Good afternoon Chairman Rounds, Senator Harris and other members of the subcommittee. I thank you for the opportunity to testify before you today on these important issues.

My testimony will discuss the significant devastation caused by the recent Northern California wildfires; the need for federal resources and coordination to aid prevention, cleanup and rebuilding efforts; and how California is preparing for a future with more intense and frequent natural disasters fueled by changes in our climate. I will also highlight an innovative effort California is taking, with federal assistance, to increase the resiliency and sustainability of a rural area in California following a devastating wildfire. The real and growing danger of catastrophic events means that all levels of government must devote more resources and enhance coordination to help address the causes of disasters, limit their devastating impacts, and speed recovery and rebuilding efforts.

Overview of the Northern California Wildfires’ Impacts and Disaster Recovery Efforts

In October 2017, California experienced one of the most devastating and deadly wildfires in its history. In Northern California, 43 people were killed and over 8,900 homes, businesses and structures were destroyed, with property losses of more than $8 billion and counting. The magnitude of the resulting hazardous waste and debris removal operations is also unprecedented for a wildfire. [See attached photos.]
The pace of recovery operations has been extraordinarily quick given the amount of devastation, due to an exceptional commitment of State resources, significant support from the U.S. Environmental Protection Agency, the Federal Emergency Management Agency and the U.S. Army Corps of Engineers, and days, nights and weeks of hard work by dedicated public servants in recovery efforts.

My agency, the California Environmental Protection Agency, has a history of close coordination with U.S. EPA Region IX and other federal agencies following past fire disasters (e.g., 2007 Southern California and Lake Tahoe wildfires, and the 2015 wildfires in Lake and Calaveras Counties). I'll briefly discuss some of our accomplishments and work with our federal partners during the most recent fires and in the seven weeks since the fires stopped burning.

**California Air Resources Board Utilizes Federal Resources to Improve Health Information**

First, the strong winds that spread the fires so quickly also carried smoke and ash up to 100 miles away, creating hazardous air quality in the San Francisco Bay Area’s major population centers. The California Air Resources Board, which is charged with protecting the public from the harmful effects of air pollution, worked with local and federal agencies to quickly expand air quality monitoring and laboratory analysis during and after the fires. This helped us to provide the public, local officials and tribal nations with vital, timely health advisories and information.

**Department of Toxic Substances Control and U.S. EPA Remove Hazardous Waste**

While, thankfully, no Superfund sites were affected, directly following the fires one of the first steps of the recovery effort was to remove the household and commercial hazardous waste – including paints, cleaners, solvents, oils, batteries, herbicides and pesticides – from the destroyed homes and other properties. The Department of Toxic Substances Control and U.S. EPA have already inspected about 8,000 burned structures for hazardous waste: over 1,000 by the Department and nearly 7,000 by U.S. EPA Region IX. Together, they have removed an estimated 100 tons of hazardous waste and asbestos-containing material. Through extraordinary effort, this phase of the operation is nearly done.
**CalRecycle’s Technical Expertise Assists in Debris Removal**

Once hazardous waste has been removed, crews can begin the much larger task of removing ash and fire debris and preparing the properties for rebuilding. California’s Department of Resources Recycling and Recovery, or CalRecycle, has been a leader in developing best practices for solid waste debris management that prioritize worker safety, environmental protection and transparency during operations. They provided our state Office of Emergency Services, FEMA, the U.S. Army Corps of Engineers and the affected local governments with this technical assistance for recovery efforts following the fires.

To date, working in collaboration with the State and local governments, the Corps of Engineers has done the lion’s share of the debris removal, clearing and disposing of 288,000 tons of ash and other materials from roughly 880 properties in Sonoma, Napa, Lake, and Mendocino Counties. CalRecycle has conducted more limited removal operations involving properties in Yuba, Butte, and Nevada Counties.

Obviously, we have a long way to go before our communities are rebuilt, but federal government assistance and federal funds are an essential part of helping to recover from this and other disasters.

**Superfund Helps to Prevent and Cleanup Threats to Public Health and Safety**

The threat from natural disasters can be greatly magnified when Superfund sites are in harm’s way. California has 98 sites on Superfund’s National Priorities List, many of them in areas at high risk from earthquakes, flooding and sea level rise. One Northern California town in particular stands squarely in the path of potential disaster.

