APPEARANCES

STAFF:
Ms. Barbara Lee, Director
Ms. Ana Mascareñas, Assistant Director, Environmental Justice and Tribal Affairs
Ms. Evelia Rodriguez, Senior Hazardous Substances Engineer
Ms. Corey Yep

ALSO PRESENT:
Dr. Marth Argüello, Executive Director, Physicians for Social Responsibility
Mr. Jack Broadbent, Executive Officer, Bay Area Air Quality Management District
Ms. Ingrid Brostrom, Senior Attorney, Center on Race, Poverty & the Environment
Ms. Shahla Farahnak, Assistant Deputy Director, State Water Resources Control Board
Mr. John Faust, Branch Chief, Air, Community and Environmental Research Branch, Scientific Affairs Division, Office of Environmental Health Hazard Assessment
Ms. Nikita Koraddi, Office of Senator Lara
Mr. Brian Leahy, Director, California Department of Pesticide Regulation
Dr. Howard Levenson, Deputy Director, CalRecycle
Ms. Cynthia Marvin, Chief, Transportation and Toxics Division, California Air Resources Board
Mr. Arsenio Mataka, Assistant Secretary, Environmental Justice and Tribal Affairs, California Environmental Protection Agency
Mr. Ian MacMillan, South Coast Air Quality Management District
ALSO PRESENT:

Ms. Deldi Reyes, United States Environmental Protection Agency, Region 9

Ms. Janet Whittick, Policy Director, California Council for Environmental and Economic Balance

Mr. Walker Wieland, Office of Environmental Health Hazard Assessment

Dr. Lauren Zeise, Director, Office of Environmental Health Hazard Assessment
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MS. YEP: Hello. I think we'll get -- it's a little bits past 9:00 and I think we should get started. So first of all, my name is Corey Yep.

MS. YEP: I'm one of the staff team members for implementing Senate Bill 673, as we like to call it, but it is about updating our permitting regulations to conform what the law has charged us with.

So I want to just go over the housekeeping items. First of all, evacuation. You will just go down the stairs and over to the park area. We have rest rooms out this door to the right, you'll see drinking fountains and the restrooms.

And then -- and I also want to note that there is a public comment period, and for those who are listening on-line, that email address to mail in your -- email your comments or questions is permits p-e-r-m-i-t-s underscore hwm@dtsc.ca.gov.

So now I would like to turn it over to Barbara Lee, our Director, and -- oh, I'm sorry. Ana Mascareñas to kind of start this -- today's symposium off.

Ana.

(Thereupon an overhead presentation was presented as follows.)

DTSC ASSISTANT DIRECTOR MASCAREÑAS: Hi. Good
morning, everyone. Welcome to the SB 673, Cumulative Impacts Symposium. And welcome to all of those who are also listening to the webcast on-line as well.

My name is Ana Mascareñas. I started as the Assistant Director for Environmental Justice and Tribal Affairs at DTSC in July of 2015. Last year, our Department was also provided with resources to build an Environmental Justice and Tribal Affairs Program, which is what we're doing right now.

I joined the Department of spending about 10 years in Los Angeles working as an environmental health and social justice advocate, also on immigration, veterans, and other federal issues, and completing a Master of Public Health, specializing in environmental health sciences.

The issue of cumulative impacts and precaution is very important to me in the work that I have pursued, in working with communities throughout my career.

I believe we have responsibility, as we're all many of us here as regulators to value community knowledge, use the best available science and tools and information that we currently have, and use all of our communications and legal tools to better serve the people of California.

Many of the staff at CalEPA and DTSC and our
partners work very hard to creatively apply their legal, communication, and community expertise to help solve issues and to help bring more resources to communities that are highly impacted by multiple environmental hazards. All of this is form of pursuing environmental justice.

As you'll hear more about with our speakers later this morning, SB 673 directs the Department to update criteria for considering to update the issuance -- criteria for issuance of a new or modified hazardous waste facility permit criteria considering vulnerability, cumulative impacts, setback distances and other criteria. We're here today to open up a conversation, take stock of what we have, and build partnerships towards examining cumulative impacts in particular.

Thank you very much for being here today, and for those listening on the webcast as well. We thank you for your time to think about how we can work together as communities, as researchers, as regulators to bring these important issues to the forefront and to better protect public health.

Next, I'd like to introduce Director Barbara Lee. Her experience, especially working previously with the CalEPA Advisory Committee on Environmental Justice and her important work and career in bringing together
partnerships to help solve complex issues is very important in this discussion. And she'll be moderating many of the pieces here today as this issue is extremely important to her.

So thank you. And welcome, Director Lee.

DTSC DIRECTOR LEE: Thank you, Ana. And good morning to everyone in the room and on the phone. It's good to see some familiar faces in the audience. As Ana mentioned, I have been working on issues related to cumulative impacts -- excuse me -- and environmental justice for many years now.

The CalEPA Advisory Committee on Environmental Justice that met in the early 2000s did some work in this space. These conversations have been going on for a long time. Our sister agencies within CalEPA, the other boards, departments, and the Office of Environmental Health Hazard Assessment, as well as sister agencies at the local level, the air districts, the CUPAs, and at the federal level with U.S. EPA, there are many people doing important work on this topic.

DTSC is relatively new to this conversation, and we're excited to have the opportunity to join in the conversation. The mandate that Senator Lara provided to us with his vision was instrumental in motivating the Department to step up, and we're very grateful for his
leadership on this.

But we're also, as I said, very mindful that a number of people who are far more experienced in this area than I am, and that the Department is, have put a lot of careful thought into how to approach questions of cumulative impacts, and community vulnerability. And the Department is right now in the mode of gathering information, expanding our horizons, and reaching out to our partners not just in government, but also in the NGO community, and in the business community, so that we can make sure we are asking the right questions, so that we can move forward in a positive direction.

I'm not under any illusions that we're going to solve the problem of community -- sorry, of cumulative impacts today, or even in the near future, but I am confident that we can make important progress, and we can help gather information and set up structures that will better inform DTSC's decision making, and do that in the context of the decisions and impacts that our sister agencies also consider.

We're very fortunate today to have with us Ms. Nikita Koraddi. She is here representing Senator Ricardo Lara. Senator Lara was the author of Senate Bill SB 673. That bill directs DTSC to evaluate its permitting regulations and make some important changes to them so
that they are more protective and more responsive to community needs.

We have broken our implementation of that bill up into multiple phases. The first phase deals with some of the more straightforward elements that the Senator asked us to consider. And we've done some workshops on that -- those elements. And you can expect to see a proposal in the next month or so, as we move forward with that implementation on the schedule that the Senator set forth for us.

However, the issue of cumulative impacts is a much more nuanced and complex issue. And the Department decided we needed to take some additional time to carry that conversation forward. We're happy to welcome Ms. Nikita Koraddi here to speak with us. She is a graduate in political science, excuse me, from UC Berkeley. She was a Fellow with the Department, and was one of the faces who welcomed me when I was appointed. She is incredibly dynamic and she works as legislative consultant for the Senator, staffs him on issues such as energy, environmental policy, transportation. He is the Chair of the Goods Movement Committee, and she supports him in that work, and advises the Senator on a number of things.

We're very happy to have Nikita come back and address us. And I hope you will join me in welcoming her.
Thank you, Nikita.

(Applause.)

MS. KORADDI: Thank you Barbara. It's really nice to be back here with my DTSC family. So thanks for having us. The Senator wasn't able to be here today, but thanks for letting me give some brief remarks on his behalf.

So Senator Lara authored SB 673 and it was signed into law in 2015. And really the overarching purpose was to improve the Department's permitting process by establishing some really clear standards and criteria as it relates to cumulative impacts and protective measures for impacted communities.

So Senator Lara represents southeast Los Angeles. His constituents live alongside heavy industry, freeways, railyards, metal processing facilities, toxic waste facilities, and for years have dealt with crisis after crisis, you know from Exide to Paramount. And so this was really sort of a community mandate that he carried forward a couple of years ago.

