

The National Dam Safety Program

Model State Dam Safety Program

FEMA 316/July 2007



Federal Emergency Management Agency
www.fema.gov

Association of State Dam Safety Officials
www.damsafety.org

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CHAPTER VIII, DAM SAFETY PROGRAM, PUBLIC RELATIONS PLAN

I. Introduction

Every government agency needs public relations. The choice is only between good public relations and poor public relations (Starr 1968 and Marshall 1974). Dam safety programs are no exception to this rule.

What is meant by public relations?

By definition, public relations include all of the activities that build good relations with audiences. Public relations attempts to reinforce positive opinions, to increase understanding and support for programs and issues, and to involve the public in the development of policies, programs, and projects.

Administrators of state agencies, although they may recognize the desirability of good public relations, generally make no conscious effort to reach out to the public through a well-planned effort. This is especially true for dam safety programs that perceive themselves as generating media attention only in the case of dam incidents.

In fact, many dam safety activities, such as permit issuance, public hearings, and meetings with dam owners, community representatives and public officials, can be used as public outreach opportunities to promote two-way communications with the agency and the public.

A public relations program will not turn public opinion around overnight. To be effective, public relations must be an on-going and long range effort that involves program staff. In addition, a conscious effort must be made to integrate a public relations effort with year-round planning and operations as outlined in an organization's strategic plan.

The best approach to any public outreach effort is a planned one. A dam safety program benefits from positive and proactive public relations. A carefully developed public relations plan will result in a strategy for making others aware of what the organization is doing, why it is doing it, and why it contributes to the welfare of the community. The plan provides the road map to exchange information, ideas and concerns regarding program issues and activities. Once a plan is developed, materials needed to interest the audience and media should be assembled. A public information officer should be fully involved in the development of materials and implementation of the campaign. All staff of the program should also be trained in the area of public relations.

II. Dam Safety Public Relations Plan

A public relations plan should include the following elements:

A. Objectives;

Setting objectives provides direction to a public relations plan. Long-term objectives for state dam safety programs could include:

1. Promotion of program awareness among the general public, elected officials, and other state and federal organizations;
2. Promotion of program awareness among the regulated community through utilization of ASDSO's "Dam Owner Education Program Workshop"
3. Involvement of the public in the permitting process if public input is a component of the permit decision for a dam; and
4. Development of a public relations contingency/emergency plan in case of dam incident.

Short-term objectives could include:

5. Advertisement of workshops, seminars or hearings to potential attendees; and
6. Release of professional and timely information to the media during and after dam incidents.

B. Target audiences;

Defining the audiences will be a great help in planning activities and evaluating which activities best match both the selected audiences and objectives. Examples of potential target audiences for dam safety communication efforts include:

1. the general public;
2. the media;
3. persons and communities below dams;
4. dam owners;
5. state and local elected officials;

6. government officials;
7. consulting engineers;
8. emergency services officials;
9. federal agencies;

Students and prospective employees

10. other state organizations; and
11. and individuals or groups whose support is necessary for the program's success.

C. Strategies;

Strategies include developing activities and materials to meet the communication objectives for selected audiences.

These activities may include workshops, seminars, conventions, publicity campaigns, and awards programs. Materials that can further the objectives of the program include brochures, fact sheets, displays, slides, media kits, newsletters, questionnaires and news releases. General topic brochures and fact sheets that are related to the safety of dams are available from the Federal Emergency Management Agency and from the Association of State Dam Safety Officials.

D. Timetable;

A timetable lists deadlines that the organization can realistically meet to carry out assignments.

E. Budget;

Budgeting comes down to making choices about where and how the program will spend available money. If a program operates under a tight budget, careful prioritization of public relations objectives will maximize results.

A good way to summarize objectives, audiences and strategies is through the use of a table.

Table I - Sample Dam Safety Public Relations Plan

<u>Objectives</u>	<u>Audiences</u>	<u>Strategies</u>	<u>Timetable</u>	<u>Cost</u>
Raise program Awareness	Elected officials	Hold informational meeting, exhibit dam safety display at legislature Copy elected official regarding specific issues with dams in their district	During legislative session	Budget to develop display and informational materials
Raise program awareness	Media, general public	1) Issue news releases, 2) exhibit display at public events, 3) develop media contacts	1) As needed 2) Conventions, fairs, youth events 3) Ongoing	Funding of public info office, entrance fees, budget for printing, graphic services
Obtain public input to the permit process if public comment affects permit issuance decisions,	Affected public, regulated community, engineering firms	Publish public notices, issue news release, hold public hearings/ meetings	Within specified number of days or as law requires	Budget for newspaper advertisement, public service announcements, meeting rooms.
Provide information about program activities and promote two-way communications	Regulated community, public, elected officials, emergency personnel	Develop Questionnaires & newsletters, hold public meetings about program activities, hold an open house	Short-term: print newsletter; Long-term: solicit feedback, conduct public meetings	Budget for graphic artist, printing, newsletter cost, room and meeting expenses