The century-old Argonaut Mine above the rural town of Jackson has left a legacy of arsenic-laden mine tailings in the area. Working in collaboration with the California Department of
Toxic Substances Control, U.S. EPA Region IX used Superfund authorities to clean up contaminated soil at an elementary school and around homes in the area. U.S. EPA also studied a 100-year-old dam that holds back 165,000 cubic yards of the toxic tailings, and found that the dilapidated dam was at risk of a catastrophic failure that could inundate Jackson with 15 feet of contaminated sludge, cause more than $100 million in damages, and result in the loss of life.

Acting on this information, in 2015, during the months before our winter storm season, the Department moved quickly to construct a water diversion system to avert dam failure in the event of heavy rains, and designed and funded a project to stabilize the dam in the short term. Further, U.S. EPA listed the mine under the Superfund program in September 2016, and will construct a final remedy for the site.

Federal and state officials rely on Superfund to help avert disasters like the Argonaut Mine, so it is important to know how much funding is needed to address those threats and the money available to pay for those costs. To address this need, in 2016 the Governor signed a bill into law (SB 2891) that requires the Department to look ahead each year and forecast the next three years' worth of anticipated cleanup costs at federal and state sites. The most recent report highlighted the importance of federal and state coordination and concludes that funding needs currently exceed available resources.

**Addressing Climate Change and Making Communities More Resilient**

California is also a leader in the fight against climate change, which we see as a “risk multiplier” for natural disasters. We are already seeing impacts from climate change in California. Average temperatures have increased by about 1.8 degrees (Fahrenheit) over the past century; fire seasons are now longer and more devastating. The state recently endured a historic, five-year drought, which has contributed to the death of over 100 million trees, and some are becoming anxious as this year’s rainy season has started out dry. Further, rising sea levels, even small
amounts, put coastal communities at greater risk of inundation during extreme high tides and storm events.

We have begun exploring how to prepare for the effects of sea level rise on the California shoreline, and how we might best mitigate its impact on Superfund and other contaminated sites. Last month, CalEPA hosted a workshop with environmental justice representatives to discuss potential impacts of sea level rise on these sites and how to build better safeguards for them. The goal is to help local communities prepare for, minimize the effects of and respond to, extreme weather events.

We have prepared a map that demonstrates the potential scope of one of these problems. It identifies the areas that are subject to fire hazards, combined with the location of Superfund sites across the state. [See attached map.] As you can see, a large number of Superfund sites are located in or near at-risk areas across the state.

With the very real risks of natural disasters impacting communities across our state, we are working to find creative ways to embed resilience in our natural systems and communities.

For instance, California was one of 13 national winners of the National Disaster Resilience Competition, which is administered by the U.S. Department of Housing and Urban Development. This provided us with funding to implement a project in rural Tuolumne County to support community resilience and forest recovery following the Rim Fire, the third worst fire in the state’s history. This fire scorched more than 250,000 acres in and around Yosemite National Park and cost more than $125 million to fight.

The Community and Watershed Resilience Program, a collaborative effort among county, state and federal agencies, is investing $70.3 million dollars received through the competition to repair and reforest the burn area to reduce future wildfire risk; use thinned material from the area to produce wood products in a newly constructed biomass facility; and build a modern
community resilience center to train local residents to work on forest restoration and in the 
biomass facility. This facility will also act as a safe haven in the event of future disasters and 
provide this rural community with additional benefits. The Program was stakeholder driven, 
received bipartisan support, and is a replicable model for other rural areas.

**Conclusion**

Through my testimony I have tried to demonstrate the real and growing danger that natural 
disasters represent, the large role that climate change plays in exacerbating these threats, and 
the unquestioned need for all levels of government to devote more resources and work more 
collaboratively to address the causes of these disasters and to help speed recovery and 
sustainable rebuilding efforts.

I am happy to answer any questions that you may have.
Sea Level Rise and Fire Risks Near Superfund Sites

Fire Hazard Severity Zones
- Moderate
- High
- Very High
- 0.5m Sea Level Rise with 100-Year Storm

Superfund Sites