And -- let's see. So for a couple of -- so for a couple years he's sort of thinking about how to restore the public's faith in regulatory agencies that are entrusted with protecting public health and the environment. And he thought this was a really important
component. It was important to have stronger criteria in place to determine, you know, a facility's compliance history, past history of violations, and look at a community's profile and demographics, particularly the presence of sensitive populations, and cumulative burdens like those that are in his community.

So I know from the Senator's perspective it's really important to have robust public participation, and the involvement of all the stakeholders that are really impacted by DTSC's permitting process, communities, industry, scientists, researchers, and so he was really excited to learn that there is a -- you know, a symposium specifically on cumulative impacts, and has asked me to follow through with the process and see how the legislature can continue to be a partner and a resource in this effort.

And so we look forward to being engaged in this effort. If there's anything that he can do, please don't hesitate to reach out. I'll be hanging around in the back and just sort of -- and participating as much as possible. But this is not my area of expertise. I'm really interested in learning more, and conveying information back to him. But this is really important for his community and he's really appreciative of the collaborative nature in which this is taking place and all
the partnerships in the room.

So thanks for having us and I look forward to being engaged in the process.

Thank you.

(Applause.)

DTSC DIRECTOR LEE: Thank you, Nikita.

We're going to have a little bit of background now on SB 673. I'd like to introduce Ms. Evelia Rodriguez. She is the -- a Senior Engineer with the Department, and has been with us for quite a long time. She was instrumental in bringing forward the Department's landmark Safer Consumer Products regulations. And we're thrilled to have her partnering with our permitting depart -- Permitting Division now on the implementation of SB 673.

Evelia.

DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER RODRIGUEZ: Thank you, Barbara. And thank you, everybody, for joining us this morning. As you may have heard, Senate Bill 673 requires the Department to update existing standards for permit decisions, in specifically permit denials and permit approvals.

The two tracks that were previously mentioned address the criteria that are in Senate Bill 673. The first part of the criteria that we are going to tackle
this year are the compliance history, the training of facility personnel, a health risk assessment, financial assurance which -- financial responsibility which also includes financial liabilities, and we're also including a community involvement profile, which is a questionnaire that summarizes what is known about the surrounding communities.

Our goal is to develop valid standards of performance on risk that will result in more consistent and transparent permitting decisions.

The second track is the remaining two criteria, which is cumulative impacts and vulnerable populations is one. And the second is setback distances to sensitive pop -- receptors. Now, sensitive receptors are schools, hospitals, elderly care facilities, and so forth.

So these remaining criteria we need to establish procedures for evaluating the vulnerability of the communities and the effects of multiple sources of pollutants. This second track, as has been already discussed, requires much more thought and the bringing together of stakeholders. Today's symposia begins this dialogue, and we encourage your involvement and input today as we move forward with the cumulative impacts assessment tools, and how to interpret the results.

We're setting the stage today with what CalEPA,
OEHHA, and other of our sister agencies have done to research and develop these tools. We also have brought today a perspective from local governments, community advocates, academia, and businesses. Later this afternoon, we're going to have a Panel discussion with representatives from the other CalEPA agencies, as well as the EPA, and local air management districts.

The Department is planning on additional symposia. This is not a one-stop solution. And we're planning it within the next two months to kind of take a deeper dive into some of the topics that we discuss today.

We're also planning multiple workshops, so once we start to coalesce, or find a direction, or find areas that we could work on together, we'd like to set working workshops, so that we could roll up our sleeves and really delve into some of these issues.

We would like to continue engaging stakeholders until we could work out regulatory concepts that will help us create objective criteria for permit decisions. And again, thank you for your participation. And I continue to look forward to all of us working together.

Thank you.

(Appause.)

DTSC DIRECTOR LEE: I would now like to welcome Mr. Arsenio Mataka to come up and speak. Arsenio was
appointed by Governor Brown as the Assistant Secretary for Environmental Justice for the California Environmental Protection Agency in 2011. Arsenio has a law degree Humphreys College Laurence Division[sic] School of Law. And he has a long and very proud history of working on environmental justice and advocacies representing communities for the State. And prior to joining the State, he is instrumental in coordinating environmental justice activities for CalEPA and its boards, departments, and offices. And we are honored to have him here to speak with us.

Arsenio.

CAL/EPA ASSISTANT SECRETARY MATAKA: I'm going to be real brief here, because I know there's a lot to get to, but -- and a lot of the folks in this room have been sort of grasping and dealing with this issue for a very long time. But look, there are two things that I wanted to say today. One is that everyone knows that for decades, for a very long time, communities throughout the State, and the nation for that matter, have demanded that environmental agencies take into account cumulative impacts when making a permit decision.

Now, as we all know, many permit decisions, our processes rely on CEQA to address cumulative impacts. But CEQA focuses -- generally speaking, focuses on the effects
of the environment, not necessarily the people. And it's the people, you know, the people -- the people who live in the midst of, you know, 30 auto repair shops within a few blocks; the people whose children play next to a freeway; the people who live next to rows and rows of warehouses or facilities.

And, quite frankly, it's the people who also get a few years shaved off their life -- their life expectancy in many of these areas that we see high cumulative impacts and vulnerabilities. It's these people who also pay the ultimate price.

So this is an opportunity to take into account the people and their vulnerabilities, and the pollution sources, and the things that exist amongst them every day.

Many of you know this, but prior to coming to CalEPA, I was -- it was -- my folks and my family were very active in like the environmental justice scene. And they would always talk about these cumulative impacts and these vulnerabilities, these challenges that they were facing and the community was facing, but it was very hard to articulate and to sort of translate that anecdotal evidence into a decision-making processes. You know, those two things kind of didn't fit too well.

And the result was that many of those decision processes or permit decisions didn't take into account

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some of those things. And so here the Department of Toxic Substances Control has a unique opportunity to really look thoughtfully at these things that many, many have asked us to consider. And it's not just on DTSC. If you issue a permit, you know what I'm talking about.

So I'm excited. I think this is something that again the communities have been asking for for a very long time. Now, we have the opportunity to put our best foot forward, and see what we can do. And for many of you who are not DTSC, but have some other regulatory authority, I would, you know, pay attention here, because this is something, and -- that is not going to go away. I think the people of California at least are going to demand that we take this into account more substantively.

And so I want to encourage this effort. I want to encourage DTSC, because you have a big lift. But at the same time, it's a huge opportunity. And for those people that I mentioned earlier, it's something that I know they would appreciate very deeply.

So thank you.

(Applause.)

DTSC DIRECTOR LEE: We're very fortunate now to have a presentation from the Office of Environmental Health Hazard Assessment on their CalEnviroScreen tool, which they developed in conjunction with CalEPA, and its
BDOs over a few -- several years ago. And the tool has been updated and is now much used. I would first like to introduce Dr. Lauren Zeise. Dr. Zeise earned her Doctorate from Harvard University and was appointed by Governor Brown as the Director of the Office of Environmental Health Hazard Assessment in December of 2016.

She had previously been serving as the Acting Director since May of 2015, but she has been with OEHHA since its inception in 1991. She's spent three years as the Deputy Director for Scientific Affairs, and 21 years as the Chief of the Reproductive and Cancer Hazard Assessment Branch at OEHHA, which included managing their Prop 65 program.

Prior to OEHHA's creation, she was chief of the Cancer Unit at the California Department of Health Services, and spent several years at the California Public Health Foundation, as well as at the U.S. Environmental Protection Agency.

She played a leading role in OEHHA's development of CalEnviroScreen, which was the nation's first comprehensive statewide environmental health screening tool. I would like to welcome her now to talk with you. Thank you Lauren for joining us.

(Applause.)
(Thereupon an overhead presentation was
presented as follows.)

OEHHA DIRECTOR ZEISE: Thank you, Barbara. And
I'm delighted to be able to talk about CalEnviroScreen.
And with you is my staff, John Faust and Walker Wieland
who are going to present the tool, and walk you through,
and give you a demonstration.

You know, this CalEnviroScreen grew out of the
concept of environmental justice. And we were faced with
how do we address multiple exposures faced by communities?
We typically use the tool of risk assessment, which has --
it's a very good tool. It has its uses.

