

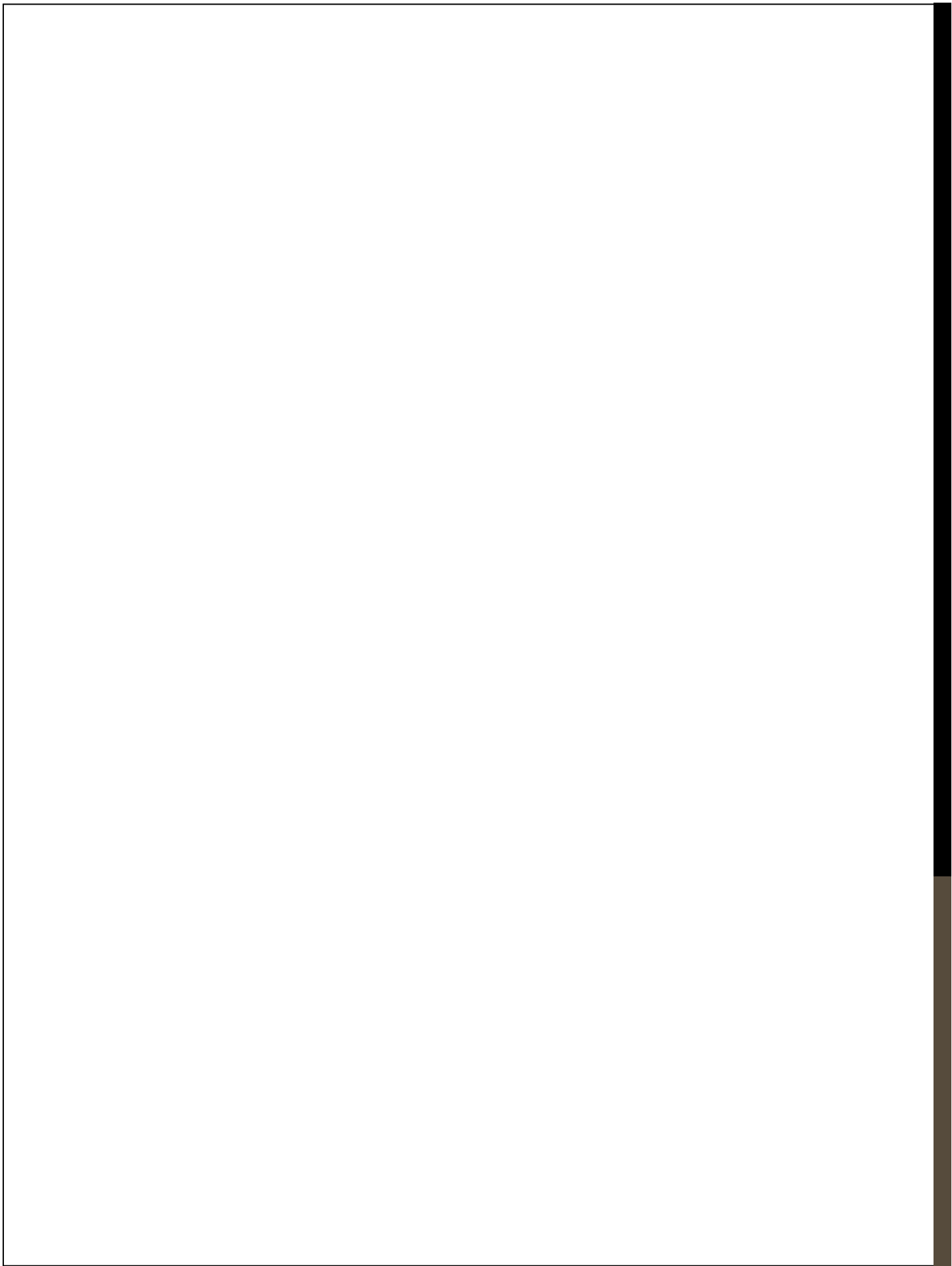


2010 National Rehabilitation Project of the Year: Prettyboy Dam near Baltimore, MD

2010-11 ANNUAL REPORT

ASSOCIATION OF STATE DAM SAFETY OFFICIALS

For the Fiscal Year Ending June 30, 2011



The 2010-11 Annual Report of the Association of State Dam Safety Officials



I am proud to present to you the Fiscal Year 2011 Annual Report for the Association of State Dam Safety Officials. Led by a dedicated team of volunteers—from state dam safety programs, other levels of government and the private sector—coupled with a committed staff, our organization was able to hit the majority of our goals as laid out in the 2007-11 Strategic Plan. I applaud everyone who has worked and continues to work hard on behalf of ASDSO and for dam safety nationwide.

Our success can also be attributed to those who painstakingly and carefully created our Strategic Plan, which acts as a roadmap as we create and carry out projects that help us achieve the goals in the plan. In fact, this summary is organized by the eight goals created in the Strategic Plan.

This past year was full of firsts:

- The first annual conference to attract more than 1,000 participants (in Seattle, WA).
- The first year that we held more classroom and distance learning courses than ever before.
- The year that we formed two new technical committees—focusing on dam failure investigations and creating engineering design review guidelines for state inspectors.

We also became more active in national decision-making that affects those working in the dam safety engineering and policymaking fields. ASDSO now holds a seat on the Intergovernmental Flood Risk Management Committee, has representation on the National Committee for Levee Safety and the International Levee Guidebook task group, and continues to serve on the National Dam Safety Review Board and the DHS Dams Sector Government and Sector Coordinating Councils.

We owe our success to enthusiastic members, generous donors and great planning and leadership. As we head into 2012, we continue to be aware of these virtues and never take them for granted. We are now preparing the Strategic Plan for the next five years. Please continue to support ASDSO as we take on bigger and even more challenging goals.

Sincerely,

John H. Moyle, P.E.
President

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Maureen C. Hogle, Meetings and Marketing

Susan A. Sorrell, Training Program Director

Jennifer Burns, Office Administration

Sarah McCubbin-Cain, Information Specialist/Librarian

Brittany Lewis, Student Assistant

Mark Ogden, P.E., Project Manager

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Division of Water Rights

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Department of Ecology

WEST VIRGINIA
Brian R. Long
Dept. of Environmental
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Meg Galloway
Department of Natural
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WYOMING
Larry L. Stockdale, State
Engineer's Office

IMPROVE THE EFFICIENCY AND EFFECTIVENESS OF STATE DAM SAFETY PROGRAMS



PROJECTS

- Facilitating networking and participation in ASDSO.
- State legislative advocacy.
- State newsletters and improved communication with states.
- Collecting State performance data and measuring progress.
- Providing educational opportunities and tools for State programs.
- Peer reviews for State programs.
- Mentoring programs for new State representatives and members.
- Coordination of State representation on national committees.

The ASDSO Peer Review Program

The ASDSO Peer Review Committee took a break from performing state reviews in FY11 to concentrate on updating and improving the ASDSO Peer Review Manual. A new review report template was completed and will be used for state reviews scheduled for FY12.

ASDSO was honored to be asked by the Department of the Interior, Bureau of Reclamation to perform an independent review of its dam safety program. The review took place in March 2011. Independent panel reviewers included Dan Mahoney (FERC), Don Basham (Stantec), Neil Parrett (retired, Reclamation) and Bill Bingham (Gannett Fleming).

Since 1990, ASDSO has performed over 40 Peer Reviews, including 28 states and many of the largest federal dam safety programs and several private sector utility companies.

Thanks go to the Peer Review Committee for contributing their time and efforts towards the much needed program update. (For a complete list of all committee members go to Appendix 1.)



Tracking State Dam Safety Program Improvements and Dam Data

Collecting and analyzing state program performance data is key to meeting Goal 1. Utilizing the benchmarks established in the Model State Dam Safety Program as well as trends over time, ASDSO's goal is to show states how their programs compare to the model and other states; and, to assist the National Dam Safety Program, National Dam Safety Review Board with measuring progress in the states that receive FEMA State Assistance Grants.

ASDSO holds 26 years' worth of data on state dam safety program performance. 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. Yet, due to lack of focused time and resources, ASDSO was never able to refine, analyze and develop reports on state performance trends over time.

In FY11, ASDSO hired new project manager Mark Ogden—retired Ohio State Representative—to analyze, among other tasks, the available state performance data. The major goal was to see if progress was being made since the beginning of the National Dam Safety Program in 1996. An additional goal was to look back all the way to 1984, when the first set of state data was collected, to study progress.

With Ogden's efforts, ASDSO was able to provide telling trends to a) the state dam safety programs, b) policymakers at state and federal levels and c) to the National Dam Safety Review Board. State-specific reports were generated in early 2011 and provided to each state. These reports were provided to federal lawmakers in March 2011 in support of the American Society of Civil Engineer's National Policy Week in Washington, DC. (Of note: 2010 data was not collected during the reporting cycle due to budget constraints at the FEMA National Dam Safety Program. It is hoped that this data will be collected before 2012.)

Provided in the next few pages is the national summary of ASDSO state performance trends analyses.

Dam Safety



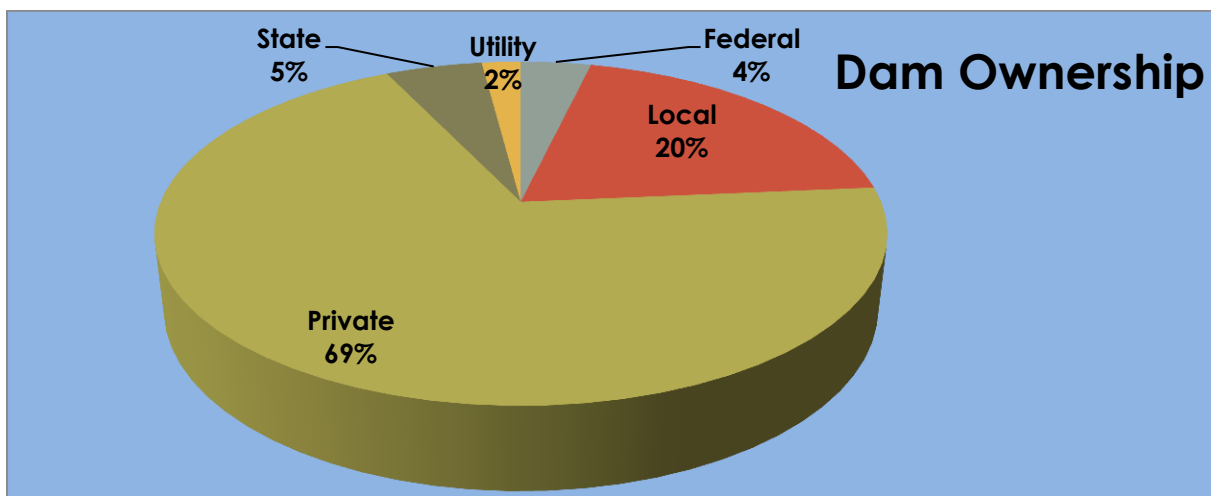
Dams are a critical part of the nation's infrastructure, providing vital benefits such as flood protection, water supply, hydropower, irrigation and recreation. Yet thousands of US dams have the potential to fail with tragic consequences. Our nation's dams are aging and deteriorating while downstream populations are increasing; this situation demands greater attention to and investment in measures that reduce risks to public safety and economic assets.

State Dam Safety Programs regulate 80% of the 84,000 dams listed in the National Inventory of Dams (NID). State dam safety programs inspect existing dams, oversee remediation of deficient dams, and work with local officials and dam owners on emergency preparedness. Many state programs lack adequate budgets, staff and authority to ensure public safety.

Improvement in State Dam Safety Program Performance

Statistics

Total NID Dams	83,987
Total NID High Hazard Dams	13,859
Total State Regulated Dams	67,194
Total State Regulated High Hazard Dams	10,856



Unlike Most Components of US infrastructure, the majority of dams listed in the National Inventory of Dams are privately owned. (Dam ownership percentages are based on the 2009 NID dataset for total NID-sized dams.)

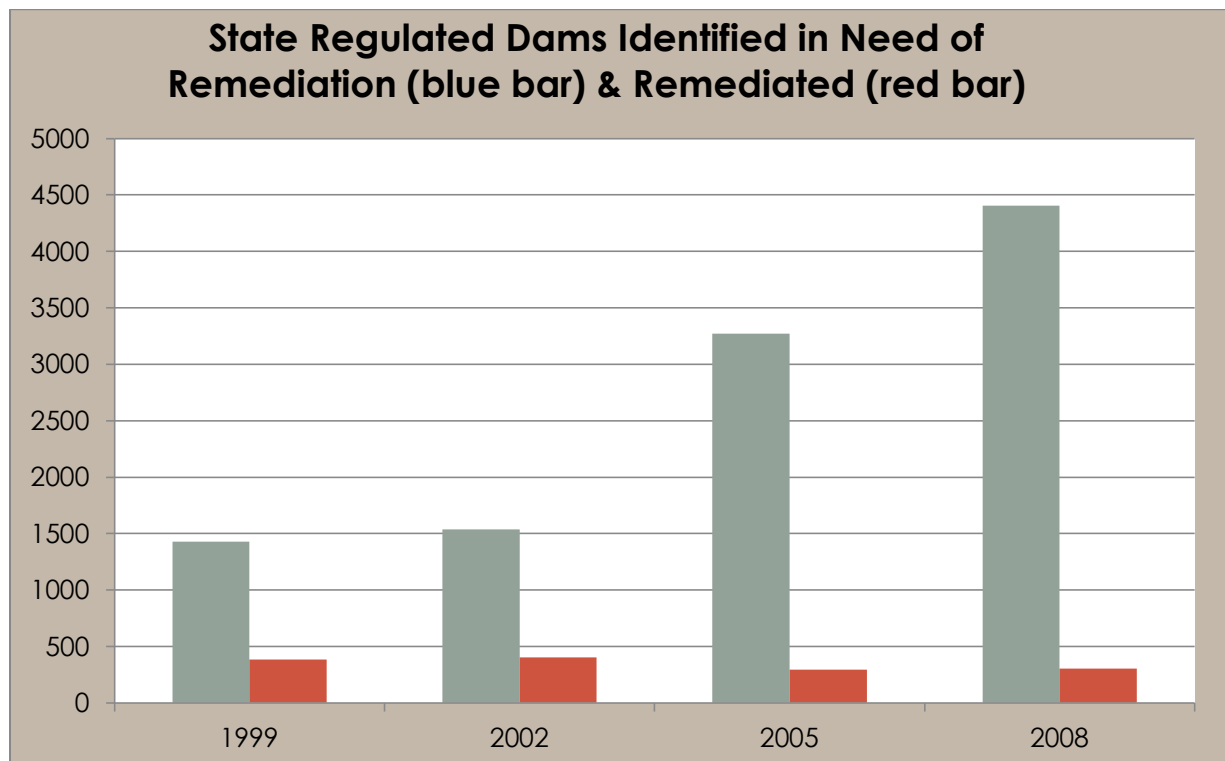
Building State Programs to Address Deficient Dams

The National Dam Safety Program, in cooperation with the Association of State Dam Safety Officials (ASDSO), developed the Model State Dam Safety Program to assist state officials in initiating or improving their state programs. The model outlines the key components of an effective dam safety program and provides guidance on the development of more effective and sustainable state programs to minimize risks created by unsafe dams. It contains chapters on Legislative Authorities, Permitting, Inspection, Enforcement, Emergency Action Planning and Response, Education and Training, and Public Relations.

The following table presents the weighted average of state responses over time to a series of yes/no questions on the authorities for each chapter. The areas are listed and weighted by importance (weights indicated in parentheses). Higher percentages indicate greater alignment of the state programs with the model.

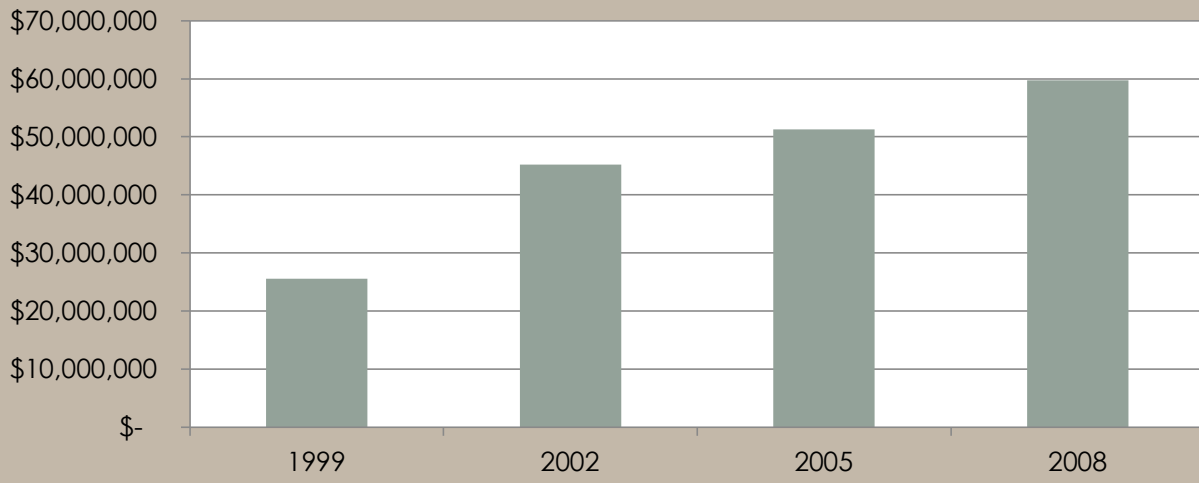
State Authorities	1989	1998	2008
Legislation (5)	70%	73%	84%
Inspection (4)	58%	67%	73%
Enforcement (4)	54%	68%	89%
EAP and Response (4)	66%	79%	69%
Permitting (3P)	51%	62%	73%
Education and Training (3)		59%	72%
Public Relations (1)		13%	29%
Overall Weighted Percentage	60%	66%	75%

Identifying the Problem

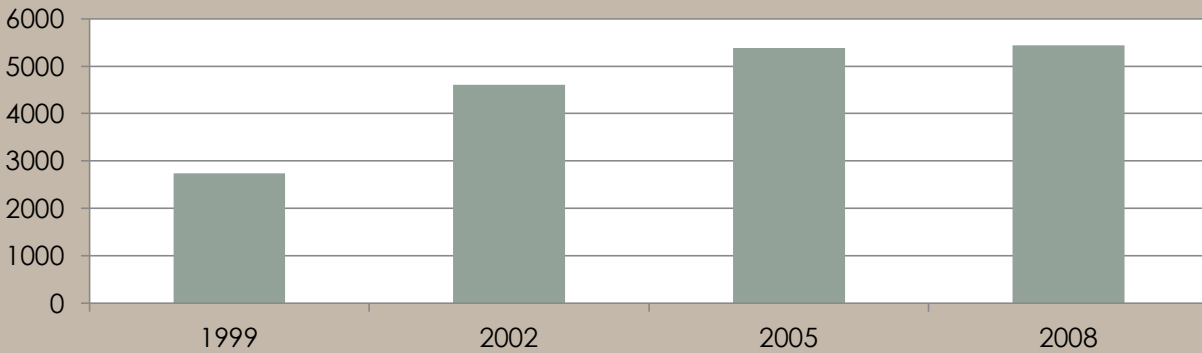


Advances in Resources for State Dam Safety Programs

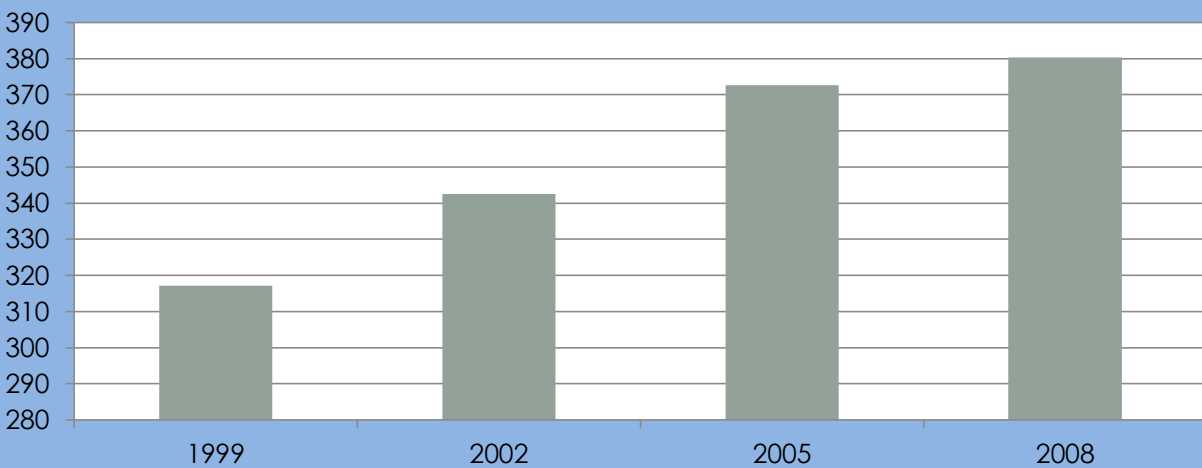
State Dam Safety Program Total Budget



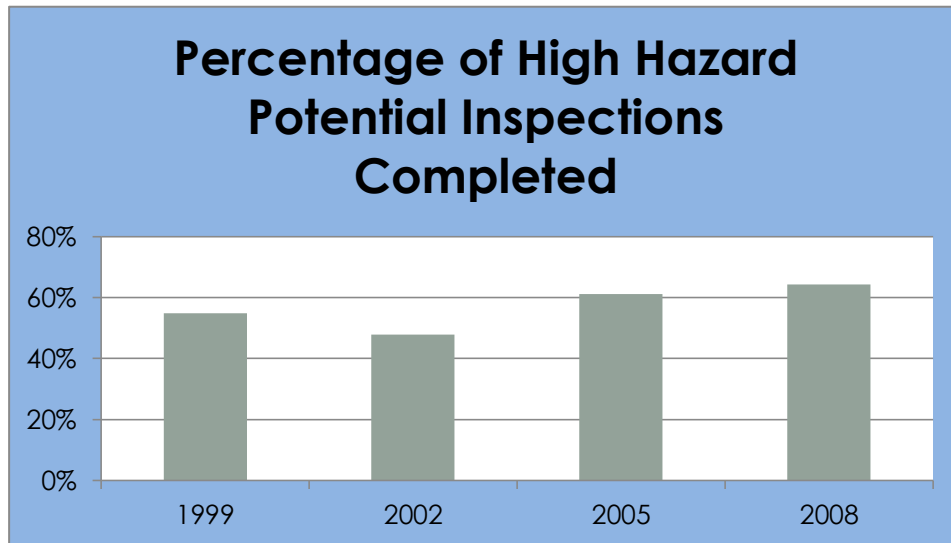
National Average Dam Safety Budget per Regulated High Hazard Potential Dam



