AIR QUALITY ISSUES IN THE COACHELLA VALLEY

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

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AIR QUALITY ISSUES IN THE COACHELLA VALLEY

MONDAY, JANUARY 12, 2004

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
Palm Desert, CA

The subcommittee met, pursuant to notice, at 10 a.m., in the Civic Center Council Chamber, 73-510 Fred Waring Drive, Palm Desert, California, Hon. Joe Barton (chairman) presiding.

Members present: Representatives Barton, Whitfield, Shadegg, Buyer, and Bono.

Staff present: Mark W. Menezes, majority counsel; Bob Meyers, majority counsel; Andy Black, policy coordinator; Peter Kielty, legislative clerk; and Michael L. Goo, minority counsel.

Mr. BARTON. The subcommittee will come to order. My name is Joe Barton. I am the chairman of the Energy and Air Quality Subcommittee of the Energy and Commerce Committee of the House of Representatives. Congresswoman Bono is a member of this subcommittee, and formally requested several months ago that a field hearing be convened in her district on the subject of air quality issues around the Salton Sea.

I'm very happy to affirm the request that we conduct such a hearing, and we're going to do that today. It's going to be a little bit unusual in that we don't have a table large enough at the front for all our panelists to sit at, so when it comes time to conduct the formal part of the hearing we'll ask each panel member to step forward, give their oral testimony, and then after each panelist has done his testimony or her testimony then we'll ask questions from the podium and direct them to specific people. The auditorium is not so large that we cannot hear without the microphone or, perhaps, we can move the microphone around.

But, before I give my formal opening statement, I want to recognize the congresswoman from, I believe, the 44th District of California, Congresswoman Mary Bono, for any opening remarks that she wishes to make, and then we'll begin the hearing.

Congresswoman Bono.

Ms. BONO. Thank you, Mr. Chairman. Actually, it's the 45th now.

Mr. BARTON. 45th.

Ms. BONO. It was the 44th before redistricting, California finished that a little bit earlier than Texas.

But, I would like to first of all welcome my colleagues to my district. It's hard to believe on a day like today that air quality is an

issue, it's such a glorious day outside. And, my colleague from Indiana is especially thankful to be here, I know it's probably 20 below or something at home for him. But, I would really like to welcome all of you and the staff who have traveled to Palm Springs from Washington to hear about this important issue.

And, sort of it's a reverse hearing for me, I'm really hoping most of all to enlighten my colleagues about the problems we face especially surrounding the Salton Sea.

Okay, with that, Mr. Chairman, a special than k you also last night for attending the Palm Springs International Film Festival Gala. Every night is not like that in Palm Springs, believe it or not, but it was, indeed, a big honor to have you attend. So, thank you, and I'll yield back.

Mr. BARTON. We have one of those every Sunday evening in Ennis, Texas. It was kind of routine for me to dress up in a tuxedo and rub shoulders with Kevin Costner and Mary Hart, you know. Actually not. I kind of felt like J.R. Ewing in Dallas when I walked in, with all the glitter and glamour. But, the most glamorous person was you and your husband, or couple, you all were great.

I want to welcome everybody to today's field hearing. I want to thank Congresswoman Bono again for her gracious request that we come out and hear this issue. I want to thank the city of Palm Desert for allowing us to use their City Council Chamber. Do we have any members of the Council here? We want to thank you, sir. Tell the mayor we thank—I assume it's a he, but it could be a she, I want to thank the mayor for allowing us to be here today.

Without objection, the subcommittee will proceed, pursuant to committee rule 4E which governs opening statements by members, and the opportunity to defer them for extra questioning time. What this means is, for those of you who don't follow CPAN in Washington, if a member wishes to make an opening statement we allow them to speak for 3 minutes. If they choose to defer that, then we give them an additional 3 minutes for questions in the question period.

Some of our hearings in Washington, we may have 15 or 20 congressmen and women at the hearing, so that extra 3 minutes does come in handy. I don't think that's going to be a problem here today.

Hearing no objection, prior to the recognition of the first witness for testimony, any member, when recognized for an opening statement, may completely defer his or her 3 minute opening statement, instead use those 3 minutes during the initial round of witness questioning.

The Chair is going to recognize himself for an opening statement.

For those of you again who don't follow what we do in Washington, the chairman doesn't have a time limit on opening statements. I can talk for an hour and they couldn't do anything about it. I won't do that today, but I'm not limited to the 3 minutes, just in case any of my subcommittee members don't remember that.

Today we are going to turn our attention to this area, which includes the Palm Springs area and the nearby Salton Sea area. It's very clear from just my limited time spent here that this is a largely desert area and it's very windy. I know this area has particulate matter compliance issues. In my opinion, some of these compliance

issues would be difficult for our creator to solve, much less humankind.

On top of this is the unique status of the Salton Sea, which is shrinking and will continue to shrink I am told. Members of the subcommittee have long heard Congresswoman Bono call attention to the growing problems caused by reduced flows of water into the Salton Sea.

Previous hearings by other committees and subcommittees have focused on the water issue directly. This subcommittee has jurisdiction over Federal air quality issues, including those caused by the shrinking of the Salton Sea. We recognize that there is no perfect answer for this problem, and that there is no consensus on what should be done.

Congresswoman Bono is right to raise the issue with Congress, and to use our subcommittee to encourage all people involved to directly focus on these issues.

The area is experiencing significant growth in housing and transportation. Meanwhile the area will also have to face reduced water transfers. That can make it one of the dustiest places in the Nation. The Palm Springs area has great leaders in renewable and clean energy. Some of them have testified before my subcommittee within the last year on your bus program here in the area. You also have geothermal production from the Salton Sea. You have a great wind farm just outside your city limits, and as I just said, you have natural gas vehicles in your public transportation fleet.

I'm pleased that we can spend some time learning about the local air quality issues, and again I want to thank Congresswoman Bono for her efforts in getting us out here.

Now I'm going to recognize in order of seniority members of the subcommittee to give an opening statement. Our first member is Mr. Whitfield from Kentucky. Do you wish to make an opening statement?

Mr. WHITFIELD. Mr. Chairman, thank you very much. I'll just make a few brief remarks, recognizing that I give up my additional time on questions, but I'm delighted to be here in the Coachella Valley area in Congresswoman Bono's district.

Those of us from other areas are quite interested in developments taking place in this area, because all of us in our districts have areas that are in non-attainment on ozone issues, as well as particulate matter issues, and it's nice to visit other areas of the country to see what common threads there are that can help us address some of these very significant issues.

Many of you may be aware that in the near future our committee will probably be taking up the clean air reauthorization act, and so I think the more hearings we have like this the more knowledge we are going to have to be more effective in dealing with those issues.

So, Mr. Chairman, I thank you for having this hearing in Mary Bono's district, and I look forward to the testimony.

Mr. BARTON. Does the gentleman from Arizona, Mr. Shadegg, wish to make an opening statement?

Mr. SHADEGG. I do, Mr. Chairman.

Mr. BARTON. The gentleman is recognized.

Mr. SHADEGG. I will also be brief, but I want to begin by thanking my colleague, Ms. Bono, for requesting this hearing, and by thanking you, Mr. Chairman, for holding the hearing.

There are a number of issues that affect air quality that are different in the west than in the east, and yet in Washington, DC, the debate focuses on the problems of the east. And so, I think it's extremely important that we hold a hearing in the west and look at how, in fact, different some of the issues are here in the west than in the east.

My congressional district is in Phoenix, Arizona. We face a serious problem with PM_{10} and also with ozone, and the parallel between our air pollution problems in Maricopa County and the greater Phoenix metropolitan area are very similar to those we have here.

Back east, a lot of the ozone pollution is caused by NO_X emissions from—our's is caused by NO_X emissions from mobile sources, whereas in the east we face Nox emissions from electricity generation and heavy industry. So, there again, there is a distinction between the problems we face here in the west versus those that are in the east.

There are two specific issues that I care the most about in this hearing and that are of great concern, and one of those is the PM_{10} particulate matter issue of an arid region. That is a problem that we face in Maricopa County and the Phoenix area, and I'm looking forward to the testimony of Matt Haber on those issues here.

I'm also particularly interested in the effect of the Salton Sea on air quality here in the area, because it seems to me that's a repeating problem, and we are going to hear about Owens Lake and Mono Lake and the issue with regard to air pollution caused by, not only the draining of those two lakes, but the potential draining of the Salton Sea. There are parallels to other lakes that may be drained as the result of the consumption of greater percentage of the water resources we have here in the west.

So, I very much appreciate you holding this hearing, Mr. Chairman. I look forward to looking at the ozone and PM_{10} issues, and I'm anxious to hear the testimony of our witnesses.

Mr. BARTON. I thank the gentleman from Arizona.

We now want to recognize the gentleman from Indiana, the Honorable Steve Buyer, for an opening statement that he might wish to make.

Mr. BUYER. Thank you, Mr. Chairman.

I think it is extremely valuable to all of us whenever we can have field hearings across the country, and Mr. Shadegg is right, air quality issues are different depending on where you are in the country. We all seem to define air quality subjectively.

The only time I had ever heard the Salton Sea was from Sonny Bono back in 1995. I didn't even know what it was. And, it was an issue that he was very passionate about, and Mary shared that same passion.

But, when you are in Indiana, and you also then grew up in parts of the southeast, what do you care about the Salton Sea, to be very honest with you.

But, the committee, we have an interest in the air quality of a country. So, for Mary Bono, she is a very talented member of the

committee and can be very persuasive, and persuasive meaning when she has an issue she's never going to let it go, and she's always going to bring it up in their conversations. And, I've been privileged to serve her, not only on Armed Services and Judiciary, but now Energy and Commerce, so I know her persuasive abilities.

I'm pleased, though, Mary, when Congress responded and did the Salton Sea Reclamation Act back in 1998, and also named the National Wildlife Refuge after Sonny, because this issue is going to be there in the hearts and minds of Congress for a long time because of Sonny, but it's also because of your interest in the issue that goes far beyond Sonny now. This is your district, it's about you and it's about how you carry this issue in Congress. And for that reason, all of us here today and we are here to be very good listeners and to be supportive of you.

I yield back.

Mr. BARTON. Thank you.

Now we'd like to recognize the gentlelady from the 45th District, for any opening statement that she wishes to make.

Ms. BONO. Thank you, Mr. Chairman.

I'm actually going to read my opening statement. I'll try to keep it under 3 minutes, because it's just such a good statement.

The Coachella Valley is experiencing an incredible rate of growth. Building permits jumped over 300 percent last year in Sun Valley cities. I'm permanent resident population grew 11 percent from last year. Between 1990 and 2002, the Coachella Valley's population leapt roughly 46 percent, while the states grew only 18 percent. This explosion in growth puts a strain on our roads, power generating capacity and the building industry, all of which impact the quality of our air.

As far as our region is concerned, the Salton Sea could certainly pose risks to our health and the environment if not dealt with properly. When southern California's water agencies worked with State and Federal officials to produce the Quantification Settlement Agreement, or a way of parceling out the limited supply of Colorado River water, the first draft of this left the Salton Sea in a dire strait as the QSA at that time never factored in its impact on the sea. At that time, as now, my primary concern is what a smaller sea would do to our air quality if we didn't address this problem at the outset.

I am grateful that a new QSA was signed, which acknowledges that transfers will impact the sea. The new agreement gives us 15 years to come up with a restoration plan. Again, air quality remains the focal point.

The time is ticking and these years will fly by. Therefore, it is critical for us to engage local, State and Federal officials on how best to face the reality of water transfers and how they will impact the sea. We have to move from studying the problem to fixing the problem, because the bill will come now or later.

By this I mean that we should look to Owens Lake, which dried up due to a water hungry and growing Los Angeles, and is now considered to be the dustiest place in the United States. Today, L.A. has spent $250 million to control 19 square miles. The final plan will address 29 square miles, at a cost of $415 million and $10 million annually in operation costs.

By comparison, we could be looking at 100 square miles of exposed Salton Sea bed. While I realize not all of that will be emissive, even if half of it is that is an expensive proposition. That is just the financial costs, never mind that Owens Lake is not nearly as heavily concentrated, or is not nearly located in such a highly concentrated population center like the Salton Sea is.

Since 1999, the U.S. EPA has found Coachella Valley to be out of compliance of Federal regulations for particulate matter. The EPA has given our region 5 years to get back into compliance by self-regulation.

In many ways, we have the making of a perfect storm here. Our natural environment, combined with the high winds, the Salton Sea, and incredible growth, could pose serious challenges to the Coachella Valley.

However, while we have these challenges, we also have some incredible people and agencies who are leaders in the effort to protect the quality of our air in unique and practical ways.

In the end, I would like to see a region where we don't have to study how PM effects our health or worry about what barren land under the sea will do. I want the Coachella Valley to continue to taut the beauty of our environment to residents and to visitors alike.

This hearing should bring to light what we are doing right and how the Federal Government can nurture this progress, but we also need to face and identify our deficiencies if are to maintain the quality of life.

Again, thank you, Chairman Barton, for holding this hearing, and thank the city of Palm Desert for hosting it. I look forward to hearing from our panelists.

Thank you, Mr. Chairman.

Mr. BARTON. Thank you.

We want to keep the record open by unanimous consent, there are a number of members of the subcommittee that couldn't be here today. Any member of the subcommittee that wishes to put a statement in the record will be allowed to do so without objection, so ordered.

We also want to keep the record open to a Congressman and a Congresswoman who are not a member of the subcommittee but are from California and wish to make—at one time they were going to try to participate but couldn't do it, Congressman Bob Filner and Congresswoman Grace Napolitano, if they wish to put in an opening statement or a statement of testimony in the record, they will be allowed to do so, without objection so ordered.

We now want to call our first panel, and normally we would have a table that all the witnesses would come and sit at the same time. Because of the structure of the Council Chamber we are not going to be allowed to do that, so on the first panel we have four individuals. We have Mr. Roy Wilson, who is the Riverside County Supervisor. We have Mr. Tom Kirk, who is the Executive Director of the Salton Sea Authority. We have Mr. Buford Crites, who is the Chairman of the Energy and Environmental Resources for the Coachella Valley Association of Governments, and we have Mr. Matt Haber, who is the Acting Deputy Director of the Air Division

of the Environmental Protection Agency for Region IX on our first panel.

We will ask Mr. Wilson to step forward, and then after him Mr. Kirk, and then Mr. Crites, and then Mr. Haber.

So, Mr. Wilson, if you will come forward, we are going to set the clock. We want to welcome you, sir. You are the County Supervisor, you are appearing on behalf of the County of Riverside, and also on behalf of the South Coast Air Quality Management District.

Your statement is in the record in its entirety, we are going to ask that you summarize it in 6 minutes or less.

Welcome to the subcommittee.

STATEMENT OF S. ROY WILSON, RIVERSIDE COUNTY SUPERVISOR; TOM KIRK, EXECUTIVE DIRECTOR, SALTON SEA AUTHORITY; BUFORD CRITES, CHAIRMAN, ENERGY AND ENVIRONMENTAL RESOURCES, COACHELLA VALLEY ASSOCIATION OF GOVERNMENTS; MATT HABER, ACTING DEPUTY DIRECTOR, AIR DIVISION; AND LARRY BILAND, SPECIALIST, ENVIRONMENTAL PROTECTION AGENCY

Mr. WILSON. Thank you, Chairman Barton, members of the subcommittee.

I am Roy Wilson, Chairman of the Riverside County Board of Supervisors, but today I'm going to be speaking in my role as Vice Chairman of the 12-member governing board of the South Coast Air Quality Management District, better known as the AQMD.

As a way of background, I might inform the committee that I am a 37-year resident of the Coachella Valley, and I have been privileged to invest many years in this community as a college professor, a planning commissioner, a transportation commissioner, a city council member, a mayor, and for the past 9 years a member of the Board of Supervisors representing this area. I am also the immediate Past President of the Salton Sea Authority.

So, while I testify on behalf of the regional AQMD Board, my local background gives me an appreciation and a commitment to our vibrant desert culture.

I'd like to give the subcommittee a very abbreviated sketch of AQMD's activities related to the Coachella Valley, and then I'd like to conclude by mentioning three Salton Sea related scientific efforts that we could urgently use immediate Federal assistance in.

First, some quick background. AQMD is the regional agency directly responsible for monitoring air quality and developing and enforcing air pollution clean air programs in the Coachella Valley, as well as in the nearly 11,000 square miles of the full South Coast air district, which includes most of the counties of Los Angeles, Orange, San Bernardino and Riverside. We have 16 million residents in our district.

AQMD's responsibilities include the submission of formal attainment demonstrations to meet State and Federal health standards for air pollution, including ozone and fine particulates, both PM_{10} and $PM_{2.5}$.

The long-term trend for fugitive dust levels in the Coachella Valley has been dramatically reduced over the years. We achieved attainment in recent years, but then we reached a lull in 1999 when conditions of a drought and heavy construction put us out of attain-

ment. We immediately put together, with a team effort, a new PM_{10} strategy plan and we are confident that that's going to get us back into compliance.

AQMD has demonstrated, and intends to continue demonstrating, full commitment to bringing the South Coast into attainment in all pollutant areas. Since AQMD is responsible for addressing any adverse air quality impacts from Salton Sea project outcomes, it is vital that we be at the decisionmaking table deciding the future of that sea. We believe that our shared experience and investment partnerships can make this a win/win situation.

Regardless of the means of the Salton Sea's eventual restoration, it is certain that we will need some measures of targeted and cost-effective mitigation measures to address fugitive dust. These concerns will come about because we know that the sea bed is going to be exposed to release a good portion of it.

In addition, AQMD needs to have a vote at the table as Federal CMAQ funding priorities are deliberated. CMAQ funding has been very helpful to us here in the Coachella Valley in our Clean Streets program, and we continue to press for AQMD's more direct inclusion as a vital stakeholder in this process of allocating these funds.

I'd like to conclude my remarks with a brief outline of three Salton Sea related scientific efforts that could urgently use immediate Federal assistance. And, as I've mentioned previously, it is a certainty that fugitive dust mitigation measures will be needed due to imminent water diversions. Our scientific staff is closely in touch with researchers in the Owens Valley who have completed federally funded dust inventory projects, and now is the optimal time to achieve an immediate Southern California follow-on to those fresh findings. AQMD deals with applying good science to benefit human health in the near term. So, we believe that transfer of knowledge is vital in the coming months.

There are three efforts that I'd like you to address. The first one deals with ambient air monitoring hardware and placement. Currently, the AQMD has its closest PM_{10} monitoring station in Indio. That's not good enough for the job of public health protection that lies ahead. Additional monitors are needed through Federal funding assistance.

The second issue deals with sand movement monitoring hardware and placement. U.S. EPA has supported fugitive dust inventory projects in the Owens Valley that have borne valuable findings this year. If AQMD can partner in replicating that measurement effort at the Salton Sea, it would enable us to more cost effectively apportion control approaches by screening out lower-emitting areas.

And third, we need to address field project assessments. Once AQMD has narrowed down the most active dust source issues and areas, we want to be able to transfer the mitigation tools successfully used in the Coachella Valley to initial testing at the Salton Sea, so that we can put in place preventative public health protection, instead of having to resort to reactive measures later on.

And, therefore, I will conclude as my clock goes down by saying thank you for holding this very important hearing here. We have AQMD staff and myself available to answer any questions if you have them.

[The prepared statement of S. Roy Wilson follows:]

PREPARED STATEMENT OF S. ROY WILSON, RIVERSIDE COUNTY SUPERVISOR, ON BHALF OF COUNTY OF RIVERSIDE

My name is Roy Wilson, and I'm speaking today as Vice Chairman of the 12-member Governing Board for the South Coast Air Quality Management District, better known as AQMD. As county supervisor for Riverside, California, I also represent Riverside County on the AQMD Board.

In addition, I might inform the Committee that I am a long-time resident of the Coachella Valley, and have been privileged to invest many years in this community as a college professor, a city council member, a planning commissioner, a mayor, a transportation commissioner, and a county supervisor—and I currently serve on the Board of Directors of the Salton Sea Authority. So while I testify on behalf of the AQMD Board, my wider background is as a committed participant in our vibrant desert culture.

There are dynamic priorities in the Coachella Valley, for housing and jobs, and health & habitat protection, and we are working hard to wisely manage greater Riverside County's role as one of the fastest-growing construction and recreation areas in the entire United States. Coachella Valley residents and businesses alike place a tremendous value on clean air, protected by a positive economic climate.

I'd like to give the Subcommittee a very abbreviated sketch of AQMD's activities relative to the Coachella Valley, and then I'd like to conclude by mentioning three Salton-Sea related scientific efforts that could urgently use immediate federal assistance.

First, some quick background. AQMD is the regional agency directly responsible for monitoring air quality and developing & enforcing air pollution clean-up programs in the Coachella Valley as well as the nearly 11,000 square miles of the full South Coast air district, which includes most of four counties and 16 million residents.

AQMD's responsibilities include the submission of formal attainment demonstrations to meet state and federal health standards for air pollution, including ozone and fine particulates—PM_{10} and $PM_{2.5}$.

We are charged with meeting these public health standards while conforming with a number of additional legal requirements (such as state and federal environmental review processes, Transportation Conformity budgets, the Endangered Species Act, and environmental justice safeguards).

Likewise, our efforts must also be accomplished in the climate of cold fiscal constraints and hot growth pressures that are now endemic to Southern California. AQMD has been truly fortunate to have one of the most forward-looking Metropolitan Planning Organizations (or MPOs) in California as our committed partner, in CVAG.

The *long-term* trend for fugitive dust levels in the Coachella Valley has been dramatically downward, toward lower ambient levels and lowered public exposure, as indicated by monitoring records as well as enforcement and compliance logs. When a short-term pause in improvement occurred in 1999, an aggressive team response readily addressed the situation, and AQMD's subsequently revised PM_{10} State Implementation Plan is now being successfully carried out through strengthened control measures.

AQMD has demonstrated, and intends to continue demonstrating, full commitment to bringing Coachella Valley into attainment with all federal and state air quality standards. As the responsible air agency, our chief goal is to ensure that the critical ecosystem resource of healthful air is maintained for human well-being in the Coachella Valley, and also to help protect that resource as a critical underpinning of economic investment and quality of life in the area, including individuals residing on nearby tribe reservation lands. Again, CVAG continues to perform as our key pro-active partner throughout this process.

I want to take just a moment to say AQMD appreciates CVAG inviting me to today's hearing. Since AQMD is responsible for addressing any adverse air quality impacts from Salton Sea project outcomes, it is vital that we be at the decision-making table deciding its future. We know that we'll be brought into the loop if negative consequences arise—but we'd much prefer to be present up front, so that our experience and investment partnerships can make this a win-win situation.

On a positive note, AQMD's Executive Officer, Dr. Barry Wallerstein, has recently been invited by the California Resources Agency to participate as a member of the Salton Sea Restoration Advisory Committee, and we look forward to an active role there.

Regardless of the means of the Salton Sea's eventual restoration, it is certain that we *will need* some measure of targeted and cost-effective mitigation measures to address fugitive dust concerns from planned water diversion and sea-bed exposure. Thus, AQMD has an ongoing interest in assuring that public air quality needs are pro-actively considered, as actions proceed by involved agencies.

In addition, AQMD needs to have a vote at the table as federal CMAQ funding priorities are deliberated. CMAQ funding has been very helpful to the success of the Clean Streets program, but we continue to press for AQMD's more direct inclusion as a vital stakeholder. AQMD can offer key suggestions concerning CMAQ allocations, and a regional vantagepoint currently being under-utilized.

I'd like to conclude my remarks now with a brief outline of three Salton-Sea related scientific efforts that could urgently use immediate federal assistance. As I've mentioned previously, it is a certainty that fugitive dust mitigation measures will be needed due to imminent water diversion. AQMD very much wants to narrow down the exposed area to be controlled. Our scientific staff is closely in touch with researchers in the Owens Valley who have completed federally funded dust inventory projects, and now is the optimal time to achieve an immediate Southern California follow-on to those fresh findings. AQMD deals with *applying* good science to benefit human health in the near term. So we believe that transfer of knowledge is of vital importance in the coming months.