But as you think about all of the various
exposures within a community beyond the particular element
that you're trying to characterize, risk assessment simply
wasn't up to the task. So we looked to a new tool to
begin a different lens to begin to look at community
exposures through, where we could take into account the
inherent vulnerability of the community, and the increased
susceptibilities of people in the community to effects of
air pollution and other exposures.

You know, as you think of things like asthma,
where if someone with asthma is exposed, of course, you
expect to see a much greater response to a given
pollutant, than if somebody doesn't have asthma. So we
began to characterize different types of health effects, the full range of the types of exposures, the different environmental effects in communities, and also socioeconomic stressors, which also impact response to pollutants, and put them all together into a cumulative impact tool.

So what we're doing here is really using indicators rather than trying to measure each and every element of exposure in a community, but instead look at indicators as surrogates for a host of exposures within different components that affect the community --

OEHHA DIRECTOR ZEISE: -- to look across the communities in California, so we could prioritize those with larger impacts than others. So the tool was really focused on looking across the State identifying communities that are -- were much more impacted than others. So looking for the greatest impacts. That was sort of the goal of our -- of our CalEnviroScreen tool.

Next slide.

OEHHA DIRECTOR ZEISE: So it's a spatial analysis. CalEnviroScreen is a spatial analysis of the relative burdens in California communities. And we look at 20 different indicators that combine into a single
And the analysis is done at a census tract level. We started off doing it at a zip code level. And within a zip code, you see varying exposures, varying impacts, varying vulnerabilities, so we chose to look at a more refined scale, because that became more representative of what was actually happening in the community. So the census tract is really a surrogate for the community.

Next slide.

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OEHHA DIRECTOR ZEISE: And what we found in this CalEnviroScreen process was that community involvement was really key to understanding what was going on, and key to ground-truthing our indicators and our approach. So we went into different communities. We -- we discussed the tool, our approach to it, the indicators, and then we -- we drilled down more by providing maps of the different areas that we were -- the communities that we were visiting. So we looked at each -- we had different tables set up with our different indicators that we were using to characterize the communities. And -- and invited the community to tell us what were we getting right, where were we off, what we were getting wrong.

And through this process, we really received an incredible amount of input, so that we could refine our
tool. And I think this was really key to the development of the tool. We're now in the third version. I guess our last -- our latest version we visited several different communities throughout the State, Fresno -- well, John can go into that in a little bit more detail, but really the community involvement was key.

So with that, I'm going to turn -- next slide, please.

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OEHHA DIRECTOR ZEISE: I'm going to turn this over to Dr. John Faust who's going to walk you through our tool, and then Walker Wieland will give you a demonstration.

DR. FAUST: All right. Good morning. Thank you. Yeah, so as Lauren said, I plan to give a broad overview of the CalEnviroScreen tool, which is now in its third version. You know, it has been a long time coming. Director Lee mentioned sort of the -- some of the initial work that the EJ Advisory Committee provided in moving this forward.

So what I'll do is I won't -- I won't spend a lot of time on the history, but I want to give you an idea of the types of information that are included in the tool, how we combine that information together, we'll talk about a few examples, and then show a little bit about how the
tool is being used and have a demonstration of the results towards the end, which my colleague Walker will walk through.

So as has been mentioned earlier, you know, the basis for environmental justice concerns with respect to cumulative impacts comes from this idea that, you know, multiple sources of pollution can be located in low income and minority communities, but that also this idea that different types of communities may be having different types of vulnerabilities from health vulnerabilities to this newer idea about socioeconomic vulnerabilities.

And it's this combination of concerns that multiple pollution sources can be concentrated in certain areas, along with this idea that there may be vulnerable populations that brings together in this idea of cumulative impacts.

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DR. FAUST: So the focus of CalEnviroScreen has been based on a definition that was adopted by the California EPA's Environmental Justice Interagency Working Group. And it's basically put on this slide, but the idea is that these types of impacts are -- represent exposures to public health and environmental effects from combined emissions and discharges in a geographic area.

And they take into account all sources, all media
through air, water, and soil, but they also consider the
idea of sensitive populations and socioeconomic factors
where we have information. And this definition has been
what's guided the development of the CalEnviroScreen tool
over the years that we've moved from the first versions to
the more recent version.

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DR. FAUST: So to turn that definition into
something that was a bit more manageable, we developed,
what we called, these components of cumulative impact.
And this is the way we organized the information that go
into the CalEnviroScreen tool. So we have, what we call,
these four components. They're exposures, environmental
effects, sensitive populations, and socioeconomic factors.

So the first, exposures. So when we think about
exposures, we think about the ways that people may be
coming in contact with pollution, for example, things in
the air they breathe, the water they drink, or different
ways that they may come in contact with chemicals in the
environment.

On the other hand, when we think about
environmental effects, these represent different types of
adverse environmental conditions caused by pollutions.
For example, the presence of contaminated sites or
chemicals in the environment, where there may not be such
direct exposures, but there's still a concern or there is a type of environmental degradation that's occurring in the community.

So those two together represent, what we call, the pollution burden, this combination of exposure indicators and then environmental effects indicators. And then on the other side, we have population measures. And here, we're talking about sensitive populations. So these are populations with biological traits, especially health status that might magnify the effects of pollutant exposures.

And then there's this newer idea of socioeconomic factors. In a 2010 report, we identified a lot of types of scientific information that support concern that socioeconomic factors, like poverty or educational attainment, are important modifiers for the -- describing the response to pollution. So we include measures for this type of factor as well.

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DR. FAUST: So in developing the tool, you know, we had a lot of -- a lot of challenges in terms of bringing -- bringing it together. But one of the things that has been important is that we were trying to keep it as relatively simple as possible, meaning we wanted a tool that was able to communicate information in a way that's
understandable and that people can use.

The tool brings together types of information from, you know, different media. So we're thinking about things that contribute to exposures in air, water, and soil. And then we had the challenge of trying to find data to represent each of these different -- different components.

And since the tool was a geographic tool, as described in the definition, we also needed to provide information on a geographic basis. So we needed to have a good understanding of how these different types of measures that were combined together differed across the State.

And as Lauren mentioned earlier, we initially worked at a certain scale, the zip code scale, but have more recently moved to a finer scale of analysis, the census tract. And then finally, we needed to bring together this information in a way that allowed us to compare different communities with each other.

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DR. FAUST: So when we think about the indicators, so the pollution indicators, the exposures and environmental effects indicators, these were representing health relevant, and widespread environmental concerns across the State, whereas those associated with the
population measures were more aligned with factors that
affected vulnerability.

We relied, to the extent we can, on publicly
available data that give us a good idea of where
differences are occurring across the State, so we needed
to have location-based information. And then we also had
certain criteria related to coverage of the State, the
quality of the data, as well as how current it was.

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DR. FAUST: So we talked about census tracts. So
the most recent census tract boundaries that are available
are the 2010 boundaries available from the U.S. Census
Bureau. So this represents a relatively fine scale of
analysis. There are about 8,000 census tracts across the
State. So with the CalEnviroScreen tool, we provide a
score for each of the indicators, as well as this overall
CalEnviroScreen score for each of these 8,000 census
tracts across the entire State.

And just to give you an idea about how big these
are, they're about 4,000 people -- they tend to be about
4,000 people per census tract. Although, there is
something of a range.

So when we think about all this different data,
and how it comes together, it really comes in different
forms. We have -- we have different, you know, types of
information, some of which is tabular, meaning we have numbers to represent each of the populations that comes from the Census Bureau. We sometimes have air monitoring data that tells us something about the concentrations of a pollutant in an area.

So we had to find a way to -- to pull all this information together in a -- in a way that allows us to both combine it and compare it across the State. And there's a -- you know, a single way for each -- each specific indicator, but we had to sort of develop and analyze each indicator individually.

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DR. FAUST: So as we mentioned, the 20 indicators that are included in the current CalEnviroScreen model are on this slide. And they fall into these four broad components. So, for example, the exposure indicators include measures of ozone and PM2.5 concentrations across the State, estimates of diesel PM emissions, drinking water contaminant measures, releases of toxic chemicals from facilities, pesticide use, and then finally traffic density.