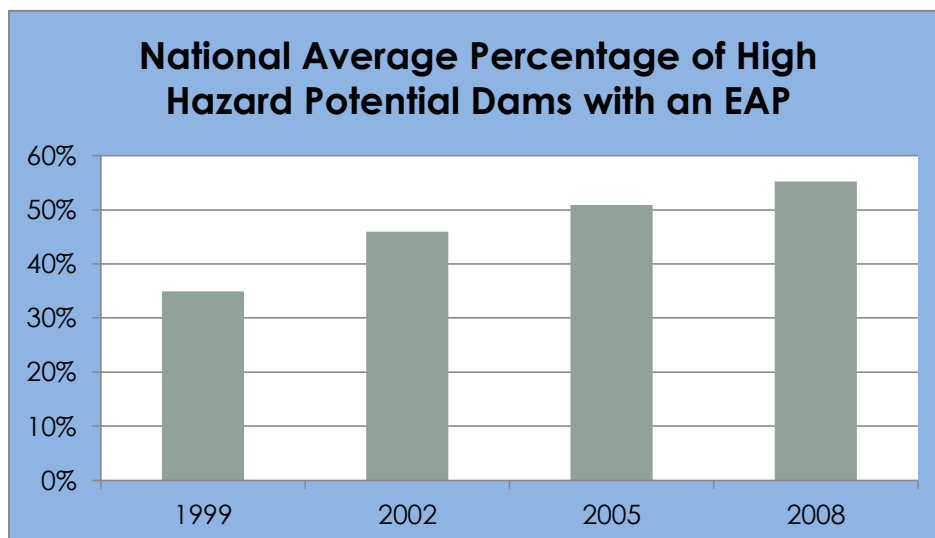
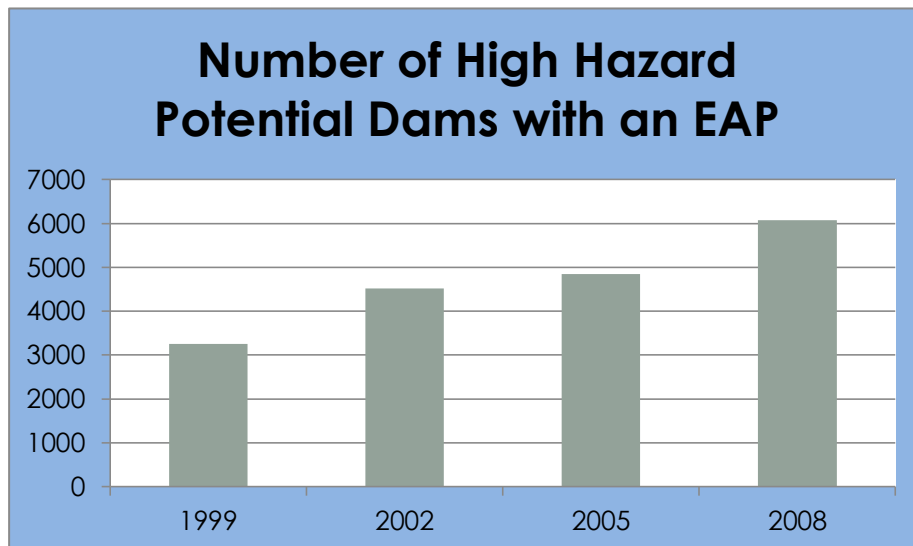
Total Staff (FTE)



Improvement in Inspection of High Hazard Potential State Regulated Dams



Improvement in Emergency Preparedness for High Hazard Potential Dams



ASDSO provided the following information to the National Dam Safety Program Review Board this year in support of the program's national performance measures for state dam safety programs.

Emergency Action Plans for High Hazard Potential Dams

- *Nationally the percentage of HH dams with an EAP has increased from 35% to 55% for the period 1999 to 2009.*
- *From 1999 to 2009 nearly every state has shown marked improvement in the number of EAPs for HH dams with no state showing a significant decrease. Many states had increases of several hundred to several thousand percent: Hawaii – 5600%, Puerto Rico - 3000%, Louisiana – 1100%, Pennsylvania – 1018%, Mississippi – 908%, New Mexico – 700%.*
- *Nationally for 1999 to 2009 the states averaged an increase of 380%. In just the last five reporting years (2005-2009) the states averaged a 92% increase.*
- *In 2008 nineteen states reported percentages of HH dams with an EAP at 90% or greater, up from just ten in 1999.*
- *There is still room for improvement with fifteen states still less than 50% of HH dams with an EAP.*

Inspections of High Hazard Potential Dams

- *In comparing 2008 to 1999, 27 states reported inspection activity for HH dams equal to 100% or greater with an additional seven states at 75% or greater (percentages in the range of 75% and above would likely represent no significant decrease in inspection activity due to scheduling fluctuations).*
- *From 1999 to 2008, fifteen states saw their inspection numbers double or more.*
- *In 2008 eight states reported decreases in their HH dam inspection numbers to less than 75% of their 2005 amounts. Unlike EAPs, inspection of HH dams has always been a high-priority activity for state dam safety programs. Decreases in inspection numbers have occurred with cuts in program resources because there was nowhere to go but down.*
- *The national average for the inspection of HH dams has increased slightly over the reporting period of 1999 to 2008.*

Identification/Remediation of Deficient High Hazard Potential Dams

- *The number of deficient HH dams reported from 1999 to 2008 increased by 418%, however the number of reported remediated HH dams only increased by 24% (reported through the DSPMT – not the NID).*
- *Increased inspection efforts by the state programs have resulted in the significant increase in the number of identified deficient HH dams. The fact that there was not a corresponding large increase in the number of HH dams remediated shows the need for increased enforcement efforts by states and for new rehabilitation and repair funding sources.*

Condition of Dams Reporting Improves the National Understanding of Where the Greatest Need for Rehab Is

- *Five states have determined the condition of 100% of their dams (report to the NID).*
- *Thirty states have determined the condition of more than 75% of their dams (reported to the NID).*

State Program Comparison to the Model State Program

The following pages show trends in state responses over time to a series of yes/no questions on the authorities for each chapter of the model program. The areas are weighted by importance to determine the national average (weights for each chapter are indicated on that page). Higher percentages indicate greater alignment of the state program with the model; lower percentages may indicate a need for improved authority. A value of less than 70% for a state has been highlighted to indicate potential concern for authorities in that area.

- *State program authorities showed significant improvement from 1989 to 1999 and again from 1999 to 2008 in every area of the model and in the overall weighted average.*
- *The area of Public Relations has the lowest overall scores, with only three programs with a percentage greater than 70. However, this is a newer area of the model and many states have shown marked improvement. In 1998, 39 states had a PR percentage of zero; yet there were only four states with a percentage of zero in 2008.*

At the beginning of the FY11 fiscal year, an ASDSO task group (funded in part by the National Dam Safety Program) was putting the finishing touches on a new-and-improved set of state performance measures. The goal was to get better state data and diminish the subjectivity that seemed to be inherent in the way questions were being answered in prior surveys.

ASDSO continues to work closely with the US Army Corps Topographic Engineering Center, which administers the National Inventory of Dams (NID) database. No NID data call was performed during the annual reporting year. Current NID data reflects the 2009 data call. (Data can be viewed at (<https://nid.usace.army.mil>))

Supporting Assistance Grants from FEMA

The major focus of the National Dam Safety Program is to provide assistance grants that allow states to continue to inspect dams and enforce safety standards even when state budgets fluctuate, as has clearly been happening over the past few years. ASDSO continues to inform federal legislators and leaders at FEMA about the necessity of these grants and provides proof, through the aforementioned performance reports, that they are effectively helping to improve state programs.

State Representation on ASDSO Committees & National Boards

The ASDSO Board of Directors ensures that there is state dam safety program representation on every ASDSO committee and task group (see Appendix 1). ASDSO continued to coordinate state dam safety program representation on several advisory groups in FY11. State representatives are now serving on the National Dam Safety Review Board and Workgroups, the Department of Homeland Security (DHS) Dams Sector Government Coordinating Council and Workgroups and the National Committee on Levee Safety.

Training & Tools for States Made Available in 2010-11

- Quarterly ASDSO Journal of Dam Safety.
- Annual State-By-State Dam Safety Program Performance Reports
- Monthly state newsletter
- Website Tools: Compilation of States' Use of FEMA State Assistance Grants
- State Surveys in 2010-11: *Tailings Dam Breach Methodology Survey for USSD Tailings Workshop, State Regulation of Containment Facilities for Confined Animal Feeding Operations, State Policies on Construction of Concrete Parapet Walls on Earth Embankments, Dam Owner Responsibility, State Dam Safety Size and Hazard Classification Schemes*
- Classroom courses on emergency action planning; construction inspection and plans and specs review; fundamentals of reinforced concrete.
- Webinars on: guidelines for assigning erodibility parameters to soil horizons for SITES analysis; pitfalls in quality control testing for earthfill; estimating permeability using empirical methods; fundamentals of hydrology for dam safety, hydraulics 101, filter design for embankment dams; roller-compacted concrete for water control structures; risk-based decision making for dams.
- Distribution of Guidelines and Flyers in conjunction with FEMA's National Dam Safety Program and the DHS Infrastructure Protection Dams Sector. Distributed in 2010-11:
 - DHS Dam Sector Website (housed at the ASDSO website)
 - DHS Self-Paced On-Line Courses: *Protective Measures*
 - DHS Dams Sector Reference documents: Estimating Loss of Life for Dam Failure Scenarios; Estimating Economic Consequences for Dam Failure Scenarios.
 - DHS State Awareness Workshop: Held June 22 in Madison, Wisconsin.
 - DHS Monthly Dams Sector Open Source Digest

Each issue of the ASDSO Journal on Dam Safety includes an article coordinated by state officials in one of the four ASDSO regions. Thanks go to the following individuals for their regional contributions to the journal this past fiscal year:

Vol. 8 Issue. 3 – *Monocacy Boulevard Dam in Karst Topography*, by Bruce Harrington, P.E., Maryland Dept. of the Environment and Ryan Tinsley, P.G., Michael Baker, Jr., Inc.

Vol. 8 Issue. 4 – *Have You Ever Seen the Rain? Georgia Did in 2009*, by Dallon T. Woosley, P.E., Program Manager, Georgia Safe Dams Program and *The Unpermitted Dam Initiative in Washington State*, By Douglas L. Johnson, P.E., Washington State Dam Safety Manager

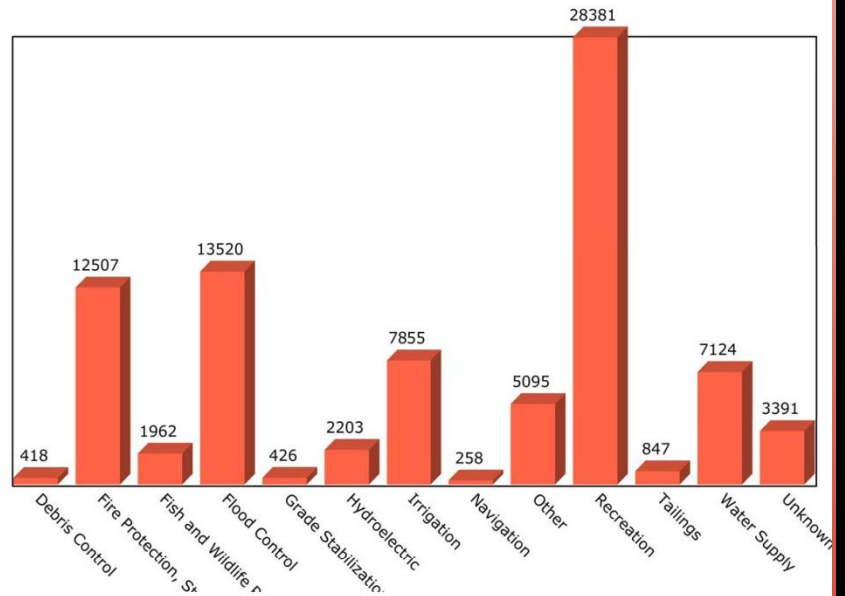
Vol. 9 Issue. 1 – *Small Dams: An Analysis of Breach Opening Geometry Utilized for 18 Dam Breach Models on Small Dams in Louisiana*, by Randy Denmon, P.E., P.L.S., Denmon Engineering, Inc.

Vol. 9 Issue. 2 – *Lake Delhi Dam: Record Rainfall, Faulty Gates and Inherent Design Issues; What Happened to the Lake Delhi Dam? A Summary of Lake Delhi Dam Breach Investigation*, by William Fiedler, P.E., Bureau of Reclamation, Wayne King, P.E., FERC, Neil Schwartz, P.E., USACE, Jonathan Garton, P.E., Iowa DNR, and, Lori McDaniel, C.P.M., Iowa DNR

Thanks go to all journal authors this year.

RAISE
AWARENESS OF
DAM SAFETY
AMONG THE
GENERAL
PUBLIC, MEDIA,
STATE AND
FEDERAL
GOVERNMENTS,
AND OTHER
STAKEHOLDERS

Dams By Primary Purpose



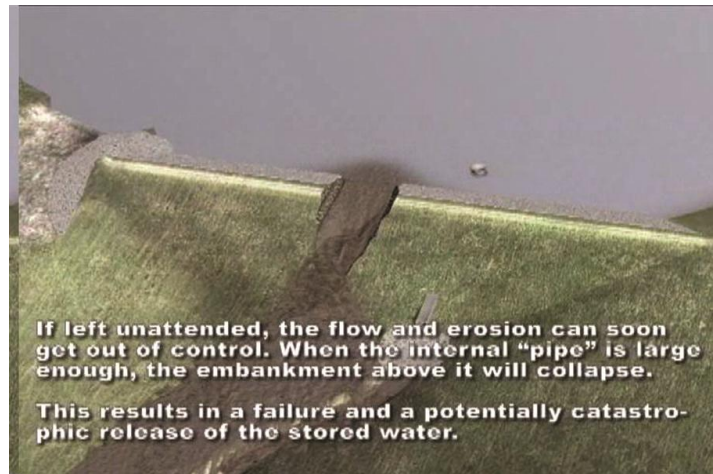
PROJECTS

- Track and respond to state and national media interest in dam safety.
- Distribute state-specific and national press releases on ASDSO initiatives and dam safety issues.
- Create press information kits on dam safety; via the website and on demand.
- Provide data, written reports and expert spokespeople for state and national news stories.
- Provide public awareness information via the ASDSO website, social media and print materials.
- Public Outreach – Crafting our message.

Computer Animations

In FY10, ASDSO created and made available three computer animations to simulate certain failure issues with dams: 1) what is overtopping, 2) what is piping, and 3) what makes a dam go from perfect to imperfect. Those three animations proved so popular that ASDSO devoted additional funding in FY11 to creating two more animations, which will be freely available for download at the ASDSO website. The focus will be on 1) dam failure due to lack of stability – seepage pressure, and 2) hazard creep.

Funds for projects like these come directly from donations received through ASDSO's Fundraising Program.



SCREENSHOT OF PIPING ANIMATION. AVAILABLE AT WWW.DAMSAFETY.ORG

Public & Media Interest: Dam Safety in National News Stories

An article that appeared in the New York Times on February 21, 2011 focused on national dam safety issues. "Danger pent up behind aging dams" provided an in-depth look at the need for dam rehabilitation nationwide through the example of the two dams impounding California's Lake Isabella, 57-year-old high-hazard-potential structures built without benefits of modern technology on an unstable foundation and an active fault. Correcting the dams' deficiencies could cost more than \$500 million. The writer of the story, Henry Fountain, attended Dam Safety '10 in Seattle, where he attended conference sessions and talked with attendees. His article sparked several subsequent news items on dam safety, as shown below. Between July 1, 2010 and June 30, 2011 ASDSO provided information for the following news items and requests:

- Des Moines Register. *Experts worry about increase in deficient US dams.* 7/27/10
- Des Moines Register. *Engineers say floodgate is suspect in Delhi dam failure.* 7/29/10
- KCRG- Cedar Rapids. *Most of Iowa's 3,374 dams are privately owned.* 8/6/10
- KCRG- Cedar Rapids. *Linn County's High-Hazard Dam Overdue for Inspection.* 8/6/10
- Capital Press. *Aging dams threaten cities, store less water.* 2/10/11
- New York Times. *Danger pent up behind aging dams.* 2/21/11 (Writer attended Dam Safety '10)
- Utica (NY) Observer-Dispatch (NY). Inquiry from reporter Elizabeth Cooper in response to NY Times story; interested in Hinckley Dam. 2/21/11
- Eugene (OR) Weekly. Inquiry from reporter Camilla Mortensen, working on story on dam safety on Willamette and McKenzie rivers. 2/21/11
- NBC News (NY). Inquiry from Azriel Relph, news researcher looking for case study for story on national dam safety. 2/22/11.
- Site Selection Magazine. Inquiry from managing editor, working on story on dam removals/restorations in US Northeast. 3/8/11
- Harpers Magazine. Writer Alex Kelly called to verify stats in NY Times article. 3/8/11
- National Geographic. Inquiry from Hannah James, producer, working on series on extreme weather events. 3/22/11
- The State – Columbia, SC. *Relief trench on Irmo dam being deepened.* 3/31/11
- The State – Columbia, SC. *Dams poorly regulated in SC.* 4/1/11
- Scientific American. Editor Michael Moyer researching dams & extreme events. 4/4/11
- History Channel. Nick Sova asked permission to use piping video for show. 4/6/11
- Austin American Statesman. *Most Texas dams would go unregulated under House-passed bill.* 5/8/11
- Cronkite News Service. *EAPs lacking for some Arizona dams.* 5/9/11

- International Water Power & Dam construction. Patrick Reynolds researching available training in hydropower & dams. 5/10/11
- PE Magazine (TX). Associate editor Danielle Boykin researching TX dam safety regulations. 5/24/11
- Bismarck Tribune. Inquiry on Missouri River dams from business reporter Christopher Bjorke. 6/13/11
- Bottom Line/Personal (CT). Inquiry from Jared Zeide on dam statistics. 6/16/11
- China Dialogue. *Fatal failures on America's rivers*. 6/28/11

ASDSO Press Releases

- December 2010 – *ASDSO awards 2010-2011 dam safety scholarships; 2011-2012 applications now available*
- Oct 2010 – *ASDSO presents annual awards*
- April 2011 - *Proposed legislation would exempt hundreds of potentially deadly dams in Texas from regulation*
- April 2011 – *Virginia governor would exempt all agricultural dams from state regulation*

Web Site

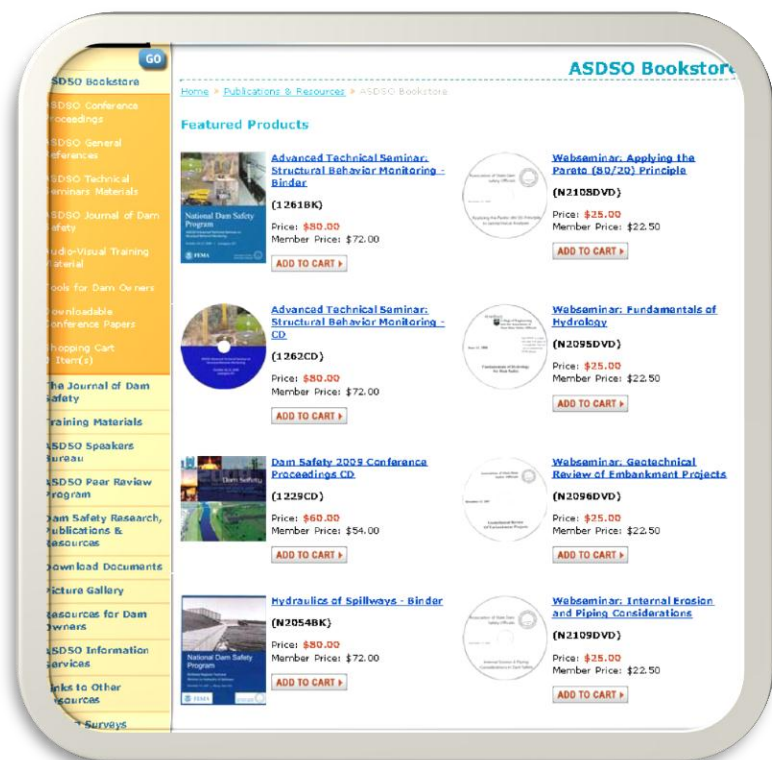
The website acts as a one-stop-shop for information on ASDSO and on dam safety. Members can access downloadable technical materials, and look up other members by name, by company or agency name, or by state. The public can learn basic information about dams and dam safety and everyone can access the various agencies and partners which deal with dam safety.

