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CHALLENGES FACING SUPERFUND AND WASTE CLEANUP EFFORTS FOLLOWING  
NATURAL DISASTERS

WEDNESDAY, DECEMBER 6, 2017

U.S. SENATE

Committee on Environment and Public Works

Subcommittee on Superfund, Waste Management and Regulatory  
Oversight

Washington, D.C.

The subcommittee met, pursuant to notice, at 2:30 p.m. in  
room 406, Dirksen Senate Building, the Honorable Mike Rounds  
[chairman of the subcommittee] presiding.

Present: Senators Rounds, Ernst, Harris and Booker.

STATEMENT OF THE HONORABLE MIKE ROUNDS, A UNITED STATES SENATOR  
FROM THE STATE OF SOUTH DAKOTA

Senator Rounds. Good afternoon, everyone.

The Environment and Public Works Subcommittee on Superfund, Waste Management and Regulatory Oversight is meeting today to conduct a hearing entitled, Challenges Facing Superfund and Waste Cleanup Efforts Following Natural Disasters.

In the past four months, three major hurricanes brought record-setting flooding and rainfall to Texas, the Gulf Region and the Caribbean. They also threatened the dozens of contaminated Superfund sites located in their path.

Further, in October, deadly wildfires scorched over 245,000 acres in California. These wildfires left an estimated \$85 billion of economic damage in their wake. This hearing is especially appropriate today as California again finds itself facing wildfires in southern California.

These ongoing fires have forced tens of thousands of people to evacuate their homes. Natural disasters such as these not only cause loss of life, but also billions of dollars in damage to the economy, infrastructure and homes.

They also have the potential to expose communities and the environment to hazardous chemicals stemming from contaminated Superfund sites that could be damaged by the storm. The Comprehensive Environmental Response Compensation and Liability

Act of 1980, also known as CERCLA, was created to manage hazardous substances and to respond to environmental emergencies, spills and natural disasters.

As the lead agency, the EPA coordinates cleanups, hazardous waste management and emergency responses with various other federal agencies such as FEMA, the U.S. Army Corps of Engineers, as well as State and local officials.

Throughout Hurricane Harvey, the EPA worked with the Texas Commission on Environmental Quality to secure dozens of Superfund sites in the Houston area and monitored for potential leaks from the sites. Following the hurricane, the EPA used aerial imaging to conduct assessments of these sites, but State and federal officials faced significant challenges in assessing these sites for testing.

Of the 13 sites the EPA identified as being possibly damaged, only 2 were immediately accessible for sampling. The remaining 11 were inaccessible due to flood waters requiring officials to wait until the waters receded before the sites could be evaluated.

Shortly after Hurricane Harvey, Hurricane Irma threatened 22 current or former National Priority List sites within Florida's southernmost 100 miles. In anticipation of the hurricane, technical staff in the EPA Region 4 office reviewed sites to secure any potential vulnerabilities. Many of these

sites remained secure after Irma made landfall.

Two weeks later, as Hurricane Maria hit Puerto Rico and the Virgin Islands as a Category 4 storm, 19 Superfund sites were at risk. Of these, 5 sites in Puerto Rico were deemed especially hazardous to human health and the environment.

Today, nearly two-and-a-half months after Hurricane Maria made landfall, the relief and remediation effort in Puerto Rico is ongoing.

In addition to these deadly hurricanes, throughout the month of October, California experienced some of the deadliest wildfires in its history. These wildfires necessitated a federal cleanup effort that involved hundreds of EPA staff and weeks-long efforts to remove thousands of hazardous waste products, largely consisting of household chemical products, from the area.

Today, this subcommittee will conduct a review of the response, remediation and recovery challenges faced by States and public officials tasked with securing Superfund sites and managing waste debris in the aftermath of these natural disasters. Our goal today is to conduct oversight of the agency coordination among federal, State and local officials following these destructive events.

We will also hear about the preparations made to secure Superfund sites in advance of these natural disasters occurring

and hear suggestions on how the planning and preparation for natural disasters can be improved.

In general, CERCLA provides substantial discretion to the EPA to expand requirements for disaster planning and post-disaster response. While CERCLA does provide the EPA with flexibility in disaster planning and remedial actions, there are few statutory requirements for proactive disaster planning and response.

I am hopeful that today's hearing will provide suggestions for improvement to disaster planning and post-disaster response so we can make certain that in the event of a natural disaster, these sites remain secure and pose no threat to the surrounding communities and environment.

I would like to thank our witnesses for being here today and I look forward to hearing your testimonies.

Now, I would like to recognize Senator Harris for her opening statement.