The three efforts we'd like to take forward are these—all aimed at quantifying the real scope of mitigation needs:

1. **Ambient air monitoring hardware and placement.** Currently, AQMD's closest PM monitor is a single station located at Indio. That's not good enough for the job of public health protection that lies ahead. Additional monitors are needed, through federal funding assistance.
2. **Sand movement monitoring hardware and placement.** U.S. EPA has supported fugitive dust inventory projects in the Owens Valley that have borne valuable findings this year. If AQMD can partner in replicating that measurement effort at the Salton Sea, it would enable us to more precisely and more cost-effectively apportion control approaches, by screening out lower-emitting areas that only have seasonal or sporadic dust-emitting activity.
3. **Mitigation field project assessment.** Once AQMD has narrowed down the most active dust source spots, we want to begin transferring the mitigation tools successfully used in Coachella Valley to initial testing at the Salton Sea, so that we can put in place effective, *preventative* public health protection—instead of having to resort to reactive measures later down the road.

I'll wrap up by recalling a sentence from a Salton Sea assessment by USGS a few years back, which said *"This challenge is of Herculean proportions but not beyond successful accomplishment."* The late Honorable Congressman *Mr.* Bono shortened that to "We can get this thing done." The AQMD Governing Board could not agree more.

I appreciate your time this morning, and I welcome any questions you might have for me or AQMD technical staff.

Coachella Valley 1999/2003 Compliance Statistical Summary

	1999	2000	2001	2002	2003
Fugitive Dust Related Complaints	426	1401	404	659	347
Resulting Notices of Violation Issued	28	24	46	61	28

COACHELLA VALLEY DUST CLASS TRAINING (2003)

- 37 classes conducted
- 742 participants (includes local city and Riverside County code enforcement and engineering staff and construction industry representatives)

KEY ACHIEVEMENTS IN THE 2003 DUST PROGRAM

- The latter part of 2003 produced a significant increase in requests for the Coachella Valley Fugitive Dust Training Class. This was in response to the anticipated requirements of the adopted Coachella Valley State Implementation Plan (CVSIP), and the compliance date of April 1, 2004 to receive the training and Certificate of Completion.
- CVAG and District staff prepared a Memorandum of Understanding, Model Draft Ordinance and Dust Control Workbook, with the cooperation of the Coachella

Valley jurisdictions and submitted the documents to each jurisdiction for adoption through their ordinance review and adoption process. (NOTE: As of January 6, 2004, ALL jurisdictions in the Coachella Valley, including Riverside County, have adopted the aforesaid documents.)

- Feedback from participants attending the dust classes tell us there is a growing level of awareness in the regulated community for the changes in the dust program and the model Ordinance.
- Developers and contractors are taking the initiative and requiring more of their staff to attend and successfully complete the dust class.
- Our training program is providing a clear and consistent message regarding the need for an aggressive dust control program as well as a comprehensive review of all of the newly adopted changes.

THE SALTON SEA AFTER THE WATER DIVERSION BEGINS: CRUCIAL TECHNICAL NEEDS TO ENABLE AIR QUALITY IMPACT AND MITIGATION ASSESSMENT

As the Salton Sea shrinks, increasing square miles of sea bed will be exposed and subject to wind erosion. Dust storms, and their related PM_{10} (small particulate matter less than 10 microns in diameter), arising from the exposed sea bed could significantly impact the health and welfare of the people of the Coachella Valley. This is similar to the situation that resulted from the draining of Owens Lake; Owens Valley is subject to PM_{10} levels orders of magnitudes greater than federal health standards during wind-driven dust storms. SCAQMD staff believes that the same type of technical program of air quality impact and mitigation assessment done in the Owens Valley is crucial to minimizing the public health & welfare impacts to air quality (from Salton Sea water diversion) in the most cost-effective manner. Under the purview of current scientific and technical peer review organizations, SCAQMD staff recommend the following technical projects:

1. At least 3 air quality monitoring stations in the communities between the northern shore of the Salton Sea and the SCAQMD's current Indio monitoring station.
   Necessity: There are no current air monitoring stations in this growing area of the Coachella Valley nearest to the Salton Sea. Much of this area is tribal land. The people of the communities in this area are predominantly lower-income minority populations. Without these monitors, the air quality impact of PM_{10} from the Salton Sea in terms of the federal health standards cannot be assessed.
2. Sufficient "Sensit™" sand movement monitors to assess the PM_{10} emissivity of exposed sea bed. As in the Owens Valley, only certain areas of the exposed sea bed may significantly emit PM_{10}.
   Necessity: The location and extent of those areas most susceptible to wind erosion is necessary to calculate emissions and conduct air quality modeling. Identifying only those sub-areas responsible for significant air emissions is necessary to maximize emission reductions for the least cost.
3. Mitigation assessment projects for proposed controls such as shallow flooding, salt-tolerant vegetation, and sand fencing. As in the Owens Valley, the most cost-effective control program may be a targeted mix of controls.
   Necessity: These projects are necessary to minimize the cost of needed controls by providing crucial technical feasibility, durability, emission reduction and cost data.

Mr. BARTON. Thank you, sir, and I want to compliment the city on their monitoring equipment in the Council Chamber. We have a little bitty clock in Washington that everybody ignores, but you can't miss that big clock. So, that may be one improvement that I take back to my hearings in Washington.

We now want to hear from Mr. Tom Kirk, who is the Executive Director of the Salton Sea Authority. If you'll please come forward.

STATEMENT OF TOM KIRK

Mr. KIRK. Chairman Barton, Congressman Bono, members of the subcommittee, thanks for the invitation. The Salton Sea Authority is a regional agency comprised of two water districts in two counties, and soon the Torres Martinez Tribe locally.

The Salton Sea is California's largest lake, and it's an important stop along the Pacific Flyway for a number of birds. There is a lot of concern that the Salton Sea could become the largest contributor of dust or PM_{10} in the region, and why the concern? Congressman Bono has already alluded to it, and that is, there are planned diversions of water from the Imperial Valley. Those planned diversions will amount to about 300,000 acre feet of water, and that will drop the elevation of the sea by about 20 feet and expose about 80 square miles or more of lake bed sediment. There are also some small diversions of water that will occur and further reduce the elevation of the sea and expose lots of lake bed.

At Owens Lake, as the Congresswoman indicated, the city of Los Angeles diverted a like amount of water in the early part of the last century, and Owens Lake is now the largest contributor of PM_{10} in the Nation. The city of Los Angeles has spent a couple hundred million dollars at Owens Lake, and will spend much more in the coming decades.

Given the Owens Lake problems, the Salton Sea Science Office, which is a federally funded office, the Bureau of Reclamation, the Salton Sea Authority, have asked the Owens Lake experts, and lots of other experts on desert, dry lakes and saline lakes, for their opinion about whether we are going to have a problem at the Salton Sea, and the jury is still out. And, of course, one of the complications of the Salton Sea is that there is water in the Salton Sea today and it's difficult to make those predictions.

At the same time, there are lots of similarities and lots of differences between Owens Lake and the Salton Sea. Among the differences, the Owens Lake is colder, has a different salt make-up and has higher winds. At the same time, the experts tells us to be very cautious, and they are predicting that there will be air quality impacts of the Salton Sea. And, one look at yesterday's Desert Sun, hopefully you have a copy of that Desert Sun article, and you see similar photos in my own testimony, one look at yesterday's Desert Sun will tell you that we may have problems with the Salton Sea. That was a photo of a dust storm that ran across, billowed across the Salton Sea on September 4. The wall of that dust storm was estimated to be well over a thousand feet high and several miles across, and that came up north from south of the Salton Sea, across the Salton Sea, and into the Coachella Valley.

Another cause for concern is putting Owens Lake in perspective with the Salton Sea, and at Owens Lake we know we've generated more dust than any other place in the Nation. We generate 80,000 to 250,000 tons of PM_{10} per year. And, for people like me, it's hard to fathom what that means, 100,000, 200,000 tons of PM_{10}, what exactly does that mean? So, I tried to compare it to our own sources of PM_{10} and dust in the Coachella Valley, and both Ted Schade, who couldn't be here, with the Great Basin Air Pollution Control District, and I, made just some preliminary estimates for your consideration.

Ted estimated that we could generate 8,000 tons of PM_{10} per year in the Coachella Valley from a receding Salton Sea. I estimate 2,500 tons. Both estimates are just ballpark figures that say maybe 1 to 10 percent of the problem of an Owens Lake. It could be great-

er, it could be smaller. I think they are very conservative estimates.

At those estimates, say we generate 800 to 2,500 tons of dust per year, compare that to all of the dust now generated in the Coachella Valley from all mobile and stationery sources. That number is 328 tons per year, and we spend a lot of time and energy making sure that smokestacks are retrofitted, and take care of various mitigation measures, even a small problem in comparison to Owens Lake at the Salton Sea could dwarf all of those emissions.

Since Ted Schade couldn't be here, I thought, if the chairman would allow me, I'll read from the last paragraph of his testimony. And, his testimony indicates, "In conclusion, for the past 13 years, while working at Owens Lake, I have often told myself that we cannot blame the city of Los Angeles, or even President Roosevelt, for allowing Owens Valley water to be diverted and causing the single, largest source of PM_{10} air pollution in the country. Those decisions were made over 90 years ago by well-intentioned leaders. I knew that such disastrous decisions would never be made in this day and age. I could not believe that our decisionmakers today would even possibly let it happen again. In my opinion, as an expert in air quality problems caused by the diversion of water from saline lakes, the diversion of water from the Salton Sea to the city of San Diego will cause some level of air pollution in the Salton Basin. Although there were many unanswered questions, the answers to which will allow an accurate assessment of the magnitude of the problem, the project proponents and decisionmakers have not seriously dealt with the potential for serious air pollution. They tell us there may be significant impacts, yet they make no attempt to quantify the problem or even suggest solutions to what could become an even bigger problem than Owens Lake. Everyone involved with the Salton Sea needs to admit that they could be involved in creating an enormous environmental catastrophe and commit the time and money necessary to determine the magnitude of the problem and implement the necessary solutions."

Well, what could you do in the Federal Government? Become more involved in the Salton Sea restoration. You point out the Salton Sea Reclamation Act, the Federal Government has been a partner in Salton Sea restoration. Both Mike Walker and Rey Stendel are in the audience representing the Federal Government today, they have been a partner, but they could be a much more active partner, as Salton Sea restoration is going to require the work of the local community, the State, and the Federal Government. I think we want to make sure we don't create an Owens Lake in a region with a million people this time of year. It could be disastrous for both the environment and the economy.

Thank you very much.

[The prepared statement of Tom Kirk follows:]

PREPARED STATEMENT OF TOM KIRK, EXECUTIVE DIRECTOR, SALTON SEA AUTHORITY

INTRODUCTION

Chairman Barton, Congresswoman Bono and other members of the Subcommittee on Energy and Air Quality, thank for the invitation to testify regarding air quality issues in our region. I am Tom Kirk, Executive Director of the Salton Sea Authority. The Salton Sea Authority is a regional government comprised of the Imperial Irriga-

tion District, Coachella Valley Water District, Imperial County, Riverside County, and, pending, the Torres Martinez Desert Cahuilla Tribe.

There may be nothing more valuable or more integral to the long term sustainability of the Coachella and Imperial Valley economy than the quality of our air. There are legitimate concerns that a receding Salton Sea could jeopardize our attainment of clean air standards and threaten public health and our quality of life based economy. While many lakes have historically filled and then receded in the Salton Basin, the Salton Sea, shown at the center of Figure 1, has existed for approximately 100 years. Its size and depth has fluctuated during that time, however during the past couple of decades its surface elevation has been stable at about -228 feet msl.

A RECEDING SEA

The Salton Sea's primary source of inflow is agricultural return water. This is also the source, via exchange, of most of the water for the water transfers from the Imperial Valley to San Diego and the Coachella Valley under the quantification settlement agreement (QSA). Under the transfer agreement, the Salton Sea's baseline inflow conditions would be maintained for 15 years. After 15 years, the full effects of the transfer would cause substantial reductions to the inflow to the Sea, as shown in Figure 2, eventually reaching an elevation about 20 feet lower than today.

The receding shoreline would leave large areas of sediment exposed to wind erosion. Figure 3 shows the expected progression of exposed sediments over time. After 30 years, about 80 square miles (over 50,000 acres) of lakebed sediments would be exposed.

Figure 4 depicts the predicted new shoreline of the Salton Sea in 30 years, after implementation of the water transfers, and depicts the 80 square miles of exposed lakebed in light blue.

POTENTIAL AIR QUALITY IMPACTS

There is no debate that much land will be exposed as the water transfer is implemented. On the other hand, there is little consensus on what impact such exposure will have on PM_{10} levels or on human health in the Coachella or the Imperial Valleys. Of course, predicting future emission impacts while the future exposed area is underwater is difficult and complicated. The U.S.G.S. Salton Sea Science Office has spearheaded a number of efforts, with the Salton Sea Authority and U.S. Bureau of Reclamation, to facilitate better predictions, including bringing together some of the nation's top experts on PM_{10} and dry lakes to help chart a research and monitoring program, assembling detailed weather and other data, and most recently, directing a detailed assessment of near shore sediments. (Characterization of Shallow Sub-Surface Sediments of the Salton Sea, Agrarian Research, 2003)

The Imperial Irrigation District Water Conservation and Transfer Project Environmental Impact Report/Statement (EIR/EIS) predicted the transfer could have a serious and unavoidable impact on air quality. The impacts were not quantified. Much attention in that EIR/EIS and related environmental assessments has been given to the differences and similarities with the nation's greatest contributor of PM_{10}, Owens Lake.

Notably, Owens Lake problems occurred after a water transfer/diversion by the City of Los Angeles that began decades ago. Ironically, the scale of the water diversion from the Owens River and the amount of water reduced from inflows to the Sea as a result of the IID water conservation and transfer project are similar. So is the amount of area exposed. However, there are differences in temperature, humidity, winds, salt composition, and groundwater that might reduce the likelihood of impacts at the Salton Sea. All are factors contributing to emissions at Owens Lake and are likely factors affecting conditions at the receding Salton Sea. Still, there are good reasons for concern.

During the winter of 2001/2002, the director of the Salton Sea Science Office witnessed a wind event at the southeast of the Salton Sea that picked up salts and lakebed material from a seasonally exposed area of the Salton Sea and blew it onshore (see Figure 5).

A more dramatic indication of the risk from the periodic high wind events at the Salton Sea occurred just four months ago on September 4, 2003. Following are images from the Salton Sea shoreline showing a massive dust cloud engulfing areas as it moved from the desert southwest of the Sea north across the Sea and into the Coachella Valley. Figure 6 shows the storm from the west side of the Sea at Salton City. The wall of the storm was estimated by the State Park ranger to be over 2000 feet high. Figure 7, below, shows the storm from the east side of the Sea at Bombay Beach, looking across the Sea.

Hypothetical scenarios help explain the interest and concern about "re-creating" an Owens Lake problem at the Salton Sea. Owens Lake generates, on average, about 250,000 tons of PM_{10} per year. For many of us, that number does not "mean" much. To put it into perspective, if the 80 square miles of exposed lakebed at the Sea generates only 1% as much PM_{10} as similar exposed areas at Owens Lake, the Sea would generate 2,500 tons of PM_{10} per year. Comparing this hypothetical impact to the amount of PM_{10} generated by all mobile and stationary sources in the Coachella Valley, 328 tons/year, puts this number in perspective (see figure 8) (California Air Resources Board, Emissions Inventory, 2002). Prevailing winds during much of the year will direct any fugitive dust from the lakebed toward the Imperial Valley. However, some of the most violent storms, as the dust storm pictured above indicates, come from the south during the summer, monsoon season, when prevailing winds reverse direction and head north into the Coachella Valley.

While PM_{10} alone is a health concern, the other concern is related to the nature of the particles that might be detached and picked up by wind. While the Sea's water quality is quite good on many measures (meets many EPA drinking water quality standards, except, of course, for salts), concentrated levels of some elements of concern are found in some of the Sea's sediments. Of the elements of concern, Selenium, Copper, Molybdenum, Nickel, Zinc and Selenium, are concentrated in the sediments in the north end of the Sea, closer to the Coachella Valley. While some of the highest concentrations of elements like Selenium are found in deeper waters, others are found around the Whitewater delta, an area that will be exposed if the Sea recedes as projected. (Environmental Reconnaissance of the Salton Sea: Sediment Contaminants, LFR, Levine Fricke, 1999)

One major difference between the Owens Valley and the Coachella and Imperial Valleys is population. Owens Lake is far from major population centers. The Coachella Valley has a year round population of over 300,000 persons and a seasonal population of over one million. This region's top two industries, agriculture and tourism are both negatively impacted by poor air quality.

ROLES & RESPONSIBILITIES

If there is an air quality problem from a receding Sea, who will be responsible for "fixing" it? As noted above, the water transfer environmental documents acknowledge the potential air quality problem. The water transfer environmental documents include the following mitigation measures: restricting public access to exposed areas to minimize disturbance of natural crusts and a research and monitoring program. The monitoring program is a condition of the transfer permit by the State Water Resources Control Board. If monitoring determines that actual impacts exceed standards, additional mitigation steps are identified: include creating or purchasing offsetting emission reduction credits or direct mitigation through provision of mitigation water or stabilizing soils.

While direct mitigation of the potential air quality problem is an identified mitigation measure, the water transfer parties may not be the responsible agency for funding the mitigation measures. Under the recently signed water transfer and related agreements, the water transfer parties are limited to paying $133 million for all mitigation costs (including those in the Imperial Valley, along the Colorado River, etc.). If serious air quality problems materialize at the Sea, it is likely that the water transfer parties' mitigation fund would not be sufficient to pay for mitigation and, presumably, the State of California would be financially responsible for any additional costs.

The Salton Sea Authority is developing a restoration plan. The reduced inflows make restoring the Salton Sea that much more complicated and challenging. The current direction of restoration planning involves designing a smaller body of water and associated wetlands, consistent with reduced inflow scenarios. The plans include dredging and/or constructing shallow water habitat areas that would be a part of the salt management system. It is likely that these shallow water habitat areas would be arranged in ways that break up the distance between dry playas and wetted surfaces. Also, we are working with a contractor with much experience at Owens Lake to design our salt management systems in ways that would "cap" soil, reducing potential emissive surfaces. At the same time, we will continue to work with the Bureau of Reclamation and U.S.G.S. Science Office to support research and science that will help us and others predict and respond to potential air quality problems.

The federal government has clear national air quality priorities associated with the Clean Air Act. The federal government also has major responsibilities associated with the Sea associated with the Migratory Bird Treaty, the Endangered Species Act and the Salton Sea Reclamation Act of 1998. The 1998 Act, along with contin-

ued support by Congresswoman Mary Bono and the Congressional Salton Sea Task Force, have enabled the Bureau of Reclamation and U.S.G.S. Salton Sea Science Office to work in partnership with the Salton Sea Authority on restoration studies, pilot projects and other activities. I understand that Department of Interior restoration-related activities do not fall within your subcommittee's purview, however, since air quality concerns are a critical element of any restoration effort, your subcommittee's assistance in supporting air quality-related research and/or projects would be greatly appreciated. Addressing the problems of a receding Salton Sea proactively and through restoration will be more cost effective than "mopping up" the problems later. The nation cannot afford another Owens Lake problem, this time centered in a region of a million people.

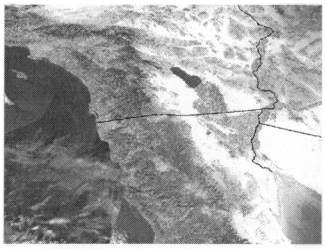

Figure 1:
Salton Sea Location

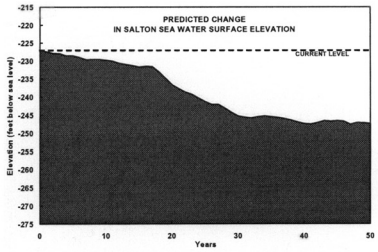

Figure 2
Predicted Sea-Elevation Decline

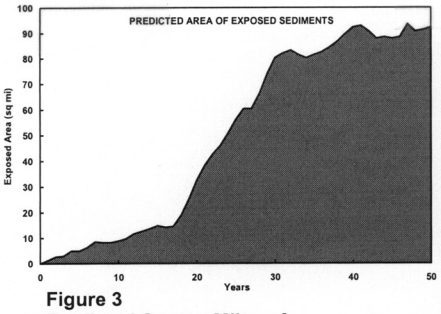

Figure 3
Predicted Square Miles of Exposed Lakebed

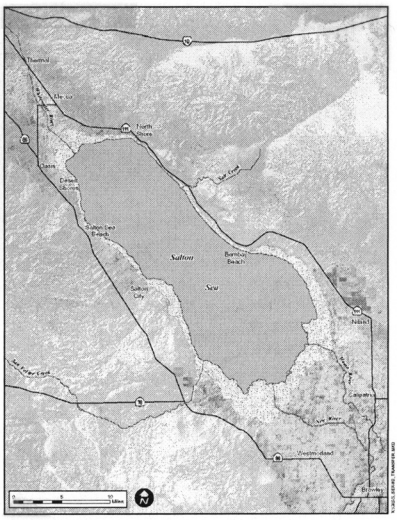

Figure 4:
Lakebed Exposed, Post Water Transfer

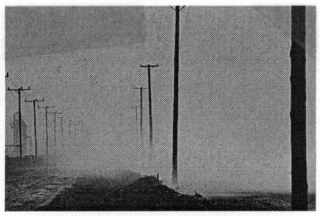

Figure 5:
Photo of Lakebed Salts Blowing,
Winter, 2001/2002

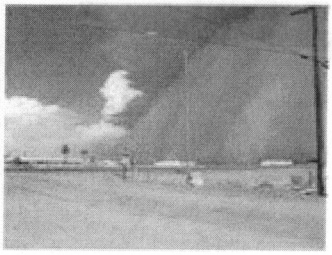

Figure 6:
Dust Storm Over the Salton Sea
From Salton City
September 4, 2003

Figure 7:
Dust Storm Over the Salton Sea, from Bombay Beach
September 4, 2003

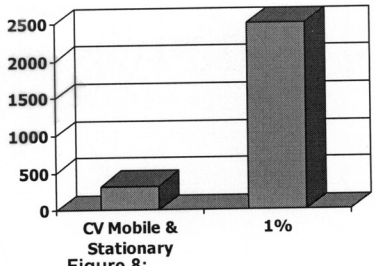

Figure 8:
Comparison: 1% of the Owens Lake
PM10 Problem to All Mobile &
Stationary Sources in Coachella Valley

Mr. BARTON. Thank you, sir.

We now want to hear from Mr. Buford Crites, who is Chairman of the Energy and Environmental Resources, Coachella Valley Association of Governments. Your testimony is in the record in its entirety, and we would ask that you summarize it in 6 minutes or less. Welcome to the subcommittee.

STATEMENT OF BUFORD CRITES

Mr. CRITES. Thank you. Thank you, Mr. Chairman, thank you, members of the subcommittee.

On behalf of the city of Palm Desert, as a member of the City Council, I welcome you and am glad that you are here. On behalf of the Coachella Valley Association of Governments, again a welcome.

A special thank you to Congresswoman Bono for the efforts that she continuously makes for our valley, in the fields, not only of air quality, but other areas, and our sincere appreciation is extended.

As she noted, the Coachella Valley is an area experiencing remarkable growth, as are many parts of the country. CVAG itself consists of over nine cities, the County of Riverside, three tribal nations, it covers an area of over 2,500 square miles, more than 300,000 permanent residents, and if you'll note the traffic today, lots of part-time residents with license plates from all over the United States, certainly including States to the north, to the east, and everywhere else. We have a thriving agricultural sector. We have a remarkable diversity of plants and animals, national parks, national monuments, and other areas nearby, internationally known for tourism, and excellence in air quality is simply not an option for the health of local residents, for the health of visitors, and for the vitality of our business communities.

To the west of our valley, we have the L.A. Basin, and this valley have been, and remain, and will be strong supporters of the EPA and local and State efforts to improve the air quality in the L.A. Basin, because we both literally see and breathe the results of their solutions.

But locally, and to the east where the Salton Sea is, the issues are specifically PM_{10}. The diorama behind you, obviously, shows a desert that is, by its nature, filled with sand and wind, but yet a significant part, if not by far the majority of the PM_{10} that is generated in this valley, is not generated naturally, it's generated by humankind and the kinds of things that we do, whether that be construction, whether it be off-roading, whether it be the presence of sand on roadways that's ground up into fine particulate matter, or whether it be, now for the future, the potential exposed seashores of the Salton Sea.

