SUSTAINABLE WATER SUPPLIES FOR THE WEST: PART 1 — PROTECTING GROUNDWATER RESOURCES

OVERSIGHT FIELD HEARING

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER

OF THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

Tuesday, April 10, 2007, in Pomona, California

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OVERSIGHT FIELD HEARING ON "SUSTAINABLE WATER SUPPLIES FOR THE WEST: PART 1 — PROTECTING GROUNDWATER RESOURCES"

Tuesday, April 10, 2007
U.S. House of Representatives
Subcommittee on Water and Power
Committee on Natural Resources
Pomona, California

The Subcommittee met, pursuant to notice, at 9:00 a.m., at California State Polytechnic University, 3801 West Temple Avenue, Kellogg West Conference Center, Pomona, California, Hon. Grace F. Napolitano [Chairwoman of the Subcommittee] presiding.

Present: Representatives Napolitano and Baca.

Also Present: Representative Solis.

Mrs. NAPOLITANO. Good morning, ladies and gentlemen. Would you kindly take your seats? Can you hear me in the back? Thank you.

Good morning, everybody. This is a meeting of the Subcommittee on Water and Power, and it will come to order, so there.

The purpose of the meeting of the Subcommittee is to hold the first of what will be a series of field hearings on sustainable water supplies for the west. That means the 17 western states served by the Bureau of Reclamation are under this committee's jurisdiction. Today's hearing will be focused on perchlorate contamination of our groundwater resources.

And I will begin with a brief statement, and I will recognize other members of the Subcommittee for any statement they may have. Additional material may be submitted by anybody from this group in the audience for the record. We will leave it open for 30 days—yes, 30 days to give you ample time to get material into the record.

I was going to be brief but I'm a little bit long. When I get to the panels, I'll tell you about that little colorful thing that I've got in front of me. I want to, of course, welcome our witnesses and thank them for being here, same for our guests. And I do want to take a moment to thank Cal Poly Pomona, President Mike Ortiz, his administration, and Doug Glaeser—where are you?—who has been exceedingly helpful to our needs in holding open rooms on this campus for meetings that we need to have. And of course, the staff

of Cal Poly. This is being recorded and will be made available to anybody who would like to avail themselves of it.

You have provided a perfect facility for a hearing, and on behalf of myself, Chairman Nick Rahall, Chair of the House Committee on Natural Resources, and my Ranking Member, Cathy McMorris-Rodgers, who cannot be here because she is expecting her baby. I thank you for your hospitality.

STATEMENT OF THE HON. GRACE NAPOLITANO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mrs. NAPOLITANO. Last Thursday, Science Magazine published results of a significant new study about water in Southwestern United States. The study, which was reported in the "Washington Post", is directly relevant to our hearing this morning, but this new study is not about perchlorate, it's not about VOCs, nor chromium, nor other contaminates. Instead, the new study is about climate change. It's about global warming and how climate change may already be playing a role in the current drought in the Colorado basin. Don't forget, the Colorado affects seven states. It's about how rainfall in this part of the country may further decline by another ten to 20 percent annually, placing further stress on our already stressed water supply. According to one of our authors of the study, government needs to plan for this right now, coming up with new well-informed and fair deals for allocation of the declining water resources.

Today's hearing is about water quality and contamination, but what we have to remember is that water quality is a critical part of our water supply. The quality of water we pump from our wells is every bit as important as the quantity we pump. If we lose hundreds of wells in California, which we have, because of chemical contamination that can never be cleaned up, there's really no difference than if we lost ten or 20 percent of our water supply to drought brought on by climate change. Water quality and water quantity are both critical to future sustainability of water supplies.

According to the California Department of Health Services as of last month, perchlorate has been detected at or above the reporting level of four parts per billion in 456 sources of drinking water of more than 7,000 sources tested in California since 1997. Roughly 100 water systems are affected. Los Angeles County reported 177 sources of drinking water contaminated with perchlorate with a peak level of 159 parts per billion. That's very, very dangerous. San Bernardino County reported 95 sources with a peak level of 820 parts per billion; Riverside County reported 84 contaminated sources with a peak level of 73 parts per billion; Orange County found 37 with peak levels of 11 parts per billion.

Several of the Regional Water Quality Control boards have informed the state of additional locations of perchlorate in groundwater that are not currently associated with contamination of public drinking water. That is, they're not being investigated, they're just letting them sit. Some of these sites have very high levels of perchlorate and they present a threat to existing and future water supply to Californians. California pumps roughly 30 percent of its drinking water from groundwater sources, and by any measure,

further groundwater contamination could significantly degrade water quality and worsen scarcity problems in our region.

Our witnesses this morning include officials from many of the major water supplies in Southern California, and I will be asking not only this panel but the other panel, "Do you believe your agency is prepared for any further loss of water supply, whether it is from chemical contamination or from climate change or drought?" And the second question, "Would you consider the current water supply for your service area to be sustainable?"

All of our local governments, the Federal Government, all our state governments, and all our water districts must work in tandem in coalitions with those areas most in need due to circumstances beyond their control. And I just made a statement a little bit ago that we need the PRP's here too, potential responsible parties. To do this, we need to bring out information relevant to the reality of each area and work together and prepare for any eventuality, such as a drought brought on by global warning, et cetera.

Again, thank you for being here, and now I will move to recognize my other members of the Subcommittee on Water and Power. And I will start with the Congresswoman Hilda Solis, the ranking by seniority. Ms. Solis.

[The prepared statement of Hon. Grace F. Napolitano follows:]

Statement of The Honorable Grace F. Napolitano, Chairwoman, Subcommittee on Water and Power

Good Morning. I want to welcome our witnesses and guests this morning. I want to take just a moment to thank our very gracious hosts—the Administration and staff of Cal Poly Pomona. You have provided a perfect facility for our hearing this morning. On behalf of myself and Congressman Nick Rahall, who is the Chairman of the House Committee on Natural Resources, I thank you for your hospitality.

Last Thursday, Science Magazine published results of a significant new study about water in the Southwestern United States. The study, which was reported in The Washington Post, is directly relevant to our hearing this morning. But this new study is not about perchlorate. It's not about VOCs, or chromium, or other contaminants.

Instead, the new study is about climate change. It's about global warming. It's about how climate change may already be playing a role in the current drought in the Colorado River Basin. And it's about how rainfall in this part of the country may further decline by another 10 to 20 percent annually, placing further stress on our water supply. According to one of the authors of the study, governments "need to plan for this right now, coming up with new, well-informed and fair deals for allocation of declining water resources."

Today's hearing is about water quality and contamination, but what we have to remember is that water quality is a critical part of our water supply. The quality of the water we pump from our wells is every bit as important as the quantity that we pump.

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According to the California Department of Health Services, as of last month, perchlorate had been detected at or above the reporting level of 4 parts per billion in 456 sources of drinking water, out of more than 7,000 sources tested in California since 1997. Roughly 100 water systems have been affected.

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Several of the Regional Water Quality Control Boards have informed the state of additional locations of perchlorate in groundwater that are not currently associated with contamination of public drinking water supplies. Some of these sites have very high levels of perchlorate and may present a threat to existing and future water supplies.

California pumps roughly 30% of its drinking water from groundwater sources, and by any measure, further groundwater contamination could significantly degrade water quality and worsen scarcity problems in the region.

Our witnesses this morning include officials from many of the major water supply agencies in Southern California. I will be asking each of you:

- Do you believe your agency is prepared for any further loss of water supply, whether it is from chemical contamination or from climate change and drought?
- Do your consider the current water supply for your service area to be sustainable?

STATEMENT OF THE HON. HILDA SOLIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. SOLIS. Thank you. Good morning, and thank you, Madam Chair, for hosting this hearing. I want to thank the witnesses for being here as well today.

Considering what's going on, not even a week ago the New York Times wrote about the importance in growth of western water projects. The article titled, "An Arid West no Longer Waits For Rain," highlighted the pressures on our water supplies by the realities of population growth, politics, and the decrease in water availability from the Colorado River. The article noted long-term projections that mountain snows, which feed the Colorado River, will melt faster and evaporate in greater amounts as global temperatures rise.

As evidence of this, the spring run-off for this year is expected to be about half of its long-term average. The run-off has only been above average in one of the last seven years. And just this past Friday the international panel on climate change released its second in a series of reports which looks at global and regional impacts of global warming. The report found that water resources in the western part of Northern America will decrease as there will be less snow pack in the mountains and summer river flows will decline. And a report published last Thursday in the Journal of Science predicted that the driest periods of the last century, the dust bowl, may become the norm in the southwest within decades because of global warming.

Concerns about the impact of global warming on our water supply compounds the problem we're discussing today, contamination also existing in groundwater supplies. And I'm proud, through my position on the select committee on energy and dependance and global warming, that we'll be able to focus on sustainability of water as well. And for many of our communities, the limited amount of available groundwater is further complicated by contamination from perchlorate, mining operations, volatile, organic compounds and other various contaminates that we find in our groundwater.

The district that I represent is home to the first perchlorate treatment facility located or known as the Baldwin Park Operable Unit. And while the hearing today is not about the source of contamination, it is known that 90 percent of perchlorate is produced by Department of Defense and NASA. There are at least 1,090

contaminated military sites in California alone that need to be cleaned up. The California Department of Health Services has estimated that perchlorate has contaminated well over 276 drinking wells, 77 drinking water systems in California alone. The ultimate price for our communities is a price of taking these wells off line.

This is why I've introduced H.R. 1747, the "Safe Drinking Water For Healthy Communities Act of 2007". This bipartisan bill requires that the EPA establish a national primary drinking water standard for perchlorate. I strongly believe that without Congressional action, the EPA will continue to delay to set a standard, largely because of the role they play as a primary polluter. That includes the Department of Defense. And by establishing a standard, we create security for our water providers at a rate that is more reasonable as a viable enforcement mechanism and knowledge that the task is safe. The enforcement and remediation mechanism will help protect groundwater supplies for future generations. No longer will identifiable polluters such as the Department of Defense be able to refuse to clean up contamination on installations which pollute our aquifers.

I also believe that we must work with our water providers to ensure that drinking water infrastructures are sustainable; and the Federal investment is also inadequate. And I'm proud that the Environment and Hazardous Materials Subcommittee, which I sit on as Vice Chair, will be holding a hearing on perchlorate in Washington, D.C. specifically regarding this legislation later on in this month.

In addition to focusing on sustainability, we must ensure that our most vulnerable communities, including minorities, communities of color, and underserved and low income, have the greatest threats removed from them. Environmental justice communities are more likely to struggle to get action taken when a problem with their water supply exists and less likely to receive assurances that there will be a long-term solution. Legislation I recently introduced also, H.R. 1103, the "Environmental Justice Act of 2007", will also help us address this important issue. By codifying President Clinton's executive order on environmental justice, we're ensuring that communities without a voice will be heard. And as one of our speakers here today, Penny Newman, I want to thank you for being here and hope to hear more of your testimony today.

With that, I yield back to Madam Chair.

[The prepared statement of Hon. Hilda Solis follows:]

Statement of The Honorable Hilda L. Solis, a Representative in Congress from the State of California

Good morning.

Thank you to our witnesses for joining us today.

Today is the beginning of a very important discussion about tile sustainability of western water supplies.

Not even a week ago the New York Times wrote about the importance and growth of western water projects.

The article, titled "An Arid West No Longer Waits for Rain," highlighted the pressures on our water supplies by the realities of population growth, politics and the decrease in water available from the Colorado River.

The article also noted long-term projections that mountain snows which feed the Colorado will melt faster and evaporate in greater amounts as global temperatures rise.

As evidence of this, the spring runoff for this year is expected to be about half its long-term average. The runoff has only been above average in 1 of the last 7 years.

Just this past Friday the International Panel on Climate Change (IPCC) released its second in a series of reports which looks at global and regional impacts of global warming.

This report found that water resources in the western part of North American will decrease as there will be less snowpack in 3 the mountains and summer river flows will decline.

And a report published last Thursday in the journal Science predicted that the driest periods of the last century—the Dust Bowl—may become the norm in the Southwest within decades because of global warming.

Concerns about the impacts of global warming on our water supply compound the problem we are discussing today contamination of existing groundwater supplies.

I am proud that through my position on the/ Select Committee on Energy Independence lb and Global Warming we will be able to focus on sustainability of water.

For many of our communities, the limited amount of available groundwater is further complicated by contamination from perchlorate, mining operations, volatile organic compounds, and other contaminants.

Tile district I represent is home to tile first perchlorate treatment facility, located/ at the Baldwin Park operable units.

While the hearing today is not about the source of the contamination, it is known that 90% of perchlorate is produced for use by the Defense Department and NASA.

There are at least 1,090 contaminated military sites in California alone that need to be cleaned up.

The California Department of Health Services has estimated that perchlorate has contaminated 276 drinking water sources and 77 drinking water systems in California alone.

The ultimate price for communities to pay is the "price" of taking wells offline.

We must work together to ensure that our communities have access to clean groundwater and safe drinking water. This is why I introduced H.R. 1747, the Safe Drinking Water for Healthy Communities Act of 2007.

This bipartisan bill requires the EPA to establish a national primary drinking water standard for perchlorate.

I strongly believe that without Congressional action the EPA will continue to delay movement to set a standard, largely because of the role of the primary polluter—the Department of Defense.

By establishing a standard, we create security for our water providers and rate payers, a viable enforcement mechanism, and the knowledge that the tap is safe.

This enforcement and remediation mechanism will also help protect groundwater supplies.

No longer will identifiable polluters, such as the Department of Defense, be able to refuse to clean up contamination on an installation which pollutes our aquifers.

I also believe that we must work with our water providers to ensure that drinking water infrastructure is sustainable and the federal investment is adequate.

I am proud that the Environment and Hazardous Materials Subcommittee, which I am Vice Chair of, will be holding a hearing on perchlorate, specifically my legislation, when we return to Washington at the end of April.

In addition to focusing on its sustainability, we must also ensure that our most vulnerable communities, including minorities and low-income, have access to safe water.

These communities and others like them, face even greater threats.

Environmental justice communities are more likely to struggle to get action taken when a problem with their water supply exists and less likely to receive assurance that there will be a long-term solution.

Legislation I introduced, H.R. 1103—the Environmental Justice Act of 2007, will help address this issue.

By codifying the Executive Order on Environmental Justice, we are ensuring that communities without a voice are heard.

As Penny Newman will testify today, access to safe and clean water is an environmental justice issue.

For the sake of our communities, for their health and their security, we must focus our attention on the sustainability of our water supplies.

I look forward to working with my colleagues on this Subcommittee, the Energy and Commerce Committee, and the Select Committee to bring a renewed attention to sustainable water supplies and move forward in the search for a solution which will benefit all.

Thank you and I yield back the balance of my time.

Mrs. NAPOLITANO. Good, because you're over. Thank you so very much. I would like to take your statement and put it into the record, if you don't mind.

Congressman Joe Baca.

STATEMENT OF THE HON. JOE BACA, SR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. BACA OF CALIFORNIA. Thank you very much, Madam Chair. First of all, I want to thank you for your leadership and concerted effort and for having the field hearing here on the sustainable water supply for the west and protecting the groundwater resources. We feel it's very important to our region and the State of California. Not only is it important to the State of California, but we've addressed this for some particular time, but your leadership is so important to a lot of us. I want to thank my colleague Hilda Solis for also being here. And here today I want to thank the witnesses for joining us here today as well.

I understand the panel is associated with perchlorate contamination in groundwater. I live with my family in the very city, Rialto, that has one of the highest levels of contamination. And the Inland Empire and Southern California has suffered tremendously due to perchlorate. And we're not here to say, you know, what's caused it or who has caused it. We know that we're looking for a study that has been conducted and hopefully that the study will come out and determine who actually has caused the problem and look toward solutions. We need to make sure the water supply is safe and secure and at affordable costs because we owe it to our residents to make sure we provide quality water.

Perchlorate has jeopardized the water supply of nearly 500,000 residents. The health dangers associated with contaminated waters are enough reasons to fix the problem. There has been traces of perchlorate in milk and in breast milk. Newborn infants are put at dangers and at risks. And I'm very fortunate because my kids, two of my children were born in Rialto, and very fortunate that they didn't have any of the risks associated with thyroid glands or the fetus, my wife during that period of time. But who knows? It could have affected my children and others who live in the area.

We need a solution. Cities, counties, private water providers have no choice but to provide customers with clean water to drink. There is a legal and moral obligation to provide safe and healthy water. To date, these obligations are in jeopardy. There is a greater cost. Perchlorate clean-up is tremendously expensive, costing over 450,000 per acre per foot of water. The economic cost of this area is almost as much of a concern as availability of clean water. The City of Rialto has a population of over 95,000 people in the area of 26,000 square footage with a potential of ten to 20,000 more people over the next five to ten years. So if you can look at it, even my city with the possibility of growing in the need there—It is in the heart of one of the fastest growing areas in the country.

Seventy-six percent of the population in this area are minorities and have an average income of $43,600. This means that increasing the consumer rate is not a practical option for water agencies of the Inland Empire. The hard working families in the area are not at fault, and I say they're not at fault, and should not have to

pay for a Federally created problem. I state a Federally created problem, or a problem that no one takes the responsibility for. And someone has to take the responsibility for it.

For most of the accounts, 90 percent of perchlorate in water comes from a Federal source. This includes the DOD, NASA, and other Federal agencies. They have to live up to it. This has been a huge problem and will require a huge solution. I am grateful that Chairwoman Grace F. Napolitano is conducting this field hearing, and I look forward to working toward a viable solution for a viable problem, and I'm grateful that the Chairwoman is taking positive steps toward a solution. I look forward to working with her.

I yield back to you.

Mrs. NAPOLITANO. Thank you. We try to stay to the five minutes simply because we have so much testimony coming before us. And Congressman Baca really stresses the fact that the Federal, defense and others have created a lot of the problems. The problem now is that they don't want to pay for it, simply. Because we have been battling for over 15 years to get them to clean it up, and this is not perchlorate, this is VOC's.

So understand that it's going to be a long haul, but we need everybody's participation and input to make sure that everyone understands the responsibility to the electorate, to the citizens of being able to clean up the mess they made, especially the PRP's, in conjunction with the PRP's, potential responsible parties. Thank you so much. I want to state that H.R. 1747, Ms. Solis's bill, there should be some copies in the back. We'll try to give you some websites so you can pick up any additional information that we're talking about today and be able to access that.

To the witnesses in panel one, your statements will be entered into the record, and all witnesses are asked to summarize the high points of your testimony and limit your remarks to five minutes. That way you can—it will go into the record and you can then summarize and add to points that you may have wanted to ensure that we make statements. The reminder is right here. It's—you have your own, right? The red is stop; the yellow is wrap it up; and the red—I mean the green, start up. So with that, I want to thank you for being here, and we will proceed to start with Mr. Joe Baca, Jr., and have him, the councilman from City of Rialto, start off the panel.

STATEMENT OF THE HON. JOE BACA, JR., COUNCILMAN, CITY OF RIALTO, CALIFORNIA

Mr. BACA. Thank you, Madam Chair and members for holding this hearing. I'm here as councilman but I'm also here as a resident for the City of Rialto. I'm a lifelong resident of Rialto who is concerned about the groundwater contamination, how it impacts our local residents both financial and personal well-being. Since I grew up and live in Rialto, I have a personal connection to this issue.

The perchlorate contamination case in Rialto is not the first of its kind. There was a previous case in the San Gabriel Valley that provided a model for the Inland Empire. In 1992 a coalition of cities and water agencies came together as a coalition to push for Senate Bill 1679. This legislation developed the San Gabriel Basin Water Quality authority. It was an important step in cleaning up

hazardous substances found in their groundwater. What was the key issue about the legislation? That a collaborative solution came about to their partnership. It was not about different agencies searching for their own solution; rather it was about what was best for the region and best for the residents.

That is the hope that I have for the Rialto and Inland regions. It is my hope that our cities and agencies follow their lead in addressing the perchlorate plume in the groundwater.

As a former chair of the State Assembly Select Committee on perchlorate contamination, my focus has always been on tackling the complex issues with perchlorate contamination of our groundwater. I proposed developing standards to safely handle the disposal of products containing perchlorate, charging a fee to those companies who develop products with perchlorate in order to fund perchlorate cleanup; and to use the state general fund to assist with perchlorate contamination cleanup. This legislation was a direct result of collaboration among cities, water agencies, and grassroots organizations like Center for Community Action and Environmental Justice and Libreria del Pueblo.

However, my advocacy did not stop at legislation. After researching perchlorate contamination, I was surprised to learn that perchlorate products were being sold through E-Bay. I became concerned that the public had free access to perchlorate without knowing how it was properly being disposed. In a letter to E-Bay North American President William Cobb, I asked the cyber-giant to stop selling perchlorate on its online market. After a few months, perchlorate was removed.

My efforts were preceded by Senator Nell Soto who also put much of her focus on perchlorate contamination. In 2003, Senator Nell Soto, the Chair of the Senate Select Committee on Perchlorate Contamination authored Senate Bill 922. The legislation forced water quality control boards to enforce cleanup and abatement if there are findings of drinking water contamination. It was not until recently that we learned about the effects of human consumption of perchlorate. Recent studies have shown that perchlorate interferes with absorption of iodine. The thyroid gland needs iodine to make hormones such as thyroxine that controls the metabolism in people and guide nerve and brain development in fetuses and babies.

That is why the City of Rialto has taken a zero tolerance policy on perchlorate contamination and have assessed a perchlorate fee through the monthly water bill to assure that drinking water does not have any detectable levels of perchlorate, which, according to our current technology, is less than four parts per billion. They also have done so with the promise that residents will be reimbursed in the future.

While Rialto residents are enjoying safe drinking water, they are doing so because they have personally financed the cleanup of our contaminated wells. We need to find solutions that allow cleanup of groundwater contamination in a timely manner. The monthly $6.85 perchlorate fee, in addition to the formula for big water users, is an added financial burden to Rialto residents. Rialto residents are largely low income with a median family income in the City of Rialto being $42,638. They are barely making it through

these difficult financial times. They are struggling to meet the high cost of living that has already been brought on by housing, utilities, and fuel.

Our residents depend on doing the right thing. We have to draw a table of similar objectives with other agencies and cities in order to obtain our ultimate goal. We cannot lose sight of our main objective to offer quality drinking water to our residents.

We must also look toward the future to assure our water supply is not threatened. There's a lot of work ahead of us, and as residents, we look forward to working with the Federal Government and elected officials to make sure we have the assistance we need. Thank you.

[The prepared statement of Joe Baca, Jr. follows:]

Statement of Joe Baca, Jr., Councilman,
City of Rialto, California

I am a lifelong resident of Rialto who is concerned about the groundwater contamination and how it impacts our local residents both financially and their personal well being. Since I grew up and live in Rialto, I have a personal connection to this issue.

The perchlorate contamination case in Rialto is not the first of its kind. There was a previous case in the San Gabriel Valley that provided a model for the Inland Empire. In 1992, a coalition of cities and water agencies came together as a coalition to push for Senate Bill 1679. This legislation developed the San Gabriel Basin Water Quality Authority. It was an important step in cleaning up the hazardous substances found in their groundwater. What was key about the legislation is that a collaborative solution came out of their partnership. It was not about different agencies searching their own solution; rather, it was about what was best for the region and its residents.

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It was not until recently that we learned about the affects of human consumption of perchlorate. Recent studies have shown that perchlorate interferes with absorption of iodine. The thyroid gland needs iodine to make hormones such as thyroxine that controls metabolism in all people and guide nerve and brain development in fetuses and babies.