[The prepared statement of Senator Rounds follows:]

STATEMENT OF THE HONORABLE KAMALA HARRIS, A UNITED STATES  
SENATOR FROM THE STATE OF CALIFORNIA

Senator Harris. Thank you, Mr. Chairman, and for your thoughtful remarks about California and the devastation we experienced because of the wildfires.

There are many Boys and Girls Clubs in California but there is one, the Harbor Gateway Boys and Girls Club in Los Angeles, that is a little different. That is because it is right near the Del Amo Montrose Superfund site.

Literally less than five feet away from where kids play, there are two underground Superfund sites filled with the chemical DDT and old tire rubber which combines to form a toxic sludge. Every day there are kids playing at this Boys and Girls Club and many have no idea that they are right next to these toxins.

That is just wrong. When you are a kid, you should be having fun, not worrying about cancer-causing toxins.

Unfortunately, the Harbor Gateway Boys and Girls Club is not the only place in my State where vulnerable Californians are exposed to dangerous chemicals. In 2015, an EPA analysis found that many communities in California, especially in southeast Los Angeles County, the Inland Empire and the San Joaquin Valley are among the most at-risk neighborhoods in the Nation. They are at risk due to their proximity to landfills, refineries, rail yards

and other polluting facilities.

Many of the Californians in these high risk areas are people of color, Black, Latino and Asian people who face heavy burdens from air pollution, traffic congestion, lead paint, hazardous waste sites and yes, Superfund sites.

For example, Watts, California is one of the most polluted areas in the State. It is only about 20 miles from Brentwood but life expectancy in Watts is nearly 12 years lower than in Brentwood. That is what we are talking about when we talk about the impact of pollutants on public health and vulnerable communities.

Communities were suffering even before the wildfires and hurricanes. These disasters made a bad environmental crisis even worse. As of yesterday, Governor Brown declared another state of emergency for three wildfires, the Thomas, Creek and Rye Fires in the counties of Los Angeles and Ventura.

This natural disaster has thus far burned more than 83,000 acres, destroying at least 200 structures and forced the evacuation of over 27,000 nearby residents. Thankfully, our firefighters are responding as quickly as possible and the Federal Government should do everything we can to assist the victims.

This comes on the heels of my visit with Senator Feinstein and Governor Brown to Sonoma and Napa Counties on October 14 to

observe a series of wildfires that ultimately burned nearly 245,000 acres, destroyed 8,900 structures and claimed the lives of 43 human beings.

Hurricanes have devastated Florida, Texas, Puerto Rico and the U.S. Virgin Islands. I saw this devastation firsthand when I visited Puerto Rico and the U.S. Virgin Islands with Senators Murkowski, Carper, Franken, Risch and Kennedy on November 5 as people struggled to rebuild and put their lives back together.

On top of that, because of these disasters, contaminants have spread, communities are still dealing with damage, debris, waste and destruction. For example, after the California wildfire, hazardous waste such as Freon chemicals, batteries and asbestos fibers, which could become airborne, were scattered everywhere.

After Hurricane Harvey, the EPA reported that a dangerous chemical, a chemical linked to cancer and birth defects, may have washed downriver from the San Jacinto River waste pits in Houston. In Puerto Rico, they are facing a humanitarian crisis. Only 50 percent of the island has power. There is a lack of food and clean water and disease is spreading due to unsanitary conditions.

A recent study linked wildfire smoke exposure to respiratory issues and asthma. Asthma was a severe problem due to pollution but increased dramatically for folks breathing

smoke from the wildfires.

Families in the California Central Valley have been sending their kids to the ER for asthma attacks three to four times a year or more. That was before the wildfire pumped soot into the sky.

Children across the Central Valley in California are choking on the very air they breathe. They will grow to adulthood certainly, as we are hearing, with lung disease. Our job is to protect people and frankly, we are failing.

We must and we can do better. Because this is about health and safety of our children, our families and our communities, and while our most vulnerable communities may be the hardest hit, let us not forget that clean air and clean water are universal needs. Whether you live in a red State or a blue State, none of us want the water coming out of the tap to be brown.

Today, we have a chance to hear from folks on the ground. This is an opportunity to learn how we can do a better job of cleaning up these sites and protecting the health of the American people and the environment in which we live.

Thank you and thank you, Mr. Chairman.

[The prepared statement of Senator Harris follows:]

Senator Rounds. Thank you, Senator Harris.

Our witnesses joining us today are: Mr. Bryan W. Shaw, Chairman, Texas Commission on Environmental Quality and Mr. Tracy Hester, Professor, University of Houston Law Center.