Environmental effects. Again, these represent different types of environmental concerns for environmental degradation or the presence of hazards in the environment. And these includes solid waste
facilities, clean-up sites, groundwater threats, impaired waters, and hazardous waste permitted facilities and generators. So those are the measures that represent different types of pollution concerns.

And then on the other side of the panel here are those that represent population. So here, with respect to sensitive populations, we include a couple of health measures -- or three health measures, asthma emergency department visits, a new indicator in this most recent version, which is a representative of cardiovascular disease, and then low birth weight infants.

And then for the socioeconomic factors, we include educational attainment, poverty, linguistic isolation, unemployment, and a more recent indicator that was added in this most recent version, housing burden low income households. So these overall represent the 20 indicators that are in the 3.0 version that we've just finalized.

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DR. FAUST: So for each indicator, we provide a score based upon the measure that's available, which is either a modeled measure or an estimate of a rate, for example. So for each indicator, each census tract is assigned a percentile value based upon where it falls in the distribution across the entire State, so -- and this
provides a relative score for each of those 20 indicators.

So the little diagram at the top just shows that each one is scaled on a 0 to 100 percentile range. So, for example, the 75th percentile for a given census tract means that it's higher than 75 percent of the other census tracts across the State.

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DR. FAUST: So I just have one example that I've pulled from the -- from the tool that we have available on-line. So this just shows, as a blue outline, a census tract in the, I think, Los Angeles area. Yes, Los Angeles area.

And here, we're looking at a specific piece of information for the diesel PM emissions estimate. And this tract, which is shown with a red color here, indicates that this tract sores in the 99th percentile for diesel p.m. emissions, meaning it's very high when you look across the State for that indicator.

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DR. FAUST: So I have -- I have a few examples to go through just three different indicators. I'm not going to cover all 20. But, for example, ozone here is represented by using air monitoring data. The daily maximum 8-hour ozone concentration that's available from the Air Resources Board, they provide us with modeled data
that estimates ozone concentrations for each tract across the State.

The data come from 2012 to '14. And this just shows one example of one specific indicator showing the range of percentiles for this ozone indicator in the San Joaquin Valley with the scores -- the higher scores are shown with the red color, so you see the higher levels as you move to these inland areas.

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DR. FAUST: Another example, the Hazardous Waste Indicator, so this represents a combination of both permitted hazardous waste facilities, as well as large quantity hazardous waste generators. The indicator itself takes into account both the site type and the status, as well as the proximity of these facilities to residential populations.

For many of them, we do include perimeter information, so we have boundaries for these areas. And then the indicator itself, the measure for each census tract is the weighted sum of all of these individual facilities within the area. And for this measure, we use information that comes from us from DTSC.

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DR. FAUST: So this slide is here just to illustrate the scoring method. So we apply, what we call,
a buffer to each facility, to determine how close it is to where anybody lives. So facilities or sites that are closest to where people live receive a higher score and then as you move farther out, they receive a relatively less -- less weight. And then again, we do sum all the facilities within the tract.

This just shows an example of how we treat different facilities. I told you we take into account both site type and status. So here, for the permitted hazardous waste facilities in this indicator, you know, for example, if we have a permitted hazardous waste facility, it's a landfill, it has a higher weight than if it's a treatment, or a storage, or a post-closure facility.

We also take into account the type of -- type of waste that they handle for these facilities as well. And all of these are added together to come up with an overall weight for a given facility.

And then for the hazardous waste generators, we also have a similar way of weighting those that takes into account the amount and type of waste that's generated.

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DR. FAUST: So here when we look at the results for this specific indicator across the San Francisco Bay area, just generally looking across, you see, you know,
higher weights along the corridor from the refinery areas in Richmond down through the East Bay with the darker colors represented on those sides. Although there's certainly a number of other places that have higher scores as well.

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DR. FAUST: And then the third indicator that I'm going to talk about, asthma. Here, we're using information on emergency department visits for asthma. We represent the rate as the number of visits per 10,000 in the population. We spatially modeled age-adjusted data that come to us from the Office of Statewide Health Planning and Development, and then analyzed by the California Environmental Health Tracking Program. So these data represent emergency department visits.

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DR. FAUST: And here, we just have a map showing the rates for the San Diego area, and the -- the higher rates are represented in the darker blue colors that you see, with lower rates represented by the greener and yellow.

So here, we see higher rates for people who are in the more central parts of the San Diego urban area. Although, there are a number of communities that -- outside of this area that also show high rates.
DR. FAUST: Okay. So we have indicated measures
for each of these 20 different indicators. And then to
come up with this CalEnviroScreen score, which brings
together the information, we combine all this information
together. This slide just sort of summarizes that
summary.

So we essentially use averages for the
percentiles for each of those four components, and then
bring that information together to calculate the overall
CalEnviroScreen score.

So this overall score can then be sorted highest
to lowest, so that those communities that face the highest
burdens combined from -- across all of these different
indicators can be sorted out and distinguished.

DR. FAUST: So we make -- we make these results
available in a number of different ways. We have scores
for all of the census tracts that are available for each
indicator, as well as the combined scores for both
pollution and population vulnerability. So we have them
as a spreadsheet. We also have an on-line tool, which
we'll do a quick demonstration of shortly. And then we
also have various ways of making the information available
for people who are doing spatial analysis and so forth, so
that -- so that you can -- we can be as transparent as possible about the data that's in the tool, and let people see the results, but also if anyone has an interest in using the data in a different way, we have the ability to pull that out and to use that.

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DR. FAUST: So just a few words about using CalEnviroScreen. You know, it's been a tool that has been enabled the -- to prioritize the commitment of resources to communities that face these high burdens. So when we have these higher CalEnviroScreen stores, we can begin to sort them, and then, you know, allocate resources to those that are most impacted.

However, the tool also does provide a certain amount of information for anyone interested in knowing sort of the setting of a specific area. So, for example, you can type in your address using the mapping application and see the types of things that are happening in a specific area, meaning you can see whether it's likely that pesticides are driving the score in a particular area, or traffic density, or population vulnerability, you know, poverty and so forth. So you can sort of see the nature of the contributions to impact in a specific place.

We do caution that this is not a health risk assessment. So the CalEnviroScreen score, you know, it
looks broadly across many of these different measures, but it doesn't represent a health risk per se, meaning you can't use that score to predict the likelihood of a given health outcome.

And then as we've said, it's not a substitute for the CEQA required cumulative impact assessment. So it doesn't determine whether a specific project is contributing significantly.

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DR. FAUST: So within CalEPA, it has been used as -- to aid ongoing planning and decision making. It's been applied in the environmental justice small grant program, more recently in the environmental justice task force activities, as well as in training and outreach within the Department.

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DR. FAUST: Probably the most significant use to date though has been in the implementation of Senate Bill 535, which required that certain investments from the Greenhouse Gas Reduction Fund go to so-called disadvantaged communities. And in the past in 2014, calEPA used the CalEnviroScreen results to identify those disadvantaged communities, which the statute requires be identified by geographic, socioeconomic, public health, and environmental hazard criteria, which the
CalEnviroScreen results were a good match for. But basically, those investments have certain criteria that have recently been amended, but that a certain fraction of the funds from the Greenhouse Gas Reduction Fund must be spent in or to the benefit of those communities.

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DR. FAUST: So this is the -- this is the result of the identification. In 2014, CalEPA identified the highest 25 percent of CalEnviroScreen results as disadvantaged. That's what the map looks like from a couple years ago. We've just recently ended a public process where we've been taking input on how the new identification will occur.

So this is -- this is a couple years ago. While we know the results are largely similar, there will be a new identification in the coming days regarding the disadvantaged communities from the 3.0 results.

So at this point, I'm going to turn it over to Walker Wieland. He's a Research Scientist and GIS analyst in our department. He's developed the mapping application that allows us to look at the CalEnviroScreen results. So I think that will be helpful to let people know sort of what types of information is readily available.

MR. WIELAND: Morning. I'm just going to
navigate to our website and show you how to access the
tool, and then just give a short demonstration of the tool
itself.

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MR. WIELAND: So I'm just typing in
oehha.ca.gov/CalEnviroScreen.