That is why the City of Rialto has taken a "zero tolerance" policy on perchlorate contamination and have a assessed a perchlorate fee through the monthly water bill to assure drinking water does not have any detectable levels of perchlorate, which, according to our current technology, is less than 4 ppb. They have done so with the promise that we will be reimbursed in the future.

While Rialto residents are enjoying safe drinking water, they are doing so because they have personally financed the clean up of our contaminated wells. We need to

find solutions that will allow us to cleanup our groundwater contamination in a timely manner. The monthly $6.85 perchlorate flat fee, in addition to the formula for big water users, is an added financial burden for Rialto residents. Rialto residents are largely low-income with the median family income in the City of Rialto being $42,638. They are barely making it through these difficult financial times. They are struggling to meet the high cost of living that has already been brought on by the housing, utilities, and fuel.

Our residents depend on us to doing the right thing. We have to be able to draw upon similar objectives with other agencies and cities in order to obtain our ultimate goal. We cannot lose sight of our main objective to offer quality drinking water to our residents. We must also look towards the future to assure our water supply is not threatened.

There is a lot of work ahead of us. As residents, we look to our federal government and its elected officials for assistance.

Mrs. NAPOLITANO. Thank you so very much. We appreciate that. It goes into the record.

Next we have Celeste Cantú, Associate Director, Santa Ana Water Project Authority, Riverside. Thank you very much, Ma'am.

STATEMENT OF CELESTE CANTÚ, ASSOCIATE DIRECTOR, SANTA ANA WATER PROJECT AUTHORITY, RIVERSIDE, CALIFORNIA

Ms. CANTÚ. Good morning, Chairwoman Napolitano and members of the Subcommittee. I appreciate the opportunity to appear before you today and discuss the effects of perchlorate contamination on groundwater supply in the Inland Empire.

Before I start with my prepared remarks, I would like to underscore, each of you mentioned significant threats to water quality in California and Western United States. We call them the four horsemen of the Apocalypse, and they are drought of the Colorado River; vulnerability on the Delta, the San Joaquin Delta, inability to deliver imported water to this area; climate change; and our own growth. And the question isn't that we grow—we will grow, but the question is how we grow. Are we going to grow in a way that interrupts the hydrology on our land where we rely on groundwater so significantly, or are we going to pave over paradise and render a situation where we don't want our children to even want to live in this area? We can change with good decisions today.

In preparation of the four horsemen of the Apocalypse—who are coming. The clippety-clops, we hear them daily. They will arrive. The question is will we be prepared for them? SAWPA has convened approximately 250 people, all passionate experts in all aspects of water throughout this entire watershed, to start planning to make sure we're ready with their eventual arrival. We see them and we can hear them and we can see them coming at this point.

In the semi-arid environment of the Santa Ana watershed, groundwater is a major source of the public's drinking water supply. This is especially true in the Inland Empire, Riverside and San Bernardino counties. Thus, any contamination of this limited and precious resource is cause for concern. Perchlorate has emerged in this watershed as a significant issue.

Perchlorate salts are highly soluble and, when applied to soil, such as the application of fertilizer or waste material left from the use of manufactured chemicals, will readily dissolve and move through the soil to the groundwater. Prior to 1997, perchlorate had

not been detected in low concentrations in groundwater anywhere in the United States. This is because the analytical method did not exist to detect perchlorate at extremely low concentration. And it was not even known to be a common contaminant. However, in 1997, laboratory analytical methods were developed to allow detection at concentrations as low as 4 micrograms per liter in water. In 2004, the California Office of Environmental Health Hazard Assessment established a public health goal of 6 micrograms per liter of perchlorate in drinking water.

The most common practice for removing contaminants from groundwater involves removal of the groundwater by pumping wells and treating the water at the well head. In 1997 when perchlorate was first determined to be present in groundwater, a viable treatment method for removing low concentrations in groundwater did not exist. Since that time, specialized polymer resins have been developed for the removal of low concentrations by a process called ion exchange. However, the capital and operation and maintenance costs of these ion exchange systems are very expensive.

Perchlorate has been detected in about 175 municipal drinking wells in San Bernardino, Riverside, and Orange Counties. About 145 of these wells are in the Inland Empire and the remainder are in Orange County. About 50 percent of the municipal wells in the entire state that have detected perchlorate are in these three counties. Most of the detections throughout the state are very low concentrations, but over 80 percent of the wells in the Inland Empire and Orange County with detectable levels of perchlorate are below 9 micrograms per liter, and most of those are below 6.

All the wells are located in historic citrus areas; therefore, it is likely that most of these wells contain perchlorate from historic use of Chilean nitrate and also industrial users. However, in the Redlands and Rialto areas, where the highest concentration of perchlorate has been detected, industrial operations have been identified as the source. The California Regional Water Quality Control Board Santa Ana Region has been the lead agency in addressing perchlorate problems in these areas.

In 2002, four water purveyors in the Rialto area shut down waters containing perchlorate, ultimately ceasing or limiting the use of 22 wells. This created a potential water supply shortage situation. The Regional Water Board pursued various mechanisms to attain money to assist the four water purveyors with funding for well head treatment. Approximately $10 million has been provided to the water purveyors. Currently, ten of the 22 impacted wells have well head treatment. These efforts, while significant, are far less than what is needed to address the overall anticipated need for cleanup of perchlorate in the Rialto area.

It is evident that there are two perchlorate groundwater plumes in the Rialto area. Multi-port groundwater monitoring wells have been installed, and extensive soil evaluations have been conducted, five deep multi-level groundwater monitoring wells up to 3 miles downgradient from the site. What we know is of all the water consumed in this area, 66 percent of it is from groundwater, and that is the groundwater that is being contaminated.

We currently have a strategy of well head treatment, and it is being addressed and is being treated. And at the current level of 6 micrograms per liter, that well water can be treated and blended and safely delivered for potable use. Groundwater supplies, along with the current level of surface water imports, provide the quality and quantity needed to meet current water demands. But should any of the major water sources be significantly reduced, such as the arrival of the four horseman of the Apocalypse, be it imported water or groundwater, or should a level of acceptable concentrations be reduced, costs of treatment would be increased, making water expensive, and supplies would be curtailed.

Mrs. NAPOLITANO. You need to wrap up, ma'am.

Ms. CANTÚ. The legacy for perchlorate contamination is for those that do not have any responsible parties. Where we do have responsible parties, we need to pursue them aggressively. Where we don't have responsible parties in terms of groundwater contamination because of fertilizer, we need to look at alternative sources for remediation.

Thank you.

[The prepared statement of Celeste Cantú follows:]

Statement of Celeste Cantú, General Manager, Santa Ana Watershed Project Authority

Chairwoman Napolitano and members of the Subcommittee, I appreciate the opportunity to appear before you today to discuss the affects of perchlorate contamination on groundwater supply in the Inland Empire.

In the semi-arid environment of the Santa Ana Watershed, groundwater is a major source of the public's drinking water supply. This is especially true in the Inland Empire area of Riverside and San Bernardino Counties. Thus, any contamination of this limited and precious resource is cause for concern. Perchlorate has emerged in this watershed as a significant issue.

Perchlorate salts are highly soluble and, when applied to soil (such as the application of fertilizer and waste material left over from the use of manufactured chemicals), will readily dissolve and move through the soil to the groundwater. Prior to 1997, perchlorate had not been detected in low concentrations in groundwater anywhere in the United States. This is because an analytical method did not exist to detect perchlorate at extremely low concentrations, and it was not known to be a common contaminant. However, in 1997, laboratory analytical methods were developed to allow detection of perchlorate at concentrations as low as 4 micrograms per liter (µg/l, or parts per billion) in water. In 2004, the California Office of Environmental Health Hazard Assessment established a public health goal of 6 "g/l for perchlorate in drinking water. As a result, the California Department of Health Services is now proposing a drinking water Maximum Contaminant Level (an enforceable regulatory standard) of 6 "g/l for perchlorate.

The most common practice for removing contaminants from groundwater involves the removal of the groundwater by pumping wells, and treating the water at the wellhead. However, in 1997, when perchlorate was first determined to be present at low concentrations in groundwater, a viable treatment method for removing low concentrations of perchlorate in groundwater did not exist. Since that time, specialized polymer resins have been developed for the removal of low concentrations of perchlorate by a process called ion exchange. However, the capital and operation and maintenance costs for these ion exchange systems are very expensive.

Occurrence in groundwater

Since 1997, perchlorate has been detected in about 175 municipal drinking water wells in San Bernardino, Riverside and Orange Counties. About 145 of these wells are in the Inland Empire, and the remainder is in Orange County. About 50% of the municipal wells in the entire State that have detected perchlorate are in these three counties. Most of the detections throughout the State are in very low concentrations. Over 80% of the wells in the Inland Empire and Orange County with detectable levels of perchlorate are below 9 "g/l, and most of those are below 6 "g/l. All the wells are located in historical citrus areas. Therefore, it is likely that most

of these wells contain perchlorate from the historical use of Chilean nitrate. However, in the Redlands and Rialto areas, where the highest concentrations of perchlorate have been detected, industrial operations have been identified as the source. The California Regional Water Quality Control Board, Santa Ana Region, has been the lead agency addressing perchlorate problems in these two areas

Rialto

In 2002, four water purveyors in the Rialto area shut down wells containing perchlorate, ultimately ceasing or limiting the use of 22 wells. This created a potential water supply shortage situation. The Regional Water Board pursued various mechanisms to obtain money to assist the four water purveyors with funding for wellhead treatment. Approximately $10,135,000 has been provided to the water purveyors. Currently, 10 of the 22 impacted wells have wellhead treatment. These efforts, while significant, are far less than what will be needed to address the overall anticipated needs for cleanup of perchlorate in the Rialto area.

It is evident that there are two perchlorate groundwater plumes in the Rialto area. Multi-port groundwater monitoring wells have been installed, and extensive soil investigations have been conducted. Five deep multi-level groundwater monitoring wells up to three miles downgradient from the site

Conclusion

While currently the contamination is costly, it is being addressed, and treated. At the current levels of 6 micrograms per liter, well water can be blended and safely delivered for potable use. Groundwater supplies along with current level of surface water imports provide the quantity and quality needed to meet water demands at the current and anticipated population levels. But should anyone of the major water sources be significantly reduced, be it imported water or groundwater or should be level of acceptable concentrations be reduced, costs of treatment would be increased, making water expensive and supplies could be curtailed.

Chairwoman Napolitano and members of the Subcommittee, I appreciate your interest in the long term sustainability of the water supply in this rapidly growing and developing watershed.

Thank you

[NOTE: A map attached to Ms. Cantú's statement has been retained in the Committee's official files.]

Mrs. NAPOLITANO. Thank you, ma'am. Try to stay within the five minutes, please, because we want to be sure everybody has an opportunity to make their presentation.

Mr. Robert DeLoach, General Manager, Chief Executive Office of Cucamonga Water District in Rancho Cucamonga. Welcome, sir.

STATEMENT OF ROBERT DeLOACH, GENERAL MANAGER, CHIEF EXECUTIVE OFFICER, CUCAMONGA VALLEY WATER DISTRICT, RANCHO CUCAMONGA, CALIFORNIA

Mr. DELOACH. Thank you, Madam Chair and members of the Subcommittee. In addition to representing the Cucamonga Valley Water District, I'm also here on behalf of the Chino Basin Watermaster in the capacity as Chairman of the Water Quality Committee. In that capacity as well as my agency, we rely on groundwater to meet our essential drinking water needs. The Chino basin alone is one of the largest and most critical groundwater aquifers in the Santa Ana watershed, if not the entire state.

Throughout all of Southern California, there is tremendous pressure on local groundwater producers to maximize the use of groundwater supplies which, in virtually every case, is the cost effective alternative to costly imported water deliveries. To give you the sense of the magnitude of the demand within the Chino basin, this past year alone, basin producers for municipal drinking water purposes produced over 124,000 acre feet. Agriculture and industrial use consumed in excess of 35,000 acre feet as well. However,

as groundwater producers, we're beginning to feel like we're being squeezed on three sides by the Federal Government.

First, most of our groundwater supply is being threatened by perchlorate and other VOC contamination, much of which is the direct result of some Federal action or policy. Second, our imported water supplies are being reduced as a result of different actions either resulting from restrictions on the Colorado River or through the State Water Project in CalFed. And last, as this committee is all too familiar with, particularly Chairwoman Napolitano, the U.S. Department of Interior is severely limiting funding through Title 16 programs for our recycled water projects. Recycled water is a critical component of supplementing or augmenting our local groundwater supplies. Over the past five years, local water producers in the Chino basin have invested over $95 million to develop recycled water infrastructure which can now treat and distribute over 8,000 acre feet of recycled water and throughout the basin.

With all that being said, reductions in recycled water funding, the cost effectiveness and availability of imported water supplies, the focus of your subcommittee hearing today, that I'm sure the effects of perchlorate in DOC contamination in local groundwater supplies, the extent of the perchlorate problem contaminating much of our groundwater supplies, then the watershed is staggering with almost 500,000 acre feet of water contaminated or impacted. In the Chino basin alone, 39 out of 115 groundwater production wells have detectable limits of perchlorate with more than one in three exceeding the California—State of California's action level.

There are several agencies within the Chino basin region as well as others throughout the entire watershed that do not have access to alternate sources of water such as imported water supplies due to either the physical characteristics of their system or because of the extreme costs associated with doing that. In the case of the City of Rialto, I think it's already been mentioned, they've lost up to 9,000 gallons a minute per day of groundwater production and they have no alternate source such as imported water.

The committee will undoubtedly hear from others today describing the options available for treatment, the costs associated with that, all of which are extremely costly and in some cases cost prohibitive, and cannot be borne on the backs of local rate payers. In a report produced by SAWPA a couple of years ago that indicated the treatment cost within the watershed associated with perchlorate and other VOC contamination ranged from $300 million to $1 billion.

At this point, I believe it's important to make a distinction of the type of perchlorate we found within the Chino basin. Until recently, we pointed our collective fingers almost exclusively at the Department of Defense and other aerospace-related industries as the culprit. And to be sure, it appears that the lion's share of the perchlorate and the VOC contamination throughout the watershed is, in fact, related to some DOD legacy. However, in the past several years in the Chino basin, we've been able to use isotope testing technology that conducts, if you will, DNA mapping of perchlorate. And by doing so, we've identified another source than just the

Chilean fertilizer which is imported literally by the boatloads for cheap nitrate fertilizer for the citrus crops of our region.

Irrespective of the source, the treatment and methodology and the costs associated with treatment, the cleanup remains the same; very costly. Madam Chair, convening this hearing is another step encouraging awareness of the magnitude of the problem facing groundwater producers, and the assistance we need to assure that our groundwater resources are maintained and secure for future generations. In the past, our agency, as well as members of these two committees convening here today, have supported this subcommittee on a variety of bills related to perchlorate cleanup such as Congressman Baca's H.R. 4606 just a couple of years ago. We're encouraged that you have chosen to tackle this difficult important issue, and we applaud you for doing so.

Thank you for allowing me to speak before you today.

[The prepared statement of Robert DeLoach follows:]

Statement of Robert A. DeLoach, General Manager/ Chief Executive Officer, Cucamonga Valley Water District

Introduction

Chairman Napolitano, Representative Baca and Representative Solis. My name is Robert DeLoach. I am the General Manager/CEO of the Cucamonga Valley Water District, (CVWD). Our District is retail water and sewer agency located in Rancho Cucamonga, California, serving a population of approximately 175,000 people in the western portion of San Bernardino County within the Santa Ana Watershed.

Our agency receives approximately 50% of its water supply from the State Water Project through the Inland Empire Utilities Agency a member agency of the Metropolitan Water District of Southern California (MWD). Approximately 40% of our locally developed water supply comes from two local groundwater basins and the remaining 10% comes from local mountain sources as surface water. Our primary source of groundwater is the Chino groundwater basin one of the largest groundwater basins in the state covering over 240 square miles. In addition to our agency the Chino Basin provides groundwater supplies to the City of Ontario, City of Chino, City of Chino Hills, City of Pomona, City of Fontana, City of Upland, the Monte Vista water District and the West Valley Water District, as well as a variety of industrial and agricultural uses.

CVWD is the majority shareholder of the Fontana Union Water Company and in that capacity we manage an extensive array of groundwater rights within the Rialto and Colton Basins as well as the Chino Basin. We also have extensive surface water rights within the Lytle Creek region in the northern portion of the Santa Ana Watershed.

Today, I appear before this committee on behalf of the Cucamonga Valley Water District, and the Chino Basin Watermaster and on behalf of Fontana Union Water Company.

Perchlorate and VOC's and Groundwater Production within the Chino Basin Region

Throughout the Santa Ana Watershed, which consists of 41 individual groundwater basins, 16 have perchlorate or other volatile organic compound (VOC) contamination and approximately 30 wells have been shut down due to the contamination. Overall it is estimated that some 170 wells in the watershed are at risk due to perchlorate contamination within the various groundwater basins due to Federal activities. Approximately 550,000 acre feet may be impacted in the watershed. In the Chino Basin alone, where in 2006 groundwater production exceeded 120,000 acre feet, 39 of the 115 wells, have detectable levels of perchlorate. More that one in three exceeds the current State of California "action level" for perchlorate.

The incidence of perchlorate in the region and in particular the Chino Basin and the Rialto/Colton basins has two primary sources of introduction. In most cases we associate the incidence of perchlorate in groundwater as emanating from the defense and aerospace related industry. The use of perchlorate either as ammonium or potassium perchlorate is used in the manufacture of propellant for rockets and missiles, and in the manufacture of fireworks or related type uses. Nationwide more than 90 percent of all perchlorate manufactured, or roughly 20 million pounds per

year is purchased by defense and aerospace industries. The defense and aerospace industries have disposed of perchlorate in various states across the countries since the 1950's with many of these states reporting perchlorate contamination in their groundwater.

It is important to note that the primary industry in the Chino Basin region dating back to the early 1900's was and remains although to a lesser degree, agriculture. With advancements in science and technology recent studies indicate that perchlorate may originate from natural resources and some types of commonly applied fertilizers that contain Chilean Nitrates. The Chino Basin Watermaster has conducted isotope testing to determine the "place of origin" of the perchlorate contamination within the entire groundwater basin. These tests are ongoing but sufficient evidence exists that indicates that that both synthetic based and fertilizer based perchlorate exists with the basin.

The existence of perchlorate represents major concerns for local water providers in terms of both water supply and cost. Estimates for remediation, with the typical "pump and treat" technology using Ion Exchange range from $1.0-$3.0 million per production well as the initial capital investment. The initial capital expenditure while staggering does not reflect the operation and maintenance costs which can exceed $500,000 per well on an annual basis. It is estimated that across the entire Santa Ana Watershed the costs to maintain existing well production could range from $300 million to $1.0 billion. It is important to note that such an investment would not produce a single drop of new water. This is water supply already in production.

Treatment of perchlorate as already has been noted represents tremendous financial impacts to local water providers many of which provide water to economical depressed areas. Attempting to recover or underwrite these costs on the backs of our local ratepayers is at best unreasonable and at worst unacceptable. Even in those instances where the perchlorate levels are low enough to be able to treat by blending contaminated water with higher quality water the availability and cost of the "blend" water may be prohibitive. In many instances this "blend water" supply is imported water from the State Water Project which has already been treated to drinking water standards approved by the California Department of Health which is in most cases the most costly supply of available water to local water producers. In the long-term this practice of using imported water to blend down the contamination levels to drinking water standards is problematic as will be described below in greater detail.

Federal Policies, Federal Actions Impacting the Region's Groundwater Resource

At present, imported water supply to the Chino Basin region exceeds 57,000 acre feet annually. This Santa Ana Watershed region and specifically the Chino Basin is one of the fastest growing areas of the nation. Today imported water deliveries to all of southern California are being reduced through actions of the Federal Government.

Statewide, annual allocations from the Colorado River have been reduced by 800,000 acre feet which heavily impact the Metropolitan Water District. Although CVWD does not directly take deliveries of Colorado River water, this action by the Federal government places added pressure on the Metropolitan Water District and any retail water provider who depend on MWD to meet their water supply requirements At the same time water supplies from the California State Water Project are being reduced or restricted as well due in part through the Federal actions and policies associate with the CALFED program.

The reduction of imported water supplies has placed an added burden and reliance on our local groundwater supplies. Agencies throughout the Santa Ana Watershed including the Chino Basin are attempting to deal with this new reality by developing alternative sources of water supply such as recycled water. With an investment of over $95.0 million over the past six years agencies within the Chino Basin have developed over 8,000 acre feet of a new drought proof and reliable source of water. This quality is expected to double this next year.

Despite the obvious economical and water supply benefits of recycled water to augment our groundwater supplies we are faced with two new realities: first, the U.S. Department of the Interior proposes to "devolve", or to eliminate the Title XVI water recycling program which should be the financial backbone for funding recycled water projects. Secondly, much of our groundwater is contaminated through the actions of the Federal Government. As already has been stated, over 90% of the perchlorate as well as volatile organic compounds (VOC's) in groundwater comes from DOD related activities. These actions equate to what we describe as the "Federal

squeeze-play". Imported water is being reduced while our groundwater supplies are contaminated.

In addition to the limitations noted previously on delivery of imported water to the region, the ability for retail water providers to actually increase their imported water supplies is in many instances limited by the physical characteristics of their respective delivery systems. In the case of the City of Rialto, five of the City's wells are contaminated with perchlorate affecting approximately 9,000 gallons per minute (GPM) of flow, and are without an alternative source of supply because they do not have a physical connection for imported water. Funding a new connection to the imported water system and then constructing a treatment plant to treat the water is also cost prohibitive for this community. Fontana Water Company which is adjacent to the City of Rialto recently constructed a 25 million gallon per day treatment plant at a cost exceeding $35.0 million.

The Chino Basin Watermaster and Agency Coalitions Addressing Perchlorate

The Chino Basin Watermaster manages the groundwater basin pursuant to a court ordered judgment for the benefit of groundwater producers within the Chino Basin. As previously mentioned the producers consist of a three user groups the largest being local municipal producers that depend on the Watermaster and the basin to meet the bulk of their drinking water requirements. The second largest group is the agriculture community which has transitioned from citrus and vineyard production and other food product crops to Confined Animal Feeding Operations (CAFO's), or dairy cattle. The smallest group consists of industrial users who rely on locally produced groundwater for various manufacturing and process water requirements.

Each of these producer groups make up the management structure of the Watermaster. Their objective is to ensure that each producer is able to produce both the quantity and quality of water to meet the water supply needs to the greatest extent possible from the basin. In so doing the Watermaster produced a management plan entitled the Optimum Basin Management Plan or OBMP.

The OBMP contains several program elements the first being the requirement to develop a comprehensive monitoring plan for the basin including monitoring of groundwater quality. That effort produced mapping of perchlorate and other VOC's which has been used in coordination with the producers and the Regional Water Quality Control Board to develop a comprehensive strategy to deal with the contamination. Included as Exhibit A is a sample of the type of monitoring work and mapping conducted by the Watermaster to identify the scope of the contaminate problem including isotope mapping. Watermaster also formed a Water Quality Committee, of which I serve as Chairman, which consisted of local producers, MWD and the Regional Board. The Committee has worked with our team of consultants and produced the following efforts:

- Continued groundwater monitoring of perchlorate and other water quality parameters including water levels to determine the effect of pumping on known and defined plumes,
- Identified treatment technologies and their effectiveness at the wellhead,
- Utilizing the isotope technology conduct analysis of existing perchlorate plumes to identify the source of the contaminate,
- Analyzed cost impacts for well head treatment, replacement water and related capital improvements related to remediation or dilution of perchlorate to drinking water standards,
- Identifying appropriate technical actions necessary to address the perchlorate problem including providing technical and administrative support to the Regional Board and with groundwater management groups from outside the Chino Basin, and
- Identification of potential responsible parties or industries including agriculture that may have contributed to the perchlorate contamination.

