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Testimony of the
ASSOCIATION OF STATE DAM SAFETY OFFICIALS
on the
Current Dam Safety Needs in the United States
Subcommittee on Economic Development, Public Buildings, & Emergency Management
Committee on Transportation and Infrastructure
U.S. House of Representatives
July 26, 2006

Dear Chairman Shuster and Members of the Subcommittee:

The Association of State Dam Safety Officials (ASDSO) is pleased to offer this testimony concerning the condition of the nation's dams and the critical role that the federal government has in assuring the safety and security of dams.

ASDSO is a national non-profit organization of more than 2,300 state, federal and local dam safety professionals and private sector individuals dedicated to improving dam safety through research, education and communications. We represent the dam safety programs of the states and our goal simply is to save lives, prevent damage to property and to maintain the benefits of dams by preventing dam failures. The state dam safety programs regulate 95% percent of the 79,000 dams in the United States. The states and these programs look to Congress and the Federal government for their continuing leadership and support.

The eyes of the nation were focused on dam safety in the 1970s when several dramatic dam failures occurred, resulting in catastrophic consequences. The federally owned Teton Dam failed in 1976, causing 14 deaths and over $1 billion in damages. Failures like Teton are a constant reminder of the potential consequences associated with dams and the obligations to assure that dams are properly constructed, operated and maintained.

The recent dam failures in Hawaii, Missouri, and New York, and the near failure in Massachusetts last year have brought into tragic focus the potential consequences of deteriorating and unsafe (deficient) dams. Recent extreme rainfalls in the Northeast this summer brought further attention to the vulnerability of dams in Maryland, New York and Pennsylvania.

After the Teton failure and other deadly failures, and prompted by the Kelly Barnes Dam (Toccoa Falls) failure in Georgia, also in the late 1970s, President Carter realized that federal programs were needed to address the dam safety issue. Based on his administration's groundwork, the federal government has been leading the way by example with the dams they own and regulate. Additionally, the **National Dam Safety Program** exists today administered by the DHS, Federal Emergency Management Agency. For 10 years, the program has been providing assistance to state dam safety programs, continuing education to dam engineers and technological advancements through research for the dam engineering profession. Additionally, the Program directs the US Army Corps of Engineers to maintain a national tracking system that catalogues dams in the US.

Dams are a critical part of the nation's infrastructure and provide vital benefits such as flood protection, water supply, hydropower, irrigation and recreation. Yet these dams have the potential for failure and tragic consequences. As downstream development of dams increases and dams continue to age and deteriorate, they demand greater attention and investment to assure their safety.

The Association of State Dam Safety Officials respectfully requests that this Subcommittee recognize the enormous value of our nation's dams and the increasing concerns for public safety because of dams. We request your support for passage of HR 4981 to continue the National Dam Safety Program and HR 1105 to create the National Dam Rehabilitation and Repair Program.

Mr. Chairman, the Association is grateful for your support and leadership in championing the reauthorization of the program through the Dam Safety and Security Act of 2002, which extended and made important additions to this successful program.

Congressman Kuhl, the Association also appreciates your commitment and support through the introduction of HR 4981 to continue this critical national public safety program.

The National Dam Safety Program

The National Dam Safety Program Act of 1996 (PL 104-303) created a national program that focused on improving the safety of the nation's dams. Congress reauthorized the program through the Dam Safety and Security Act of 2002 (PL 107-310) and made modest increases in the authorized funds. This small, yet critical program provides much needed assistance to the state dam safety programs in the form of grant assistance, and training and research; and through facilitating the exchange of technical information between federal dam safety partners and the states. As authorized, the program provides $6 million in grant assistance to states based on the relative number of dams in each state. The grants may be utilized to best suit the individual state's needs. In addition, the National Dam Safety Program provides $500,000 each year to be used for training of state dam safety engineers and $1.5 million annually for research. These research funds are used to identify more effective methods of evaluating the safety of dams and more efficient techniques to repair dams. And now, these research funds can be used to develop better methods to assess and improve the security of dams.

According to the National Inventory of Dams—a program authorized by the National Dam Safety Program and administered by the US Army Corps of Engineers—there are over 79,500 dams in the United States. For the vast majority of these dams, the responsibility of assuring their safety falls on the shoulders of the states through regulatory programs (the remaining dams are owned or regulated by federal agencies). Because of limited staff and limited funding, most states are overwhelmed by that challenge. Table 1 attached to this testimony provides state-by-state data on the number of dams, the number of staff, the state budget and the number of dams that are considered unsafe, referred to as "deficient" in the table.