Now I would like to yield to Senator Harris to introduce our third witness.

Senator Harris. Thank you, Chairman Rounds.

It is my great honor to introduce one of our witnesses today, Matt Rodriguez, Secretary of the California Environmental Protection Agency. He was the Chief Assistant Attorney General for the Justice Department's Public Rights Division in 2008 shortly after Jerry Brown won election as Attorney General.

He supervised the land law, environmental law, natural resources law, consumer law, civil rights enforcement, antitrust and corporate fraud sections of the office.

During his tenure, he worked to make our community safer by enforcing hazardous waste disposal laws and regulations protecting groundwater from underground storage tanks and the leaks of those tanks.

Secretary Rodriguez also oversaw the legal team that defended the State's greenhouse gas rules and against challenges. This was a fight for the right of Californians to combat climate change and Matt played a critical role of leadership.

Prior to heading the California EPA, Secretary Rodriguez served briefly as Acting Chief Deputy Attorney General while I was the Attorney General of the State of California. During that time and throughout his career, I have trusted and depended on him for his advice and counsel, especially on environmental issues.

Matt Rodriguez is known throughout California and nationally as being an expert on all these issues and being a dedicated lifelong public servant. It is an honor to have you before this committee.

Thank you.

Senator Rounds. Welcome, Mr. Rodriguez.

Now we will turn to our first witness, Mr. Bryan Shaw, for five minutes. Mr. Shaw, you may begin.

STATEMENT OF BRYAN W. SHAW, CHAIRMAN, TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

Mr. Shaw. Thank you, Mr. Chairman, Ranking Member Harris, and members of the subcommittee. Good morning and thank you for the chance to visit with you about the Texas Commission on Environmental Quality and our response to Hurricane Harvey.

My name is Bryan Shaw and I am the Chairman of the Texas Commission on Environmental Quality. My agency's mission is to protect our State's public health and natural resources by ensuring that the air and water are clean and that waste is disposed of safely. Fulfilling this mission is critical during and after natural disasters.

With the challenges we face with this and other issues in the State, it continues to be critical that we coordinate with local, State and federal officials to address the human and environmental impacts of Hurricane Harvey and its aftermath.

The cooperation between agencies during the hurricane response highlighted how well the EPA and the States can work together. The hurricane response and recovery efforts provided a direct opportunity to put into practice key elements of the Environmental Council of the States' Cooperative Federalism 2.0 effort which is designed to improve the relationship between the EPA, State and regulatory agencies.

The TCEQ, EPA Region 6, and EPA headquarters all worked

together efficiently and cooperatively during this time to quickly address the many issues that resulted from Hurricane Harvey. The TCEQ continues to be involved in multiple response and recovery efforts, including efforts related to debris management and Superfund sites.

Talking about some of the debris management, specifically construction and demolition debris associated with Hurricane Harvey and the recovery presents a potential health risk as it can harbor mold, bacteria, viruses, rodents, and mosquitoes. Construction debris can also contain household hazardous chemicals, such as pesticides or cleaners stored in the home. Proper management of construction debris is imperative to reduce exposure to these potential infectious agents and harmful wastes.

The first step is to rapidly remove the material from the houses, especially if it has been wet from waste from flood waters, as those are always contaminated with microorganisms. Getting them out quickly helps to prevent growth and spread of mold, bacteria, and viruses indoors.

Once out of the house, it becomes critically important to quickly move the construction and demolition debris from curbs to temporary debris management sites. This helps to reduce public exposure to these wastes and the vectors associated with those piles of waste at the curb. Once at a temporary site, it

is crucial to dispose of materials and hazardous wastes properly, as well as getting rid of construction debris materials in a way that is environmentally protective either through recycling or proposal disposal in a lined, permitted landfill.

The TCEQ is actively working with local governments on siting and approving those temporary sites in a quick and expeditious but safe manner. We have permitted about 208 of those since the hurricane went through, 90 of which are still active. Those typically are operating 24 hours a day to facilitate getting those materials off the curb so we can get those communities healthy as well getting folks back into their homes in a safe place to live.

Our staff worked continuously to ensure we are inspecting for both environmental as well as fire protection purposes in the management of those temporary sites. So far our best estimate is about 25 million cubic yards with regard to debris associated with Hurricane Harvey that will be need to be disposed of in the State of Texas. About 10.4 million cubic yards, less than half of that, has been removed as of this date. At this point, there is about 1.6 million cubic yards in those temporary sites between the curb and in their final disposition in landfills.