In addition to the efforts of Watermaster to manage the water quality issues related to perchlorate and VOC contamination in the Basin, several other groups have been formed within the Santa Ana Watershed to investigate perchlorate related issues in the watershed.

Regional Board Perchlorate Task Force

- Organized through the Santa Ana Regional Water Quality Control Board in cooperation with EPA Region 9.
- Formed to investigate Potential Responsible Parties for perchlorate contamination and mapping within the Rialto-Colton Basins.

Inland Empire Perchlorate Task Force
- Formed to negotiate a solution to the perchlorate problems incurred by Fontana Water Company and the West Valley Water District.

Mayor's Advisory Committee of Water Contamination (Perchlorate)
- Formed to advise the mayor and city council on perchlorate contamination issues in the City of Rialto

Mr. Chairman, the Cucamonga Valley Water District along with the Chino Basin Watermaster takes our respective roles in groundwater basin management and water supply very seriously. Perchlorate is a serious problem and has impacted our local groundwater resources and the local economy. We are looking for solutions that can be implemented now. Throughout the entire region there is a need to fully characterize the various contamination plumes in a coordinated fashion or assist existing entities such as the Watermaster in their ongoing efforts. We need to coordinate on data collection and monitoring to identify movement of the various contaminate plumes, contained and ultimately cleaned up. We need to identify water supply alternatives that are cost effective and reliable such as developing funding for recycled water.

Our agency remains committed to doing all that we can to ensure that our groundwater supplies are protected in a cost effective manner. We appreciate the efforts your committee have undertaken to conduct this hearing and solicit information regarding this issue.

Thank you Madam Chairwoman for your time and consideration.

Mrs. NAPOLITANO. Thank you, Mr. DeLoach. And of course, thank you Ms. Solis, because she's attacking the issue of perchlorate from the other side. But before I move on, I'd like to recognize and again thank President Mike Ortiz, standing in the back, who just joined us. Thank you for allowing us to use your facilities, sir. It's very nice—we're very much enjoying it. Thank you.

And I'd also like to introduce the staff in case, after the meeting, you want to talk to some of the staff who really does most of the work. On my left is Steve Lanich who is the Director of Personnel for the Subcommittee, and—where are you, Kiel? Kiel, hiding back there, he's Minority subcommittee staff who is joining us, and he's listening out to any of the comments you may hear in the background. And also to my Chief of Staff Daniel Chao behind me, Amelia Wang, my District Director and Joe, who is my Legislative Director. And Emily, where are you? Oh, I'm sorry. Emily, another staff of this efficient subcommittee, very, very capable young people. And Steve has over 20-some odd years on water, so you know he knows the subject. I want to introduce you to them so you understand what we do in Washington and how we do it and why we do it with this personnel. All right. I'd like to move on to Penny Newman——

Mr. BACA OF CALIFORNIA. Madam Chair, weren't you on campus here on Saturday as well with Dr. Ortiz?

Mrs. NAPOLITANO. Yes, so were you. That's why I say thank you to the President. We brought in the congressional institute to talk to over 200 youngsters from the local high schools and middle schools on some of the grant scholarships and trying to help them learn how to stay in school, how to go to university, and how to become successful leaders. So thank you, sir.

With that, Penny Newman, Executive Director, Center For Community Action and Environmental Justice in Riverside, I have read your testimony. It's very interesting. Welcome.

STATEMENT OF PENNY NEWMAN, EXECUTIVE DIRECTOR, CENTER FOR COMMUNITY ACTION, ENVIRONMENTAL JUSTICE, RIVERSIDE, CALIFORNIA

Ms. NEWMAN. Thank you. It's a pleasure to appear before you, and I thank you for the opportunity to add our testimony to this very important issue.

I'd also like to introduce two of my staff people who are here. That's Jan Mendez and Nina Diaz who are working our San Bernardino office on the perchlorate issue. Still can't hear me?

Mrs. NAPOLITANO. That's good.

Ms. NEWMAN. CCAEJ, as it's commonly called, is one of the oldest and most accomplished environmental justice organizations in the nation, having begun our work in 1978 as a small neighborhood community group focused on California's Top Priority Superfund Site, the Stringfellow Acid Pits.

It's through our involvement with Stringfellow that we first became introduced to perchlorate. In 1999 and 2000, they did testing for the chemical for the first time with that site and discovered that overnight, our plume had expanded by more than five times from what we originally thought. It now went from Glen Avon into two more communities, Pedley and Mira Loma extending 6 miles to the Santa Ana River. This discovery also found that dozens of families had been drinking contaminated water with perchlorate without their knowledge. The State of California through the Department of Toxic Substance Control, moved quickly to provide bottled water and started the process of connecting people to another water system.

One of the things that we found very disturbing about perchlorate was because it was so mobile and moved so quickly, that it contaminated a wide area, but that we're also beginning to see how it uptakes into our food chain. Crops such as sweet lettuce, alfalfa, and cucumbers have been found to have perchlorate in them. For Latino communities, who rely on staples such as nopales to augment their nutrition value, it has the same characteristics. No one is doing a study on this. That means that our low-income Latino communities are relying on this as an addition to their nutrition and a possibility of intake in perchlorate that way. So it's not just whether you live in an area that is contaminated, like Rialto or Stringfellow, but also the food that we're drinking—or eating.

In 2004, CCAEJ along with the Environment California, a statewide research and policy organization partnered in our Inland Valley Perchlorate Community Relief Project to focus on the contamination in Rialto. We were alarmed that in high income, predominantly white communities like Redlands, it took less than a year to get cleanup and abatement ordered. Yet, in Rialto, working class, 65 percent Latino population, it is going on over ten years and still no cleanup and abatement order has been issued. Despite the responsibility and years of negotiations, neither Goodrich Corporation nor Black & Decker, those named by U.S. EPA as dischargers have agreed to clean up the mess they have created. While the companies delay, many of the citizens of Rialto are having to step forward to pay for their clean water.

That delay continues today. In fact, instead of meeting to develop comprehensive cleanup plans, Goodrich and Black & Decker are conducting prolonged depositions in an attempt to harass, intimidate, and abuse agency staff and my own organization. The interrogations consist of aggressive yelling, brow-beating, verbal attacks, and threats to the point of bringing some people to tears in the hallway. The attacks continue with subpoenas for extensive document production even though dates for submitting evidence have been outlined and scheduled for the administrative hearing. Even though Constitutionally protected, the corporations continue to press for funding sources and our membership lists for our community-based organization.

The goal is clear. They have stated both verbally and in writing that if we simply withdraw as a designated party, all of this will stop. We've made a commitment to the residents of Rialto that we are going to ensure that their voice is heard in this area on an equal level with the polluters, the agencies, and the cities, and we're not going to back down.

In 2006, it became even more clear how dangerous this situation was when tests that were mandated for Goodrich to conduct discovered an alarming spike in the levels. Between April of 2005 and April of 2006, the levels rose from 53 parts per billion to over 10,000, the highest in the State of California. While these delays continue, it is the community of Rialto that pays the price. With strong leadership and efforts from local officials such as Mr. Baca, there has been some Federal funding coming forth. But to address this problem in a comprehensive way and a cleanup price of over 300 million, we have to hold the polluters responsible. As my mother always told me, if you make the mess, you clean it up. If we expect that for responsibility in our children, we should expect no less for our corporations.

Our aquifers and water sources are a precious commonwealth for all of us. We cannot allow them to continue to be polluted. It is a resource for all of us no matter what our income or status in the community. Our first item that this committee can do as individuals or as a committee is to write a letter to the State Water Resources Board endorsing the strong cleanup and abatement order that has been drafted. We've had great input into this, and I think it will provide a model around the country for the way that we should be pursuing. Thank you.

[The prepared statement of Penny Newman follows:]

Statement of Penny J. Newman, Executive Director,
Center for Community Action and Environmental Justice

Chairwoman Napolitano, Honorable Members of the subcommittee, I thank you for the opportunity to address this committee on this important issues.

My name is Penny Newman, Executive Director for the Center for Community Action and Environmental Justice. CCAEJ is one of the oldest and most accomplished environmental justice organizations in the nation having begun our work in 1978 as a small neighborhood group fighting for the cleanup of California's top priority Superfund site, the Stringfellow Acid Pits.

Perchlorate in Groundwater

It is through our involvement with the Stringfellow site that in 2000, we became acquainted with perchlorate when testing discovered the chemical in the aquifer below the site. That discovery, expanded overnight the contaminated plume seeping from the site by more than 5 times. (Exhibit 1). Instead of the pollution being

confined to the community of Glen Avon it now affected 2 more communities—Pedley and Mira Loma—extending it more than 6 miles to the Santa Ana River. With this discovery dozens of families were found to be drinking water from their private wells contaminated by perchlorate. The State of California Department of Toxic Substances Control (DTSC) moved quickly to provide bottled water to affected residents and began the process of connecting homes to another water system.

The response by DTSC in quickly addressing the perchlorate contamination in Glen Avon sadly seems to be an anomaly rather than standard practice both by DTSC and other state agencies. For example, in the community of Norco residents find that contamination from the Wyle Labs has placed their homes and water resources at risk as well. Perchlorate is one of the noted contaminants along with TCE which has volatized through the soil and concentrated in homes—prompting, in at least one case, emergency action due to the high levels. (Exhibit 2). In the Norco case agencies have been slow to respond as staff turnover and even agency turnover has produced a lack of historical memory and repetition for residents of having to reprove and re-discuss the same issues over and over. Progress on this site has been frustratingly slow for affected residents who feel they have been put in the position of conducting the tasks public agencies should be doing.

Across the county line in San Bernardino in the City of Rialto, perchlorate has had a major impact on the city and its residents. One young woman relates her story. She moved to Rialto, buying her dream house and sending her kids to school down the street, the town seemed the perfect place to raise three young children. Much to her horror, in March of 2003 she discovered that water from wells contaminated by rocket fuel from operations of Goodrich Corp and Black & Decker, is piped to her home.

Upon investigating this alarming situation further, she discovered that despite the companies' combined yearly revenues of more than $5 billion, the corporations have to date failed to clean up the mess they created more than forty years ago. As a result, she and 100,000 other residents in the diverse, working class community just east of here have had their clean water stolen from them.

Perchlorate travels easily in water, allowing spills to rapidly enter water supplies, and persists for many decades underground. Through careless handling, use, storage and disposal of perchlorate over the last six decades, the military and its contractors have extensively polluted California's drinking water sources. State agencies have discovered perchlorate pollution in more than 350 California water sources, including the Colorado River and hundreds of municipal wells. Perchlorate contaminates the drinking water supply of 16 million Californians. The contamination extends into more than 10 counties, San Bernardino, Sacramento, Los Angeles, Riverside, Ventura, Tulare, Orange, Santa Clara, Sonoma and San Diego (Exhibit 3).

According to the U.S. Environmental Protection Agency, Office of Research and Development the vast majority of perchlorate in the United States is synthetic associated with use in rocket propellants, explosives, road flares, air bags, electronic tubes lubricating oils, leather tanning, fabrics, electroplating, aluminum refining, rubber manufacture, and the production of paints. As a consequence of their widespread use and water solubility, huge amounts of perchlorate have leached into surface and groundwater used as drinking water source.

Southern California relies heavily on its underground aquifer system for a majority of its drinking water. As perchlorate continues to migrate into our underground aquifers, our backup water source is the Colorado River. In the 1950s, large amounts of perchlorate were made at factories owned by American Pacific and Kerr-McGee corporations outside Las Vegas, in an area draining into Lake Mead and the Colorado River. Dumping, spills and explosions left the area around these factories heavily contaminated. It is estimated that more than 20 million pounds of the chemical remain in the sediments downstream from the factories. Wastewater from the city of Las Vegas carries the perchlorate downstream to Lake Mead. In 2004, 200 to 300 pounds of perchlorate leached into Lake Mead every day.

With the current pace of cleanup and with natural flushing of the river, it is estimated that the lower Colorado River will remain contaminated with perchlorate for the next 50 years.

Perchlorate in Food

The impact of perchlorate is not limited to drinking water. Perchlorate also concentrates in leafy vegetables like lettuce, which creates a concern for consumers of Imperial Valley crops irrigated with Colorado River water. Tests by scientists and advocacy organizations like the Environmental Working Group have confirmed that plants, especially broad-leaf varieties, concentrate perchlorate from the environment. Scientists have found perchlorate in plant tissues at levels up to 100 times higher than in nearby water sources. In 2004, The Food and Drug Administration

released a study finding perchlorate in 90 percent of 128 lettuce samples and in all but three of the 104 milk samples, with average levels ranging from six parts per billion in milk to 12 parts per billion in Romaine lettuce. These results raise the possibility that perchlorate contamination is much more widespread than regulators currently know, and that exposure is wide spread across the country.

Perchlorate is highly mobile in water and can persist for decades under typical ground and surface water conditions. Research has also shown that perchlorate can concentrate in crops such as wheat, lettuce, alfalfa, and cucumbers thereby resulting in much greater exposures than might be predicted by water or fertilizer concentrations. Newer data have shown perchlorate contamination to be widespread in store-bought fruit, vegetables, cow's milk, beer and wine. Perchlorate has been found in human breast milk at levels up to 92 ppb, and was found in every one of 2820 urine samples the Centers for Disease Control recently tested for perchlorate. Nopales, a staple in the Latino communities, has similar characteristics of those vegetables found to uptake perchlorate easily such as lettuce. A concern for low income Latino communities that rely on the tasty succulent as a major food source is that perchlorate levels will be high in this crop as well.

Perchlorate is a potent competitive inhibitor of the sodium-iodide symporter (NIS), interfering with the normal uptake of iodide into the thyroid gland, as well as normal transport of iodide across the placenta and into the lactating mammary gland. Iodide uptake inhibition can result in decreased capacity to synthesize thyroid hormones. In the developing fetus and infant, adequate thyroid hormones are necessary for normal brain development. Subtle alterations of thyroid hormone during pregnancy—even within the normal range—have been associated with decreased intellectual and learning capacity in childhood.

In 2004, CCAEJ and Environment California, a statewide research and policy organization, partnered in our Inland Valley Perchlorate Community Relief Project and began focusing on the Rialto contamination. We were alarmed that in high income, predominantly white (72%) communities like Redlands, a Cleanup and Abatement Order (CAO) was issued by the Regional Water Board against the polluter in less than one year. Yet in Rialto a working class community that is 64.7 percent Latino, ten years have passed since the discovery of the pollution. But despite their responsibility and years of negotiations, neither Goodrich Corp. nor Black & Decker have agreed to clean up the mess they have created. While the companies delay, many citizen of Rialto drink water that is polluted by rocket fuel. According to data supplied to local and state water officials, water from drinking water wells contaminated at up to three times the safety levels issued in other states is piped to homes in the city.

That delay continues today. In fact instead of meeting to develop a comprehensive clean up plan, Goodrich and Black & Decker are conducting prolonged depositions in an attempt to harass, intimidate and abuse agency staff and public interest advocates. The interrogations consist of aggressive yelling, browbeating and verbal attacks to the point of bringing some people to tears in the hallway. The attacks continue with subpoenas for extensive document production even though dates for submitting evidence have been outlined in a schedule for the Administrative Hearing. Even though constitutionally protected the corporations continue to press for funding sources and membership lists of our community-based, non-profit organization.

And while the delays continue, several other wells unusable due to contamination, in this drought-prone area brings the city to the brink of running out of water. While the pollution continues to move, the polluters continue to delay and deny responsibility. In the meantime, it is the residents who have been forced to pay water bill price hikes and surcharges to pursue the polluters for clean water. The residents are hit twice. First, their water supply is destroyed by the polluters actions and irresponsibility. Secondly, those most unable to afford it—the residents of Rialto—are the only ones having to pay.

In 2006, new mandated pollution tests conducted by Goodrich corporation and submitted to state water officials in July reveal an alarming spike in contamination that threatens to send a new pulse of toxic perchlorate pollution into Rialto drinking water wells. Levels of perchlorate pollution in well PW-2, located close to the historic Goodrich perchlorate disposal pit spiked sharply in 2006—from an April 2005 concentration of 53 ug/L to an April 2006 concentration of 10,000ug/L. the highest level reported in the state.

A potential explanation for this spike in perchlorate levels is that heavy rains increased the level of the water table, dissolving perchlorate contamination that persist in the oil around the Goodrich "burn pit". Once dissolved, the perchlorate would have traveled into local groundwater, creating a new "pulse" of contamination. This new pulse threatens wells down gradient from well PW-2.

While delays continue in taking aggressive action to stop the migration of perchlorate in the aquifer more and more water is destroyed and taken out of use as a common public drinking water source. With the strong leadership and efforts by local officials some federal funding has been forth coming to begin to address the problems. But the real answer is in making the polluters pay for the ecological disaster their mismanagement and irresponsibility have created. It is only through the polluters pay principle that enough resources will be available to correct the situation and save our water resources. It is inherently unfair to use taxpayers money to fund the cleanup created by the corporations' actions. As my mother always told me, "If you make the mess, you clean it up."

Our aquifers and water resources are a precious common wealth for us all. All life relies upon this resource. We cannot accept irresponsible actions by anyone to pollute this precious resource. Clean drinking water should not be dependant upon one's ability to buy filters or bottled water. It is a resource for us all no matter ones income or status in the community. A first step to achieving this goal is joining us in endorsing our petition to the Water board for a strong Clean up and Abatement Order. (Exhibit 5)

Thank you for the opportunity to address this committee regarding this important issue.

[NOTE: The exhibits listed below have been retained in the Committee's official files.]

- Exhibit 1. Perchlorate Plume from Stringfellow Acid Pits
- Exhibit 2. Off site contamination from Wyle Labs in Norco California
- Exhibit 3. Number of Perchlorate Contaminated Wells by County
- Exhibit 4. Groundwater contamination/Perchlorate plumes and contaminated wells in the Inland Valleys of Riverside and San Bernardino.
- Exhibit 5. Sample letter endorsing Clean up and Abatement Order in Rialto.

Mrs. NAPOLITANO. Thank you, Ms. Newman. We will move on to the last witness on this panel, Mr. Phil Wyels, Assistant Chief Counsel, State Water Resources Control Board from Sacramento. Welcome. Thank you for coming, sir.

STATEMENT OF PHIL WYELS, ASSISTANT CHIEF COUNSEL, STATE WATER RESOURCES CONTROL BOARD, SACRAMENTO, CALIFORNIA

Mr. WYELS. Thank you, Madam Chair and members. As Assistant Chief Counsel for the California State Water Resources Control Board, one of my duties is to provide legal representation and counsel to the California Regional Water Quality Control Boards. The regional water boards and the State Water Board are in California, the primary agencies with regulatory responsibility over the quality of the water resources in the state. Among the other authorities, the water boards have the authority to issue cleanup and abatement orders to compel persons who have caused or permitted discharges of waste that have resulted in water pollution or contamination to investigate and remediate those discharges. When exercising that authority in situations where the discharge of waste has adversely affected other entities' water supplies, the water boards can require those persons who have discharged their waste to provide water—to provide replacement water supplies to the affected water users.

When the water boards are exercising their authority to compel investigation and remediation of groundwater pollution, they are acting in a quasi-judicial capacity. They conduct an adjudicative hearing to determine whether the weight of the evidence supports a finding that the potential responsible party did, in fact, discharge the waste resulted in the groundwater pollution. After the Water Board determines which parties are responsible for the investiga-

tion or remediation, the Water Board continues to maintain jurisdiction to oversee the investigation and remediation including approving the final cleanup plan and setting the groundwater cleanup levels.

On those occasions where the groundwater pollution has directly affected an existing water supply, the water boards do have the authority to require replacement water supplies. This can be in the form of providing well head treatment, paying money to the water suppliers so they can obtain additional water, or directly obtaining additional water for the suppliers. One issue of particular relevance in discussing the requirement of responsible parties to provide replacement water supplies is the necessary level of pollution in the supply wells before the responsible parties are required to provide that replacement water.

The State Water Board issued a precedential order in 2005, the result of an appeal filed by another perchlorate manufacturer in a different part of the state. And in that order, the State Water Board decided that as a matter of policy, the regional boards should only require the responsible parties to provide replacement water supplies for public health purposes if the pollutant concentrations at the supply wells exceeded drinking water standards. Where drinking water standards have not yet been adopted as with perchlorate, the State Water Board directed the regional water boards to defer to the expertise of the Department of Health Services and another sister agency, the Office of Environmental Health Hazard Assessment to determine what levels would be safe. That level currently has been set at 6 parts per billion by the Office of Environmental Health Hazard Assessment level, and that is below what the regional water boards currently use. The Department of Health Services in California recently proposed to adopt a state maximum contaminant level of 6 parts per billion for perchlorate.

The regional water boards do have the ability to require replacement water supplies if necessary to protect other uses of water or if necessary to prevent the acceleration of the groundwater plume's migration due to the operation of municipal supply wells. And on occasion, the regional water boards have found it necessary to restrict the use of water supply wells where the continued pumping of those wells is causing nearby groundwater plumes to spread. In these cases, the responsible parties, including notably the Department of Defense, have generally been very resistant to providing water supplies. As you might imagine, the regional water boards have typically found that it's much more cost effective to prevent the spread of pollution.

With respect to the local perchlorate plume, the Santa Ana Regional Water Board has been devoting much of its staff's time to this very important problem over the last several years. The Regional Board has been working in close cooperation with the City of Rialto to develop the evidence to support its case against certain potential responsible parties. The responsible parties have filed numerous appeals with the State Water Resources Control Board in courts prior to this hearing, however, and the State Water Board recently decided that it will take over responsibility to conduct the hearing.

That administrative hearing is scheduled to take six full days starting as soon as next month. At the conclusion of that hearing, I expect that the State Water Board will issue an order determining which parties are responsible for investigation and remediation of the major source area of perchlorate. The State Water Board is also being asked by the Regional Board to order some or all of the responsible parties to provide water supplies to the affected water supply users.

I'd just like to conclude by explaining that the Regional Water Board is grateful for the tremendous support that the City of Rialto has provided by way of its Federal litigation, and the Regional Board also appreciates the assistance that the United States Environmental Protection Agency has provided. And we hope that they will be able to continue in that role. Unfortunately, my understanding is that the Department of Defense has been less than cooperative at the Rialto site, so any encouragement that the Subcommittee can provide in that regard would be very much appreciated.

That concludes my testimony. Thank you for convening this hearing on this important topic, and thank you for letting us speak.

[The prepared statement of Phil Wyels follows:]

Statement of Phil Wyels, California State Water Resources Control Board

Thank you for the invitation to testify before the Water and Power Subcommittee of the House Natural Resources Committee. My name is Phil Wyels. I am an Assistant Chief Counsel for the California State Water Resources Control Board; my duties include providing legal counsel and representation to the nine California Regional Water Quality Control Boards. My testimony today will focus on two primary issues. First, I will describe those agencies' general approach in overseeing remediation of groundwater pollution, including requiring the persons responsible for creating the pollution to provide replacement water supplies to affected water users. Second, I will explain those agencies' roles in addressing the Rialto-area perchlorate groundwater contamination.

In California, the agencies that have primary responsibility over the quality of the state's water resources are the State Water Resources Control Board and the nine California Regional Water Quality Control Boards, which are commonly referred to as the State Water Board and the Regional Water Boards. The Water Boards are comprised of gubernatorial appointees who oversee a professional staff that includes engineers, geologists, and scientists. The Water Boards have broad quasi-legislative and quasi-adjudicative authority to regulate all discharges of waste that can affect the quality of the state's groundwater or surface waters. This includes administering both the federal Clean Water Act's National Pollutant Discharge Elimination System permit program, as well as a state's Porter-Cologne permit program that regulates discharges that are beyond the scope of the NPDES permit program. In addition, the Water Boards have the authority under state law to compel persons who have caused or permitted discharges of waste that have resulted in water pollution or contamination to investigate and remediate their discharges. When exercising that authority in situations where the discharge of waste has adversely affected other entities' water supplies, the Water Boards can require those persons who discharged the waste to provide replacement water supplies to the affected water users.