New in FY11:

-New and improved bibliography search feature. Users can search a vast bibliography of information on dam safety.

-New search feature gives the website a much more user-friendly interface.

-Technical Resource Center by topic. Arranged to coincide with ASDSO's Program of Study, users can see what technical areas should be studied to become well-versed in dam safety engineering or go straight to a technical area to delve deep into training opportunities, guidelines or other tools specific to that area.



Thanks go to members of the Affiliate Member Advisory Committee for assisting with development of the Technical Resource Center at the ASDSO website.

During the reporting cycle there were over 198,578 distinct visits to the site from U.S. and international users. Top areas of interest remain the same as last year and include:

- The Conference and Training Center
- Latest news stories
- The Resource Center
- The Sustaining Member links
- The Bookstore
- The Career Center

Top downloads included the following:

- A list of US dam failures and incidents
- The Suggested References Report
- The scholarship application
- Registration materials for the annual conference

Social Media

Baby steps—that’s what the goal is for ASDSO’s journey into the world of social media. The Facebook page has 224 people who “like” it. Most of the focus is on posting news stories, student information and job announcements.

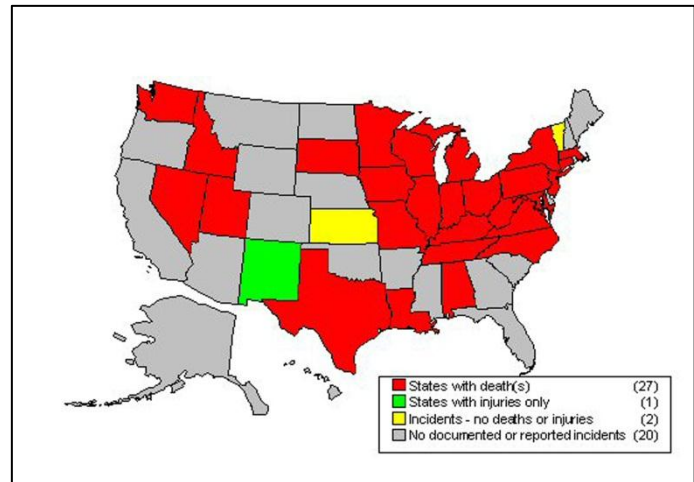
Branding Our Association

To increase public awareness of ASDSO, our marketing poster was placed as an advertisement in *SE Journal* and *LakeLine Magazine*. The poster is still available for individuals who request a copy.

Our Public Awareness Philosophy

Public awareness was a hot topic in FY11. From the debate about where dams fit into the public perception of risk—how do or how should people weigh their reaction/preparation for risks caused by floods due to dam failures or incidents—to the prioritization within ASDSO’s mission of public safety around dams including awareness of the dangers of low-head dams, these are the issues discussed frequently by leadership in FY11. And there is a constant challenge to harmonize the ASDSO public awareness message with that of ASDSO’s partners within the broader emergency and flood risk management communities.

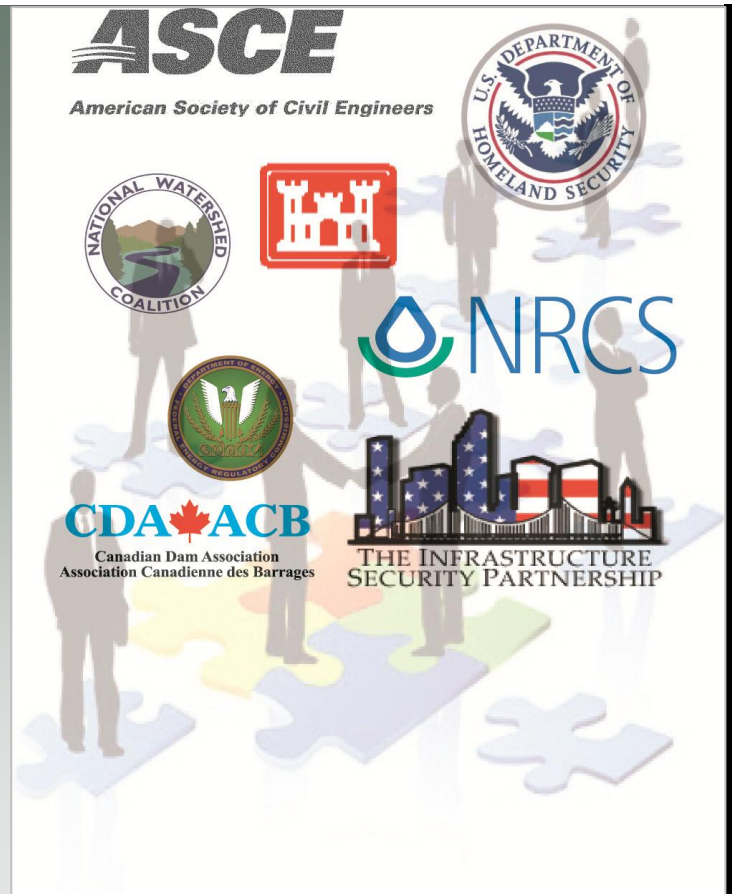
ASDSO leaders spent considerable time in FY11 working to not only present messaging to the public-at-large, but talking with, educating and preparing written communications for those working in emergency and flood risk management fields—those who do not work directly within the dam safety world—to explain how dams fit into broader risk management planning.



A BUDDING AWARENESS MESSAGE FOR ASDSO: SAFETY AROUND LOW-HEAD DAMS. SHOWN HERE, STATS FROM A STUDY BY DR. BRUCE TSCHANTZ.

In FY11, the ASDSO Website featured new pages devoted to public safety around dams and awareness.

FACILITATE INTER ORGANIZATIONAL, INTER GOVERNMENTAL AND INTER STATE COOPERATION



PROJECTS

- Support for Regional Meetings of State Officials.
- Routine communication with partners about ASDSO's initiatives and coordination on projects.
- Coordination with the National Dam Safety Review Board under FEMA's National Dam Safety Program.
- Partnering with the Department of Homeland Security to carry out the Dams Sector Specific Plan for Dam Security and Resiliency.
- Developing a role for ASDSO within the growing national levee safety strategy and federal flood risk management communication and coordination initiatives.
- Implementation of the MOU with the Natural Resource Conservation Service.
- Working with the EPA on Coal Ash Waste Dam Inspections.
- Support for the ASCE Report Card.

INTERSTATE

ASDSO Regional Highlights

One goal of ASDSO is to bring state dam safety programs together through facilitation of regional activities and networking. ASDSO coordinates communication among state representatives and other members through four established regional organizations. The Northeast, Southeast and West region hold regional conferences to discuss issues of mutual concern and to provide forums for regional topics to be presented and published in proceedings. Through the regional networks, ASDSO is able to get feedback and direction on issues of national concern.

West Region

West Region Representatives to the Board:

- Colorado: Mark Haynes – elected for a second term in 2010, but announced retirement in June 2011.
- Nebraska: Pat Diederich - serving second term through September 2011.
- Idaho: John Falk – elected for a second term in 2010 (through September 2012).
- North Dakota: Jon Kelsch – serving first term through September 2011.

The West Region held one caucus meetings in FY11 at the ASDSO 2010 Annual Conference in Seattle, WA. The West Region maintains a small regional budget, held at ASDSO headquarters, which is used to operate the regional conference and assist regional representatives, if needed, to attend board meetings.

Southeast Region

Southeast Region Representatives to the Board:

- Louisiana: Zahir “Bo” Bolourchi – serving second term through September 2011
- West Virginia: Brian Long -- serving first term through September 2011
- Georgia: Tom Woosley – elected for a second term in 2010 (through September 2012).

Over the year, the region held one caucus meeting at the 2010 ASDSO Annual Conference in Seattle. The Southeast Region maintains a small regional budget, held at ASDSO headquarters, which is used to operate the regional conference and assist regional representatives, if needed, to attend board meetings. The Southeast confirmed that it will hold a regional conference in 2012 in Louisville, KY.

OUR PARTNERSHIPS:

The member agencies of the Interagency Committee on Dam Safety (ICODS):

- DHS, Federal Emergency Management Agency, National Dam Safety Program
- DHS, Office of Infrastructure Protection, Dams Sector
- USDA Natural Resource Conservation Service
- US Army Corps of Engineers
- Federal Energy Regulatory Commission
- Department of the Interior (Bureau of Reclamation, Fish and Wildlife Service, Bureau of Land Management, Bureau of Indian Affairs, National Park Service, Office of Surface Mining)
- Department of Labor, Mine Safety and Health Administration
- International Boundary and Water Commission
- Department of Energy
- Tennessee Valley Authority

ASCE Government Relations

ASCE Environment and Water Resources Institute

ASCE Geo-Institute

Association of State Floodplain Managers

Canadian Dam Association

CEATI

Interstate Council on Water Policy

Interagency Flood Risk Management Committee

National Association of Flood and Stormwater Management Agencies

National Emergency Management Association

National Hydrologic Warning Council

Northeast Region

Northeast Region Representatives to the Board:

- New Jersey: John Moyle – serving second term through September 2011.
- Maryland: Cas Taherian – serving first term through September 2010. Retired in June 2011. The seat was filled by Jim Gallagher (New Hampshire).
- New York: Alon Dornitiz – elected to first term in September 2010 (through September 2012).

National Watershed Coalition

Ohio Dam Safety Association

The Infrastructure Security Partnership

U.S. Society on Dams

The Northeast Region held two caucus meetings in FY11 at the ASDSO Annual Conference in Seattle and at the Regional Conference in Lake Placid, NY in June 2011. The New Jersey/Pennsylvania Council for Safe Dams (CSD, a chapter of ASDSO, coordinated the biennial conference, which attracted over 200 attendees to Lake Placid, NY in June.

CSD also focuses on improving dam safety policies and laws in New Jersey and Pennsylvania. The CSD maintains a small budget, held at ASDSO headquarters, which is used to operate the regional conference and assist regional representatives, if needed, to attend board meetings, as well as finance small projects including legislative advocacy efforts.

Midwest Region

Midwest Region Representatives to the Board:

- Illinois: Jason Campbell – serving first term through September 2011.
- Minnesota: Jason Boyle – elected to second term in September 2010 (through September 2012).

The Midwest Region held one caucus this year at the 2010 Annual Conference in Seattle.

INTER-GOVERNMENTAL

Working with Our Federal Partners

Federal agency representatives make up about 19% of the ASDSO membership. About 14% of dams in the USA are owned or regulated by federal agencies. Each federal agency that plays a role in dam safety has a unique relationship with ASDSO. ASDSO serves as a communication vehicle for these agencies and as a portal for communication to state dam safety agencies.

ASDSO maintains formal memoranda of agreement or partnering agreements with the USDA Natural Resources Conservation Service and the US Army Corps of Engineers. The NRCS currently underwrites training courses that ASDSO provides, bringing state conservation engineers and state dam safety engineers together to work more closely on emergency action planning. There is a long-standing relationship with FEMA's National Dam Safety Program and a relatively newer one with the Office of Infrastructure Protection, Dams Sector, also under DHS. Both provide underwriting for many of the projects that ASDSO carries out. The Federal Energy Regulatory Commission volunteers experts routinely to provide on-site training for states. All agencies graciously offer their expertise as subject matter experts or committee volunteers on an as-needed basis.

NRCS Partnering

In 2010, an updated memorandum of understanding was signed between ASDSO and the NRCS. The major mission goals follow:

1. Dams in the United States must be constructed, rehabilitated, operated and maintained in accordance with sound engineering principles to avoid potential loss of life and destruction of property in the event of dam failure;
2. Most dams designed and constructed under the technical supervision of the NRCS are regulated by the member states of the ASDSO;
3. It is the mutual desire of the NRCS and ASDSO to recommend the best current practices in the safety of dams design and operation process;
4. The NRCS and ASDSO wish to encourage a harmonious relationship and improve communications between the state offices of the NRCS and the member states of the ASDSO;
5. The coordinated and timely exchange of information related to conceptual planning, design, construction, operation, hazard classification, rehabilitation and maintenance of dams can be accomplished with recognition by the NRCS of the responsibility of the member states of the ASDSO to exercise regulatory jurisdiction and the review of specific project plans.

ASDSO supported NRCS efforts to develop a similar MOU with each state by encouraging state participation. To date, thirty-two states have a completed MOU, with six states still in the approval process.

The NRCS and ASDSO continued a highly successful joint project to deliver training on Emergency Action Planning for Dam Safety. The two-day short course was held in three different locations during FY11, allowing over 110 representatives of the local, state, and federal dam safety and emergency preparedness communities to attend. This interactive course focused on such topics as Why Have EAPs?; How to Prepare EAPs; and How to Conduct EAP Testing and Exercises. It will be conducted twice in FY12.



IN MAY 2011, THE NRCS SMALL WATERSHED PROGRAM WAS DESIGNATED AS A NATIONAL HISTORIC LANDMARK IN AGRICULTURAL ENGINEERING BY THE AMERICAN SOCIETY OF AGRICULTURAL AND BIOLOGICAL ENGINEERS. ASDSO HELPED THE NRCS PUBLICIZE THIS ACHIEVEMENT. PICTURED HERE ARE NRCS CHIEF DAVE WHITE (RIGHT) AND USDA ARS ADMINISTRATOR DR. EDWARD KNIPLING, SHOWN AT THE NEWLY INSTALLED MONUMENT TO THE WATERSHED PROGRAM AT THE OKLAHOMA AGRICULTURAL BUILDING, OKLAHOMA CITY.

FEMA and the National Dam Safety Program

Since the early 1980s and, in particular, after the establishment and funding of the National Dam Safety Program in 1996, ASDSO and FEMA have devoted themselves to a strong partnership.

In FY11, FEMA sponsored the following projects through a grant to ASDSO:

- Classroom-Based Technical Seminars and Web-Based Training
- Support for State Peer Reviews
- Dam Owner Workshops
- Coordination and Production of Public Awareness Materials

ASDSO continues to support five State representatives who serve on FEMA's National Dam Safety Review Board. At the end of FY11, Doug Johnson (Washington) left state government and therefore stepped down from the Review Board. ASDSO nominated David Gutierrez (California), who was accepted to the Review Board beginning in FY12.

The five state representatives serving on the Review Board in FY11 were:

- Byron Lane (Michigan)
- Michael Johnson (Arizona)
- Doug Johnson (Washington)
- Jim Gallagher (New Hampshire)
- Brian Long (West Virginia)

Many ASDSO volunteers also serve on the following Work Groups (See Appendix 1 for a roster):

- Research Work Group
- Training Work Group
- National Inventory of Dams Work Group
- Emergency Action Planning Task Group
- Risk Assessment Task Group
- Performance Measures Task Group
- Risk Categorization Steering Committee
- Geotextiles Steering Committee
- Filter Guidance Steering Committee
- Seepage Surveillance Steering Committee
- Dam Breach Equations Steering Committee

For more information, see the National Dam Safety Program's website at:

www.fema.gov/plan/prevent/damfailure/index.shtm

DHS and the Office of Infrastructure Protection

The Office of Infrastructure Protection (IP) within DHS serves as the sector-specific agency for the Dams Sector. Within Infrastructure Protection, the Sector-Specific Agency Executive Management Office maintains responsibility for the critical infrastructure protection of the Dams Sector through ongoing coordination with the Dams Sector Coordinating Council (DSCC) and the Dams Sector Government Coordinating Council (DGCC).

The DSCC was formally launched in May 2005 and is comprised of representatives from industry, municipal and private dam ownership. The DSCC serves as a hub for communication, coordination, sector-specific expertise, and advice between the government and private owner/operators during protection, response, and recovery activities. The DGCC, formally launched in January 2005, is comprised of representatives from Federal and State agencies and serves as the counterpart and partner to the DSCC to assist in the planning, implementation, and execution of sector-wide security programs for the sector's assets. These councils provide a structure through which representatives from the government and the private sector can effectively collaborate and share approaches focused on the improvement of Critical Infrastructure/Key Resources (CIKR) protection.

Several ASDSO state representatives sit on the Government Coordinating Council (DGCC) and workgroups including the following:

- John Moyle (New Jersey); John Kale (alternate)
- Steve McEvoy (North Carolina); Mel Nevils (alternate)
- Pat Diederich (Nebraska); Tim Gokie (alternate)

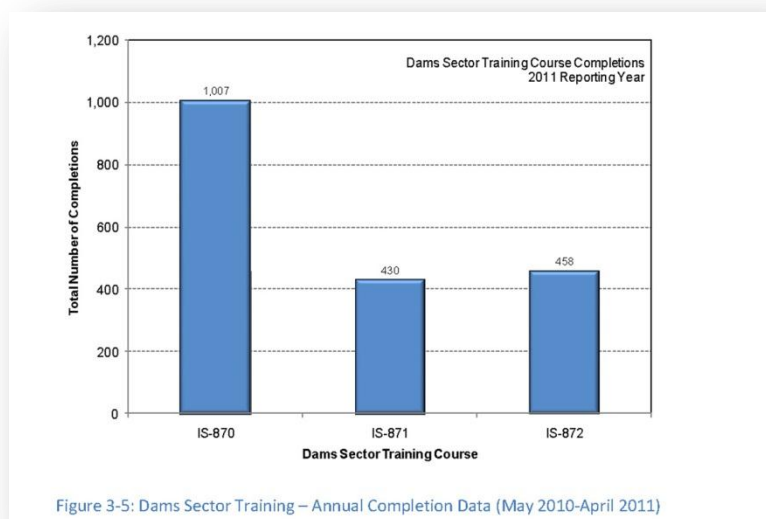
- Keith Banachowski (Ohio); Rodney Tornes (alternate)
- David Gutierrez (California); Randy Fessler (alternate)
- Doug Johnson (Washington); John Blacklaw (alternate)
- Roger Adams (Pennsylvania); Tom Bold (alternate)
- Mark Haynes (Colorado); Paul Perri (alternate)

The State Dam Security Panel (SDSP) was formed in 2009 consisting of the state representatives serving on the DGCC. The panel met in conjunction with sector meetings. The mission of the panel is to reach out to the state dam safety offices and to create and oversee plans and projects to assist the Dams Sector in delivering guidelines and tools to improve protection of the critical dams within the sector.