Deficient or unsafe means that these dams have been identified as having hydrologic or structural deficiencies that make them susceptible to a failure triggered by a large storm event, an earthquake, progressive deterioration, or simply through inadequate maintenance. Currently states have identified approximately 3,400 dams as being deficient, or unsafe. The number of unsafe dams has risen by 33% since 1998. In New York the state lists 51 unsafe dams all of which are classified as high hazard potential. In Pennsylvania there are 325 unsafe dams and 225 of these are classified as high hazard potential. Indiana has 76 high-hazard potential dams determined to be deficient.

There are over 10,000 dams classified as high hazard potential, meaning that the consequences of the dam's failure will likely include loss of human life and significant downstream property damage. Every member of this Subcommittee has high hazard dams in their home state. There are 785 high hazard potential dams in Pennsylvania, 815 high hazard potential dams in Texas and 25 high hazard potential dams in Maine. According to the National Inventory of Dams about 40% to 50% of the high hazard

potential dams are not being inspected yearly. According to the *Model State Dam Safety Program* (FEMA No. 316), a high hazard potential dam should be inspected every year.

The task for state dam safety programs is staggering; in New York where there are over 5,030 dams there are only 8.2 full time employees assigned to the dam safety program. Indiana has about 1,100 dams with only 1 engineer and 2 inspectors and 2 engineering geologists in their dam safety program; and Maine, which has more than 639 dams, only has a staff of 1.5 full time employees.

HR 4981 provides for continuing the program and makes several important changes, which include defining a "state-regulated dam" which is critical to establishing the funding levels and incentives to states. Another change in HR 4891 is the addition of a condition assessment to be included in the updates to the National Inventory of Dams. In addition, HR 4981 provides modest increases in the authorized funds for state assistance, training, research and updates to the National Inventory.

Federal Leadership Role

There is a clear need for continued federal leadership in support of dam safety. This country suffered several large and tragic dam failures in the 1970s that focused attention on dams and prompted Congress to pass national dam safety legislation:

- 1972 - Buffalo Creek Dam in West Virginia failed and killed 125 individuals;
- 1976 - Teton Dam failure in Idaho caused $1 billion in damages and 14 deaths;
- 1977 - Kelly Barnes Dam, in Toccoa Falls, Georgia failed, killing 39 Bible college students;
- 1977 - Failure of the Laurel Run Dam in Pennsylvania killed 40 people;

More recent failures have demonstrated the enormous damages that dam failures can produce:

- 1995 – Timber Lake Dam, near Lynchburg, Virginia, failed, killing two people.
- 1996 - Meadow Pond Dam in Alton, New Hampshire failed, killing one woman and causing $8 million in damages.
- 2003 - Failure of the Silver Lake Dam in Michigan caused more than $100 million in damages including $10 million in damages to utilities, $4 million to the environment, $3 million to roads and bridges and flooded 20 homes and businesses. It also flooded a major power plant, causing the closure of two iron mines and temporarily putting 1,100 miners out of work.
- 2004 - Big Bay Lake Dam in Mississippi failed, destroying or damaging over 100 homes, two churches, three businesses, a fire station and a bridge. The failure caused lakeside property values to plunge, and prompted a $100 million lawsuit against the dam owner.
- 2005 - In July, the Hadlock Pond Dam in Washington County, New York failed, displacing residents and causing over $1 million in damages to residences and transportation arteries.
- 2005 – The cataclysmic flooding of New Orleans in September demonstrated the deadly potential posed by water retention structures.
- 2005 – In October, approximately 2,000 people were evacuated from Taunton, Massachusetts when the 173-year-old dam at Whittenton Pond threatened to break. Emergency construction of a second dam downstream of the failing structure averted a disastrous flooding of the downtown area.
- 2005 – Around the same time as the Taunton crisis, residents of Schoharie County, New York became aware of serious problems with Gilboa Dam, which impounds roughly 19 billion gallons of water. Engineers say that the dam could collapse under extreme weather conditions. If this happened, many residents would have only minutes to escape; the villages of Schoharie and Middleburgh would be submerged under 30 to 40 feet of water, and the floodwaters would carve a path of destruction up to 60 miles long. Action is being taken: Local officials have issued flood preparedness manuals and are working to identify residents who may have trouble evacuating if the dam fails, and crews are working on emergency repairs for the dam. The long-term plan calls for a $200 million rehabilitation project.