As a general rule, it is the Regional Water Boards that conduct most of the direct regulation of waste discharges and oversight of groundwater remediation, while the State Water Board hears appeals from parties challenging the Regional Water Boards' orders. Occasionally, however, the State Water Board itself will act as the finder of facts and issue orders in the first instance. In addition to the Water Boards, there are several local, state, and federal agencies that play varying roles in overseeing investigation and remediation of various types of contamination in California.

When the Water Boards are exercising their authorities to compel investigation and remediation of groundwater pollution, they are acting in a quasi-judicial capacity. They conduct an adjudicative hearing to determine whether the weight of the

evidence supports a finding that the potential responsible parties did in fact discharge the waste that resulted in the groundwater pollution. After the Water Board determines which parties are responsible for the investigation and remediation, the Water Board continues to maintain jurisdiction to oversee the investigation and remediation, including approving the final cleanup plan and setting final groundwater cleanup levels.

On those occasions where the groundwater pollution has directly affected an existing water supply, the Water Boards have the authority to require the responsible parties to provide replacement water supplies to the affected water suppliers. This can be in the form of providing wellhead treatment, paying money to the water suppliers so that they can obtain additional water, or directly obtaining additional water for the suppliers. The state law that provides this authority was amended in 2004, and now specifies that any replacement water is required to be the same quality that the groundwater was prior to the discharge of waste. Incidentally, State Senator Nell Soto, who has been heavily involved in the local perchlorate groundwater pollution issues, sponsored that amendment to California Water Code section 13304.

One issue of particular relevance in discussing the requirement for responsible parties to provide replacement water supplies is the necessary level of pollution in the supply wells before the responsible parties are required to provide replacement water. The State Water Board issued a precedential order in 2005 that resolved an appeal filed by Olin Corporation, a perchlorate discharger south of San Jose. The State Water Board decided that, as a matter of policy, the Regional Water Boards should only require the responsible parties to provide replacement water supplies for public health purposes if the pollutant concentrations at the supply wells exceed drinking water standards. Where drinking water standards have not yet been adopted; as with perchlorate, the State Water Board directed the Regional Water Boards to defer to the expertise of the California Office of Environmental Health Hazard Assessment (OEHHA), a sister state agency that conducts human health risk assessments. OEHHA had determined that perchlorate in drinking water does not pose adverse effects on human health at or below 6 micrograms per liter, so the State Water Board concluded that the dischargers should not have to provide replacement water supplies for human health purposes until the perchlorate at the supply wells was above 6 micrograms per liter. The California Department of Health Services recently proposed to adopt a state Maximum Contaminant Level of 6 micrograms per liter for perchlorate.

The State Water Board's precedential Olin order left open the possibility, however, that the Regional Water Boards could require replacement water supplies at lower pollutant levels if necessary to protect other uses of water or if necessary to prevent the acceleration, of the groundwater plume's migration due to the operation of municipal water supply wells. On occasion, the Regional Water Boards have found it necessary to restrict the use of water supply wells where the continued pumping of those wells is causing nearby groundwater plumes to spread. In these cases, the responsible parties, notably including the Department of Defense, have generally been very resistant to providing replacement water supplies. As you might imagine, the Regional Water Boards have typically found that it is much more cost effective to prevent the spreading of the pollution.

With respect to the local perchlorate plume, the Santa Ana Regional Water Board has been devoting much of its staffs' resources to this very important problem over the last several years. The Regional Water Board staff, in cooperation with the City of Rialto, has been collecting evidence and developing a case to determine which entities are responsible for the pollution, especially from a 160-acre site in Rialto that is believed to be one of the primary source areas.

The original intent was for the Regional Water Board staff to present this information to the Regional Water Board at an adjudicatory hearing. The potential responsible parties filed numerous appeals with the State Water Board and the courts prior to the hearing, however, and the State Water Board decided earlier this year that it would take over responsibility for conducting the hearing. That hearing is scheduled to take six full days, starting next month. At the conclusion of the hearing, I expect that the State Water Board will issue an order determining which parties are responsible for investigation and remediation of that major source area. The State Water Board is also being asked to order some or all of those responsible parties to provide replacement water supplies to the affected water supply users.

The State Water Board has named six parties to the adjudicatory hearing. Those parties are the Santa Ana Regional Water Board staff who are advocating for the adoption of an order, the City of Rialto, which has been providing invaluable assistance to the Regional Water Board staff, two local environmental justice organizations, and the potential responsible parties. Because this is a judge-like hearing,

there is an ethical wall between all of the parties and the State Water Board. Therefore, as an attorney that represents the Regional Water Boards, I am not in a position to know how the State Water Board views the evidence that has been submitted to it to date. I do expect, however, based on the potential responsible parties' tactics to date, that the hearing will be heavily contested and that some, if not all, of the parties will turn to the courts to attempt to overturn any State Water Board order that concludes that they are responsible for the perchlorate pollution.

In the meantime, the Regional Water Board is grateful for the tremendous support that the City of Rialto has provided by way of its federal litigation against a multitude of potential responsible parties. Through that litigation, for example, Rialto has been able to take literally hundreds of depositions of former employees of some of the potential responsible parties, arid in so doing has helped develop key evidence regarding historic perchlorate handling practices. The Regional Water Board also appreciates the assistance that the United States Environmental Protection Agency has provided, and hopes that it will be able to continue in its support role. Unfortunately, my understanding is that the Department of Defense has been uncooperative at the Rialto site, so any encouragement that the Subcommittee can provide in that regard would be very much appreciated by the Regional Water Board staff.

Once again, thank you for the opportunity to provide this testimony to the Subcommittee, and I would be pleased to answer any questions you might have.

Mrs. NAPOLITANO. Thank you so very much, Mr. Wyels. I couldn't agree with you more, and that's one of the reasons we're having the hearings and being able to get more information received. I'm glad to hear that you're going to be having that hearing hopefully next month. And I'd love to have staff come in and sit in on it. Does your agency work with Federal EPA?

Mr. WYELS. We do. There are actually a number of agencies involved in various water pollution cleanups throughout the state. U.S. EPA has been involved in somewhat of a support role. They're letting the state take the lead, which so far is working, slowly albeit. And yes, they have provided direct support on this particular case.

Mrs. NAPOLITANO. Oh, what about the defense department? Are they part—are you inviting them to be there so they can hear the findings and be more aware of the effect it has on the populace?

Mr. WYELS. The Regional Water Board has asked the Department of Defense to assist in the investigation; so far my understanding is they have largely declined for this particular site. They are not one of the named responsible parties for the order that the State Board would be considering. That's from a different source area. And so yes, the hearing is open to the public. I couldn't tell you whether they plan to attend or not.

Mrs. NAPOLITANO. Thank you. Do we have a representative from Federal EPA here? Would you stand, sir, and state your name?

Mr. VILLASENOR. Sure. Andre Villasenor, U.S. EPA with the L.A. field office.

Mrs. NAPOLITANO. Thank you for coming, and thank Laura for allowing you to come because I just called her yesterday. Thank you, sir. And the reason I asked them to send somebody is so they can listen to the testimony of the people of the water agencies and the state and the local agencies to get a better idea of what is really happening in our backyard. So thank you.

As a witness on this panel, Mr. Wyels, Mr. Araiza of the West Valley District believes that state and Federal intervention is needed. Do you agree with the assessment? And if so, what Federal or state entity do you believe should take the lead role?

Mr. WYELS. At this time, the State Water Board has asserted itself as the agency that is adjudicating the determination about liability and cleanup responsibility, and they are on track to conduct the hearing next month. So I'm hopeful, despite all of the delay efforts and sort of the aggressive defense moves, that they will proceed at the hearing.

Mrs. NAPOLITANO. OK. You state some of the major impediments are the inability of the Federal Government to own up to its responsibility, one, that namely the PRP's, and the list goes on in regard to what litigation and other things that are happening. What can we do? What can the Federal Government, in conjunction with the states and locals, do? Because the only ones that win are the attorneys.

Mr. WYELS. I agree. I'm not one of those attorneys, unfortunately. I'm on salary. No, the answer, Madam Chair, is with respect to the Department of Defense, Congress can certainly encourage them to be much more forthright and forthcoming in terms of providing funds and resources to not only investigate, but also to take responsibility for the discharges for which they are responsible. We have been pleased with U.S. EPA's role to date to the extent that they can obtain additional funding to increase the level of support they provide. That would be wonderful.

Mrs. NAPOLITANO. Well, if we can get Federal EPA to sit with the groups in this area and begin to understand the severity of the local problem, whether it's Rialto or—well, the rest of the Inland Empire, and work with them as they did with the San Gabriel Valley cleanup, I think we will be in a better position and be able to force the PRP's to the table so that at least the process can get moving in being able to address especially those areas that are really affected. I have—let's see. Celeste Cantú, how has the perchlorate contamination affected the quality and sustainability of the Santa Ana Watershed?

Ms. CANTÚ. Up to this moment with the treatment expenses that they're implementing, the supply is being maintained. It is getting more and more precarious, particularly as other factors such as precipitation change due to global warming or lack of reliability of imported water come into focus better, we realize how precarious we might actually be. But with the treatment that is going on at this moment and with the limit of 6 that we have to work with at this moment, we are able to sustain a water supply. Should any of those factors change, however, it would be increasingly vulnerable and it would be hard to feel very secure that we would have a reliable source.

Mrs. NAPOLITANO. Thank you. Mr. DeLoach, and then I'll let my other colleagues have a go at it. How much has the State Water Project supplies been reduced by pumping restrictions in recent years? And how does this translate to water supply reductions in the Chino basin and the State Water Project?

Mr. DELOACH. Well, currently in the Chino basin alone area, we've seen no reductions. Our current—our imports are about 37,000 acre feet a year, but we fear that that's going to be reduced somewhat. And for many of us that is the lion's share of our water supply. For us it represents over half of our water supply. So any reduction on it will be detrimental unless we can develop alternate

sources. But we're planning now that there will be reductions within the next five to ten years.

Mrs. NAPOLITANO. OK. Because of the issue with the fish getting into the——

Mr. DELOACH. The Delta pumps.

Mrs. NAPOLITANO [continuing]. Pumps. Right. There was going to be some changes, and we have not heard yet as to what those are going to be. And that should possibly affect the water supplies to this region.

Mr. DELOACH. It will.

Mrs. NAPOLITANO. And then Mr. Baca, you're up.

Mr. BACA OF CALIFORNIA. A series of questions. I guess I'll start with the first one, with the council member from the City of Rialto, since I happen to know him.

What action is the city taking to address water supply and potential public health problems arising from perchlorate contamination, in your opinion as a resident of the City of Rialto?

Mr. BACA. We have a few things that Rialto has done. First of all, we shut a few of our wells to make sure that we're not, you know, asserting perchlorate to our residents, and we've also adopted a zero tolerance policy. And to define a zero tolerance, what it is is a policy that we will serve less than the technology available. So based on technology today, we're serving 4 parts per billion or less. And we're also in the process, we filed 41 lawsuits, we're participating in the state hearing, and pushing for a cleanup and abatement order. And the other thing we're doing too is we're requesting Federal funding and looking for an alternative water supply. One of the things that we push for is the Bunker Hill basin in the Inland Empire, we're looking at joining with other water agencies to make sure that we have an alternative water supply.

But most of all, the biggest concern to me is the amount of bills—the amount of money that the residents are paying. So for example, I have a bill here, the bill here is $83.28, and the amount of fees that we're charging per residence is $15.63. That's roughly 17 percent of their bill. So those that are on fixed income or low or moderate income have a difficult time paying these bills. So that's just one of the concerns and one of the highlights I wanted to make sure we bring to this committee.

Mr. BACA OF CALIFORNIA. Thank you very much. And I know that Penny Newman indicated that based on the population—and that's a district that I represent, the 43rd Congressional District. This is the poorest district of any congressional member in the State of California with the highest number of minorities. Well, not the highest number of minorities, but the poorest district anyway, with 42 percent Hispanic and roughly between 14 to 16 percent African American. Penny, what impact, do you know, does it really have in terms of a minority community, because for them it becomes very difficult in terms of having quality of water and then looking at their payments too? Could you explain the difficulty it is for many of the minorities? And especially the effects for many of the women who are now having children and they can't afford to go out and buy bottled water. They're relying on the water that's currently in that area.

Ms. NEWMAN. I had one mother talk to me about the position they're in of trying to decide whether to be able to buy school shoes for their children or pay their water bill. And that's a situation that families should not be in. And I think that we overlook the stress that's put on families living in that situation. We may have discovered the perchlorate in 1997, but we don't know how long it was there previous to that. So there were families that were probably drinking contaminated water throughout that whole time. So when young women are getting pregnant, they're concerned about what they're doing to their child. When they're breast feeding, they're concerned about what are they passing on to their child.

And that's a quality of life issue, that is an issue that we should not be subjecting families to have to worry about. Most people in California don't have to worry about that. I mean, they know that their water is good or they can buy bottled water or another water source, get filters, whatever. For low income communities, that's not an option for them, so they have to rely on public agencies to ensure that what they're getting is safe.

Mr. BACA OF CALIFORNIA. I'm going to have to squeeze one more question in because my time is up and Madam Chair really sticks to her time. This is the time she controls. The next question I have is for Ms. Cantú. How important a role do you believe imported water will play in replacing perchlorate contaminated water supply in the future?

Ms. CANTÚ. Well, I hope it's not a very important role at all because it's not going to be a reliable source. Currently I think we import about 23 percent of our water in this watershed. Both of those major sources, Colorado River and the Delta supplies, are vulnerable. They're vulnerable for many different ways, so I do not think it would be prudent to rely on that as an important replacement source at all.

Mr. BACA OF CALIFORNIA. OK. Thank you. One other question, and I'll just ask all of you, any one of you that want to answer, is there an end to this? Is there really a solution to the perchlorate problem, to really solving it, or will we continue to always have a perchlorate problem that will exist no matter what? I mean, we can look at resources and funding, we can look at who has the problem, but will there be an end to this at one point, where quality of water will be there, where our residents don't have to deal with it? Can anybody try to attempt that, or will someone?

Ms. NEWMAN. I can certainly jump in. I think that we have to, that we don't have a choice. We have a limited amount of groundwater available to us. As we heard, we can't rely on outside sources. Colorado River has perchlorate in it, we can't rely on it. And I think if we're going to survive as a society, we have to be able to provide one thing that is dependant for life, and that's our water. We have to be able to do that. We can't use those basins as storage basins when we import water because the perchlorate will stay in that basin unless we take it out. So I think this has to be a priority for us and we have to step forward and do a cleanup to the furthest extent feasible.

Mrs. NAPOLITANO. Thank you. Congresswoman Solis.

Ms. SOLIS. Yes. I have a question for Mr. Wyels. I understand that you work in conjunction with many of the different water

authorities across the state. And my question is more centered on what, in fact, is the water quality authority doing in terms of looking at the mining industry? We have several large industries in the San Gabriel Valley, and of course here in Riverside area as well. And I've often wondered about the lack of role in terms of water quality authority to help gage if there's any pollutants that are entering into our water tables, particularly in the San Gabriel Valley.

Mr. WYELS. Congresswoman Solis, the Regional Water Board, the Santa Ana Regional Water Board has authorities beyond just those that we discussed earlier to require cleanup of the discharges they have already created. They also have brought authorities to regulate any discharge of waste that can affect water quality. And so with respect to mining, the regional boards have the authority to, and do in fact, regulate discharges associated with active mining sites and in addition to looking at historic mining sites for remediation. So the short answer is that we have plenty of authority to regulate, and I believe that we are actually doing a sufficient job in terms of current regulations that are designed to prevent creating new problems as we go.

Ms. SOLIS. Do you think there could be more done on the part of the Federal Government and EPA to help and assist in investigation and monitoring?

Mr. WYELS. Again, there's no question, we can use all the help we can get in terms of inventories, past practices in terms of looking at what groundwater areas have already been contaminated. There's no question that we don't have enough resources to go out and sample broad strokes of California's groundwater. So the answer is yes.

Ms. SOLIS. So I think that's a big issue here too is the lack of ability on the part of agencies like yours and the Federal Government to release funding to do that kind of investigation and monitoring, because oftentimes you hear about it after there's actually been the contaminants that have been seeping into the water table.

My next question is for Penny, Penny Newman. I mentioned the Environmental justice proposal that we're putting forward. What are your thoughts on that? Would that help communities like Rialto and other communities in the San Gabriel Valley or areas where there are large swaths of minorities under populations that have heavy industry?

Ms. NEWMAN. Now, I think you've certainly taken the lead on environmental justice issues, and we followed your leadership along the way and really applaud your efforts. I think, you know, the recognition that there are communities who disproportionately share the burden of pollution in our society is beginning to be recognized. And I think for communities in that situation, it's not just the general population, these are real hot spots that have multiple sources of contamination. It's the air, it's the groundwater, it's their homes. It is surrounding them, the environment. It is everything around them.

And I think, you know, an effort to identify these communities and what the characteristics are and then set up a special task force that would, number one, stop any further facilities from coming in that may add to that pollution, kind of put a moratorium on that, and put together a response team, much like we do with

natural disasters. Where the different agencies come in, coordinate their efforts to reduce—start reducing the level of pollution, not just stopping where we're at, but really start doing things to reduce it, and to put forward some efforts that would entice clean industry and start giving jobs to these communities to start helping them rebuild their communities and really put forth an effort on that in specific areas. And it's not hard to identify an EJ community, you just have to look around. They're there, it's pretty obvious.

Ms. SOLIS. Thank you. My next question is for Mr. DeLoach. You mentioned fertilizers and the impact that's having in this particular area. Can you shed some light on that? And the cost, who should be held responsible for that?

Mr. DELOACH. And I think as I was speaking with staff earlier, I may need to find some amended comments from my testimony because for the longest time, I think once we identified that it was, in fact, cheap nitrate fertilizer imported from Chile, the natural assumption was that the U.S. Department of Agriculture or some affiliated agency helped with the importation. We're not sure that that is, in fact, the case. There seems to be some indication through the import taxes and tariffs that took place back in the 1920s, 1930s, and 1940s in the large farming co-ops that there was some role of the Federal Government. But irrespective of whether it's Chilean fertilizer or a DOD related contaminant, the treatment and methodology is the same, and the cost is basically the same, extremely expensive.

Ms. SOLIS. Thank you.

Mrs. NAPOLITANO. Ask one more question. We'll go a second round.

Ms. SOLIS. For Ms. Cantú, how do you feel about the Federal Government's role in terms of the U.S. EPA holding, setting, or attempting to set a standard for perchlorate cleanup? Is that something that the Federal Government should be involved in or should states be allowed to continue to move ahead as California has? I mean, is it helpful to maybe have a clearer standard at the Federal level?

Ms. CANTÚ. Most of the pollution that we've seen historically has been contained within a state, so that a state jurisdiction could be consistent from throughout the state. The Kerr-McGee historic contamination that affected myself and Mr. DeLoach in that we grew up drinking undiluted, unblended water from the Colorado River that was heavily polluted and perchlorate levels that nobody could even dream about now, came from between two states. But that's pretty rare. In fact, I think that's the only case. So since we find these localized, it makes sense to have each state set its own standards to reflect the wills and the values of the people in that community. California is moving toward setting a final standard, they've done a lot of work historically. I think that's been good work to date.

Ms. SOLIS. Unfortunately, other states in the union don't follow suit, and that's where we have the dilemma in terms of trying to set some standards, and even trying to get Department of Defense to be responsible. They won't even come to the table or attend any hearings that we had in our subcommittee. And it's very unfortunate, but now hopefully that will change.

Mrs. NAPOLITANO. Thank you. We'll start a second round of questioning for this panel. My first question will be to Ms. Cantú. H.R. 813, "Santa Ana River Water Supply Act of 2007" would, among other things, authorize the lower Chino Valley—lower Chino dairy area the contamination demonstration and reclamation project. To what extent could this proposed project upset pressures on existing water supplies from perchlorate contamination and other causes of supply restrictions?

Ms. CANTÚ. Perchlorate is the contaminant of concern that we're here to discuss today, but salt is—just everyday salt is a major concern in this watershed as well. One of the goals for a sustainable community in this watershed is that we reach salt balance, that we're able to take out to the ocean as much salt as we are bringing in through importations. It is also critical for our sustainability. Perchlorate is one major concern that we're focused on, but we ought not to forget the others, and salt is one of those. So it's critically important.

Mrs. NAPOLITANO. Thank you. Mr. DeLoach, your testimony states that you will soon double your water recycling, and hopefully we'll be able to get the administration to change their tune because I'm working on that heavily.

Mr. DELOACH. Thank you.

Mrs. NAPOLITANO. What is the potential for further increasing water reused in the basin? And have you been successful in obtaining state or Federal funding for water reuse efforts?

Mr. DELOACH. Thank you very much. Yes, we have been in the Chino basin through the Inland Empire Utilities Agency, State Revolving Fund monies have been tapped, and other state sources. We're doing about 8,000 acre feet a year currently. We expect that number over the next five to ten years to exceed 12,000 acre feet. We're actually in the process now where we're actually beginning to import—or actually recharge local groundwater basins that have been heavily blended with either state project water or surface water runoff which we're capturing so that we can get every available drop of water resource back in the ground for local water producers. It's the most inexpensive source water that we have, and as you know it, the only drought-proof source that we have.

Mrs. NAPOLITANO. Thank you. Let's see. Ms. Newman, Exhibit 3 of your testimony shows a number of wells contaminated by perchlorate listed by county. Has the source of contamination been positively identified for each of the wells? And could you provide this committee with that information?

Ms. NEWMAN. I can certainly provide it. It's public record, it's on the DHS website. And I don't think in all of the situations that they've been identified, and certainly I think the dischargers would argue that they haven't been proven beyond a reasonable doubt to be the discharger, but they're certainly in most instances a source that you can look to just by looking through historic data.

Mrs. NAPOLITANO. Thank you. We look forward to seeing that piece. Or if you can give us a website, the staff can get to them and we'll pull them out.

Mr. DeLoach, H.R. 122, the "Inland Empire Regional Water Recycling Initiative," which would authorize the Inland Empire, Cucamonga Valley recycling project, passed the House. How would

this legislation assist in addressing water supply shortages resulting from perchlorate contamination? And I would also ask is the state being a partner in any way?

Mr. DELOACH. We anticipate that the state will in fact be a partner. There is an application for additional state fund dollars to assist us in development of those projects. The project component of the bill that's related to my agency will produce an additional 5,000 acre feet a year of recycled water to areas that we just cannot reach because they both were built on an alluvial fan. And pumping the water up those hills is very costly in terms of electricity demand. The Inland Empire Utilities Agency piece is another component of their larger region-wide program. That will do close to 20,000 acre feet, I believe, and they're both critical pieces of the puzzle.

Mrs. NAPOLITANO. Good. Do you know if the fertilizer you referred to is still being produced and imported into the United States?

Mr. DELOACH. As far as being produced and actually being imported into the United States, no.

Mrs. NAPOLITANO. Excellent. Thank you. Coming right along, Mr. Baca, do you have questions for the second round?

Mr. BACA OF CALIFORNIA. Thank you very much. First question is for Robert DeLoach. Generally what has been the cost to the district to address perchlorate contamination? And to what extent has perchlorate contamination in groundwater affected the operation and treatment cost and users fee for the district?

