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Testimony of The American Society of Civil Engineers Before The Senate Committee on Environment and Public Works

On

The Water Resources Development Act of 2010:

Legislative and Policy Proposals to Benefit the Economy, Create Jobs, Protect

Public Safety and Maintain America's Water Resources Infrastructure

November 17, 2010

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## Infrastructure

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Madame Chairwoman, Senator Inhofe, and Members of the Committee:

Good morning. I am Larry Roth, and I am project manager for ARCADIS in Sacramento. The firm is the independent consultant for the Bay Delta Conservation Plan for California's Delta Stewardship Council. I am a civil and geotechnical engineer specializing in water resources. I have worked on the design, construction, and evaluation of more than 50 major dams throughout California and the U.S. I also served for a number of years as Executive Vice President of the American Society of Civil Engineers (ASCE) in Washington.

I am pleased to appear before you today to testify on behalf of ASCE<sup>1</sup> on our views on the need for a Water Resources Development Act (WRDA) in 2010. We congratulate the Committee for assuming a leadership role in pursuing a public-safety agenda through reauthorization of WRDA in 2010.

### A. National Infrastructure Needs

America's infrastructure picture certainly looks bleak. In urban areas, roadway congestion tops 40 percent. The number of high hazard dams—dams that, should they fail, pose a significant risk to human life—has increased by more than 3,000 just since 2007. Our <u>2009 Report Card for America's</u> <u>Infrastructure</u> reported that decades of underfunding and inattention have jeopardized the ability of our nation's infrastructure to support our economy and facilitate our way of life.<sup>2</sup>

The Report Card assigned a cumulative grade of D to the nation's infrastructure; it noted that a five-year investment of \$2.2 trillion from all levels of government and the private sector was needed to bring our infrastructure into good condition. About half of that sum will be available under present federal, state and local spending plans, leaving an overall infrastructure investment gap of \$1.1 trillion through 2014.

Levees received a D–. More than 85 percent of the nation's estimated 100,000 miles of levees are locally owned and maintained. The reliability of many of these levees is unknown. Many are more than 50 years old and were originally built to protect crops from flooding. With an increase in development behind these levees, the risk to public health and safety from failure has increased. Rough estimates put the cost at more than \$100 billion to repair and rehabilitate the nation's levees. The nation's 12,000 miles of inland waterways received a grade of D– as well. The average age of all federally owned or operated locks is nearly 60 years, well past their planned design life of 50 years.

Current economic and political conditions notwithstanding, the path forward will be expensive. But federal, state and local investments in essential public works can create jobs, provide for economic growth, and ensure public safety through a modern, well-engineered national infrastructure.<sup>3</sup> Since the passage of the American Recovery and Reinvestment Act in February 2009, the economy has regained more than two million jobs due to investments— much of it in infrastructure—provided by the law.<sup>4</sup>

Now I would like to highlight briefly some of the nation's most pressing infrastructure needs in the area of water resources.

### B. Congressional Action on a National Levee Safety Program Is Essential.

Earlier this year, a 120-year-old levee made of sand on the Wisconsin River collapsed near Portage, Wisconsin, flooding hundreds of homes. Five years after Hurricane Katrina devastated the Gulf Coast, there is still no national safety program for federal or state levees.<sup>5</sup>

Congress must move quickly to enact federal legislation to protect the health and welfare of American citizens from the catastrophic effects of levee failures. The levee safety program should be modeled on the successful National Dam Safety Program. The act should require the federal and state governments to conduct mandatory safety inspections for all levees and establish a national inventory of levees. The act should require the federal and state governments to conduct mandatory safety inspections for all levees and establish a national inventory of levees. The National Flood Insurance Program should map all areas potentially flooded by a levee breach and identify these as special flood areas to better communicate risks and encourage affected property owners to seek appropriate protection.

WRDA 2010 should require the Comptroller General, in consultation with the Secretary of the Army, to study the potential benefits of formally uniting the National Dam Safety Program with the National Levee Safety Program. The study should examine (1) the potential to improve the protection of the general public health, safety, and welfare from dam and levee failures through a unified dam and levee safety program; (2) the administrative and budgetary efficiencies to be achieved in the unification of the national dam and levee safety programs; and (3) any other factors the Comptroller determines will assist the Congress in assessing the benefits of the integration of the two programs.

In addition, WRDA should require the Secretary of the Department of Homeland Security and the Secretary of the Army to complete a study of the potential benefits of transferring the two programs into an independent federal dam and levee safety agency.