- 2005 - In December, the sudden failure of Taum Sauk Dam in Missouri released a wall of water through Johnson's Shut-Ins State Park. The flood demolished the home of the park superintendent and his family, who were swept at least a quarter-mile away into the early morning darkness. Miraculously, all five members of the family survived. Had the dam failed during the summer months, it is likely that many lives would have been lost, as the park is a popular destination for campers and swimmers.
- 2006 - In March, the failure of Kaloko Dam on the Hawaiian island of Kauai killed seven people and caused significant damage to property and the environment.
- 2006 –In late June, following a ten-hour storm that dumped a foot of rain in an area near Gaithersburg, Maryland, the Lake Needwood dam developed severe leakage as the lake rose 23 feet above normal pool. Roughly 2,200 people were evacuated from their homes for up to three days as workers labored feverishly to lower the lake.

Potential dam failures are not merely a local or state concern, as a dam failure in one state may cause loss of life and property damage in an adjacent state. Including recovery costs from the President's disaster relief fund and the Flood Insurance Program, the cost of one small dam failure can easily exceed the annual costs of the National Dam Safety Program. Continuation and full funding of the National Dam Safety Program is an investment in public safety that will be repaid many times over in fewer dam failures, reduced federal expenditures for dam failure recovery and, most importantly, fewer lives lost.

Benefits of the National Dam Safety Program

The National Dam Safety Program has been successful in assisting the state programs. The training program is one aspect of this success ($500,000/annually). This training provides access to technical courses and workshops that state engineers could not otherwise attend. Examples include Dambreak Analysis, Concrete Rehabilitation of Dams, Slope Stability of Dams, Earthquake Analysis, Emergency Action Planning and many others including recent training in Dam Site Security.

The Research Program ($1.5 million/annually) is an important program to all within the dam safety community. Its funds have been used to identify future research needs such as inspections using ground penetrating radar or risk analysis. In addition, these funds have been used to create a national library and database of dam failures and dam statistics at the National Performance of Dams Program at Stanford University as well as a national clearinghouse and library of dam safety bibliographic data at ASDSO.

Research funds are currently being used to provide security training, security assessment tools and best management practices for states to utilize in addressing potential terrorist actions against the 75,000 non-federal dams. The small increase ($500,000) in the funding levels authorized by the 2002 act was intended to address dam site security. Dam site security is now an urgent area of concern for state dam safety officials, both in training needs and in research to better understand and respond to potential threats to dams.

The most valuable benefit to the state programs comes from the State Assistance Program. The assistance is based on the number of dams in each of the participating states and is used as an incentive to encourage states to improve their program by meeting basic criteria such as:

- State statutory authority to conduct inspections of dams;
- State authority to require repairs to unsafe dams; and
- State policies that address dam site security at non-federal dams.

Use of these funds helps states meet their own unique challenges. States have utilized funds to perform dam failure and dam stability analyses, to hire additional staff to conduct inspections and to conduct owner education workshops. In addition, funds have enabled states to provide additional staff training, and to purchase equipment such as computers, field survey equipment and software, and remote operated cameras for internal inspections.

It is disappointing to see that appropriations and FEMA's budgeting priority for the Program over the past two years are well below the authorized levels, just as we begin to realize the benefits of the state assistance program—dam safety inspections have increased, the number of Emergency Action Plans, used to notify and evacuate downstream populations in the event of a failure, have increased. Despite the growing number of unsafe dams, the increase in dam failures, and the increase in funding approved by Congress in the Dam Safety and Security Act of 2002 to $8.6 million, appropriations have remained at the previous level of $5.9 million. States have not realized any increase in assistance. Budget reductions and stiff competition with other FEMA mitigation programs such as earthquake and hurricane planning have further reduced the state grant assistance funds by almost 22%.

Table 2, attached to this testimony, provides information on the amount of state assistance received for each state, the potential funding if fully appropriated at authorized levels and the amount each state will lose as a result of the reduced funding. The lost funds come at a difficult time when development below dams creates additional high hazard potential dams, dams continue to age and deteriorate and, now, security issues must be addressed by the states.

