Boyer, Bureau of Reclamation
 Dan Mahoney, FERC

TASK FORCES/WORK GROUPS**Model Program Guidance Documents**

Mark Ogden, OH (Chair)
 Steve Verigin, CA
 Linda Hyatt, WI
 Brian Long, WV
 John Ritchey/John Moyle, NJ
 Bob Dalton, AMAC
 Bill Bingham, AMAC

Model Program Update Task Force

Dave Gutierrez, CA (Chair)
 Mark Ogden, OH
 Linda Hyatt, WI
 Robert Dalton, Vasconcelles Engineers
 Brian Long, WV
 John Moyle, NJ
 Bill Bingham, Gannett Fleming

NRCS EAP Guideline Task Force

Bill Irwin, NRCS
 Larry Caldwell, NRCS
 Mark Locke, NRCS
 Bruce Harrington, Maryland
 Marilyn Thomas, Kentucky
 Tom Sanburg, Montana
 Brian Becker, US Fish & Wildlife
 Dan Seibert, National Watershed Coalition

Organization Review Task Force (Complete)

Established in the 2001-2002 Action Plan to review options of non-voting members to become more involved in the leadership of ASDSO.

Steve Verigin, Chair

Matt Lindon, Utah
 Laurence Siroky, Montana
 Mark Ogden, Ohio
 Leon Smothers, Kentucky
 Don Martino, Pennsylvania
 Jim Weldon, Denver Water Board
 Eric Ditchey, McCormick-Taylor

CHAPTERS

COUNCIL FOR SAFE DAMS EXECUTIVE COMMITTEE

Eric Ditchey, P.E., Chair, McCormick, Taylor & Associates
 Thomas Fitzgerald, P.E., Schnabel Engineering Associates, Inc.
 David (Dave) K. Burd, Director, Merrill Creek Reservoir
 Leo J. Coakley, P.E., P.P., Vice President, Hatch, Mott MacDonald
 Keith A. Pytlik, P.E., Senior Engineer/Projects Manager
 North Jersey District Water Supply Commission
 John H. Moyle, PE, Department of Environmental Protection, NJ
 John Ritchey, PE, Department of Environmental Protection, NJ
 Dennis Dickey, Department of Environmental Protection, PA
 Mike Conway, P.E., P.L.S., Department of Environmental Protection, PA
 Christopher M. Hager, PE, Langan Engineering
 Dick Horvath, Gannett Fleming
 Ken Fosnaught, Lake Meade Property Owners Association
 Christopher S. Adams, P.E., President, Civil Dynamics, Inc.
 Joseph R. Kula, P.E., Vice President, URS Corporation
 Anthony L. Fernandes, P.E., Manager, Engineering, Design & Construction, Aqua Pennsylvania, Inc.
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Meg Galloway, Wisconsin

Levee Issue

Mark Ogden, Ohio

National Dam Safety Review Board

Organized by the NDSPA, ASDSO has five positions on this Board appointed by FEMA.

Laurence Siroky, Montana
 Ken Smith, Indiana
 John Moyle, New Jersey
 Brian Long, West Virginia
 Jack Byers, Colorado

National Hydropower Association

Bill Jordan, State of Vermont

National Watershed Coalition Liaison

One person to coordinate with the NWC, attend meetings on behalf of ASDSO. Report back to ASDSO Board and carry Board direction to the NWC.

Ed Fiegle, Georgia

NDSPA NID Work Group

ASDSO representatives to the NDSPA National Inventory of Dams Subcommittee.

Tony Niles, Chair, Corps
 Tom Woosley (ASDSO/MT)
 Jim Alexander (ASDSO/MO)
 Tim Schaal (ASDSO/SD)
 Dave Simon (FERC)
 Mark Locke (USDA/NRCS)
 Gene Zeisel (FEMA)

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ASDSO representatives to NDSPA Research Subcommittee.