Be prepared for a dam incident	Media, public, elected officials	The agency's public affairs office should assemble a press kit, develop public relations emergency response action plan that can be coordinated with the public information officer at the site	Short-term: prepare press kit; Long-term: Prepare type and amount of emergency information in advance	Budget to assemble press kit; public announcements
Raise program awareness	Dam owners	Conduct an ASDSO "Dam Owner Education Program Workshop"	As needed	Budget for meeting expenses

III. Developing Informational Materials

Below are a number of recommended materials a dam safety program may develop for a public outreach program.

IV. Brochure

A brochure that outlines a program's purpose, activities, and services is a must for every dam safety organization (See appendix J).

Brochures may be included in press kits; inserted in responses to Freedom of Information Act (FOIA) requests or general correspondence; provided as handouts at hearings or public meetings; placed on display racks at agency offices or public libraries; and passed out at conventions, state fairs and other public events.

Tip: The writing should be brief, descriptive, clear, and free of technical jargon or bureaucratic terminology. Use simple and attractive graphics. The simpler the brochure, the more it will be read.

If more than one brochure is produced, make sure to use similar paper sizes, matching or complementary colors, type faces, and layouts.

V. Webpage

A well designed webpage that is kept current is perhaps one of the most effective methods of presenting useful information on the dam safety program and raising public awareness and status of the program. Most states have a webpage as part of the larger department website. As with printed brochures, the information presented must be accurate, descriptive and clearly written. Many states include information on the program mission and purpose as well as:

- copies of legislation and regulations
- history of the program
- program organization chart
- technical guidelines
- references
- permit application forms
- general emergency action plan information
- dam safety awareness information
- photographs
- grants and loan program information
- current news
- a link to the U.S. Army, Corps of Engineers dam inventory
- frequently asked questions

VI. Fact Sheets

Fact sheets are a way to provide in-depth information on specific issues and to present topics that are subject to frequent questions. Possible topics include dam ownership information, explanation of specific permit issues, classifications

of dams, size of dams, clarification of technical topics, aspects of emergency planning, and the roles of external agencies during emergencies.

VII. Newsletter

A newsletter can improve public understanding and participation in the dam safety program. The publication will serve as a means of direct communication to inform and update audiences regarding organizational developments, regulations, concerns, and goals.

A newsletter can reach dam owners, engineering consultants, emergency services personnel, legislators, media contacts, agency administrators, agency field staff, and other interested persons.

A typical newsletter issue may contain: guidance about procedural matters, applications received, permits issued, construction projects completed, new employee profiles, interesting statistics, question and answer section, recent emergency situation, reprints or synopsis of major changes in regulations, calendar of events, and an ASDSO news corner.

Tip: Develop an attractive design and layout; maintain graphic continuity and provide a few regular features such as a question and answer section. Be aware of the informational needs of the audiences. Publish regularly and maintain an informative style.

VIII. News Release

A basic element of any public information plan is the news release. Program activities that include dedication of new dams, repair of popular dams, new or revised regulations, public comment periods, or awards are newsworthy.

In drafting a news release, stick to the facts, use complete names, write with an emphasis on community benefits and be timely. Be aware of the newspaper's deadlines and write the news release as far in advance of publication day as possible.

A public information officer should work closely with the program in developing and distributing news releases

IX. Display

A display can be an effective and flexible tool to draw attention to a dam safety program. Displays can be set up at trade shows, legislative halls, libraries, and

other public events. Display materials may be found in existing files and materials. For example, if the display is to be set up at a construction-related exhibition, before and after pictures of dam safety construction projects may be found in existing files.

Tip: Decide on the best representative pictures, enlarge to display size and arrange the pictures on the display backdrop. The display arrangement should be uncluttered, easy to see at a distance, and provide simple picture captions.

Consult with a graphic artist or public information specialist to plan the “look” of the display. Once a visitor approaches the display, there should be handouts available including brochures, fact sheets, summaries of the displayed projects (with additional pictures), current and previous issues of the dam safety newsletter, and copies of the press kit for appropriate target individuals. Staff the display booth with people knowledgeable about the dam safety program. Keep approaches to the display open so that free circulation of visitors is possible.

X. Press Kit

Dam Safety administrators should always have materials available that will provide background information to reporters, to an interviewer on a radio talk show, or television story. A press kit can also be used to introduce the program to the legislature and local elected officials.