As was noted by previous speakers, we were a serious non-attainment area for PM_{10}. We came back into balance and then, because of construction and other issues, and I think just probably not our best attention, we were out of compliance, we came back in the year 2002, and along with an excellent cooperative relationship with our local building and industry associations, and being able to use a lot of the models from Maricopa County in Arizona we created a new plan in 2002 that really does do a lot in terms of doing best available control technology of making sure that our street sweeping program has zero emission vehicles, that the vehicles themselves produce no pollutants because they are natural gas, making sure we are doing sand fencing, making sure we are doing stabilizers, training. The results of the 2002 program in 1 year is that complaints of fugitive dust in this valley have dropped by over 40 percent to their lowest level in 5 years.

That program is at least possible because of the Federal Government's participation with CMAQ funding, and, obviously, as that expires this year we are looking for that to be reauthorized, and for the Coachella Valley again to remain a recipient. We use those

funds to do the kinds of regional clean street programs and other kinds of programs that have made this reduction possible.

But, every bit of that reduction could be for naught with the kinds of quantities of PM_{10} that the Salton Sea has the potential, the very real potential, to generate.

And, as I noted before, we depend on the quality of our air for our economy and our health. We do sincerely request that the Salton Sea be on your radar screen, not only for the remarkable, remarkable ecological value that it has, in terms of places for migrating birds, water fowl and recreation, but also because of the potential for human health catastrophes that have happened in other places.

We will pay a bill. The only question is, is how we choose to pay those bills. And, as Congresswoman Bono has noted, being proactive, having plans in place, using AQMD's resources, allowing the Coachella Valley, through its participation with the Federal Government, CMAQ, to continue to do what we do within the valley, and then making sure that a strong regional approach of local governments, the State government, and the Federal Government, make sure that the Salton Sea retains its vitality as an ecological treasure and also does not become something that we will all rue the day that we finally have heard of the Salton Sea, and not as something to treasure, and not as something to visit, not as something to be proud of, but it is yet something else that we have to figure out how to fix.

I thank you all.

Mr. BARTON. Thank you, sir.

I've been told by my staff that this clock actually comes from Washington, DC, that we just haven't used it in my subcommittee because I hold my subcommittee hearings in the big committee room on the first floor, that this is a clock that they use up on the third floor. So, I still want to thank the City Council for this, but you probably have an even bigger clock.

Mr. CRITES. No, we were going to thank you for the gift of the clock.

Mr. BARTON. Oh, beware of congressmen bearing gifts.

Our final panelist on the first panel is Mr. Matt Haber, who is the Acting Deputy Director of the Air Division of the Environmental Protection Agency in Region IX. We'd love to have you come forward. Welcome to the subcommittee.

STATEMENT OF MATT HABER

Mr. HABER. Thank you. Good morning, Chairman Barton and members of the subcommittee. I am Matt Haber. I'm the Acting Deputy Director of EPA's Region IX Air Division in our Pacific Southwest Office. Thank you for the opportunity to provide testimony relating to air quality in the Coachella Valley, as well as potential air quality impacts associated with reduced water flows that might impact the Salton Sea.

We've been actively engaged with air quality in the Coachella Valley since the State of California and our agency determined that the area did not attain the health-based air quality standard. Our role has been to work with the South Coast Air Quality Manage-

ment District and the Coachella Valley Association of Governments on two important pollutants, ozone and PM_{10}.

I want to cover a few key areas just to summarize my remarks, starting with air quality in the Coachella Valley, talking a little bit about lessons we've learned in Owens Valley, and the next steps that we might take related to the Salton Sea.

As the other speakers have said, there have been a number of problems with air quality in the Coachella Valley. The valley is currently out of attainment for both the 1-hour ozone standard as well as the PM_{10} standard. And, due to aggressive moves and leadership by the South Coast Air Quality Management District and the Coachella Valley Association of Governments, from both standards the area is on its way toward attaining the standards, and particularly the innovative steps that the CVAG has taken with respect to PM_{10}. We really think that that's been a good thing.

The area is currently experiencing violations of the 8-hour ozone standard, and the State has recommended, and EPA has indicated that we agree with its recommendation, to designate the area nonattaining the 8-hour standard. So, we'll continue to need to work on ozone issues, as well as PM_{10} issues.

In terms of the Owens Valley, the other speakers have very eloquently talked about the origin of the problem in the valley, and what was done to do it, but a couple things I wanted to emphasize is that the way we got to the solutions there was a cooperation between EPA, the Great Basin, Unified Air Quality Management District, and the city of Los Angeles, to work together toward a solution, looking at different alternative ways of putting emission controls in place, which in that case turned out to be a combination of vegetation, gravel and shallow flooding.

But, one thing I do want to emphasize is that it's not the case that controls that work there are exactly transferrable to the situation here with the Salton Sea. We need to look very carefully at the specifics of the Salton Sea to find out what will work and what won't.

As the Salton Sea recedes, as the surface grows, there is a potential for wind erosion and very large emissions, as the other speakers have said, due to wind erosion and human activity.

We need to look very carefully at Owens Valley as a model for what might be done here to prevent the problems. Again, the other speakers have said very eloquently that starting today is the best time to do it, instead of when we actually have a problem and human health is impacted.

We believe that starting with monitoring near the lake is appropriate, and really finding out what the best science is so we can take the next steps to control lake emissions before they occur.

I'm going to close really early.

Mr. BARTON. Bless you.

Mr. HABER. The experiences that we've had at Owens and Mono really should guide our decisions concerning the Salton Sea, to help prevent violations of the PM_{10} standards which could negatively affect public health.

Thank you for the invitation to provide testimony here, and I'd be happy to answer any questions you have.

[The prepared statement of Matt Haber follows:]

PREPARED STATEMENT OF MATT HABER, ACTING DEPUTY DIRECTOR OF AIR DIVISION, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 9

Good morning, Chairman Barton and Members of the Committee. My name is Matt Haber. I have been the Acting Deputy Division Director in the Air Division at the United States Environmental Protection Agency Region 9, our Pacific Southwest office, since June 2003. Thank you for the opportunity to provide testimony relating to the air quality in the Coachella Valley as well as the potential air quality impacts associated with reduced water flows which impact the Salton Sea.

EPA has been actively engaged in air quality in the Coachella Valley since the State of California and the Agency determined that the area did not attain the health based air quality standard. EPA's role has been to work with the South Coast Air Management District and the Coachella Valley Association of Governments to protect residents from the health effects of air pollution. EPA has continued to work with the Coachella Valley to address the non-attainment status regarding two important air pollutants, ozone and particulate matter. As required by the Clean Air Act, EPA has approved the South Coast Air Management District's plans B known as the State Implementation Plan B to achieve healthy levels of ozone and particulate matter. Air quality modeling shows that attainment is projected given control measures currently adopted and current levels of anthropogenic and natural emissions.

EPA's role in the Salton Sea and Lower Colorado River region has been to work with the Salton Sea Authority to oversee initial environmental studies. In 1997, Congress provided EPA $5 million to identify baseline conditions at the Sea. Based on those studies and in recognition of the complexity of the issues, in 1998 Congress appropriated an additional $8.5 million to EPA for scientific and engineering studies and pilot projects. The studies and projects were coordinated by the Salton Sea Authority. This work has provided a basis for the development of alternatives being considered to improve conditions at the Salton Sea. Throughout the process, EPA worked to ensure the use of appropriate scientific methods and approaches to protecting air quality in the valley.

EPA served on the Salton Sea Science Advisory Committee. This committee provided actions that could be taken to protect air quality in the valley. EPA also had a role in the environmental review of projects related to California's use of Colorado River Water which have an impact on water flow into the Salton Sea. Since the hearing here today is focused on "Air Quality Issues in the Coachella Valley," I will now spend some time discussing that subject.

1. COACHELLA VALLEY AIR QUALITY

a. Particulate Matter in the Coachella Valley

The Coachella Valley is currently classified under the Federal Clean Air Act as being a "serious" non-attainment area for PM_{10}. Particulate matter, also known as PM, is the general term used for a course and fine particles found in the air. Particulate matter is associated with numerous adverse environmental and health effects. Exposure to coarse particles is primarily associated with the aggravation of respiratory conditions such as asthma. For the last 3 years, the Coachella Valley's design values were above the national coarse particle standards as measured over the course of a day and over the course of a year. The Coachella Valley far exceeded the 24-hour standard of 150 micrograms per cubic meter, with the value calculated at 604 micrograms per cubic meter. During this time, the area exceeded the standard on 10 days.

In this area, the primary sources of PM_{10} emissions are fugitive windblown dust (28%); construction and demolition (23%); reentrained dust from paved roads (22%); and reentrained dust from unpaved roads (12%). EPA is working with the South Coast Air Quality Management District "SCAQMD," Coachella Valley Association of Governments, and each of the local governments to address these sources of course particles. The area has adopted best available control measures to reduce these emissions in the area.

These control measures include state-of-the-art controls on paved roads: minimizing track-out (preventing soil from unpaved areas from entering upon paved areas); providing for PM_{10} efficient street cleaning; mandating post-event street cleaning; and requiring curbs and gutters and chemical stabilization of unpaved road shoulders. In addition, best control measures are required for construction and demolition activities; unpaved roads (e.g., chemical treatment or speed reduction); agricultural activities (e.g., soil conservation plans); and controls on weed abatement. The control measures, as appropriate, increase in stringency during periods of high wind, in order to reduce the emissions. On August 1, 2003, the SCAQMD amended the area's plan to control coarse particles by enhancing, existing control

measures to reduce further PM_{10} emissions. These enhancements are expected to bring the Coachella Valley into attainment with the national standards for PM_{10} by, or before, the 2006 deadline. Under the plan, SCAQMD will conduct modeling to show that the area will attain on schedule.

b. National Ambient Air Quality Standards for Ground-Level Ozone

The area is classified as a "severe" non-attainment area for the 1-hour ozone standard. As you may know, ground-level ozone is a component of smog. Health problems attributed to ozone exposure include increased respiratory symptoms such as chest pain and cough. Exposures to ozone can make people more susceptible to respiratory infection, and aggravate preexisting respiratory diseases such as asthma. These effects generally occur while individuals are actively exercising, working, or playing outdoors. Children, active outdoors during the summer when ozone levels are at their highest, are most at risk of experiencing such effects.

EPA has approved a State Implementation Plan or "SIP" to bring the area into attainment with the 1-hour ozone standard by the Clean Air Act deadline of 2007. The standard for the 1-hour ozone standard is 0.12 ppm. For the last 3 years Coachella Valley's design value was 0.132 ppm. During this period, the area had 12 days above the standard at the design monitor in Palm Springs.

The primary sources of ozone precursor emissions in the area are: on-road motor vehicles (51%), off-road engines (25%), and solvent evaporation (13%). Both the SCAQMD and California Air Resources Board "CARB" have adopted stringent measures to control ozone precursor emissions from on-road and off-road mobile sources, and from the key area and stationary sources within the Coachella Valley and upwind in the metropolitan Los Angeles area. These State and local controls are supplemented by EPA's national mobile source control program. SCAQMD and CARB recently strengthened the control measure commitments and adopted a new modeling demonstration that the Coachella Valley area will attain the 1-hour ozone standard by the 2007 deadline.

c. Coachella Valley and the Natural Events Policy

The Coachella Valley is susceptible to high wind events that generate windblown dust. During the years 1993-2001 the valley recorded 15 days exceeding the 24 hour average PM_{10} standard, all of which they documented—and EPA approved—as high-wind natural events. Coachella Valley has a Natural Events Action Plan (NEAP) in their 2002 SIP.

2. REDUCED WATER FLOWS INTO THE SALTON SEA AND AIR QUALITY

Lower Sea levels will expose shoreline sediments that may become airborne. From our experience at Mono Lake and the Owens Lake basin, which I will talk about in a moment, we know that windblown dust from an exposed dry lake bed can cause high levels of PM_{10} which is particulate matter smaller than 10 microns in size. Inhalable particulates in this size range, especially those associated with toxic materials or metals, can have serious health effects for people, especially children, the elderly, and those with respiratory illness. Our concern regarding airborne impacts from the Salton Sea is based on results from initial studies and our experiences at Mono and Owens Lakes.

a. Mono Lake

Mono Lake is located in Mono County in eastern-central California. Since 1941, portions of the water from four of the major tributary streams have been exported before reaching the lake. From 1974 through 1989, an annual average of 83,000 acre-feet of water was exported from the Mono Basin to the city of Los Angeles.

Over the past 50 years, the water level of Mono Lake has dropped by approximately 45 feet, causing the exposure of approximately 20 square miles of new shoreline and an emissive area of 9 square miles. As the lake receded, 24-hour PM_{10} readings increased from 404 ug/m3 in 1988 to 900 ug/m3 in 1993. Today, the State of California is refilling Mono Lake to its historical level, and although the lake has not yet reached that level, the PM_{10} levels are declining (the highest 24-hour reading in 2001 was 450 ug/m3).

b. Owens Dry Lake Bed

Owens Lake is located in Inyo County in eastern-central California. In 1913, the Los Angeles Department of Water and Power (LADWP) completed an aqueduct system and began diverting the waters of the Owens River to the City of Los Angeles. By 1930, these diversions had drained Owens Lake almost completely dry.

The Owens dry lake bed is approximately 70 square miles. The emissive area is approximately 35 square miles. Strong winds over the dry, alkaline bed of Owens

Lake have produced the highest measured concentrations of PM_{10} ever recorded in the US: levels as high as 23,000 ug/m3 were measured at the small community of Keeler. Annual PM_{10} emissions from Owens Lake may exceed 400,000 tons, and dust transported from the Lake can result in violations of the 24-hour PM_{10} NAAQS in the town of Ridgecrest 150 miles to the south. The dust from the lake bed contains carcinogenic compounds, including arsenic, nickel, and cadmium. The State Implementation Plan includes control measures such as shallow flooding, managed vegetation, and gravel cover to minimize dispersal of PM_{10} and bring the area into attainment of the Federal health standard.

c. Salton Sea

The conditions at Mono Lake and the Owens Dry Lake are not the same as the Salton Sea in their climatic and soil characteristics. We cannot predict with confidence potential emissions from the newly exposed shoreline at the Sea. However, the potential of exposing 100 square miles of shoreline without any mitigation raises concerns about air quality impacts. Factors that potentially affect PM_{10} air quality problems include how the lake crusts over after the water recedes; how rain, drying and other forces such as human activities might disturb the crust; and, how winds affect emission patterns on the dry lake bed. In addition, the soil from the lake bed may contain toxic materials. These could be naturally occurring, as in the case of Owens Lake, as well as potential contaminates from agricultural runoff. The congruence of these factors may cause higher emissions in some areas compared to other locations in the vicinity.

There is some indication that the existing north shore of the Salton Sea might be presently emitting PM_{10} into the air. To understand these potential impacts, the soil type and characteristics of the potential new shoreline should be assessed. Models to assess the level at which violations of the Federal PM_{10} health standard may occur should also be employed. And finally, potential control measures should be evaluated.

The experiences at Owens and Mono Lakes should guide our decisions concerning the Salton Sea to help prevent violations of the PM_{10} standard which could negatively impact public health. Thank you for extending an invitation to me to provide testimony here today. I will be happy to answer any questions that the Subcommittee members may have. Thank you.

Notes:

Air quality data are from EPA's Air data website: (http://www.epa.gov/air/data/index.html).

Emissions inventory data are from CARB's 2002 emissions inventory website: (http://www.arb.ca.gov/emisinv/emsmain/emsmain.htm).

Website for both the PM_{10} and Ozone SIP's (http://www.aqmd.gov/aqmp/AQMD03AQMP.htm)

Mr. BARTON. Thank you.

That concludes the testimony of the first panel. Normally, we would ask questions of the first panel seated together at the panel table, and then we would go to the second panel. Because we don't have a panel table, I'm going to ask our first four panelists if they have a time constraint. If they do not, I'm going to ask unanimous consent that we let the second panel also put their testimony on the record and then ask questions of both panels at the same time.

Is there anybody on the first panel that needs to leave in the next 20 minutes?

Mr. KIRK. No.

Mr. BARTON. Is there objection of the subcommittee to letting the second panel put their testimony on the record before we ask questions?

Mr. BUYER. A question on process. Then if we are going to have—when it comes to our time and we have a particular question, or I don't understand how we are going to do this, if you are going to have one person come up are we then going to ask only that person?

Mr. BARTON. Well, what we will do when we yield, what we'll do, if there's not objection to the unanimous consent request, we'll let the second panel put their testimony in the record, then I'll recog-

nize in order of seniority the members of the subcommittee for 5 minutes, and then a second round for 5 minutes if they wish, so that you have a total of 10 minutes, which you would have had had we done it one panel at a time. There's going to be no—we are not going to short sheet anybody in terms of time.

Mr. BUYER. No, I was just thinking if they were going to be constantly jumping up and down.

Mr. BARTON. Well, I'm just going to put them right in front of us and point to them, and you can point to them.

Mr. BUYER. All right. I have no objection then.

Mr. BARTON. If they need a microphone we'll get one to them or they can step forward.

Mr. BUYER. No objection.

Mr. BARTON. Okay.

Hearing no objection, so ordered.

We'll now go to our second panel. The first testifier is Ms. Joan Taylor, who is the Conservation Chairwoman for the Tahquitz, if I'm saying that right, Tahquitz Group of the Sierra Club, the San Gorgonio Chapter. If Ms. Taylor would come forward.

We're glad to have you, and your testimony is in the record in its entirety, and we would ask that you summarize it in 6 minutes.

STATEMENT OF JOAN TAYLOR, CONSERVATION CHAIR, TAHQUITZ GROUP, SIERRA CLUB, SAN GORGONIO CHAPTER; EDWARD KIBBEY, EXECUTIVE DIRECTOR, BUILDING INDUSTRY ASSOCIATION OF SOUTHER CALIFORNIA, INC., DESERT CHAPTER; JEFF WELTON, SENIOR VICE PRESIDENT, WINTEC ENERGY; AND VINCE SIGNOROTTI, VICE PRESIDENT, REAL ESTATE ASSETS AND COMMUNITY RELATIONS, MIDAMERICAN-CALENERGY

Ms. TAYLOR. Thank you, Chairman Barton, members of the committee, and especially Congresswoman Bono for twisting some arms and getting you all down here and giving us the opportunity to speak to this important issue.

Can you hear me okay?

Mr. BARTON. Yes, ma'am.

Ms. TAYLOR. Thanks.

I'm not going to summarize all the testimony. I just want to emphasize two main issues that we need to plan for now, and that would be the clean air legislation and the Salton Sea.

With regard to the clean air legislation, you are having some especially beautiful weather, weather that everyone pictures when they think of the Coachella Valley. Unfortunately, it's not always that way. Most of the time when things heat up in the inland basin, that is the Riverside/San Bernardino area, which is the dirtiest area in the Nation, we get literally a wall of smog going through here. I noticed it first about 30 years ago, thought it was a forest fire, but it happens all the time now, and particularly in warmer weather.

So, we, as Buford Crites said, are literally down wind from some of the dirtiest air in the Nation, and we have a sensitive population here. It's a growing population, a lot of elderly people, a lot of people come here with lung ailments, and we also have a national park that we shouldn't forget about, much of which is in the

Coachella Valley, which is always in the top three dirtiest national parks in the Nation.

So, when the Clean Air Act comes up for reauthorization, it needs to be kept strong, hopefully strengthened. The new Source Review is something that, in particular, could affect the Coachella Valley as a down wind receptor.

In any event, we hope to solve the PM_{10} problems and hope that you will keep the clean air legislation strong to prevent or to ameliorate the wall of smog that does come in here and affect our residents and visitors.

With regard to the Salton Sea, that obviously is a specter that makes other problems pale by comparison. In talking with Ted Schade of Owens Valley, he said he couldn't even limit what our exposure might be. It could be as bad as the Owens Lake. And he said, "Why aren't they meeting up in Owens Lake to see what it's really like up there?" And, it's true, I've been up there in a dust storm and it's like a pea soup fog. It's incredible, and it's those tiny micron particles that once they get in your lungs they don't leave.

So, it's not too early to be thinking about that. We have a 10-year window while they are being forced to fallow fields in Imperial, and after that they'll start sucking water out of the sea, and we'll get this exposed shore line.

Now, you know how long it takes to study, to plan, to get the funding, and then there have to be some years for the actual implementation of the measures that are decided upon, whether it be shallow flooding, or the planting, whatever they decide on. So, we urge you to be thinking about that now, to give the requested funding for those steps we can take now to prevent another huge health disaster in California.

I hope you enjoy your stay here, and don't see that wall of smog, but keep this in mind, please, and thanks again for your consideration of these very important issues.

[The prepared statement of Joan Taylor follows:]

PREPARED STATEMENT OF JOAN TAYLOR REPRESENTING TAHQUITZ GROUP OF THE SIERRA CLUB

Chairman and Members of the Committee: Thank you for the opportunity to testify on this important issue. I am speaking for the Tahquitz Group of the Sierra Club, which represents Sierra Club from the Banning Pass to the Colorado River, including the Morongo Basin on the north and the Pinyon area on the south. We appreciate the Committee's interest in the air quality problems of this region.

As you will probably hear from other witnesses, many of whom have great expertise in air quality, our Valley's air quality problems originate from the Los Angeles metropolitan area as well as from within the Valley.

The Los Angeles-generated component of our air pollution is primarily an automobile-generated wall of smog that blows through the pass from the west nearly every afternoon. The solution to this source is clear: keep the Clean Air Act intact, or even move to strengthen it. Attempts to weaken this important legislation could affect the health of millions of Californians, including the residents of the Coachella Valley. California is on the cutting edge of clean air legislation, and we need all the tools possible in order to hold the line and perhaps one day win the battle against smog.

For instance, Congress is currently considering "reauthorization" of our nation's major transportation legislation. We are concerned that several parts of this proposal will lead to worse air quality around the country, and here in California. The impact that dirty air from Los Angeles has here is a perfect example of how transportation decisions can have long term and far ranging impacts. The bill under consideration goes the wrong way in this regard. For example, the bill cuts the time frame for looking at future impacts from sprawl inducing roads in half, from twenty

years down the road to ten years, leading to projects that may saddle communities with dirty air for a generation. In addition, there are proposed changes that would allow State Implementation Plans to be less effective. In sum, Congress should fix this bill before allowing it to move forward.

Congress is also considering legislative proposals to reduce pollution from power plants. It is well past time that we address this critical public health concern. Any proposal should strengthen the existing Clean Air Act, not undermine it. Proposals like the Bush Administration's so-called "Clear Skies" scheme actually gets us less pollution reduction than strong enforcement of the Clean Air Act.

I'd also like to address an issue that is not currently before Congress. The Environmental Protection Agency has weakened the New Source Review program of the Clean Air Act in the last year. This program, which requires factories, including power plants and refineries, to install modern pollution technology when they make changes that increase pollution, is a proven success. Unfortunately, EPA has finalized rule changes that create gaping loopholes, leading to the chance of tremendous pollution increases. One of the worst of these changes was blocked by a federal court on Christmas Eve, to the relief of breathers everywhere.

It is important to know we have a national park here that is affected by air pollution. 85% of Joshua Tree National Park lies within Riverside County, much of that in the Coachella Valley. Unfortunately this park has the dubious distinction of being among the three national parks with the dirtiest air. This year, for example, ozone levels in the Park exceeded 8-hour health standards on 40 days, resulting in warnings for citizens to avoid outdoor activities, which is exactly what they come to the Park to pursue. Joshua Tree also is one of the five worst parks for nitrogen deposition, resulting in the proliferation of non-native grasses, which in turn fuel wildfires. Regional haze in Riverside County is also a problem for the Park, and visitors regularly complained about obscured views from the Park's famous viewpoints.

As regards the locally generated particulate matter pollution, there are several areas of concern, each with its own problems and potential solutions.

First, as generally agreed by those with greater expertise in this field than I, the Coachella Valley's particulate pollution problem is not actually caused by the sporadic sandstorms that blow through the center of the Valley and have in fact created a series of dunes here. For one thing, these events occur on a relatively small number of days during the year, and for another, the blowsand grains they move actually contains a relatively small amount of fine particulates. This of course assumes that the wind is blowing across undisturbed desert, not a disturbed construction site or dirt road. Also, it is worth noting that the particle size of blowsand granules at the west end of the Valley is larger and coarser that at the east end, where there are remnants of fine sediments from ancient inland lakes that once covered much of that area.