Many privately built levees are deeded to local governments or associations who do not maintain them or even recognize the risks. There is no dependable catalog of the location, ownership, condition, or hazard potential of levees in the United States. Flooding from Katrina demonstrated the need for consistent, up-to-date standards for levees based upon reliable engineering data on their location, function, and condition.

The nation must use all the tools available to reduce damages from hurricanes and major storms. This means the use of structural methods, such as levees, floodwalls, and dams, but also non-structural approaches, such as flood-resistant design, voluntary relocation of homes and businesses from flood-prone areas, the revitalization of wetlands for storage, and the use of natural barriers to storm surges.

The federal government must accept the responsibility for the safety of all federally funded and regulated levees. Similarly, state governments must enact legislation authorizing an appropriate entity to undertake a program of levee safety for non-federal levees.

C. The Committee Should Act on the Dam Rehabilitation and Repair Act This Year.

The Committee should add S. 732, the Dam Rehabilitation and Repair Act as a separate title in WRDA 2010. Senator Akaka's bill would amend the National Dam Safety Program Act to provide a modest, yet critical, \$200 million over five years for repairs, rehabilitation, or the removal of non-federal, publicly owned, high hazard dams across the United States. A version of this bill passed the House in the 110<sup>th</sup> Congress with a vote of 263–102.

According to the National Inventory of Dams, there are more than 85,000 dams in the United States. These dams are a vital part of our nation's aging infrastructure and provide enormous benefits to the majority of Americans including drinking water, flood protection, renewable hydroelectric power, navigation, irrigation, and recreation. Yet these critical daily benefits provided by the nation's dams are inextricably linked to the potential consequences of a dam failure if the dam is not maintained, unable to safely impound water, carefully pass large flood events or withstand earthquakes.

The number of dams determined to be unsafe or deficient has risen from 3,500 in 2005 to 4,095 in 2007. Meanwhile, the Association of State Dam Safety Officials has estimated that it would cost more than \$10 billion over the next 12 years to upgrade the physical condition of all critical non-federal dams — dams that pose a direct risk to human life should they fail.

Senator Akaka's bill has strong bipartisan support. Members of Congress recognize that the federal government should bear some responsibility in repairing ailing dams as failures do not necessarily respect state and local boundaries and the proposed legislation would distribute that funding to those dams in greatest need.

# D. Congress Must Solve the Problem of Declining Balances in the Inland Waterways Trust Fund.

The tax rate for the trust fund has been 20 cents per gallon since January 1, 1995. We believe that an increase in the waterways user fee is long overdue, and we concur in the recommendation that the current fee be increased between six and nine cents a gallon.

ASCE endorses the recommendations of the Inland Marine Transportation System (IMTS) Capital Investment Strategy Team released in April. This plan would invest \$7.6 billion in inland waterways improvements over the next 20 years.

We believe, however, that any increase in the Inland Waterways User fee <u>also</u> include a provision to index that fee to the consumer price index (CPI)

and be adjusted every two years. We further recommend that any diesel fuel tax revenues received by the IWTF be "firewalled" to establish discretionary spending limits in the same manner used for Highway Trust Fund and the Aviation Trust Fund to reserve the IWTF revenues exclusively for the reconstruction of the system's aging infrastructure.

Forty-seven percent of all locks maintained by the U.S. Army Corps of Engineers were classified as functionally obsolete in 2006. Assuming that no new locks are built within the next 20 years, by 2020, another 93 existing locks will be obsolete—rendering more than 8 out of every 10 locks now in service outdated. The need for increased investment at the federal level is compelling.

Our nation's inland waterways are a strategic economic resource. The nationwide network includes nearly 11,000 miles of federal user fees through an excise tax on fuel. Commercial waterway operators on these designated waterways pay a fuel tax of 20 cents per gallon, which is deposited in the Inland Waterways Trust Fund (IWTF).

The IWTF, which was created in 1978, now funds half the cost of new construction and major rehabilitation of the inland waterway infrastructure. But the IWTF fund balance has eroded in recent years; the administration has proposed phasing out the existing tax on waterways fuel and establishing a lock user fee.

Moreover, the Atlantic Intracoastal Waterway (AIWW) is a designated IWTF project. The commercial users on the AIWW have been paying into the fund since its inception while receiving very little in return for the AIWW system. As there are no new construction activities or major rehabilitation projects planned for the AIWW, there is little likelihood any of the fees collected on the Intracoastal Waterway will be used to improve or maintain the AIWW. ASCE believes that this inequity for the AIWW needs to be addressed.

The IWTF balance has declined each year for more than a decade. In FY 2011, the Office of Management and Budget estimates fund revenues at \$85 million, with a year-end balance of approximately \$30 million.

