DEPARTMENT OF THE ARMY

U.S. ARMY CORPS OF ENGINEERS

COMPLETE STATEMENT

OF

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COMMANDING GENERAL AND CHIEF OF ENGINEERS

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

ON

"The Status of The Nation's Dam, Levee and Other Flood Control Infrastructure"

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Chairman Barrasso, Ranking Member Carper, and Members of the Committee, I am Lieutenant General Todd Semonite, Commanding General and Chief of Engineers. I am pleased to be here today to discuss the role of the U.S. Army Corps of Engineers (Corps) in dam and levee safety. Generally, our objective in this area is to reduce risks to public safety associated with dams and levees. Our efforts in this area are part of a larger system of management practices by the Corps, aimed at ensuring that our Nation is positioned to deliver a greater objective: to safely provide a range of water resources benefits to the Nation. For dam and levee safety, the Corps uses a risk-informed approach to assure that this objective is met in a transparent and disciplined manner.

Water plays a central role in the economy, the health of our communities, and the diversity of our ecosystems and natural landscapes. Unfortunately, many in our Nation have also experienced what happens when we have too little or too much water, or water that is not fit to sustain natural habitats. In many ways, the decisions that we have made as a Nation in developing, managing, and protecting our water resources have influenced how the Nation developed and where its people now live. The Nation's water resources infrastructure includes dams and levees built by the Federal government, states, local authorities, and the private sector over many years. Sustaining the benefits that these structures provide, where warranted, requires the proper management of the risks that come with those benefits.

Although often planned and constructed as individual projects, many of our Nation's dams and levees now operate as integrated components of a larger water resources management system. The Corps owns and operates only a small fraction of the dams and levees in the Nation – 715 dams (less than 1% of the 90,580 dams in the 2016 national inventory of dams) and roughly 2,500 miles of levees (less than 10% of the roughly 30,000 miles now in the national levee inventory). From a functional perspective, the Corps generally constructed the dams and levees that it owns and operates primarily to provide navigation and/or flood risk reduction benefits, but many of them also support other uses such as hydropower, water supply, and recreation.

Infrastructure designed and constructed for the conditions and practices of two generations ago now delivers its benefits in an ever-changing world. We know the infrastructure embeds the decisions and practices of the past in its construction, but what changes? Over time, all infrastructure ages and deteriorates, unless it is properly maintained and periodically rehabilitated. Our understanding of the frequency and intensity of hydrologic and seismic events also changes, as do the sizes of the populations living and working near the infrastructure. Meanwhile, the practice of engineering and science leaps ahead. Also, consider that in the last six years, the Nation has experienced five flood events that exceeded a 1 in a 1,000 chance of occurring.

The Corps is addressing these changes in a risk-informed manner. We make informed adjustments to ensure that our investments in safety going forward are appropriate. For example, our dam safety program enables the Corps to extend the period that a project

can provide some or all of its authorized benefits, by investing in measures that reduce the principal safety risks at our dams to an acceptable level.

For many dams and levees, the costs, responsibilities, risks, and benefits are now shared. As we make choices as to which of these structures warrant an improvement for safety and who should bear the costs, we must be careful to not create divides with one group bearing the costs, another gaining benefits, others being held responsible, and yet others absorbing the risk. Such a divided system is neither fair nor sustainable, in my view, and would complicate the task of establishing a better set of incentives to reduce these risks in the future.

When it comes to addressing our Nation's dam and levee safety challenges, major Corps responsibilities generally follow project-specific authorities for managing infrastructure that the Corps owns and operates. The Corps also has programmatic authorities for participating in the national community of dam and levee safety. In reaching decisions on potential safety measures at the dams or levees that it owns and operates, the Corps considers the public safety, economic, and environmental risks posed by the infrastructure, the costs of reducing these risks, and the authorized project benefits that a proposed safety improvement would enable the project to continue to provide to society. The Corps authorities for dams and levees are varied and include:

- Project-specific authorities for projects that include dams and/or levees. To date, the Corps has designed and constructed over 3,000 such projects.

- For 715 of the dams that the Corps constructed, the Corps is a self-regulated owner. For these dams, the Corps operates, maintains, and repairs the dams, including rehabilitation. In addressing potential safety concerns, the Corps uses a modern risk management framework to assess and characterize the risks, establish priorities, select risk reduction measures, and communicate the risks.

- For other dams that the Corps constructed, which are owned, operated, maintained, and repaired by non-federal entities, we rely on the qualified state dam safety programs to regulate the structures. Forty-nine of the States now have such a program. For these dams, the Corps may provide technical assistance on a reimbursable basis, when requested. The Corps also participates in the National Dam Safety Program, which is hosted by the Federal Emergency Management Agency. The National Dam Safety Program supports state dam safety programs and contributes state-of-the-art policies, practices, and training to state and other federal partners.

- The Corps owns roughly 2,500 miles of levees, which it maintains.

- The Corps constructed roughly another 10,000 miles of levees that local authorities own and maintain. Under its Public Law 84-99 program, the Corps also inspects periodically approximately 2,500 miles of levees constructed by local authorities.

There are few state levee safety programs and no recognized standards at the national level for those programs. In the absence of effective regulatory regimes at the state level (comparable to the ones at the state level for non-federal dams), the repair and rebuilding of many locally owned levees after a flood often falls on the Federal government and the U.S. taxpayer. Title IX of the Water Resources Development Act of 2007, and section 3106 of the Water Resources Reform and Development Act of 2014, may provide a way to address this concern. A primary purpose of these provisions was to build capabilities within the states for levee safety, as well as to develop national guidelines and align federal programs. The Corps has been working on a key part of this effort, by developing a national levee inventory.

In summary, dams and levees are an important part of the Nation's water resources infrastructure. Management practices aimed at ensuring our Nation is well-positioned to safely monitor and manage water resources infrastructure involve many parties, including Federal, state, and local agencies, and the private sector. For the dams and levees that the Corps owns and operates, we are working to align the costs, responsibilities, risks and benefits, in order to inform our decisions on providing for the safe operation, proper maintenance, and effective management of risk. A similar framework of risk-informed management may help meet these objectives for decisions on the safety of other dams and levees across the Nation.

This concludes my testimony. Thank you for allowing me to testify about the challenges we face together in the area of dam and levee safety. I would be happy to answer any questions you may have.