Need for a National Rehabilitation Program for Dams

While there have been modest gains in the number of dams being repaired, the number of state regulated dams identified as unsafe is increasing at a faster rate than those being repaired. The number of unsafe dams has risen by 33% since 1998 to more than 3,300. This condition will undoubtedly continue to worsen without federal leadership and an investment in the safety of our country's dams.

The Association of State Dam Safety Officials, in its October 2003 report entitled *The Cost of Rehabilitating Our Nation's Dams*, estimated that $10 billion would be needed to repair the most critical dams over the next 12 years. Out of this, needed repairs at publicly owned dams are estimated at $5.9 billion with the remaining $4.1 billion needed for privately owned dams.

ASDSO endorses passage of H.R. 1105 to create a federally administered dam rehabilitation funding program. This federally sponsored program would provide funds to be cost-shared at 65 percent federal to 35 percent state/local for non-federal publicly owned dams. The legislation would provide funds to states based on the number of high hazard dams in each of the participating states. Table 3 shows state-by-state potential funding amounts.

While HR 1105 is a good start, it does not address privately owned dams. There are more than 52,000 privately owned dams in the US. ASDSO estimates that approximately 45% of these may be in need of rehabilitation. There is a great need to begin an assistance program at both federal and state levels to help private dam owners with their rehabilitation needs. It is a public safety issue since privately owned dams are at risk of failure just as are publicly owned dams.

The America Society of Civil Engineer's 2005 Report Card for America's Infrastructure gave Dams in the United States a grade of "D." The dams across the United States are aging; 85% of the dams will be 50 years or older by the year 2020. Downstream development within the dam failure flood zone places more people at risk. When homes are built in the dam failure flood zone, a "low hazard potential" dam (low hazard: failure is not expected to cause loss of life or significant property damage) becomes a high hazard potential dam. Therefore, the dam no longer meets dam safety criteria as the potential consequences of a failure now include loss of life.

Does the country want the number of unsafe dams to continue increasing? Will the federal government find a way to assist dam owners or will future catastrophic dam failures with resulting loss of life continue to occur? It is a reasonable expectation of every American to be protected from preventable disasters such as dam failures.

ASDSO strongly urges the Subcommittee's support for H.R. 1105 to create a federally administered dam rehabilitation program in order to repair our nation's unsafe dams.

Dam Security of Non-Federal Dams

The events of September 11, 2001 have focused unprecedented attention on the security of our nation's critical infrastructure, including dams. Dams, in fact, have been identified by intelligence and law enforcement agencies in specific threat alerts. Federal agencies that own dams, such as the US Army Corps of Engineers and the Bureau of Reclamation, have been conducting vulnerability assessments and security improvements on these federally owned dams. Sharing of federal government expertise, and providing federal coordination and assistance to the states and to private dam owners is happening, but at a very slow pace.

There are clearly thousands of non-federal dams that are potential targets based on type of construction, size, purpose (water supply, hydro power, flood control); and on the population and infrastructure at risk below the dam. Federal leadership is urgently needed to provide technical and financial assistance to states for training, for conducting vulnerability assessments and for identifying and implementing security improvements on dams determined to have inadequate security programs.

ASDSO supports the continuing efforts of the Department of Homeland Security to focus expertise and funding on improving dam security programs at federal, state and local levels.

The Future of a National Dam Safety Program

Dams are a vital part of our aging national infrastructure that provide many vital benefits, but that also pose a threat to life and property if they fail. The National Dam Safety Program is a valuable program that offers assistance to states as an investment in public safety. The Program needs to continue and to be funded properly to meet public safety expectations and prevent more loss of life from dam failures.

Our country's dams are aging and deteriorating, the number of dams determined to be unsafe is increasing and there is a tremendous demand for funds to repair unsafe dams.

Mr. Chairman and members of the Subcommittee, the Association requests, in the strongest terms possible, that you provide the necessary priority to the safety of our nation's dams by passing HR 4981 and HR 1105, and that you demand aggressive management of the National Dam Safety Program to achieve the results that the people who live below our dams expect.

The Association stands ready to assist the Subcommittee and staff in any way to advance the cause of dam safety. Toward that goal, please contact me or our Executive Director, Lori Spragens at 859-257-5140 if we can support the Subcommittee's important work.