Materials include: Brochures and fact sheets, an agency’s organizational chart, copies of recent newsletters, photographs of program activities, editorials or any articles that demonstrate the benefits that the program brings to the community. When assembled in a folder, these materials will comprise a Press Kit.

XI. Planning for Incidents

Every Dam Safety program is subject to the possibility of a dam incident. If an incident occurs, an emergency/crisis communication plan can pay dividends by managing critical information quickly and efficiently. An emergency/crisis plan should include:

- A. The general policy should be to disseminate, in coordination with the public information officer at the site, objective and accurate information regarding the incident, and to provide agency officials, press and radio representatives with timely answers to questions;
- B. The plan should consider the probable communications situation and radio or cellular telephone security and procedures. Communications with key personnel on a 24-hour basis may be necessary;

- C. To function effectively, only designated agency officials should take questions and provide answers. The officials must state only established facts without any guessing or speculation;
- D. Press Kits should be available to provide information regarding the dam safety program's operations;
- E. In addition to providing incident information about the immediate situation, the agency should have a qualified person available to persons inquiring about policy or current issues involving the program; and
- F. Shortly after a major emergency incident is resolved, a press conference should be called to summarize the incident and agency actions taken to protect life and property.

If the Dam Safety program plans for incidents during routine times, the transition to an emergency/crisis plan will be much smoother. The result should be an accurate and timely information flow from the agency to the media.

See ASDSO web site for links to example: State web pages; Fact Sheets, Newsletters

XII. References

Marshall, Sol H. Public Relations Basics for Community Organizations, Hollywood: Creative Book Company, 1974.

Starr, Edward. What You Should Know About Public Relations, Dobbs Ferry, New York: Oceana Publications, 1968.

Promoting Issues & Ideas. M. Booth and Associates, Public Interest Public Relations, 1987.

Bloomenthal, Howard. Promoting Your Cause, New York: Funk & Wagnalls, 1971.

APPENDIX J

PUBLIC OUTREACH TOOL SAMPLES

CASE 1: OHIO

CASE 2: PENNSYLVANIA

CASE 3: CALIFORNIA



Ohio Department of Natural Resources Division of Water Fact Sheet

Fact Sheet 94-27

Dam Safety: Rodent Control

Rodents such as the groundhog (woodchuck), muskrat, and beaver are attracted to dams and reservoirs, and can be quite dangerous to the structural integrity and proper performance of the embankment and spillway. Groundhog and muskrat burrows weaken the embankment and can serve as pathways for seepage. Beavers may plug the spillway and raise the pool level. Rodent control is essential in preserving a well-maintained dam.

Groundhog

The groundhog is the largest member of the squirrel family. Its coarse fur is a grizzled grayish brown with a reddish cast. Typical foods include grasses, clover, alfalfa, soybeans, peas, lettuce, and apples. Breeding takes place during early spring (beginning at the age of one year) with an average of four or five young per litter, one litter per year. The average life expectancy is two or three years with a maximum of six years.

Occupied groundhog burrows are easily recognized in the spring due to the groundhog's habit of keeping them "cleaned out." Fresh dirt is generally found at the mouth of active burrows. Half-round mounds, paths leading from the den to nearby fields, and clawed or girdled trees and shrubs also help identify inhabited burrows and dens.

When burrowing into an embankment, groundhogs stay above the phreatic surface (upper surface of seepage or saturation) to stay dry. The burrow is rarely a single tunnel. It is usually forked, with more than one entrance and with several side passages or rooms from 1 to 12 feet long.

Groundhog Control

Control methods should be implemented during early spring when active burrows are easy to find, young groundhogs have not scattered, and there is less likelihood of damage to other wildlife. In later summer, fall, and winter, game animals will scurry into groundhog burrows for brief protection and may even take up permanent abode during the period of groundhog hibernation.

Groundhogs can be controlled by using fumigants or by shooting. Fumigation is the most practical method of controlling groundhogs. Around buildings or other high fire hazard areas, shooting may be preferable. Groundhogs will be discouraged from inhabiting the embankment if the vegetal cover is kept mowed.

Gas cartridges may be purchased at garden supply and hardware stores. Information about the use and availability of gas cartridges may be obtained from county extension offices, or the U.S. Department of Agriculture at the following address:

The USDA
Animal and Plant Health Inspection Service
Wildlife Services
200 North High Street, Room 622
Columbus, Ohio 43215
(614) 469-5681

Muskrat

The muskrat is a stocky rodent with a broad head, short legs, small eyes, and rich dark brown fur. Muskrats are chiefly nocturnal. Their principal food includes stems, roots, bulbs, and foliage of aquatic plants. They also feed on snails, mussels, crustaceans, insects, and fish. Usually three to five litters, averaging six to eight young per litter, are produced each year. Adult muskrats average one foot in length and three pounds in weight. The life expectancy is less than two years, with a maximum of four years. Muskrats can be found wherever there are marshes, swamps, ponds, lakes and streams having calm or very slowly moving water with vegetation in the water and along the banks.