Director Lori Spragens represents ASDSO on the Sector Coordinating Council (DSCC). Her alternate, Jack Byers, supports the SDSP and ASDSO through assisting in the administration of the contractual projects sponsored by DHS. Other ASDSO members sitting on these councils are listed in Appendix 1.

The Dams Sector is a successful example of how a public-private partnership can work toward a unified goal. DHS releases a Sector Annual Report every July, which summarizes all of the tools, training and information sharing activities ongoing.

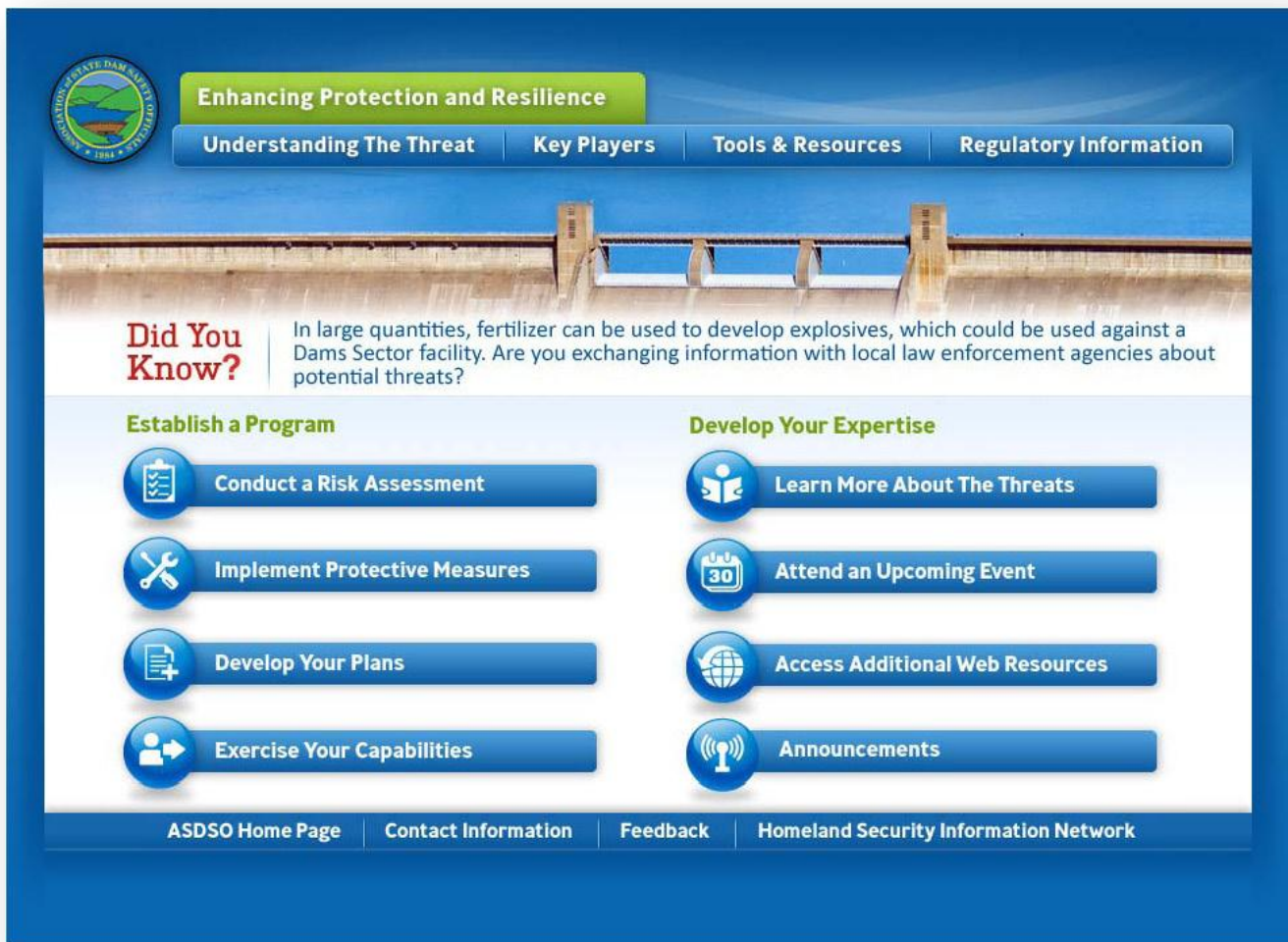
At right is a graph taken from the 2010-11 Dams Sector Annual Report showing progress in training course usage. For more information contact: nipp@dhs.gov.



ASDSO signed an agreement with DHS IP in FY09 to further assist the Dams Sector in carrying out its mission. During the reporting year (the third year of the five-year contract), the following projects were completed:

- Communication and outreach to state dam safety agencies was improved and expanded. States were encouraged to register for HSIN-CS and to utilize the Consequence-Based Top Screen. Information was provided to the States through the ASDSO E-News and through the DHS Open Source Digest.
- The 3rd Annual National Dam Security Forum was held in conjunction with ASDSO Dam Safety '10 in Seattle WA. Post forum conference calls were organized to critique the forum. Planning for the 4th Annual Forum began shortly after the Seattle Forum and continued through the end of the reporting year.
- The State Dam Security Panel (SDSP) met two times and had two conference calls during the year. Two members of the SDSP resigned due to job changes and retirement. Replacements were not identified before the end of the reporting year. The final SDSP meeting will be held at the Dams Sector meetings in August 2011 (Denver, CO). It is anticipated that the structure of the SDSP will be altered going into Option Year 3.
- The ASDSO webpage was modified and expanded to provide infrastructure and dam security information.
- Human Technologies was engaged as a subject matter expert to develop a more comprehensive dam security resource center webpage. This project was completed and the enhanced webpage has been integrated into the ASDSO webpage. DHS coordinated releases for the use of all training materials posted on the ASDSO website.
- The Dams Significant Incident Reporting (SIR) database template and the data fields were completed as part of the Dams Sector Analysis Tool (DSAT). ASDSO entered historic dam failure information and recent dam failure information into the DSAT.

- Coordination of the 2011 State Security Metrics and state program performance data call continued with U.S. Army Corps of Engineers (USACE). By the end of the reporting period the USACE had not launched the web-based tool that is used to collect the data so no 2010 was collected. The plan is to still collect 2010 data in September of 2011.
- The State Security Needs Survey was completed. The purpose of the survey was to clearly identify the current status of state dam security activities and what assistance ASDSO and /or DHS could provide to assist the states dam security activities.
- An article on dam security was written for the ASDSO *Journal on Dam Safety*.
- Information was provided to DHS for the Dams Sector SAR (Sector Annual Report). ASDSO participated in the review of the SAR prior to finalization.
- The Security Workshop for state dam safety officials was held June 21, 2011 in Madison WI. Travel reimbursement for four state attendees was coordinated.



SCREENSHOT OF THE ASDSO/DHS WEBPAGE WHICH CAN BE ACCESSED THROUGH THE ASDSO WEBSITE.

To view the Dams Sector Specific Plan and NIPP go to:
<http://training.fema.gov/EMIWeb/IS/IS860a/CIKR/dam1.htm>

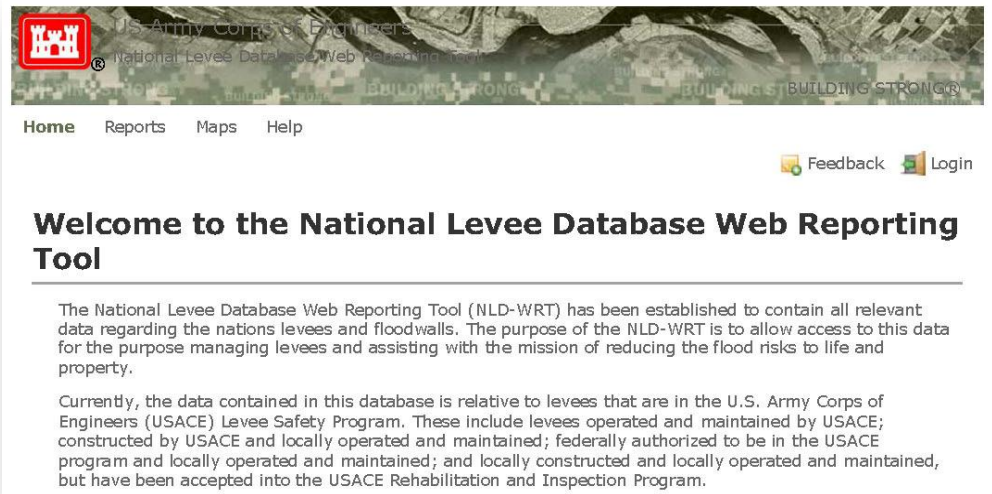
Partnering with the US Army Corps of Engineers: The National Levee Database and the Topographic Engineering Center

In this fiscal year, ASDSO began a cooperative effort with the USACE to inform and train users on the capabilities and use of the National Levee Database (NLD) and to begin NLD data gathering. The NLD contains information relative to the status and safety of the nation's levee systems, including attributes of levees relevant to their design, construction, operations, maintenance, repair, and inspections. As a first step

toward involvement of the state dam safety, levee safety and emergency management programs, in January ASDSO conducted a short survey requesting general information from the state dam safety offices on their state's levee safety program, authorities, data availability, data format and other important information that USACE used to fine tune the NLD. In addition, ASDSO sits on the NLD Steering Committee that is tasked to assist USACE in the public roll-out of the NLD.

All annual State dam safety program performance and dam data collection is a coordinated effort between ASDSO and the US Army Corps of Engineers' Topographic Engineering Center (TEC). From dam inventory data—which goes into the National Inventory of Dams—to state program performance data—such as changes in state budgets, number of inspections, personnel—each state provides data to be used for performance measuring on a national scale.

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. The Corps and ASDSO exchange continuing education information and mutually post dam safety announcements. The ASDSO Annual Conference is always used by the Corps as a venue to transfer technology and to hold "town hall" style meetings for Corps officials.



ASDSO Provides Independent Review of Bureau of Reclamation, Dam Safety

In March 2011, a team chosen from ASDSO Peer Review Program pool provided an independent panel review of the US Bureau of Reclamation's Dam Safety Program. This was the 11th annual independent review of the program but the first performed through ASDSO since the intensive year-long review the ASDSO conducted in 1995-96.

ASDSO Submits Opinion on the Environmental Protection Agency's Proposed Requirements Regarding CCR Impoundments

Considerable time was spent the past two years assisting EPA officials in identifying and communicating with dam safety officials in many states where EPA inspections of CCR (coal combustion residuals) impoundments were conducted. EPA became involved in inventorying and inspecting several hundred facilities after the catastrophic failure of an impoundment in

Tennessee in 2009. ASDSO coordinated communications with state officials and educated EPA officials about dams and dam safety.

In late 2010, the EPA opened a comment period through the Federal Register as it laid out a long and detailed proposed regulation, which included language that would affect the regulation of the CCR dams in all states. ASDSO provided comment in November 2010. (See Appendix 2)

INTER-ORGANIZATIONAL

The National Committee on Levee Safety

ASDSO continued efforts to support the development of a National Levee Safety Program. These efforts included continuing participation in the Intergovernmental Flood Risk Management Committee (IFRMC), a group made up of members from the U.S. Army Corps of Engineers, FEMA, the National Association of Flood and Stormwater Management Agencies, the Association of State Floodplain Managers, and ASDSO. The IFRMC addresses key national issues of flood risk management topics and makes recommendations for needed changes, particularly with regard to interagency cooperation and collaboration.

ASDSO members continue to participate as members of the National Committee on Levee Safety and coordinate with ASDSO leadership on the work of the committee. In addition, ASDSO leadership and the ASDSO Levee Safety Committee provided input and support to the NCLS as part of their Review Team and assisted in the US role for the development of the International Levee Handbook.

Discussions continue on the ASDSO board and among the states on ASDSO's role as a levee safety organization and on the possible merging of the National Dam Safety Program with a new National Levee Safety Program.

The US Society on Dams (USSD)

ASDSO and USSD continue to work jointly on projects and share information routinely. The following projects are underway:

- Explore creation of a student curriculum about dams (elementary, middle and high school levels) in conjunction with a company that creates science courses.
- Explore improvement opportunities in the area of on-site dam operator training.
- Coordinate on student/kids website pages.
- Assist with the USSD Tailings Workshop to be held in August 2011. ASDSO provided state data on tailings dams regulations. Past ASDSO president Rob Martinez (NV) presented the data at the workshop.

As is custom, ASDSO president David Gutierrez spoke on behalf of ASDSO at the April USSD Annual Conference in San Diego.

Association of State Floodplain Managers

ASDSO has enjoyed a long-standing partnership with ASFPM on many issues related to dam safety and flood risk management. The two associations participate together on the Intergovernmental Flood Risk Management Committee and both provide members to the National Committee on Levee Safety. In this fiscal year, ASDSO leaders sought to improve communication with the ASFPM leadership on issues of common interest and subsequently held two meetings with ASFPM leaders. The groups discussed ways to achieve common dam safety/flood risk management goals and pledged to continue communication efforts.

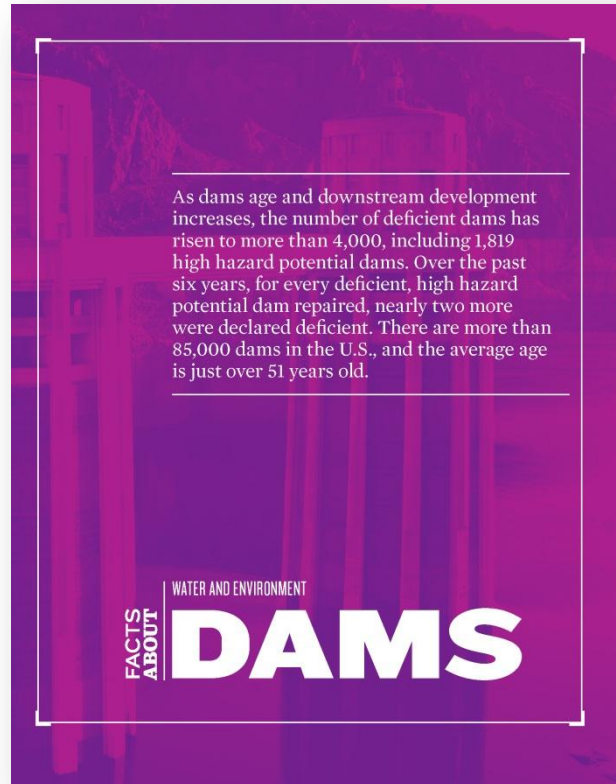
American Society of Civil Engineers (ASCE)

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

In March 2011, ASDSO and ASCE members touted the importance of the National Dam Safety Program and the need for a national dam rehabilitation financing program at ASCE's 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 lawmakers to push for stronger dam safety programs at the federal level.

ASDSO exchanges information routinely with the Geo-Institute and the Environment and Water Resources Institute.

ASCE REPORT CARD 2009: SNAPSHOT OF
DAMS REPORT CARD COVER



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. NWC keeps ASDSO informed on its push to get full funding for the Small Watershed Program. ASDSO, in turn, provides letters of support and additional testimony when required. ASDSO NWC liaison Matt Scherer (Kansas) stepped down as liaison this past year. Tom Woosley (Georgia) is acting liaison until a permanent replacement can be identified. Tom attended the NWC conference on behalf of ASDSO in 2011.

PROVIDE THE PROFESSIONAL DAM SAFETY COMMUNITY WITH FORUMS FOR THE EXCHANGE OF INFORMATION



PROJECTS

- Journal of Dam Safety
- Distribution of monthly electronic newsletters
- Annual national conference.
- Technical training seminars and webcasts.
- Interactive training calendar.
- Updated Program of Study and web-based training courses.
- Coordination of ASDSO's training program with the FEMA National Dam Safety Program and DHS Dams Sector training efforts.
- Information resources center.
- Database of dam failure and incidents.
- Collection and analysis of state program performance data.
- Focus on technical topics: new committees

Dam Safety '10 – Seattle, Washington

The 2010 National Conference drew a record 1100 attendees from all over the U.S. and several foreign nations to the Washington State Convention Center in Seattle. Highlights from the September 19-23 event included:

- A specialty workshop on Identification, Monitoring, and Repair of Piping Damage to Dams
- Keynote presentations by world-renowned experts on seismic issues in the Pacific Northwest, including the Cascadia Subduction Zone; plus a report on lessons learned from the 2010 earthquake in Chile.
- An agenda track looking at the early development of the National Levee Safety Program
- Soapbox Sessions on Private Dams on Federal Property; and Dam Failure Investigations
- The Third Annual National Dam Security Forum, including two full days of presentations.
- A field trip to Cedar Falls and Snoqualmie Falls hosted by Seattle Public Utilities Seattle City Light, and Puget Sound Energy
- Over 100 different companies exhibited and 15 companies sponsored the conference.

Please mark your calendars for these upcoming ASDSO conferences:

2012 Southeast Regional Conference, May 6-9, in Louisville, KY

Dam Safety '12, September 16-20, in Denver, CO

Dam Safety '13, September 8-12, in Providence, RI

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 members. E-News copies are posted on the website.

Regional Conferences



The 2011 Northeast Regional Conference was held on June 5-7 in Lake Placid, NY. Over 200 attendees participated. General and concurrent technical sessions covered such popular topics as Case Studies in Dam Rehabilitation, Owners Issues, Instrumentation, Dam Removal, and Appurtenant Works. Conference events, including the sold-out exhibit show were held in the brand new Lake Placid Conference Center, which contains both state-of-the-art meeting facilities as well as historic venues used in the 1932 and 1980 winter Olympics

Thanks go to John Ritchey (NJ); Alon Dominitz (NY); Roger Adams (PA); and Steve Doyon (NH) who served on the regional conference program committee.

Interactive Training Calendar

A directory of engineering and dam safety-related training opportunities is available on ASDSO's website. The user-friendly directory is searchable by date, sponsoring organization, and topic. Currently the listings include conferences, seminars and workshops in the U.S. and abroad.

The screenshot shows the ASDSO website's Training Directory page. At the top left is the ASDSO logo, a circular emblem with a dam and water. To its right is the text "Association of State Dam Safety Officials". Further right are links for "MEMBERS LOG IN" and "CONTACT US". Below this is a navigation bar with orange background and white text: "HOME", "ABOUT ASDSO", "COMMITTEES & PROJECTS", "CONFERENCES & TRAINING", "PUBLICATIONS & RESOURCES", "PRESS ROOM & NEWS", "CAREER CENTER", and "INFRASTRUCTURE SECURITY". Below the navigation bar is a search bar with a "GO" button. To the right of the search bar is the heading "Training Directory" with a breadcrumb trail: "Home > Conferences & Training > Training Directory > Search All Training". Below the heading is a "Search Training Directory" section with a "Search by keyword" input field, an "All Types" dropdown menu, "Start Date" and "End Date" input fields with calendar icons, and a "SEARCH" button. On the left side of the page is a vertical menu with links: "Training Directory", "Distance Learning", "Search All Training", "Training Materials", "ASDSO Conferences", "ASDSO Technical Seminars", "Dam Owner Workshops", and "WEB & Distance Training".

Technical Education Programs

Six classroom-based technical seminars were held across the U.S. during FY11, including:

Plans & Specifications Review and Construction Inspections

This course features a newly updated agenda, and was conducted by MWH Americas Inc. and Tetra Tech, Inc. on March 15-16 in Las Vegas, NV. Sixty students attended.

Fundamentals of Reinforced Concrete Design for Hydraulic Structures

The instructors for this brand new course were from Holcim (US) Inc., and the University of South Carolina's Department of Civil & Environmental Engineering. The course was held on April 6-7 in Baltimore, MD and on May 25-26 in Columbia, SC, with a combined attendance of 54 students.

Interactive Preparedness: Emergency Action Planning for Dam Safety

This seminar was sponsored by the Natural Resources Conservation Service, and was held three times during the Fiscal Year: November, 2010 in Fort Worth, TX; April 2011 in Denver, CO; and June 2011 in Madison, WI. The seminars were conducted by URS Corporation and W.W. Wheeler Associates, and attracted a combined attendance of 120 people.