We have efforts on our website to make sure we work with

our local officials and others to ensure that we encourage them about the most efficient and effective methods to deal with those materials so that we do that safely and quickly and can return those communities to a healthy standard we all strive for.

In keeping with Governor Abbott's disaster proclamation, we requested that certain rules be suspended that would hinder, delay or prevent any necessary actions associated with the response, dealing with debris management and controlled burns associated with that. The Governor has renewed that declaration and it will not expire until December 19 unless he extends it further.

We always had the authority to issue temporary permits, authorizations at our municipal landfill sites to allow them, for example, to exceed their permitted threshold in emergency situations on a temporary basis. Those are up to 180 days with a possible 180-day extension. Those would then have to go through either removing that material or a subsequent permitting process to make those permanent.

We worked to try to ensure that the enforcement discretion, as well as the issues we put forward with the Governor asking for exemptions from the rules, that we do not exceed those time frames and can move forward in a way that allows for proper disposal quickly of those materials.

I will quickly finish by saying of the Superfund sites that we have in the State, 34 of those are federal and 17 are State. Mr. Chairman, you mentioned that the key to that is making sure prior to landfall that we secure those sites.

This can include making sure storage tanks, vessels, and containers are secured so that they do not wash away, making sure they are secured so that people do not get into them, and ensuring we are taking other protective measures to ensure we minimize the likelihood of off-site contamination associated with those Superfund sites.

I am happy to answer questions as time permits.

[The prepared statement of Mr. Shaw follows:]

Senator Rounds. Thank you for your testimony, Mr. Shaw.

We will now turn to our second witness, Mr. Tracy Hester.

Mr. Hester, you may begin.

STATEMENT OF TRACY HESTER, PROFESSOR, UNIVERSITY OF HOUSTON LAW  
CENTER

Mr. Hester. Thank you, Mr. Chairman. It is an honor and privilege to be here. I appreciate the opportunity to speak with the committee.

As you mentioned, my name is Tracy Hester. I teach environmental law at the University of Houston Law Center. Prior to that, I spent about 20 years as a practicing environmental law at the law firm of Bracewell LLP.

I appear here in my personal capacity and do not speak on behalf of any of those organizations or other group I work with.

My testimony centers on ways the system could be tweaked or modified to make CERCLA and Superfund site responses more resilient in the face of disasters.

As you mentioned in your opening statement, EPA already has substantial grant power under CERCLA to do that. Under Section 104, the Federal Government has the capacity to select remediation actions that can encompass and include the capacity to be prepared for disasters and to have excess resilience if they get struck by a hurricane or other weather event.

In addition and probably more on point, Section 106 gives EPA the express power to issue abatement orders that require responsible persons to take steps to prevent the imminent threatened release of a hazardous substance that would cause an

imminent substantial endangerment. That gives a built-in capacity to respond to disasters that create risks to the community.

As you also mentioned, the statute does not include a broad array of any explicit mentions to any kind of disaster capacity or response. There are some specific areas where the statute could have some modifications made to build in that capacity.

There are three areas. First, make the site selection remedies basically to protect it against release in the first place in the face of disaster. In particular, you could add disaster risk resilience as one of the statutory criteria that EPA must observe when they select remedial action.

There is a long list of them included in Section 9621(b)(1) of the statute. Just add at the end, subsection (H) to make specific reference to disaster recovery and response as part of the remedy selected for a site.

Two, you could direct EPA to do a prospective and proactive review of all health and safety assessments that have built into them emergency response and capacity. Essentially, identify which sites are in the path of a natural disaster or likely to suffer one and go through that portfolio in advance and identify whether or not they have emergency response plans in place that can deal with the black swan event. If they do not, make sure they get upgraded in advance.

Three, take a look at all the sites as a universe and then review and rank them as to which ones pose the greatest risks. Currently under the statute, there is a mandatory review period that every site's remedy must be looked at again in five years and make sure it is still protective of human health and the environment.

That review includes what other new data has come into play including changes in weather patterns and risks of disasters. Make that part of the five year review cycle. You could also make sure that any State-based laws that require disaster resilience in planning become considered as applicable or relevant appropriate requirements under the statute under Section 9621(d).

Last, make some clarifications as to the act of God events. Some of the members of the responsible party community had some questions as to whether or not an event like Harvey or a 500-year or 1,000-year storm was an act of God that created some issues in terms of their responsibility to clean up sites they had already cleaned up.

If there was some clarity on that, you could speed up the response and participation of the parties.

Last, if disaster strikes, build more capacity to respond to it. One of the biggest concerns, at least as I observed as someone who was in Harvey and is still dealing with the

aftermath of that, was concern of the public as to whether or not there had been release from the sites based on what they are hearing secondhand from the press and from visual observations.