The administration's budget request noted for FY 2011 that the administration will propose to replace the current fuel tax with a new funding mechanism that will raise the revenue needed to meet the authorized non-federal cost-share of these capital investments "that is more efficient and more equitable than the fuel tax" for traffic on the inland waterway system. If the administration's proposal is enacted, the budget forecasts additional receipts of \$72 million for the IWTF for FY 2011. Together with the \$85 million in estimated receipts from the current excise tax and interest income, total receipts for the Inland Waterways Trust Fund would be \$157 million under the administration's budget request in FY 2011.

According to the Inland Waterways Users Board, large project cost overruns and delays in project schedules on the waterways have drawn down the IWTF balance. Project completion delays result from a federal budgeting and appropriations model that provides funding in annual and often-insufficient increments rather than a more reliable multi-year funding mechanism that would provide the certainty needed to more efficiently contract and build these capital projects.<sup>6</sup>

### E. The Committee Must Pass Legislation That Would Require All Revenues in the Harbor Maintenance Trust Fund to Be Appropriated Each Year.

The balance in the Harbor Maintenance Trust Fund (HMTF) has been increasing each year. The current balance at the end of fiscal year 2010 is estimated at more than \$5 billion.<sup>7</sup>

Therefore, the Committee should support legislation similar to H.R. 5892, which contains a provision requiring the total of all appropriations from the HMTF each fiscal year be equal to all revenues received by the HMTF each year.

Such legislation would require Congress to create a mechanism to ensure the equitable distribution of HMTF monies so that federal assistance would go to the ports in greatest need. The U.S. Army Corps of Engineers data indicate that a significant portion of annual HMTF disbursements now go to harbors that handle little or no cargo, according to a recent report by the Congressional Research Service (CRS).

This provision would establish a policy for increased expenditures from the Harbor Maintenance Trust Fund to ensure that annual revenues collected are utilized to meet the nation's navigation maintenance dredging needs.

The Corps of Engineers estimates that full channel dimensions at the nation's busiest 59 ports are available less than 35 percent of the time, the CRS reported.

This can increase the cost of shipping as vessels carry less cargo in order to reduce their draft or wait for high tide before transiting a harbor. It could also increase the risk of a ship grounding or collision, possibly resulting in an oil spill.<sup>8</sup>

We support the deepening and widening of ship channels, as necessary, to accommodate the new, larger ships in the world fleet and the continued maintenance dredging of ship channels for the efficient handling of maritime commerce. ASCE also supports programs that limit erosion and sedimentation in ports, harbors and waterways.

On land, U.S. port facilities are primarily a collection of state, local, or privately owned facilities and private companies.<sup>9</sup> More than 13 billion tons of freight, valued at \$11.8 trillion, were transported nearly 3.5 trillion tonmiles in the United States during 2007, according to the Commodity Flow Survey conducted by the U.S. Bureau of Transportation Statistics.<sup>10</sup>

These ports and their related facilities are an essential element of the national economy and must be preserved and strengthened.

### F. The Committee Must Support Increased Budgets for the U.S. Army Corps of Engineers Civil Works Program

In the face of the Corps' aging infrastructure needs, the president's budget for the Civil Works Program in FY 2011 reduced federal investments in essential national civil works systems.

The budget proposal totaled only \$4.9 billion, a reduction of 9.3 percent from the FY 2010 enacted level of \$5.4 billion. The administration request represented a 51 percent decrease from the FY 2009 enacted total of \$10 billion through regular appropriations and the American Recovery and Reinvestment Act.

Moreover, the trend is not likely to improve in future years. The Corps estimates that its budget proposals will continue to decline through FY 2015, with a low estimate of \$4.5 billion for FY 2013. The Corps expects that inflation will reduce actual spending on key infrastructure programs by a further \$3 billion over the next five years. <sup>11</sup> ASCE believes that these levels of spending are inadequate to meet the nation's security, economic and environmental demands in the 21<sup>st</sup> century.

The proposed construction budget for FY 2011 would assign \$1.7 billion to 99 construction projects; only two of these are new starts. The administration's request represents a reduction of \$341 million from the FY 2010 appropriation for this account. These funds are used for the construction of river and harbor, flood control, shore protection, environmental restoration,

and related projects specifically authorized or made available for selection by law.

Increased funding to the states for water resource planning is vitally important to encourage statewide collaborative efforts to avert future crisis such as flooding or drought. Preparedness is a cornerstone for ensuring future water supply availability for population and economic growth and new challenges to address environmental needs. At least \$100 million should be provided on a cost-shared basis in the Civil Works program to help states develop strategies to address their future challenges and needs.