Plans are underway for the following seminars to be held in FY2012:

Plans & Specifications Review and Construction Inspections

April dates and location to be announced

Interactive Preparedness: Emergency Action Planning for Dam Safety

November 15-16, 2011 in Portland, Oregon, and in early May, 2012 in Boston, MA.

Fundamentals of Reinforced Concrete Design for Hydraulic Structures

March dates and location to be announced

Two new courses are in the development stage, and will be held for the first time in early 2012. They include:

An NRCS-sponsored course on ***Dam Inspections and Safety Evaluations***, to be taught by Gannett Fleming, Inc. This course will incorporate both classroom instruction and on-site dam inspection demonstrations. It will be held for the first time on January 17-19 in McKinney, TX

The ASDSO Training Committee will soon select a developer/instructor for a new basic level course titled: ***Dam Failures and Lessons Learned***. This course is tentatively scheduled to be held for the first time in February, 2012.

Web-Based Training Project

The ASDSO Training Committee's goal for FY11 was to significantly increase the number of webinars held, so that the national and international dam safety community could begin to rely on ASDSO for high quality and accessible web-based training. The results of ambitious new project were very encouraging.

Guidelines for Assigning Erodibility Parameters to Soil Horizons for SITES Analysis. Presented: October 12, 2010 by Danny K. McCook, USDA-NRCS (retired). 75 participants

Pitfalls in Quality Control Testing for Earthfill. Presented: November 16, 2010, by Danny K. McCook, USDA-NRCS (retired). 88 participants

Estimating Permeability Using Empirical Methods. Presented: December 14, 2010, by Danny K. McCook, USDA-NRCS (retired). 88 participants

Hydrology 101: Intro to Hydrology for Dam Safety. Presented: February 15, 2011, by Dr. Art Miller, P.E., AECOM. 155 participants

Hydraulics 101: Intro to Hydraulics for Dam Safety. Presented: April 5, by Dr. Art Miller, P.E., AECOM. 101 participants

Filter Design History and a One-Step Design Process. Presented: June 14, 2011, by Danny K. McCook, USDA-NRCS (retired) and James Talbot, P.E. 160 participants

Three more webinars are scheduled for the first half of FY 12, including:

Roller Compacted Concrete Design and Construction of Water Control Structures. Scheduled: August 9, 2011, by Randall P. Bass, P.E., Schnabel Engineering

Risk Assessment Basics for an Individual Dam. Scheduled October 11, 2011, by Dr. David Bowles, P.E., RAC Engineers & Economists

Risk Management for a Portfolio of Dams. Scheduled December 13, 2011, by Dr. David Bowles, P.E.

The ASDSO Program of Study

During FY 11 ASDSO's Technical Training Committee focused on developing a list of core courses to be provided by ASDSO. These core courses are viewed as essential in providing an engineer with a well-rounded knowledge of dams, and are slated to be offered on a regular rotation by ASDSO in the coming years. These topics were identified as top priority among the many areas of expertise listed in the Program of Study. The committee recognizes that many areas of expertise and topics are addressed by non-ASDSO sponsored training, publications or resources. Information on these outside training opportunities and resources can be found in the Training Calendar and Technical Resource sections of the ASDSO website.

Category 1: DAM SAFETY PROGRAM MANAGEMENT

Courses: Plans and Specs Review
Dam Failure Incidents and Lessons Learned

Category 2: EMERGENCY ACTION PLANNING

Course: Interactive Preparedness & Emergency Action Planning for Dams

Category 3: GEOTECHNICAL

Courses: Soil Mechanics for Dam Safety
Slope Stability Analysis of Embankment Dams
Seepage for Earth Dams

Category 4: HYDRAULICS

Course: Dam Failure Analysis -Tentative

Category 5: HYDROLOGY

*Core courses still under discussion.

Category 6: INSPECTIONS

Courses: Safety Evaluation and Inspection of Dams
Construction Inspections for Dams & Ancillary Structures

Category 7: RISK INFORMED DECISION-MAKING

*No core courses identified. The USBR offers the definitive training on this topic.

Category 8: DAM SITE SECURITY

*No core courses identified. DHS and ASDSO are developing training tools in this area.

Category 9: SEISMIC

*No core courses identified.

Category 10: STRUCTURAL

Courses: Fundamentals of Reinforced Concrete Design for Hydraulic Structures
Conduits, Valves & Gates

Category 11: SURVEILLANCE AND MONITORING OF DAM PERFORMANCE

*No core courses identified.

Category 12: MISCELLANEOUS

*No core courses identified.

The following topics will be considered for future development:

- Rehabilitation of Embankment Dams
- Foundation Treatment and Grouting
- Plant & Animal Impacts (Webinar)

The Information Resource Center

Resources/Library

Bibliography - ASDSO's bibliographic database of dam and levee safety references is now online. The bibliography contains all ASDSO publications, as well as publications from other sources. ASDSO has electronic versions and/or hard copies of many items listed in the database, and many records are linked to full-text documents.

Information Services – ASDSO responded to a large number of information requests from members and non-members, including states, the media, researchers, dam owners, university students and staff, federal agencies, people living near dams, legislative staff and others.

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

The screenshot shows the website for the Association of State Dam Safety Officials. The navigation bar includes links for HOME, MEMBERSHIP, ABOUT ASDSO, ABOUT DAM SAFETY, NATIONAL PARTNERSHIPS, SHOP ASDSO, DONATE, ADVERTISE, REGISTER FOR TRAINING, and CAREER CENTER. A search bar is located at the top right. The search results for 'geotechnical' show 900 results. A list of categories is provided: Bibliography (707), Bookstore (147), Free Documents (5), Jobs/Internships (2), Training (15), and Everything Else (20). The 'Everything Else' category is expanded to show 20 results, including a 'Conference Agenda' for a 'Hands-On Geotechnical Engineering Mini-Workshop' and 'Research Links' such as 'Geotechnical Resources' and 'Geotechnical Earthquake Engineering Portal'.

NEW SEARCH FEATURE AT THE ASDSO WEBSITE TAPS INTO WEALTH OF INFORMATION ON TECHNICAL TOPICS.

New ASDSO Publications & Surveys, July 1, 2010 - June 30, 2011

Publications:

- *Dam Safety 2010, Proceedings of the 27th annual conference of the Association of State Dam Safety Officials, held in Seattle, Washington*
- *ASDSO Technical Seminar on Fundamentals of Reinforced Concrete Design of Hydraulic Structures*
- *ASDSO Technical Seminar on Plans and Specifications Review and Construction Inspection*
- *ASDSO Webseminar: Empirical Estimates of Permeability for Earth Dam Projects*
- *ASDSO Webseminar: Guidelines for Assigning Erodibility Parameters to Soil Horizons for SITES Analyses*
- *ASDSO Webseminar: Hydraulics 101: Intro to Hydraulics for Dam Safety*

- *ASDSO Webseminar: Hydrology 101: Intro to Hydrology for Dam Safety*
- *ASDSO Webseminar: Pitfalls in Quality Control Processes for Compacted Earth Fill*
- *Journal of Dam Safety, V. 8 (3, 4); V. 9 (1,2)*
- *Monthly newsletter*

Surveys:

- *ASDSO Compilation of State Dam Safety Program NDSP State Assistance Grant Projects*
- *State Dam Safety Size Classification Schemes*
- *State Regulation of Containment Facilities for Confined Animal Feeding Operations*
- *Dam Owner Responsibility*
- *State Regulation of Levees*
- *State Policies on Construction of Concrete Parapet Walls on Earth Embankments*
- *National Levee Database Survey*
- *Agricultural dam exemptions*
- *Betterment district for a private dam*
- *Computer model input files*
- *EAP costs*
- *State regulation of tailings dams*
- *Weathering of limestone-faced dams*

The On-Line Bookstore

Many individual papers and articles have been added to ASDSO's on-line bookstore, available through the Publications and Resources section of the ASDSO website. Also, available are materials from new webinars and technical seminars listed above.

The Dam Failure & Incident Database

ASDSO has partnered with DHS Infrastructure Protection in the development of the Significant Incident Reporting (SIR) database. The web-based SIR database will provide information to dam regulators, owners and others in the dam safety community on dam incidents and failures. Information collected will include basic information on the dam, the cause of the incident/failure, and consequences of the failure. This fiscal year, ASDSO collected and entered into the database incident data from multiple sources including the states, dam owners and news reports. The SIR database is nearing completion and will hopefully be available to users in Fiscal Year 2012.

The State Dam Safety Program Performance Data Collection and Analysis Program

ASDSO, in partnership with FEMA and the U.S. Army Corps of Engineers, collects and analyzes state program performance data so that states can see how they compare to other states and to the Model State Dam Safety Program. ASDSO uses the data to provide reports to state and federal lawmakers and others. This year, ASDSO completed a FEMA-funded effort to study the performance data collection process and develop new performance data questions for Calendar Year 2010. As described earlier in this report, ASDSO also analyzed and organized several years' worth of performance data to develop performance reports for each state dam safety program. Due to delays in funding, the data call for Calendar Year 2010 was delayed to early Fiscal Year 2012.

ASDSO Technical Committees

Two new committees were approved by the Board of Directors during the reporting year.

Following two wildly popular "Soapbox Sessions" that were held at Dam Safety 2009 in Florida and Dam Safety 2010 in Washington, a new standing committee was formed called the **Dam Failure Investigations Committee**.

Here is an excerpt from its charter:

The mission of the committee is to assist the States (in partnership with other stakeholders) to improve the current practice of investigating dam failures.

The initial objectives of the committee are to review recent dam failures investigations, examine investigation practices of other industries, identify needs of the States, consider stakeholders, explore legal issues/funding, and to develop alternatives and recommendations to the ASDSO Board of Directors for improvement of the practice of dam failure investigations. The committee will also make recommendations for improving lessons learned from dam failures. The committee will develop a report to the ASDSO Board documenting their research, findings and recommendations.

The later objectives of the committee are to assist ASDSO and the States with adoption of improved practices for conducting investigations, supporting investigations following failures and for facilitating lessons learned from dam failures for improvement within the dam safety community.

Progressing quickly in 2011, the committee drafted an interim dam failure investigations guide, which was undergoing review at the end of the fiscal year.

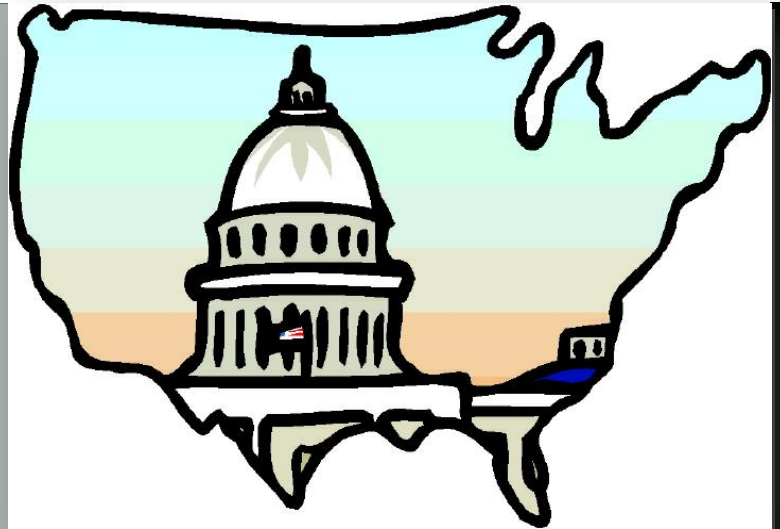
Members of the Affiliate Member Advisory Committee requested and received approved from the Board to form a committee now called the **Task Force for Developing Guidance for Dam Safety Review of Engineering Designs**. According to the group, many state dam safety programs are understaffed and are tasked with numerous responsibilities, including dam hazard classification, dam inspections, development and/or review of Emergency Action Plans, emergency response, and the review and approval of engineering designs for new dams and/or rehabilitation/repairs/modifications to existing dams. Review of designs can take considerable time and resources, sometimes resulting in inordinate delays for construction of repairs that may be critical to dam safety. Many state programs provide guidance on design criteria; however, there is little known guidance with regard to the level of review that should be provided by the regulatory agency.

Many state dam safety programs receive design submittals from engineers with limited qualifications in dam engineering, requiring more extensive reviews. To avoid this issue, some state and federal dam safety agencies have credentials based certification for practicing in the field of dam engineering.

Considering these two broad issues, it seems appropriate that a Review Guidance Document be available to state dam safety regulators outlining a generally accepted practice for review of engineering designs. The proposed document will provide a resource to state dam safety regulators with regard to review of engineering designs.

The **Outlet Works Technology Committee** has seven subcommittees on various outlet works issues. The subcommittees have been tasked with developing white papers related to their identified topics. To date, one subcommittee has completed its white paper regarding the use of cradles. It was summarized in a technical presentation at the 2010 ASDSO Conference in Seattle. Other white papers are in various stages of development. A draft white paper regarding conduit grouting has been completed. Final modifications are anticipated within the next couple of months.

PROVIDE
REPRESENTATION
OF DAM SAFETY
INTERESTS BEFORE
STATE
LEGISLATURES,
CONGRESS AND
EXECUTIVE BRANCHES



PROJECTS

- Support full appropriations of the National Dam Safety Program.
- Advocate for passage of the National Dam Rehabilitation and Repair Act.
- Implement a stronger states legislative advocacy program.
- Maintain the ASDSO On-Line Center for Advocacy and Outreach
- Support other organizations with legislative/policy issues of interest to the dam safety community: FEMA's map modernization program; the USGS Streamgage Program; and the Small Watershed Dam Rehabilitation Program.

ASCE's Policy Week

For the past five years, ASDSO's Board and other members participated in the March Policy Week organized by the American Society of Civil Engineers Government Relations office. Armed with talking points and compelling handouts, members met with staffers, Congressman and Senators from nearly every state touting the need for the National Dam Rehabilitation and Repair Act and other issues.



PICTURED HERE DURING THE 2011 ASCE POLICY WEEK ARE ASDSO MEMBERS (FROM L TO R) GREG PAXSON (SCHNABEL ENGINEERING), PRESIDENT JOHN MOYLE (NEW JERSEY), BILL BINGHAM (GANNETT FLEMING), ASDSO BOARD MEMBER ALON DOMINITZ (NEW YORK) AND ASDSO DIRECTOR LORI SPRAGENS.

Creation of a Federal Dam Rehabilitation Grant Program

The climate in Washington, DC over the past reporting period made it difficult to move a dam rehabilitation bill forward. At the end of the fiscal year, neither the House nor the Senate had introduced a bill, although much time was spent in DC crafting bill language and answering questions by staffers.

Concurrently this past year, ASDSO leaders pushed for re-authorization of the National Dam Safety Act. Again, there was no progress at the end of the fiscal year.

Thanks go to ASDSO's partner, the ASCE Government Relations Office in Washington, DC. Directed by Brian Pallasch, the DC team leads ASDSO's "on-the-ground" efforts to advocate for federal dam safety programs.

The ASDSO Legislative Advocacy Center at www.damsafety.org offers status of important bills and policies, both federal and state, and tools for those interested in helping ASDSO work toward stronger state and federal programs.

Stream Gage Funding

Led by the Interstate Council on Water Policy (ICWP), many organizations are pushing to increase federal spending to restore the U.S. Geological Survey's Cooperative Water Program (CWP) and National Streamflow Information Program (NSIP) to at least FY-2003 levels in the FY11 and FY12 budget cycles. ASDSO signed onto an ICWP endorsement letter urging full funding of the programs next year. During the year, the ICWP has been keeping ASDSO and others who signed onto the letter informed of the status of this appropriation.

The Small Watershed Dam Rehabilitation Program

Part of the Natural Resources Conservation Service (NRCS) Watershed Programs, the Small Watershed Dam Rehabilitation Program provides funding to the NRCS to rehabilitate high priority dams that were built by the NRCS' predecessor, the Soil Conservation Service, in the early part of the 20th century. Now these dams belong to local sponsors across the country. ASDSO continued to push for full appropriations for this program in FY11 and FY12. ASDSO partners with the National Watershed Coalition to coordinate communications and alerts to legislative advocates from both organizations.

For more information on the Watershed Rehabilitation Program go to: <http://www.nrcs.usda.gov/programs/WSRehab/>

ASDSO Support for States' Programs

ASDSO, along with partners at ASCE, ACEC, state floodplain management associations, and American Rivers, worked to defeat bills in Virginia and Texas that would have substantially weakened dam safety regulation in those states. In Virginia, two bills were introduced to expand existing exemptions for dams.

- Senate Bill 1060 proposed to change the definition of a dam to include only those structures that are at least 25 feet high and impound at least 50 acre-feet and to exclude agricultural dams impounding less than 100 acre-feet. This would have eliminated all public safety requirements for 914 of the 1568 jurisdictional dams including 24 high hazard and 193 significant hazard dams.
- Senate Bill 1406 proposed to increase the number of dams with agricultural exemptions by increasing the exempted height from 25 feet to 30 feet and broadening the definition of agricultural use to include agricultural preservation and conservation. This bill had the potential to exempt 97% of the regulated dams in Virginia including 45 high hazard and 319 significant hazard dams.

Thanks to the efforts of all the partners opposed to these bills, the Virginia DCR was able to reach a compromise on SB1060 that allowed all current jurisdictional dams to remain under state regulatory authority while requiring less stringent requirements for engineering studies and assessments for low hazard potential dams. ASDSO supported this substitute version as a common sense and effective approach to the regulation of low hazard potential dams. As part of the compromise, SB1406 was eliminated and the substitute SB1060 passed the General Assembly without opposition. There was a further effort by the administration of Gov. McDonnell to insert the language of SB 1406 into the state budget bill, but due to the efforts of our members and partners, the amendment was withdrawn.

In Texas, ASDSO worked with many partners to defeat an amendment to a bill that would eliminate over 94% of dams under state regulatory jurisdiction by exempting dams with less than 1000 acre-feet of storage. The amendment was approved by the Texas House of Representatives as part of a reauthorization bill for the Texas Commission on Environmental Quality. Through the efforts of ASDSO, our members and many partners, the amendment was not included in the Senate reauthorization companion bill and was greatly changed in the conference committee report for the two bills. The final bill, adopted by the Legislature, includes an exemption for significant and low hazard dams storing less than a maximum of 500 acre-feet in counties with population less than 215,000, excluding dams within municipal corporate limits. While ASDSO does not support the exemption in the final bill (it will eliminate state regulatory authority over 208 significant hazard potential dams), it is considerably better for public safety than the original amendment.

ASDSO will continue to work with partners in both Virginia and Texas to help build coalitions to support strong dam safety regulations.

EAPS

ASDSO assisted the EAP workgroup of the National Dam Safety Review Board in distributing tools for the development of emergency action plans to states and to dam owners. As part of that effort, ASDSO created EAP resource web pages for state regulators and for dam owners. The resources for dam owners include a simple EAP template, and several ways to do simplified, low-cost inundation mapping. The resource page for state programs includes these tools as well as sample letters for states to send to dam owners, and links to guidelines and templates used by states and federal agencies.

PROVIDE QUALITY AND EFFECTIVE OUTREACH PROGRAMS



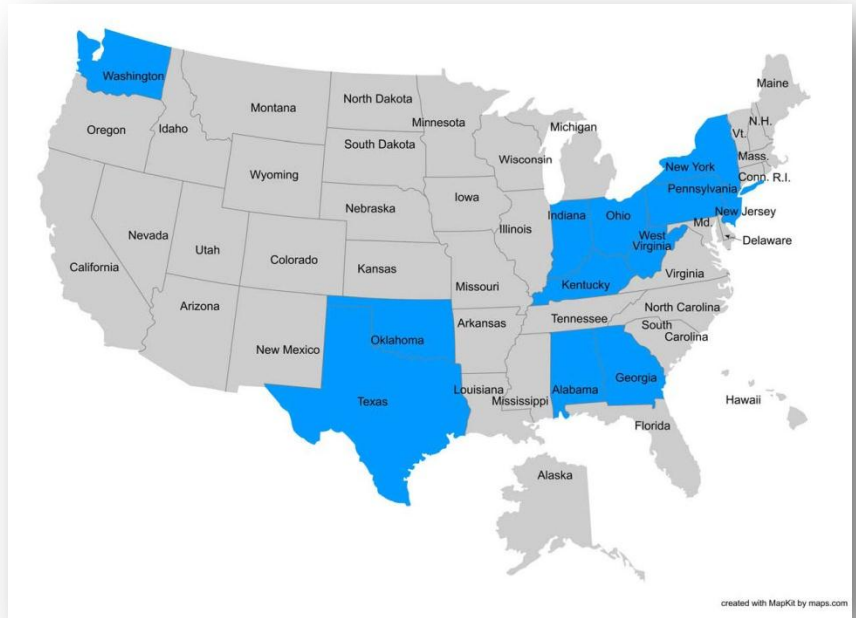
PROJECTS

- Dam Owner Education Workshops
- Website Tools for Owners and Operators
- Student Outreach: Scholarships; Student employment opportunities; Speakers Bureau; Paper competition and student involvement in conferences; UK E-Day

Dam Owner Education Program

It is essential that dam owners, especially those owning small, non-federal or non-federally regulated dams, are educated about their responsibilities as dam owners. ASDSO is proud of its programs aimed at providing information and facilitating communication between dam owners and state regulators.