Mr. DELOACH. Treatment costs not only in our area but I mean the entire Chino basin, Congressman, the capital costs are somewhere in the million dollars per well to do a typical well head treatment. The annual O&M costs just to operate that system and the grind disposal or whatever's associated with that can be anywhere up to three or $400,000 a year. In some cases, I believe, as we get further east into the Rialto area, that is cost prohibitive just because of the types of contamination and the amount of contamination. In our area Cucamonga Valley Water District, the levels are such that we can actually blend the very costly state imported state project water and blend it down to below the state action level.

Mr. BACA OF CALIFORNIA. What do you estimate the cost to be in your area?

Mr. DELOACH. I'm not sure at this moment. I'd have to get back to you on that.

Mr. BACA OF CALIFORNIA. Any figure. What would it be?

Mr. DELOACH. We're probably looking at, on an annual basis, less than two to $3 million a year.

Mr. BACA OF CALIFORNIA. OK. My next question, then, along the same lines is since we have quite a few contaminated wells in my city, the City of Rialto, the 22, this question would be for the City of Rialto, council member from Rialto. What is your estimate based on the cost and the cleanup for that area? And I know that this is a high ball figure, but this is where we're looking at entities that are responsible, not only to the Federal Government, but also the private sector that was involved in that has caused a lot of the contamination in the immediate area. What would it be for estimated

costs, you know, if we were looking at trying to solve the problem in short range? And I guess we would only look at the short range because we don't know what the long range term would be based on the population because this could be ongoing. The council member from Rialto, Joe Baca Junior, what's your estimate of what that would be?

Mr. BACA. You know, based on our attorneys' numbers, the total cost for the total cleanup in the City of Rialto could be anywhere from $100- to $300 million. But a concern is obviously if we keep putting on these well head treatments, it's just a temporary fix. I think Penny brought up a good point; unless we really go in there and clean the whole thing up, it's going to be ongoing costs. And as Robert mentioned, you know, it's about a million and a half per well head treatment, and anywhere from $300- to $500,000 per year. So it's an ongoing cost. And that's a concern that we're just passing these costs on to residents, but, you know, the estimates have been between $100- and $300 million. Unless we really go in and clean it all up, I mean, the costs are just going to be ongoing.

Mr. BACA OF CALIFORNIA. And I guess this goes for all the panels here, and an aggressive step for this panel and the other is: What we need to take, you know, from our Federal Government and from our committee is the kind of legislation, and whether it's Mrs. Solis'—Congresswoman Solis' legislation or other panels' legislation that basically says that we need to come back and really take drastic steps and look at solutions, not only at what we need to do now, but in terms of what we need to do in terms of the future to make sure that we have good quality of water to protect a lot of our individuals.

The next question I would have is for, I guess, Ms. Cantú. What specifically could the Federal Government—it's along the same lines—do to support watershed protection efforts related to perchlorate contamination?

Ms. CANTÚ. Specifically for perchlorate would be encouragement or requirement by the Department of Defense to step up and remediate and clean the contamination that they are responsible for. That would go far in the State of California, not just from this watershed, but throughout the state, to clean up the situation.

Mr. BACA OF CALIFORNIA. All right. I think you know well that the hardest thing is for them to admit that they did it based on, you know, everybody's afraid of lawsuits. Once they admit that they've caused the problem, then there's the probability of lawsuits. So they never want to admit that they caused the problem. But at least to clean it up is very important.

I know my time is just about expired, but the next question then I would have is for—I guess for Ms. Newman. In your opinion, what are the key areas for the Federal Government in addressing perchlorate contamination?

Ms. NEWMAN. I agree, the Department of Defense really needs to step forward, and that can only be done through, you know, Federal action. States don't have much power in that situation. But I think you can also set an example on the recognition of the perchlorate problem, where it is taking place, and the need to really move forward. And we only have one state that has set a standard, and that's Massachusetts at 2 parts per billion. That should tell the

rest of the states that there is a reason to not have it at 6, but let's get it down.

The evidence that is coming out is so strong. The Center for Disease Control study recently indicated that very small levels will affect human beings. We can't afford to sit back and wait for dead bodies and then the epidemiological studies. We'll have damaged populations. And so we really need to take an aggressive measure. And I think that many of the states are looking to the Federal Government to help with that and setting that leadership.

Mr. BACA OF CALIFORNIA. Thank you. I know that my time is expired, but for the record, I'd like to state that both Senator Feinstein and Senator Boxer are very much concerned with this issue and want to take aggressive steps in trying to look for solutions to the problems to remedy the situation. And I know that they're working in conjunction with all of us members here in the State of California, both in the northern portion and the southern portion. They're looking at how we might remedy the situation and hopefully we can continue to work together.

Mrs. NAPOLITANO. Thank you, Congressman. One of the things that a lot of people, especially students in the audience, knows is that California—Southern California sources of water are from three areas; California aqueduct State Water Project of course, the Colorado River, and then our groundwater basins. And one of those goals, you are going to have horrendous impact for our water quality, and that's one of the reasons that the dam was established to indeed be able to help provide should an earthquake cut us off from the aqueduct and some other sources of water, at least we'd have some of that water.

However, if you do not have potable water, if you don't recycle the water, if we don't clean up the aquifers, if we don't look at the perchlorate, saline and all the other contaminants, California's economy will drop because that affects where you live, the ability to deliver the water to not only the residents but to businesses that will provide the jobs and thus provide the economy. So it's a great issue, it's a big issue, it's a very important issue, and yes, Joe, I see your finger. Go ahead.

Mr. BACA OF CALIFORNIA. Madam Chair, along the same lines, one of the things that we really have got to consider as we look at the cleanup of the perchlorate contamination and remediation of the water supply is global warming and the impact it's going to have. So that's why this becomes very critical right now, because as scientists and others have said, global warming means that we could have less water in terms of the future. And if we don't begin to look at cleaning this water, the impact it's going to have on us.

Mrs. NAPOLITANO. Yes, sir. And please remind the Administration, there is global warming.

One of the sad facts, and I say that because I've been in water also for a number years, is that many of our community water systems, the water wells are not tied into either the aqueduct or to the Colorado River, and hence, cannot blend their water, and so they're stuck with contaminants. And we need to begin to look at how do we work in tandem to be able to help those communities develop the ability, not only to clean up their contaminated wells, but also to tie into other sources of water for the future benefit of

the communities. With that, thank you, panel. It's been very—wait a minute. I didn't give you a chance, did I? I'm sorry. I keep forgetting my manners.

Ms. SOLIS. Yes. A question for Penny. When you hear about contaminants affecting your community, do you feel that there are sufficient tools and information or grants that you can utilize to help provide that information to the community?

Ms. NEWMAN. No. I mean, there never is the grants for community-based organizations that are the most affected by these issues, and it's very difficult for communities to find a way to participate in the discussions on what the solutions are. And certainly the residents who are most affected know what the solutions are and what they should be, and they have a right to participate in that. As we're finding with this hearing that's coming up in May with the state board, we had applied and received authority to be a designated party in that. What we found is we're up against all the attorneys for Goodrich and Black & Decker, we don't have any attorneys.

And so it seems very unfair that to participate in a public setting, that communities, and low income communities like ours, are hampered because they don't have access to the high-powered attorneys. They don't have that ability to play on the same level. So the grants and stuff would be extremely helpful in gaining information, access to information, access to the forms in which these issues are discussed in helping to frame the solutions that come forward.

Ms. SOLIS. I don't know if you're aware, but under the Bush administration, he expects to cut back on public information regarding sites that are—well, even chemical plants and things like that that may be exposing different contaminants in surrounding areas. And they would very much like to not have to publicize that. They think it's a burden on businesses. And in fact, they're also holding back on funding for public information that's made available through libraries, through the EPA. So I would just underscore that the public really needs to help send a message to this administration who strongly feel that those tools are being taken away that you do something with it. Thank you very much.

My next question is for Mr. Wyels. And I wanted to ask you when will the State Department of Health Services be prepared to announce a final maximum of contaminant level for perchlorate?

Mr. WYELS. The Department of Health Services put out a proposed rulemaking for public comment and concrete to close, I believe, in October or so 2006. So I'm expecting that they will be coming forward with their rule virtually any day, certainly within the next several months.

Ms. SOLIS. So is there any reason why it's taking so long? It seems to be——

Mr. WYELS. I must admit, I'm not privy to their internal process.

Ms. SOLIS. And a follow-up question; are any financial assistance programs available for removing perchlorate from the groundwater available through state water bonds or other state resources?

Mr. WYELS. The State Water Board does have some limited funding available for problems like perchlorate contamination. It's a limited amount of money. The State Water Board did, in fact, send

several million dollars to the City of Rialto when the crisis first hit. I don't think the state board is in a position to do that again because that was fairly significant.

Ms. SOLIS. So isn't there a role that the Federal Government can play here?

Mr. WYELS. Absolutely.

Ms. SOLIS. Perhaps provide assistance?

Mr. WYELS. Yes.

Ms. SOLIS. Or—and could you give me a sense, because obviously we have—we're running at deficit spending too at the Federal Government, but also holding responsible parties accountable, maybe having EPA provide more full enforcement?

Mr. WYELS. Yes. EPA certainly is one of our main partners in the fight against groundwater pollution and finding responsible parties and having them pay for the damage they've caused. So I'm sure that they could use more funding, all of the state agencies and Federal agencies are very committed but very understaffed personnel trying to do this work.

Ms. SOLIS. And I have one last question here. This is for Mr. Robert DeLoach, and it's with respect to the Metropolitan Water District of Southern California. I think over the past decade, they've added significant water supply capacity in anticipation of the reduction in the Colorado River supplies and, in response to the Delta pumping restrictions, has actually met their actions to help stabilize the Chino basin supplies.

Mr. DELOACH. Well, I think most of what you'll hear about Metropolitan doing will be related to the Colorado River, the Imperial Valley and mining the All American Canal and issues such as that. That's the Colorado River system. The State Water Project system, as the Congressman is well aware, developed the Diamond Valley Lake for emergency purposes only. We hear from time to time that there are discussions that that could be used for short-term deliveries to offset demands. I'm not aware that anything is done specifically for the Chino basin, although with aging infrastructure, we're seeing more and more opportunities for catastrophic, if you will, breakdowns in that system. We're going to be shut down for nine days starting next week as a result of a portion of the line becoming almost inoperable.

So those types of things we're going to be faced with more and more every year, and that will greatly curtail, if not eliminate imported water for a short duration and period of time.

Ms. SOLIS. Thank you.

Mrs. NAPOLITANO. Thank you. There's some real heavy duty stuff coming our way, the pumps being reduced. If we have drought, continuing the drought cycle that we're in, if we have contamination of aquifers, I mean, this whole area—and I'm talking Southern California, just in this area, is going to find themselves in a lot of water shortage problems. And just as a last question to Mr. Wyels, given the fact that there was just a water bond passed, how are we not looking at using some of that funding to be able to help address the issue of perchlorate?

Mr. WYELS. Actually, that's not an area that I work in, so I couldn't give you a very direct answer to how the money's being used. I do know some of it's available through the resource agency

in California and other dollars are available through California Environmental Protection Agency. But I couldn't tell you more. There may be some people at the table who do have some more about——

Mrs. NAPOLITANO. OK. We'll look forward to getting some of those answers from some of my colleagues. Assemblywoman Wolk was Chair of Parks, Water, and Wildlife and working with us, and we'll hopefully be able to work in tandem to help bring some of the funding—match funding.

Thank you, panel. Thank you for your presentations and for your being so kind in sitting through the round of questions and for your involvement. And I'd like to now move forward to the second panel.

I would like to welcome Brad Coffey, Water Treatment Section Manager of the Metropolitan Water District in Los Angeles, Anthony Araiza, General Manager-Secretary of West Valley Water District in Rialto, Bob Martin, General Manager, East Valley Water District, Highland, and Michael Whitehead, Board Member, San Gabriel Basin Water Quality Authority in West Covina. And Dr. Robert Krieger, Personal Chemical Exposure Program, Department of Entomology, University of California, Riverside will be submitting written testimony for the record. And welcome, panel, and we will begin this round with Mr. Brad Coffey, Water Treatment Section Manager of Met.

STATEMENT OF BRAD COFFEY, WATER TREATMENT SECTION MANAGER, METROPOLITAN WATER DISTRICT, LOS ANGELES, CALIFORNIA

Mr. COFFEY. Thank you. On behalf of the Metropolitan Water District of Southern California, I wish to thank the committee for the opportunity to appear before you.

In 2006, the California Department of Health Services proposed a maximum contaminant level for perchlorate at 6 parts per billion. We expect a final maximum contaminant level this year. Metropolitan Water District is the nation's largest provider of treated drinking water. We import from the Colorado River and Northern California through the State Water Project. Metropolitan delivers on average more than one and a half billion gallons of water every day to its 26 customers known as member agencies. Those agencies, in turn, sell that water to more than 300 subagencies or directly to consumers. In all, over 18 million Southern Californians rely on Metropolitan for some of or all of their water supply.

Water volumes in California are frequently expressed as acre feet, an agricultural term for the amount of water needed to cover one acre with water one foot deep. That is 326,000 gallons. Translated to domestic use, one acre foot of water provides the yearly water needs for two families. Regional groundwater basins yield approximately 1.4 million acre feet of water per year, which is roughly 90 percent of the local supplies to Southern California. Most of this is recharged naturally, but about 200,000 acre feet per year of this groundwater is replenished through imported supplies.

One consequence of perchlorate in local drinking water wells is increased demands for deliveries from Metropolitan, either to offset local lost production or to blend down higher concentrations of perchlorate. To assess these effects, Metropolitan conducted a reconnaissance-level survey of its agencies to determine the potential

impact of the proposed perchlorate standard. The findings are as follows: 62 percent of Metropolitan's member agencies have detected perchlorate in 243 drinking water wells in the region. Importantly, 42 percent of those agencies have detected perchlorate higher than the proposed maximum contaminant level of 6 parts per billion.

Agencies have reported shutting down about five percent of their groundwater sources, that is 40 wells out of approximately 800, due to perchlorate contamination and have lost at least 70,000 acre feet per year of groundwater production. The affected agencies have also had to increase their purchase of imported water supplies for blending. Metropolitan began a perchlorate investigation in June of 1997, once it was detected in the Colorado River aqueduct. Extensive water test sampling showed that perchlorate entered the River at the Las Vegas wash near Henderson, and the contamination source was identified as Kerr-McGee, a chemical manufacturer in Henderson, Nevada.

The physical and chemical nature of the perchlorate ion precludes the effectiveness of typical groundwater treatment technologies. The optimum technology depends on the perchlorate concentration, presence in concentration of co-contaminants, and other water quality parameters. Compared to the operations and maintenance cost of groundwater from a typical domestic well, which is about $125 per acre foot, perchlorate treatment can increase the cost five-fold. Thus, treatment options are available to cover groundwater supplies contaminated with perchlorate; however, it's difficult to predict whether treatment will be pursued to recover all lost production since local agencies will decide based largely on costs, ability to identify potentially responsible parties for cleanup, and availability of alternative supplies.

Metropolitan responded to perchlorate within our state admission to provide the service area with adequate and reliable supplies of high quality water. I'll briefly describe these efforts. First, the cleanup at Henderson Nevada. Once perchlorate was detected in the Colorado River, Metropolitan worked with local state and Federal agencies to advocate for a rapid and complete cleanup at Henderson. Remediation began in 1998 and will continue for decades. As a result of the cleanup, perchlorate entering the River has been reduced by 85 percent.

Metropolitan also uses integrated resources planning to ensure adequate and reliable supplies to its service area. One strategy is for us to store imported water during wet years in groundwater basins for use during subsequent dry years. To make this strategy feasible in groundwater basins with perchlorate contamination, Metropolitan has funded treatment to ensure the stored groundwater can be used. Groundwater recovery projects, another integrated resources planned strategy, produced new water through treatment technologies that removed undesirable constituents.

In some cases, local agencies are reluctant to make the capital investments necessary to recover the degraded water. In this program, agencies may seek financial assistance from Metropolitan to offset the cost to the extent that recovering the water has a regional benefit. In summary, perchlorate contamination of local groundwater basins remains a serious threat to local water sup-

plies. Some agencies, particularly those who rely heavily on groundwater or are not within Metropolitan's service area, find that mitigation for perchlorate, though technically feasible, induces a large financial burden.

The Metropolitan Water District, through its regional approach to water supply planning, has helped to mitigate the issue by advocating for rapid cleanup of the Colorado River, by planning for water quality uncertainties, and by funding local groundwater projects. While our actions detailed here have reduced the regional water supply affected by perchlorate, the traditional supplies of communities are still threatened. We're encouraged by the community's interest in perchlorate and recognize that much work remains to be done. Thank you.

[The prepared statement of Brad Coffey follows:]

Statement of Brad Coffey, Water Treatment Section Manager, Metropolitan Water District of Southern California

On behalf of the Metropolitan Water District of Southern California (Metropolitan), I wish to thank Chair Napolitano, Representative Baca, and Representative Solis of the Subcommittee on Water and Power for the opportunity to appear before you this morning. My name is Brad Coffey, and I serve as the Water Treatment Manager for Metropolitan.

Perchlorate Background

Ammonium perchlorate is used as a main component in solid rocket propellant, and is also found in some types of munitions and fireworks. Ammonium perchlorate quickly dissolves and becomes highly mobile in groundwater. Unlike many other groundwater contaminants, perchlorate neither readily interacts with the soil matrix nor degrades in the environment. The primary human health concern related to perchlorate is its effects on the thyroid. Perchlorate interferes with the thyroid's ability to produce hormones required for normal growth and development. In 2006, the California Department of Health Services proposed a maximum contaminant level for perchlorate at 6 micrograms per liter (μg/L) or parts per billion (ppb), which is equal to the California Office of Environmental Health Hazard Assessment's public health goal. The public health goal is the concentration that does not pose any significant risk to health. A final maximum contaminant level is expected in 2007.

Metropolitan Background and Regional Water Supply

Metropolitan is the nation's largest provider of treated drinking water. Each day during a normal year, the district moves more than 1.5 billion gallons of water through its distribution system, delivering supplies to 26 member agencies. Those agencies, in turn, sell that water to more than 300 sub-agencies or directly to consumers. In all, over 18 million Southern Californians rely on Metropolitan for some or all of the water they use in their homes and businesses. These people live within Metropolitan's six-county service area, which encompasses 5,200 square miles in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties.

Metropolitan imports water from the Colorado River and Northern California through the State Water Project. Metropolitan's member agencies then deliver to their customers a combination of local groundwater, local surface water, recycled water, and imported water purchased from Metropolitan. For some, Metropolitan supplies all the water used within that agency's service area, while others obtain varying amounts of water from Metropolitan to supplement local supplies.

Metropolitan typically provides between 45 and 60 percent of the municipal, industrial, and agricultural water used in its service area. The remaining water supply comes from local wells, local surface water, recycling, and from the city of Los Angeles' aqueduct from the eastern Sierra Nevada.

Perchlorate Discovery

Metropolitan began monitoring for perchlorate in June 1997 when it was detected in the Colorado River Aqueduct. Extensive sampling within the Colorado River watershed in July and August of the same year indicated that the perchlorate originated in the Las Vegas Wash, and the most likely source was the Kerr-McGee (now TRONOX) chemical manufacturing site located in Henderson, Nevada.

Perchlorate levels in Colorado River water at Lake Havasu peaked at 9 ppb in May 1998; however, concentrations have decreased significantly in recent years as a result of aggressive clean-up efforts at Henderson, Nevada. Since October 2002, perchlorate concentrations at Lake Havasu have remained less than the proposed standard of 6 ppb, and the concentration has been consistently non-detectable (less than 2 ppb) since June 2006.

No detectable amount of perchlorate was ever found in the State Water Project system.

Effect on Local Supplies

Water volumes in California are frequently expressed as acre-feet, an agricultural term for the amount of water needed to cover one acre with water one foot deep (326,000 gallons). Translated to domestic use, one acre-ft of water provides the yearly water needs for two families.

Regional groundwater basins yield approximately 1.4 million acre-ft/year, which accounts for 90 percent of Southern California's local supplies. Most of this usage recharges naturally, but approximately 200,000 acre-ft/year are replenished through imported Colorado River and State Water project supplies.

Perchlorate in local groundwater basins originates largely from local sources. The vast majority (approximately 90 percent) of locations where perchlorate has been detected in the groundwater are associated with the manufacturing or testing of solid rocket fuels for the Department of Defense and the National Aeronautics and Space Administration, or with the manufacture, storage, handling, or disposal of perchlorate. Past agricultural practices using fertilizers laden with naturally occurring perchlorate have also been implicated in some areas.

One consequence of perchlorate in local drinking water wells is increased demand for deliveries from Metropolitan, either to off-set lost production or to blend down higher concentrations of perchlorate. To assess these effects, Metropolitan conducted a reconnaissance-level survey of its member and retail agencies to determine the potential impact of a perchlorate standard of 6 ppb. Sixteen (62 percent) out of Metropolitan's 26 member agencies and 32 (18 percent) out of 173 retail/contracting agencies have detected perchlorate in 243 drinking water wells. The survey indicates that 11 (42 percent) of the member agencies and 27 (16 percent) of the retail/contracting agencies have perchlorate detections higher than 6 ppb. While two agencies detected perchlorate in the range of 100-300 ppb, more than 60 percent of the agencies detected perchlorate at less than 10 ppb.

These agencies reported shutting down approximately five percent of their groundwater sources (40 wells out of 819) due to perchlorate contamination and lost at least 70,000 acre-ft/year of groundwater production. Affected agencies also had to increase their purchase of imported supplies for blending. In the longer term, many of these agencies are considering various options for removing or reducing perchlorate concentrations, including blending and treatment, to recover some or all of lost production.

Available Treatment Technologies

The physical and chemical nature of the perchlorate ion precludes the effectiveness of typical groundwater treatment technologies such as air stripping, carbon adsorption, or ultraviolet light oxidation. Perchlorate treatment technologies may be classified into two main categories of destructive or removal technologies. The main destructive process is biological reduction, which can be accomplished either within the soil formation (in-situ) or at a pump-and-treat facility (ex-situ). Typical physical removal processes include ion exchange, membrane filtration (including reverse osmosis and nanofiltration), and electrodialysis. Physical removal processes all require subsequent disposal of removed perchlorate.

The optimum treatment technology depends on the perchlorate concentration, the presence and concentration of co-contaminants, and other water quality parameters. For example, nitrate—which is also widely present in the region—influences the perchlorate treatability because of its similar chemical structure and its occurrence at concentrations thousands of times greater than perchlorate. For biological destruction of perchlorate contamination within the groundwater formation, site-specific hydrogeologic conditions such as depth, soil permeability, and groundwater flow velocity are also important.

In general, biological destruction is less expensive than physical removal processes. For example, the cost of ex-situ biological reduction is approximately $100/acre-ft for a low-nitrate site and $400/acre-ft for a higher nitrate site. In contrast, ion exchange ranges from $150/acre-ft to greater than $500/acre-ft. Compared to the operations and maintenance cost of groundwater from a typical domestic well ($125/acre-ft), perchlorate treatment can increase the cost five-fold.

Thus, treatment options are available to recover groundwater supplies contaminated with perchlorate. However, it is impossible to predict whether treatment will be pursued to recover all lost production since local agencies will make those decisions based largely on cost considerations, ability to identify potentially responsible parties for cleanup, and the availability of alternative supplies.

Metropolitan's Response

Metropolitan's mission to provide its service area with adequate and reliable supplies of high-quality water resulted in a number of related efforts that mitigate the impact of perchlorate contamination in the region. These efforts are described below.