So this is our CalEnviroScreen webpage with more
detailed information on the development of the tool,
individual indicators, and supplemental analyses. We've
got a link here right at the top for this most recent
version of CalEnviroScreen. Right now, we're on the
CalEnviroScreen 3.0 webpage, which has a link to the
report in both English and Spanish, but it also has our
mapping tool, embedded within the website. But just for
presentation purposes, I'll open it in a new tab.

So this is what the mapping tool looks like right
when you first arrive. Just a little bit of information
about what CalEnviroScreen is. So when the user hits
okay, they can see a map of California and all census
tracts throughout the State symbolized based on their
overall CalEnviroScreen score as John had outlined. If
you look on the legend on the right-hand side here, it
shows the range of scores, all the way from the most
impacted communities, the top 10 percent, to this darker
shade of green, the lowest scores for CalEnviroScreen.
There are also some census tracts across the State that are cross-hatched that indicate places that are highly polluted areas, but do not have an overall CalEnviroScreen score usually to low population data -- low population counts.

So you can enter any location in California on this map. So I'll just type in Sacramento. It will zoom to your location and show localized results. So you can click on any one of the census tracts here and pull out information on CalEnviroScreen. So I'll just click on census tract in downtown Sacramento, and a pop-up window is produced that shows information about the census tract as it relates to CalEnviroScreen.

There's the population, the overall CalEnviroScreen percentile. Scrolling down a little further will produce the individual percentiles for the pollution burden side, and the population characteristic's side.

And then below that is a list of each of the individual indicators and what percentile they correspond to. So it's the same for all indicators a higher number means that that's the higher percentile as compared to other census tracts throughout the State. So, for example, clean-ups is a 98th percentile, meaning that the number and type of clean-up sites here are higher than 98
percent of the rest of the State.

Scrolling down further is some supplemental information about -- about the CalEnviroScreen tool, including information on the age characteristics of people in the census tract. And further down is a pie chart that's produced individually for each census tract that shows the race and ethnicity profile of the census tract. You can get this information on any census tract in California.

There are some simple tools here as well, including a little button here that takes you back to the map of California. This mapping tool is mobile friendly. So if you have GPS location enabled on your phone or tablet, you can click on find my location and it will take you to where you are.

There are also some simple tools here including a -- creating a printout of the mapping screen, and some simple sharing tools, sharing on social media or producing a hyperlink of the area you're looking at if you want to show that area to somebody else.

A couple of links here on the top as to get back to the CalEnviroScreen website. And then I think I'll just close with saying that we plan on releasing in the coming weeks individual indicator maps of all of the indicators within CalEnviroScreen. So, for example, you
could look at a map of just asthma or a map of just clean-up sites throughout California. So those are going to be coming out very soon also in an interactive format.

And last, but not least, John had mentioned making the data available. We have the spreadsheet -- Excel spreadsheet showing information on CalEnviroScreen, a Google Earth KML file, and then a couple of GIS files for download that contain all of the information from CalEnviroScreen, and then a supplemental paper specific to our drinking water indicator methodology. So I think that's it on my end.

DR. FAUST: Good. Thank you. Yeah. I do want to just add. With respect to the individual indicator maps, which we have made available for the 2.0 and are in the process of developing and making available. So, for example, many of those individual indicator maps that feature the locations of specific sites or facilities, those facilities' locations are also identified on those maps, so you don't just see the colors, but you can see the points for the data that go into the -- go into those.

And I did forget to mention that we do have -- we have a hard copy and a PDF report that describes our methodology in detail, so that if there's any specific questions about sort of where the data come from, how we've analyzed the data, you know, what our reason is for
including it, you can find that information in the report and dig in deeper.

So I think we -- are we taking questions?

MR. WIELAND: I wanted to mention, yeah, we have time for a few questions, if there are any.

MS. BROSTROM: On the page where you talked about the caveats, you know, about the -- that this tool isn't designed to be a health risk assessment. And I understand you know that is partly based on the relative ranking. I do see in the future, you know, the next advance for cumulative impact analysis is, you know, making the tool able to make some definite health conclusions. What do you -- what do you see needs to be done in order to get to that place, and what are some of the barriers to making a tool that could look at what are the health risks associated with cumulative impacts?

Thanks.

DR. FAUST: All right. Yeah. Well, a big question. Yeah. So Dr. Zeise mentioned at the beginning some of the challenges that face us in understanding, you know, sort of this -- this finer level of health risk, you know, that communities face. I mean, we're -- we're sort of charged with identifying this bigger picture of understanding these differences in communities across the entire State, and we recognize that, you know, there's
many different contributors from different types of air pollutants, you know, different things in the water so forth, and that sort of understanding that and the combination of potential vulnerability is -- is, you know, presently analytically intractable, because of just how -- how much information is required.

I do think though, you know, that, you know, a tool like this that does look broadly, you know, is a beginning to start to bring together information of the type that sort of needs to be developed to move in the direction of understanding risks.

You know, I think -- I think we continue to -- to think that we need to understand information at a finer -- even finer level of resolution. You know, and we're doing certain things to move in that direction. For example, we have like air monitoring studies, local air monitoring studies that begin to tell us something a little bit more specific about, you know, where differences are occurring, you know, even below the census tract scale.

You know, and we can continue to develop, you know, an understanding of health risks from individual -- individual chemicals.

And I think -- I think we have also a lot of opportunities to develop some of the information that, you know, we have in the tool at a finer level to take more
chemical specific information into account, when we think about them individually, and then when we think about them in combination as well.

You know, sort of the question of when that time is when we converge and have a good understanding of cumulative risk based upon some of this type of information, I can't really tell you, but I think we -- we have chances, but enhance and improve our understanding incrementally.

DTSC DIRECTOR LEE: Thank you, John, and also to Lauren and Walker for the demonstration and the overview of the CalEnviroScreen tool. It's an important foundation on which these conversations are happening. And we look forward to working more with OEHHA as we seek to develop methodologies in the future to expand our ability to look at cumulative impacts in the context of permitting decisions.

I am now going to introduce to you Mr. Ian MacMillan from the South Coast Air Quality Management District. Ian runs the -- is the manager for the SCAQMD's AB 2588 Air Toxics Hot Spots Program. He also was instrumental in incorporating more stringent guidelines from the Office of Environmental Health Hazard Assessment for conducting risk assessment into the South Coast methodology for assessing risk from stationary sources.
The South Coast also operates their MATES Program, which is a tool they have developed for looking at cumulative air burden throughout their basin. It was a groundbreaking tool when they developed it probably about a decade or more ago, I think.

And we are very happy to have Ian here to talk with us today. It's also -- he's a familiar face for a number of folks at DTSC, because prior to joining the South Coast Air Quality Management District, Ian worked for the Los Angeles school system on their school construction program and interacted with DTSC staff in the clearing of school sites for new construction.

So welcome, Ian.

(Thereupon an overhead presentation was presented as follows.)

MR. MacMILLAN: Good morning. Thank you very much for having me.

So I'd like to give a little perspective on what one air district does with regards to cumulative impacts. I should say that it's -- the way that we treat cumulative impacts might be different than what other air districts do. We are a very large air district, largest in the nation, in fact. And so what we might do might be a little bit different than what smaller or medium-sized air districts do.
MR. MacMILLAN: I do want to start off very briefly talking about the different kinds of risk assessments. And this is just one way that I tend to think about it. And so on the top here we're looking at facility based risk assessments. And this is sort of the typical permitting style risk assessment. And this covers what a lot of agencies do, whether it's DTSC, EPA, South Coast AQMD, et cetera.

And really the idea is to look at a specific process, specific facility and see how that impacts those who are around that process or around that facility.

Somewhat similar, but a little different, is a site-based risk assessment. This is more looking at what would happen on an individual site. And this might be something for like a clean up. If there's pollutants added at a particular site, you might want to see what's happening at that site, and what would happen to future residence.

The difference here is that on a site-based one, this is, in some senses, a little bit more like a cumulative assessment, in that you're looking at the total historical pollution load on a site, and then what that might do to future residents or future occupants, I should say.
And then lastly, this receptor based. I know we just heard that CalEnviroScreen is not a risk assessment. And it certainly is not that, but the idea that there is a way to look at a receptor, an individual person, or an individual location and see what is a total pollution burden on that location.