Muskrats make their homes by burrowing into the banks of lakes and streams or by building "houses" of bushes and other plants. Their burrows begin from 6 to 18 inches below the water surface and penetrate the embankment on an upward slant. At distances up to 15 feet from the entrance, a dry chamber is hollowed out above the water level. Once a muskrat den is occupied, a rise in the water level will cause the muskrat to dig farther and higher to excavate a new dry chamber. Damage (and the potential for problems) is compounded where groundhogs or other burrowing animals construct their dens in the embankment opposite muskrat dens.

Continued on back!

Muskrat Control

Barriers to prevent burrowing offer the most practical protection to earthen structures. A properly constructed riprap and filter layer will discourage burrowing. The filter and riprap should extend at least 3 feet below the water line. As the muskrat attempts to construct a burrow, the sand and gravel of the filter layer caves in and thus discourages den building. Heavy wire fencing laid flat against the slope and extending above and below the water line can also be effective. Eliminating or reducing aquatic vegetation along the shoreline will discourage muskrat habitation. Where muskrats have inhabited the area, trapping is usually the most practical method of removing them from a pond.

Eliminating a Burrow

The recommended method of backfilling a burrow in an embankment is mud-packing. This simple, inexpensive method can be accomplished by placing one or two lengths of metal stove or vent pipe in a vertical position over the entrance of the den. Making sure that the pipe connection to the den does not leak, the mud-pack mixture is then poured into the pipe until the burrow and pipe are filled with the earth-water mixture. The pipe is removed and dry earth is tamped into the entrance. The mud-pack is made by adding water to a 90 percent earth and 10 percent cement mixture until a slurry or thin cement consistency is attained. All entrances should be plugged with well-compacted earth and vegetation re-established. Dens should be eliminated without delay because damage from just one hole can lead to failure of a dam or levee.

Beaver

Beaver will try to plug spillways with their cuttings. Routinely removing the cuttings is one way to alleviate the problem. Trapping beaver may be done by the owner during the appropriate season; however, the nearest ODNR, Division of Wildlife, District Office or state game protector should be contacted first.

Hunting and Trapping Regulations

Because hunting and trapping rules change from year to year, ODNR, Division of Wildlife authorities at one of the following offices should be consulted before taking any action.



Wildlife District One
1500 Dublin Road
Columbus 43215
Phone: (614) 644-3925
FAX (614) 644-3931

Wildlife District Two
952 Lima Avenue, Box A
Findlay 45840
Phone: (419) 424-5000
FAX (419) 422-4875

Wildlife District Three
912 Portage Lakes Drive
Akron 44319
Phone: (330) 644-2293
FAX (330) 644-8403

Wildlife District Four
360 E. State Street
Athens 45701
Phone: (740) 594-2211
FAX (740) 592-1626

Wildlife District Five
1076 Old Springfield Pike
Xenia 45385
Phone: (937) 372-9261
FAX (937) 376-3011

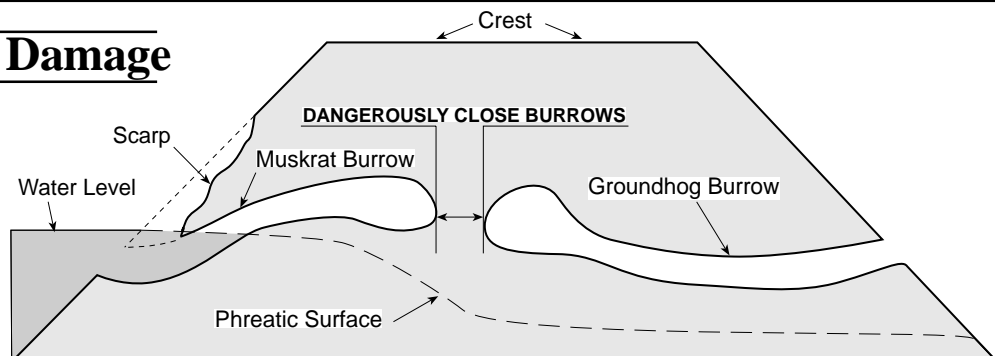
In Sandusky
305 East Shoreline Drive
Sandusky 44870
Phone: (419) 625-8062
FAX (419) 625-6272

In Fairport Harbor
Phone: (440) 352-6100
FAX (440) 350-0250

Any other questions, comments concerns, or fact sheet requests, should be directed to the Division of Water at the following address:

Ohio Department of Natural Resources
Division of Water
Dam Safety Engineering Program
2045 Morse Road
Columbus, Ohio 43229-6693
Voice: (614) 265-6731 Fax: (614) 447-9503
Website: <http://www.dnr.state.oh.us/water>

Rodent Burrow Damage



Bob Taft Governor • Samuel W. Speck Director • Dick Bartz Chief

R 7/05/99



Division of Water Dam Safety

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[Canals](#) | [Dams](#) | [Education](#) | [Floodplains](#) | [Ground Water](#) | [Water Inventory](#) | [Water Planning](#) | [Withdrawal Registration](#)

Dam Safety

[About Dam Safety Program](#)

[Contacts & Phone Numbers](#)

[Publications of this Program](#)

[Dam Definitions Classifications and Statistics](#)

[Levee Definitions Classifications and Statistics](#)

[Lowhead Dams Inventory and Removal](#)

[Owners Responsibility, Dam Failures](#)

[Importance of Regular Inspections](#)

[Dam Owners Annual Fee](#)

[Engineering Consultant List](#)

[Loan Programs for Repair or Improvements](#)

[Construction Permits for Dams](#)

[Construction Permits for Levees](#)

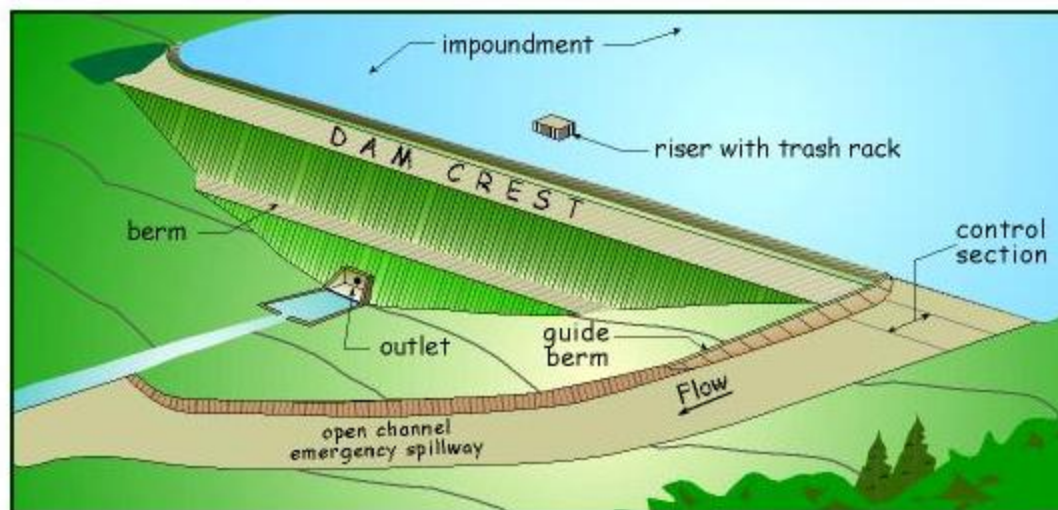
[Permit Forms and Instructions](#)

[Inspection Forms and References](#)

[Repair of Dams & Levees](#)

Dam Safety Engineering Main Page

24-Hour Emergency Number (614) 799-9538



Downstream view of an earth and rock open channel spillway.
From Dam Safety [Fact Sheet number 49](#).

New Program Items

09/29/06



Four NEW Lowhead Dam Removal Case Studies Added

The four structures removed are:

Munroe Falls Dam (Cuyahoga River), Lovers Lane Dam (Mahoning River), North River Rd. Dam (Mahoning River), and River Street Dam (Olentangy River).

[Go to Case Studies Page](#)



Fact Sheet

Commonwealth of Pennsylvania • Department of Environmental Protection

BUREAU OF WATERWAYS ENGINEERING

VEGETATION AND EROSION CONTROL ON DAMS

Problems with Trees and Brush Near Dams

Trees and brush on a dam's earthen embankment, as well as 10 to 20 feet along the downstream edge of the embankment, can hide developing structural problems and also create potential new problems. Sudden uprooting of trees by strong winds can result in the displacement of a relatively large amount of embankment material. This in turn can lower the crest of the dam, reduce the effective width of the dam and enhance seepage. Falling trees also can cause structural damage to concrete, steel, stone or timber structures.

The root systems of trees can be a potential hazard by allowing seepage pathways to develop through a dam. Trees eventually die and their roots decay and rot. A network of channels is formed by decaying roots that increases seepage within the dam's embankment or foundation. This seepage can develop into serious piping (internal erosion) that removes the soil particles from the embankment of the foundation, which can ultimately lead to the failure of the dam.