Henderson, Nevada, Cleanup. Once perchlorate was detected in the Colorado River in 1997, Metropolitan began working with the U.S. Environmental Protection Agency, the Nevada Department of Environmental Protection, and the Southern Nevada Water Authority to advocate for a rapid and complete cleanup of perchlorate at the Henderson, Nevada site. Remediation activities began in 1998 and will continue for decades. As a result of the cleanup, the mass loading of perchlorate entering the Colorado River has been reduced by 80-85 percent and perchlorate has not been detected in Colorado River water at concentrations greater than 2 ppb since June 2006. Thus, the public health implications are reduced and less water is required by the agencies for blending down local contributions of perchlorate.

Perchlorate Action Plan. In January 2002, the U.S. Environmental Protection Agency released a draft risk assessment for perchlorate that led to the eventual public health goal and draft maximum contaminant level for perchlorate of 6 ppb. In June 2002, Metropolitan responded by initiating Perchlorate Action Plan to comprehensively address perchlorate. Elements of the plan included: monitoring, resource assessment, tracking health effects studies, tracking remediation efforts, modeling, legislative and regulatory strategies, and outreach activities.

Groundwater Conjunctive Use. One of the strategies employed by Metropolitan's Integrated Resources Planning is storage of surplus water available during wet years in groundwater basins for use during water supply shortages. The target for this dry-year conjunctive use is 300,000 acre-ft/year of water supply by 2020. To make this strategy feasible in a number of groundwater basins with perchlorate contamination, Metropolitan has funded ion exchange treatment to ensure that stored groundwater can be pumped and used for municipal water supply. Metropolitan has invested nearly $100 million in groundwater conjunctive use projects within its service area in partnership with its member agencies and groundwater basin managers

Groundwater Recovery. Groundwater recovery projects use a variety of treatment technologies to remove undesirable constituents such as nitrates, volatile organic chemicals, perchlorate, color and salt. In many cases, expensive processes are required, and agencies are reluctant to make the capital investments necessary to recover the degraded water. In those cases, agencies typically seek financial assistance to offset costs to the extent that recovering degraded water has a regional benefit. Once treated, however, recovered groundwater may be delivered to potable water systems.

Metropolitan currently funds recycling and groundwater recovery projects through the Local Resources Program. The Local Resources Program is a performance-based incentive program instrumental in helping the region implement local resource targets. Metropolitan has invested over $121 million and partnered with member agencies on dozens of recycling groundwater recovery projects.

Summary

Perchlorate contamination of local groundwater basins remains a serious threat to local water supplies. Some agencies, particularly those who rely heavily on groundwater or are not within Metropolitan's service area, find that mitigation for perchlorate—though technically feasible—induces a large financial burden. The Metropolitan Water District, through its regional approach to water supply planning has helped to mitigate the perchlorate issue by advocating for rapid cleanup of the Colorado River, planning for water quality uncertainties, and funding local groundwater recovery projects. Though much work remains to be done, the supply impacts from perchlorate contamination have been planned for or addressed to minimize the threat to the region's overall supply.

Mrs. NAPOLITANO. Thank you, Mr. Coffey.

Next we have Anthony Araiza, Manager-Secretary of the West Valley Water District in Rialto.

STATEMENT OF ANTHONY W. ARAIZA, GENERAL MANAGER, WEST VALLEY WATER DISTRICT, RIALTO, CALIFORNIA

Mr. ARAIZA. Thank you, Madam Chair, members of the committee. I'm here today to discuss a groundwater pollution crisis that is threatening public health, environment, water supplies, and general economic growth of a significant segment of the Inland Empire. West Valley is one of four water purveyors in the affected region. The other three water purveyors include Fontana Water Company and the cities of Rialto and Colton. Fontana Water Company is regulated by the California Public Utilities—regulated by the Public Utility Commission, and Rialto and Colton are governed by city charters. West Valley is an independent special district that has an elected board of directors.

The pollution which is polluting the groundwater aquifers on which West Valley and other area water providers rely presents an imminent and substantial endangerment to health and the environment. Due to the crisis, the citizens of the affected area are paying for enormous costs associated with the investigation and cleanup of pollution. Most of these citizens are hardworking, blue-collar families that should not have to do this, and do not have the ability to pay for such expensive investigation and cleanup. Unfortunately, as I describe later in my testimony, neither the Federal Government or the state regulatory agencies responsible for investigating and directing cleanup of this pollution crisis have taken any action which may resolve this decade-old problem.

I have personally been involved in responding to the contamination since we first learned of it. Regrettably, as is evident from the lack of progress in this last decade, the regulatory agencies charged with responsibility for overseeing the crisis including the U.S. EPA have been absent and have simply failed to bring a solution to the problem. Part of this reason for the ineffective response may be a lack of creating new strategies to deal with a complex issue involved in my area, which includes over 60 years of operations of dozens of responsible parties covering a fairly wide geographic area.

Modern times require new ways of approaching serious problems. However, instead of smart and creative problem solving, I have witnessed firsthand bureaucratic and legal roadblocks to finding a solution. West Valley's assessment is that this matter needs the immediate and close attention of the Federal Government, and specifically the U.S. EPA, to bring about the changes to the investigation process so that the rational, reasonable solution is identified, pursued, and achieved very soon. I base this assessment on my personal experience with the California regulatory agencies currently involved and my knowledge of what U.S. EPA has been able to accomplish in other areas where groundwater supplies have been severely polluted.

The perchlorate pollution has forced West Valley and other impacted water agencies to shut down or restrict the use of over 22 groundwater production wells in the area representing approximately 52 percent of the region's water supply. It is also West Valley's assessment that more groundwater production wells may be shut down in the near future as pollution continues to spread unchecked. The West Valley has purchased and is currently operating

several perchlorate treatment systems. These systems include ion-exchange systems and biological remediation systems. The perchlorate treatment technologies act to strip perchlorate from drinking water before it is served to the customers.

The costs associated with the perchlorate pollution and the related treatment technology are staggering. West Valley estimated costs to purchase and operate and maintain perchlorate treatment technologies over a ten-year period is approximately $35 million. This does not include investigation and administrative costs. The combined costs to the four impacted water purveyors to investigate and conduct a cleanup of the pollution will be in the hundreds of millions of dollars, which only increases by order of magnitude if the pollution continues unchecked. Due to these significant costs, it is imperative that the oversight of the investigation of the pollution be strong and efficient. Unfortunately, as I will explain further, that has not been the case in our area.

There is not a doubt that this is a complex problem; however, in my opinion, the crisis is being exacerbated by a cumbersome bureaucratic process. Currently, the agency directly responsible for overseeing the investigation of the pollution is the Santa Ana Regional Water Quality Control Board. At one time, the U.S. EPA was assisting as a backup to the Regional Board, but in the last few years the U.S. EPA, and the many enforcement tools granted to it by Congress, has been completely absent from the picture. During the course of the investigation, the regional board's effectiveness has been limited due to a small staff and limited resources.

Most important, through no fault of its own, the Regional Board structure is not suited for such a serious and complex enforcement case, which is managed in public hearings by a nine-member civilian board who naturally are often influenced by the local politics of their area. I have more in my statement, but I see my time is up. But——

Mrs. NAPOLITANO. Just wrap it up.

Mr. ARAIZA. Basically we feel that the U.S. EPA needs to step in and be a more forceful tool that can be utilized in the cleanup of this area. We feel that the Regional Board has been hampered, they've been stopped by the polluters in court time and time again. It's costing the citizens of our local area millions and millions of dollars to fight these polluters, and the tools that U.S. EPA has need to be utilized to bring these people to the table.

[The prepared statement of Anthony W. Araiza follows:]

Statement of Anthony W. Araiza, General Manager, West Valley Water District

Introduction

My name is Anthony Araiza and I am the General Manager and Secretary of the West Valley Water District. I am here today to discuss a groundwater pollution crisis that is threatening the public health, environment, water supplies and general economic growth of a significant segment of the Inland Empire.

West Valley is located in the County of San Bernardino approximately 54 miles east of Los Angeles. West Valley is a public agency formed on January 8, 1952 and established under Division 12 of the California Water Code. Since its inception, West Valley has been engaged in financing, constructing, operating, maintaining and furnishing water service to its customers. For Fiscal Year 2005-2006, West Valley's service area had a population of 62,400. West Valley is governed by a five-

member Board of Directors that is elected at large from the registered voters living within the water district's boundaries.

West Valley is one of four water purveyors in the affected region. The other three water purveyors include the Fontana Water Company and the Cities of Rialto and Colton. Fontana Water is regulated by the California Public Utilities Commission and Rialto and Colton are governed by their city charters.

By way of background, I have worked for West Valley for 44 years and have 25 years of experience in agency administration. I am directly responsible for overseeing the operation and maintenance of West Valley's drinking water supply wells. I am also responsible for directing all investigations and responses to incidents of chemical releases or pollution that impact West Valley's drinking water supplies, including the current perchlorate pollution problem.

The perchlorate pollution, which is polluting the groundwater aquifers on which West Valley and other area water providers rely, presents an imminent and substantial endangerment to health and the environment.

Due to this crisis, the citizens of the affected area are paying for the enormous costs associated with the investigation and cleanup of the pollution. Most of these citizens are hardworking blue-collar families that should not have to, and do not have the ability to pay for such expensive investigations and cleanup. Unfortunately, as I describe later in my testimony, neither the Federal nor the State regulatory agencies responsible for investigating and directing cleanup of this pollution crisis have taken any action which will resolve this decade old problem.

I have been personally involved in responding to the contamination since we first learned of the contamination. Regrettably, as is evident from the lack of progress in the last decade, the regulatory agencies charged with responsibility for overseeing this crisis, including the USEPA, have been absent or have simply failed to bring about a solution to the problem.

Part of the reason for this ineffective agency response may be the lack of creative new strategies to deal with the complex issues involved in my area, which includes over 60 years of operations by dozens of responsible parties covering a fairly wide geographic area.

Modern times require new ways of approaching serious problems. However, instead of smart and creative problem solving, I have witnessed firsthand bureaucratic and legal roadblocks to finding a solution. West Valley's assessment is that this matter needs the immediate and close attention of the federal government, and specifically the USEPA, to bring about changes to the investigation process so that a rational, reasonable solution is identified, pursued and achieved, very soon. I base this assessment on my personal experience with the California regulatory agencies currently involved and my knowledge of what the USEPA has been able to accomplish in other areas where groundwater supplies have been severely polluted.

Extent of Pollution, Cost for Cleanup and Treatment Activities

The perchlorate pollution has forced West Valley and the other impacted water agencies to shut down or restrict the use of twenty-two (22) groundwater production wells in the area, representing approximately 52% of the region's water supply. It is also West Valley's assessment that more groundwater production wells may need to be shut down in the near future as the pollution continues to spread unchecked.

West Valley has purchased and is currently operating several perchlorate treatment systems. These systems include ion-exchange treatment systems and bioremediation systems. The perchlorate treatment technologies act to strip perchlorate from drinking water before it is served to customers.

The costs associated with the perchlorate pollution and related treatment technologies are staggering. West Valley's estimated cost to purchase, operate and maintain perchlorate treatment technologies over a ten year period is approximately 35 million dollars. This number does not include investigation and administration costs. The combined costs to the four impacted water purveyors to investigate and conduct a cleanup of the pollution will be in the hundreds of millions of dollars, which only increases by orders of magnitude if the pollution continues unchecked.

Due to these significant costs, it is imperative that the oversight of the investigation of the pollution be strong and efficient. Unfortunately, as I will explain further, that has not been the case in our area.

Regulatory Oversight

There is no doubt that this is a complex problem. However, in my opinion, the crisis is being exacerbated by a cumbersome bureaucratic process. Currently, the agency directly responsible for overseeing the investigation of the pollution is the Santa Ana Regional Water Quality Control Board. At one time, the USEPA was assisting as a back up to the Regional Board, but in the last few years, USEPA (and

the many enforcement tools granted to it by Congress) has been completely absent from the picture.

During the course of its investigation, the Regional Board's effectiveness has been limited due to its small staff and limited resources. Most important, through no fault of its own, the Regional Board structure is not suited for such a serious and complex enforcement case, which is managed in public hearings, by nine civilian board members, who naturally are often influenced by the local politics of their area.

The Regional Board's process is subject to challenge at multiple levels, whether the Regional Board acts or fails to act. Imagine the U.S. Attorney's Office or a local District Attorney with such an unwieldy, awkward and restrained ability to act.

To be accurate, the Regional Board has issued some investigation orders and other directives for information. However, an objective review will show that for the entire time it has been investigating this pollution problem—at least seven years—the Regional Board has not pursued a comprehensive regional strategy that takes into account the 60 years of contamination from multiple sources where these sources are impacting drinking water wells miles apart.

Instead, the Regional Board is looking at individual sources of contamination on a case-by-case basis. This approach leads to multiple distractions described below and, in my view, is not adequate and is a lot of motion with little tangible action. This should be self evident since after over so many years, the regional perchlorate contaminant plumes have not been assessed, nor is the extent of the contamination known.

Also, I have witnessed the Regional Board's efforts being constantly undermined by responsible parties that are taking advantage of the process by challenging every step the board takes. These legal proceedings are causing significant delays in assessing the scope of the problem, all the while the pollution continues to spread. It is estimated that the combined legal costs to date for all parties is over 50 million dollars.

On top of this, just last month, the Regional Board yielded control of a portion of the investigation to the State Water Resources Control Board. In fact, the Assistant Executive Officer for the Regional Board told our technical consultant that Board Staff is so overwhelmed with the many legal proceedings involving one portion of the problem that until the State Water Board hearing is complete, he will take no action on any of the other perchlorate-related investigation activities currently before the Regional Board.

My blunt assessment is that this case has reached the point where serious help and intervention is needed to review the situation and consider options to help get this under control and restore the public's confidence in the State's oversight and regulatory role over water supplies. Pressure on USEPA to re-engage and exercise their jurisdiction would be a good first step.

No state agency has the enforcement capabilities or know-how to get the job done the way USEPA handles complex cleanup jobs. Equally important is the fact that USEPA is the only agency that can coordinate impacts on multiple regions, which this case ultimately will have. USEPA also should have an interest in protecting the federal funds that are being provided to this region. Without such help, nothing will change and hundreds of thousands of local citizens will continue to suffer the consequences of a stalled, time consuming and expensive effort currently underway.

Potential Regulatory Solutions

West Valley believes there is a regulatory solution. Due to the complex nature of the problem, it appears timely and prudent for the USEPA to reengage substantially in the investigation. The USEPA has experience handling large, complex pollution cases such as this that involve and affect many entities and persons.

More precisely, the USEPA handles many large complex cases throughout Southern California, including serious groundwater contamination problems in San Bernardino, Baldwin Park, Burbank, South El Monte and the San Gabriel Valley operable units. To date, these large complex USEPA-led groundwater investigations have been very successful. It is frustrating and somewhat disturbing that this pollution crisis has not received the same level of involvement from USEPA even though the people impacted by the pollution in the Inland Empire are of limited economic means and less political means to help protect their interests.

In this case, if USEPA had a greater role in the investigation, if not a lead agency status, it could engage all responsible parties in a manner apparently not available to the Regional Board. The Regional Board, which, as you know, is a political body, can only act when it meets and it must act at regularly scheduled meetings which requires compliance with the California Brown Act and usually involves other cumbersome procedures. This process naturally makes the investigation very slow

moving and it is hard for the Regional Board to take decisive action and react to changes in circumstances.

As I have explained in my testimony today, the parties involved in this case have witnessed several responsible parties using administrative procedures to delay resolution while continuing to push off indefinitely their own liability. If the USEPA were more heavily involved or simply put in charge, it would not need to wait for regularly scheduled hearings or follow time consuming administrative procedures which doe not get to the substance of the problem, let alone a solution.

To be very clear, I believe the USEPA, with the assistance of state regulatory agencies, could begin immediate talks with all parties about how to identify the scope of and deal with the problem. Such flexibility will dramatically decrease the time and costs associated with investigating the pollution and lead to solutions in a greatly reduced time frame.

In sum, the current lead agency regulators must continue the investigation with the resources available and consider additional enforcement tools which are available. Most importantly, the USEPA must step forward and take over the matter, or, at least, become involved in supervising the characterization of the contamination and its ultimate cleanup before it is too late and the contamination spreads to dozens more wells and impacts thousands more lives.

Conclusion

In conclusion, the perchlorate pollution in the Inland Empire is a water pollution crisis. There is urgent need for the USEPA to step in and develop and manage a regulatory approach that is not subject to constant legal challenge and also looks at the regional problem as a whole.

Thank you for the opportunity to appear before you today and I am available to answer any questions.

Mrs. NAPOLITANO. Thank you, sir. I appreciate your testimony.

Mr. Bob Martin, General Manager, East Valley Water District in Highland.

STATEMENT OF BOB MARTIN, GENERAL MANAGER, EAST VALLEY WATER DISTRICT, HIGHLAND. CALIFORNIA

Mr. MARTIN. Thank you. Madam Chairwoman, members of the Subcommittee. I want to thank you for holding this field hearing this morning. The timing of this hearing is significant because all of us began hearing about the perchlorate problem in our drinking water supply almost ten years ago. It was around Memorial Day of 1997. During these ensuing years, we have all struggled with this issue, first because there was no proven way to remove perchlorate from our drinking water supplies, and then we're dealing with the enormous cost now associated with constructing and operating perchlorate removal facilities.

My district was involved in much of the preliminary research involving treatment technologies and it has sponsored four national conferences over the past seven years where we have brought stakeholders from local state and Federal sectors together to better understand this challenge. I might add that we're also going to be sponsoring a conference next year to continue this effort. As the State of California prepares to issue a final MCL for perchlorate, I hope that the Congress, under the leadership of your subcommittee, can move forward with new local and Federal partnerships that will help us to address the issue of how to treat and remove perchlorate from our drinking water supply without overly burdening our customers with water bills they cannot pay.

All of us at the witness table face the challenge of removing perchlorate from our drinking water supplies. But the nature of this challenge does and can differ from each location. In the East Valley

Water District, our needs are met primarily by groundwater from the Bunker Hill groundwater basin, from which we draw about 80 percent of our water supply. The remaining 20 percent comes from the Santa Ana River which originates in the San Bernardino mountains.

In approximately 2001, a series of our well tests confirmed that East Valley Water District did indeed have perchlorate in our drinking water supply, and we tested positive in eight of our 21 wells. I did have a contact level of perchlorate at levels ranging anywhere from 4 parts per billion up to 16 parts per billion. Based upon our investigations, though, we can find no indication that our service area has been the location of a defense-related facility or of a private sector facility. Based upon research conducted by our Regional Water Quality Control Board, that's the Santa Ana region, we have concluded that our perchlorate problem can be traced back to the fertilizer that was earlier mentioned that was brought in from South America during the early part of the 20th century. It was used on orange groves and crops that are now part of our service area.

Since these deliveries were made generations ago and land ownership has changed, often many times, we see little hope in securing funding help from principal responsible parties. This means that the customers of my district will have to bear the cost of building and operating complex perchlorate treatment systems. When we found perchlorate in our drinking water supply, the next question to answer was whether the U.S. EPA or the State of California might respond by setting a standard for perchlorate and what that standard might be. East Valley has closely participated in the Federal and state dialogue with regard to this issue over the past several years since many millions of dollars of capital costs will be depended upon what that standard will say.

When it became apparent that the State of California would proceed with an MCL, my board began committing itself to financing, design, and construction of treatment facilities that would allow us to meet this pending MCL. But I must tell you that removing perchlorate from our drinking water supply is going to represent the single most costly project the agency has ever undertaken. We estimate that the design and construction of the necessary treatment facilities will require us to spend an initial $50- to $60 million with many years of additional operation and maintenance costs to follow.

Many of our customers are on fixed or limited incomes, and considering the improbability of identifying the PRP, the result will be these customers will have to bear the full costs of treatment. This initial capital outlay alone could add $15 to $20 per month to a typical customer's water bill. This, indeed, will be a very heavy burden for many of the people that we serve and may be expected to only increase over the years because of the high O&M costs associated with perchlorate.

It is our hope in East Valley that we can work with this committee, our local water agency colleagues, and our congressional delegation to expand on the work that you've already done and create a perchlorate cleanup partnership which will allow us to cooperate together and assure the safety of our drinking water

supply. We at East Valley cannot trace our perchlorate contamination to the activities of the Federal Government or other contractors, but we have the same responsibility to serve safe water to our customers and to do so under arrangements that they can afford.

We believe that when a drinking water supply or—we believe that a local and Federal cleanup partnership would be of great benefit to people we serve, and I urge you to continue to pursue authorizations and appropriations that would make such a partnership a reality.

Thank you.

[The prepared statement of Bob Martin follows:]

Statement of Robert Martin, P.E., General Manager, East Valley Water District

Madam Chairwoman, Congressman Baca, Congresswoman Solis, and Members of the Water and Power Subcommittee, I am Robert Martin, General Manager of the East Valley Water District in San Bernardino. Thank you for holding this field hearing today. I know that I am joined by all of my water colleagues at the witness table and all of those in the Inland Empire in expressing our deep appreciation for the interest and the leadership that this Subcommittee has shown with regard to the challenges we all face in securing the water resources needed for the future of our region and throughout the West. The timing of this hearing is significant because all of us began hearing about perchlorate in our drinking water supply almost ten years ago, around Memorial Day of 1997. During these ensuing years, we have all struggled with this issue, first because there was no proven way to remove perchlorate from drinking water, and then with the enormous costs associated with constructing and operating perchlorate removal facilities. The East Valley Water District has sponsored four national conferences over the past seven years bringing stakeholders from the local, state, and federal sectors together to better understand the nature of this challenge. As the State of California prepares to issue a final MCL for perchlorate, I hope that the Congress, under the leadership of your Subcommittee, can move forward with new local/federal partnerships that will help us to address the issue of how to treat and remove perchlorate from our drinking water without overly burdening our customers with water bills which they cannot afford to pay.

All of us at the witness table face the challenge of removing perchlorate from our drinking water supplies. But the nature of this challenge can differ with each location. The problems that my agency faces with perchlorate may be traced back to the changing pattern of land use in our service area over the past hundred years. When the East Valley Water District was founded in 1954, much of our nearly 33 square mile service area in the eastern part of the San Bernardino Valley were orange groves. Over the years, with the creation of the City of Highland and the rapid urbanization of our region, we have grown to where we serve the water and wastewater needs of approximately 70,000 customers. This number continues to grow as housing tracts replace most of the remaining orange groves in the easternmost portion of our service area. Our needs are met by groundwater from the Bunker Hill Basin from which we draw about 80% of our water supply with the remaining 20% coming from surface water that originates in the San Bernardino Mountains.

Both our groundwater and our surface water supply have always been considered to be of high quality. We have watched as our colleague agencies in the region have wrestled with perchlorate contamination that has been traced to a number of sources, frequently associated with defense, or defense contractor facilities or even private sector facilities such as fireworks manufacturers. Then, in 2001, a series of well tests confirmed that East Valley Water District had perchlorate in 8 of our 21 wells at levels ranging from 4 parts per billion (ppb) to 16 parts per billion (ppb). Based upon our investigations, we can find no indication that our service area has been the location for a defense related facility or of a private sector facility. Based upon research conducted by our regional water quality control board (Santa Ana Region), we have concluded that our perchlorate problem can be traced back to fertilizer brought in from South America in the early 20th century and used on orange groves that are now part of our service area. Since these deliveries were made generations ago and land ownership has changed, often many times, there is little hope of our securing funding help from principal responsible parties. This means that the

customers of the East Valley Water District will have to bear the cost of building and operating complex perchlorate treatment systems.