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 Hal Van Aller (ASDSO/MD)
 John Ritchey (ASDSO/NJ)
 John Vrymoed, (ASDSO/CA)
 William Myers (USACE)
 Darrel Temple (USDA/ARS)
 Dan Mahoney (FERC)
 Gene Zeisel (FEMA)
 Jon Phillippe (Alternate)
 Jason Boyle, ND (Alternate)
 Bob Dalton (Private Sector)

NDSPA Training Work Group

ASDSO is represented on the federal training subcommittee under the National Dam Safety Program. This subcommittee is responsible for developing training programs under the NDSP's training mandate. The subcommittee will also be the National Training Workshop task force, which will develop the topic agenda, and all necessary elements of the annual national dam safety training workshop. To be held at Emmitsburg every February.

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 Joe Bills (FEMA)
 Gene Zeisel (FEMA)
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NDSPA Performance Measures Work Group

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 Rita Henry (FEMA)
 Gene Zeisel (FEMA)
 Gus Tjoumas (FERC)
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 James Demby, U.S. Department of Agriculture, Forest Service
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 Rita Henry, DHS/FEMA
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 Don Kirkwood, Mine Safety and Health Administration
 Steven Knecht, State of Montana
 Enrique Matheu, Department of Homeland Security, Office of Infrastructure Protection
 Tony Niles, U.S. Army Corps of Engineers

USSD Coordination

ASDSO president

APPENDIX B

Association of State Dam Safety Officials

Board of Directors and State Representatives Resolution Number 1-2006

WHEREAS, levee failures following Hurricane Katrina caused loss of life and property damage, and

WHEREAS, levees and dams share many aspects of design, construction, inspection, maintenance, hazard potential, emergency action planning, and security, and

WHEREAS, both levee safety and dam safety programs are critical to public safety and protection of the environment; and

WHEREAS, due to the potential damage posed by levees nationwide, the U. S. Congress is considering legislation (H. R. 4650) to conduct an inventory and assessment of levees, and to establish a national levee safety program administered by the US Army Corps of Engineers, and

WHEREAS, this national program establishes an incentive program for states to administer levee regulatory programs, and

WHEREAS, if state dam safety programs are tasked with the additional responsibility for levee safety, many states will require additional resources to administer effective levee and dam safety programs,

NOW THEREFORE BE IT RESOLVED, by the Board of Directors and the State Representatives of the Association of State Dam Safety Officials, meeting on June 7, 2006, that the Association of State Dam Safety Officials supports passage of H. R. 4650 and the establishment of a National Levee Safety Program, which will enhance the efforts of the states to improve the conditions of levees that protect lives and property. This support is given provided that the proposed program contains levee safety focused funding provisions, is not an unfunded mandate from the federal government, and does not propose redirecting the existing limited federal and state resources dedicated to the safety of dams. Additionally, the support is given provided that the system used to classify the hazard potential of a levee is similar to the current system used to classify the hazard potential of a dam.