One way to address that is in addition to the initiatives already undertaken with mobile laboratories and aerial over flights which are enormously useful and great initiatives, there is capacity I think to add capacity for drones and unmanned aerial vehicles that are able to go to the sites much more quickly when the roads are washed out.

There is discussion already underway at the Office of Enforcement and Compliance Assurance at EPA to have drones that can take samples or do multispectral remote analysis so that you can actually get at least preliminary data to assuage concerns of the public.

In doing so, you probably need to have a pilot program to make sure you have those tested and that they are reliable and ready to put into use when the moment comes.

Bottom line, in conclusion, I want to emphasize the State and the Federal Government stepped up and really built a success story of working together on the front lines in the face of disaster. They really need to be commended for that.

There are no idiots in foxholes, there is no turf in the middle of a natural disaster, but there are ways we could improve the system. I would be glad to answer questions about

that if time permits.

[The prepared statement of Mr. Hester follows:]

Senator Rounds. Thank you for your testimony, Mr. Hester.

We will now turn to our third witness, Secretary Matthew Rodriguez. Secretary Rodriguez, you may begin.

STATEMENT OF MATTHEW RODRIGUEZ, SECRETARY, CALIFORNIA  
ENVIRONMENTAL PROTECTION AGENCY

Mr. Rodriguez. Thank you very much. Good afternoon, Chairman Rounds and Senator Harris. It is a pleasure to be able to testify before you today. I will use my testimony today to summarize several points made in my written submittal.

First, and most importantly, I do want to emphasize that California does need federal resources and we do need coordination with the Federal Government in order to prepare for our future. It is a future that will see more intense and frequent natural disasters, unfortunately, fueled by changes in our climate.

You well described and I appreciate the understanding in Washington of the disasters that have occurred in California in the last six months and those occurring right now. It really has been a test of our working relationship with the Federal Government but I am pleased to say that we have been working very, very well together.

I have a picture and I understand Senator Harris was there, but this gives you a sense of the devastation that occurred in the fire in northern California. Thankfully no Superfund sites were affected by this fire.

As you mentioned Senator Rounds, that does not mean there is not a hazardous waste component to this. In fact, Region 9

has worked with the State to inspect 8,000 burned structures so far. That has led to the removal of 100 tons of hazardous waste and asbestos-containing material.

As Dr. Shaw alluded, once hazardous waste has been removed, you still have the much larger task of removing the ash and fire debris and preparing these properties for rebuilding. So far, we have looked at about one-tenth of the properties or removed materials from one-tenth of the properties in the burn area with the northern California fires. That alone has led to a little over 288,000 tons of ash and debris.

Obviously, we have a long way to go before these communities can recover and start rebuilding but the Federal Government has been a significant partner in this rebuilding exercise.

The threat from natural disasters is only going to be greatly magnified when Superfund sites are in harm's way. In California, this is an especially critical concern because the State has 98 sites on the Superfund National Priorities List, many of them in areas of high risk from earthquakes, flooding or fires.

This danger is growing as a result of climate change that we have been seeing in California which we see as a risk multiplier for these natural disasters. We are already seeing impacts from climate change in California. Average temperatures

have increased by 1.8 degrees in the past century. Fire seasons are now longer and more devastating as we are experiencing.

The State recently endured a historic five-year drought which has contributed to the death of 100 million trees in the State which no doubt is contributing to the fire we are experiencing now.

To better understand the extent of the problem we are experiencing in California and how it may affect Superfund sites in the future, we have been mapping and preparing, as Professor Hester suggested, a list of the Superfund sites that are likely to be affected by future disasters. Here, you see a map of areas in high fire zones. The red, orange and yellow are in high fire zones. You can see a number of Superfund sites are implicated by these maps.

Additionally, we have been looking at sites that could be affected by sea level rise. We recently convened a meeting in the Bay area to look at the effects of sea level rise in the Bay area. Again, you can see there are several significant Superfund sites right around the Bay that would be affected by a sea level rise, coupled with a 100-year storm event. These are areas that would release DDT into the Bay and a number of carcinogens.

We are trying to step up and assess the scope of the problems so that we can work with local communities and the

Federal Government in the future to respond to these problems. It is going to require planning on our part and in coordination with the Federal Government when we see these issues.

We have some good examples. We have dealt with a significant problem at a mine, the Argonaut Mine site in Jackson, in Calaveras County, which threatened to flood the small town of Jackson with 15 feet of toxic, arsenic laden sludge. We have also worked to rebuild in some of the areas that have been affected by fires in the past to make sure they are more resilient, more fire resistant, and that we are helping those communities to respond to any future fires in those areas. Again, federal funding was significant in those areas.