So it is generally accepted that the particulate pollution generated here in the Coachella Valley comes primarily from earthmoving activities associated with construction, and from vehicles, including heavy diesel truck traffic on Interstate 10, with Off Highway Vehicle (OHV) use and conventional vehicle use on unpaved surfaces making lesser contributions. Because of the Coachella Valley's continued noncompliance with air quality standards, a State Implementation Plan has zeroed in on the type of fugitive dust emissions that are produced by construction and construction vehicles, as well as other vehicles on dirt roads, but interstate truck traffic and OHV use are more difficult to regulate.

At this time OHV use is not a major particulate concern, since the demand for this pastime is not great, because of the large elderly population in this Valley. However, there is potential for a big increase in particulate generation from OHVs. This is because the Bureau of Land Management has recently proposed siting an Off Highway Vehicle "open area" in the east end of the Coachella Valley. This is a bad idea. In the first place, currently there is a relatively small local demand for an OHV open area.

Secondly, there exist three such OHV play areas within 50 to 75 miles of the Coachella Valley, namely Johnson Valley and Stoddard Valley to the north and the Imperial (Algodones) Dunes to the south. By creating a new OHV open area here, BLM would surely create a magnet to attract new OHV use to the Coachella Valley and result generating significant additional and uncontrollable particulate pollution here. Thirdly, the BLM is proposing this new open area in the east end of the Valley, where the sands are the finest and most likely to generate large uncontrolled amounts of particulate pollution. Perhaps this project does not fall under the jurisdiction of your committee; however, it is a potential large contributor to our problem of which you should be aware.

Another threat to air quality in the Coachella Valley is the siting of power plants here. Two years ago, there were five gas burning power plants on the drawing boards to be sited here. These plants would have produced enough power to serve 4 million people, over 10 times that needed for our valley. Given this valley's existing non-compliance with air quality standards and given its elderly population which is more sensitive to air pollution, it hardly needs to be said that this is an inappropriate place to generate power for the southwest region. We already have one trash burning plant, one gas-fired "peaker" plant, one proposed pump storage plant, and many, many windmills generating power here. If anything, the Coachella Valley is an appropriate location for solar power. It is not a good location for conventional power plants, both because of air quality concerns and water supply issues.

Another concern is corporations purposely siting power plants and other air polluting facilities on Indian Reservation land in the Valley. The existing large trash burner, named Colmac, is on Indian land. Additionally, at least one of the five other proposed power plants was slated to be located on Indian land as well. There has also been an unpermitted sewer sludge drying operation as well as continued general trash burning on Indian Reservation. We surely support Native American sovereignty, but we feel that our health and air quality laws need to be respected, and we look to the federal government to ensure that happens.

But there is one threat to the air quality here that makes the others pale by comparison. That is the specter of particulates, probably laced with selenium and other pollutants, which would be exposed if the Salton Sea is allowed to shrink. If the experience at Owens Lake has taught us anything, it is that it is better to deal with this issue sooner rather than later. By 2006, the Los Angeles Department of Water and Power will have spent over $400 million wrestling with the Owens Lake problem, and the ongoing remediation cost will be 15 million a year. Thirty square miles of exposed shoreline at Owens Lake generates an average of 80 thousand tons of PM_{10} a year. How much airborne particulate would the projected 50 to 100 square miles of exposed shoreline at the Salton Sea generate? We don't know for sure, but it would be a huge source of particulates even if generated only a fraction of that generated from our northern counterpart. And the costs of remediation would be equally large or larger, due to the additional wildlife concerns.

So, when it comes to the Salton Sea we can pay something to deal with this issue now, or we can pay a lot more later. How much the eventual cost will be is debatable. But undoubtedly it will meet or exceed the cost of Owens Lake, because it must include both preserving the Sea's value for wildlife as well as fully mitigating any air quality impacts of shoreline exposure, should that happen.

Who has responsibility for potential air quality problems caused by a shrinking Salton Sea? We believe it is a major federal responsibility. Not only does the federal government have responsibility under the Clean Air Act and the Salton Sea Restoration Act, but also under the Endangered Species Act and the Migratory Bird Treaty. There is also a National Wildlife Refuge on the Sea, and formerly a naval weapons test base there. The $130 million provided by the Imperial and San Diego water swap is clearly inadequate mitigation, especially since much of this funding is dedicated to other problems that are not associated with potential air quality problems caused by a shrunken Salton Sea.

In conclusion, we appreciate the Committee's interest in Coachella Valley air quality issues, and urge retention and strengthening of vital federal air quality standards, as well as taking federal responsibility to ensure that the Salton Sea does not become another Owens Lake health disaster, which in this case would affect hundreds of thousands of people, not just ten thousand as in the case of Owens Valley.

Thank you for the opportunity to make input on these vital issues.

Mr. BARTON. Thank you.

We now want to hear from Mr. Edward Kibbey, who is the Executive Director for the Building Industry Association of Southern California, Desert Chapter.

If Mr. Kibbey would come forward.

STATEMENT OF EDWARD KIBBEY

Mr. KIBBEY. Thank you very much, Chairman Barton, and members of the subcommittee, and we want to thank you very much for coming out and getting our problems first person, if you will. And,

Congresswoman Bono, you just continue to do your outstanding job so no additional thanks are required.

It always amazes me that something that is almost too small to see is measured in tons. It's unreal. So, when you figure out that in addition to PM_{10} rising into the air, there's just an awful lot of larger particles, sand, dust and so on. It's been commented that it's too bad that you didn't come down on a windy day and see some of our sand and dust, but I'm glad you didn't, because now you know it's so beautiful you'll come back and spend more money. This is good.

The building industry is interested in money, as you might expect, but we're also interested in the health of our buyers, those who come to the desert to live. Now, I represent both the Coachella Valley and the Imperial Valley. The Salton Sea is a large concern of ours, a concern that will come to fruition, no question. The sea will subside, get smaller, there will be dust, so it's up to us to limit how much.

How much effect are we going to allow on the Coachella and Imperial Valleys from a sea that has for years been a real great place to go, lately not quite so great, but can return as a great place to go, and something that Tom Kirk and his group, and Congresswoman Bono, are working hard to make happen.

From a builder's perspective, I guess all of you have been down around the Salton Sea, there's an awful lot of buildable land down there, an awful lot of area to place houses, to bring more people to the desert to enjoy what we enjoy on a day-to-day basis. So, yeah, something needs to be done.

It's going to cost a lot of money, and we haven't got it here in the Coachella Valley or the Imperial Valley, so we are going to need your help. I know, you haven't got a lot of money either. Each one of you has your own perspective of where those limited bucks should go, but I think here you have what could be a choice to protect a national monument, if you will, the Salton Sea. It's so big it deserves to be a monument. Or, you have the choice to sit back and say, well, we just really don't have the bucks and, by golly, it's not my problem anyhow.

So, the building industry, if we have one request, would be that you listen to Congresswoman Bono who is the messenger from this area, and you listen to the message that she brings you. And, when she says that we need some millions of dollars to do something, I'll guarantee you this, she'll come to you with not something but what we need to do. That's coming, so be prepared, and please help us out.

As you have seen from my testimony, and you've heard from others, we have recovered here in the Coachella Valley and are recovering yet again. We've shown that we, the building industry, we, the cities and county, we, the citizens, can, indeed, join together and understand that there is pain, but yet take that pain to make our home a better place to live. We've done it before, we'll do it again, but let's not wait until the time comes that we have those tons of PM_{10} in the air coming into the area. Let's get to it now, let's correct it now, it is correctable, but it's going to cost a lot of money.

Again, thank you very much for coming to our wonderful valley, and we thank the Lord for giving you such a beautiful day so you can why we are so proud of where we live.

Thank you.

[The prepared statement of Edward Kibbey follows:]

PREPARED STATEMENT OF EDWARD C. KIBBEY, EXECUTIVE DIRECTOR, BUILDING INDUSTRY ASSOCIATION OF SOUTHERN CALIFORNIA, INC.

As we sit here today, the Coachella Valley is in non-compliance with PM-10 Air Quality Standards as established by the Environmental Protection Agency (EPA). Again, as we sit here today, cities of the valley and the county are taking steps to adopt new rules that will bring the valley back into compliance with PM-10 air quality requirements.

These two statements speak to the constant cooperation between the South Coast Air Quality Management District (SCAQMD), local government agencies and the local building community and their dedication to making our local environment the healthiest in the world.

For years now, these entities, public and private, have worked together to keep our environment healthy. Whether it's clean water, clean air or endangered species, the valley has a long history of working together to make it happen.

A number of years ago, the valley overcame unbelievable odds to bring our air quality into compliance and we retained that standard for a few years. Then came a building boom, a drought and a couple of seasons of high winds and all of a sudden we were no longer in compliance. Without changing any of our previously successful procedures, our dust problem increased to such a point that something had to be done.

SCAQMD came down and told us that we were headed for trouble, but could forestall disaster if we got together and designed new procedures which would improve our existing dust control rules. Over the next few months, committees met and soon came to agreement on new rules which were workable for both the Air District and those affected, meaning every citizen of the Coachella Valley. The local building industry agreed to more restrictions with the understanding that they would cost more money; The cities and the county agreed to new rules which would, for the first time, bring them into the realm of those responsible for controlling their own PM-10 generation; The agricultural industry realized that they would no longer be virtually exempt from controlling dust and those owners of vacant land found themselves facing requirements to control use of their properties.

After months of meetings . . . of give and take by all participants . . . a model ordinance was put together one which satisfied both the SCAQMD and, perhaps more importantly, the EPA. Shortly, this ordinance will be adopted by all entities and go into effect. We are hopeful that this effort will result in our valley returning to full compliance with PM-10 regulations.

One might say that this is a wonderful thing, this voluntary giving up of money and freedom for the good of all, and they would be right. But there was more than public spiritedness and the willingness to do right that drove this effort. There was the very real threat that the Environmental Protection Agency would storm into town and take over, restricting our ability to carry on life as we know it and casting a draconian regulatory net over the entire valley until such time as we were able to meet their requirements. Our real fear that building and growth in the valley would be brought to a halt gave us the impetus to make things work.

As elsewhere in the nation, construction of new homes has been the primary economic driver here in the Coachella Valley, with nearly four-thousand new homes being built each year. The folks who have been buying those homes are, more and more, those buying a primary residence with less of them making their purchase as a second home. These are people who are making the Coachella Valley their home, and they are vitally interested in the quality of air they breathe. This then brings us to the future and the potential negative effect of the Salton Sea.

This huge body of water has the potential to become one of the biggest health hazards since the drying up of the Owens Valley in Central California. If the Salton Sea situation were to remain status quo, it is probable that the water level will drop which will expose miles of sea bottom which will provide thousand of tons of material to be picked up by the winds and carried to the Coachella Valley as PM-10. Such an occurrence would shortly ruin life as we enjoy it today and has the potential to turn the valley into a modern day Death Valley, devoid of tourists and long on houses for sale with no buyers.

We have learned how to control our own dust problem and will ultimately return as the shining star of EPA accomplishments, but we are having difficulty understanding how we can dodge the Salton Sea bullet given the distance to the problem and the lack of funding to correct the problem. So now, we are looking to the Federal and State Governments for help, hopefully without too many strings which could strangle any recovery in bureaucratic nonsense.

Thank you for your attention.

Mr. BARTON. Thank you, sir.

We now want to hear from Mr. Jeff Welton, who is the Senior Vice President for Wintec Energy in North Palm Springs.

STATEMENT OF JEFF WELTON

Mr. WELTON. Good morning. My name is Jeff Welton, as the chairman so said. I'm Senior Vice President of Wintec Energy, and we are based in Palm Springs, the western end of the Coachella Valley.

Wintec has been in the wind energy business since 1985, and we manage and operate about 66 megawatts of wind energy projects, most of which are located here in the Coachella Valley.

Wintec is a member of the California Wind Energy Association, CalWEA, which I am representing here today.

In my remarks today, I'd like to give you a brief sketch of wind energy in the valley and the State as a whole, and talk about the contribution that wind energy makes to our air quality, as well as its potential to further improve air quality in both the electric and transportation sectors.

My written statement provides further detailed information on this matter.

The Coachella Valley is host to over 600 megawatts of wind energy capacity, which represents about a third of California's wind energy projects, and when combined with the rest of the State's wind projects supply about 1.5 percent of California's electricity needs.

CalWEA estimates that annually California's existing wind energy projects avoid over a million pounds of NO_X emissions and over a million pounds of PM_{10} emissions. Renewable energy of all types, excluding large hydro power, supplies about 11 percent of California's electricity needs, more renewable power than any other State.

California's historical promotion of renewable energy has greatly reduced the demand for combustion fired generation in the State, which helps to explain why California's electric sector accounts for only 3 percent of the state's NO_X emissions and less than .5 percent of California's PM_{10} emissions.

Over the next 10 years, however, it is estimated that California will need in excess of 10,000 megawatts of new generation. To significantly reduce the environmental impacts of this new generation on our local air quality, it will be important to meet much of that demand with emission-free wind energy. California is aiming to do just that with the recent adoption of its "Renewables Portfolio Standard," a policy requiring our State's utilities to get 20 percent of their electricity supply from renewable energy by the year 2010.

The California Energy Commission envisions that wind energy could comprise two thirds of the renewables that will be needed to meet this goal. CalWEA estimates that this new wind power would

avoid over a million pounds of NO_X emissions and over a half a million pounds of PM_{10} emissions annually, that would otherwise come from new natural gas-fired power plants. Clearly, wind energy has the potential to play an important role in minimizing air impacts on the electric sector on the Coachella Valley and the rest of California.

Wind energy also holds potential for the transportation sector. An important element of AQMD's Air Quality Management Plan is to achieve major use of zero emission vehicles. Fuel cells are considered to be an ideal solution for zero emission vehicles because they can provide high fuel efficiency and zero emissions, while still matching the long range and rapid refueling capabilities of cars that we drive today. Hydrogen fuel cells are truly "cradle-to-grave" zero-emissions propulsion systems when they are powered by hydrogen generated from renewable fuels, rather than from other fuel sources that pollute.

My company, Wintec Energy, is currently participating in a project funded by the AQMD and the U.S. Department of Energy where wind energy is used to generate hydrogen that will be used in vehicles operated by the California Fuel Cell Partnership. It is expected that the fuel cost per mile will be similar to what we now pay for hydrocarbon fuel, but without diminishing our air quality.

It is estimated that only six of our modern 1.5 megawatt wind turbines could provide enough hydrogen fuel for all of Coachella Valley's transit and public agency vehicles. Thus, wind energy holds significant promise in reducing emissions generated in the transportation sector, as well as the electric sector.

In closing, there are a few things that Congress can do to aid the development of wind energy so that our industry can provide air quality, not only here in the Coachella Valley and our State, but also country-wide. Approve the passage of the energy bill which includes an extension of the Federal wind tax credit, also known as the PTC, and authorize the development of additional utility transmission capacity that will be necessary to transport additional wind electricity to load centers.

Thank you very much for inviting the California Wind Energy Association to present its views today. Thanks.

[The prepared statement of Jeff Welton follows:]

PREPARED STATEMENT OF JEFF WELTON, SENIOR VICE PRESIDENT, WINTEC ENERGY, LTD., ON BEHALF OF THE CALIFORNIA WIND ENERGY ASSOCIATION

INTRODUCTION

Good Morning. My name is Jeff Welton. I am Senior Vice President of Wintec Energy, Ltd. Wintec has been in the wind energy business since 1985. Wintec manages and operates over 53 MW of wind energy projects here in the San Gorgonio Pass (which is the western mouth of the Coachella Valley) and another 13 MW up north in the Altamont Pass east of San Francisco. In total, our wind projects provide California with 66 MW of wind capacity and more than 170 GWh annually.

I am here today representing the California Wind Energy Association ("CalWEA"), of which Wintec is a member. CalWEA is a trade group comprised of 27 companies, including wind plant owners and project developers, turbine manufacturers, and various businesses that provide services to the wind industry. CalWEA represents the industry primarily in California energy policy forums, and occasionally in Congress on energy matters uniquely affecting the California wind industry.

Today I will give you a brief sketch of wind energy in California, the future potential of wind energy in the state, wind's potential to contribute to air quality improvements in the Coachella Valley, and some of the ways in which Congress can promote

the growth of wind energy so that we can help to reduce the air quality problems in the Valley and the rest of the state.

A BRIEF HISTORY OF WIND GENERATION IN CALIFORNIA

California's implementation of the federal Public Utility Regulatory Policies Act of 1978 launched the wind industry worldwide. That policy yielded on the order of 7,000 megawatts of renewable energy capacity, including approximately 1,600 MW of wind generation capacity. A key provision of PURPA is the requirement that utilities pay generators of renewable energy what they otherwise would have paid for power. California was somewhat unique among the states in that it required the utilities to sign long-term contracts at these "avoided costs." At the time these contracts were signed, in the early 1980s, prices were projected to be very high. The contracts thus locked in what, in retrospect, were relatively high prices. These contracts allowed investments in brand new technologies that had a lot of risk associated with them; but for those contracts (and tax credits), these projects—which spurred the commercial development of wind technology globally—would never have been built. The utility companies often argue that PURPA resulted in over-priced renewables, but it is important to note that the power the state's utilities would otherwise have acquired—the coal and nuclear plants that they had on their drawing boards—would have been far more expensive, as documented by California's energy agencies.[1] Coal-fired generation in place of emission-free renewables like wind would only have exacerbated an already dire air quality situation in the State.

California's large base of renewables provided stability during the state's recent "energy crisis." These projects produced power without interruption, and without the commodity risk of natural gas-fired generation, throughout the tumultuous market of 2000 and 2001, even during the several months when they were not being paid by California's troubled utilities. These projects provided enormous benefits to consumers because they were paid under stable, contract-based prices, not the distorted spot market prices that were paid to merchant generators.

CURRENT STATUS OF WIND GENERATION IN CALIFORNIA AND THE COACHELLA VALLEY

The San Gorgonio Pass is host to approximately 600 megawatts (MW) of generation capacity fueled by the wind—about a third of the state's wind energy capacity which, in total, provides for about 1.5% of California's electricity needs. When the wind is blowing, it powers the entire Coachella Valley, avoiding the need for combustion generation. Wind and other types of renewable energy—geothermal, biomass, solar, and small hydro—together provide about 11% of the state's electricity from resources indigenous to the State.

Most of the wind turbines that you see when you fly into the Palm Springs airport or drive into the valley on Interstate 10 are second-generation wind turbines that were installed in the mid-1980s. Though most of them continue to operate well, they are the wind industry's ancient history. Wind technology has improved dramatically since then, as you can also see here in the San Gorgonio wind resource area with some of the new projects that have been installed more recently. Whereas the old turbines stand about 120 feet above the ground (measuring to the tip of the highest blade), the new turbines stand 400 feet above the ground. Whereas a second-generation turbine might produce 200,000 kilowatt-hours (kWh) in a year, a new fourth generation turbine will produce 5.6 million kWh—about 28 times more. Some of the major changes in the technology include:

- taller turbine towers, which access higher wind speeds,
- longer blades, which capture more wind energy, and
- advances in electronic monitoring and controls, blade design, and other features.

Effectively, the wind industry went from a Model T to a Lexus in 25 years. The result is dramatically reduced wind costs: the cost of energy from most of the wind projects that you see out there was originally about 30 cents per kilowatt-hour (kWh). Today, a large wind farm can produce electricity at 4 to 5 cents per kWh or less.

An important goal of the California wind industry is to replace the early-vintage turbines with new technology. Because the new turbines are so much larger and produce so much more power, a single new turbine will replace 20 of the older turbines while producing 50% to 100% more energy. Along with the additional energy, visual aesthetics are improved as well. With the replacement of the second-generation technology, the 3,000 turbines that you see out there right now will eventually

[1] California Energy Commission and California Public Utilities Commission, *Final Report to the Legislature on Joint CEC/CPUC Hearings on Excess Electrical Generating Capacity,* P150-87-002 (June 1988) at p. 65.

be reduced by half. But there is an obstacle in our way, as I will discuss in a moment.[2]

WIND ENERGY & IMPLICATIONS FOR AIR QUALITY IN THE COACHELLA VALLEY

A. Electric Sector

The state's historical promotion of renewable energy—which as I mentioned now provides 11% of the state's electricity, exclusive of large hydropower—has reduced the demand for combustion-fired generation in the state. Power plant retrofit requirements have significantly reduced emissions from the state's natural gas-fired electricity generators, so that they account for only 3% of nitrogen oxides (NO_X) emissions and 0.47% of $PM_{2.5}$ emissions in the state.[3]

However, demand for electricity generation is the fastest growing segment of California's gas usage. Over the next 10 years, the California Energy Commission estimates that 10,000 MW of generating capacity or demand-reducing resources will be needed to meet growing demand.[4] In order to contain the environmental impacts of that generation on Coachella Valley air quality, it will be important to meet that demand in significant part by emission-free wind and other renewable resources, as well as with increased energy efficiency and demand reduction.

In 2002, the California Legislature made a commitment to doing just that when it adopted a policy called the "Renewables Portfolio Standard" or "RPS", which will require California's investor-owned utilities and competitive retail suppliers to derive 20% of their retail sales from renewable energy by 2017. The state's energy agencies have adopted a goal of meeting this requirement by 2010,[5] and the Energy Commission has recommended that the RPS requirement be extended to cover the state's municipal utilities.[6] The state's portfolio requirement approach ensures the same sort of risk minimization approach one uses for a 401k plan.

The Energy Commission envisions that wind energy—because of its low cost relative to other renewables and abundant wind resources in the state—could comprise 66% of the renewable energy required to meet this goal. This would require that the state's current renewable energy capacity be more than quadrupled by adding over 6,000 MW of wind generation capacity.[7] Replacing existing wind turbines with more productive new turbines is also an important means of achieving the state's RPS goals.

As you can see, therefore, wind energy can and should play an exceedingly important role in minimizing the air quality impacts of the electric sector on the Coachella Valley as well as the rest of California in the near future and for decades to come.

Finally, we wish to make a few additional points. First, by reducing the demand for natural gas, California's renewable energy goals will also put downward pressure on the price of gas for all consumers. Second, wind energy adds significantly to the reliability of the electric system while imposing extremely low system integration costs.[8] Lastly, the wind industry is a significant part of the economy of the Coachella Valley, providing hundreds of jobs and contributing significantly to the tax base here.

B. Transportation Sector: Wind-powered Electric Vehicles

Wind energy's potential extends beyond the electric sector. Wind energy has the potential to play a role in reducing vehicle emissions, which is a large source of the air quality problem in the Coachella Valley as you will undoubtedly hear from other panelists today. An important element of the South Coast Air Quality Management District's Air Quality Management Plan is to achieve major use of zero-emission vehicles (ZEVs) in its jurisdiction. Over the mid- to long-term, fuel cells are considered to be an ideal solution for ZEVs because they can provide high fuel efficiency and zero emissions, while also matching the long range and rapid refueling capabilities of the cars we drive today. When powered by hydrogen that has been made from

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[2] Originally, there were approximately 6,000 turbines in the San Gorgonio Pass area. With replacements of old turbines and the addition of new projects, there are now approximately 3,000.

[3] *Electricity and Natural Gas Assessment Report,* December 2003, California Energy Commission.

[4] *Ibid.*

[5] State of California Energy Action Plan. See http://www.cpuc.ca.gov/PUBLISHED/REPORT/28715.htm.

[6] *2003 Integrated Energy Policy Report,* December 2003, California Energy Commission.

[7] *Renewable Resources Development Report,* California Energy Commission, November 7, 2003.

[8] This was shown in a recent study performed for the California Energy Commission with participation from the California Independent System Operator. See http://cwec.ucdavis.edu/rpsintegration/.

renewable fuels like wind energy, hydrogen, fuel cells are truly "cradle-to-grave" zero-emissions propulsion systems. Because of its low cost, wind energy holds large promise for large scale economic "green hydrogen" production.

My company, Wintec, is currently involved in a project funded by the AQMD and the U.S. Department of Energy to investigate the economic feasibility of the wind-hydrogen option on a utility scale. It is expected that the fuel cost per mile will be similar to what we now pay for hydrocarbon fuel, but we will not have to pay for the health and environmental damage. As part of the project, wind energy will be used to generate hydrogen, which will be compressed and stored for use in either a fuel cell bus or other vehicles operated by the California Fuel Cell Partnership. Each of our existing, early-vintage turbines generate enough electricity to produce over 3,000 kg of hydrogen annually—enough to power a hydrogen bus for about 30,000 miles. The local transit agency, which serves the Valley and is participating in this project, as well as the City of Palm Desert have the capability to fuel hydrogen vehicles.