Kenneth E. Smith
President

June 2, 2006

APPENDIX C

2005 Statistics on Dams and State Safety Regulation

| State | Total Dams in National Inventory | Dams Under State Regulation ² | | State-Determined Deficient Dams ³ | | | State Dam Safety Budget | State Staff Dedicated to Dam Safety Regulation | |
|----------------|----------------------------------|--|---------------|--|--------------|------------|-------------------------|--|-----------------|
| | | Total | HH | Total | HH | SH | | Total FTEs | Dams Per FTE |
| Alabama | 1,403 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA |
| Alaska | 105 | 82 | 18 | 29 | 7 | 7 | 100,500 | 1 | 82 |
| Arizona | 334 | 252 | 93 | 34 | 28 | 6 | 715,801 | 9 | 28 |
| Arkansas | 1,207 | 1,172 | 102 | 21 | 19 | 1 | 338,700 | 3.5 | 335 |
| California | 1,483 | 1,255 | 334 | 53 | 32 | 18 | 8,145,000 | 60 | 21 |
| Colorado | 1,688 | 1,898 | 340 | 19 | 7 | 3 | 1,735,600 | 15 | 127 |
| Connecticut* | 723 | 706 | 238 | 22 | 9 | 10 | 472,000 | 4.3 | 164 |
| Delaware | 61 | 37 | 9 | 4 | 3 | NR | 317,230 | 0.5 | 74 |
| Florida | 780 | 804 | 72 | 45 | 8 | 30 | NR | NR | 10 |
| Georgia | 4,158 | 4,874 | 437 | 112 | 112 | NR | 704,013 | 9 | 542 |
| Hawaii | 123 | 131 | 96 | 48 | 30 | 6 | 164,000 | 1.75 | 75 |
| Idaho | 396 | 372 | 96 | 5 | 2 | 3 | 317,547 | 7.5 | 50 |
| Illinois | 1,318 | 1,434 | 184 | NR | NR | NR | 306,000 | 4.8 | 299 |
| Indiana | 1,073 | 938 | 241 | 445 | 76 | 154 | 425,000 | 5 | 188 |
| Iowa | 3,275 | 3,272 | 78 | 18 | 10 | 8 | 110,000 | 1.25 | 2,618 |
| Kansas | 5,650 | 5,993 | 183 | 41 | 15 | 15 | 616,540 | 7.16 | 837 |
| Kentucky | 1,055 | 1,100 | 177 | 90 | 30 | 41 | 1,550,420 | 14 | 79 |
| Louisiana | 367 | 534 | 29 | 24 | 14 | 5 | 480,316 | 8 | 67 |
| Maine | 639 | 841 | 25 | 13 | 3 | 10 | 36,914 | 1.5 | 561 |
| Maryland | 303 | 389 | 66 | 27 | 8 | 5 | 468,020 | 4.75 | 82 |
| Massachusetts* | 1,500 | 2,977 | 333 | 40 | 22 | 18 | 500,000 | 4.0 | 744 |
| Michigan | 955 | 1,158 | 79 | 23 | 5 | 7 | 282,550 | 2.8 | 414 |
| Minnesota | 1,059 | 1,275 | 310 | 79 | 5 | 22 | 305,000 | 3.4 | 375 |
| Mississippi | 3,322 | 3,633 | 39 | 16 | 14 | NR | 267,767 | 4.3 | 845 |
| Missouri | 4,850 | 661 | 455 | 36 | 35 | 1 | 254,464 | 5 | 132 |
| Montana | 3,301 | 2,882 | 102 | 15 | 11 | 4 | 366,531 | 5.25 | 549 |
| Nebraska | 2,156 | 2,156 | 129 | NR | NR | NR | 434,652 | 5.7 | 378 |
| Nevada | 497 | 530 | 147 | 25 | 4 | 2 | 225,514 | 2 | 265 |
| New Hamp. | 659 | 3,614 | 89 | 8 | NR | 4 | 677,294 | 8 | 452 |
| New Jersey | 805 | 1,698 | 202 | 193 | 48 | 116 | 1,254,000 | 20 | 85 |
| New Mexico | 521 | 393 | 170 | 104 | 77 | 27 | 484,100 | 6 | 66 |
| New York | 1,971 | 5,030 | 384 | 51 | 51 | NR | 977,072 | 8.21 | 613 |
| North Carolina | 2,720 | 4,482 | 1006 | 143 | 93 | 28 | 1,162,608 | 16 | 280 |
| North Dakota | 784 | 3,426 | 28 | 22 | 5 | 13 | 200,000 | 4.5 | 761 |
| Ohio | 1,640 | 1,664 | 411 | 825 | 170 | 285 | 1,415,024 | 12.5 | 133 |
| Oklahoma* | 4,672 | 4,527 | 185 | 31 | 8 | 3 | 122,000 | 2.5 | 1,811 |
| Oregon | 875 | 1,237 | 122 | 3 | 2 | 1 | NR | 2.2 | 562 |
| Pennsylvania | 1,482 | 3,134 | 785 | 325 | 225 | 46 | 2,039,600 | 24 | 131 |
| Puerto Rico | 34 | 36 | 34 | NR | NR | NR | 600,000 | 9 | 4 |
| Rhode Island | 185 | 657 | 17 | 5 | NR | 1 | 113,976 | 1.2 | 548 |
| South Carolina | 2,388 | 2,377 | 153 | 4 | 2 | 1 | 200,000 | 2.5 | 951 |
| South Dakota | 2,452 | 2,354 | 47 | 61 | 8 | 7 | NR | 1.5 | 1,569 |
| Tennessee | 1,043 | 623 | 148 | 7 | 3 | 2 | 339,278 | 8 | 78 |
| Texas | 7,069 | 7,510 | 815 | 108 | 103 | 3 | 552,886 | 7 | 1,073 |
| Utah | 752 | 5,821 | 188 | NR | NR | NR | 657,900 | 6 | 970 |
| Vermont | 363 | 563 | 57 | 1 | 1 | NR | 299,000 | 2.2 | 256 |
| Virginia | 1,591 | 1,400 | 136 | 120 | 49 | 38 | 678,569 | 6.25 | 224 |
| Washington | 856 | 957 | 145 | 28 | 16 | 12 | 1,967,028 | 8.2 | 117 |
| West Virginia | 555 | 571 | 267 | 36 | 33 | 3 | 479,773 | 6 | 95 |
| Wisconsin | 1,154 | 940 | 214 | 2 | NR | NR | 518,750 | 6.25 | 150 |
| Wyoming | 1,420 | 1,410 | 79 | NR | NR | NR | 2,039,600 | 4.98 | 283 |
| TOTAL | 79,772 | 95,780 | 10,094 | 3,361 | 1,403 | 966 | 36,418,537 | 363.45 | 415 (av) |