That very briefly describes the scope of the problem we have in California, what we are doing to be proactive and get ahead of that problem, and work with the Federal Government to plan and address these issues in the future.

As I said, we have had a good working relationship with Region 9 in particular. FEMA has been very helpful to us recently, but we know there will be disasters in the future and we are trying to get ahead of the curve so we will be prepared to deal with them in the future.

I appreciate the opportunity to speak to you today. I am available to answer any questions you might have.

[The prepared statement of Mr. Rodriguez follows:]

Senator Rounds. Thank you, Secretary Rodriguez.

Normally, we take about five minutes apiece for questions on behalf of all of us Senators. Today, as usual for the United States Senator, time management is not the best. They have notified us that we will be having votes very shortly.

I would like to complete this subcommittee discussion before we leave for the votes. There is the announcement.

I want to be specific with regard to the Superfund sites in particular. Mr. Shaw, looking at the fact that you had a number of sites that were impacted by the hurricane, are you aware of any releases from any of the Superfund sites within your jurisdiction due to the impact of the hurricanes?

Mr. Shaw. We have two sites that likely had or may have had a release. One is a State Superfund site. It is not obvious where the source of that was. There was a sheen seen on the water days after the storm. It appears to have been a minor release but we have contained that and made sure it is not there.

There was some release there. No impacts have been noted from that but there was a release at that site.

The other is the San Jacinto waste pits where dioxin is stored. In fact, the EPA recently released their decision for final disposition of that site. The protective cap was removed so we know that the material was exposed.

What we have seen from the testing is it is difficult to determine how much, if any, of that material was actually released, but it is possible that those releases did occur. I know the testing that occurred subsequent to repairing the cap shows the concentrations, both in the sediment and the water, are similar to what they were pre-storm but that section of the river has a fair amount of contamination from dioxin from many sources over many years.

Senator Rounds. Mr. Hester indicated several statutory changes that might be very helpful, basically some common sense approaches, making some changes in advance, doing some analysis in advance, doing some pre-planning and so forth.

Your full remarks, without objection, will be included in the record for this subcommittee hearing.

In listening to those remarks, do you believe some of those recommendations Mr. Hester made would have been beneficial had they been implemented beforehand?

Mr. Shaw. I think it is very possible that some of those suggestions could be helpful. Some are done already so I think the question would be trying to make sure we encourage and incentivize without becoming too proscriptive so that the one size fits all approach does not get in the way of solving those problems.

I mentioned very briefly in my testimony, for example, that

prior to the storm, we try to make sure those things that systematically are not protected, barrels, drums and things that have to be out where they may be exposed to the hurricane, that you secure those.

I think it makes sense a good engineering design for that solution take into account that resiliency. I think there is potentially some benefit to pointing that out, as he discussed, where you look at that and make sure we encourage and incentivize that lessons learned approach, how do we make sure we are doing things in advance that make it easier to protect it should a natural event occur.

Senator Rounds. Mr. Hester, I appreciated the comments you made and the suggestions you indicated. They will be carefully reviewed.

I believe Mr. Shaw makes a good point: one size does not fit all. Can you elaborate a bit on your thoughts in terms of his comments just now?

Mr. Hester. Absolutely. First, I want to acknowledge that my experience has been that EPA staff, especially on-the-scene coordinators, do an extraordinary job during incredibly tight time pressure when a hurricane is approaching.

I have seen them not only secure tanks and containers; we have built emergency berms on the spot with bulldozers to make sure sites are protected and pumped down wastewater lagoons to

the point they can handle large influxes of water. All of those are done on a very fast turnaround basis and very much on an ad hoc basis.

My endorsement would be please keep doing that, but I also think there might be some good policy to have that done in advance in terms of making the remedies selected for sites better able to accommodate those kinds of actions when there is an expectation we will have these kinds of extreme weather. I would also suggest that, to a certain extent, you can pre-stage and have the resources available and identified to be able to quickly do that if you need to.

Senator Rounds. Thank you.

Mr. Rodriguez, I am going to allow my counterpart, Senator Harris, to do most of the questions for you but I think right now, with all of the activity going on in California, the fires you have had and so forth, it brings to light the challenges that are out there and our need for a constant oversight of the different areas. The recommendations you make I think are very, very relevant in this particular case.

I thank you for being here today as well.

Senator Harris.

Senator Harris. Thank you.