Table 1 Association of State Dam Safety Officials

2005 Statistics on Dams and State Safety Regulation

State	Total Dams in National Inventory	Dams Under State Regulation[2]		State-Determined Deficient Dams[3]			State Dam Safety Budget	State Staff Dedicated to Dam Safety Regulation	
		Total	HH	Total	HH	SH		Total FTEs	Dams Per FTE
Alabama	1,403	0	0	0	0	0	0	0	NA
Alaska	105	82	18	29	7	7	100,500	1	82
Arizona	334	252	93	34	28	6	715,801	9	28
Arkansas	1,207	1,172	102	21	19	1	338,700	3.5	335
California	1,483	1,255	334	53	32	18	8,145,000	60	21
Colorado	1,688	1,898	340	19	7	3	1,735,600	15	127
Connecticut*	723	706	238	22	9	10	472,000	4.3	164
Delaware	61	37	9	4	3	NR	317,230	0.5	74
Florida	780	804	72	45	8	30	NR	NR	10
Georgia	4,158	4,874	437	112	112	NR	704,013	9	542
Hawaii	123	131	96	48	30	6	164,000	1.75	75
Idaho	396	372	96	5	2	3	317,547	7.5	50
Illinois	1,318	1,434	184	NR	NR	NR	306,000	4.8	299
Indiana	1,073	938	241	445	76	154	425,000	5	188
Iowa	3,275	3,272	78	18	10	8	110,000	1.25	2,618
Kansas	5,650	5,993	183	41	15	15	616,540	7.16	837
Kentucky	1,055	1,100	177	90	30	41	1,550,420	14	79
Louisiana	367	534	29	24	14	5	480,316	8	67
Maine	639	841	25	13	3	10	36,914	1.5	561
Maryland	303	389	66	27	8	5	468,020	4.75	82
Massachusetts*	1,500	2,977	333	40	22	18	500,000	4.0	744
Michigan	955	1,158	79	23	5	7	282,550	2.8	414
Minnesota	1,059	1275	310	79	5	22	305,000	3.4	375
Mississippi	3,322	3,633	39	16	14	NR	267,767	4.3	845
Missouri	4,850	661	455	36	35	1	254,464	5	132
Montana	3,301	2,882	102	15	11	4	366,531	5.25	549
Nebraska	2,156	2,156	129	NR	NR	NR	434,652	5.7	378
Nevada	497	530	147	25	4	2	225,514	2	265
New Hamp.	659	3,614	89	8	NR	4	677,294	8	452
New Jersey	805	1698	202	193	48	116	1,254,000	20	85
New Mexico	521	393	170	104	77	27	484,100	6	66
New York	1,971	5,030	384	51	51	NR	977,072	8.21	613
North Carolina	2,720	4,482	1006	143	93	28	1,162,608	16	280
North Dakota	784	3,426	28	22	5	13	200,000	4.5	761
Ohio	1,640	1,664	411	825	170	285	1,415,024	12.5	133
Oklahoma*	4,672	4,527	185	31	8	3	122,000	2.5	1,811
Oregon	875	1,237	122	3	2	1	NR	2.2	562
Pennsylvania	1,482	3,134	785	325	225	46	2,039,600	24	131
Puerto Rico	34	36	34	NR	NR	NR	600,000	9	4
Rhode Island	185	657	17	5	NR	1	113,976	1.2	548
South Carolina	2,388	2,377	153	4	2	1	200,000	2.5	951
South Dakota	2,452	2,354	47	61	8	7	NR	1.5	1,569
Tennessee	1,043	623	148	7	3	2	339,278	8	78
Texas	7,069	7,510	815	108	103	3	552,886	7	1,073
Utah	752	5,821	188	NR	NR	NR	657,900	6	970
Vermont	363	563	57	1	1	NR	299,000	2.2	256
Virginia	1,591	1,400	136	120	49	38	678,569	6.25	224
Washington	856	957	145	28	16	12	1,967,028	8.2	117
West Virginia	555	571	267	36	33	3	479,773	6	95
Wisconsin	1,154	940	214	2	NR	NR	518,750	6.25	150
Wyoming	1,420	1,410	79	NR	NR	NR	2,039,600	4.98	283
TOTAL	79,772	95,780	10,094	3,361	1,403	966	36,418,537	363.45	415 (av)