*CT, MA, and OK did not submit budget, FTE, or deficient dams data for 2005. Figures shown are from 2004.

APPENDIX D

National Dam Safety Program (Available on the Web at FEMA)

Guidelines for Dam Safety

The Interagency Committee on Dam Safety (ICODS) developed federal guidelines on dam safety. CD-ROM copies of the guidelines, Federal Guidelines for Dam Safety (FEMA 93CD), can be ordered from the [FEMA Publication Distribution Center](#).

- [Emergency Action Planning for Dam Owners \(FEMA 64\)](#) (PDF 319 KB)
- [Earthquake Analyses and Design of Dams \(FEMA 65\)](#) (PDF 767 KB, [TXT](#) 178 KB)
- [Federal Guidelines for Dam Safety \(FEMA 93\)](#) (PDF 372 KB)
- [Selecting and Accommodating Inflow Design Floods for Dams \(FEMA 94\)](#) (PDF 2 MB, [TXT](#) 104 KB)
- [Glossary of Terms \(FEMA 148\)](#) (PDF 191 KB)
- [Hazard Potential Classification System for Dams \(FEMA 333\)](#) (PDF 146 KB)

Technical Manuals and Guides

- [Technical Manual for Dam Owners: Impacts of Animals on Earthen Dams \(FEMA 473\)](#) (PDF 5.5 MB, [TXT](#) 281 KB)
- [Technical Manual for Dam Owners: Impacts of Plants on Earthen Dams \(FEMA 534\)](#) (PDF 2.8 MB, [TXT](#) 182 KB)
- [Dam Owner's Guide to Plant Impact on Earthen Dams \(FEMA L-263\)](#) (PDF 1.5 MB, [TXT](#) 11 KB)
- [Dam Owner's Guide to Animal Impacts on Earthen Dams \(FEMA L-264\)](#) (PDF 694 KB, [TXT](#) 14 KB)
- [Conduits through Embankment Dams: Best Practices for Design, Construction, Identification and Evaluation, Inspection, Maintenance, Renovation, and Repair \(FEMA L-266\)](#) (PDF 4.7 MB, [TXT](#) 9.7 KB)

Research Needs Workshop Reports

Since 1999, National Dam Safety Program (NDSP) research funds have been allocated to workshops in nine priority areas. CD-ROM copies can be ordered from the [FEMA Publication Distribution Center](#).