Brush and woody vegetation can hinder the visual inspection of dam surfaces. Sinkholes, animal burrows, seeps and other irregularities can be obscured by trees and brush. Woody vegetation can cause excessive shade that can hinder the growth of a sturdy, dense grass coverage. These affected areas are more prone to surface erosion.

Erosion Control

Grass cover is a very effective and inexpensive way to prevent the erosion of embankment surfaces. The stems and root systems of grasses tend to trap fine particles of soil, thus inhibiting the migration of these particles. A good grass cover provides an excellent means against erosion due to runoff caused by rains, and can protect the embankment during limited overtopping.

Maintenance

Grass cover should be routinely cut to provide a surface that can be easily inspected. **Trees and brush should never be allowed to grow on or very near a dam!** Many older dams have very large trees growing on or near them. Removal of trees, roots and brush should be done under the direction of a qualified professional engineer knowledgeable in dam safety and maintenance.



For more information contact:

Department of Environmental Protection
Bureau of Waterways Engineering
Division of Dam Safety
P.O. Box 8554
Harrisburg, PA 17105-8554
(717) 787-8568

For more information, visit DEP's website at www.state.pa.us, Keyword: "DEP Dam Safety."

DEP Regional Offices

Southeast Region

2 East Main Street
Norristown, PA 19401
484-250-5900

Counties: Bucks, Chester, Delaware, Montgomery and Philadelphia

Southwest Region

400 Waterfront Drive
Pittsburgh, PA 15222-4745
412-442-4217

Counties: Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland

Southcentral Region

909 Elmerton Avenue
Harrisburg, PA 17110
717-705-4708

Counties: Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York

Northcentral Region

208 W. Third Street, Suite 101
Williamsport, PA 17701
570-327-3675

Counties: Bradford, Cameron, Clearfield, Centre, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union

Northeast Region

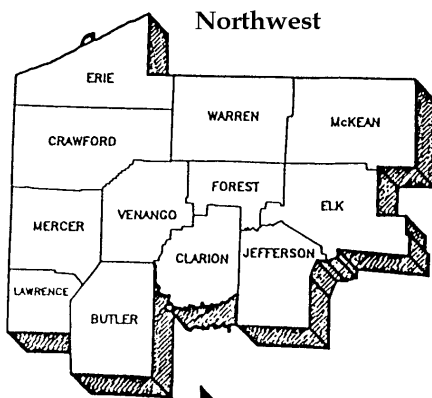
2 Public Square
Wilkes-Barre, PA 18711-0790
570-826-2511

Counties: Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne & Wyoming

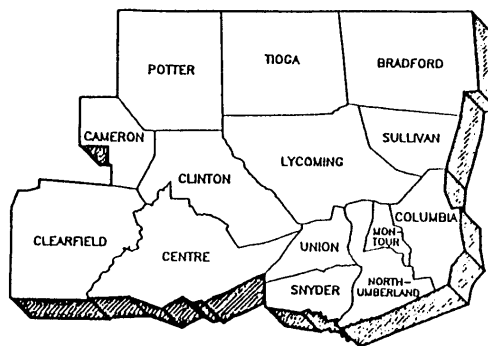
Northwest Region

230 Chestnut Street
Meadville, PA 16335-3481
814-332-6899

Counties: Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango and Warren



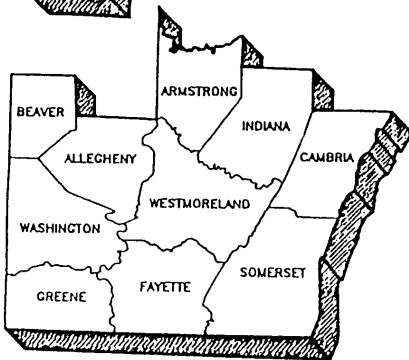
Northwest



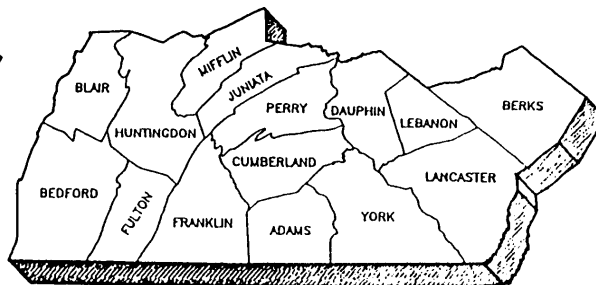
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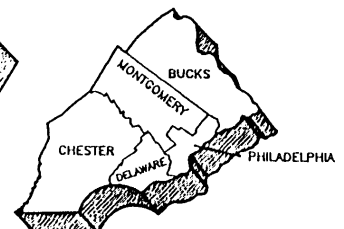
Northeast



Southwest



Southcentral



Southeast

THE CALIFORNIA CHALLENGE

On average, two dozen dams in the United States fail each year. Since 1970, significant dam failures have resulted in hundreds of lives lost and billions of dollars in property damage.