We urge the removal of the prohibition on "new starts" in future Appropriations bills. We believe this is not in the best interest of the Corps' work on the nation's waterways, flood control needs and ecosystems restoration. Congress took a strong stand and made a serious commitment to the American people when it voted to override President Bush's veto of the 2007 Water Resources Development Act and authorized more than \$23 billion in new projects for the Corps of Engineers. It is time to meet that commitment by addressing this backlog of funding needs and provide additional funding for this critically important program. Failing to move on new projects that have been authorized will stop the Corps from addressing pressing needs.

### G. Conclusion

That concludes my testimony, Senator Boxer. I would be pleased to answer questions from the Committee.

#### NOTES

<sup>1</sup> ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 140,000 civil engineers individually in private practice, government, industry and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Service rules.

<sup>2</sup> The American Society of Civil Engineers, Report Card for America's Infrastructure (2009), <u>http://www.infrastructurereportcard.org/</u>. Fifteen infrastructure systems received a cumulative grade of D due to deferred maintenance and a lack of investment in new systems.

<sup>3</sup> The connection between economic expansion and infrastructure investments was most clearly explained more than 20 years ago. <u>See</u> David A. Aschauer, <u>Is Public Expenditure Productive?</u>, 23 J. MONET. ECON. 177 (1989) (finding that "the fall-off in productivity growth [in the 1970s] is matched, or slightly preceded, by a precipitous decline in additions to the net stock of public nonmilitary structures and equipment.")

<sup>4</sup> "One year after the passage of the Act, we can report that approximately 2 million jobs have been created or saved thanks to the Act's impact on hiring in the private sector, by local and state governments and by non-profits." Vice President Biden, Annual Report to the President on Progress Implementing the American Recovery and Reinvestment Act of 2009 (February 2010), <u>http://www.whitehouse.gov/recovery/anniversary/message</u> (last visited Nov. 15, 2010).

<sup>5</sup> The U.S. Army Corps of Engineers is responsible for approximately 2,000 levees that stretch about 14,000 miles overall. Tens of thousands of miles of additional levees are under state, local or private authority. <u>http://www.usace.army.mil/CEPA/NewsReleases/Pages/0906TreesLevees.asp</u><u>x</u>.

In addition, the Bureau of Reclamation in the Interior Department manages 8,116 miles of water-filled canals. Although WRDA 2007 states that the levee standards in title IX of the Act are intended for "structures along canals," the Bureau argues that these canals are exempt from federal levee requirements under WRDA because the Interior Department is not specifically mentioned in the Act. <u>See</u> Memorandum from Roseann Gonzales, Director, Policy and Program Services, Bureau of Reclamation, to Commissioner, Bureau of Reclamation, Non-Applicability of the Levee Safety Act to Bureau of Reclamation Canals (Nov. 25, 2008) (on file with ASCE).

<sup>6</sup> Inland Waterways Users Board, Annual Report to Congress (2009), <u>http://www.iwr.usace.army.mil/usersboard/AnnualReportToCongress.htm</u> (The 2010 report is due out in October, according to Corps officials.)

<sup>7</sup> U.S. Treasury Department, Treasury Bulletin 127 (March 2010), <u>http://www.fms.treas.gov/bulletin/b2010\_1.pdf</u>. In 1986, Congress authorized a tax on imports and exports to finance the HMTF. In 1998, the U.S. Supreme Court declared the export tax unconstitutional. That decision has caused a decrease of 30 percent in overall HMTF revenues, but the unexpended balance nevertheless continues to increase each year. <u>Id.</u>

<sup>8</sup> Congressional Research Service, Harbor Maintenance Trust Fund Expenditures (Jan. 25, 2010).

<sup>9</sup> The ports and harbors contain landside port infrastructure such as terminals, wharves, rail yards, and roadways within the harbor districts. The vast bulk of America's landside port infrastructure is owned and operated by state, local and private sector entities. The owners and operators are not required by law to report regularly on the physical condition of their landside infrastructure.

<sup>10</sup> Bureau of Transportation Statistics, U.S. Freight on the Move: Highlights from the 2007 Commodity Flow Survey Preliminary Data, <u>http://www.bts.gov/publications/bts\_special\_report/2009\_09\_30/html/entire.ht</u> <u>ml#2</u> (last visited Apr. 29, 2010).

<sup>11</sup> U.S. Army Corps of Engineers, The Fiscal Year 2011 Budget and an Alternative View of the Civil Works Mission 11 (Mar. 9, 2010) (unpublished PowerPoint presentation, on file with ASCE).