Testimony of
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Introduction

Good morning, Mr. Chairman and Members of the Committee. My name is Robert Fenton, and I am the Assistant Administrator for Response in the Office of Response and Recovery at the Federal Emergency Management Agency (FEMA). As a fifth generation San Franciscan, I have spent a lot of time in the California Delta region. I came to my current role in 2009 after 13 years of service with FEMA's Region IX Office in Oakland—which serves Arizona, California, Nevada, Hawaii, Guam, American Samoa, Commonwealth of the Northern Marianas, Republic of the Marshall Islands, and the Federated States of Micronesia. During that time, I supported the response to major floods in the California Delta in both 1997 and 1998, and I appreciate the opportunity to return home to discuss FEMA's support of current planning and preparedness efforts in this region.

As you may know, the Sacramento-San Joaquin Delta is a region where two of California's largest rivers meet. Freshwater from these rivers meets saltwater from the Pacific Ocean, creating the West Coast's largest estuary and supporting a unique and delicate ecological environment that forms the hub of the State's water distribution system. Over 1,100 miles of levees create 57 leveed island tracts, some of whose surface can be 20 feet or more below the outside water level. Two-thirds of all Californians, about 23 million people, and millions of acres of irrigated farmland, part of a $27 billion agricultural industry, rely on the Delta for water. Disruption of this water flow resulting from any number or combination of disasters would have a devastating effect on California, creating widely felt impacts across the Nation.

Through our Region IX Office, FEMA and our partners have been deeply engaged in addressing the long term water-related issues in California through a Whole Community approach. This approach to emergency management engages not only Federal, State, local, tribal and territorial governments, but also the private sector, non-governmental organizations, and the public to collectively understand and address community needs. FEMA has joined with partners across this Whole Community to implement cooperative policies that assure adequate, safe, and dependable water supplies for the people, businesses, and institutions of not just California, but also in Arizona, Nevada, Hawaii, Guam, and other U.S. interests. This engagement is achieved primarily through water-focused joint planning efforts and exercises with our partners.

Planning

FEMA's "Whole Community" initiative recognizes and seeks to leverage the capabilities that both governmental and non-governmental entities can contribute while preparing for and responding to catastrophic disasters. FEMA has long coordinated and facilitated the development of detailed state and regional catastrophic response plans for earthquakes, hurricanes, tsunamis, improvised nuclear device attacks, and other threats.

Most recently, FEMA and our partners have conducted these planning efforts in support of Presidential Policy Directive – 8 (PPD-8), which directed the Secretary of Homeland Security to develop a national preparedness system that defines the core capabilities necessary for the Nation to prepare for incidents of greatest risk. This system will include a series of integrated national planning frameworks covering prevention, protection, mitigation, response, and recovery, and will inform planning in support of these frameworks at every level of government through a new National Planning System.

As we work to implement PPD-8, our planning assumptions for catastrophic disasters continue to be based on worst-case scenarios—they are designed to challenge preparedness at all levels and force innovative, non-traditional solutions as part of the response and recovery strategy to such events. FEMA and our partners seek to identify the highest priority tasks necessary to save and sustain lives and stabilize a catastrophic incident during the crucial first 72 hours, and have begun to work across all segments of society to identify how we can collectively achieve these outcomes. While the initial 72 hours after an incident are the most critical in saving and sustaining life, our approach spans not only response operations following a disaster, but also prevention, recovery, protection, and mitigation activities that occur before, during, and after a catastrophic event. Through full engagement with the Whole Community, this planning results in the development and identification of existing capabilities that can be employed using pre-established logistics protocols and deployment solutions.

In addition to national all-hazards planning, FEMA conducts regional catastrophic planning to address area-specific disaster scenarios which present greater likelihoods of occurrence based on location. Much of this work is coordinated through our Regional Interagency Steering Committees (RISCs), which are senior-level entities that address operational and preparedness issues related to response and recovery activities in FEMA's ten regions.

In California, the San Francisco Bay Area Earthquake Response Plan (published September 23, 2008) and the Southern California Catastrophic Earthquake Response Plan (published December 14, 2010) describe joint State and Federal response to catastrophic earthquakes using input from thousands of emergency management professionals at all levels. Included in the many challenges addressed in these plans is the damage to water infrastructure systems, including water distribution, treatment, and sewage systems, resulting from earthquake ground-shaking.

In addition, the Cascadia Subduction Zone Planning Project represents a Whole Community partnership working to develop a disaster response plan based on a magnitude 9.0 earthquake along the 800-mile long Cascadia Subduction Zone. "Cascadia" is located just off the Pacific Northwest Coast, and the subsequent tsunami affecting the west coast of the United States and

Canada would devastate a vast array of infrastructure and systems, including water delivery and disposal. The disaster response plan created by the Cascadia Subduction Zone Planning Project will outline response activities and collaborative efforts to be implemented in the immediate aftermath of an earthquake along the subduction zone. The plan is expected to be finalized by September 2012.