California has 1,250 state-regulated dams. Many of those dams are on the nation's highest hazard list because they pose a significant public safety threat due to their large size and proximity to major population centers. Other potential risk factors include:

- Many dams are located close to or on faults capable of generating major earthquakes.
- California has some of the most complex geology in the world, which affects the design and performance of dams.
- California's dams are aging. Most are over 50 years old.

Something Had To Be Done

In 1928, the 205-foot-high St. Francis Dam in Southern California failed. More than 12 billion gallons of water rushed down the San Francisquito Canyon, demolishing 1,200 homes, washing out 10 bridges, and killing approximately 450 people. The dam had been designed and constructed just two years earlier – without any regulatory oversight.

This sudden and tragic dam failure, one of the worst disasters in California's history, resulted in the creation of California's Dam Safety Program in 1929. Although dam owners are responsible for the safety of their own dams, the Department of Water Resources' Division of Safety of Dams (DSOD) is required by state law to regulate non-federal publicly and privately owned dams to prevent dam failure.



Division of Safety of Dams

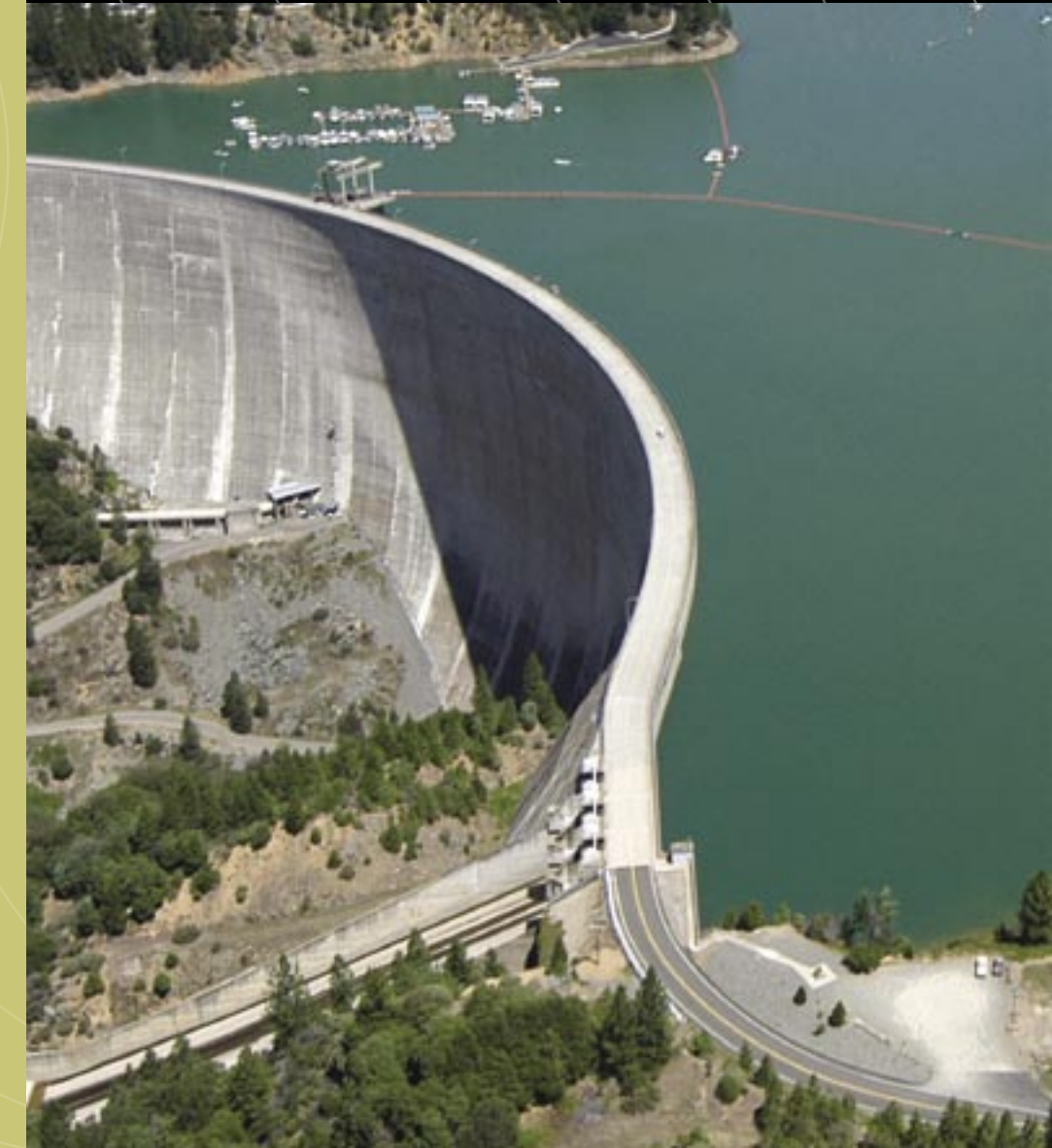
2200 X Street, Suite 200

Sacramento, CA 95818

916 227.4644

<http://damsafety.water.ca.gov/>

CALIFORNIA'S DAM SAFETY PROGRAM: Safeguarding People & Property



MAJOR BENEFITS, CONSIDERABLE RISKS

Because of California’s seasonal and climatic conditions, water storage is critical. Dams help reserve the water necessary for agriculture, hydroelectric power, recreational, environmental protection, and a stable drinking water supply. They are also critical tools in flood control. Along with their many benefits, dams present formidable consequences if not properly designed, built, and maintained.

All dam owners in California must be prepared for the inevitability of earthquakes and flooding. However, even without large-scale natural disasters, there are numerous causes of failure that can occur under less extreme conditions, including:

- Poor design
- Unsound construction
- Inadequate maintenance
- Age-related problems



St. Francis Dam during failure, near Los Angeles, CA (1928)



Baldwin Hills Dam after failure, Los Angeles, CA (1963)



Teton Dam during failure, Madison County, Southeast Idaho (1976)

DIVISION OF SAFETY OF DAMS – MORE THAN JUST INSPECTIONS

DSOD is composed of highly specialized engineers and geologists that work closely with dam owners and their consulting engineers to ensure the safety of dams in California. Division engineers independently review and evaluate designs of new dams which must meet state safety requirements. Enlargements and repairs of existing dams are also thoroughly analyzed.