Filling up with hydrogen was almost unheard of a decade ago, but now there are six hydrogen filling stations in California. Within the next two years, that number is expected to double, and over 30 more fuel cell buses will go into service. Europe and Japan are moving much faster. Here's what the future could look like here in the Coachella Valley:

- Six modern 1.5 MW wind turbines could provide fuel for all of Coachella Valley transit and public vehicle needs. (Though wind energy is intermittent, hydrogen provides a means of storage, though storage facilities must be developed.)
- 60 modern turbines could provide fuel for 20,000 cars (a car for every 12 persons in the Coachella Valley).
- Long-term, a hydrogen pipeline network, similar to present natural gas lines, would connect wind hydrogen generation to fueling stations.

Therefore, wind energy holds promise to reduce not only the emissions generated in the electricity sector, but also in the transportation sector.

OBSTACLES TO GROWTH IN WIND ENERGY

There are a number of state and federal policies that will be important in realizing the potential of wind energy in the Coachella Valley. In the very near term, there are three important things that the Congress can do to promote the development of wind energy.

First, delay in the passage of the Energy Bill resulted in the expiration of the federal wind production tax credit (PTC), creating a "boom-and-bust" cycle for the industry—contracts have been put on hold, workers have been laid off, and the momentum in the U.S. wind energy market has come to a halt. The wind industry needs the three-year PTC extension that was included in that bill.

Secondly, there is a provision contained in the PTC[9] that discourages the repowering of the wind projects here in the San Gorgonio Pass and elsewhere in the state. It does so by denying the tax credit to repowered projects unless the project owner amends his existing power purchase contract to reduce the purchase price for the additional power. This outmoded provision has the effect of reducing California's share of the federal tax incentives to increase wind generation. We ask for your help in removing this provision when the PTC is extended.

Finally, the development of additional transmission capacity will be necessary to transport wind energy to load centers in the state. Care should be taken to see that federal policies do not result in impediments to fair and economic access to the transmission grid.

Thank you very much for inviting the California Wind Energy Association to present its views today. I would be happy to answer any questions.

Mr. BARTON. Thank you, sir.

Our last witness, but certainly not least, is Mr. Vince Signorotti. He's the Vice President for Real Estate Assets and Community Relations for MidAmerican CalEnergy. Welcome to the Subcommittee, you are recognized.

STATEMENT OF VINCE SIGNOROTTI

Mr. SIGNOROTTI. Thank you, Mr. Chairman, and thank you, members of the committee. It's a pleasure to be here.

[9] Paragraph 7 of Subsection 45(d) of the Internal Revenue Code.

As Mr. Barton said, I'm Vince Signorotti, and I'm with CalEnergy Operating Corporation. CalEnergy Operating Corporation is a subsidiary of MidAmerican Energy Holdings Company, which is based in Des Moines, Iowa. And, with me today is Jonathan Weisgall, who is Vice President for Legislative and Regulatory Affairs. So, we appreciate the opportunity to be here, and to discuss this important topic.

You've heard a lot about particulate matter, and PM_{10}, and air emissions and so forth, and I think that it's important to also discuss what we are doing in Imperial County, where I've been a full-time resident for about 15 years.

California, as you know, faces an extraordinary challenge in seeking to increase electric generating capacity, while meeting Federal clean air compliance requirements. While the State has approved a few power plants over the past 3 years, long-term supply and demand forecasts are still not favorable. For many years, Californians have lived on power imported from out of State, because we simply do not have enough in-state electric generating capacity to meet our demands during the warmer months, and clearly this was one of the proximate causes for the energy problems that we experienced in the fall of 2000 and in 2001.

While we have long imported power from other States to meet demand, we are now seeing power plants operating across the border in Mexico that send electricity into southern California and airborne pollution into the Imperial and Coachella Valleys. I do not have any short-term answers for the Clean Air Act compliance challenges that these emissions pose for our area, but I strongly believe that the best long-term solution is to generate more clean energy from our indigenous resources here in California to serve the needs of our State.

California, and Coachella Valley in particular, is fortunate to have some of the most abundant reserves of renewable energy in the world, geothermal and wind in particular, and you just heard from Mr. Welton with regards to the potential for wind, the amount of energy that's already being produced from wind here in the Coachella Valley. CalEnergy, on the other hand, is one of the world's largest developers of renewable energy projects. Today, we generate 340 megawatts of clean, reliable, renewable baseload energy for California's energy consumers. Less than a month ago, we received approval from the State for a new 185 megawatt expansion of our facilities near Calipatria. This will represent the largest geothermal energy project anywhere in the United States. This power is produced without the significant air emissions typically seen from non-renewable resources. Compared to the natural gas power plants currently operating within sight of the U.S.-Mexico International Boundary, our existing geothermal plants offset hundreds of tons of nitrogen oxide, carbon monoxide and other particulate matter.

Geothermal power, as the word implies, is energy that comes from the heat of the earth. Production wells at our Salton Sea facilities extract the geothermal brine from underground reservoirs. The super-heated brine is brought to the surface, flashed to steam, and used to turn a turbine. These wells range in depth from about a mile to two miles deep. After extraction of the heat, the brine is

reinjected back into the geothermal reservoir. A well-managed geothermal reservoir is, thus, a sustainable resource, a virtual closed-loop system, as we have seen at the Salton Sea, where there has been no measurable decrease in pressure in the geothermal reservoir since production began in the early 1980's.

About 2,600 megawatts of geothermal energy are produced in the western States, and over 5 percent of that comes from California's 50 plants. Nevertheless, geothermal and other renewable energy developments continue to face serious challenges, such as the physical limitations on the size and location of the resource; high up-front capital costs; and, importantly, transmission constraints in delivering power from these remote regions to load centers.

While there is nothing policymakers can do about the physical limitations of renewable resources, Congress can and should take steps to assist us in overcoming the hurdles posed by high up-front capital costs and physical constraints. For example, we are extremely encouraged that the comprehensive energy bill report expands the Section 45 production tax credits for renewable electricity to cover geothermal energy. This provision represents the single greatest incentive to the expanded production of renewable energy, including geothermal development in the nearby Imperial Valley. And, the new plant that I mentioned, if constructed, would represent the largest single investment in Imperial County ever, at about $450 million, and that is in a county that has, typically, one of the highest unemployment rates in the country, and I think today it hovers at around 20 percent.

In the meantime, uncertainty created by the failure to pass the energy bill has cast a shadow over other renewable energy development. As you know, markets hate uncertainty, and within markets investors hate uncertainty the most.

The other major impediment to expanding the production and delivery of renewable energy in the Imperial Valley and throughout California is the need to expand transmission infrastructure. A recent study by industry and university experts suggests that if fully developed the Salton Sea Reservoir could support in excess of 2,300 megawatts of energy. However, in order for that potential to be realized, we must have greater transmission capacity. No new significant transmission lines have been built in the area since the completion of the 230-KV line in 1987. That line was built specifically to transmit renewable energy from Imperial County to population centers. The construction of new transmission facilities and the improvement of the existing transmission system through this congestion is imperative to the future development of clean, renewable resources.

The proposals in the comprehensive energy bill that would provide incentives for the construction of these new electric transmission facilities coordinate Federal agency approvals of transmission line siting, and establish a Federal backstop for resolving interstate transmission bottlenecks are all strong positive actions Congress should take.

The strong tax, policy, and research and development measures in the energy bill will help ensure that future U.S. electricity supplies will be available from a diverse, domestic, renewable resource base. As a result, Coachella Valley, California and the rest of the

country will see improved reliability, lower consumer costs, greater investments in renewable energy, improved air quality, enhanced U.S. energy security and more jobs. Simply put, the comprehensive energy bill before Congress does more to increase the domestic production of renewable energy than any previous government action. These provisions represent a huge win for the environment and therefore the country, and all U.S. energy consumers, and I urge you to do all you can to get this bill to the President's desk.

Thank you.

[The prepared statement of Vince Signorotti follows:]

PREPARED STATEMENT OF VINCE SIGNOROTTI, VICE PRESIDENT, REAL ESTATE ASSETS AND COMMUNITY RELATIONS, CALENERGY OPERATING CORPORATION

Thank you, Mr. Chairman. My name is Vince Signorotti. I am the Vice President for Real Estate Assets and Community Relations for CalEnergy Operating Corporation, and I have lived in the Imperial County for 15 years. CalEnergy is a subsidiary of MidAmerican Energy Holdings Company, an international energy company headquartered in Des Moines. With me today is Jonathan Weisgall, Vice President for Legislative and Regulatory Affairs for MidAmerican Energy.

As you know, California faces an extraordinary challenge in seeking to increase electric generating capacity while meeting federal Clean Air Act compliance requirements. While the state has approved a few power development projects in the last three years, long-term supply and demand forecasts are still not favorable. For many years, Californians have lived on power imported from out-of-state, because we simply do not have enough in-state electric generating capacity to meet our demands during the warmer months. Indeed, this was one of the proximate causes of our recent power crisis.

While we have long imported power from other states to meet demand, we are now seeing power plants operating across the border in Mexico that send electricity into Southern California and airborne pollution into the Imperial and Coachella Valleys. I do not have any short-term answers for the Clean Air Act compliance challenges that these emissions pose for our area, but I strongly believe that the best long-term solution is to generate more clean energy from our indigenous resources here in California to serve the needs of the state.

California—and Coachella Valley in particular—is fortunate to have some of the most abundant reserves of renewable energy in the world—geothermal and wind in particular. CalEnergy is one of the world's largest developers of renewable energy projects. We currently generate 340 megawatts of clean, reliable, renewable baseload geothermal electricity for California's energy consumers, and less than a month ago we received approval from the state for a 185-megawatt expansion of our facilities near Calipatria. This will represent the largest geothermal energy project anywhere in the United States. This power is produced without the significant air emissions typically seen from non-renewable resources. Compared to the natural gas power plants currently operating within sight of the U.S-Mexico International boundary, our existing geothermal plants offset hundreds of tons of nitrogen oxide, carbon monoxide and particulate matter annually.

Geothermal power, as the word implies, is energy that comes from heat in the earth. Production wells at our Salton Sea facilities extract the geothermal brine from underground reservoirs. When that superheated brine reaches the surface, it is flashed into steam, which turns a turbine to create electricity. These wells range in depth from about one to two miles below the Earth's surface. After extraction of heat from the brine, the brine is reinjected back into the geothermal reservoir. A well-managed geothermal reservoir is thus a sustainable resource—virtually a closed-loop system—as we have seen at the Salton Sea, where there has been no measurable decrease in pressure in the geothermal reservoir since production was started in the early 1980s.

About 2,600 megawatts of geothermal electricity are produced in the Western states, and over 5% of California's electricity comes from the state's 50 geothermal plants. Nevertheless, geothermal and other renewable energy developments continue to face serious challenges, such as: (1) physical limitations on the size and location of the resource; (2) high up-front capital costs; and (3) transmission constraints in delivering power from remote regions to load centers.

While there is nothing policy makers can do about the physical limitations of renewable resources, Congress can and should take steps to assist us in overcoming the hurdles posed by high up-front capital costs and physical constraints. For exam-

ple, we are extremely encouraged that the comprehensive energy bill conference report expands the Section 45 production tax credit for renewable electricity to cover geothermal energy. This provision represents the single greatest incentive to the expanded production of renewable electricity, including geothermal development in nearby Imperial Valley. In the meantime, uncertainty created by the failure to pass the energy bill has cast a shadow over renewable energy development. As you know, markets hate uncertainty, and within markets, investors hate uncertainty the most.

The other major impediment to expanding the production and delivery of renewable electricity in the Imperial Valley and throughout California is the need to expand transmission infrastructure. A recent study by industry and university experts suggests that if fully developed, the Salton Sea field could produce over 2,300 megawatts of electricity. However, in order for that potential to be realized we must have greater transmission capability. No new significant transmission lines have been built in the area since the completion of a 230-KV transmission line in 1987, which interconnects the Imperial and Coachella Valleys and was built specifically for the purpose of transmitting electricity from renewable energy facilities. The construction of new transmission facilities and improvement of the existing transmission system to reduce congestion is imperative to the future development of clean renewable resources.

The proposals in the comprehensive energy bill that would provide incentives for the construction of new electric transmission facilities, coordinate federal agency approvals of transmission line siting, and establish a federal backstop for resolving interstate transmission bottlenecks are all strong positive actions Congress should take.

The strong tax, policy, and research and development measures in the energy bill will help ensure that future U.S. electricity supplies will be available from a diverse, domestic, renewable resource base. As a result, Coachella Valley, California and the rest of the country will see improved reliability; lower consumer costs; greater investment in renewable energy; improved air quality; enhanced U.S. energy security; and more jobs. Simply put, the comprehensive energy legislation before Congress does more to increase the domestic production of renewable energy than any previous government action. These provisions represent a huge win for the environment and therefore the country and all U.S. energy consumers, and I urge you to do all you can to get this bill to the President's desk.

Jon and I would be pleased to answer any questions you might have.

Mr. BARTON. Thank you.

The gentleman went a minute over, but since he was talking about my energy bill in a positive way I allowed him to do that.

I would like our eight panelists to all come to the chairs at the front. Some of you went back out in the—if you testified if you'll come forward here, sit up here at the front so we can try to minimize the up and down.

We are going to have at least one 5-minute round by each member of the subcommittee, and then if we need to we'll do a second 5-minute round, and we'll go longer. I mean, that's a minimum. I've got to reset the clock here.

The Chair is going to recognize himself for the first 5 minutes of questions. I'm going to make a general statement. The comprehensive energy bill, as several of you alluded to, has passed the House. The conference report has been completed, and it's passed the House, and it's awaiting debate in the Senate.

The Senate has a requirement that if one member of the Senate wishes to not debate a bill they can force a vote on what's called cloture, which means you have to get 60 senators to vote to limit debate, otherwise you can have an indefinite filibuster.

The Majority Leader, Mr. Frisk, brought the comprehensive energy bill up for a cloture vote right before the Christmas break, and he got 58 cloture votes and you need 60. The two California senators did not vote for cloture. So, for those of you that have supported the bill and its incentives for renewable energy and things like that, I'd encourage you to get with Senator Feinstein and Sen-

ator Boxer and encourage them to vote for cloture in the next month or so, so we can bring the bill up for a vote. It's already passed the House on a bipartisan basis.

My first question is to Mr. Welton, who is the wind energy expert. You talked about the Renewable Portfolio Standard requirement in California that 20 percent of the renewable—20 percent of the energy be generated by renewables. Does that 20 percent include hydro?

Mr. WELTON. I believe it does.

Mr. BARTON. It would almost have to.

Mr. WELTON. Yes, I believe it includes both small and large hydro.

Mr. BARTON. Okay.

In terms of wind energy, I noticed all the windmills when I drove up Interstate 10 yesterday to get here. Mr. Whitfield's district generates a lot of its electricity with coal, and they have a base, if you could break it down to kilowatt, which is what we pay at retail, their wholesale cost of generation for coal is about two and a half cents a kilowatt. In Texas, we use primarily natural gas, we use some wind power, we use some coal, our wholesale cost is about 4.5 cents a kilowatt. What, right now, is it costing, and I don't want proprietary information, but in general what is it costing to generate wind power here in the Coachella Valley, either at the megawatt level or at the kilowatt level, if you can break it down.

Mr. WELTON. Well, at the kilowatt level it depends on what type of contract you have. If you are selling to Southern California Edison they are paying us about six cents per kilowatt, but it's costing us to generate that probably maybe two to three cents per kilowatt.

Mr. BARTON. So, your generation costs have come down substantially.

Mr. WELTON. Right. We have—well, our company specifically has older generation turbines that have been installed since 1988, and we still run at about 100 percent availability.

Mr. BARTON. What does the—if you know this, and if you don't I won't hold it against you—what does the average California resident pay per kilowatt for electricity right now?

Mr. WELTON. I think the Coachella Valley has some of the highest energy rates. They pay anywhere from 14 to 15 cents per kilowatt.

Mr. BARTON. And, is that typical for the whole State, or is that a little high?

Mr. WELTON. I think for the State it's a little less than that, I think it's between 11 and 12 cents.

Mr. BARTON. I would like the gentlelady representing the Sierra Club to come forward for a question, Ms. Taylor, I believe.

Ms. TAYLOR. That's correct.

Mr. BARTON. You were the only one, I think, in your testimony that actually talked about some solutions to the PM_{10} issue. Everybody else kind of laid the problem out, but I didn't hear anybody propose a solution. And, I think you did allude to some irrigation or some other——

Ms. TAYLOR. That's correct.

Mr. BARTON. [continuing] so my assumption is that the obvious answer, which is just to put more water, doesn't work because

water is pretty expensive, and if you irrigate after the water is gone that's expensive. So, if you were me, and Congresswoman Bono came to you and said, Congressman Barton, I want you to do X in the next energy bill, what is the most common sense solution that could be propounded?

Ms. TAYLOR. Well, I think there are a variety of things that have been tried, and I don't propose to be an expert on this. If Ted Schade were here——

Mr. BARTON. Well, you the only one that even alluded to a solution.

Ms. TAYLOR. Yes, that's right, that's right. However, Tom Kirk or Ted Schade could answer this better than I.

Let me just say that one solution that has been proposed, which has been shown not to work at Owens Lake, is the idea of putting a salt crust down. You know, these saline lakes, when they evaporate, they are pulling the salt out of them, trying to keep it from getting hyper saline. And, they tried laying down salt in the Owens Valley and that did not work, so that's one that may be unlikely to work.

What they have done at Owens Lake is shallow flooding, recycling the water, which they can only recycle so long before it becomes too, you know, hard. But, apparently, for their more recent areas that they are now having to treat as they go along, they've done 19 square miles now, they are going to have to go up to 30, apparently they are going to go to shallow flooding seems to be the most cost effective.

Mr. BARTON. There's no natural habitat that you can plant that will catch over time?

Ms. TAYLOR. Yes, they did a plant native salt grass in the irrigated areas, but apparently the maintenance, as I understand it, the water costs are $5 or $6 million a year, projected to be that, just with their solutions. So, some water is involved, I'm afraid.

Mr. BARTON. Okay.

Well, my time has expired, so I've got to yield.

Ms. TAYLOR. I'm sorry.

Mr. BARTON. No, thank you.

We'll recognize the gentleman from Kentucky, Mr. Whitfield, for 5 minutes.

Mr. WHITFIELD. Mr. Chairman, thank you very much, and I would like my first question to go to Mr. Kirk with the Salton Sea Authority.

Mr. Kirk, all the testimony that I read, or at least most of it, referenced the Owens Valley issue and the Mono Lake issue, which you talked about. It's my understanding that the problems there were caused by the city of Los Angeles over a number of years diverting water from those areas.

And, my recollection was that someone mentioned you were diverting water from the Salton Sea to Imperial Valley, and then someone is diverting water from the Salton Sea to San Diego, is that correct?

Mr. KIRK. It gets a little complicated. The diversion of water is from the Imperial Valley, Imperial Irrigation District, to San Diego. And, in fact, the Coachella Valley as well.

The diversion, every gallon you send to San Diego from the Imperial Valley, a gallon less water flows into the Salton Sea.

Mr. WHITFIELD. And, who makes the decision to divert that water?

Mr. KIRK. The Imperial Irrigation District and San Diego County Water Authority, and a number of other water agencies in the State of California.

Mr. WHITFIELD. And, is there a serious water shortage in this area? I assume there is.

Mr. KIRK. It depends on who you ask. In San Diego, they are looking for a long-term reliable source of water, and San Diego imports almost all of its supply of water, and they look to the Imperial Valley who had a large water right to satisfy some of their need.

Mr. WHITFIELD. So, recognizing that in the long term, it seems from the testimony everyone recognizes, that there is going to be a serious particulate matter problem down the road, as the sea recedes. Why do they continue to divert the water?

Mr. KIRK. The water is valuable and, of course, again, San Diego and Los Angeles, have grown by importing water from other places.

The problem with the Salton Sea, despite all of our testimony, we don't know how big of a problem there will be, nor do we know where it will occur. So, there's more uncertainty than there is anything else.

Mr. WHITFIELD. But, it is a big revenue source.

Mr. KIRK. It is.

Mr. WHITFIELD. And, who benefits from that?

Mr. KIRK. The Imperial Irrigation District is selling the water for about $250 an acre foot. They get the revenue, San Diego gets the water.

Mr. WHITFIELD. And about, what is the total revenue per year?

Mr. KIRK. $50 million a year on average.

Mr. WHITFIELD. So, $50 million a year, okay.

Now, we have not really touched on this, but I have read somewhere, or someone mentioned to me, there's something referred to as a new river canal, that I understand brings wastewater from Mexico into the Salton Sea. Is that correct?

Mr. KIRK. There is a new river that runs from Mexico into the Salton Sea, correct.

Mr. WHITFIELD. Oh, a new river.

Mr. KIRK. Yes.

Mr. WHITFIELD. And, is that polluted, is that industrial waste?

Mr. KIRK. Yes, it is polluted, and EPA is working with the Republic of Mexico on a project to reduce waste falling into the Salton Sea. The total flows from Mexico are relatively small in comparison to the total flow getting into the Salton Sea.

Mr. WHITFIELD. So, if you were looking down the road at this particulate matter issue from an environmental standpoint, versus this new river inflow, the particulate matter potentially would be a much more serious problem than the inflow of industrial waste from Mexico?

Mr. KIRK. In my opinion, yes, and one of the factors here is it takes about 70 hours for the water to get from Mexico into the Salton Sea, it's a slow-moving stream, fairly long. And, by the time

that water gets to the Salton Sea it's largely cleaned up. A lot of the wetlands deal with many of the pollutants that flow into the Salton Sea.

Mr. WHITFIELD. And, is there a local government entity receiving revenue from Mexico for disposing of its wastewater here?

Mr. KIRK. No.

Mr. WHITFIELD. No.

Mr. KIRK. No, and I smile, no, there is not. There are plans to clean that water up, and the water, once it's cleaned up, it's likely not to flow into the Salton Sea, that water will be reused in Mexico, probably to turn a profit for Mexican interests.

Mr. WHITFIELD. Okay.

Thank you. I have about 40 seconds left. Mr. Haber, I noticed this map that was in our literature, and I think this refers to air quality standards as it relates to particulate matter. And, it looks like about two thirds of the State of California is in non-attainment on particulate matter. Is that——

Mr. HABER. That actually looks to me, at least from this distance, like it may be the ozone map, that California, it would be fair to say that California has probably one of the most, if not the most, challenging problems for both ozone and particulate matter in the country.

Mr. WHITFIELD. This is the PM_{10} map.

Mr. HABER. Oh, yes.

Mr. WHITFIELD. But, the ozone map would be similar to this?

Mr. HABER. Yes, it would be.

Mr. WHITFIELD. So, I can safely say that at least a third of California would be in non-attainment on both ozone and particulate matter?

Mr. HABER. That's right.

Mr. WHITFIELD. Okay.

Thank you.

Mr. BARTON. Okay.

The Chair would recognize the gentleman from Arizona, Mr. Shadegg, for 5 minutes.

Mr. SHADEGG. Thank you, Mr. Chairman.

I'd like to begin by questioning both, if I might, Mr. Kirk and Mr. Haber. I'll try to get both of your opinions on some of these questions.

I guess I want to begin with an overall question. It sounds to me, Mr. Kirk, you think the question of how much of a PM_{10} problem is going to arise out of the Salton Sea brine, or, I mean, a reduced flow of water into it, is an open question, I will tell you candidly, the person I'd like to be questioning is Mr. Schade, is that right?

Mr. KIRK. Yes.

Mr. SHADEGG. He seems to think it's a bigger problem, and he seems to be quite concerned about it.

Mr. Haber, where are you on that issue?

Mr. HABER. We haven't done any quantification, but I think Mr. Kirk is correct that there are quite a number of unknowns about exactly how the lake will behave, what areas of the lake will emit more or less. So, there's, unfortunately, a great deal we don't know at this point.

Mr. SHADEGG. There's pretty much consensus among—I guess I'd like for you to clarify for me this—among the three of you, that it's a potential serious problem, PM_{10} drying a lake.

Mr. KIRK. Potentially extreme problem.

Mr. SHADEGG. Potentially extreme problem. I'm glad you said that, because Ms. Taylor, in her testimony, and I'm going to question her, I hope, a little bit in a minute, makes it fairly clear that it is a very serious problem.

