

STATEMENT OF
THE AMERICAN SOCIETY OF CIVIL ENGINEERS
BEFORE THE
ENVIRONMENT AND PUBLIC WORKS COMMITTEE
UNITED STATES SENATE
ON THE WATER RESOURCES DEVELOPMENT ACT
SEPTEMBER 20, 2012

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

It is an honor for me to appear before this committee on behalf of the American Society of Civil Engineers (ASCE)¹ to discuss the importance of water resources projects to our nation's overall economic health.

ASCE commends the Environment and Public Works Committee for holding a hearing today on a new Water Resources Development Act (WRDA). The Society is pleased to present to the Committee our views on investing in the nation's water resources infrastructure and the impact that this infrastructure has on the nation's ability to compete in a global economy. A Water Resources Development Act that fosters economic growth and job creation through policies that strengthen U.S. infrastructure will allow the nation to remain competitive in the Twenty-First Century.

A. National Infrastructure Needs

America's infrastructure picture certainly looks bleak. Our *2009 Report Card for America's Infrastructure*² 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.

In the *Report Card* the nation's Levees received a D– due to the fact that the reliability of the majority of estimated 100,000 miles of levees in the country is still unknown. Many of these levees 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. Additionally, the nation's 84,000 dams received a grade of D. With the average age of dams just over 51 years old and the number of deficient dams rising to more than 4,000, the nation is left in a scenario where for every deficient high hazard dam repaired, nearly two more are declared deficient.

Current economic and political conditions notwithstanding, the path forward will require significant investment. 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.

B. The Impact of Under-Investing in Our Nation's Ports and Inland Waterways

Aging infrastructure for marine ports and inland waterways threatens more than 1 million U.S. jobs according to ASCE's latest *Failure to Act*³ economic study on the nation's ports released on September 13, 2012. Between now and 2020, investment needs in the nation's marine ports and inland waterways sector total \$30 billion, while planned expenditures are about \$14 billion, leaving a total investment gap of nearly \$16 billion. This investment gap is for what would be considered the federal responsibility. The ASCE report does not address the landside connections or the "inside the fence" infrastructure that is the responsibility of the port authority.

¹ 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 Code.

² www.infrastructurereportcard.org

³ www.asce.org/failuretoact

The nation's marine ports and inland waterways are critical links that make international commerce possible. However, with the scheduled expansion of the Panama Canal by 2015, the average size of container ships is likely to increase significantly, affecting the operations at most of the major U.S. ports that handle containerized cargo and requiring both sectors to modernize. Needed investment in marine ports includes harbor and channel dredging, while inland waterways require new or rehabilitated lock and dam facilities.

The United States has 300 commercial ports, 12,000 miles of inland and intra-coastal waterways and about 240 lock chambers, which carry more than 70 percent of U.S. imports by tonnage and just over half of our imports by value. To remain competitive on a global scale, U.S. marine ports and inland waterways will require investment in the coming decades beyond the \$14.4 billion currently expected. ASCE reports that with an additional investment of \$15.8 billion between now and 2020, the U.S. can eliminate this drag on economic growth and protect:

- \$270 billion in U.S. exports
- \$697 billion in GDP
- 738,000 jobs in 2020
- \$872 billion in personal income, or \$770 per year for households

The report concludes that unless America's infrastructure investment gaps are filled, transporting goods will become costlier, prices will rise, and the United States will become less competitive in the global market. As a result, employment, personal income, and GDP will all fall due to inaction.

C. Congressional Action on a National Levee Safety Program Is Essential.

Seven years after Hurricane Katrina devastated the Gulf Coast, there is still no national safety program for federal or state levees. While FEMA and the U.S. Army Corps of Engineers have made great strides in creating an inventory of the location of the nation's levees, when examined the conditions of many of these levees are worse than originally expected.

Congress must take action and 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 complete a national inventory of levees.

Additionally, 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.

Many privately built levees are deeded to local governments or associations who do not maintain them or even recognize the risks. There is still no complete, and dependable, catalog of the location, ownership, condition, or hazard potential of levees in the United States. Flooding from Hurricane Katrina, and more recently from Hurricane Isaac, 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. WRDA 2012 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:

- 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;
- The administrative and budgetary efficiencies to be achieved in the unification of the national dam and levee safety programs; and
- Any other factors the Comptroller determines will assist the Congress in assessing the benefits of the integration of the two programs.

D. The Committee Should Reauthorize the National Dam Safety Program.

The Committee should add S. 3362, the Dam Safety Act of 2012 as a separate title in WRDA 2012. The bipartisan bill introduced by Senators Akaka, Boozman, Whitehouse, and Crapo would reauthorize the National Dam Safety Program through 2016 providing grants to improve state dam safety programs through training, technical assistance, inspection, and research.

The National Inventory of Dams, counts more than 84,000 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 inspected or maintained.

Only about 11 percent of the nation's dams are owned, operated, or regulated by the federal government. State governments are responsible for ensuring the safety of most dams. Unfortunately, many state programs are underfunded and understaffed. This legislation recognizes that the federal government plays a vital role in maintaining and inspecting dams wherever they may be located. Under FEMA's leadership, the National Dam Safety Program is dedicated to protecting the lives of American citizens and their property from the risks associated with the development, operation, and maintenance of America's dams.

The Dam Safety Act of 2012, S. 3362 as introduced, would provide \$13.9 million per year, including:

- \$9.2 million per year split among the states, based on the relative number of dams per state, to make improvements in programs identified in the National Dam Safety Program Act;
- \$1.45 million per year in research funds to identify more effective techniques to assess, construct, and monitor dams;
- \$1 million per year for a nationwide public awareness and outreach program;
- \$750,000 per year in training assistance to state engineers; and
- \$500,000 per year for the National Inventory of Dams.