Division engineers and geologists perform frequent inspections of dams under construction to verify compliance with approved plans and specifications. The 1,250 state-regulated dams are inspected at least once a year by DSOD engineers familiar with the history, performance, instrumentation, background, and unique details of each dam.

Although California dams are designed and maintained to the highest standards in the country, our state’s seismic activity and extreme rainfall in some areas require today’s DSOD staff to be experts in how earthquakes and floods affect such structures. Complex analyses are completed by engineers and geologists to predict dam performance during extreme conditions. Division engineers quickly respond to emergency situations, to assess performance and ensure downstream safety following natural disaster type loading.



Near failure of the Lower San Fernando Dam, San Fernando Valley, CA (1971)

CLOSE CALL

During a 1971 earthquake, the near failure of the San Fernando Dam increased the focus on seismic safety of dams. Over 80,000 people lived downstream of the dam at the time of the earthquake. A DSOD water level restriction imposed before the earthquake, in combination with quick action taken by DSOD and the owner, helped to avert a major catastrophe.

THE SYSTEM WORKS BEST WHEN WE WORK TOGETHER

DSOD is constantly developing and applying new technologies in dam design, seismic fortification, testing, and maintenance. We work in close cooperation with other state and national organizations concerned with dam safety and public protection to ensure the most efficient use of our resources and to keep abreast of state-of-the-art in dam engineering. When dam owners work in concert with DSOD, they benefit from the collective experience of all of these organizations.

Cooperation, communication, knowledge, action, and a constant watchfulness will keep California’s dams, and its people, enjoying the best protection possible.



DSOD engineers perform field inspections to assess the dam’s structural condition and how well it is maintained.



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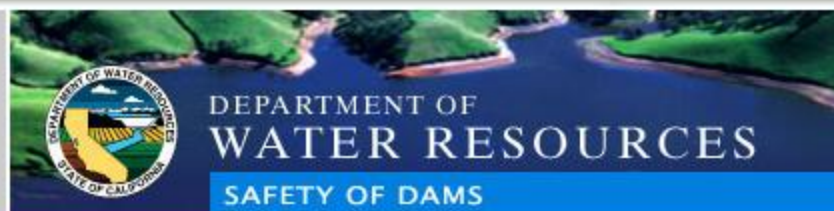
[Contact Us](#)

**Division of Safety of
Dams
Department of Water
Resources**

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DSOD - Our Mission

To protect people against loss of life and property from dam failure. The California Water Code entrusts this regulatory power to the Department of Water Resources which delegates the program to the Division of Safety of Dams.

Information regarding the supervision of dams is provided here to better serve the public, dam owners and applicants – links to this information are located on the left side of this web page. Information regarding the technical aspects of dams is provided on the right side of this page.

☒ DWR ☐ My CA

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