When we found perchlorate in our drinking water supply, the next question to answer was whether the USEPA and the State of California might respond by setting an MCL for perchlorate and what that MCL might be. East Valley has closely participated in the federal and the state dialogue with regard to this issue over the past several years since many millions of dollars of capital costs at our utility depended upon the standards set by our Federal and State regulators. When it became apparent that the State of California would proceed with an MCL, and when we received guidance with regard to what this might be, my Board began committing itself to financing, design, and construction of the treatment facilities that would allow us to meet the California perchlorate MCL. Our East Valley mission statement calls on us "to provide our customers with a safe and reliable water supply that is delivered at a fair and cost effective price" and we are fully committed to meeting that high standard.

But I must tell you that removing perchlorate from our drinking water supply represents the most costly single action that my agency has ever undertaken. We estimate that design and construction of the necessary treatment facilities will require us to spend an initial $50-60 million with many years of additional Operations and Maintenance (O&M) costs to follow. Many of our customers are on fixed or limited incomes. Considering the improbability of our identifying a PRP, the result will be that these customers will have to bear the full cost of treatment. This initial capital outlay alone could add $15-$20 per month to a typical customer's water bill. This will be a very heavy burden for many of the people that we serve and this burden may be expected to increase over the years because of the high O&M costs associated with Perchlorate treatment.

We have followed with interest and deep appreciation the efforts of Congressman Baca and Senator Feinstein to secure passage of the California Perchlorate Contamination Remediation Act in the 109th Congress. We also deeply appreciate the leadership of you, Chairwoman Napolitano and the Water and Power Subcommittee with regard to this issue. You have all helped to give voice to the fact that our region, our State, and our nation cannot prosper without the assurance of an adequate, safe, and affordable water supply. In the past, these sorts of major challenges have been met through the creation of local/federal partnerships. It is our hope at East Valley that we can work with this Committee, our local water agency colleagues, and our Congressional delegation to expand on the work that you have already done and create a perchlorate cleanup partnership which will allow us to cooperate together and assure the safety of our drinking water supply. We at East Valley cannot trace our perchlorate contamination to the activities of the federal government, federal contractors, or entities completely in the private sector. But we have the same responsibility to serve safe drinking water to our customers and to do so under arrangements that they can afford. We believe that when a drinking water supply is secured that the entire nation benefits. A local/federal cleanup partnership would be of great benefit to the people we serve and we urge you to continue to pursue authorizations and appropriations that would make such a partnership a reality.

Mrs. NAPOLITANO. Thank you, sir. I appreciate your testimony.

Mr. Michael Whitehead, Board Member, San Gabriel Basin Water Quality Authority, West Covina. Thank you for being here, sir.

STATEMENT OF MICHAEL WHITEHEAD, BOARD MEMBER, SAN GABRIEL BASIN WATER QUALITY AUTHORITY, WEST COVINA, CALIFORNIA

Mr. WHITEHEAD. Thank you, Madam Chairman, members of the committee. I've submitted fairly detailed prepared testimony and remarks with a good deal of factual information, and if it is acceptable to you, I'll submit on that. But I would like to add a few observations about that, and in particular with respect to the San Gabriel Valley where I spent the last 30 years of my life managing water systems and water supplies.

Mrs. NAPOLITANO. We'll accept that for the record.

Mr. WHITEHEAD. Thank you. I spent 30 years of my life dealing with water supplies in the San Gabriel Valley, and the good news in the San Gabriel Valley is that we have this vast underground aquifer which supplies and is capable of supplying over a million people that live and work in the San Gabriel Valley from local groundwater supplies—a local, abundant, renewable, sustainable water supply. That's the good news. The bad news is that much of it is polluted, polluted so much, in fact, that the U.S. EPA named it a Federal Superfund site years ago and set about, I think, observantly or affirmatively doing something about that. But even so, that took a long time. And the state legislature formed the San Gabriel Basin Water Quality Authority specifically for the purpose of addressing groundwater contamination in the Valley.

And we've gotten a good start on that. We've had your support and the support of the entire San Gabriel Valley delegation. Also Mr. Baca has been very influential in supporting our efforts in getting the Federal Government to step up and take responsibility for this long and unfortunate legacy of Cold War Era defense-related discharges into the aquifer that's contaminated this rich, abundant, local, renewable supply. It has bedeviled us. The perchlorate problem, as my colleagues have mentioned, is extraordinarily difficult to deal with, very expensive to deal with. It is, in my estimation, extraordinarily unfortunate that our public officials have failed to take a stand on what the drinking water standard ought to be.

This contaminant has been known to be out there for more than ten years, and as a manager in the water supply industry, it is imperative that we have standards, that we have standards that we can design water systems to comply with. And quite frankly, the lack of a standard has left us with our hand out to the Department of Defense, which routinely brushes it aside saying, "A little bit of perchlorate never hurt anybody." But the fact of the matter is perchlorate represents a clear and present public health and safety crisis and has to be addressed. And with your support, support you've given the San Gabriel Basin Groundwater Restoration Fund and our efforts to increase the authorization there, we are extraordinarily grateful for your leadership and support on that.

I'd like to yield whatever time I have remaining. My colleagues from the Authority have a very brief video clip that was broadcast on public television recently that describes a near catastrophic problem with perchlorate in the City of Monterey Park that was aided immensely by the funding that was provided through your efforts.

[The prepared statement of Michael Whitehead follows:]

Statement of Michael L. Whitehead, Director of the San Gabriel Basin Water Quality Authority

Good morning, Madam Chairwoman, Committee members, and staff. My name is Michael Whitehead and I am a member of the Board of Directors of the San Gabriel Basin Water Quality Authority. Let me express my appreciation to Congresswoman Grace F. Napolitano, Congressman David Dreier, Congresswoman Hilda Solis, Congressman Adam Schiff, Congresswoman Lucille Roybal-Allard, and Congressman Gary Miller for their unwavering support and efforts in helping to restore the San Gabriel Groundwater Basin.

The San Gabriel Basin underlies 167 square miles of the San Gabriel Valley. The San Gabriel Basin holds hundreds of thousands of acre-feet of local, renewable, public drinking water supplies. In fact, the San Gabriel Basin provides a reliable, local

drinking water supply for the more than one million people who reside and work in the San Gabriel Valley.

Beginning in the early 1980s, industrial contaminants have been discovered in the groundwater in the San Gabriel Basin aquifer. Those contaminants are the unfortunate legacy of unregulated discharges from defense-related industries during the cold-war era of the 1950s, 1960s, and 1970s. Contaminants such as Perchlorate, Volatile Organic Compounds, and other industrial chemicals in the groundwater led to the closure of many dozens of drinking water wells in the San Gabriel Valley. The resulting crisis led to the United States Environmental Protection Agency placing the San Gabriel groundwater basin on the EPA's National Priorities List. In other words, the Basin became one of the nation's largest superfund sites. But that allowed the EPA to take necessary investigatory and enforcement actions to identify the potentially responsible parties and to develop information needed to formulate groundwater cleanup plans. Though the EPA's actions have been extraordinarily helpful, the EPA did not undertake the job of cleaning up the Basin itself, and it has been in no position to provide funding to local agencies for that purpose.

To satisfy the need for a locally-based entity to provide leadership and unified planning, the California State Legislature in 1993 created the San Gabriel Basin Water Quality Authority to plan, coordinate, and accelerate the San Gabriel Basin groundwater cleanup efforts. Since its inception, the Water Quality Authority has developed and funded projects that have removed over 20 tons of contaminants and treated over 312,000 acre-feet of groundwater in the San Gabriel Basin.

The Water Quality Authority has been aided by two federal programs—the San Gabriel Basin Restoration Fund ("Restoration Fund") and the Title XVI program. These two programs have been a catalyst in the success of our remediation efforts. Both programs have enabled us to continue the collaborative approach of merging groundwater cleanup with restoring public drinking water supplies. It has allowed us to leverage federal dollars and local funding to bring all parties, including the parties potentially responsible for the contamination, to the table and work in a manner that addresses multiple issues at the same time.

Through the leadership of Congresswoman Napolitano, Congressman David Dreier, and the members of the San Gabriel Valley Congressional Delegation, Congress created the Restoration Fund in December of 2000. The Restoration Fund is providing $75 million in federal matching funding for groundwater restoration projects in the San Gabriel Basin and $10 million for projects near the Whittier Narrows in the Central Basin. The Restoration Fund has provided urgently needed funding for local groundwater remediation efforts to assure reliable, safe drinking water supplies for our community. Congresswoman Napolitano, together with Congressman Dreier and their colleagues moved decisively to establish the Restoration Fund as a means of expediting the remediation of the very valuable local groundwater supplies.

The Restoration Fund has provided an incentive for the Responsible Parties in the San Gabriel Basin to participate in the cleanup and reach funding agreements with the Water Quality Authority and the affected local water suppliers. The funding has also allowed the Water Quality Authority and the affected water suppliers to fund projects even before Responsible Parties could be identified or when Responsible Parties are no longer viable, cannot be located, or are recalcitrant. Without this additional federal funding, the likelihood for additional well closures would be great, leaving only the option of turning to costly and already overburdened imported water supplies.

In light of the remarkable success of the Restoration Fund and its profound impact on the local cleanup efforts, Congressman David Dreier and his colleagues in the San Gabriel Valley Congressional Delegation have introduced H.R. 123. H.R. 123 would increase the ceiling on the Restoration Fund by $50 million for a total authorization of $135 million. This additional funding would allow us to continue the progress we've made and allow us to avoid enormously costly litigation that only serves to delay the cleanup of local drinking water supplies.

Similarly, the Title XVI program has provided the San Gabriel Basin with the ability to provide much needed wellhead treatment, stem the flow of contaminants, stabilize water rates, and most importantly deliver safe and reliable drinking water to the residents of the San Gabriel Valley.

In 2004, Congresswoman Napolitano and her colleagues in the San Gabriel Valley Congressional Delegation introduced and passed H.R. 1284 which increased the ceiling on the San Gabriel Basin Demonstration Project by $6.5 million. This increase resulted in a total authorization of $44.5 million for local cleanup efforts. The additional funding has allowed the Water Quality Authority to maintain the crucial momentum toward implementing groundwater cleanup we've seen in the San Gabriel Basin.

In the time period since the Restoration Fund and Title XVI program were made available to the Water Quality Authority, thirty-four projects have been allocated funding. Twenty projects have been built and another eight are currently under construction with completion expected by the end of summer.

For example, with the completion of four major groundwater cleanup projects developed and implemented through the Water Quality Authority with the cooperation of local water suppliers, participating Responsible Parties, and the U.S. EPA, we will be removing perchlorate and other toxic chemicals from groundwater at the rate of 24,000 gallons per minute on a 24/7 year-round basis. These projects will continue to provide safe drinking water to residents and businesses in Baldwin Park, La Puente, West Covina, the City of Industry, and surrounding areas for decades to come without burdening the public with higher water bills.

Without the funding for the treatment facilities, local water suppliers would have been forced to shut down more water wells due to rapidly migrating contamination. The well closures would have forced local water suppliers to become reliant on imported water, which would come mainly from the Colorado River. And as you know, California's allotment from the Colorado River water is being cut back. This would have severely impaired our ability to provide water for the residents and businesses in the San Gabriel Valley.

Water from wells in the San Gabriel Valley is relatively inexpensive to pump and supply to homes and businesses. The current price for an acre-foot of treated, ready-to-drink Colorado River water in the high-demand summer period is approaching $500. The typical cost to pump, treat, and deliver an acre-foot of local San Gabriel Basin groundwater is $65 to $250 depending on the levels and types of contamination being treated.

It is vital that we restore the San Gabriel Basin aquifer which as I mentioned is an essential, local, renewable water supply. Once we are able to remediate the contamination it is our belief that the San Gabriel Valley will be able to use the groundwater aquifer to meet most, if not all, of our local water needs. Removing harmful contaminants from our communities' groundwater supply will allow local water suppliers to better meet the needs of local residents for safe drinking water at affordable rates and makes certain that the groundwater basin is able to meet the water supply needs of future generations.

The federal assistance provided by the Restoration Fund and the Title XVI program have allowed us to carry out our mission of facilitating groundwater cleanup and providing a clean, reliable drinking water supplies for the more than one million residents of the San Gabriel Valley.

Thank you for allowing me to testify on the successes of the San Gabriel Basin Water Quality Authority and the important on-going progress of the cleanup of the San Gabriel Basin today.

Mrs. NAPOLITANO. Dim the lights, please.

[Video Presentation.]

Mrs. NAPOLITANO. Thank you. It's so true. The migration does happen in most instances whether we want to admit it or not, which then brings to mind that we, as a society, not only the water agencies, the local municipal governments, but also the general populace needs to begin to look at water conservation. And the agency needs to look at water storage and water recycling to continue to be able to provide that source of water.

With that, I will start off the questioning with Mr. Coffey. And one of the things that struck me in your testimony was the cleanup of the Henderson, Nevada contamination. How was it accomplished so efficiently? Who paid for it? And what happened to the perchlorate in Lake Meade? I mean, it didn't just evaporate. And did it go downstream to the irrigators and finally to Imperial and then into the tap waters of Southern California of which we are beneficiaries? And can you describe in more detail how the NC-2 cleanup actually works?

Mr. COFFEY. Yes, Congresswoman. In 1997 when the detection level for perchlorate was reduced, we detected perchlorate in the Colorado River aqueduct. We began an extensive evaluation of the

watershed and identified the Las Vegas wash, which is the main drainage area from Las Vegas, as having extremely high concentrations of perchlorate. It wasn't long before we identified groundwater flows in the Las Vegas wash region which contained that perchlorate.

The agency with regulatory oversight there was Nevada's Department of Environmental Protection. Nevada Department of Environmental Protection working with the polluters, Kerr-McGee and American Pacific Corporation, and with the oversight of the U.S. Environmental Protection Agency, began a series of cleanup orders where Kerr-McGee installed various control measures to control the main source of the plume. There are two main plumes in the Henderson area, one which was caused by Kerr-McGee which was rapidly moving into the Las Vegas wash, and one which was entering the groundwater and not moving as rapidly toward the wash, that was the American Pacific plume.

There's been three or four treatment phases which were installed, initially a pump-and-treat system was installed which reduced by about 500 pounds per day the amount of perchlorate entering the wash. That resin was then hauled off to a hazardous waste incinerator in Utah and the perchlorate was destroyed. Also, an impermeable boundary, a slurry wall was installed in the area of highest concentration to block the groundwater flow such that the groundwater could be pumped from the area of highest concentration and treated by ion-exchange. Subsequently, a treatment plant, a pump-and-treat system using biological destruction of perchlorate was designed and built and has been accomplishing all of the perchlorate destruction. In that case, the perchlorate is biologically reduced back to chloride, and then that water can be discharged back to the Las Vegas wash.

That whole system took approximately six years to get to its completion, although fairly rapid steps were taken to reduce the loading. At its maximum, we estimate about a thousand pounds per day of perchlorate were entering the Colorado River system. That perchlorate was disbursing throughout Lake Mead and all of the downstream areas of the Colorado River. In general, about 100 pounds of perchlorate resulted in about 1 part per billion of perchlorate in the Colorado River. So at its maximum of about a thousand pounds per day of discharge into the wash, that would have historically resulted in no greater than about 10 parts per billion of perchlorate in the River.

We've seen a dramatic decline in our monitoring results of perchlorate from the Las Vegas wash. Entering the wash now are approximately 50 pounds per day of perchlorate which is entering the Colorado River, and we have not detected perchlorate at our intake at Lake Havasu at concentrations above 2 parts per billion since May of 2006.

Mrs. NAPOLITANO. Thank you. Did Kerr-McGee pay adequate reimbursement or—besides putting in their treatment plant?

Mr. COFFEY. Kerr-McGee followed all of the directives by the Nevada Department of Environmental Protection. They since had a lawsuit against the Navy because the Navy directed the operation at that chemical manufacturing facility for some time. Last year they reached a settlement with the Navy where the Navy would

pay a portion of their cleanup costs to date, and then the Navy would pay a portion of the ongoing cleanup costs. To date, about 2200 tons of perchlorate have been removed from the environment in Henderson and destroyed, and we expect that cleanup to remain for decades, but they reached an agreement with the Federal Government on shared costs for that cleanup.

Mrs. NAPOLITANO. So they are sharing the costs.

Mr. COFFEY. They are now sharing the costs.

Mrs. NAPOLITANO. Well, that's good for the Navy. Let's see if the other agencies will come across with similar arrangements. Thank you. I'll pass on to Mr. Baca.

Mr. BACA OF CALIFORNIA. Thank you, Madam Chair. You know, it's very alarming to me that all of you, you know, stated that the consumer will ultimately have to bear the costs if we don't treat this right now. And it's for those of us that are politicians, we have the responsibility toward our consumers, and we want to make sure that the cost isn't on them, because who's responsible? Both the Federal and private sector that's created the problem. And yet, you know, it's very alarming that if we look at the perchlorate and the problems, that could escalate. And one of the things is that our consumers really are not totally aware of the gravity of what could impact them now and in the future.

And then especially as we look at our area in Southern California with the San Andreas Fault and the possibility of an earthquake in the immediate area and what impact it could have to its well, and that's something that we should take into consideration when we look at the need for funding and additional funding in the immediate area. So my question, I guess, would be to all of you, and I'm going to ask a general question, has perchlorate contamination affected your ability to provide safe and reliable supply of drinking water to your consumer, which is question number one, and have you experienced or do you anticipate any water supply shortage as a result of the presence of perchlorate? Any one of you can attempt to answer this.

Mr. ARAIZA. It has affected our abilities simply because we've had to shut down several wells. But we have also installed treatments.

Mr. BACA OF CALIFORNIA. Can you mention the numbers that have been shut down?

Mr. ARAIZA. In our area—my statement says 22, but in reality I know of at least 24 because I just shut two more wells down that were not part of my statement then. In fact, I am working as hard as I possibly can—or my agency is, I shouldn't say "we" because I work for an agency. The agency is working to install a treatment system as we speak so it will be online for the summer. Our groundwater is our life blood, of course. I do have a small package treatment plant that I treat a little bit of the water out of Lytle Creek wash and a small amount of State Water Project water. But 80 percent of my water comes out of the ground. And when one of my basins is affected—and that is the Rialto basin and the Chino basin, I pump them both. And in fact, the north Riverside basin that I pump out of also, all three of them have perchlorate in them.

And so it is a major concern of my agency to not pass that on to our rate payers. We have been very successful in getting funding

from, a little bit from the Federal Government, some from the State of California, and a little bit from one of the PRP's, if you can believe that. They stepped up originally, but they've backed away now and decided to spend their money on attorneys. But it has—it did help us put on our first two treatment systems which were ion-exchange. They were very expensive to operate, as you've heard. And the new treatment system I'm putting on is going to be the ion-exchange also, but it does have a major effect on it.

Mr. BACA OF CALIFORNIA. Can any—Michael?

Mr. WHITEHEAD. Yes, Congressman, in answer to your question, it is a very definite impact on our ability to supply reliable water supplies to our customers. It's imperative that we have access to our local water supplies. In the San Gabriel, for example, and the Baldwin Park La Puente area where we were severely affected by perchlorate contamination, as well as contaminants of other sorts, we lost 14,000-15,000 gallons per minute of water production capacity because of perchlorate in 1997-1998, and since that time period. I used the word catastrophic earlier. We were fortunate to be able to get by and do water conservation practices. Don't tell me how we did it, we were fortunate not to have a major disaster or a major wild fire in the area that would require that water.

The good news, though, is that through the efforts of the Groundwater Restoration Fund, the San Gabriel Basin Restoration Fund, which you've all supported and we thank you for that, and the efforts of the San Gabriel Basin Water Quality Authority, we've been able to design, construct, and now are operating plants in the Baldwin Park, La Puente, and City of Industry area now where we're treating 24,000 gallons of water per minute removing perchlorate, removing all of the VOCs, rocket fuel, you name it, from that water and treating that down to non-detectable levels.

And the funding for that has come—the city money was provided by the restoration, though the restoration fund did not pay for all of that. It provided the seed money that allowed us to bring the polluters to the table and negotiate settlements with them whereby they're paying 100 percent of the capital costs of those facilities. Capital costs spent to date, $100 million. It's going to cost hundreds of millions of dollars to operate those facilities for the years to come. And at least in that small part of the San Gabriel basin where we got our start, 100 percent of that cost was borne by the polluters and outside funding, again with some matching funds from the Federal Government to pay for all of that capital cost. And the polluters are paying going-forward costs which is approaching $10 million a year to operate those five plants that we have in Baldwin Park.

That's only the beginning. You saw the story of Monterey Park where we had to move in there. San Gabriel Valley is 167 square miles, and so we have a vast problem. It's a Federal Superfund cleanup site. So we have a lot more to do. But to answer your question, it has had a profoundly adverse effect on our ability to provide safe reliable water. And we've been working, I'll say relentlessly to reverse that situation. With your help we've been successful.

Mr. BACA OF CALIFORNIA. I know that my time is up.

Mrs. NAPOLITANO. No. Go ahead.

Mr. BACA OF CALIFORNIA. My question that I asked earlier—or the statement that I made earlier, but I want to ask it in reference to a question. If, in fact, we had an earthquake, are we totally prepared to provide good quality water now based on the problem that we have on perchlorate and to deal with it? Is there any one of your agencies now prepared to deal with that? And do we have a plan in place if, in fact, we had a major earthquake that hit us right now and we had to supply water? I hope we don't, but thank God.

Mr. ARAIZA. I'll try that. We believe we are as prepared as we can be. We have taken major steps to prepare for that inevitable problem that probably will get some areas of Southern California. We have equipped our wells as best we can with emergency backup. Most of all of our wells, 99.9 percent of them are electrically operated, so you have to be able to—if you lose your power, you'd have to be able to patch standby generation to run those wells. My agency has been buying standby generators, and it seems like a great expense to have stuff sitting there, but you have to be able to do that. We've hardened our reservoirs, most all of us in the water industry are doing that to be able to maintain the amount of water we have in storage.

Mr. BACA OF CALIFORNIA. But if it goes into our soil——

Mr. ARAIZA. If it shakes and it does shake bad enough, it will affect some of our wells. Some will be affected because it will—a lot of them are older constructed wells that when they start shaking, rattling, and rolling, they'll start coming apart. There's no doubt about that. But we think that we will be able to get by. I'm not saying it won't be an emergency, but——

Mr. BACA OF CALIFORNIA. Because we know what happened with the San Fernando one. We had a seven point something earthquake in that immediate area, and the impact it's going to have before we actually do the cleanup in the immediate area, is that there are still going to be children that are going to be born. And during that period of time, we know the impact it's had on infants and the fetus of a woman, too, as well. So I'm just curious. Anybody else can answer.

Mr. COFFEY. From a regional perspective, we are also concerned about the potential for a large earthquake. As the three main import water sources, Colorado River aqueduct, State Water Project system, and the Los Angeles Department of Water and Power Act are all crossed by the San Andreas Fault. Our procedure is to keep a six-month emergency supply of water within the basin that, if all three of those water supplies were severed, that within the basin there's a six-month supply of water assuming significant conservation during that period. And so we believe that we are able to manage that earthquake risk from a water supply perspective.

Also, I would just add that it's likely that any of the perchlorate treatment systems that have been installed recently have been installed with the most recent knowledge of earthquake tie downs and geotechnical investigations, and those—that new equipment is likely more ruggedized for an earthquake than perhaps an older infrastructure.

Mrs. NAPOLITANO. OK. Thank you. And one of the things that you're talking about is the contamination, has any testing been done in the water in the dam to make sure that that's OK?

Mr. COFFEY. "The water in the dam," are you speaking about Diamond Valley Lake?