And the reason I bring up these three differences is really there's a lot of technical analysis that goes into all of these kinds of assessments. And depending on what your goal is, that defines how you do your technical assessment. And so it's a very important thing to consider when crafting some risk assessment methodologies.

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MR. MacMILLAN: Very, very briefly, the risk assessment methodology I think folks here are generally familiar with it. The basic math underlying risk assessments is largely the same across all agencies, all risk assessment types. It's you have your pollutant toxicity, times your dose, equals your health risk. The devil is really in the details here though.

When you look at each of these circles up on the top, you know, for example, on the pollutant toxicity, different agencies assume different toxicity for different toxic substances. And there's sometimes some very good reasons for that, but it's one fundamental difference that
occurs across agencies.

When we look at dose, this also can make a big difference. For example, the exposure duration, maybe one assessment uses 30 years, another one uses 70 years. Maybe in some cases, there's an assumption that children are more susceptible to toxic pollutants for all -- all pollutants, and there might be some sort of multiplier applied for children that is -- one agency might use and another agency might use, or one risk assessment might use and another might not use.

And so these are some very key factors. For example, if you look at -- are you looking at a model, are you looking at a measured concentration? And there's probably hundreds of other parameters that really affect the way a risk assessment can be used and what its final outcome is. And so when thinking about cumulative assessments, especially if you're going to be combining across different agencies, or different risk assessments, any one of these parameters can really affect what the final result is going to be.

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MR. MacMILLAN: Now, when we look at specifically air quality health risk assessments, typically these are more of a facility-based approach. It's, you know, thinking about for permitting, for example, when a new
source is permitted, either a new process or a new
facility, there's a standard facility-based approach where
you look at what are the impacts of a facility on its
surrounding environment.

The way most air districts do it in California,
is it's usually on a permit unit basis, so it might be a
single piece of equipment or several pieces of equipment
that are all similar, and -- but for the case where
there's a concern about the total effect of an entire
facility, so some facilities might have many, many permit
units, maybe dozens or hundreds, there's the State law, AB
2588, the Air Toxics Hot Spots Act, which was enacted in
the late eighties, this looks at, in a sense, a cumulative
assessment of an entire facility. And this assessment is
repeating, in that it looks every several years to see
what the toxic pollutants are coming from a facility. And
it's looking at actual concentrations -- or actually
emissions rather.

And one of the key pieces of the AB 2588 law is
that it requires air districts by statute to use the new
OEHHA risk assessment guidance -- or actually the --
whatever risk assessment guidance that OEHHA puts forward.
And so this often dictates how air districts conduct their
risk assessments is because of AB 2588.

And then finally, like all other agencies, we
undergo CEQA. And CEQA, as was mentioned before, does
have a cumulative impacts assessment as part of it, but
there's a key feature here to think about with CEQA, in
that CEQA is looking at the impacts of a project. And so
baseline conditions, or existing conditions, are often
subtracted out of what the final decision outcome is. And
so it's really just trying to see what is happening from
the project itself.

One sub — or kind of side note here, I did work
with schools, but CEQA has a special case for schools.
And it says that there is more of a cumulative assessment
of schools of looking at all sources, and not looking at
what happens from the school outwards but from outside
into the school. And this applies to all public schools
where there is an acquisition of school property.

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MR. MacMILLAN: Now, within the South Coast AQMD
itself, we have a long history of addressing cumulative
air quality impacts. We have our Air Quality Management
Plan, and that we do that every several years. And this
is really focused on, what we call, criteria air
pollutants. These are the air pollutants that are defined
in the federal Clean Air Act, for example, particulate
matter, ozone, nitrogen oxides, et cetera.

And this looks at all sources and devises
strategies to meet the ambient air quality standards, whether they are California standards or federal standards.

Similarly -- and a slightly different approach was in 1997 our board adopted what are called our Environmental Justice Initiatives. And this was really one of the first of its kind in the nation to look at what's a comprehensive approach to address environmental justice and to look at toxics impacts and sensitive communities. And a whole slough of measures came out of this.

The next three bullets here get into part of it. One was we began a cumulative impacts working group, and this is back in the early 2000s, and developed a white paper. Every now and again, I go back and read this white paper, and much, if not all of it, is still relevant. It's -- the same issues were around back then are still around now of how do you determine what is a cumulative impact, and how do you assess it.

We also have our toxics control plans that came out of the environmental justice initiatives. And these are looking similar to our air quality management plans, which look at criteria pollutants. This looks at toxic pollutants. That morphed into, what we call, our Clean Communities Plan. And again, this is an idea of taking a
comprehensive look at how to address sensitive populations and toxic exposures.

We also have our Multiple Air Toxics Exposure Study, often called MATES. That's been -- gone through four iterations. We're just now beginning our fifth iteration, or planning for our fifth iteration of that. And this is a way to try to assess risk from all sources within the basin.

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MR. MacMILLAN: Now the result of all of these efforts is that when we look at toxic pollution through the years, it's gone down fortunately. And what we see is that, in general, when we look on this graph behind me, we see cancer risk through time at various stations. And this is looking without diesel particulate matter. Diesel particulate matter is certainly the largest source of toxic air pollution in the South Coast Basin, largely from mobile sources, whether it's trucks, locomotives or trains or ships.

But this is really looking more at the stationery source side of pollutants. And what we see is that there's been about a 75 to 85 percent reduction since 1990. So there's been remarkable progress. We still have a long ways to go, but there has been remarkable progress.

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MR. MacMILLAN: One way that we try to look at this -- I want to touch a little bit more in detail on our MATES study. This is an analysis that looks at both monitoring data, where we collect samples for an entire year throughout the basin, and look at toxic pollutants throughout our basin, as well as a modeling analysis, where we take the emissions inventory that we have or we think we understand where the emissions are coming from, from the mobile sources, such as cars, trucks, trains, and stationary sources, whether they're refineries or power plants or what have you.

And we throw that all into a dispersion model and we get a big blobby map that you see there with a lot of purple there. And so this is the L.A. area. You see all the black lines on this screen are freeways where we -- Los Angelinos apparently love them. We spend so much time on them. And we see that the risk is greater, typically along the freeways, because that's where all the trucks and cars are, not surprisingly.

But this study has also been very useful, when we put these monitors out, we've actually found new sources of pollutants and new sources of emissions that -- by doing this study again and again, we always learn something new from both the modeling side, as well as the monitoring side.
So the map I'm showing here is from our 2005 assessment MATES III. When we look forward to MATES IV, which was in 2012, we see all those colors start to diminish, which is great, great success, right, that we see that the -- that means that the risk has been going down substantially. A lot of this is due to a reduction in diesel particulate matter, but it's very good success. We see sort of the brightest pattern right down near the ports, not surprisingly.

What we also found out is right about this same time frame, OEHHA came out with their new risk assessment guidelines that found that cancer risks are higher than we previously new. A large part of this is that there is some new science that's come out that shows that children are more susceptible to cancer causing compounds than previously believed, and so when we take that into account and we use a new OEHHA methodology, we find we have the exact same map again, that risks are still quite elevated, and we have a lot of work ahead of us.

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MR. MacMILLAN: I want to touch on another approach that we take to cumulative impacts, and this is air monitor. We'll sometimes do some special studies to see what air pollution impacts are in a local area. We have, of course, a region-wide network that provides some
information at a couple dozen sites, but we also do some smaller scale studies as well.

And one thing that we're also discovering is that there's a lot of new technology coming along, that there's low cost censors that are becoming available to the public. There's remote sensing technologies that can tell us some information about emissions that we just really didn't know before. And this is something our agency is very active in both of these efforts to try to make sure that the information that comes out of these new technology is something that can be relied upon, and we can understand what it's really telling us.

One example of this is in the City of Paramount. It was mentioned earlier this morning. We found a new kind of technology where we can mount air monitors on power poles and on utility poles, and collect information about metals in the air. And this is a really new technique that was never available before. And once we started mounting these in this city, and an industrial part of the city, we found much higher sources of hexavalent chromium, than we'd ever known about before.

And some of these sources we didn't even know could be sources of hexavalent chromium. But by sticking these monitors out, we really found some new information.