One way that ASDSO reaches out to owners is through its workshop program. In FY11, ASDSO continued to increase the number of dams owners trained throughout the U.S. FEMA's National Dam Safety Program provided a portion of the support for workshops.



STATES IN BLUE HELD DAM OWNER WORKSHOPS IN FY11

Workshops held in FY11:

Indiana: July 28, 2010

Trainer: Sky Medors

Georgia: August 17, 2010

Trainer: Randy Bass

Ohio: August 24, 2010

Trainer: Mike Ahlstrom

Washington: September 24, 2010

Trainer: Dean Durkee

New Jersey: September 24, 2010

Trainers: Eric Ditchey and Carl Montana

New Jersey: December 6, 2010

Trainers: Eric Ditchey and Carl Montana

Texas: February 22, 2011

Trainer: State of Texas

Texas: March 23, 2011

Trainer: State of Texas

Oklahoma: April 6, 2011

Trainer: John Rutledge

Georgia: April 26, 2011

Trainers: Randall Bass and Gregg Hudock

Georgia: May 6, 2011

Trainers: Randall Bass and Gregg Hudock

West Virginia: May 11, 2011

Trainer: Dan Marks

Over 900 owners were trained as part of ASDSO's Owner Outreach Program in FY11.

Pennsylvania: May 18, 2011

Trainer: Paul Schweiger

Kentucky: May 25, 2011

Trainer: Eric Ditchey

Alabama: May 26, 2011

Trainer: Randy Bass

New York: June 5, 2011

Trainer: Phil Moreschi

Texas: June 9, 2011

Trainer: State of Texas

Texas: June 15, 2011

Trainer: State of Texas

Indiana: June 28, 2011

Trainer: Eric Ditchey

The ASDSO Owner Outreach Committee now has three one-day workshops available. The first is an overview course. The second focuses on dam engineering for non-engineers. The third course is on operation and maintenance.

Thanks go to our trainers for these courses:

- Gregg Hudock
- Paul Schweiger
- Dan Marks
- Phil Moreschi
- Eric Ditchey
- Sky Medors
- Randy Bass
- Mark Ahlstrom
- Dean Durkee
- Greg Paxson
- Carl Montana
- Dennis Zebell
- John Rutledge

ASDSO Website

The following updates & new features of note were added to the website in 2010-11.

-The Dam Owners section of the web site was enhanced with downloadable tools and basic information on dam ownership.

-The interactive U.S. map, which gives users the ability to click on a state and get information on each state's dam safety programs, was improved with the addition of new 2011 State Dam Program Performance Reports, short updates on how states have used FEMA State Assistance Grants and information on state loan or grant programs.

-A major upgrade was the new Search Feature coupled with the "re-opening" of the Dam Safety Bibliography and the "Technical Resources by Topic" section. Thanks go to the following members for

The screenshot shows the ASDSO Bibliography website. On the left is a navigation menu with items like 'Resources by Topic', 'Bibliography', 'ASDSO Keywords', 'ASDSO Publications', 'Download Documents', 'The Journal of Dam Safety', 'Picture Gallery', 'Research Links', and 'Links to Other Resources'. The main content area includes a search box with a tip: 'You can also search the ASDSO Bibliography using the site search. Just enter part of the title, an author, or keywords and click the search button to find a reference.' Below this is a breadcrumb trail: 'Home » Technical Resources » Bibliography'. A section titled 'About the Bibliography' contains 'Contents' and 'Access' information. A yellow box on the right asks 'Need help or have a suggestion?' and provides contact info for Sarah McCubbin Cain or Brittany Lewis. At the bottom, there are search instructions and a search form with fields for Database, Reference Type, Title, Secondary Title, Author, Publisher, Project Location, Keywords, Abstract, and Year(s), along with a 'Clear' button.

their technical assistance on creating the resource center information:

- Scott Arends, Hanson Professional Services
- Terry Arnold, MWH America
- Bob Bowers, O'Brien & Gere
- Robert Dalton, Vasconcelles
- John France, URS
- Sharon Krock, Schnabel
- Joe Kula, URS
- Martin McCann, Jack R. Benjamin
- Lelio Mejia, URS
- Mishelle Noble-Blair, Fairfax County Water, VA
- Greg Paxson, Schnabel Engineering
- Tom Pursel, Gannett Fleming
- Robert Saber, Gannett Fleming
- Steve Snider, O'Brien & Gere
- Jim Weldon, Denver Water (retired)

-USSD educational website link added to ASDSO kids' pages.

-New website pages added to focus on dam security and risk management of critical dams.

-Archived ASDSO webinars available through bookstore.

Promotion of Dam Engineering as a Profession

Undergraduate Scholarship

Brian Bellmore, Michigan Technological University

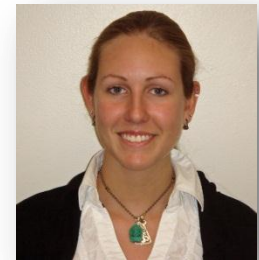
Brian Bellmore is a 5th year undergraduate pursuing a Bachelor's in Civil Engineering and a Bachelor's in Surveying Engineering at Michigan Technological University. Brian's activities at MTU include Secretary of the MTU Student Chapter of the American Congress of Surveying and Mapping, former Vice President of the Lambda Sigma Honor Society and Student Member of the American Society of Civil Engineers. Brian has completed six summer internships with four different firms, including Coleman Engineering of Michigan, William H. Smith and Associates of Colorado, Mead and Hunt Engineering of California, and J.F. Brennan Marine of Wisconsin. Brian has performed HEC-RAS modeling to determine vulnerability of floodplain residents, designed dam spillway geometry, created a wells location database using ARCGIS, and created a canal alternatives analysis using HEC-RAS and Civil 3D. He has also worked as a hydrographic surveyor, mapping streambeds using echo sounding and Hypack software and mapping floodplains using Surveying Total Stations and GPS.



BELLMORE (CENTER) PICTURED WITH 2009-10 PRESIDENT GUTIERREZ (LEFT) AND SCHOLARSHIP COMMITTEE CHAIR AND CURRENT PRESIDENT JOHN MOYLE

The New Jersey-Pennsylvania Council for Safe Dams Scholarship: Erin Dovel, College of New Jersey

The New Jersey-Pennsylvania Council for Safe Dams awarded a \$2,500 scholarship to Erin Dovel, who is currently studying Civil Engineering at the College of New Jersey. She has maintained a focus in water resources, including coursework in hydrologic engineering. Erin is entering her senior year of undergraduate work, and hopes to graduate with a Bachelor's degree in May 2011. She is currently treasurer of The College of New Jersey's Engineering Honor Society, and has been on the Dean's list for 5 consecutive semesters. Erin's other collegiate activities include the Society of Women Engineers, Phi Kappa Phi Honor Society, and ASCE. She has also worked with the Monmouth County Park System as a seasonal ranger and



ERIN DOVEL

event planner. Erin is interning at the New Jersey Department of Environmental Protection, where she works within the Dam Safety Section. Upon graduation, Erin hopes to pursue a Master's Degree in Water Resources or Environmental Engineering.

ASDSO is proud to recognize these fine scholars, who personify the profession's commitment to keeping in the forefront the health, safety, and welfare of the public.

As the fiscal year drew to a close, the Scholarship Committee and the Board of Directors awarded one winner for the 2011-12 ASDSO Senior Undergraduate scholarship:



Alexander McCaskill was selected as the recipient of a \$10,000 ASDSO senior undergraduate scholarship for the 2011-2012 school year.

Alex is a senior at the University of Missouri-Kansas City, majoring in civil engineering with a geotechnical emphasis. Alex is Vice President for the UMKC student chapter of the Missouri Society of Professional Engineers. Honor Society memberships include: Chi Epsilon, Tau Beta Pi, and Phi Kappa Phi. Student memberships include ASDSO, ASCE, the American Institute of Steel Construction, and the Association of Engineering Geologists. In his spare time, Alex enjoys welding with his Millermatic 211 MIG welder to restore and create both useful and artistic pieces.

For the past year and a half, Alex has been employed by The Judy Company, Inc., a geotechnical specialty contractor, where he has experienced the practical aspects of dam safety. After graduation, he intends to pursue a graduate degree in geotechnical engineering.

In addition to a \$10,000 scholarship award, Alex received a travel stipend to attend Dam Safety '11 in National Harbor, MD and recognition at the annual ASDSO awards ceremony.

The Committee on Educational Outreach

During the past year, the CEO, chaired by Peter Nicholson, University of Hawaii, worked on the following initiatives:

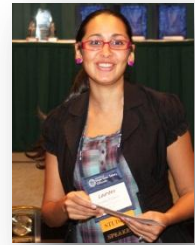
- Continuous updating of ASDSO's Facebook page with news for students and faculty. The page is primarily maintained by ASDSO student assistant Brittany Lewis.
- Hosted the student lounge at Dam Safety '10 in Seattle.
- Reviewed 15 submissions for the third annual student paper competition, selected three finalists, and reviewed final papers for presentation.
- Emailed university contacts information about ASDSO webinars suitable for classroom use.
- Announcements about the ASDSO scholarship and the 2011 student paper competition were sent by email and print mailings to university department heads and deans of engineering, civil engineering professors, and ASCE chapter advisors.
- ASDSO staff continued to maintain an extensive email list of more than 900 university contacts throughout the US, which was used to publicize the 2011 student paper competition, the 2011-2012 scholarship, ASDSO's clearinghouse for internships and co-ops, and invitations for students to attend ASDSO annual and regional conferences.
- Speakers Bureau - The CEO updated two Powerpoint presentations for use by Speakers Bureau members. The Bureau includes more than 30 volunteers in 19 states.
- Engineering Day - Sarah McCubbin-Cain represented ASDSO at the University of Kentucky's annual Engineering Day, held Feb. 26, 2011. Dozens of students stopped by ASDSO's booth to take part in a simple dam building activity.
- Student Job Opportunities - The CEO continues to encourage members to post student job openings on ASDSO's website, free of charge. A resume posting service for students and recent graduates is now available.

Students at Dam Safety 2010

Winners of ASDSO's third student paper competition:

Benjamin Skousen, University of Utah - *Effects of Breach Formation Parameter Uncertainty on Inundation Risk Area & Consequence Analysis*. (Co-authors: David Judi & Timothy McPherson, Los Alamos National Laboratory)

Lourdes Polanco (pictured at right), Utah State University - *Reliability-based Underseepage Analysis in Levees Using Monte Carlo Simulation*. (Co-author: John Rice, Assistant Professor, College of Engineering, Utah State University)



Scholarship recipient Brian Bellmore (at right), Michigan Technological University attended the 2010 annual conference and was recognized at the annual awards banquet.



In 2011, ASDSO received 15 entries from 15 universities for its third annual student paper competition (up from six in 2009 and equal to the number of entries for the 2010 competition). Universities represented in 2011 student paper competition:

CA: University of California, Berkeley
CO: Colorado School of Mines
DC: The Catholic University of America and George Washington University
GA: Georgia Institute of Technology
IL: University of Illinois Urbana-Champaign
MO: Missouri University of Science and Technology
MI: Michigan Tech and University of Michigan
NC: North Carolina State and University of North Carolina, Chapel Hill
OR: Portland State University
PA: Pennsylvania State University
TX: University of Texas at Arlington
WA: Seattle University

Keith Thole and Sarah McCubbin-Cain coordinated the judging and paper selection. Finalists were:

Micro Hydropower in the North Carolina Piedmont: A Feasibility Study on Integrating Existing Low-Head Dams into the Regional Grid. Christopher J. Sandt, P.E., MS Student, Environmental Engineering; Co-author: Martin Doyle, Ph.D., Associate Professor of Geography, The University of North Carolina, Chapel Hill

Study of Levee Seepage and Slope Stability in Relation to Roots. Michelle Shriro, P.E., G.E., Ph.D Candidate; Diego Cobos-Roa, Ph.D Candidate. Co-authors: Jonathan D. Bray, Ph.D, P.E., Professor; and Nicholas Sitar, Ph.D, Professor, University of California- Berkeley; John Lichter, Consulting Arborist; Richard Evans, C.E., Environmental Horticulturist, University of California-Davis; and Roy Kroll, Senior Engineering Geologist, California Department of Water Resources

Limit States Approach for Coupled Seepage-Deformation Analysis of Earth Embankments. Mahdi Khalilzad, A.M. ASCE, PhD Student; Co-author: M.A. Gabr, F. ASCE, Professor, Department of Civil, Construction, and Environmental Engineering, North Carolina State University

All will present their papers at Dam Safety 2011. Several other student papers will be published in the proceedings and one entrant will participate in the poster session (*Static Analysis and Evaluating of Pore Pressure Generation and Settlement of Karkheh Earth Dam during Construction, Reservoir Filling and Performance* Hamid Karimpour, Ph.D. Candidate and Research Assistant, Department of Civil Engineering, The Catholic University of America).

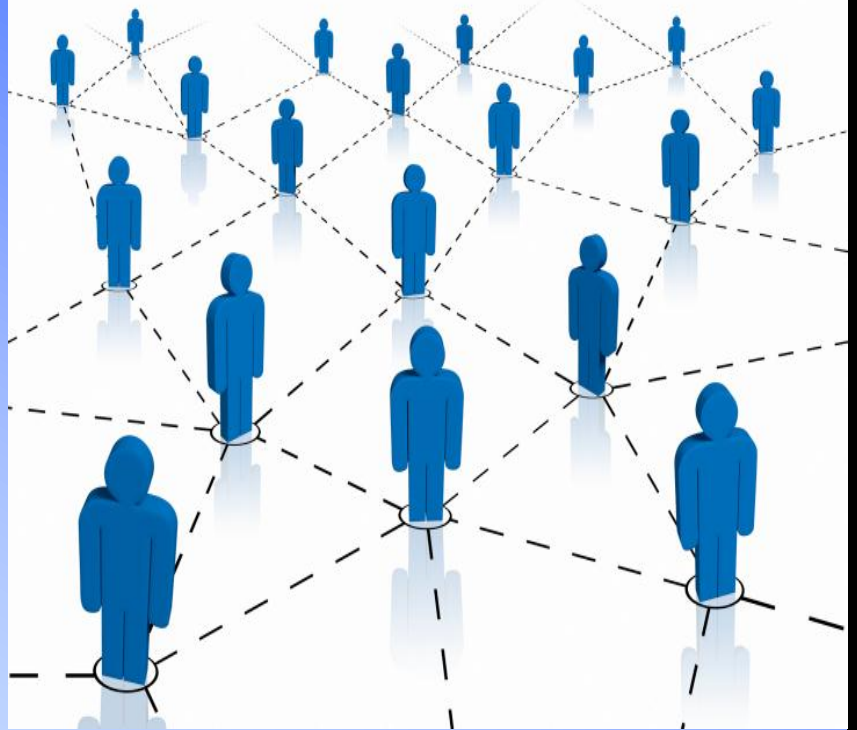
ASDSO and the University of Kentucky

ASDSO continues its partnering relationship with the University of Kentucky. In the past year:

- Several UK students used ASDSO resources, including the library, for research.
- ASDSO assisted with resources for a UK research project on dam security:
- ASDSO helped arrange an opportunity for students to go on a dam inspection with Ky Dam Safety staff.
- ASDSO shared plans for the E-day dam building activity with staff of UK's Center on Applied Energy Research.
- A UK student interviewed ASDSO staff for a website feature on local non-profits.
- ASDSO participated in UK's annual Engineering Day by hosting a simple dam building activity (pictured at right).



CREATE A UNIFIED COMMUNITY OF DAM SAFETY ADVOCATES THROUGH MEMBERSHIP IN ASDSO



PROJECTS:

- Recruit members nationwide, focus on members from engineering firms, university professors and dam owners.
- Recognize individuals and entities making a difference within the dam safety community.
- Create new and better ways to welcome new members and increase volunteerism.
- Develop public awareness initiatives to help identify ASDSO outside the membership community.
- Survey the membership for input and suggestions on improvement.

MEMBERSHIP AND VOLUNTEERISM

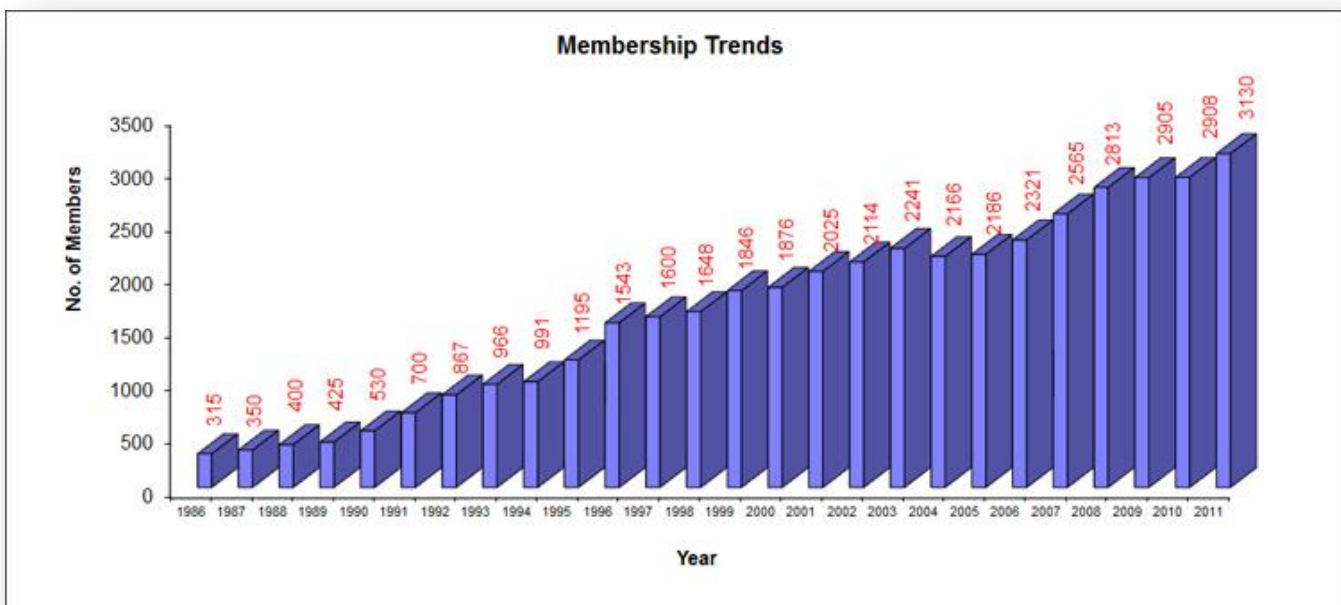
- OVER 400 NEW MEMBERS WERE ADDED TO THE ASDSO MEMBERSHIP ROSTER IN FY11.
- OVER 100 ASDSO MEMBER VOLUNTEERS PARTICIPATED IN MOVING PROJECTS FORWARD IN 2010-11 THROUGH COMMITTEE WORK.

ASDSO Membership

The 2010-11 membership campaign has concluded with the following results:

	<u>FY10 (Final)</u>	<u>FY11 (Final)</u>
Full Voting	51	51
Associate	1076	1185
Affiliate		
Company	184	192
Company Employee	904	954
Individual	537	582
Student	18	21
Honorary	17	17
Senior	91	99
Sustaining	30	29**
Total	2908	3130

** Five of the Sustaining Members are states. California, New Hampshire, New Jersey, Ohio, and Pennsylvania.



Volunteerism

Volunteers dedicate their time on all ASDSO committee and task groups and make this organization grow and operate. Without the support of our volunteer members, none of our programs would exist.