In conjunction with broad-based planning efforts like our catastrophic and hazard-specific planning, FEMA continues to partner with the State of California to prepare for catastrophic disasters like earthquakes in the densely populated Los Angeles and San Francisco metropolitan areas. Essential to these efforts is a shared and coherent analysis of threats to potable water production and distribution in communities at risk for severe ground-shaking. Collaborative earthquake planning (e.g., Catastrophic Southern California Earthquake Plan) has helped support the development of emergency plans with contingencies to:

- Maintain flow and pressure in the pipes to and from water treatment plants and pumping stations during disasters.
- Provide potable water to sustain life and support health and sanitation needs during disasters.
- Return the quality and quantity of water to pre-disaster standards.

FEMA also works with partners in emergency management to re-establish transportation networks, gas and electrical power, and sewage treatment in the aftermath of major incidents. As a result of the many planning efforts in this area, task forces have been established for the temporary repair of water distribution facilities and the delivery of potable water in the aftermath of a California earthquake.

Moreover, FEMA is part of the National Earthquake Hazard Reduction Program (NEHRP) along with the U.S. Geological Survey, the National Science Foundation and the National Institutes of Standards and Technology. The four NEHRP agencies work in close coordination to improve the Nation's understanding of earthquake hazards and to mitigate their effects. The missions of the four agencies are complementary, and the agencies work together to improve our understanding, characterization, and assessment of hazards and vulnerabilities; improve model building codes and land use practices; reduce risks through post-earthquake investigations and education; improve design and construction techniques; improve the capacity of government at all levels and the private sector to reduce and manage earthquake risk; and accelerate the application of research results. All four agencies are responsible for coordinating program activities with similar activities in other countries.

Preparedness

In addition to our planning efforts, FEMA brings together emergency management professionals across the Whole Community to improve preparedness by exercising current plans and uniting individuals in the field of emergency management. As part of the 2008 California State-wide "Golden Guardian Exercise," FEMA and the California Emergency Management Agency (Cal EMA) joined other state, local, tribal, governmental, and non-governmental stakeholders exercising the San Francisco Bay Area Earthquake Plan. This year's Golden Guardian Exercise

includes a test of the Southern California Catastrophic Earthquake Response Plan, including the establishment of a water conveyance task force to assist with the restoration of potable water deliveries following a magnitude 7.8 Southern San Andreas Fault earthquake.

The scenario in this year's Golden Guardian Exercise parallels that of the ShakeOut Scenario, published in 2008 by the U.S. Geological Survey, Multi Hazards Demonstration Project (MHDP). MHDP provides decision-making information for loss reduction and improved resiliency by engaging emergency planners, businesses, universities, government agencies, and others in preparing for major natural disasters by using hazards science to improve community resiliency. MHDP's ShakeOut Earthquake Scenario was created by a team of more than 200 scientists and experts who examined in detail the geophysical, physical, and social implications of a massive earthquake, including impacts to water conveyance. This scenario served as the centerpiece of the largest earthquake drill in United States history, involving over 5,000 emergency responders and the participation of over 5.5 million citizens. ShakeOut has evolved into an annual statewide event and has formed the basis of federal and state catastrophic earthquake plans.

FEMA has also supported MHDP's efforts in exercises like ARkStorm, an emergency planning scenario associated with hypothetical severe and sustained winter storms striking California over a period of several weeks. FEMA's flagship emergency-planning software, HAZUS-MH, was used for estimating physical damages in the ARkstorm scenario, and teams including FEMA members helped generate and review flood maps for the hypothetical scenario. This exercise not only ensured California electric utility providers are familiar with FEMA reporting and the appropriate forms for financial relief, it recognized the need for resiliency and additional research regarding wastewater services, improvements to be supported by FEMA's Hazard Mitigation Grant Program.

To further promote awareness and preparedness efforts surrounding the Sacramento-San Joaquin Delta, the FEMA Region IX Office in Oakland, California has established a Memorandum of Understanding (MOU) with Cal EMA related to disaster assistance in the Delta area. The purpose of the MOU, which was executed in February of 2010, is to establish criteria regarding the potential eligibility for FEMA's Public Assistance (PA) program funding in the special reclamation districts in the Sacramento-San Joaquin Delta area. The MOU clarifies the requirements for PA funding for: emergency flood fighting and response, emergency repair, permanent restoration, and replacement of facilities.

The FEMA/Cal EMA MOU clearly defines the respective responsibilities of FEMA, Cal EMA, and the reclamation districts before, during and after the event. It requires levees and flood control mechanisms to meet specific geometric and physical criteria such as height, width, angle of slope, and armament. It also requires regular inspections of levees as well as documented profiles, cross sections, and certifications from licensed engineers that the facilities satisfy criteria established in the MOU. Each reclamation special district must submit an annual maintenance plan that addresses any and all deficiencies identified by the certifying engineer.

Conclusion

FEMA's preparedness efforts in the Sacramento-San Joaquin Delta area are exemplified by the water-focused joint planning and exercises that occur there regularly. By engaging the Whole Community in catastrophic, all-hazards, and hazard- specific planning, and in the exercises that test and evaluate these plans, we continue to address the long term water-related issues in California. Our plans address a wide variety of potential hazards and unite emergency managers through an intensive and collaborative planning process, while our exercises bring together thousands of emergency responders across the Nation to practice and assess current plans and procedures. The Agency continues to create cooperative policies that assure adequate, safe, and dependable water supplies for California and the Nation at-large.

Thank you, Mr. Chairman, for providing me this opportunity to appear before you today. I look forward to answering any questions you or other Members of the Committee may have.