- [Seepage through Embankment Dams \(FEMA 535\)](#) (PDF 5 MB, [TXT](#) 541 KB)
- [Dam Spillways \(FEMA 536\)](#) (PDF 38.5 MB, [TXT](#) 251 KB). FEMA 536 by section:
 - [Part 1](#) (PDF 4.4 MB, [TXT](#) 130 KB)
 - [Part 2](#) (PDF 2.7 MB, [TXT](#) 12 KB)
 - [Part 3](#) (PDF 2.6 MB, [TXT](#) 16 KB)
 - [Part 4](#) (PDF 3.2 MB, [TXT](#) 16 KB)
 - [Part 5](#) (PDF 4.5 MB, [TXT](#) 6 KB)
 - [Part 6](#) (PDF 3.4 MB, [TXT](#) 11 KB)
 - [Part 7](#) (PDF 4.1 MB, [TXT](#) 6 KB)
 - [Part 8](#) (PDF 3.9 MB, [TXT](#) 9 KB)
 - [Part 9](#) (PDF 4.5 MB, [TXT](#) 7 KB)
 - [Part 10](#) (PDF 3.8 MB, [TXT](#) 11 KB)
 - [Part 11](#) (PDF 1.4 MB, [TXT](#) 33 KB)

- Spillway Gates (FEMA 537) ([PDF](#) 95 MB)
- Hydrologic Issues for Dams (FEMA 538) ([PDF](#) 3.6 MB, [TXT](#) 422 KB)
- Impacts of Plants and Animals on Earthen Dams (FEMA 540) ([PDF](#) 846 KB, [TXT](#) 50 KB)
- Embankment Dam Failure Analysis (FEMA 541) ([PDF](#) 8.9 MB, [TXT](#) 434 KB)

FEMA 541 by section:

- Part 1 ([PDF](#) 3.2 MB, [TXT](#) 237 KB)
- Part 2 ([PDF](#) 3.3 MB, [TXT](#) 89 KB)
- Part 3 ([PDF](#) 2.8 MB, [TXT](#) 109 KB)
- Outlet Works ([PDF](#) 4.4 MB, [TXT](#) 332 KB)
- Risk Assessment for Dams ([PDF](#) 80 MB)

National Dam Safety Program Information

- The National Dam Safety Program: 25 Years of Excellence ([PDF](#) 539 KB, [TXT](#) 14 KB)

Videos and Software

- **Emergency Action Planning Video**

The video captures federal and state dam safety experts discussing the various components of an Emergency Action Plan (EAP) and how to assess whether a dam requires an EAP. To order at no cost, please contact Rita Henry at rita.henry@dhs.gov. Include your name and complete mailing address in the e-mail. Limited copies of the video are available.

- **Dam Seepage Monitoring System**

The Dam Seepage Monitoring System is an interactive tool designed to help owners and operators store instrument data on their personal computers and plot the data for evaluation, thereby improving the safety of their dams.

1. [Download the Dam Seepage Monitoring System](#) from the Association of State Dam Safety Officials Web site.
2. Select the SETUP.EXE file to run the installation program and install the Dam Seepage Monitoring System.
3. Read the User Guide by selecting "Dam Seepage Monitoring System On-line Help" from the "Help" menu.

Many of the publications can be ordered from the **FEMA Publication Distribution Center**. Call 1-800-480-2520 for ordering information (Fax: 301-362-5335).