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

Table 2 FEMA National Dam Safety Program State Grant Assistance Funds

Reduced Grant amounts in FY 2003 and FY 2004, Grants at full funding and
Estimated cumulative state grant losses over four year period FY 2003 through FY 2006

STATE	FY 2003 Reduced Grant Authorized at $ 6 M Appropriated at $4 M	FY 2004 Reduced Grant Authorized at $ 6 M Appropriated at $4 M	FY 2003-2006 Annual Grant if fully funded at $ 6 M	FY 2003 & 2004 Lost grant assistance over past two years	FY 2003 thru FY 2006 Projected grant loss over four years at current levels
Alabama*	$0	$0	$0	$0	$0
Alaska	$25,715	$22,990	$44,091	-$39,477	-$81,680
Arizona	$29,834	$26,672	$51,153	-$45,800	-$94,762
Arkansas	$35,898	$32,093	$61,550	-$55,109	-$114,022
California	$64,139	$57,340	$109,971	-$98,463	-$203,724
Colorado	$74,716	$66,797	$128,108	-$114,702	-$237,323
Connecticut	$46,113	$41,226	$79,065	-$70,791	-$146,470
Delaware*	$0	$0	$0	$0	$0
Florida	$41,730	$37,307	$71,550	-$64,063	-$132,548
Georgia	$144,571	$129,248	$247,880	-$221,940	-$459,204
Hawaii	$27,099	$24,227	$46,464	-$41,602	-$86,076
Idaho	$36,886	$32,977	$63,245	-$56,626	-$117,162
Illinois	$64,303	$57,487	$110,253	-$98,716	-$204,247
Indiana	$61,074	$54,601	$104,717	-$93,758	-$193,990
Iowa	$123,487	$110,398	$211,728	-$189,572	-$392,232
Kansas	$229,727	$205,378	$393,887	-$352,668	-$729,686
Kentucky	$56,460	$50,476	$96,806	-$86,675	-$179,335
Louisiana	$33,064	$29,559	$56,691	-$50,759	-$105,022
Maine	$43,774	$39,134	$75,054	-$67,200	-$139,040
Maryland	$35,371	$31,622	$60,647	-$54,300	-$112,349
Massachuettes	$74,485	$66,590	$127,712	-$114,347	-$236,589
Michigan	$44,993	$40,224	$77,144	-$69,071	-$142,910
Minnesota	$50,726	$45,350	$86,975	-$77,873	-$161,123
Mississippi	$135,482	$121,121	$232,295	-$207,986	-$430,332
Missouri	$43,280	$38,692	$74,207	-$66,441	-$137,470
Montana	$117,226	$104,801	$200,994	-$179,961	-$372,347
Nebraska	$90,205	$80,644	$154,664	-$138,479	-$286,518
Nevada	$36,063	$32,241	$61,833	-$55,362	-$114,547
New Hampshire	$49,639	$44,377	$85,110	-$76,204	-$157,669
New Jersey	$76,002	$67,946	$130,311	-$116,675	-$241,405
New Mexico	$37,842	$33,831	$64,884	-$58,094	-$120,199
New York	$87,074	$77,844	$149,295	-$133,672	-$276,573
North Carolina	$164,711	$147,253	$282,411	-$252,858	-$523,174
North Dakota	$41,368	$36,983	$70,929	-$63,507	-$131,398
Ohio	$79,857	$71,393	$136,922	-$122,593	-$253,651
Oklahoma	$170,676	$152,585	$292,638	-$262,015	-$542,120
Oregon	$61,634	$55,101	$105,677	-$94,618	-$195,769
Pennsylvania	$63,678	$56,928	$109,181	-$97,755	-$202,260
Puerto Rico	$24,031	$21,484	$41,204	-$36,892	-$76,331
Rhode Island	$31,097	$27,801	$53,319	-$47,739	-$98,775
South Carolina	$96,762	$86,506	$165,906	-$148,545	-$307,345
South Dakota	$97,619	$87,272	$167,376	-$149,861	-$310,069
Tennessee	$42,027	$37,572	$72,059	-$64,518	-$133,490
Texas	$245,643	$219,607	$421,176	-$377,102	-$780,240
Utah	$40,314	$36,041	$69,122	-$61,888	-$128,049
Vermont	$33,986	$30,384	$58,272	-$52,174	-$107,950
Virginia	$38,930	$34,804	$66,749	-$59,764	-$123,653
Washington	$40,215	$35,952	$68,952	-$61,736	-$127,735
West Virginia	$33,064	$29,559	$56,691	-$50,759	-$105,022
Wisconsin	$54,681	$48,885	$93,755	-$83,943	-$173,683
Wyoming	$67,632	$60,463	$115,961	-$103,826	-$214,820