Focus on New Members

The committee works on ways to make new and younger members feel welcome. The Committee would like to continue working to develop the Mentoring Program, which was developed in 2008-2009. We are brainstorming on ways to work with the Student Outreach committee on this program. The committee held a Dine-Around at Dam Safety 2010. Over the fiscal year, the committee worked on new ideas to better promote this for Dam Safety 2011.

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 30-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.

AMAC reps are chairing the following committees:

- Keith Ferguson, Journal Editorial Committee
- George Mills, Owner Education Committee
- Randy Bass, Technical Training Subcommittee on Classroom Technical Training
- Art Miller, Technical Training Subcommittee on the Program of Study
- Paul Schweiger, Technical Training Subcommittee on Web-Based Training
- Steve Verigin, Peer Review Committee (Mr. Verigin also serves as ASDSO liaison to the National Levee Safety Committee)
- Greg Paxson, Task Force to Develop Guidance for Dam Safety Review of Engineering Designs

Not only are AMAC members serving as chairs, they serve as members on several ASDSO committees. ASDSO also tapped many AMAC members to assist with developing the on-line technical resource center.

Bill Bingham (Gannett Fleming) is serving as chair of the AMAC through FY12 and Terry Arnold (MWH America) is vice-chair.

2010 Awards/Recognition

Each year ASDSO recognizes outstanding contributions to dam safety on national and regional levels. The following award winners were honored at ASDSO's 2010 Awards Luncheon, held September 22 at Dam Safety '10 in Seattle:

Northeast Region: Hazen and Sawyer, P.C., Raleigh, NC and Upper Potomac River Commission, Westernport, MD

ASDSO's Northeast Region recognized Hazen and Sawyer and the Upper Potomac River Commission (UPRC) for development and execution of a successful plan to replace the flood gates at Savage River Dam, a 180-ft high, high-hazard potential earth and rockfill dam impounding a 17,400 ac-ft reservoir in western Maryland. Operated



(FROM L TO R) REPRESENTING HAZEN AND SAWYER: JIM MCCARTHY, NORTHEAST STATES REGIONAL REP JOHN MOYLE, AND SCOTT SHOEMAKER REPRESENTING THE UPPER POTOMAC RIVER COMMISSION.

under the guidance of project engineer USACE, the dam was constructed in 1952 primarily for flood control and low flow augmentation for the Savage River, a prized native trout stream and the source of about 20 percent of Potomac River water used by three major utilities serving the greater DC area.

Controlled releases from the reservoir are made through two service gates and two emergency gates. In late 2007, one of the emergency gates stuck in the closed position. An investigation found extensive internal corrosion in both emergency gates, and determined that all four gates were at risk of structural failure under high reservoir levels. The UPRC's initial efforts to secure funding for the estimated \$6 million gate replacement project were unsuccessful. Subsequently, the State of Maryland and the UPRC entered into a Consent Order that led to a development of a plan by UPRC and Hazen and Sawyer to replace the gates by early 2010, and to fund the work as a "shovel-ready project" under the then-pending American Recovery and Reinvestment Act (ARRA).

The plan involved: (1) Expediting the contract to manufacture the replacement gate components under a two-phase contract, with Allegany County, MD, fronting the related engineering design costs on behalf of the UPRC, and with the second, manufacturing phase conditional upon procurements of funding for the gate manufacture and installation; (2) Submitting the project for funding under the ARRA program; and (3) Completing project construction documents ready for bidding pending funding approval. This strategy worked: The project was approved for funding under the ARRA program in time to allow construction to be advertised in July 2009; however, ARRA funding delays narrowed the critical window of time available for draining the reservoir and installing the new gates prior to the spring snowmelt. To expedite the project, UPRC and Allegany County authorized the contractor to work double shifts, allowing completion of the critical gate installation sequence in time to commence re-impoundment on March 5, when flow through the reservoir's outlet tunnel was about 50 cfs. By March 8, tunnel flow had increased to 200 cfs, which would have curtailed further work had gate installation not been completed. The reservoir completely refilled on March 13, 2010 and the gates were put into operation in April.

Southeast Region: Francis E. Fiegler, II, P.E., Program Manager, GA Department of Natural Resources Safe Dams Program

The Southeast Region honored Ed Fiegler for more than 30 years of dedication to Georgia's Safe Dams Program and for being an integral part of dam safety in Georgia, the Southeast and the nation.

Mr. Fiegler was one of the first employees of the Georgia Safe Dams Program. As Program Manager, he has taken part in more than 1,000 dam inspections, hundreds of dambreak routings, more than 30 condition assessment reports, hundreds of construction plan reviews and many emergency responses.

Mr. Fiegler has been involved in ASDSO since its inception and was instrumental in its growth. He participated in the 1979-1981 Tri State Dam Safety Conferences that led to the establishment of ASDSO. He served on ASDSO's Model Dam Safety committees, and on ASDSO's Board of Directors. He was an ASDSO President in 1999-2000.

Mr. Fiegler has been dedicated to bringing PL-566 watershed dams into compliance on a national level. He served for more than a decade on both the National Watershed Coalition Steering Committee and Dam Safety Committee. He received the 2001 NWC Meritorious Service Award for his role in the passage of the Small Watershed Rehabilitation Amendment of 2000, and the 2005 NWC Larry Smith Distinguished Service Award.

In addition, he has been honored for his contributions to dam and public safety by receipt of a Certificate of Excellence from the Georgia Environmental Protection Division (1996); a National Award of Merit from the Natural Resource Conservation Service (2001); a Certificate of Appreciation from the Georgia Emergency Management Agency (1995); and a National Award of Merit from the Association of State Dam Safety Officials (2003).



(FROM L TO R) SOUTHEAST REGIONAL REP BRIAN LONG, REGIONAL REP TOM WOOSLEY, ED FIEGLE, AND REGIONAL REP BO BOLOURCHI.

Mr. Fiegle has been active in promoting engineering within Georgia, serving as West Georgia Chapter President of The Georgia Society of Professional Engineers (GSPE) for several years and as GSPE President from 2004-2006. The GSPE named him "Engineer of the Year in Government" in 1992-1993 and 2003-2004, and "Georgia Engineer of the Year" in 2010. Mr. Fiegle has been involved with GSPE's Mathcounts contest since 1988. He has also served as GSPE Secretary and Treasurer and on numerous GSPE committees.

Midwest Region: American Electric Power, Columbus, OH

ASDSO's Midwest Region recognized American Electric Power (AEP) for its commitment to improving dam safety and reducing potential impacts to downstream property and human life in the event of dam failure. Ohio Dam Safety has a strong, positive working relationship with AEP. Several AEP dam safety staff are members of ASDSO, the Ohio Dam Safety Organization, the American Society of Civil Engineers, and other professional organizations.



(FROM L TO R) OHIO STATE REP RODNEY TORNES, REPRESENTING AMERICAN ELECTRIC POWER PEDRO AMAYA, MIDWEST REGIONAL REP JASON CAMPBELL AND REGIONAL REP JASON BOYLE.

AEP is upgrading its Ohio dams to bring them into compliance with dam safety laws. Since 2006, AEP has fully breached three high-hazard dams, reduced the height of two high-hazard dams, fully breached one non-regulated structure, performed engineered repairs to one moderate-hazard dam and performed numerous owner repairs to other high-, moderate-, and low-hazard dams. AEP plans to breach two additional moderate-hazard dams. AEP has undertaken comprehensive investigations and hazard evaluations of several Ohio dams, and is preparing emergency action plans and Operation, Maintenance, and Inspection manuals for its dams that lack these manuals.

In 2009 AEP invited several owners of state-regulated dams in Michigan to observe Emergency Action Plan exercises held at AEP dam projects. This experience gave the dam owners additional perspective on ways to fine-tune their own emergency action plans, and exemplifies AEP's strong commitment to improving dam safety.

West Region: Warren D. Samuelson, P.E., Manager, Dam Safety Section, TX Commission on Environmental Quality

ASDSO's West Region presented its 2010 Merit Award to Warren Samuelson, Manager of the Texas Dam Safety Section, for his dedication to revamping a once severely understaffed state dam safety program. Mr. Samuelson has long been eligible for retirement, but has elected instead to undertake the tremendous challenge of improving dam safety in the state of Texas.



(FROM L TO R) WEST REGIONAL REP JOHN FALK, REGIONAL REP DAVID GUTIERREZ, REGIONAL REP JON KELSCH, WARREN SAMUELSON, REGIONAL REP PAT DIEDERICH AND REGIONAL REP MARK HAYNES.

The Texas program has dramatically improved under his watch. Mr. Samuelson testified before the state legislature to request increased support for the program. Since 2003, program staff has increased from 5 FTEs to 29 FTEs, while the program budget increased from \$350,000 in 2006, to \$2.4 million in FY09. He worked to revise the Texas dam safety law - in particular, the state's definition of a jurisdictional dam and hazard-potential classification criteria - the changes went into effect last year.

Mr. Samuelson has conducted numerous dam owner workshops, reaching 214 owners last year and nearly twice as many in the first six months of 2010. He has worked tirelessly with local NRCS officials on rehabilitation of the state's watershed dams.

Mr. Samuelson received his BS degree in Civil Engineering from the University of Texas at Austin, and is a licensed PE in Texas. He has spent nearly 39 years with the Texas Commission on Environmental Quality and predecessor agencies in the areas of dam safety, floodplain management, and on-site sewage facilities, with nearly 32 years in the area of dam safety. He has been ASDSO State Representative for Texas since 2004.

2010 National Rehabilitation Project of the Year: Gatehouse Anchorage System for Prettyboy Dam - Alvi Associates, Inc., Towson, MD

Prettyboy Dam, a concrete gravity dam built in the 1930s, is owned by the City of Baltimore. At 150-ft high and 700-ft long, the dam creates Prettyboy Reservoir, which has a design storage volume of about 19 billion gallons. Together with the downstream Loch Raven Reservoir, the reservoir provides about 60% of the water supply for the 2.7 million residents of the Baltimore metropolitan area. Control of water flow through the dam is via a concrete gatehouse monolithic with the dam.

By 1978, extensive cracking had developed in the gatehouse and the adjacent main body of the dam, along with substantial water leakage into the gatehouse stairwell.

Through 1994, five different consultants had performed six investigations of the cracking with inconclusive and inconsistent findings. At that point, the City tasked Rummel, Klepper & Kahl (RK&K), along with Alvi Associates as a subconsultant, with performing a comprehensive dam investigation. As part of this effort, Alvi Associates led the forensic structural and geotechnical investigation, discerning that the cracks clustered into eight distinct groups, and identifying three distinct general causes of the cracking, with each cause contributing in varying degrees to each group. A "cause-effect matrix" was thus developed, transcending the usual assumption of a simple one-to-one influence of cause to effect. This causal matrix was quantitatively validated by analyses of stresses and deformations of the dam, gatehouse, and bedrock – including creep effects in each – and the resulting predictions were found to fit the observed cracking remarkably well. The next step was to assess the implications of the cracking. Stability analyses revealed a significant and worrisome risk that the cracks could interconnect to the extent of precipitating a catastrophic gatehouse stability failure, with associated inability to regulate water flow through the dam.



(FROM L TO R) PRESIDENT GUTIERREZ, REPRESENTING ALVI AND ASSOCIATES IRFAN ALVI AND SCOTT DODDS OF BRAYMAN CONSTRUCTION.



To stabilize the gatehouse, Alvi Associates designed a \$6 million anchorage system consisting of 38 post-tensioned steel threadbar anchors. The anchors were core-drilled up to 70 feet into the dam, in water depths up to 100+ feet, all while dodging many voids and obstacles within the dam. Some anchors were directly attached to the face of the gatehouse, while others were attached via large prestressed concrete beams. To avoid construction problems and damage to the dam, the contract documents included innovative measures such as a comprehensive integrated shop drawing process, a preproduction anchor installation and testing program, a specific anchor stressing sequence with varying post-tensioning forces, and milestone underwater inspections.

The anchorage system was expertly constructed by Brayman Construction, with RK&K providing overall construction management and environmental monitoring services, and with Alvi Associates leading the review of contractor technical submittals and closely partnering with Brayman to develop technical solutions during construction. Because of the cooperative professional attitude and solid capabilities of all parties, the construction process went exceptionally well. The project was

completed ahead of schedule and under budget, and Alvi Associates and Brayman both described it as their best experience ever on a construction project!

2010 National Award of Merit: USDA Natural Resources Conservation Service

The ASDSO Board of Directors presented the 2010 National Award of Merit to the US Department of Agriculture, Natural Resource Conservation Service. With the renewing and reinvigorating of the NRCS/ASDSO partnering agreement in September 2009 came increased efforts to work together on reducing risk from dam failures. In particular, the focus is on dams built by the NRCS (through the PL-566 program and other programs) and still technically supported by the NRCS although owned by local authorities. The new agreement was signed at the 2009 ASDSO Annual Conference. Drawing from the MOA, the major mission goals follow:

Dams in the United States must be constructed, rehabilitated, operated and maintained in accordance with sound engineering principles to avoid potential loss of life and destruction of property in the event of dam failure;

Most dams designed and constructed under the technical supervision of the NRCS are regulated by the member states of the ASDSO;

It is the mutual desire of the NRCS and ASDSO to recommend the best current practices in the safety of dams design and operation process;

The NRCS and ASDSO wish to encourage a harmonious relationship and improve communications between the state offices of the NRCS and the member states of the ASDSO;

The coordinated and timely exchange of information related to conceptual planning, design, construction, operation, hazard classification, rehabilitation and maintenance of dams, can be accomplished with recognition by the NRCS of the responsibility of the member states of the ASDSO to exercise regulatory jurisdiction and the review of specific project plans.

During this past year, NRCS leaders, in particular Noller Herbert, Director of the NRCS Conservation Engineering Division, and Mark Locke, NRCS National Design Engineer, supported and emphasized the need for individual state conservation engineers to sign similar MOAs with state dam safety programs. Many states followed suit opening the doors for better communication and coordination.

For many years, ASDSO and the NRCS have been working on improving emergency planning at dams. Under the leadership and support of the NRCS, ASDSO experts created a model emergency action plan designed for "NRCS-sized" dams. Now, the NRCS and ASDSO are teaching local dam owners how to create, maintain and test EAPS using the model as the guide. In the past year, two workshops were held with three more coming up in the next few months. The number of EAPs maintained at NRCS dams is growing dramatically.

Mark Locke continues to refine and improve the NRCS dam inventory, with the goal of streamlining the data collection process and improving data quality. This helps improve data in the National Inventory of Dams and provides support for state databases. ASDSO congratulates and acknowledges the NRCS for striving to improve dam safety nationwide.



(FROM L TO R) NRCS NATIONAL DESIGN ENGINEER MARK LOCKE, NRCS ENGINEERING DIVISION DIRECTOR NOLLER HERBERT AND PRESIDENT GUTIERREZ.

2010 President's Award

John France received the 2010 President's Award from President David Gutierrez for his support for and advice to the president and to the ASDSO Board. The word "tireless" is how John's support for ASDSO can be described in a word. When asked to help, John is always willing. In his role as chair of the Affiliate Member Advisory Committee the last two years (his term is complete at this conference), John has loyally attended every ASDSO board meeting and contributed his time, reason and expertise to assist ASDSO in moving policy and projects forward. He also serves on ASDSO's Conference Program, Finance, and Technical Journal committees, and serves as a trainer for ASDSO Dam Owner Workshops. Additionally, he has volunteered his time to help with numerous ASDSO projects including the recent effort to upgrade the database of state dam safety performance data. (And he's creative...he came up with the slogan on this year's coffee mug!)

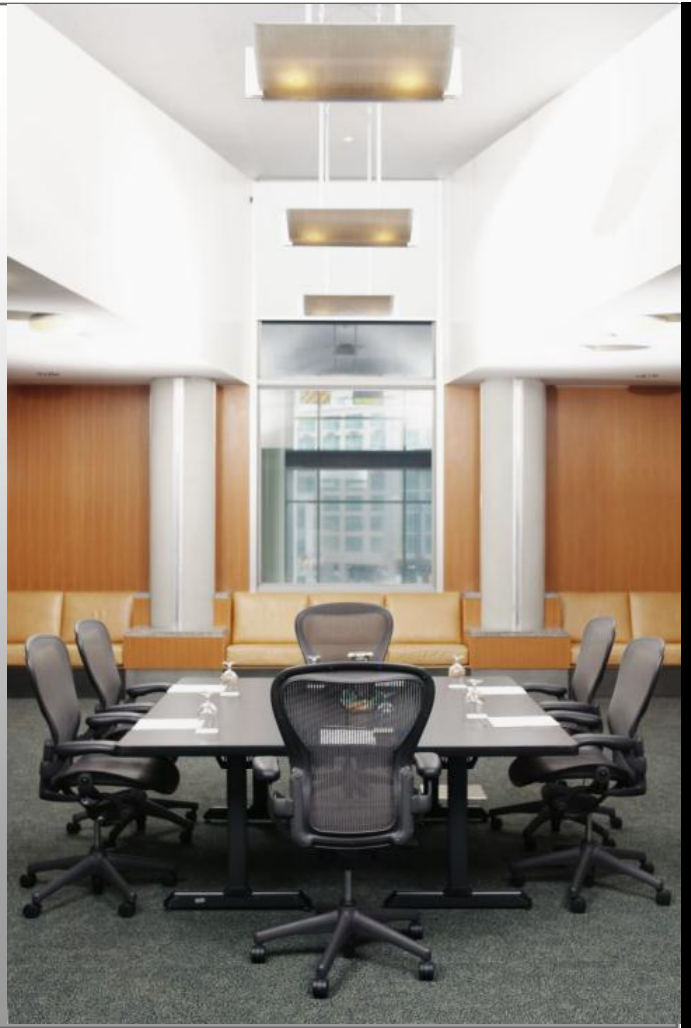


JOHN FRANCE (LEFT) WITH 2009-10 PRESIDENT GUTIERREZ.

In his professional life, John has published numerous papers on geotechnical engineering, dam engineering, dam safety, and seismic analysis. Mr. France has regularly authored papers and made presentations for the professional meetings of ASDSO and USSD. He was a principal instructor for an ASDSO advanced training course on stability analysis. He was project manager for two FEMA-funded ASDSO research workshops on Seepage Through Embankment Dams and Outlet Works for Dams. Aside from contributing his expertise to dam safety through ASDSO, Mr. France is also active in the U.S. Society on Dams, the American Society of Civil Engineers, the American Council of Engineering Companies of Colorado, and the Colorado Water Congress. He served on the National Dam Safety Review Board and several NDSRB workgroups.

John W. France is a registered PE with the Denver Office of URS Corporation where he is Vice President, Senior Principal, and National Technology Leader for Dams. He received his BS degree in civil engineering and MS degree in geotechnical engineering from Cornell. Mr. France has over 30 years of consulting engineering experience, during which time he has worked on hundreds of civil engineering projects. He has been responsible for the analysis, design, and construction of embankment and roller compacted concrete dams and their appurtenant structures. Mr. France has provided A/E consulting services to dam safety programs in the U.S. Department of Interior continuously since 1983. He has served on Consultant Review Boards for the Bureau of Reclamation for several dam safety rehabilitation projects. Currently, he is serving on Advisory Boards for two Corps of Engineers dam safety projects and on Advisory Boards for BC Hydro for dam safety studies and modifications of three of its dams.

MANAGING THE ASSOCIATION EFFECTIVELY THROUGH INTERNAL POLICIES AND PROCEDURES



FUNDRAISING

- **ASDSO'S CAMPAIGN GENERATED \$23,750 IN DONATIONS AND \$78,000 IN SUSTAINING MEMBERSHIPS.**
- **ASDSO ENTERED INTO GRANTS AND CONTRACTS FOR FEDERAL SUPPORT TOTALING OVER \$1 MILLION.**

ASDSO Leadership

Transitions

Board of Directors

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 2010-11 officers include the following:

- President: John Moyle, New Jersey
- President-Elect: Zahir "Bo" Bolourchi, Louisiana
- Treasurer: Jason Campbell, Illinois
- Secretary: Patrick Diederich, Nebraska

These officers, along with immediate past president David Gutierrez (California) and executive director Lori Spragens made up the Executive Committee in 2010-11.