E. Floodplain Management

Flooding remains one of the most prevalent natural disasters in the United States. Development and associated infrastructure in flood prone areas has increased rapidly as people are attracted to historically fertile floodplains and coastal areas. Even though the benefits of preserving the natural floodplains as flood storage areas and wildlife habitat have been recognized, the floodplains continue to be developed and new inhabitants are subjected to periodic flooding and related devastation, as shown by recent hurricanes. People living and working in flood prone areas often have developed a false sense of security. Once a flood occurs, residents and businesses often expect government to reduce or eliminate the risk of flooding through large capital projects. These populations need the protection of an efficient floodplain

management program implemented before the flood occurs. By recognizing the likelihood of future flooding and the beneficial aspects of the natural floodplain, areas can be protected and communities can become disaster resistant.

The U.S. Army Corps of Engineers (USACE) has been combating floods for more than 80 years and has proven a vital partner for national flood plain management. The Flood Control Act of 1960 created the Floodplain Management Services Program, which allows for the Corps to use its technical expertise in flood plain management to help both federal and non federal entities deal with floods and flood plain related matters.

The objective of the Corps' program is to encourage the prudent use of the nation's flood plains for the benefit of the nation's economy and public welfare by supporting comprehensive flood plain management planning at all governmental levels. Assistance can be provided in the form of technical services, planning guidance, and assistance on floods and flood plain issues. Study scopes range from helping a community identify present or future floodplain areas and related problems to a broad assessment of the various remedial measures that can be effectively used. Some of the most common types of special studies include:

- Floodplain Delineation / Flood Hazard Evaluation Studies
- Hurricane Evacuation Studies
- Flood Warning / Preparedness Studies
- Regulatory Floodway Studies
- Flood Proofing Studies

However, currently the U.S. Army Corps of Engineers has been faced with reduced appropriations over the past several years. In fact, the Office of Management and Budget (OMB) reported last week that the Civil Works program faces a reduction of \$505 million in FY 2013 under the sequestration authority of the Budget Control Act of 2011, which would be across the board cuts of roughly eight percent. This would include \$34 million of the \$415 million in FY 13 budget authority for flood control and coastal emergencies.

WRDA 2012 can be used as a vehicle to increase authorization levels for such a vital floodplain management program and to ensure that Corps floodplain management programs are authorized over the upcoming years.

ASCE supports protection of natural floodplains and the concept of building disaster resistant communities consistent with sustainable development and holding paramount the public's safety, health, and welfare. ASCE urges governments at all levels to adopt proactive floodplain management policies, particularly in vulnerable coastal lowlands and river bottoms, and supports creative partnering between federal, state and local governments to adopt floodplain management policies and to fund the design and implementation of floodplain management policies and flood mitigation projects in a timely manner.

ASCE urges federal, state, and local governments to inform residents of communities in floodplains of the hazards associated with the development or major redevelopment of communities below sea level or in high-risk, flood-prone areas. Such development is inherently unsustainable and puts the public at significant risk of loss of life and property. The multiple-use of flood prone areas and flood mitigation facilities should be pursued, including river restoration, wetland restoration, aquifer recharge, improvements in habitat, ecosystems, and water quality, recreation and open space use, and incorporation of floodplains into comprehensive watershed management programs.

F. The Inland Waterways Trust Fund.

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.

However, the tax rate for the trust fund has been 20 cents per gallon since 1995. ASCE believes that an increase in the waterways user fee is long overdue, and we concur in the recommendation that the current fee be increased to between six and nine cents a gallon. However, ASCE also stresses that any increase in the Inland Waterways User fee includes 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 and to reserve the IWTF revenues exclusively for the reconstruction of the system’s aging infrastructure.

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.

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.

G. Put Trust into the Harbor Maintenance Trust Fund

The dredging of the nation’s ports and harbors has suffered from years of under investment in a system that is critical to America’s ability to compete in the global marketplace. For Fiscal Year 2013 the administration has requested \$839 million be appropriated from the HMTF—only 50 percent of total estimated revenues. Total revenues are now estimated at \$1.659 billion for FY 2013. The busiest U.S. harbors are presently under maintained. 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. This situation 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.

The FY 2013 budget request does not come close to meeting the requirements of the nation’s ports and harbors, which have an annual need for maintenance dredging of between \$1.3 billion and \$1.6 billion, according to the Army Corps of Engineers.

This trend toward reduced investments in our ports and harbors has led to ever greater balances in the HMTF, and the unexpended balance in the Trust Fund is growing with a bookkeeping balance of more than \$6 billion by September 30, 2013, the Office of Management and Budget reports.

Therefore, the Committee should enact legislation, 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. The Committee should also guarantee that appropriations are not taken from other Corps of Engineers programs due to the potential increased funding from the HMTF.

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. 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.

ASCE supports the deepening and widening of ship channels, as necessary, to accommodate new, larger ships 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.

H. Conclusion

In conclusion, a significant gap between planned investments and needs exists. The nation's aging infrastructure is critical to both our economy and public safety. Deferring water resource projects creates costs that reverberate throughout our economy, causing exports and GDP to fall, threatening U.S. jobs, causing a drop in personal income, and putting those who live behind a dam or levee at increased risk. A new Water Resources Development Act must address these concerns by creating a national levee safety program, reauthorizing the national dam safety program, and correcting spending shortfalls out of both the Inland Waterways Trust Fund and the Harbor Maintenance Trust Fund. ASCE looks forward to working with the Senate Environment and Public Works Committee as you develop WRDA 2012.

Thank you, Senator Boxer. This concludes my testimony. I would be please to answer any questions.