What we found to be very useful from this is
really focusing on coordination. And part of this
coordination is what we do within the agency. We're a
very large agency, 700 plus employees, making sure that
our compliance folks are talking to our legal folks,
talking to our planning folks et cetera, so that there's a
common understanding and availability of resources and
tools to make sure that's all coordinated, as well as
working with other agencies, such as DTSC and others, to
make sure that the other agencies understand what we're
doing, and we understand what the other agencies are
doing.

We have a lot of regular coordination calls that
are going on. And then lastly also with the public of
making sure we're going out speaking to the public. We
have regular conference calls we hold with the public, and
make sure that -- that this coordination is occurring.

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MR. MacMILLAN: Part of our come -- or our
comprehensive approach to cumulative impacts is also
looking at our regulations. And it's one thing to try to
put in a cumulative program for permitting, but what we've
really found is that one size doesn't fit all when it
comes to regulations. Many sources have their own special
needs and their own special solutions to reduce the
pollution. And so we have a comprehensive strategy to try
to reduce pollutants.

And so we have many source-specific rules, whether it's on asbestos, or dry-cleaning, or led facilities or what have you. We have a continuing regulatory framework where we try to address pollutants from every industry that we can.

We also provide extra protection for sensitive populations in some of our rules, whether it's for schools or for residents. They're also called out in many of our rules.

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MR. MacMILLAN: We also have a pretty robust funding program that we administer, either local funds or State or federal funds. Our agency administers these funds in most cases to mobile sources of pollution to again address the diesel particulate matter. But we have a whole slough of funds that are listed on this slide here that we try to make sure are used in the most effective way. Some of these also go to stationary sources.

But we've found that this has been a very effective approach. The funding level goes up and down year by year, as you can imagine. We're currently at about 100 million a year with some fluctuation in there, but we have found this to be very effective at reducing pollution.
MR. MacMILLAN: In conclusion, really, there are many ways to assess cumulative risks. And the devil is really in the details, the technical assessments here are quite complex, and it's just something to keep in mind when going down this pathway that the technical approach really -- really matters, because the results we put in affects what comes out.

The primary focus of our agency has been on regulation, but also incentives, and working with partners, and trying to find other ways, because there's not really a one size fits all. And so even if you know where it a cumulative impact might be how you're going to address it. One way is through permitting, but there might be a lot of other ways that agencies can address cumulative impacts.

With that, I'll end my talk. And if there are any questions, I'm available.

(Applause.)

DTSC DIRECTOR LEE: Thank you, Ian.

Unfortunately, Rich Stedman who was also going to speak to us at this time from the Monterey Bay Unified Air Pollution Control District is ill with the flu, and was unable to make it today. I took the opportunity to ask Jack Broadbent who is the Executive Officer at the Bay
Area Air Quality Management District if he would like to just take a couple of moments to talk with us about some of the creative things the Bay Area Air District is doing in the space of cumulative impacts.

They held a symposium recently. They have their CARE Program. They've really done some important work in this area and are one of the leader organizations in California working on cumulative impacts. And Jack has agreed to take a few minutes just to fill us in on that, so thank you, Jack.

BAY AREA AQMD AIR POLLUTION CONTROL OFFICER

BROADBENT: Thank you, Barbara. Well, I don't need to say anything more. You just -- you just gave my talk.

No. I'd be glad to talk a little bit about what we're doing in the Bay Area as it relates to trying to understand and address cumulative impacts. Probably need to just a -- take a moment just to talk a little bit about the Bay Area. I really appreciated Ian's presentation, because I thought it did a great job of explaining in terms of from an air quality, a local air pollution control agency standpoint, how to address cumulative impacts.

And I think the best thing I can tell you is this is not a new issue to the air pollution control agencies. We've been seeking to trying to address cumulative impacts
for many decades actually. And that's certainly the case in the Bay Area.

The Bay Area Air District is -- or I should the Bay Area is home to about seven and a half million people. We have, at the Bay Area Air District, we're roughly about half the size of the South Coast. We permit, and oversee, and seek to minimize emissions from about 10,000 facilities in the Bay Area.

So the District -- my District is about 350 folks. And as I indicated, we have been working on the issue of cumulative impacts since I've been there for nearly 14 years now.

So what we have sought to try to address, or how we've sought to try to address cumulative impacts is really, first and foremost, of course, through our permitting program. And I'll tell you about that, because we have a lot of ongoing continuing work in that area.

Burt as Barbara mentioned, out almost over a decade ago, we initiated an effort referred to as our Cumulative Air Raise Evaluation Program, or our CARE Program.

And that effort was simply to try to understand what are the disproportionately impacted communities in and around the Bay Area, try to map, try to understand what the relative risk is. And similar to the MATES Program, I have some great maps. And if I -- if I had
better appropriation, I would have been able to show you these maps.

But let me just tell you what we know from our -- from our efforts. We know that we have some communities, specifically up in Richmond, where there's a high concentration of, not only stationary sources but also a number of mobile sources, namely train traffic -- certainly the refineries are there, train traffic, ship traffic actually as well, what we call the iron triangle up that way.

But as you -- if you can picture it in your mind the Bay Area, as you move from the Richmond area all the way down the 880 corridor, it's a highly impacted area as well. On the Peninsula side the Bayview-Hunters Point is also a impacted community.

And then as you move to the lower part of the Bay Area, we have basically East San Jose, where the confluence of freeways, and you have a relatively poorer community over there in the eastern part of San Jose.

Our highest risk in the Bay Area is in the West Oakland community adjacent to the port. And it's indicative of the Bay Area. What you have in the Bay Area is a very dense area. At least seven and a half million people live essentially adjacent to some fairly big sources. It's not as spread out as, for example, in L.A.
and certainly not as spread out in the San Joaquin Valley, but rather you have folks living literally right up against the fence line, and that's definitely the case in the West Oakland community.

Now the West Oakland community, given the fact that it's next door to the port, it's also, if you know this area, has a freeway running through it. And when the earthquake occurred, they rerouted the freeway, and it rerouted the freeway right through the West Oakland community unfortunately.

So our CARE Program identifies the risk in the West Oakland community, and it's -- in terms of risk, the relative risk just from air pollutants, it's on the same order as what you'll find next to the 710 Freeway down in L.A. Ian I know that's probably one of the higher risks as it relates to the Alameda corridor, just that -- the port and all the trucks up and down that freeway. And we find very similar risks in the West Oakland community.

Now, the good news is through the implementation of a number of CARB regs, also just frankly focusing our grant resources, we've been able to reduce that risk, and that's a good news story.

But similar to the MATES findings, when you now readjust the relative risk with the new OEHHA risk approach or factors, we see that while the risk has gone
down, it's now gone back up in terms of its relative size, and the relative impacts, largely because of the new OEHHA risk factors.

Now, that's -- it's not to mean that there's more emissions in those communities, just that we know and understand that the potency of -- particularly diesel risk is better understood, and we need to continue to really attack and address the relative impacts in these communities.

Let me talk a little bit about though, Barbara -- and I won't take too much time, but I appreciate you giving me the mic, and let me talk a little bit about our work relative to our permitting efforts.

This is an area in which we have -- frankly, have welcomed any or all new ideas on how to really incorporate the surrounding when it comes to permitting in our -- in our stationary source permitting. And I'll just give you a couple of ways in which we have sought to try to address this.

About four or five years ago, we sought to identify communities, in and around the Bay Area, wherein that if a particular source expands or gets added to that community, that they would face a higher offset ratio with regard to their new source review program, meaning that if a new source wanted to locate in the West Oakland or in...
the Richmond community in the Bay Area, they would not
only have to apply best available control technology, but
they would have to also offset their remaining emissions
on a ratio of similar to say a 1.5 or 2.0 to 1.

And our offset ratios now are only 1.1 or 1.2 to
1. So that was our attempt to try to address some of
these disproportionate impacts. We had a very vigorous
rulemaking effort, a very tumultuous debate in front of
our board. Ultimately, the board did not put this
proposal in place, in part because it felt that all areas
of the Bay Area should seek to be able to have as much
protection as possible.