One of the issues that's mentioned with regard to Owens dry lake is that it is a salt—that salt is a factor there, but as I look at the figures, apparently, Mono Lake has some high salt content, like all lakes in the west, but not as salty as, for example, Owens Lake, and not as salty as the Salton Sea would be, is that correct?

Mr. KIRK. No, Mono Lake is actually twice as salty as the Salton Sea, it's not as salty as Owens Lake once was. And, the real factor at Owens Lake, why it is off the charts, is the amount of area exposed. Owens Lake has receded significantly, in fact, it's not much of a lake at all.

Mr. SHADEGG. It's pretty much dried out totally.

Mr. KIRK. Most years.

Mr. SHADEGG. But, the salt crust has not caused it not to be the biggest air pollution problem, PM_{10} problem, in the country, is that right?

Mr. KIRK. At Owens Lake? Owens Lake is the biggest air quality problem in the country, as far as PM_{10} goes.

Mr. SHADEGG. And, the fact that the salt crust, that's talked about in some of the materials that have been submitted, has not precluded it from creating this tremendous PM_{10} problem.

Mr. KIRK. I understand the question now. You are correct, in fact, the type of salt at Owens Lake, and it interacts with groundwater and saline water flowing up, have caused some of the air quality problems at Owens Lake.

Mr. SHADEGG. As I look at Mr. Haber, your testimony, as I read this it looks like 9 square miles of exposure at Mono Lake has resulted in a doubling of the PM pollution—PM_{10} pollution, at that lake?

Mr. HABER. I'd have to review my numbers, but that sounds roughly correct, yes.

Mr. SHADEGG. Those are your numbers.

And, it looks to me like Owens dry lake bed it's some 35 square miles, is that correct, we are looking at 9 square miles versus 35 square miles?

Mr. HABER. Yes.

Mr. SHADEGG. Thanks.

How many square miles of potential exposure is there at the Salton Sea?

Mr. KIRK. Eighty square miles.

Mr. SHADEGG. So, it could be dramatically larger?

Mr. KIRK. Yes, which could produce a much bigger problem.

Mr. SHADEGG. Now, the question I have, two other questions I want to get into, how far, if you know, or if Mr. Schade's testimony or other testimony can tell us, how far can this PM travel? Does the Owens Lake pollution travel 100 miles, 200 miles, 500 miles? Has anybody looked at those factors?

Mr. HABER. I don't know the answer to that question, do you?

Mr. KIRK. My understanding, and again, Ted Schade would be the best person to answer that, my understanding is that Owens Lake pollution travels as far south as the north part of San Bernardino—or the central part of San Bernardino County, it travels, in fact, for hundreds of miles.

When you look at the dust storms of even the Salton Sea, you can imagine at Owens Lake there's dust traveling for literally tens, if not hundreds, of miles on major occurrences.

Mr. SHADEGG. Okay.

And, with regard to the content of the dust, one of the issues I understand is that every time a lake of this type dries up part of the dust is toxic material that was in the lake at the time it was a lake, or settled on the lake at the time it was a lake, and it settles out and ends up a fair amount of the content of the dust includes toxic materials. Is that right?

Mr. HABER. That was certainly the case with Owens Lake, and we don't know exactly what the components are at Salton Sea, but one would imagine that there would be some similarities.

Mr. SHADEGG. Has that issue been studied for the Salton Sea yet?

Mr. KIRK. It has, in fact, we just completed a study with Egregian Research, who did a lot of work at Owens Lake, of all the near-shore sediments, and we have a good feeling for contaminate considerations in near-shore areas, the areas that will recede first. Those elements include selenium, cadmium and a couple of other inorganic elements.

Mr. SHADEGG. My time is about to expire, but let me ask one last question. I take it the terrain of both Mono Lake and Owens Lake is somewhat similar to the terrain at the Salton Sea, that is, fairly low, flat terrain?

Mr. KIRK. It is. In fact, the Salton Sea is equivalent to a lake, a puddle, the width of this room, about a quarter of an inch deep. So, it's a broad massive lake that's relatively shallow.

Mr. SHADEGG. I have a series of other questions which will wait for the second round.

Mr. BARTON. Is it literally that shallow?

Mr. KIRK. No, that's my Palm Desert chamber model of the Salton Sea, the sea is about 50 feet deep.

Mr. BARTON. Okay. I was thinking, that is a skinny lake. Even in Texas we wouldn't call that a lake.

The gentleman from Indiana is recognized for 5 minutes.

Mr. BUYER. I have a question, I'm not sure who to turn to. If I could, maybe Mr. Wilson and then maybe Mr. Kirk, if you could both come forward.

I'm trying to be a very good listener and to understand this, with regard to a Federal nexus. There are times in Indiana, as the Great Plains finger across Iowa, Illinois, northern Indiana, whereby I have counties that are non-attainment at certain times of the year because of agriculture. It could be by planting. It could be by harvest.

Do you care about that here in Palm Springs?

Mr. WILSON. Yes, and we have addressed that, we have had the agricultural industry, the Farm Bureau, at the table as we developed our PM_{10} strategies in the Coachella Valley.

Mr. BUYER. Let me ask it from this perspective. I'm looking at this one, this looks like a common sense view. As I'm listening to this, you have a water district that is located—part of its location is the—Imperial Valley has a water district that cuts a deal to divert their water to San Diego to make money, and in turn that deal affects, actually, contributes to the demise of the Salton Sea, is that what I'm hearing? If I'm hearing that, this makes no sense——

Ms. BONO. I wish——

Mr. BUYER. I don't mean to be rude, but——

Ms. BONO. [continuing] no, but will the gentleman yield?

I wish I were a panelist, actually, on this, because—and I'm so glad the light bulb is going off and one congressman is realizing this could impact Phoenix now.

This was done at the behest of the Secretary of the Interior and the Undersecretary for Water, Bennett Raley, so they were direct, the negotiation was very long, but it was not—really, the negotiations were long and drawn out, and in the end, under a lot of duress, I would say the QSA was cut.

Mr. BUYER. But, Ms. Bono, you've got a water deal that we're talking about air quality issues here, and you can cut what you think is the best water deal in the world, but if you are asking for the Federal treasury to give money because there is a result, a very poor consequence of the deal, and the testimony here is about that air quality, how is that a good deal for the citizens of southern California?

Ms. BONO. First of all, it's also important to remember there's a difference, when you include the Federal Government in this discussion it's not like Owens Lake, even though you didn't bring that up.

The Salton Sea, although historically it's been there for millenniums, and with the Salton Sea geographics it's been there, but the Salton Sea was created by a Federal accident. So, the Federal—the Army Corps, I believe it was, allowed a dyke to be breached and continued to flood this area for many, many years. So, that's the Federal nexus of all of this.

Mr. BUYER. Okay.

Ms. BONO. But, the Colorado River, the law is something you would probably never really have to deal with much in Indiana, but John Shadegg knows about it.

Mr. BUYER. Ms. Bono, Mr. Kirk, in your testimony, you wrote who will be responsible? That really stuck with me when I read your testimony last night.

Mr. KIRK. You noted it was a question, and not with a——

Mr. BUYER. That's right, I read further, because my mind, since I read that last night, has been going who is going to be responsible, who is going to be responsible, and then when you start thinking about this water deal that was cut out there, do people here really think that was a good deal for you?

Mr. KIRK. In defense of, we do have representatives of one of the water districts here involved, but not the Imperial Irrigation District in the room. In defense, the water deal was more complicated

than farmers selling water to make money, it was, in part, part of the broader Basin package to get California to reduce its over-reliance on the Colorado River.

And, some would suggest that if the water deal did not occur peaceably, that the Federal Government would have stepped in and made it occur and thereby reduce inflows into the Salton Sea, and we'd be left with some of these same questions.

But, you are right, I did not definitively answer who is responsible. I think it will be a mix. The water districts, in their defense, have ponied up $133 million to solve all sorts of environmental mitigation problems, and, in fact, a little bit more than that.

The State of California is resolved to help with mitigation, and the role of the Federal Government is a bit of a question mark.

Mr. BUYER. Mr. Haber, did the EPA sign off on this water deal, or did they have a voice in the process?

Mr. HABER. My understanding is that EPA was involved in an advisory role, but we didn't have a direct role.

Mr. BUYER. In an advisory role, and what was the advice of EPA on the deal?

Mr. HABER. I'm afraid you just exceeded my knowledge on that.

Mr. BUYER. Pardon?

Mr. HABER. I'm afraid you've just exceeded my knowledge about this. I can get back to you on that if it would be useful.

Mr. SHADEGG. Would you please let—without taking the gentleman's time, I'd like to reaffirm what was said before, just to make the point that you have to understand the entire law of the river, and that California is currently overdrawing its allotment by a substantial amount. The cities on the west coast desperately need water, they are currently taking a lot of that from the Colorado. They are taking more than they are allowed to take, and that, indeed, was a part of what happened. Indeed, the Secretary of Interior threatened the Imperial Irrigation District and said if you don't do this then California will lose water that it is critically relying upon right now. So, it's incredibly complex.

Mr. BUYER. I know you have your interest in a neighboring State, but if we are doing an air quality hearing, and the Federal Government helps a State negotiate a deal in which it can have very poor consequences on air quality, I'm puzzled that EPA, which is only an advisory role, indeed, did EPA even issue an advisory opinion?

Mr. BARTON. The gentleman's time is expired.

Isn't Congress fun? Isn't it just great? You know, we all—and we are all Republicans here.

Mr. SHADEGG. Mr. Chairman, may I request that the gentleman be given an extra 30 seconds?

Mr. BARTON. The clock had expired when you took his time.

Mr. BUYER. Can EPA just answer whether or not they issued an advisory opinion, Mr. Chairman?

Mr. BARTON. Sure. Would the gentleman from EPA attempt to answer that question?

Mr. BILAND. May I answer for my colleague?

Mr. BARTON. You may. We need you to identify yourself for the record, though, sir.

Mr. BILAND. My name is Larry Biland. I'm th Project Manager for the Owens Valley EPA, and I was also asked, I was brought in during the Salton Sea, during the water transfer, for my expertise dealing with that.

Mr. BARTON. You are an employee of the Environmental Protection Agency?

Mr. BILAND. Yes, I am.

Mr. BARTON. Okay.

Mr. BILAND. Yes, we did provide comments. In fact, I had made a list of—a detailed list of what would be required, starting with an air monitoring program, and going down to performing some studies to determine what the soil characteristics were and what would occur on an exposed shoreline. We did provide those comments, but they were not incorporated into the final agreement.

Mr. BUYER. Thank you, Mr. Chairman.

Mr. BARTON. The gentlelady from California is recognized for 5 minutes.

Ms. BONO. Thank you, Mr. Chairman.

So far, I would call this hearing a wonderful success, because people are starting to get it. My colleague over here is understanding the frustrations. My colleague from Arizona is understanding that these issues, the old adage of waters—whiskey is for drinking and water is for fighting, we often times are on the opposite side of this.

However, he, too, now is realizing that the Salton Sea can have an adverse effect on his district. So, if we are not proactive here, and this is my task as a Member of Congress, as we all know up here our body of government, as well as city councils, and counties, we react to a crisis. And, we are trying so desperately here to say we need to do something before it's too late.

A year ago, 2 years ago, we had this very same hearing on another topic, and that was fires in the bark beetle infested area, and we've all seen catastrophic fires that California has had and, indeed, we just lost 14 lives because of the subsequent mud slides.

So, I'm trying to get Congress to be proactive here, to say we need to step in, and this is not a question, it's just a soap box, but it's feeling really good, we need to step in and stop this disaster before it gets worse.

I stated to my colleague from Arizona that the law of the river is something that, yes, California has been in overdraft, and I'm hoping he's going to hear this, but if, in fact, the Salton Sea becomes a health hazard then it would be my task to try to redefine what beneficial use of the Colorado River water is, and that would be a huge fight in Congress, but if, in fact, people are suffering cardio respiratory illnesses because of the Salton Sea I would have to see if we could redefine beneficial use of water.

John Shadegg is one of the most brilliant lawyers in Congress, so I know he'll be helping me mitigating what we can do with the Salton Sea.

My question, though, my first one, is to the EPA. I don't know if Mr. Haber wants to answer or who, but why aren't you guys screaming for this? You guys really have been asleep at the switch. I do have the testimony from June 2002, and you gave me the same things you are giving me now. And, why are you not—why

isn't somebody standing up and screaming and making sure that you are a part of it, because the water is a very, very small issue compared to this air quality issue.

Mr. HABER. This is a question of sort of intervening Federal agency authority, so I would say it's complex, and given that air quality planning is mostly carried out at the local level, we want to be at the table, but we can't drive the process.

Ms. BONO. Do you need a congressional mandate? I think you are going to be getting it. In 1998, we did the Salton Sea Restoration Act, which was largely ignored by the Bureau of Reclamation, and I feel that EPA is the same way.

The Secretary of the Interior and the Federal bureaucracies want to just hope they can punt this problem next year, and next year, and next year. We've bought 15 years of time with this QSA, that we've saved the sea, in effect, and the regional issues, but what do I need to do to make you guys be an active partner here, instead of—even answers that you didn't even know what your role was so far with this very significant policy.

Mr. HABER. Well, I guess I would reiterate that we want to be involved, and people always say at the local level is the best place to do, and I think that's EPA's general position, is South Coast District, Coachella Valley, Association of Governments, Salton Sea Authority, needs to be in the lead. We want to be there with them, but to have us in front I think people would be coming back and saying why is the Federal Government not——

Mr. BARTON. Would the gentlelady yield?

Ms. BONO. Yes, Mr. Chairman.

Mr. BARTON. There are other issues around the Nation that involve both air and water quality issues, and in the instance of the MTBE issue, it's generally been the water people that prevailed. Is there a protocol in California where you work with the air and water quality executives for the State of California and you make a determination which Federal and State agency is going to dominate, because——

Mr. HABER. I'm not aware of such a protocol. My suspicion is the answer is no to that.

Mr. BARTON. In Texas, the air quality issue tends to dominate the water quality issue, at least on ozone non-attainment, which you referred to.

Mr. HABER. To date my understanding, this is probably the most acute situation where there appears to be a direct conflict between water needs and air quality impacts.

Mr. BARTON. But, we do have, in the pending energy bill, which again has passed the House, is waiting to be debated in the Senate, Congressman Shadegg has been very instrumental in some legislation that would formalize and designate lead agencies on some of these water quality issues, and these hydro licensing and relicensing issues. So, perhaps, we could take that as a model and expand it to air and water issues, so that we do get some sort of a Federal, at least Federal guidance, if not a—I'm not a real Federal mandate guy, but I do think if you've got competing interests we, perhaps, could provide some guidance.

I took about 2 minutes of the gentlelady's time, I'd ask unanimous consent that Congresswoman Bono have an additional 2 minutes in this round. Hearing no objection.

Ms. BONO. Thank you, Mr. Chairman.

When you are pointing to the local agencies, I'd like to ask Supervisor Wilson to comment on his role. But, if you could stay in the firing line that would be good.

Mr. HABER. Thank you very much.

Mr. WILSON. My role, specifically, regarding Salton Sea and air quality, is that it?

Ms. BONO. Yes, he's saying that it's really your role to be taking the lead with a Federal agreement. The QSA was a federally drive project, and he's saying it was your role to advise, when I believe it's EPA's role to advise. And, I'm just leading the witness, I think.

Mr. WILSON. In my opinion, EPA needs a stronger role, because South Coast represents the northern part of the Coachella Valley down to the Imperial County line. There's a different air quality district, the Imperial Water District, that regulates Imperial. We need an overview, a branch from EPA, to get us coordinated on this effort.

Mr. HABER. And, might I say, I may have misunderstood your question about roles. What I was thinking of particularly is the district's role to prevent air quality problems and remedy those that exist. You are talking about the QSA and our role is that the Department of Interior, which I believe is the lead agency and has driven it, and as Mr. Biland said, in the consultation process we provide comments, and that is under NEPA, that is what our role is limited to.

Ms. BONO. But you say your comments were ignored.

Mr. HABER. At that point, we had the choice of raising it to the Department of Environmental—to CEQ or not, and it's relatively rare that the agency has done that. You could certainly question that choice.

Ms. BONO. Okay.

Mr. WILSON. And, if I could just add to that. EPA has been now involved with the Owens Lake disaster. We want to prevent that from happening by being proactive. We need EPA's help, we need transfer of knowledge that they've gained in the Owens Valley, so that we can do some proactive studies beforehand, before we get the PM_{10} out here into the people's lungs.

Ms. BONO. Thank you.

Thank you, Mr. Chairman.

Mr. BARTON. The Chair would recognize himself for 5 minutes in the second round.

I want to ask, I'm a registered professional engineer, and I feel inclined to ask a few technical questions. As I understand it, the ambient air quality standard for California is stricter than the air quality standard at the Federal level. For PM_{10}, the Federal standard, the primary standard, is 150 micrograms per cubic meter on a 24-hour basis, and the annual arithmetic mean is 50 micrograms per cubic meter. The State of California has a 24-hour standard for PM_{10} of 50 micrograms, which is a third the size of the Federal standard, and its annual standard is 20 micrograms, which is only 40 percent of the Federal standard.

We also have the statistics for the Palm Springs Fire Station, monitoring station, which showed for 2001, 2000 and 2002, the measurements, and they, on two of the years, seemed to be in compliance or almost in compliance, except for 1 day with the Federal standard, but they are nowhere close to the State standard.

So, my question, I would guess to the gentleman from the EPA, we hate to keep beating on you, but what happens if we get within the Federal standard but are nowhere close to the State standard, who pays for that? If we can help get them under the Federal standard I'm all for that, but I'm not inclined to spend a lot of Federal dollars to get them into compliance with the State standard that's 60 percent tighter than the national standard.

Mr. HABER. Perhaps you are fortunate there, we are not responsible for enforcing the State standard. It's not part of the State implementation plan, except to the extent that it assists the State in getting to the Federal standard, it's not something that we deal directly with.

The other thing I would note, just for the record, is that the Federal standard has an attainment deadline associated with it, whereas I understand the State standard does not have a particular deadline associated with it.

Mr. BARTON. Okay.

Mr. Crites, would you want to take a crack at that? You are the representative of the local association, and if we can help get you all under the Federal standard are you willing to get your State legislatures to tote the note to get you within compliance with the State standard?

Mr. CRITES. We are on a 2006 deadline for compliance, I believe, with the EPA standards, and those are the ones that we are headed for right now. We are not in compliance so far. We believe, obviously, that the kinds of things that we are doing will take us to that compliance, and the issue that I brought then is, is that all might very well be for naught at the Federal level of standards should some of the issues that we've talked about today relative to the Salton Sea become true.

Mr. BARTON. Well, let me ask the question a different way. Is there anybody, any panelist, that thinks if we meet the Federal standard for PM_{10} that automatically gets you enough to get down to the State standard?

Mr. WILSON. Mr. Chairman, if I could call on Doctor Julia Lester from the technical staff of AQMD, maybe she could answer that question.

Mr. BARTON. Sure. If you'll just identify yourself for the record.

Ms. LESTER. I'm Doctor Julia Lester, I'm the Program Supervisor for Particulate Matter at the South Coast Air Quality Management District.

The work that you are doing here to reduce emissions to meet the Federal standard do give us progress toward the State standard. The State requirement is, although there's no set attainment date, that we continue to show progress, and that we are doing all feasible measures.

The State program that we've committed to in our air quality plans do impose all feasible measures on dust control in the Coachella Valley.

Mr. BARTON. So, unlike the Federal standard, if you are in non-compliance for any Federal standard and stay in non-compliance highway funds can be withheld, huge fines per day can be enforced, at the State level if you are in non-compliance with the State standard, as long as a showing is made that you are trying to comply there's not an automatic penalty associated with being in non-compliance of the State standard.

Ms. LESTER. That's correct, to the extent that the health and safety code of the State of California is very clear as to what hurdles you have to demonstrate to show that you are actually imposing all feasible measures.

Mr. BARTON. So, your State standard, for at least PM_{10}, is really not a hard standard. It's this is what we think it should be, we want to try to get there, but if you can't get there, as long as you are trying to get there, it's okay.

Ms. LESTER. That would be a correct term.

Mr. BARTON. Okay, thank you.

I didn't start my clock right at 5 minutes, so I know I've already exceeded my time, so I'm going to recognize Mr. Whitfield.

Mr. WHITFIELD. Thank you, Mr. Chairman.

Doctor Lester, may I follow up on some questions that the chairman was asking to make sure I understand this? Basically, you are saying that as long as you can convince the State that you are operating in good faith to meet their effort then there won't be any penalties, is that correct?

Ms. LESTER. That's correct. The State standards are significantly more stringent than the Federal standards, and I think that is my understanding of the legislation, that's why there is the balance.

Mr. WHITFIELD. And, are you aware of any areas in California where they have not met that good faith standard and that there were penalties associated with not meeting the standard?

Ms. LESTER. Not to my knowledge.

Mr. WHITFIELD. Okay, thank you.

Ms. Taylor, you made one comment, and this is a little bit off of what we are talking about, but you made a comment, I thought, that the dirtiest national park in the country was here in the Coachella Valley, is that correct?

Ms. TAYLOR. I believe they trade places. I believe the Superintendent of Joshua Tree is here, Curt Sauer, he could, perhaps, answer that, but it's always among the top three dirtiest, and sometimes the dirtiest, in the last few years.

Mr. WHITFIELD. And, how is that measurement—how do they——

Mr. BARTON. Yes, define dirty, is that BMT and dust? Is that, why?

Ms. TAYLOR. Ozone.

Mr. WHITFIELD. Oh, ozone standards.

So, this national forest here is one of the three dirtiest in the Nation from an ozone standard.

Ms. TAYLOR. National park, yes.

Mr. WHITFIELD. Okay, and that's the case right now?

Ms. TAYLOR. Yes.

Mr. WHITFIELD. Yes.

Mr. WHITFIELD. Okay, thank you.

Ms. TAYLOR. Thank you.

Mr. WHITFIELD. Mr. Haber, it's my understanding that 1.5 percent of electricity needs in California are generated by wind, is that correct?

Mr. HABER. I actually don't know the answer to that, perhaps, the gentleman——

Mr. WHITFIELD. Is that right, Mr. Welton?

Mr. WELTON. That's correct.

Mr. WHITFIELD. All right, and 5 percent by geothermal, is that correct?

Mr. WELTON. Yes.

Mr. WHITFIELD. Okay.

And, do we know how much electricity is generated in California by coal-fired plants that export electricity into California?

Mr. WELTON. I believe it's probably very low.

Mr. HABER. There are about 4 to 6 power plants in nearby States that export to California that are coal fired.

Mr. WHITFIELD. All right. Do any of you have a breakdown of the total electricity generated for California and what the source of that electricity is? I mean, you have 1.5 percent wind, 5 percent hydro.

Mr. WELTON. Yes, I have rough numbers, but——

Mr. WHITFIELD. Okay, well then I'll follow up on that later.

May I ask you just a couple questions, Mr. Welton?

Mr. WELTON. Please.

Mr. WHITFIELD. On the wind power, you talked about this production tax credit, which is tied up in the chairman's energy bill, which we hope will be passed soon, but all of us continue to look for productive, efficient means to produce power, and renewable is always an excellent way to do that. But, this 1.5 percent that you all are producing for electricity, how many windmills are there in this area?

Mr. WELTON. In this area alone?

Mr. WHITFIELD. Yes.

Mr. WELTON. Oh, there's 600 megawatts, which translates to about 3,000 wind turbines.

Mr. WHITFIELD. So, you've got 3,000 wind turbines. And, my understanding that the next generation right now these are towers of what, 120 feet, or 150 feet?

Mr. WELTON. The tower, the turbine goes to about 300 feet to 400 feet, that being the blade at the 12 position.

Mr. WHITFIELD. Okay, because I understand the new generation would be even taller.

Mr. WELTON. In California, I think there's a limit on the size that you can put in.

Mr. WHITFIELD. Okay.

How often do you hear complaints on visual pollution relating to windmills?

Mr. WELTON. Frequently, and also infrequently. One of the goals of the San Gorgonio Pass, that's the region down here, is we are trying to remove older generation turbines, so for every 20 of the older generations you can put in one new generation turbine, and that reduces the amount of clutter.

Mr. WHITFIELD. And, what would you say the total capital cost of these 3,000 windmills are, that are in this area?

Mr. WELTON. It's difficult to say. A lot of those, as I said, are older generation turbines that were installed back in '88.

Mr. WHITFIELD. Do you have a ballpark figure?