* No state dam safety program

Table 3

Dam Repair & Rehabilitation Act of 2005

Funding Table by State

(Total Funding over 4 year program)

State	Number of Public Dams (high hazard)*	Est. Repair Costs for Public Dams	Potential Funding from Rehab Program
Alabama	16	$ 36,969,700.00	$3,161,671.19
Alaska	10	$ 11,560,420.00	$2,821,747.50
Arkansas	79	$ 67,919,960.00	$5,881,060.71
Arizona	54	$ 114,906,520.00	$4,375,684.37
California	308	$ 680,357,460.00	$20,012,174.14
Colorado	137	$ 266,708,760.00	$8,649,010.77
Connecticut	112	$ 98,129,550.00	$7,774,921.28
Delaware	0	$ 0.00	$2,336,142.23
Florida	7	$ 11,560,420.00	$2,336,142.23
Georgia	178	$ 233,293,720.00	$10,979,916.07
Hawaii	16	$ 17,386,010.00	$3,015,989.61
Idaho	14	$ 21,316,500.00	$2,967,429.08
Illinois	81	$ 73,818,340.00	$6,075,302.82
Indiana	58	$ 59,767,500.00	$5,298,334.39
Iowa	55	$ 82,082,480.00	$4,764,168.59
Kansas	112	$ 137,899,360.00	$7,677,800.22
Kentucky	88	$ 108,209,770.00	$6,366,665.99
Louisiana	10	$ 12,986,750.00	$2,724,626.44
Maine	32	$ 37,776,600.00	$3,647,276.46
Massachusetts	253	$ 62,876,580.00	$13,650,745.07
Maryland	49	$ 160,772,990.00	$4,278,563.32
Michigan	101	$ 89,409,830.00	$7,386,437.06
Minnesota	37	$ 35,398,170.00	$4,230,002.79
Mississippi	75	$ 47,358,250.00	$5,298,334.39
Missouri	14	$ 23,784,100.00	$5,881,060.71
Montana	70	$ 111,236,810.00	$5,395,455.44
Nebraska	63	$ 74,479,790.00	$5,152,652.81
Nevada	65	$ 77,427,070.00	$4,909,850.17
New Hampshire	53	$ 46,980,370.00	$3,938,639.63
New Jersey	119	$ 94,309,450.00	$7,629,239.69
New Mexico	1	$ 2,562,500.00	$5,249,773.86
New York	262	$ 314,455,910.00	$16,224,453.01
North Carolina	177	$ 185,596,360.00	$9,960,145.00
North Dakota	17	$ 29,124,820.00	$3,161,671.19
Ohio	77	$ 87,634,780.00	$13,942,108.23
Oklahoma	129	$ 167,029,090.00	$5,686,818.61
Oregon	49	$ 93,556,280.00	$4,230,002.79
Pennsylvania	301	$ 354,823,900.00	$19,575,129.39
Puerto Rico	28	$ 67,719,700.00	$3,695,836.99
Rhode Island	1	$ 2,562,500.00	$2,336,142.23
South Carolina	156	$ 155,408,770.00	$5,929,621.24
South Dakota	33	$ 29,515,560.00	$3,938,639.63
Tennessee	82	$ 76,155,580.00	$6,172,423.88
Texas	576	$ 655,973,320.00	$28,607,387.46
Utah	15	$ 19,517,070.00	$5,832,500.19
Virginia	109	$ 44,731,860.00	$6,755,150.20
Vermont	33	$ 199,605,940.00	$3,890,079.10
Washington	105	$ 106,452,520.00	$5,783,939.66
West Virginia	202	$ 313,903,950.00	$11,368,400.29
Wisconsin	174	$ 106,767,120.00	$5,929,621.24
Wyoming	15	$ 28,030,120.00	$3,113,110.66
TOTAL	**4,808**	**$5,937,810,880**	**$350,000,000**

** Bill defines public dams as non-federal publicly owned dams.*