Board members elected in 2010 include the following:

- Cas Taherian (Maryland), elected to a second term representing the Northeast Region
- Alon Dominitz (New York), elected to a first term representing the Northeast Region
- Tom Woosley (Georgia), elected to a second term representing the Southeast Region
- Jason Boyle (Minnesota), elected to a second term representing the Midwest Region
- Mark Haynes (Colorado), elected to a second term representing the West Region
- John Falk (Idaho), elected to a second term representing the West Region

These elected officials join the following members to complete the Board of Directors for 2010-11:

- John Moyle (New Jersey), representing the Northeast Region
- Zahir (Bo) Bolourchi (Louisiana), representing the Southeast Region
- Brian Long (West Virginia), representing the Southeast Region
- Jason Campbell (Illinois), representing the Midwest Region



TWO BOARD MEMBERS SERVED OUT THEIR TERMS AT DAM SAFETY 2010. PICTURED HERE ARE DENNIS DICKEY (PA)(LEFT) AND ROBERT MARTINEZ (NV)(RIGHT) WITH 2009-10 PRESIDENT GUTIERREZ. THANKS GO TO THESE OUTGOING BOARD MEMBERS.

- Pat Diederich (Nebraska), representing the West Region
- Jon Kelsch (North Dakota), representing the West Region

AMAC Chair Bill Bingham (Gannett Fleming) sits on the Board representing the AMAC. AMAC Chair-Elect Terry Arnold (MWH) also attended meetings on behalf of the AMAC.

Northeast representative Cas Taherian (Maryland) retired prior to the end of the fiscal year. Jim Gallagher (New Hampshire) is serving out his term. Mark Haynes, Colorado, also retired at the end of June 2011, leaving his seat on the Board open. Thanks go to these two state representatives and Board members.

State Representatives

- Board member Mark Haynes retired as the chief of the Colorado Dam Safety Division at the end of the fiscal year. The Colorado state representative appointment is pending.
- Virginia named Robert Bennett as the new state representative replacing Ryan Brown.
- Kansas named Kim Feldkamp as new state representative to take over for Matt Scherer.
- Board member Cas Taherian retired as Maryland Dam Safety Division chief and ASDSO state representative. Hal Van Aller was named as new state representative for Maryland.
- Oregon announced that it had hired a new dam safety officer, Keith Mills, who will also serve as ASDSO state representative for Oregon, replacing Barry Norris.
- Long-time Washington state representative and past president Doug Johnson left the state to begin a new career with the Federal Energy Regulatory Commission. Jerald LaVassar took his place as state representative for Washington.
- Ted Lozier replaced David Hanselmann as the state representative for Ohio.

Thanks go to all of the outgoing state representatives: Mark, Ryan, Matt, Cas, Barry, Doug, and David.

New Staff



In FY11, ASDSO was glad to bring on Mark Ogden, retired from the State of Ohio, as its newest staff member. Mark brings a wealth of engineering and state government background to ASDSO.

Finance Committee

The Finance Committee continued to oversee ASDSO's investment program, as the economic downturn continued to affect ASDSO's long-term investment plan. The committee focused much of its attention on refining and updating the cash management policies to bring them more in line with current trends. The committee also saw an outpouring of giving by many members and the hard work of volunteers across the country, as the eighth year of the ASDSO Annual Fundraising Drive nearly met its goals.

See Appendix 3 for a list of 2010-11 Patron Donors and Sustaining Members.

FY2011 Action Plan

There were 87 projects in the FY2011 Action Plan. All but six were completed or underway at the end of the fiscal year.

Budgeting and Income

ASDSO ended FY11 under budget and with a surplus of income.

FY11 Revenues Summary

	<u>Budget</u>	<u>Actual</u>
Dues	\$290,000	\$303,000
Patron Program	\$25,000	\$23,750
Annual Conference (Seattle, WA)	\$731,985	\$735,640
Seminar and Workshop Fees	\$294,500	\$273,276
All Other Income	\$81,000	\$193,600
Contracts (DHS, FEMA, NRCS, Corps TEC)	\$922,786	\$948,680
Totals	\$2,345,271	\$2,477,988

FY11 Expenditures Summary

	<u>Budget</u>	<u>Actual</u>
Salaries, Fringes, Taxes*	\$219,519	\$283,823
Meetings and Committee Expenses	\$81,680	\$90,883
Annual Conference	\$441,917	\$447,842
Seminars and Workshops	\$112,975	\$49,002
Journal and E-News	\$82,000	\$90,789
Direct Operating Costs and Cons. Support	\$409,802	\$356,450
Contracts* (DHS, FEMA, States, Corp TEC)	\$973,576	\$906,717
Totals	\$2,321,469	\$2,225,506
Final excess revenues over expenditures	\$ 23,802	\$252,482

* Contracts include a portion of salaries, fringes and payroll taxes: \$201,663 (budgeted) \$159,556 (actual).
Total Payroll budgeted for FY11 = \$421,182 / Actual = \$443,378.

During FY11, ASDSO signed or carried out project contracts with the following:

- DHS, FEMA (National Dam Safety Program projects): Entered into a grant utilizing Federal FY10 funds. To carry out technical seminars, support three state peer reviews, support five one-day dam owner workshops, create public awareness pamphlets/webpages. Closed out Federal FY09 contract totaling \$411,168 to do similar projects.
- DHS, Office of Infrastructure Protection (Dams Sector). Signed Federal FY10 contract through ASDSO's GSA Contract totaling \$410,300. The contract objectives included dam security workshops, support for the State Dam Security Panel, support for the Third Annual National Dam Security Forum, collection of metrics to analyze state participation in dam security programs, creation of a classroom seminar on security and creation of a webpage on security at the ASDSO website. Closed out Federal FY09 contract totaling \$399,374 to do similar projects.
- USDA, Natural Resources Conservation Service. Signed in Federal FY10 through ASDSO's GSA Contract totaling \$68,919 to conduct EAP workshops in three locations. Late in the fiscal year, signed Federal FY11 contract to continue EAP workshops and to create and hold a new workshop on introduction to safety inspection of dams.
- State of Florida: \$36,865 to hold two technical seminars for state dam safety officials.
- State-sponsored dam owners workshops:

	<u>Budget</u>
Washington	\$18,832
Oklahoma	\$18,832
Pennsylvania	\$18,832
West Virginia	\$18,832

APPENDIX 1
COMMITTEE ROSTER



ASDSO STANDING COMMITTEES

Affiliate Member Advisory Committee

Bill Bingham, Gannett Fleming, PA, Chair
Terry Arnold, MWH America, CO, Vice-Chair
Randy Bass, Schnabel Engineering, GA
Bob Bowers, O'Brien & Gere
Jack Byers, Applegate Group, CO
Bob Dalton, Vasconcelles, IL
Eric Ditchey, McCormick Taylor, 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
Joe Kula, URS Corp., Gaithersburg, MD
B. Dan Marks, Marks Enterprises, Arden, NC
Marty McCann, Jack R. Benjamin & Associates, NPDP, CA
Art Miller, Penn State University, PA
George Mills, GEM Consulting, OH
Carl Montana, French & Parrello, NJ
Karl Myers, Piedmont Geotechnical Consultants, GA
Greg Paxson, Schnabel Engineering
Jeff Powers, Florence & Hutcheson, Inc, GA
John Rutledge, Freese & Nichols, TX
Paul Schweiger, Gannett Fleming
Steve Snider, Independent Consultant, NY
Ed Tomlinson, Applied Weather Associates, CO
Steve Verigin, GEI Consultants, CO
Jim Weldon, Denver Water Board, CO
Mishelle R. Noble-Blair, Fairfax Water - Griffith Water Treatment Plant, VA
Scott M. Arends, Hanson Professional Services, Inc., IL
Anthony M. Nokovich, American Water Company, PA

Annual Conference Program Committee

John Ritchey, New Jersey, Chair
John France, URS Corp.
Eric Ditchey, McCormick Taylor
Michele Lemieux, Montana
Matt Lindon, Utah
Greg Hanson, USDA NRCS ARS
Greg Zaminsky
Eric Halpin, US Army COE

National Dam Safety Forum Program Subcommittee

Jack Byers, ASDSO
Kristen Baumgartner, DHS
Frank Calcagno, FERC
Steve McEvoy, NC
Roger Adams, PA
Enrique Matheu, DHS
Alfred Hancock, Xcel Energy
Robert Knowlton, NY Power Authority

Annual Awards Committee

John Falk, (USACE), Chair, West Region
Bob Finucane, Vermont (Retired), Northeast Region
Lyle Bentley, Tennessee, Southeast Region
Bob Dalton, Illinois (Retired), Midwest Region
Dennis Dickey, Pennsylvania, Northeast Region
Pat Diedrich, Nebraska, West Region

Constitution & Bylaws Committee

Brian Long, Chair, West Virginia
Bo Bolourchi, LA

Charles Cobb, Alaska
Elaine Pacheco, New Mexico
Glenn Lloyd, Missouri
Jim Gallagher, New Hampshire
John Moyle, New Jersey
Jon Phillippe, Virginia
Ken Smith, Indiana
Tom Woosley, GA

Dam Failure Investigations Committee

Mark Baker, Chair
Robert Clay, MO
Warren Harris IV, NY
Tami Idol, NC
Wayne King, FERC
Steve McEvoy, NC
Dusty Myers, MS
Jim Pawloski, MI

Technical Advisors

Bill Allerton, FERC
Dan Mahoney, FERC
Edwin Matsuda, HI
Pat Regan, FERC

Dam Owner Outreach Advisory Committee

George Mills, Chair, GEM Consulting
Richard DeBold, New Hampshire
Dennis Dickey, Pennsylvania
John Moyle, New Jersey
Raul Silva, Massachusetts
Kenneth Smith, Indiana

Trainers

Phil Moreschi, Fuss & O'Neil
Dan Marks, Marks Ent.
John France, URS
Danny McCook
Joe Kula, URS
Dean Durkee, Gannett Fleming
Greg Paxson, Schnabel
John Harrison, Schnabel
John Rutledge, Freese & Nichols
Eric Ditchey, McCormick Taylor
Carl Montana, French & Parello
Paul Schweiger, Gannett Fleming
John France, URS

Finance Committee

Jason Campbell (Chair), Illinois
Bo Bolourchi, Louisiana
John Moyle, New Jersey
Dave Gutierrez, California
Ken Smith, Indiana
John France, URS Corp., Colorado
Matt Lindon, Utah
Rob Martinez, Nevada
(Include Board Secretary in correspondence as well.)

Legislative Activities

Dave Gutierrez, Chair, California
Brad Iarossi, USFWS
Jim Gallagher, New Hampshire
John Moyle, New Jersey
John Falk, Idaho
Raul Silva, Massachusetts

Meg Galloway, Wisconsin
Dan Lawrence, Maricopa County, AZ
Eric Ditchey, McCormick Taylor, NJ
John Ritchey, New Jersey
Ken Smith, Indiana
George Mills, GEM Consulting
Joe Kula, URS
Jack Byers, Applegate

Levee Safety Committee

Mark Ogden, Chair
Steve Verigin, GEI
Dave Gutierrez, California
Paul Perri, Colorado
Bill Bingham, Gannett Fleming
Matt Scherer, Kansas
John Rutledge, Freese and Nichols
Don Basham, Stantec

Membership Committee

Chrissy Ferrazanno (Chair), Schnabel
Sky Medors, Lawson-Fisher
Jason Boyle, MN
Visty Dalal, Maryland

Officers Nomination Committee

2011

Dave Gutierrez, California, Chair
John Moyle, New Jersey
Robert Martinez, Nevada

Outlet Works Committee

Joe Monroe (Chair), Schnabel, Georgia
Kofi Acheampong, Maryland
Erik Dove, Missouri
Greg Zamensky, Maryland
Les Boyd, Texas
Mike Knarr, California
Joe Stock, Ohio
Arvil Bass, Oklahoma
Ken Worster, Texas
John Falk, Idaho
Larry Marcik, Connecticut
Dennis Hogan, Pennsylvania
Mark Haynes, Colorado
William Andres, Connecticut
Param Dhillon, California

Peer Review Committee

Steve Verigin, Chair, GEI Consultants
Bill Bingham, Gannett Fleming Engineers
George Mills, Ohio (retired)
Dan Mahoney, FERC
John Cima, Dominion Resources
David Gutierrez, California
Ken Smith, Indiana

Peer Review Team Pool

Consultants

Terry Arnold, MWH America
Randall P. Bass, P.E., Schnabel Engineering
William B. Bingham, Gannett Fleming Inc.
John France, URS Corp.
Dean Durkee, Gannett Fleming, Inc.

Dam Owners

James H. Weldon, Denver Water Department,
John Cima, Dominion Resources Services, Inc.

Richard Sanchez, CA DWR
John Yen, Southern Cal Edison
Boris Slogar, Muskingum WCD

State Dam Safety Officials

David A. Gutierrez, CA Dept. of Water Resources
George E. Mills, (Formerly with the) OH DNR Div of Water
John Moyle, NJ DEP Dam Safety Section
John Ritchey, NJ DEP Dam Safety Section
Stephen W. Verigin, (Formerly with) CA DWR
Matthew Lindon, (Formerly with) Utah Dam Safety
Robert Dalton (Formerly with) Illinois DNR
Dennis Dickey (Formerly with) Pennsylvania DEP
Doug Johnson (Formerly with) Washington Dept of Ecology

Specialized Pool (US Federal & Canada)

Ms. Mona Bechai, MOBEC Engineering
Barry Hurdall, BJH Engineering Ltd.
Daniel J. Mahoney, FERC (retired)
Don Basham, Stantec (Formerly USACE)
Manoshree Sundaram, FERC

Retired reviewers

Marty Stralow
George Austin
Cat Cecilio
Alan Pearson
Tom Kelly
Jim Simons
Chris Veesaert
Carl Montana
Ron Lemons
Alton Davis, Jr.
Larry Lambert

Scholarship Committee

John Moyle, Chair, New Jersey

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APPENDIX 2
ASDSO COMMENT ON EPA
PROPOSED REGULATION



ASSOCIATION OF STATE DAM SAFETY OFFICIALS

November 16, 2010

RE: Hazardous Waste Management System
Identification and Listing of Special Wastes
Disposal of Coal Combustion Residuals from Electric Utilities Docket
Attention Docket ID No. EPA-HQ-RCRA-2009-0640

The Honorable Lisa Jackson
Administrator
United States Environmental Protections Agency
Mailcode: 5305T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Dear Administrator Jackson:

The Association of State Dam Safety Officials (ASDSO) thanks the United States Environmental Protection Agency (USEPA) for the opportunity to provide comments regarding the proposed requirements to address the stability of surface impoundments for coal combustion residuals (CCR).

EPA should be aware of the context in which CCR dam safety requirements are proposed. Several catastrophic dam failures in the 1970s led Congress to enact the National Dam Safety Program Act of 1972 (Public Law 92-367). The primary focus of the National Dam Safety Program Act is to “reduce the risks to life and property from dam failure in the United States through the establishment and maintenance of an effective national dam safety program to bring together the expertise and resources of the Federal and non-Federal communities in achieving national dam safety hazard reduction.” The Act was amended in 1986 (Water Resources Development act, 1986 – P.L. 99-662), 1996 (Water Resources Development Act, 1996 – P.L. 104-303), 2002 (Dam Safety and Security Act, 2002 – P.L. 107-310) and most recently in 2006 (Dam Safety Act, 2006 – P.L. 109-460). In June of 1979, the *ad hoc* interagency committee on dam safety issued the *Federal Guidelines for Dam Safety* for federal agency dam owners. The Interagency Committee on Dam Safety (ICODS) was established in 1980 to encourage the establishment and maintenance of effective federal programs, policies, and guidelines to enhance dam safety and security, and to serve as the permanent forum for the coordination of federal activities in dam safety and security. The National Dam Safety Program Act provides grants, research, and training to assist state dam safety agencies in improving their regulatory programs.

The regulation of dams in this nation has evolved over the last 30 years, both from a federal policy perspective and from a state regulatory agency perspective due to the above events and state/federal legislation. While some states’ dam safety regulatory legislation does not extend to CCR impoundments, several states include CCR impoundments in state dam safety jurisdiction. It is imperative to allow those states with legislative jurisdiction to continue their lead role in regulation of CCR impoundments.

The USEPA has proposed establishing dam safety requirements to address the structural integrity of surface CCR impoundments to prevent catastrophic releases based on Mine Safety and Health Administration (MSHA) requirements for Slurry Impoundments (30 CFR 77.216). The Association of State Dam Safety Officials provides the following comments regarding USEPA's proposed dam safety requirements:

- Language should be included to the proposed rules to allow acknowledgement of state dam safety program primacy over coal combustion residual impoundments, where state dam safety regulation exists.
- Under 30 CFR 77.216, regulation of surface impoundments **only** exist to protect miners on mine property, and not the downstream public. Any USEPA dam safety regulation should include consideration of hazards to the downstream public.
- USEPA should adopt existing FEMA hazard potential guidelines. Since 1979, FEMA has had the leading role in coordinating national dam safety. The *Federal Guidelines for Dam Safety*, published in April of 2004 and prepared by the INTERAGENCY COMMITTEE ON DAM SAFETY is a collection of documents that should be referenced in USEPA' dam safety regulations pertaining to CCR impoundments.
- USEPA should require emergency action planning specific to each dam in accordance with FEMA guidelines. The MSHA regulations, (30 CFR 77.216), provides provisions for response to hazardous conditions, but no formal written-plan is among the requirements. It is the opinion of ASDSO that a formal Emergency Action Plan (EAP) prepared in advance for each dam is critical to dam safety.
- USEPA should incorporate specific safety standards consistent with the Federal Guidelines for Dam Safety (see FEMA documents 33, 333, 64, 94 and 65) in any proposed CCR dam safety regulations.

The safety of our nation's dams has always been a critical objective of both Federal agencies as well as State Dam Safety Agencies. With this in mind, ASDSO respectfully requests that the comments provided in this letter be favorably considered in any proposed rules regarding the dam safety regulation of coal combustion residuals.

ASDSO is a non-profit organization of state and federal dam safety regulators, dam owners/operators, dam designers, manufacturers/suppliers, academia, contractors and others interested in dam safety. Our mission is to advance and improve the safety of dams by supporting the dam safety community and state dam safety programs, raising awareness, facilitating cooperation, providing a forum for the exchange of information, representing dam safety interests before governments, providing outreach programs, and creating a unified community of dam safety advocates.

Thank you for your consideration,

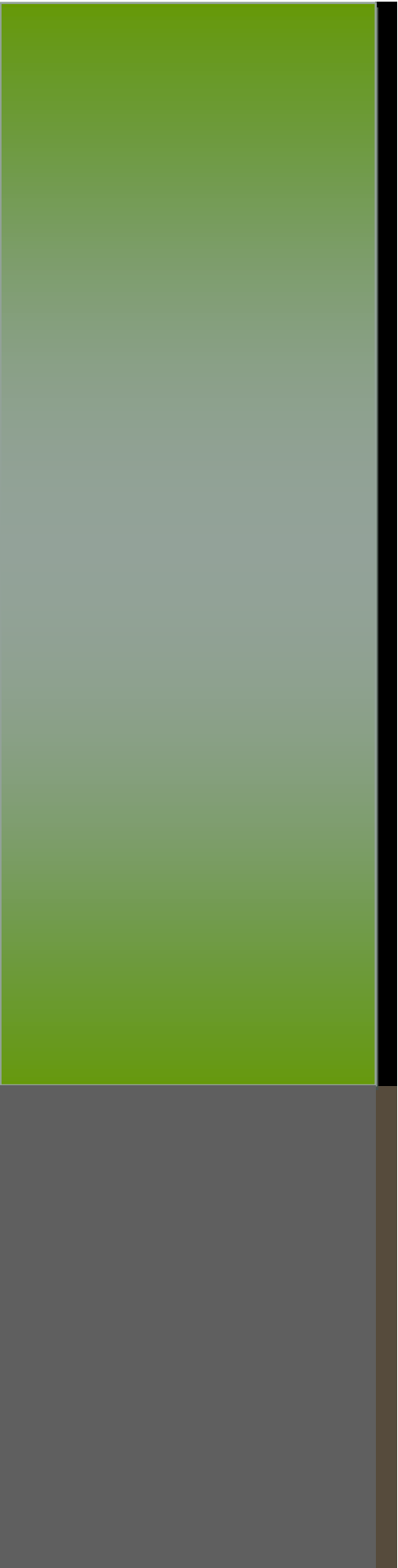


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