FEMA Distribution Center
P.O. Box 2012
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APPENDIX E

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APPENDIX G

Statement of Revenues & Expenditures (July 1, 2005- June 30, 2006)*

| REVENUES | | |
|--|-----------------------|-----------------------|
| | <u>BUDGET</u> | <u>ACTUAL</u> |
| Dues | \$162,000.00 | \$165,135.00 |
| Sustaining Members | \$55,000.00 | \$60,000.00 |
| Donations | \$26,600.00 | \$27,117.00 |
| Seminars/Workshops | \$169,853.00 | \$121,281.00 |
| Annual Conference | \$265,970.00 | \$367,299.00 |
| Advertising Revenues | \$10,000.00 | \$15,275.00 |
| Publication Sales | \$9,000.00 | \$7,978.00 |
| Contracts | \$597,353.00 | \$622,698.00 |
| Interest | \$10,000.00 | \$7,871.00 |
| All Other Revenues (incl. NID from escrow) | <u>\$22,500.00</u> | <u>\$19,470.00</u> |
| TOTAL REVENUES | \$1,328,276.00 | \$1,414,124.00 |
| EXPENDITURES | | |
| <u>Controllable Expenses</u> | - | |
| Salaries | \$223,114.00 | \$220,807.00 |
| Travel & Meetings | \$124,249.00 | \$145,287.00 |
| Printing & Copying | \$56,650.00 | \$33,411.00 |
| Postage | \$26,519.00 | \$27,879.00 |
| Supplies & Equipment | \$18,108.00 | \$16,557.00 |
| Independent Contractors | \$251,128.00 | \$244,379.00 |
| Scholarships | \$5,000.00 | \$5,000.00 |
| Annual Conference | \$220,009.00 | \$273,330.00 |
| Newsletter/Journal | \$43,000.00 | \$50,723.00 |
| Dues/Subscriptions/Acquisitions | \$2,000.00 | \$4,138.00 |
| Staff Education | \$2,000.00 | \$3,075.00 |
| ASDSO Committee Expenses | \$20,500.00 | \$20,697.00 |
| Misc. (includes Red Cross donation) | <u>\$10,200.00</u> | <u>\$12,106.00</u> |
| Subtotal | \$1,002,477.00 | \$1,057,389.00 |
| <u>Semi-Controllable Expenses</u> | | |
| Fringe Benefits | \$46,319.00 | \$42,327.00 |
| Payroll Taxes | \$16,153.00 | \$16,153.00 |
| Insurance | \$4,260.00 | \$4,260.00 |
| Depreciation | \$6,000.00 | \$6,000.00 |
| Bank Charges | \$1,000.00 | \$1,010.00 |
| Charge Card Charges | \$14,000.00 | \$11,921.00 |
| NID/Training Grants to States | <u>\$173,487.00</u> | <u>\$171,815.00</u> |
| Subtotal | \$261,219.00 | \$253,486.00 |

| <u>Fixed Expenses</u> | | |
|-------------------------------|------------------------------|------------------------------|
| Rent | \$27,084.00 | \$27,084.00 |
| Lease Contracts | \$20,456.00 | \$19,539.00 |
| Maintenance | \$100.00 | \$1,125.00 |
| Auditing Fees | <u>\$12,000.00</u> | <u>\$12,500.00</u> |
| Subtotal | \$59,640.00 | \$60,248.00 |
| TOTAL EXPENDITURES | | |
| | <u>\$1,323,336.00</u> | <u>\$1,371,123.00</u> |
| Increase in Net Assets | \$4,940.00 | \$43,001.00 |

Fund Balance

Out of the \$592,491 that ASDSO is holding at 6/30/06:

| | | |
|--------------------------|------------------|---|
| NID State Grants | 44,600.00 | |
| INEL Grants/State Accts. | 12,000.00 | |
| West Region | <u>32,464.00</u> | The CSD and the South have separate accounts. |
| Total "Encumbered" | 89,064.00 | |

Therefore the Fund Balance at 6/30/06 is 503,427.00

* Final accounting audit pending