For Secretary Rodriguez, on October 14, I had the opportunity to survey the damage of the wildfires in California

firsthand. There was still minimal containment while I was there. As you know, eventually 245,000 acres in northern California burned. I previously mentioned the lives and structures lost.

The Fourth National Climate Assessment, a Federal Government report, recently stated that we have experienced an increase in large wildfires since 1980 and that as the climate warms, the number will probably continue exponentially.

Climate change, as I think you would agree, acts as a force multiplier in extreme weather conditions. I think it important this committee understands how toxic Superfund sites are impacted by these disasters as we have discussed. To that end, my colleagues and I have submitted a letter to the Government Accountability Office requesting a report on how the EPA is taking climate change impacts into account when assessing Superfund sites.

What do you believe are some of the concerns that California EPA has regarding how climate change may impact Superfund and hazardous waste sites?

Mr. Rodriguez. There are a number of concerns that we have. Obviously these are very, very dangerous sites. As you noted in your opening statement, they are very dangerous sites because of the chemicals often still on the site and they pose a threat, if they are not controlled, to the surrounding

communities.

We have done a lot of work in California identifying what we call disadvantaged communities in California, communities that are largely poor and already dealing with a large number of environmental burdens and what we can do to help those communities.

One of the things we can do to help those communities is to deal with these sites and make sure they are properly regulated. In order to do that, we have been working very closely with these communities. The discussion we had with the Bay Area community is an example of that.

We try to work with the communities to understand what Superfund sites are in those areas, understand the threats that we see being posed to those areas in the future because of changing climate and changing sea level, and work with them to understand what we can do at the State, federal and local levels to respond to those issues.

I will say we have a number of guidelines in the works right now that set out standards we and the community can be using to help plan in the future to both prepare the Superfund sites and also help the communities around these sites.

We also have an assessment that will be coming out next year that will talk about the extent of the problems in some of these communities. We also have an adaptation guideline that is

going to be coming out next year that will talk about how we can prepare our communities to respond to floods, natural disasters, and fires. We have also updated our guidelines for planning in the States to deal with fire hazards.

We want to take some of those lessons we are learning in those situations and work with the USEPA to help them appreciate what we are doing at the local level and include them in the planning process because we think that is the key.

We are looking at these issues and standards we think can be applied in California. We need to have the buy-in of the Federal Government as we work collaboratively to deal with the issues there.

I will note it is helpful to have a Federal Government we can work with on climate issues just generally. We look forward to working with the Federal Government to deal with the changes in climate and work on programs to prevent climate change from occurring.

Senator Harris. How are you incorporating the fact of climate change into the reporting and planning you have described?

Mr. Rodriguez. It will be showing up in our land planning in terms of resiliency. As you well know, it will be looked at as we go through our elaborate sea growth planning process. We will be looking at how to incorporate steps to protect those

Superfund sites from changes that might occur as we can identify they are in an area where there is a fire hazard or a hazard from sea level rise.

Are there additional protections we need to build into that project in order to make sure they are not susceptible to those changes? We need to take a long term view.

As Professor Hester mentioned, for example, through the Department of Toxic Substances' control process, every five years, they will be reviewing the permits that are out there to make sure they are up to date and we are taking into account any changes that have occurred, circumstances in the preceding five years, and whether we need to do more in order to protect those areas.

Senator Harris. Thank you.

Senator Rounds. Senator Booker.

Senator Booker. Thank you very much, Mr. Chairman.

This is an issue I have been talking about since I first came here. In my opinion, we are in a state of crisis with a lack of urgency to address that crisis.

Across the Country, we have unrelenting, dangerous Superfund sites sitting in our neighborhoods close to populations that are literally poisoning our residents. For me, this is unacceptable.

I am going to today again introduce the Superfund Polluter

Pays Act, with which I am sure you are familiar. The bill would reinstate the excise tax on polluting industries to provide funding for Superfund cleanups.

When this excise tax was last reauthorized, it was passed by the Senate 86-13. It passed and was signed into law by President Ronald Reagan. The bill was needed because funding for Superfund sites continued to decrease. It is now at its lowest point in 25 years. In fact, if adjusted for inflation, we are currently funding the Superfund Program at 40 percent of its 1987 levels.

The problem with that is now we have longitudinal data. We know what these sites are doing to the surrounding populations. I know this because New Jersey has more Superfund sites than any other State and it is more densely populated than any other State.

As you know and I am sure you have discussed in this hearing, nationwide 11 million Americans live within a mile of a Superfund site; three to four million of these people are children. We now factually know, because of longitudinal data, babies born within one mile of a Superfund site, prior to the site cleanups, have a 20 percent higher rate of birth defects, a 20 percent higher rate of birth defects.