Mr. WELTON. Well, I can give you an idea. A new turbine, say it's a 1 megawatt wind turbine, and you are putting in 50 megawatts of that, the cost is about $750,000 per machine to, you know, turn the key. If you put in smaller numbers, of course, the cost goes up.

Mr. WHITFIELD. Okay.

Okay, thank you very much, Mr. Chairman.

Mr. BARTON. We would now recognize the brilliant lawyer from Arizona for 5 minutes of questions.

Mr. SHADEGG. Mr. Kirk and Mr. Haber, please.

I want to just conclude a couple of quick points. We ended by discussion of how the terrain around both Owens Lake and Mono Lake is relatively flat and spread out, and that's similar to what is the situation at the Salton Sea.

Mr. KIRK. Yes. One major difference is the mountains in the Owens Valley are closer to the lake. There's a steeper gradient outside of the lake bed.

Mr. SHADEGG. And, both contribute to wind conditions, or would that contribute to wind conditions?

Mr. KIRK. The venturi effect of these narrow mountain passes certainly contributes to wind conditions in both places.

Mr. SHADEGG. On mitigation, I actually read that there was a discussion, which maybe in Mr. Schade's testimony and also referenced in Ms. Taylor's testimony, that one option is flooding, which is putting water over it, shallow flooding, but in order to do that you'd have to have the water, correct?

Mr. KIRK. Correct.

Mr. SHADEGG. And, on a flat surface it would take less water than if it was a steep surface?

Mr. KIRK. No, actually, it's a function of a surface area entirely.

Mr. SHADEGG. The second option is plants and watering those plants.

Mr. KIRK. Right.

Mr. SHADEGG. Again, requiring water, and the last is gravel?

Mr. KIRK. Yes.

Mr. SHADEGG. Covering it with gravel.

I take it you agree with Ms. Taylor that it's better to deal with the problem before rather than after?

Mr. KIRK. Indeed.

Mr. SHADEGG. Can either of you tell me the surface of the Salton Sea, how many—or its width by length?

Mr. KIRK. Fifteen miles by 9 miles, 8 or 9 miles, I'm sorry, 350 square miles, 35 miles long, by about 10 miles wide.

Mr. SHADEGG. Thirty-five by 10, 350.

Ms. Taylor, if you could come forward.

First of all, I do live in Phoenix, Arizona, but I do like to vacation on the California Coast. We happen to like the Orange County Coast, and so we come here often. We drive down the hill into Coachella Valley, and it's a pretty spot, it's awfully green and ver-

dant compared to what you've been through, but I have seen the wall of pollution that you talk about. Indeed, we come down that hill and we can just see it coming through the pass at Banning and Beaumont.

And, my Dad grew up in southern California and talked to me about the Banning and Beaumont Pass, and flying it when he was a kid.

Your testimony indicates that the problem in this area, all the problems in this area, would pale by comparison to this potential PM_{10} problem we have arising out of the Salton Sea, is that right?

Ms. TAYLOR. That's correct.

Mr. SHADEGG. And, that it has the potential to be another Owens Lake disaster?

Ms. TAYLOR. Yes.

Mr. SHADEGG. And, that the Salton Sea could be a huge source of PM_{10} pollutants, right?

Ms. TAYLOR. Yes, and finer.

Mr. SHADEGG. You would also agree that these PM_{10} pollutants can travel hundreds of miles?

Ms. TAYLOR. I don't know, but I think that these fellows that are speaking are aware of this.

Mr. SHADEGG. You mentioned mitigation being salt being put on top, a salt crust, and that didn't work.

Ms. TAYLOR. Apparently not at the Owens Lake.

Mr. SHADEGG. And, are you aware of the other attempts at mitigation, plants and flooding, both requiring water?

Ms. TAYLOR. The only two I'm aware of that were successful were the plants and the shallow flooding.

Mr. SHADEGG. Well, I think it's a serious problem and I think we have to deal with it. It's an interesting interrelation between water and air.

I do want to digress and ask one other topic. Are you—are the positions you have taken today, are they the positions of yourself as a member of the Sierra Club, or the Sierra Club itself?

Ms. TAYLOR. These are the positions of the local group of the Sierra Club. I believe they are well within national Sierra Club policy.

Mr. SHADEGG. That's where I wanted to ask a couple of questions, switch topics a little bit, but a parallel that I happen to see. Are you aware that the Sierra Club nationally has adopted a resolution calling for the draining of Lake Powell?

Ms. TAYLOR. Yes, I am.

Mr. SHADEGG. Do you know if the Sierra Club has studied the particular problem that could result from the Salton Sea?

Ms. TAYLOR. No, I do not know, but I don't believe it's a saline area.

Mr. SHADEGG. So, you don't the Salton Sea has been studied by the Sierra Club?

Ms. TAYLOR. No, let me put it this way, I don't think that they are the same conditions as Lake Powell, because it hasn't been there long enough.

Mr. SHADEGG. Well, actually, in the testimony of Mr. Schade, he says the fact that you dry up a lake more recently means you get more pollution.

Ms. TAYLOR. But, I think he's talking about a very old lake, and the Salton Sea has been flooded over millennia and so forth. Lake Powell is artificial, and it's recent, the last 50 years or so.

Mr. SHADEGG. Actually, both the Salton Sea and Lake Powell could be arguably artificial, as Ms. Bono pointed out here that the Salton Sea was an artificial creation by accident, the Lake Powell was created by intent.

Ms. TAYLOR. If I could just, because it is an important issue, the Salton Sea over a millennia flooded that way. The last flooding was an accident.

Mr. SHADEGG. Right, both are a result of Federal——

Ms. TAYLOR. But, it flooded and dried out, over a millennia it is very salty.

Mr. SHADEGG. Given that salt is a factor here, salt is a factor in any given lake of this type in the western United States, you've already indicated that the Sierra Club has not studied, to your knowledge, the Salton Sea and the impact on air pollution, is that right? There's no formal study that you know of.

Ms. TAYLOR. That the Sierra Club has done, no.

Mr. SHADEGG. And, do you know of a study done by the Sierra Club on the potential for air pollution if Lake Powell is named?

Ms. TAYLOR. No, I do not know of any such study.

Mr. SHADEGG. Okay.

What I want to ask as a concluding question is, if, in fact, it's shown that draining Lake Powell could result in the same kind of PM_{10} problem for many portions of the country that you are going to have here out of the Salton Sea, and if, in fact, it's shown that the water stored behind Lake Powell from the Upper Basin States could, in fact, be used to help make sure that the Salton Sea doesn't dry up, would you either personally, or do you think some chapters of the Sierra Club, would consider, based on that evidence, dissenting from the national Sierra Club's position calling for the draining of Lake Powell?

Ms. TAYLOR. Now you are talking Sierra Club politics, which are about as complicated as national, and I would just say I personally would advocate that the Sierra Club look at all parts of an issue, such as that.

Mr. SHADEGG. My question was, would you consider dissenting?

Ms. TAYLOR. As long as I represent Sierra Club, I cannot dissent from a national position.

Ms. BONO. Thank you. The chairman has allowed me to Chair the hearing suddenly. I hope I don't look a lot older now, but Congressman Buyer, your 5 minutes.

Mr. BUYER. I don't know why I'm still hung up on your question from last night, who is responsible, because I keep taking this thing to different plateaus.

But, who is responsible, California is a fascinating State as we take care of interests all across the country, California is a State where you have your moratorium to offshore drilling, you won't allow any building of nuclear facilities, you consume nine times the power that you built for yourself, you divest your own utilities, you don't own—you only own the wires, you won't build transmission lines. You take power from the northwest, hydro power. You take coal from southern Indiana, and Kentucky, and West Virginia. You

have peaking plants of natural gas. Natural gas prices are very high at the moment. Who is responsible?

The first thing about responsibility is about yourself, so when we were trying to take care of interests around the country, I look at California and say, California, what have you done for yourself? And then I look at this one that's going on, I'm glad you brought us out here, then I look at this one and go, okay, if that's how California is acting as a State, I guess, look, they are just doing the very same thing with regard as a city, what's San Diego doing for itself? And then, they cut this deal to take water, everybody is looking for something for the cheap, trying to do it on the cheap, so rather than drawing it from the sea, oh, that would be too expensive, so let's cut our deal here, and it has an impact that will have a health consequence.

Here we are talking about air quality. We are not even—there's been no discussion here today about the health consequences. The reason I remembered the Salton Sea, when Sonny Bono first came to Congress his office was close to me, and he talked about the Salton Sea, and I hadn't even met you at that time, Mary, and I don't want to get too personal here, but I hadn't met you at the time, he talked about his wife having asthma.

Mary, I don't know how you—somebody here, is this a very high asthma place? Does anybody know? Can anybody tell me? Nobody knows? I would think—please.

Mr. WILSON. Asthma is up almost everywhere in the U.S., and this area is no exception. A lot of people moved here because of air quality, and they have found out not all of it certainly is particulate matter, and one of the issues is we brought our landscapes from other parts of the U.S., and so we planted olives and oleanders and everything else, and so we gets lots of allergens from plants. We get lots of it from the air.

Mr. BUYER. If I may, just for 1 second, sir. Do you know, are there any—I guess I can go back to the Health Subcommittee on this one, Mr. Chairman, but are there any that you aware, with regard to how the State is broken out, where this area is very high in asthmatic and pulmonary disease?

Mr. WILSON. Yes, there is even such a thing called Desert Lung that comes from, not just here, but it's also found in the San Joaquin Valley and other places where you get a lot of airborne particulates, and if I could have 20 seconds, sir, to make one comment and that is you are square on target correct, the Salton Sea was, in essence, being ignored in the water deal, and lots of other interests were up at the top, and air quality was getting rolled, and thank you again, Ms. Bono, for being there, and thank you, sir, Mr. Buyer, for paying attention to the issue, because this was one of the consequences that nobody was going to talk about, because we were busy doing a Federal/state deal on water.

Mr. BUYER. It's pronounced Buyer, it's French, but I don't mind you Americanizing it.

Mr. WILSON. All right, Mr. Buyer, sorry, sir.

Mr. BARTON. He's trying to be nice to you.

Mr. BUYER. No, he's very—he's very good, I'm just trying to—I don't understand, you know, your testimony was very good, and we also had somebody from the Home Builders, you want to talk about

a desire consequence, let the word get out that this is not a place to come, this is not a place to retire, because of the health consequences of southern California not taking care of itself. I don't think that's a very good thing, and we have to look at this from a Federal perspective on how we take our available resources and move them around the country.

And, you know, it's human nature, you'll go where people are working together to take care of a particular problem. The people that are unwilling to take care of something themselves, you just say, well, we'll just wait until they get their act together. It's a human consequence, it's reality.

You know, wow, California, you have a lot of challenges here, Ms. Bono. I'll yield back. Thank you for your testimony.

Ms. BONO. Thank you. I will yield myself an additional 5 minutes, but I'd like to remind Mr. Buyer, though, before you go picking on California, it is the fifth largest economy in the world, and I would think that our economy helps drive the rest of the country, and I believe our economy is probably bigger than France's.

Mr. BUYER. I'm not defending France.

Ms. BONO. That's okay, go ahead and try.

Mr. BUYER. No, my family came from Alsace Lorraine, and it was pre-1870, and at that time we were part of Germany.

Ms. BONO. All right, but I would just like to sort of along the lines of what Steve was saying, if, Tom Kirk, you could come up and discuss briefly in my 5 minutes what we are trying to do, and where we are trying to go, and along with Supervisor Wilson we are trying to—oh, I was trying to ignore my own time, no, I'm just kidding. Now I've entirely messed it up. Okay, go. We are trying to come up with a plan that's much larger than solely a body of water, and I think prior to today my colleagues thought of me and the Salton Sea, and fish and birds, and that I was sort of only caring about these things, but really there are opportunities here to do sort of beneficial or mutual uses, and come up with some very creative solutions, so could you please comment on where we go from here, and you can also comment on who should be the lead agency in the restoration of the sea.

Mr. KIRK. I'd be happy to do all of the above, and I was taken by your comments. And, one of the things that came from one of our recent board meetings with Supervisor Wilson, one of the board members said, "God helps those who help themselves," and the Salton Sea Authority in the past year has taken that motto apart and said, well, the Federal Government isn't going to be there, we hope they will be, and if the State government, we are not sure exactly where they are going to be, let's strive to make a restoration plan and work with Congresswoman Bono on that restoration plan.

And, there are three standard mitigation measures at Owens Valley. We have opportunities at the Salton Sea that Owens Valley doesn't have. Our restoration of the Salton Sea is not about letting the sea drop up. We will still have 800,000, 900,000, maybe a million acre feet of water flowing into the Salton Sea, and how we manage that water will go a long way to protecting fish and wildlife resources, providing wonderful recreational opportunities, and doing great things for air quality. We haven't talked about that, but salt management is a part of a restoration plan. And, the con-

cept that we are working with Congresswoman Mary Bono on is doing as much with the water resource as possible, taking advantage of wetlands creation, ala Duncan Hunter's concept from the Imperial Valley, cleaning up water as it flows into the Salton Sea, creating a smaller but healthier Salton Sea, and using salt management to take salt out of the system. We have—salt gets into the Salton Sea, the terminal body of water, now we are going to create a flow-through system with salt coming out at the other end, and using shallow water wetlands and salt management to help mitigate it into air quality.

And, at the Salton Sea that makes sense. It may not have made sense at Owens Valley, but at the Salton Sea most of our salt is sodium chloride, and sodium chloride creates a hard crust, and using wetlands, and some grasses, and salt management to mitigating its air quality is going to go a long way to addressing the problem here.

With respect to roles and responsibilities, my honest answer is I don't know, and government is complicated, and there are all sorts of overlapping responsibilities. What I can tell you is, we've got a great relationship with the Federal Government, believe it or not, at the local level. There are good people at the Bureau of Reclamation, the Salton Sea Science Office. I think we are doing the right things in terms of studies, understanding the sediments. We are going to take the next step of modeling winds and sediments together.

And, with respect to Salton Sea restoration on its own, it's going to take us all rowing in the same direction. I believe the Salton Sea Authority has the most at stake among the State, local and Federal partners, and in defense of EPA, I think one of the things they said rang true, and that is, keep decisionmaking as local as possible, because we are the ones that are going to be living with the decisions of the water districts, the water transfer, the State of California and the Federal Government.

So, the Salton Sea Authority is poised to do that in partnership with the Bureau of Reclamation, with the leadership of the Congressional Task Force and the State of California, and we're taking steps together. We are going to ask the Federal Government for money, there's no doubt about it. We want an authorized Salton Sea Restoration Project, we want the Federal Government very engaged, but we are not asking the Federal Government for all of the money. The State of California, we are going to ask them, the water transfer parties have created some innovative ways of creating some money for Salton Sea restoration, about $300 million will go into Salton Sea restoration.

The local community is taking steps to create a redevelopment district around the Salton Sea, and we know, for those of you that have been out to the Salton Sea, compare those property values to where we are sitting today, they are incredibly low at the Salton Sea, as we create the vision for the Salton Sea we know property values are going to rise, and when those property values rise property tax receipts rise, we are going to capture some of that and send it back into the project.

We expect water transfer revenue, State bond money, Federal authorization, and again, with the adage, "God helps those who

help themselves," the local community to support restoration. It's going to be expensive, it's going to be a billion dollar project is my guess, at the same time I'm sure, and this is what I heard from all of the testimony, we better deal with this now rather than 10, or 20, or 30 years, it's going to get more expensive cleaning up the mess than it will to proactively restore the Salton Sea.

With that, that was the best I can do, Congresswoman Bono, to describe part of your vision for the Salton Sea.

Ms. BONO. Thank you.

Thank you, and I thank you, Mr. Chairman, and I'm happy to turn it back over to the chairman at this point in time.

Mr. BARTON. Well, let me reassume the chairmanship briefly, just to conclude the hearing.

I have one final question. There was one gentleman early on, I don't know if it was Mr. Wilson or Mr. Crites, that you said you needed more monitors or an additional location for the monitor. Could you, just very briefly, expound on that.

Mr. WILSON. Yes, I can. We would like to put more monitors down around the Salton Sea to measure, and we'd also like to take some of the research that's been done by EPA at Owens Lake and replicate that around the Salton Sea, but the district is strapped for funds and additional monitors. We've got two in the Coachella Valley, we need down——

Mr. BARTON. Is there any controversy about location, or is it simply a funding issue?

Mr. WILSON. It's a funding issue.

Mr. BARTON. So, there's not a controversy about location, you just need more money to put more monitors.

Mr. WILSON. Correct.

Mr. BARTON. Okay.

Well, let me conclude the hearing.

Mr. SHADEGG. Mr. Chairman?

Mr. BARTON. I'll yield to the gentleman from Arizona.

Mr. SHADEGG. I simply want to raise a brief point of order. I want to be assured by you that the testimony of Mr. Theodore Schade, of the Great Basin Air Pollution Control District, will be submitted. I don't know if it's ever been made a part of the hearing, but I'd like it in.

Mr. BARTON. Without objection, so ordered. I should have done that at the beginning. I appreciate you bringing that to my attention. You definitely are a brilliant lawyer.

I want to assure all our good Californians here that we get lots of input on California issues on my subcommittee. Every Republican on the full committee, Ms. Bono, Mr. Radanovich, and Mr. Issa, members of the subcommittee, and two of the Democrats, Mr. Waxman and Ms. Capps are members of the subcommittee. At the full committee there are two additional Californians on the democratic side that are also members, so we have a total of seven Californians on the full Energy and Commerce Committee, five of them serve on the Energy and Air Quality Subcommittee.

I sometimes refer to my subcommittee as the California Subcommittee of the Commerce Committee, because of the number of Californians. So, we get plenty of input and we certainly under-

stand the necessity to maintain a viable economy in California, because it is such a large part of our overall national economy.

This is a complicated issue, because it does involve air and water quality issues, and it also involves an interaction between State and Federal guidelines and regulations, which came out today.

It is not directly impacted by the pending energy bill, in terms of the Federal/state role, but that is certainly an issue that we need to do some study on, and I will work with Congresswoman Bono on that.

So, I want to thank the local leaders that are all here for attending today. You do have the Palm Springs Film Festival going on, you could be rubbing elbows with Sidney Poitier, he's in town, Kevin Costner is here, Richard Zannick is here, they are all holding symposiums in other parts of the city. So, I certainly appreciate you folks staying for 2 hours to hear us debate this issue. It's not as sexy in terms of the glamour, but it's over time probably more important in terms of—I know in terms of the health effects, and, hopefully, maybe even in terms of the economic effect. So, appreciate your attendance.

The subcommittee is adjourned.

[Whereupon, at 12:22 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows:]

PREPARED STATEMENT OF THEODORE D. SCHADE, GREAT BASIN AIR POLLUTION CONTROL DISTRICT

My name is Theodore D. Schade. I am a registered professional civil engineer and the Senior Project Manager for the Great Basin Air Pollution Control District in Bishop, California. I have spent the last thirteen years studying dust emissions from the dried beds of Owens and Mono Lakes in Eastern California and have helped to develop and implement plans to reduce those emissions to levels that meet the requirements of the Federal Clean Air Act.

The issue being discussed at today's hearing is air quality in the Coachella Valley and, in particular, the impact that activities at the Salton Sea may have on future air quality in the valley. My intention today is to draw a few parallels between the Salton Sea and another of California's inland saline lakes—the Owens Lake. If these two inland seas are as alike as I believe they may be, the decision to divert water destined for the Salton Sea could have significant adverse impacts on the air quality of the Imperial and Coachella Valleys. So, please bear with me while I speak about Owens Lake; you will see that so much of what has happened at Owens Lake and what has been learned there is applicable to the Salton Sea.

I have been working on the dust problem at Owens Lake since September 1990. Working with other scientists, we have studied the geology, hydrology, biology, archaeology, history and of course meteorology and air quality of Owens Lake. We worked from the mid-1980s until the mid-1990s to understand the lake's physical properties. Since then we have worked to develop and now implement a solution to the largest single source of particulate matter air pollution in this country.

In the late 1800s, Owens Lake was one of the largest natural lakes in California. It is a basin lake, which means it has no outflow; its size is determined by the amount of fresh water that flows in every year balanced with the amount of water that evaporates. And because there is no outlet, it is a saline lake; the minerals that dissolve from the rocks of the Sierra and White/Inyo Mountains upstream are transported to the lake and then left behind when the fresh water evaporates. With a surface area of more than 110 square miles (GBAPCD 1997, pg. 3-52) and an average depth of 20 to 30 feet, in the 1880s Owens Lake supported two steamships transporting silver ingots from the mines in the Inyo Mountains destined for the growing city and port of Los Angeles (GBAPCD 1997, pg. 3-162). With regard to wildlife, an early settler reports that the lake was once "alive with wild fowl, from the swift flying Teel to the honker goose . . . Ducks were by the square mile, millions of them. When they rose in flight, the roar of their wings . . . could be heard on the mountain top at Cerro Gordo, ten miles away . . ." (Kahrl 1982, pg. 35). Very much like Mono Lake, the wildlife at Owens Lake sustained itself on billions of insects; at about three times the salinity of seawater, the lake was too salty for fish. But,

Owens Lake's fate was sealed in 1913 when the City of Los Angeles completed construction of the Los Angeles Aqueduct. This marvel of modern engineering intercepted the Eastern Sierra snowmelt that previously kept Owens Lake full and diverted the water south 223 miles to the growing City of Los Angeles. By the mid-1920s, Owens Lake had all but disappeared—with no significant input of water and evaporation rates of over five feet per year, the lake became a lifeless, hypersaline brine pool that, depending on rainfall, varies in size from zero to about 40 square miles (GBAPCD 1997, 3-52).

With the lake nearly gone, over 60 square miles of saline lake bed was suddenly exposed. As the salt water evaporated, salt deposits were left behind. The mix of salts and fine sediments has created a very dynamic surface. Every year, winter rains dissolve the existing salt crust and then, as the water evaporates in the spring and summer, a new salt crust is formed. If the salt crust is formed during warm weather, the salt crystals cement the soil particles together and the surface is very hard and resistant to wind erosion. However, if the crust forms during the cool or cold weather, an efflorescent crust is formed that is very soft and subject to wind erosion (St.-Amand 1987). The resulting dust storms of fine salt and soil particles truly have to be seen to be believed—the largest dust storms in the U.S. occur at Owens Lake (Reheis).

Before addressing the levels of air pollution caused by the dried bed of Owens Lake, it is necessary to briefly address the air pollutant known as PM_{10}, what the standards are and why it is a health risk.

The term "ambient air quality" refers to the atmospheric concentration of a specific compound or material present at a publicly-accessible location that may be some distance from the source of the pollutant emissions. During the 1980s, air quality standards for particulate matter were revised to apply only to "inhalable" particles with a size distribution weighted toward particles having aerodynamic diameters of 10 microns or less. This is where the term "PM_{10}" comes from. The Federal PM_{10} Ambient Air Quality Standard is set to control concentrations of inhalable-sized fine particles less than 10 microns in size, or about one seventh the diameter of human hair. The U.S. Environmental Protection Agency uses health risk studies to establish the PM_{10} standard—the standard is based on potential impacts to human health.

It does not matter what these small particles are made of, the fact that they are so small allows PM_{10} sized particles to be inhaled deeply into and lodge in our lower respiratory tracts. When breathing through the nose, few particles with an aerodynamic diameter larger than 10 microns reach the lower respiratory tract. People who live in or visit areas exposed to elevated levels of PM_{10} are at risk.

Federal standards for PM_{10} have been set for two time periods: a 24-hour average and an annual average of 24-hour values. The federal "National Ambient Air Quality Standards' (NAAQS) for PM_{10} are:

> 150 micrograms per cubic meter ($\mu g/m^3$) as a 24-hour average; and 50 $\mu g/m^3$ as an annual arithmetic mean.