Mrs. NAPOLITANO. Yes.

Mr. COFFEY. Yes. We monthly test the water source of Diamond Valley Lake, and it is non-detectable for perchlorate at 2 parts per billion.

Mrs. NAPOLITANO. Good, because if anything should happen, as the Congressman was alluding to, that will be our source of water. And one of the things that the Congressman was talking about is the effect on infants and other children, and I'm wondering if anybody had done any investigation over the effect on the learning—because it does affect learning—ADD, Attention Deficit Disorder. That could be one of the conceivable outcomes of the perchlorate on our youngsters, and that's something we need to look at. And I want to ask the Congress to possibly request some studies along that line on the health effects on infants as they grow older, what else are they going to be prone to.

I would like to thank the Federal EPA because, Mr. Whitehead, as you well know, they've been bringing the PRP's, the potential responsible parties to the table. And that's in great part thanks to their continued effort to putting pressure on them. And the credit goes to Congressman Drier who ran line 42 and got us all involved, not to say that we weren't already, but the fact that they were able—my predecessor was able to place them on the Superfund list during the Pat Schroeder days when she was on the Superfund committee. And that has started the ball rolling. But had it not been for people recognizing the future effects it would have on this whole area, right now San Gabriel Valley would be in deep trouble.

So thank you for all the work, and we thank the EPA for their participation. And we agree, there are no standards that have been set for the perchlorate, partly because the special interest and the business pressures. And then of course, Mr. Araiza, I read with great interest your testimony, that the parties involved in the litigation spent over $50 million.

Mr. ARAIZA. Yes, that's my understanding, that the PRP's and some of the cities and even the state have spent tremendous amounts of monies on their litigation. And it's just almost unfathomable how much.

Mrs. NAPOLITANO. Well, how much—if that money had been put to good use, I think the problem would not be as severe as it is now.

Mr. ARAIZA. It might have helped a lot. You're absolutely right.

Mrs. NAPOLITANO. Then there are a couple of other questions to Mr. Whitehead. Do you see the role for the Department of Interior, specifically the Bureau of Reclamation with their project on recycling? Of course the Administration is beginning to change their tune but not fast enough. And the U.S. Geological Survey, who is doing a study on the groundwater quality and contamination on contaminants, how—what, do you see all of it coming together with the local water agencies?

Mr. WHITEHEAD. Well, the Bureau of Reclamation and Department of Interior has been central to the administration of the San Gabriel Basin Restoration Fund. They have been an excellent partner in that endeavor, certainly at the operation level. It's regrettable that the Administration has not given the support to the highest echelons of the Bureau to continue our funding and be as enthusiastic as the local——

Mrs. NAPOLITANO. We'll get into that.

Mr. WHITEHEAD. But to answer your question, the Bureau of Reclamation has been central to this. And apart from the current fiscal year difficulties in getting funding and the problem with the budget and so forth, they have been tireless in their efforts and working very cooperatively. So I would recommend that they continue in that role and they be strengthened in that role, and that the restoration Fund be reauthorized as proposed in H.R. 123, which was introduced in this session, to extend the authorization by an additional $15 million. I think that would be immensely helpful, and of course the Bureau will be involved in that.

As far as the U.S. Geological Survey, I think that's the right terminology, activities, they have been doing a great deal of geophysical work in the basin identifying the carrying capacity in terms of storage capacity. And the part that was just published in this morning's San Gabriel Tribune, they reported their findings of a very interesting study that shows that recharge of the basin because of the record rainfall in past years has allowed us to reenforce our local water supplies. Certainly not the be all and end all of water supply problems, but it adds a margin of safety so that we don't have to be reliant on questionably reliable outside imported water supplies. Again, without belaboring the point, our access to that local groundwater is dependant on our ability to treat it, to remove the perchlorate and other contaminants.

Mrs. NAPOLITANO. Thank you for that. And again, returning to your statement about the Administration's unwillingness to continue to accept water recycling as a tool to be able to get additional water treated and put back into the aquifers or into the wells, it's been a running battle with the Administration to get them to understand that it is a necessity. They maintain that the law was only put in, and it's by mandate, Congressional mandate that they help the communities with the recycle water projects. They maintain that it was only for studies for pilot projects, and I maintain that that's not so, that they were mandated to continue the work. And as you well know, the Water 2025 Administration Plan does not do water recycling, and we have been battling with them.

The Water 2025 has not been funded by Congress and not been authorized by Congress, and yet they're putting $11 million into that, which I'm hoping that one way or another we'll be able to take those out and put them into water recycling funds. So that's the current battle on that. And I'm hoping that we'll be able to get the support we need to be able to do that. The communities need that assistance. As you well know, it has been of help. And I think we need to continue providing that seed money for communities that need it.

To Mr. Araiza, how do you dispose of the perchlorate after it's been removed from the well by ion-exchange?

Mr. ARAIZA. The system that we use is a—it's a removal system where we take the particulates and actually take them away and burn them and then put new filter media in. So it's actually removed and new media's brought in. They take the old media away and they destroy it.

Mrs. NAPOLITANO. By burning it?

Mr. ARAIZA. By burning it, yes. They burn the little resins up with the perchlorate in it, and they bring new resin in and replace it. We are looking at some regenerable resins and we, hopefully, are going to be working with an arm of the Department of Defense, the DSTCP in installing a new system this summer that they have been testing that possibly we will be able to have a regenerable resin. But I'm not sure how soon that's going to come. We're hoping for it by this summer, but hope doesn't work a lot of times. You just have to go out and do it yourself.

Mrs. NAPOLITANO. Well, is there any research that any of you know that can provide a better way of being able to handle it?

Mr. ARAIZA. Well, bio-remediation works great as far as letting—and I apologize, letting the bugs eat up the perchlorate. They seem to like it. But you can't take the water that has been produced by that and put it directly back into your water system. You have to retreat it again, so that brings the cost up. It's very inexpensive originally to use the bio-remediation, but to re-treat it to use in a system is very expensive. It brings the cost back up. So it's just as cost effective to use the ion-exchange at that point.

Mrs. NAPOLITANO. There has been some other methodology touted in the east coast membrane technology. Are you aware of it, or have you heard about it? Have they used it?

Mr. ARAIZA. Yes. The problem with membrane, and someone will correct me if I'm wrong, it's very costly because it takes a lot of energy to push it through the membranes. So you have to force the water through the membranes by pumping it at very high velocity, and that raises the cost up. RO systems, which are basically a membrane system that take everything out of the water, have been around and they're using it in the Chino basin to take the salts out. It gets very expensive. That's even more expensive water than the ion-exchange systems.

Mrs. NAPOLITANO. Well, when I look at water cost for the farming community in Northern California and the couple of hundred they pay versus what we pay versus what Arizona is paying for the water, I think we're going to end up somewhere in the middle on that.

Mr. Coffey, on the issue of fertilizer, is it still in the soil? And how long will it continue to contaminate groundwater? Or do you know if it does? How long will it be to physically remove the contaminated soil? Would that eventually be another option?

Mr. COFFEY. Well, the ammonium perchlorate in fertilizer is similar in chemical structure to nitrate. And we find—often we find co-occurring nitrate contamination with perchlorate contamination. And that co-occurrence is often the result of our agricultural legacy. One of the difficulties is that because of their similar chemical structure—but nitrate occurs at concentrations thousands of times greater, the concentrations of nitrate are what drives the real treatment costs for perchlorate. That perchlorate will remain in the

groundwater basin unless it is mitigated in some way either through—within the ground treatment or through pump-and-treatment system, and its legacy would remain just as the legacy of agricultural use of fertilizers and nitrates.

Mrs. NAPOLITANO. So you don't see any future ability for the rainwater to glean out the earth, so to speak, before it gets into the aquifer?

Mr. COFFEY. Well, certainly the basins are used and the groundwater flows through the basins, but in terms of that massive perchlorate which was applied to agricultural lands, that massive perchlorate will remain or will travel a downgradient in the hydrogeologic case. So it will only be by eventual flushing or removal of the perchlorate.

Mrs. NAPOLITANO. Well, it can only do so much filtering, can't it?

Mr. COFFEY. Right. But the biological reductions really do not occur without additional carbon sources without a treatment. It's very rare that the conditions exist naturally for any kind of biological reduction.

Mr. BACA OF CALIFORNIA. Thank you, Madam Chair. My question is for Mr. Martin. We have heard today that a cease and desist order was issued one year after the discovery of perchlorate in the East Valley Redlands area. Can you help us understand why after ten years we cannot get a similar order in the low income of Rialto?

Mr. MARTIN. I wish I could. We really haven't been involved too much with the proceedings with Rialto and West Valley. Probably better question for Butch here. I'd have to ask you, Butch.

Mr. ARAIZA. And I don't know that I have an answer to that question, Congressman Baca. I think my testimony, of course, is very——

Mr. BACA OF CALIFORNIA. We're not as influenced as Redlands, but yet, why can't we get them——

Mr. ARAIZA. You know, and when they were trying to solve the Redlands problem, I personally thought it was taking way too long to do that. And it's the process that we go through with the regional boards. They are a bureaucratic arm of the State of California that answers to an appointed board, and most of those people are people from our local communities that are influenced by other people in the community and it's a hard process to deal with. That's why I am so——

Mr. BACA OF CALIFORNIA. Are you saying that because it's influenced—because Redlands is, you know, high economic area versus low economic area, we have different Congressmen in that area versus someone in the different area? I mean, that's basically what you're stating in one sense in terms of why it was addressed in one year and it's taken us ten years in another area.

Mr. ARAIZA. And I——

Mr. BACA OF CALIFORNIA. There's different standards, and yet, the problem that existed in that area——

Mr. ARAIZA. Was addressed.

Mr. BACA OF CALIFORNIA. Yes.

Mr. ARAIZA. And they finally forced Lockheed to the table, and I think it was through the arm-twisting of probably their Congressman in that area. And it is a very affluent area, and it probably helped the fact that it was a very affluent area that they had a lot

of people that pushed at that. It doesn't—it probably makes sense that that is the case.

Mr. BACA OF CALIFORNIA. And we should be hearing everybody's voices regardless of whether they have influence or not, whether you come from a poor disadvantaged area, and that's what we're basically saying here.

Mr. ARAIZA. Absolutely. I agree a hundred percent.

Mr. BACA OF CALIFORNIA. I want to get back to a question that the Congresswoman asked earlier, when she was talking about one of the things that we currently lack standards in reference to the parts per billion. And I know in California we set the standard at 6 parts per billion, and yet the U.S. Environmental Protection Agency has not set an overall standard, and yet the State of Massachusetts has set a standard of 2 parts per billion. And I know that if we set a zero tolerance, do you think that that could actually be met by all of us? And would that be the safest level? Because if we set either a 2 or a 6, have the studies determined if those are safe, or if zero tolerance would be the safest that we should go with at this point? Anyone can attempt to answer.

Mr. WHITEHEAD. Mr. Baca, I'm not a public health expert and I can't—I wish I could tell you——

Mr. BACA OF CALIFORNIA. But you guys are impacted.

Mr. WHITEHEAD. But we have a direct impact, as you say, on public health because we deliver the water for public consumption by adults and children and the entire population. So please understand that we have a deep and abiding interest in attempting public health and safety. I can tell you this, that because there is no standard—we talked about the California standard of being 6 parts per billion. That's not a standard, that's a non-enforceable level that's called a public notification level. It's not a binding enforceable level. What we need are standards. I can tell you that in the absence——

Mr. BACA OF CALIFORNIA. You're saying Federal standards, right?

Mr. WHITEHEAD. of Federal standards.

Mr. BACA OF CALIFORNIA. I mean, we need to be clear on that, because I think that for the public, sometimes we look at what the state comes up with, and they assume that that's the standard. And we need to clarify that and say that there is no Federal guidelines right now.

Mr. WHITEHEAD. There is no Federal standard. The law of the State of California is that the standard that will apply will be the U.S. EPA established standard or the state standard if it's more stringent. We have neither.

Mrs. NAPOLITANO. Can you state why it hasn't been set?

Mr. WHITEHEAD. I wish I knew. We were on the verge of having a U.S. EPA adopted standard set five years ago. And now I can't tell you why they dodged that issue and handed it off to the National Academy of Sciences to come up with something else. I don't know the answer to that. I can tell you this.

Mr. BACA OF CALIFORNIA. But let me say if we did set a standard, do you think then—I mean, this is just going through my mind right now. If we did set a national standard, then automatically that probably every city, then, would probably save X amount of

dollars in filing fees and attorney's fees because they're fighting all of this right now. So that would be dollars that could be reinvested in terms of cleanup water versus the fees that they're fighting right now. I mean, basically we're spending a lot of money on attorney's fees to fight this issue. I don't know.

Mr. WHITEHEAD. That's the lesson we learned in the San Gabriel Valley. And thank God we learned that lesson. We didn't spend the $50 million on attorney's fees and have a scorched earth litigation policy that Ms. Newman described. What we did is we led those polluters to the table. If Ms. Solis was here, she would probably say we forced them to the table with her help and your help and the help of the other elected officials and agencies. But in the absence of a standard, we set our own standard over there. And that standard was the lowest level achievable by the use of best available technology, which we know is below 1. And that's what we're treating at 24,000 gallons a minute that I mentioned earlier, to below 1.

It's not good enough to treat it to 6, talking about establishing a standard. That's nothing more than a license for the polluters to boot up to 6 parts per billion. That's nonsense. What we need is a supportable health-based standard that we can design and operate our facilities to. That's what the water industry needs. We need standards. And it's beyond comprehension that we haven't been able to address this issue. So in that regard, I can tell you right now that the water quality authority supports Ms. Solis' bill. We need to set a timetable, we need to get that done, we need standards so we can design these systems to protect public health.

Mr. ARAIZA. Yes, let me add in, I agree a hundred percent. The U.S. EPA needs to have a standard set, a national standard set. California's a privacy state, by that, the health department sets their—they look after their own MCLs they set on water. And if the U.S. EPA set it at 6, I would imagine—I wouldn't be a bit surprised if California tried to one-up them and go to 4, which would be fine. As Mr. Whitehead said, we are using the best technology we can right now to take the perchlorate out. That does take it down below 4, probably around 2 or 1 part per billion.

I have publicly assured my constituents and my agency that we are not serving any perchlorate in my agency, and my board has backed me a hundred percent on that. And we are spending some of our public's money, though, to make sure we're continuing to do that because we have not been able to get funding from either the PRP's or from other areas. But to that end, we will continue to do that. My board has agreed that we need to do that. But we do need a Federal standard, absolutely.

Mr. BACA OF CALIFORNIA. Thank you. I guess my next question would be have the reduction in state water supplies resulted in increased reliance on groundwater as a result of the municipal water supplies? Anyone can answer this.

Mr. ARAIZA. In our area, and that's one of the major problems we have is in Fontana, Rialto, Colton areas, we don't have a good supply of state project water. We do have what is available, but we have not gone to the extent to build the massive treatment plants. Mr. Whitehead is currently underway in Fontana building a large surface water treatment plant to treat state project water. I have

expanded my surface water treatment plant to be able to hopefully double its capacity. Presently it's at about ten million gallons a day, and I'm hoping to take it to 20 by next year and be able to accommodate more state project water.

If that water was cut off, yes, it would make us dependant. We'd have to depend on our groundwater. Even with the project, the surface water treatment plants, basically we are supposed to have 100 percent backup for those plants through our groundwater sources, especially for short periods of time.

Mr. BACA OF CALIFORNIA. Anyone else want to answer?

Mr. COFFEY. Metropolitan provides 45 to 60 percent of the water supplies to the region, and that's comprised of water from the Colorado River and water by contract through the State Water Project system. By contract, we have approximately two million acre feet per year of water supplies through the State Water Project, and currently with the result of this year's hydrology, 60 percent of that supply is available to us. That means that approximately 1.2 million acre feet per year this year of water can be imported into the region.

Now, there are threats to the pumping banks, as you're aware, and we're awaiting a number of court actions on that. But even within some of those actions, that would reduce the available supplies this year by maybe 75 percent to—or about half of that, so about 600,000 acre feet per year. And in essence, Metropolitan, through its integrated resources plan, has identified a number of strategies in terms of groundwater storage, storage off the aqueduct, partners with agriculture to make our water supplies much more robust and less likely to be threatened by any one problem, such as a drought in one of the watersheds or our local groundwater contamination. These are very serious at the local level, but on a regional level, Metropolitan has invested in a diverse portfolio of water resources such that any threat to one source would not be a major problem for the region.

Mr. BACA OF CALIFORNIA. But Brad, reliability on the Colorado River could impact us because we rely on it right now quite a lot. But because of the growth in the population of both Colorado and Arizona could impact the future demands of water to the State of California based on the projections, as California right now has 37 million people and we could go up to 48 million people by the year 2030. So the reliance on the Colorado River is that we have to look at other resources too as well. Is that true?

Mr. COFFEY. That is correct. And certainly recycling and groundwater resources and conservation are all important aspects of that. Fortunately California does have the rights to 4.4 million acre feet of the Colorado, and that has been—that has been heard throughout the courts over the past decades. But you're right, sources of water are also conjunctive use of groundwater basins storing water in wet years in the groundwater basin for withdrawal in dry years. And in groundwater conjunctive use and groundwater recovery and local resources programs, Metropolitan has invested several hundred million dollars in the past two decades to make the water systems much more robust for regional supply.

Mrs. NAPOLITANO. May I step in and say that thanks to the Metropolitan Water chairman, former chair Phil Pace, who asked me

to check out Moab, which is another issue that we have not even touched upon, and it's the ten and a half—or they say 12 million tons of spent uranium 750 feet from Colorado. That could conceivably go in and wash uranium and contaminate not only our drinking water from Colorado, which is a third of our water, but also something like 20-some-odd million people, the ecology, the tourism, and, I mean, untold areas. Well, thanks to the Met, we were able to get the Department of Energy, then Bill Richardson, to pass legislation with the support of the Clinton Administration to put into statute that we need to address that issue.

And in the last few years, the Governors finally got it and started asking the Administration for support in addressing it not only through the NAS—NSA, I can't remember the acronyms—to be able to look at the best way of addressing it. They capped it with $5 million left by the company Atlas that went bankrupt and that was not even enough to put a cap on it. It was red clay that just blew out all over. But also the PRP is not being held accountable. And because it was used for Cold War defense systems, the Federal Government has had to step in. And unfortunately they're not moving fast enough; however, there is a process of getting a contractor to either sludge it, move it, or get it recycled. And it will take anywhere between 20 and 30 years and possibly up to a billion dollars to move.

Mr. COFFEY. Correct.

Mrs. NAPOLITANO. So understand, the issues also affected, that's a third of our drinking water from the Colorado River for Southern California.

On another issue, Mr. Whitehead, in the mid-80s, I was lucky enough to meet a representative of two water districts for the City of Norwalk for which then I was mayor, and found out that there was a contamination traveling down toward our 20 communities in the lower area that needed to be addressed. And at that time, we asked for a geological study to determine the aquifer that was contaminated and would no longer provide potable water to my district given non-treatment. And so once that geological study was done, it was presented to the cities surrounding Norwalk, and they took action to band together, put money together, and then go to the Federal EPA to ask for assistance to be able to deal with contamination.

And I remember going to many meetings at the local level where there was an issue about, "Well, do we treat it above ground? Do we treat it below ground? Do we use the technology?" And years went by before they actually were able to begin the actual treatment. So let that be a lesson. You need to be able to come together and decide what—not how to treat it, but to treat it as soon as possible. And that's why I have a little interest in water. I have a few years of background in this.

And I must ask all of you to go back and educate your elected officials, not only your local, your state, and your Federal, your county officials of how important water is, because let me tell you, not many people understand it, not many people know the effect, not only on health, but also on the economic vitality of the region. And so I would ask that the public also get involved and that they raise their voices to all of their elected officials and that they raise

their voices, not only to their elected officials, but to the Administration because you're the ones who are affected, your families, your peers, your coworkers. And this is not an issue that is going to go away. And we need to impress upon the Federal Government that they need to form a coalition and a partnership with all agencies, state, county, Federal, and health agencies to be able to ensure that we take a look at what is happening, because they didn't find perchlorate in the San Gabriel basin until, what, two years ago?

Mr. WHITEHEAD. 1997. And that's after 20 years of problems with VOCs.

Mrs. NAPOLITANO. So understand, it's something that is there, and we need to continue to inform and educate.

Now, going to—there's some reports, I don't know if there's copies back there, but there's a website that you can get them. The Sierra Congressional Resource here provided that on perchlorate, and there is also draft report summaries, and the Santa Ana watershed was kind enough to get us some copies. Those are exceedingly important. I suggested that whoever's interested in water and following it into the next generation, that they look at it.

With that, I conclude the Subcommittee's oversight hearing on sustainable water supplies for the West, part one, protecting our groundwater resources. And I thank the panel for your testimony and your time, and I hope it was well spent. And under the Committee Rule 4H, additional material for the record should be submitted by members or witnesses, for that matter, members of the audience, within 30 days after the hearing. They can send them to my office or to Mr. Baca's office, and we'll get them into the record. I would appreciate cooperation of the witnesses in responding promptly to any questions submitted to you in writing. And with that, I adjourn the hearing. Thank you very much. God bless.

[Whereupon, at 11:45 a.m., the Subcommittee was adjourned.]

[Additional material submitted for the record follows:]

[A letter submitted for the record by The Honorable Grace Vargas, Mayor, City of Rialto, California, follows:]

CITY OF RIALTO
CALIFORNIA

April 9, 2007

The Honorable Grace F. Napolitano
Subcommittee on Water and Power
1522 Longworth House Office Building
Washington, D.C. 20515

Dear Madam Chairman:

The City of Rialto respectfully requests the opportunity to testify before the Natural Resources Subcommittee on Water and Power's field hearing in California on April 10, 2007, The City of Rialto is most interested in offering insight into how it has been meeting the challenge of providing clean and safe water to its residents while dealing with one of the most contaminated perchlorate sites in the State if not the country.

The City of Rialto provides water service to almost 50,000 people, as well as schools, hospitals, parks, and businesses. The City relies on groundwater which is pumped primarily from the Rialto-Colton Basin. The Rialto-Colton Basin is the most important water resource for the City of Rialto.

Seven of Rialto's thirteen wells have been removed from service for some period due to detections of perchlorate from just over 4 to 110 parts per billion (ppb). The shutdowns have reduced Rialto's production capacity by nearly 48 percent. The perchlorate plume affecting the City's wells is believed to be more than 6 miles long and approximately 1 mile wide, although the full extent of the plume is not known. Perchlorate concentrations as high as 10,000 ppb have been found in groundwater. The Rialto-Colton Basin is also impacted by volatile organic compounds, including trichloroethylene (TCE) at concentrations up to 730 ppb. The perchlorate and TCE contamination, coupled with the ongoing drought conditions in Southern California, has severely reduced the availability of water to the City.

The source of much of the perchlorate contamination impacting drinking water wells is a site located over the northern portion of the Rialto-Colton Basin in the City of Rialto where the Army, defense contractors, and fireworks manufacturers have utilized or manufactured the chemical in their operations for over 60 years. It has been shown that many of these operators have discharged perchlorate onto the ground thus allowing for its eventual contamination of the underlying groundwater aquifer. The City is pursuing a multi-pronged strategy to deal with this critical threat to its water supply.

Rialto stands ready to offer testimony and answer any questions the Subcommittee may have about how our City has dealt with the threat of perchlorate groundwater contamination. Please do not hesitate to contact me or Henry Garcia, City Manager, a[(909) 820-2689 or Robert Owen. Rialto's City Attorney, at (909) 890-9027,

Sincerely,

Mayor Grace Vargas

cc: The Honorable Joe Baca