We also know that these Superfund sites are disproportionately in communities of color, indigenous

communities and low income communities. When we call this environmental injustice, it is painful to me that the folks being harmed by this are disproportionately seeing themselves exposed to hazardous waste and pollution in this data I am showing at 20 percent higher rates of birth defects.

In one example, a recent EPA and HUD analysis showed that the majority of Superfund sites are located within one mile of HUD-funded low income housing. As a guy who lives next to HUD-funded low income housing that has two Superfund sites in my community, I live in a neighborhood where the median income is \$14,000 per household and as thousands of my residents who live next to and near these Superfund sites, we have to do something about this.

The first question, Mr. Rodriguez, is do you support reinstating the excise tax on polluting industries like Ronald Reagan signed into law, like Senator Mitch McConnell and many of my other colleagues voted for?

Do you believe we should reinstate this excise tax to clean up Superfund sites, especially knowing Senator Boxer and I questioned whether the net number of Superfund sites in the United States of America is increasing or decreasing? It has been increasing in recent years. Do you believe we should reinstate this excise tax?

Mr. Rodriguez. I am not sure as we sit here whether the

Governor has taken a position on that specific excise tax, but I will say certainly additional funding is necessary for the program. As you mentioned, the funding for the Superfund Program has gone down through the years, but the need has not gone away. In fact, the need is as great as ever. That is something we are testifying to today.

In particular, I agree with your observations concerning the communities around these Superfund sites. In many instances, in California, they are the communities least capable of responding to some of the problems themselves because they tend to be disadvantaged, low economic communities.

More needs to be done to focus funding in these areas and to help these areas. I think additional funding is certainly something that is warranted.

Senator Booker. The facts are this is a growing problem in our Country. There are orphan sites right now but for the funding being available, we could be cleaning them up and taking millions of children out of risk's way.

I heard the conversation as I walked in a bit about climate change but I want to press that question right now. We had 40 Superfund sites at risk of damage during Hurricane Harvey, sites that TCEQ, the Federal Government and the responsible parties knew to be contaminated and harmful to human health.

We also knew Harvey would hit before it did and we

generally know the Gulf Coast is going to continue to face these extreme weather events. What is often less acknowledged though is the environmental injustice communities bear, this disproportionate burden when these things impact.

As my time expires, I would ask did TCEQ provide any special attention or preparation to these environmental injustice communities prior to Hurricane Harvey making landfall? What ongoing monitoring are we doing to deal with what is going to continue to happen in the United States of America, especially along the Gulf Coast and southeastern coast of the United States?

Mr. Shaw. With regard to the Superfund sites, we continued to monitor those, prepared for and monitored after the landfall where it appeared there was damage. Specifically, the San Jacinto waste pits is the one federal Superfund site where damage occurred that had the potential for exposure.

It is a federal lead site so they took the lead in that doing sampling and developing a plan with the responsible parties to quickly reinsert the cap and protection on there to minimize any ongoing damage.

They followed up with fairly extensive sampling to try to determine if there were off-site impacts from that. I mentioned earlier that the results were there was an exposure of those materials but it appears from the sampling that took place after

the cap was replaced, that the levels in the sediment and water are similar to what they were prior to the hurricane.

In a sense we may have dodged a bullet with regard to that. On the other hand, that river is also contaminated with dioxin from many sources over many years. It is not a great story from the standpoint that the problem has gone away. There is still a need to make sure we are working proactively to ensure we are being protective of that site and other sites in that area.

Senator Rounds. Because I think it is a valid question, I would like to have the other members to have a chance to do this but I have to go vote. Would you consider that a QFR and allow them to answer that for the record?

Senator Booker. There is a reason why you are the Chair. Clearly you have a lot of wisdom. I will follow you to vote right now and appreciate their QFR.

Senator Rounds. Very good.

We would simply ask if each of you would respond to the Senator's question for the record. That would be greatly appreciated. Thank you. Thank you, Senator Booker, for participating as well.

This is important. It is important that we do the oversight and learn each time we run into one of these what we can do to do a better job. I thank you all for taking the time to come and contribute. Hopefully, we do a better job in the

future.

One again, I would like to thank all of our witnesses for taking the time to be with us today. I would also like to thank my colleagues, who have attended this hearing, for their thoughts and their questions.

The record will be open for two weeks which brings us to Wednesday, December 20.

With that, this hearing is adjourned.

Thank you.

[Whereupon, at 3:21 p.m., the subcommittee was adjourned.]