Exposure to PM_{10} levels above the federal standard may cause sensitive individuals to experience varying degrees of breathing difficulties, some of which may linger beyond the exposure period. In some cases, breathing difficulties due to PM_{10} exposure may cause asthma attacks or even contribute to an individual's death. Other health effects, such as eye and nasal irritation, may also occur. The most sensitive population includes children, the elderly and people with respiratory problems, heart disease or influenza. (SWRCD 1994, § 6.4.2)

The emissive surfaces that form on Owens Lake make it the largest single source of air pollution in the United States. It is the largest source in terms of total tons of particulate matter air pollutants emitted per year and in terms of the levels of Standard exceedances. According to the recently adopted attainment plan for the Owens Valley, the Owens Lake bed emits an average of over 80,000 tons or 160 million pounds of PM_{10} per year (GBAPCD 2003, pg. 4-2). Peak 24-hour PM_{10} levels as high as 12,038 $\mu g/m^3$ (80 times the Standard) have been measured at a publicly accessible hot spring near the historic shore of Owens Lake and 3,929 $\mu g/m^3$ (26 times the Standard) in the town of Keeler on the eastern edge of the lake bed. High exceedances also occur frequently. In 2002, for example, of the top thirty 24-hour PM_{10} levels measured in the entire U.S., 28 occurred at Owens Lake—the 26th and 28th highest occurred in El Paso, Texas. Similar high exceedances occur at Owens Lake every year (GBAPCD 2003, pg. 3-5 and USEPA).

One of the reasons that Owens Lake is so dusty is that it is one of the youngest dry lakes in the world. Its youth is what makes it different from the scores of other dry lakes found in the western United States. The other dry lakes in the Great Basin have been dry for hundreds to thousands of years—they have had time to naturally stabilize. Owens Lake has been dry for less than a century—it is still in a

very dynamic state. Given time, perhaps hundreds of years, Owens Lake would stabilize; we see signs of natural stabilization processes occurring. However, we cannot wait for hundreds of years—the Federal Clean Air Act requires the Owens Lake dust to be controlled by the end of 2006 (GBAPCD 2003, pg. 8-4).

But, I am pleased to report that, due to the hard work of the Great Basin Air Pollution Control District and the City of Los Angeles, the dust at Owens Lake is in the process of being controlled. In 1998, the City of Los Angeles and Great Basin entered into an historic agreement that provides for the dust problem to be solved by the federal government's 2006 deadline. Based on over a decade of research and testing, Great Basin developed a plan that allows Los Angeles to install any combination of three control measures on the areas of the exposed lake bed that emit dust. The allowable control measures include: shallow flooding, managed vegetation and gravel blanket. Shallow flooding simply spreads a thin sheet of water over the emissive area. Managed vegetation uses techniques developed by Great Basin to reclaim the saline soils and establish a protective cover of salt-tolerant saltgrass (*Distichlis spicata*) using drip irrigation technology. Gravel blanket is a four-inch thick layer of very coarse gravel that armors the surface and prevents the capillary rise of salt crystals (GBAPCD 2003, Ch. 5).

All three approved dust control measures attempt to mimic natural processes that are occurring on Owens Lake. Natural seeps and springs along the historic lakeshore keep the surface wet and non-emissive in many small areas. If the natural seep waters are fresh enough, they may flush the salts from the soil—this allows saltgrass vegetation to establish naturally. Where very coarse soil particles occur, such as near the inlet of the Owens River, the fine clay and silt soils are blown away and the coarse sand and gravels are left behind which help to armor the surface. A number of non-nature mimicking control measures have also been tested over the years, including: sprinklers, sand fences, soil tilling, soil compaction and many chemical stabilizers. These either failed outright or would be unfeasible to implement on the enormous scales needed at Owens Lake (GBAPCD 1997, Ch. 7).

The City of Los Angeles started the first phase of large-scale dust control measure implementation in the fall of 2000. Their initial project was an 8,600 acre (13.5 square mile) shallow flood project that they completed in January 2002. This Phase 1 Project cut lake bed emissions by about 30 percent. Because Great Basin's agreement with Los Angeles required 16.5 square miles of the lake bed to be controlled before the end of 2003, Los Angeles immediately moved on to the second phase of the solution. They then constructed a 3,700 acre ($5^{3/4}$ square mile) project that combines drip irrigated saltgrass with shallow flooding. The project was planted with about 60 million saltgrass plants which by next year will be large enough to control dust to the level necessary to meet the PM_{10} Standard. To date, Los Angeles has spent about $250 million to control about 19 square miles (12,300 acres) of emissive lake bed. The final plan for Owens Lake, adopted by Great Basin in November 2003, provides for dust controls to be constructed on a total of 29 square miles (19,000 acres) of lake bed. Los Angeles estimates that the project will cost $415 million to construct and about $10 million per year to operate (GBUAPCD 2003, pg. 7-8).

The Owens Lake dust control effort will also have an ongoing cost in terms of water. On average, about 320,000 acre-feet per year (ac-ft/yr) of water that naturally flowed into Owens Lake is diverted to Los Angeles (GBAPCD 1997, pg. 7-2). The Environmental Impact Report prepared for the Owens Lake dust control plan estimates that the final project will remove about 51,000 ac-ft/yr of water from the Los Angeles Aqueduct for use on the lake bed (GBAPCD 1997, pg. 4-45). Therefore, to solve the dust problem, Los Angeles will be able to export about 16 percent less water that they could before they were required to implement PM_{10} control measures. This water has a monetary value. The USEPA recently developed a value for Los Angeles' Owens Valley water of $323 per ac-ft (USEPA 2002). Therefore, the annual cost of the diverted 51,000 ac-ft/yr is about $16.5 million.

Finally, to conclude the discussion of Owens Lake, we cannot blame the City of Los Angeles for making the Owens Lake disappear. When they decided to sacrifice Owens Lake and the environment in the Owens Valley for the growth of the emerging City of Los Angeles, even President Theodore Roosevelt acknowledged that the concerns of the residents in the Owens Valley were "genuine," but their concerns "must unfortunately be disregarded in view of the infinitely greater interest to be served by putting the water in Los Angeles" (Kahrl 1982, pg. 140). One hundred years ago, even President Roosevelt felt that the environment in a remote, sparsely settled valley was not something to be protected and preserved when it interfered with the continued growth of one of the nation's great cities. However, our priorities as a nation have changed since 1906 when Roosevelt wrote those words. Protection of our environmental resources has become a priority, especially in remote, sparsely settled places. And we could blame Los Angeles if they continued to refuse to fix

the problem they have caused. But they finally have not refused; they finally acknowledge that the air pollution from Owens Lake is caused by their water diversions and they have begun a costly and enormous undertaking to solve their problem.

Now to the Salton Sea. I believe much of what has happened at Owens Lake will happen at the Salton Sea, if the Sea's water supply is simply diverted like Owens Lake's. I have been invited down to the Salton Sea a number of times over the past three years by the Salton Sea Authority and the Salton Sea Science Office to specifically look at the sea and its potential to emit dust if its level is lowered. I have also reviewed much of the literature relating to potential dust emissions and have read the sections addressing air quality at the Salton Sea in the Imperial Irrigation District's Water Transfer Project EIR/EIS. I also sat on a panel of experts in 2002 that authored a White Paper titled "The Potential for Fugitive Dust Problems at the Salton Sea If Water Levels are Lowered Significantly from Current Conditions." What I have seen at the Salton Sea and what I have read in the EIR/EIS concerns me. Although there are a number of differences between the two lake basins, I believe there are enough similarities to justify my concern. Both Owens Lake and the Salton Sea contain unimaginable quantities of salt—we

speak of these quantities in terms of millions of tons. As the waters evaporate enormous salt deposits are left behind. Although theory says the type and mix of salts at the Salton Sea should be more stable than at Owens, there are enough unstable salts to, at certain times and under certain conditions, cause the type of emissive surfaces that form at Owens to form at the Salton.

At Owens Lake the City of Los Angeles' water diversions caused about 70 square miles (45,000 acres) to be exposed. Only about 40 percent of this area, or 30 square miles (19,000 acres), emits dust. However, these 30 square miles of exposed lake bed make Owens Lake the largest single source of PM_{10} air pollution in the country. I understand that over 100 square miles (68,000 acres) of the Salton Sea's bed is expected to be exposed as water is diverted from the basin. Even if only a fraction of the newly exposed sea bed is emissive, there is the potential for many thousands of acres of dusty sea bed.

Although it is the intent of the Clean Air Act that all our air should be fit to breathe, only about 40,000 people live in the sparsely populated Eastern Sierra areas impacted by dust emissions from Owens Lake. This is not the case with the Salton Sea basin. Hundreds of thousands of people living in the Imperial and Coachella Valleys could be impacted by dust storms from the exposed Salton Sea bed. In addition, many thousands of acres of valuable agricultural lands could be impaired by blowing salt and sand.

The Water Transfer EIR/EIS admits that the proposed transfer would cause thousands of acres of sea bed sediments to be exposed and that this newly exposed area would have the potential for dust suspension. But it goes on to say that the many variables "prevent any reasonable quantitative estimate of emissions and associated impacts from the exposed shoreline." It then goes on to state that, rather than a scientific quantitative estimate, a "qualitative assessment" will be provided. A "qualitative assessment" was inappropriate for the California State Water Board during their Mono Lake decision process; it was also inappropriate for the California Air Resources Board and the USEPA during the development of the air plans for Mono and Owens Lakes. In those cases, extensive research, testing and computer modeling allowed us to reduce the uncertainties in the many variables that affect dust emissions. With uncertainties reduced, we were able to construct air quality models that closely matched actual conditions. There is absolutely no reason why such an effort cannot take place for the proposed Salton Sea sediment exposure. Even a crude modeling effort would give an indication of the potential magnitude of the problem.

An issue completely ignored in the EIR/EIS air quality discussion is the possibility of air toxics that could be contained in the dust. Elevated levels of PM_{10} are considered to be a health risk not because of what the dust is made of, but rather because the very small particles lodge deeply in our lungs. Toxic materials in the dust only add to the health risk. Elevated levels of naturally-occurring arsenic and cadmium in the sediment at Owens Lake increase the lifetime cancer risk from those toxics by 24 per million (GBAPCD 2003, pg. 3-8). Sediment analyses at the Salton Sea indicate that dust emissions there could potentially contain many more toxic materials, including pesticides and uranium (LFR Levine-Fricke 1999).

At the risk of oversimplifying the many complicated factors that contribute to cause lake sediment dust storms, I would like to present a crude "quantitative" estimate of the potential for dust at the Salton Sea. At Owens Lake about 70 square miles of lake bed is exposed. About 40 percent of the exposed lake bed or 30 square miles emits PM_{10} (GBAPCD 2003, Ch. 4). As mentioned above, under the worst

case, about 100 square miles (68,000 acres) of Salton Sea bed would be exposed when water is diverted from the sea. Because of different soil and salt conditions than at Owens, maybe only 30 percent of the exposed area at Salton might emit dust. This is still 30 square miles (19,000 acres) or an area equal to that at Owens Lake that will emit PM_{10}. Also assume that in the best case, for all the unsubstantiated reasons presented in the EIR/EIS, an acre of sediment at the Salton Sea is only one-tenth (10%) as emissive as an acre at Owens Lake (this could be wishful thinking). This means that instead of annual emissions of 80,000 tons, the annual emissions would be 8,000 tons or 16 million pounds of PM_{10} emitted every year. In most cases, PM_{10} sources greater than 100 tons are considered to be major sources of air pollution. With regard to peak 24-hour concentrations, if the peaks at the Salton Sea were also only one-tenth as bad as Owens Lake, levels as high as 1,200 $\mu g/m^3$ could be expected. This is eight times higher than the Federal 24-hour Standard of 150 $\mu g/m^3$. No one can say that the water diversions will not cause a serious air quality problem at the Salton Sea without much more study, analysis, research, modeling and testing. And if this work indicates that there could be an air quality problem, a plan to take care of it needs be in place before water diversions begin. Otherwise, the health of many thousands of people will be at risk.

In conclusion, for the past 13 years while working at Owens Lake, I have often told myself that we cannot blame the City of Los Angeles or even president Roosevelt for allowing Owens Valley water to be diverted and causing the largest single source of PM10 air pollution in the country. Those decisions were made over 90 years ago by well-intentioned leaders. I knew that such disastrous decisions would never be made in this day and age. I could not believe that our decision-makers today would even possibly let it happen again. In my opinion as an expert in the air quality problems caused by the diversion of water from saline lakes, the diversion of water from the Salton Sea to the City of San Diego will cause some level of air pollution in the Salton Basin. Although there are many unanswered questions, the answers to which would allow an accurate assessment of the magnitude of the problem, the project proponents and decision-makers have not seriously deal with the potential for serious air pollution. They tell us that there may be significant impacts, yet they make no attempt to quantify the problem or even suggest solutions to what could become an even bigger problem than Owens Lake. Everyone involved with the Salton Sea needs to admit that they could be involved in creating an enormous environmental catastrophe and commit the time and money necessary to determine the magnitude of the problem and implement the necessary solutions.

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ATTACHMENTS TO

SUMMARY OF COACHELLA VALLEY AIR QUALITY AND RELATED ISSUES WRITTEN TESTIMONY

Submitted by Coachella Valley Association of Governments
To
Congressional Subcommittee on Energy and Air Quality
January 12, 2004

South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

October 10, 2002

Ms. Victoria Whitney
Program Manager
Hearings and Special Projects Section
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

Dear Ms. Whitney:

Comments on Imperial Irrigation District and San Diego County Water Transfer Agreement

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the State Water Resources Control Board's (SWRCB) proposed draft order regarding the Imperial Irrigation District (IID) and the San Diego County Water Authority (SDCWA) water transfer agreement.

SCAQMD is the agency responsible for air quality monitoring and improvement in the Salton Sea Air Basin (SSAB) portion of Riverside County. This area, also referred to as the Coachella Valley, includes the northern shores of the Salton Sea and is classified by the U.S. EPA as a serious PM10 (particulate matter with an aerodynamic diameter of 10 microns or less) non-attainment area. Most of the ambient PM10 is from local fugitive dust sources, but transport from the southwestern U.S. (including the Salton Sea and other Imperial County areas) does contribute to overall PM10 levels in Coachella Valley. The SCAQMD recently approved a new and more stringent PM10 air quality plan to ensure that PM10 health standards are met as soon as possible. Full implementation of that plan's Most Stringent Measures on all local sources of fugitive dust demonstrates attainment of the PM10 health standards with very little margin of safety. Additional contributions of PM10 from the Salton Sea area (e.g., further exposed seabed) could threaten the attainment status of the Coachella Valley. Failure to attain or maintain the federal PM10 standards could result in mandatory emission reductions from local sources that are already controlled at the most stringent level, or sanctions and potential loss of transportation funds.

While the SCAQMD is supportive of the various measures proposed in the Final Environmental Impact Report for the IID Water Conservation and Transfer Project to mitigate future fallow agricultural parcels (e.g., Best Management Practices) and shoreline exposure (four step evaluation and mitigation plan), we are concerned about the long-term air quality impacts resulting from the proposed project. In particular, the SCAQMD is concerned that the SWRCB's draft order (p. 76)

implies that full mitigations for certain impacts only need to be mitigated for 15 years and declares that any impacts after 15 years are, by definition, unmitigable. Presuming this 15 year limit also applies to air quality impacts, it is unclear what agency would determine if further impacts are unmitigable. Given the tenuous Coachella Valley PM10 attainment status, the SCAQMD believes that any agreement should require the continuing development and implementation of measures to mitigate potential air quality impacts from shoreline exposure. Air quality impacts could continue long after the water transfer ends, especially if mitigations are discontinued. The SCAQMD also has concerns with any agreement that removes the responsibility for this mitigation from any party. As demonstrated in the Owens Valley, windblown PM10 emissions from shoreline exposure are considered an anthropogenic source and cannot be excluded under the U.S. EPA's Natural Events Policy unless Best Available Control Measures are implemented. Excluding parties from responsibility to mitigate continuing emission sources resulting from transfer could shift that responsibility to sources in the Coachella Valley, since under the Clean Air Act, the Coachella Valley must attain and maintain the PM10 standards. As mentioned previously, these sources would already be mitigating their emissions with Most Stringent Measures.

If you have any questions regarding these comments, please contact Dr. Julia Lester of my staff at (909) 396-3162.

Sincerely,

Elaine Chang, DrPH.
Deputy Executive Officer

LT:ZP:JCL

cc: S. Roy Wilson, Ed.D., Riverside County Supervisor
Patricia A. Larson, Executive Director, Coachella Valley Association of Governments
Tom Kirk, Executive Director, Salton Sea Authority

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October 24, 2002

Ms. Victoria Whitney
Program Manager
Hearings and Special Projects Section
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

Dear Ms. Whitney:

Additional Comments on Imperial Irrigation District and San Diego County Water Transfer Agreement

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to provide additional comments on the State Water Resources Control Board's (SWRCB) proposed draft order regarding the Imperial Irrigation District (IID) and the San Diego County Water Authority (SDCWA) water transfer agreement. The following comments, which supplement those presented in my October 10, 2002 letter, are based solely on the revisions to the draft order subsequent to October 16, 2002.

As discussed in my letter of October 10, 2002, SCAQMD is the agency responsible for air quality monitoring and improvement in the Salton Sea Air Basin (SSAB) portion of Riverside County. This area, also referred to as the Coachella Valley, includes the northern shores of the Salton Sea and is classified by the U.S. Environmental Protection Agency as a serious PM10 (particulate matter with an aerodynamic diameter of 10 microns or less) non-attainment area. Most of the ambient PM10 is from local fugitive dust sources, but transport from the southwestern U.S. (including the Salton Sea and other Imperial County areas) does contribute to overall PM10 levels in Coachella Valley. The SCAQMD recently approved a new and more stringent PM10 air quality plan for the Coachella Valley to demonstrate attainment with health-based PM10 air quality standards. Any additional contributions of PM10 from the Salton Sea area could seriously threaten the attainment status of the Coachella Valley since full implementation of the PM10 air quality plan demonstrates attainment of the PM10 health standards with very little margin of safety. Failure to attain or maintain the federal PM10 standards could result in federally mandated emission reductions from local sources or sanctions and potential loss of federal transportation funds.

We commend the plan which would start a research and monitoring program within six months of a transfer agreement. However, we are greatly concerned that, as currently proposed, only Imperial County Air Pollution Control District and the California Air Resources Board are given the authority to comment on the feasibility of air quality impact mitigation measures. The North Salton Sea is in SCAQMD jurisdiction and emissions from this source impact the Coachella Valley serious non-attainment area. Therefore, the SCAQMD should also be considered a responsible air quality agency for this project, and we insist that SCAQMD be included on any decisions related to air quality impact mitigation feasibility determination, as indicated in the SCAQMD's May 5, 2000 comment letter on the Draft Environmental Impact Report/Statement.

Additionally, while the SCAQMD is supportive of the various measures proposed in the Final Environmental Impact Report/Statement for the IID Water Conservation and Transfer Project to mitigate future fallow agricultural parcels (e.g., Best Management Practices) and shoreline exposure (four step evaluation and mitigation plan), we are concerned about the long-term air quality impacts resulting from the proposed project. The SCAQMD staff believes that any water transfer agreement should require the continuing development and implementation of measures to mitigate potential air quality impacts from shoreline exposure and include periodic re-evaluation of the effectiveness and adequacy of air quality-related mitigation measures. The information provided in the draft order and Environmental Impact Report/Statement does not clearly make the case that the potentially significant PM10 emissions from shoreline exposure are unavoidable. Mitigation measures for fugitive dust can and should be implemented for the life of the project and beyond to reduce potential impacts to insignificant levels or to the greatest extent feasible. To terminate mitigation measures during the life of the project is inconsistent with the requirements of CEQA. The SCAQMD staff seeks to assist SWRCB and other stakeholders in developing and implementing feasible mitigation for the potential air quality impacts of the proposed project.

If you have any questions regarding these comments, please contact Dr. Julia Lester of my staff at (909) 396-3162.

Sincerely,

Elaine Chang, DrPH.
Deputy Executive Officer

LT:ZP:JDN

cc: S. Roy Wilson, Ed.D., Riverside County Supervisor
Patricia A. Larson, Executive Director, Coachella Valley Association of Governments
Tom Kirk, Executive Director, Salton Sea Authority

CVAG
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County of Riverside • Agua Caliente Band of Cahuilla Indians • Cabazon Band of Mission Indians • Torres Martinez Desert Cahuilla Indians

November 5, 2002

Jack McFadden, President of the Board
Coachella Valley Water District
P.O. Box 1058
Coachella, CA 92236

Dear President McFadden and Board Members:

I am writing at the direction and on behalf of the Coachella Valley Association of Governments (CVAG) Energy and Environment Committee. This committee is composed of a city councilmember from each of the 10 desert cities, the 4th District County Supervisor, and a tribal councilmember from three indian nations.

We support your efforts to secure needed water for the Coachella Valley and to quantify our Colorado River water rights under the California 4.4 Plan. However, we urge you include the following refinements to your final agreements:

Per the South Coast Air Quality Management District (SCAQMD) letter dated October 24th to the State Water Resources Board:

a) "Mitigation measures for fugitive dust can and should be implemented for the life of the project and beyond to reduce potential impacts to insignificant levels or to the greatest extent feasible."

b) "The SCAQMD staff believes that any water transfer agreement should require the continuing development and implementation of measure to mitigate potential air quality impacts from shoreline exposure and include periodic re-evaluation, of the effectiveness and adequacy of air quality-related mitigation measures."

CVAG believes that the best way to address the issues of (b) above is through a supplemental EIR/EIS to be completed prior to the 15th year of the water transfer.

These are not major changes in the Quantification Agreement, but they are essential to provide the assurances that we need for the health of our residents and for the continued economic viability of the region as the water transfer goes forward.

Yours very truly,

Buford Crites
Chair, Energy and Environment Committee

Attachment: SCAQMD Letter

cc: Congresswoman Mary Bono
CVAG Committee members

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November 5, 2002

Stella Mendoza, President of the Board
Imperial Irrigation District
333 East Barioni
Imperial, CA 92251

Dear President Mendoza and Board Members:

I am writing at the direction and on behalf of the Coachella Valley Association of Governments (CVAG) Energy and Environment Committee. This committee is composed of a city councilmember from each of the 10 desert cities, the 4th District County Supervisor, and a tribal councilmember from three Indian nations.

We support your efforts to secure needed water for the Coachella Valley and to quantify our Colorado River water rights under the California 4.4 Plan. However, we urge you include the following refinements to your final agreements:

Per the South Coast Air Quality Management District (SCAQMD) letter dated October 24th to the State Water Resources Board:

a) "Mitigation measures for fugitive dust can and should be implemented for the life of the project and beyond to reduce potential impacts to insignificant levels or to the greatest extent feasible."

b) "The SCAQMD staff believes that any water transfer agreement should require the continuing development and implementation of measure to mitigate potential air quality impacts from shoreline exposure and include periodic re-evaluation, of the effectiveness and adequacy of air quality-related mitigation measures."

CVAG believes that the best way to address the issues of (b) above is through a supplemental EIR/EIS to be completed prior to the 15th year of the water transfer.

These are not major changes in the Quantification Agreement, but they are essential to provide the assurances that we need for the health of our residents and for the continued economic viability of the region as the water transfer goes forward.

Yours very truly,

Buford Crites

Buford Crites
Chair, Energy and Environment Committee

Attachment: SCAQMD Letter

cc: Congresswoman Mary Bono
CVAG Committee members

73-710 Fred Waring Drive, Suite 200 • Palm Desert, CA 92260 • (760) 346-1127 • FAX (760) 340-5949

CVAG
COACHELLA VALLEY ASSOCIATION of GOVERNMENTS
Blythe • Cathedral City • Coachella • Desert Hot Springs • Indian Wells • Indio • La Quinta • Palm Desert • Palm Springs • Rancho Mirage
County of Riverside • Agua Caliente Band of Cahuilla Indians • Cabazon Band of Mission Indians • Torres Martinez Desert Cahuilla Indians

January 8, 2004

U.S. House of Representatives
Subcommittee on Energy and Air Quality
The Honorable Joe Barton, Chairman
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Barton:

As the Chairman of the Coachella Valley Association of Government's Energy and Environmental Resources Committee, we are honored to have you and the Congressional Subcommittee on Energy and Air Quality in the Coachella Valley.

We thank Congresswoman Mary Bono for her efforts in arranging this hearing and for her continued support of the Coachella Valley.

As a community of nine cities, Riverside County, tribal nations, and local stakeholders, we are working together to address air quality issues in our Desert and to attain our PM10 federal attainment status. Our goal is to improve and maintain the quality of our for the 300,000 residents in the Coachella Valley.

To understand the issues we face, CVAG submits the attached Summary of the Air Quality Issues in the Coachella Valley into the public record along with attachments to the Subcommittee for your review.

It is an honor and a privilege to be here with you today. We thank you again for visiting the beautiful Coachella Valley and hope that you will consider our issues and help us achieve better air for the communities we serve.

Sincerely,

Buford Crites
Chairman
Energy and Environmental Resources

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