And that was just one of many different ideas
that have come out of the idea of trying to try to address
cumulative impacts. We've sought to try to change the
underlying rulemaking that governs our permitting. It's
an idea that was talked about with our CARE Task Force,
when we --

DTSC ASSISTANT DIRECTOR MASCAREÑAS: I put the
maps up for you.

BAY AREA AQMD AIR POLLUTION CONTROL OFFICER
BROADBENT: That's good. It's not our maps, but it's a
map.

Thank you.

DTSC DIRECTOR LEE: It's your map.
BAY AREA AQMD AIR POLLUTION CONTROL OFFICER

BROADBENT: Is it?

I can't tell. Oh, okay. Good.

So I mention this, because when we first established the CARE Program, we actually established a CARE Task Force. And I get a chance to recognize Janet Whittick, who actually served on the CARE Task Force. And in the true idea of what a task force is, it started and ended. We've thought that it's not something that should have a long-term life.

We're now thinking we probably need to reestablish the CARE Task Force or something like it. And we're actually contemplating establishing some type of working group to continue to explore what are some ideas in terms of addressing cumulative impacts through our permitting program, and -- but we do know that we need to do this in a manner in which all voices are heard, everyone is welcome to the table. So look for Janet and others here in the room for us to be inviting folks to a working group where we can continue to explore potential regulatory approaches.

I'll just mention a last few things. Ian, I thought, did a great job, but we, too, have adopted rules just to try to seek to reduce the impacts in communities, particularly when we understand that there are sources in
those communities that could be subject to a command and
control rule. So we've adopted a metal melting rule that
impacted a number of sources along the 880 corridor.
We've also adopted a number of refinery rules that reduce
their emissions on the Richmond and the Martinez and other
communities.

And we're -- lastly, I'll just mention that we're
working on a rule right now, which is proposed rule 1118
which would seek to be able to require all stationary
sources to ultimately be brought down to a 10 in a million
risk. This will be considered in front of my board
probably in the July time frame. We have been working on
this. The EIR just got posted actually last Friday, so
it's new news. And we're real excited about that proposal
in front of my board.

But with that, Barbara, I will stop and thank you
for the opportunity to let you all know what we're doing
in the Bay Area. And thanks for getting that map for
knee. Thanks.

(Applause.)

DTSC DIRECTOR LEE: I think Jack needs to get an
award for standing up and giving a very cogent
presentation of all of the amazing work that they are
doing in the Bay Area Air District with about five minutes
notice. It's also a testament both to -- to just the
technology we have at our finger tips on the Internet, as well as how easily navigable the Bay Area website is that we were able to quickly Google BAAQMD CARE map and find it, and pull it up for folks to take a look at.

And that, in and of itself, is a wonderful example of some of the great work that the Bay Area District, as well as you heard earlier, the South Coast Air District have done in this space, which is an important part of the reason that we wanted to hold this symposium as DTSC is starting to work on issues of cumulative impacts and cumulative risk, because so much good work has gone before us, and we know we're new to this space, and we are very respectful of the expertise, and the leadership that our colleagues have shown in this area in the air districts in OEHHA, and at other organizations.

So at this point, we are now at our break. And so what time do we come back from the break Evelia?

DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER RODRIGUEZ: 10:55.

DTSC DIRECTOR LEE: 1055. So we have about a 20-minute break now. For those of you on the air, we will -- will the webcast stay off -- stay on or will we turn it off during the break?

DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER
RODRIGUEZ: We'll go off.

DTSC DIRECTOR LEE: So the webcast will go off-line during the break. We have a 20-minute break now. And we will resume at five minutes to 11:00.

Thank you.

(Off record: 10:36 a.m.)

(Thereupon a recess was taken.)

(On record: 10:59 a.m.)

DTSC ASSISTANT DIRECTOR MASCAREÑAS: Hi, everyone. We're about to get started again.

Great. Please start taking your seats.

Welcome back from the break, everyone. We're just pulling in the last folks who are chatting in the lobby.

Welcome back.

So we had a fantastic speaker, Dr. Rachel Morello-Frosch, ready to present to us today. You'll see her presentation behind me. The Science of Cumulative Impacts: Implications for Decision Making is the name of her presentation. Unfortunately, there is a flu going through the Bay Area, and she is unable to join us to actually deliver the presentation in person today. And she sends her regrets. We will make her presentation available as part of the follow up to today's symposium.

And so she will provide that information, and
we'll try and incorporate some of the information that she also has in her presentation throughout the rest of the day.

Just for folks who don't know Dr. Rachel Morello-Frosch. She is a professor who holds a Ph.D. in Environmental Health Sciences, and focuses her research on environmental health and environmental justice. An expert in this field, and we are lucky to have her prepare these materials for us today.

With that, we're going to move into the presentations on -- from the community perspective. And I'll bring back up Director Lee to introduce our next two speakers. Thank you.

DTSC DIRECTOR LEE: Thank you, Ana. I am happy to have the opportunity to introduce for everyone two folks who I've had the opportunity to work with in my capacity at DTSC, and at least in one case for many years on issues associated with environmental impacts on communities.

So I'm going to start by introducing Ms. Ingrid Brostrom. She's a senior attorney at the Center for Race, Poverty, and the Environment. She's a graduate of UC Hastings School of Law. And she joined CRPE in 2006 as an Equal Justice Works Fellow. She currently leads CRPE's Toxic Free Communities Campaign, which is focused on
eliminating or reducing threats to California's low income communities and communities of color.

She also was instrumental in convening The People's Senate, which is an organization with representatives from impacted communities around the State, and works with DTSC to try to address the community's needs. We've had a very productive working relationship with her, and she sits on the advisory committee for our Hazardous Waste Reduction Initiative, and has been an important contributor to that effort.

She also holds degrees in environmental studies and politics, and interned with the Jane Goodall Institute, the Center on Biological Diversity, and the Sierra Club.

In addition to Ingrid Brostrom, we're fortunate to have Ms. Martha Argüello. I've known Martha since we served together on Cal EPA's Environmental Justice Advisory Committee in the early 2000s. For the past -- Martha is the Executive Director of Physicians for Social Responsibility.

And for the past 32 years, she's served in the nonprofit sector as an advocate, community organizer, and coalition builder. She joined the L.A. Chapter of Physicians for Social Responsibility in 1998 to launch their environmental health programs, and became their

She is committed to making the credible voice of physicians a powerful instrument for transforming California and our planet into a more peaceful and healthy place. She's dedicated her career to the environmental justice movement and is active as a board member on way too many organizations for me to run through the list now. But she is quite a force in environmental justice and we are fortunate to have her as well as Ingrid Brostrom here.

I'm going to invite them to come up together and sit at the table. If you want to stand while you speak, you can do that, or you can speak from the table, whichever is easier for you.

Thank you so much for joining us.

(Applause.)

DR. ARGÜELLO: So we decided to change the order a little. So in 2007 when I became the ED one of my first official acts as ED was to hire a membership coordinator who now works at DTSC, the wonderful Ana. So I just want to acknowledge what a wonderful opportunity we had to work together.

(Thereupon an overhead presentation was presented as follows.)

DR. ARGÜELLO: And so my -- as Barbara had mentioned, we were -- we served together on the
Environmental Justice Advisory Committee at a time when there was a lot of legislative activity around environmental justice. And some of those first activities, you know, in the early 2000 was first, well, what is environmental justice. Because at that time, there was a debate, like does that even exist? What is that? What is an environmental justice problem?

And so for advocates who had been talking about environmental racism, and the lived experience of seeing less protection, it was sort of always jarring to be in rooms where you were trying to -- where you were being told that you had to prove that you were being harmed.

And so at -- part of that process two very big ideas came out of that environmental justice process. And it was -- you know, everybody board and department was supposed to develop an Environmental Justice Action Plan.

But the two main things that came out of that were, one, the cumulative impacts tool. So for -- I was in a meeting and we sort of jokingly thought the cumulative impacts tool was not designed to distribute GGRF funds. It was actually in response to many, many years of political advocacy on the part of impacted communities saying the tools that you currently have for evaluating - remember that hazard equation that you saw - those tools are minimizing the exposures and the impacts
that we're feeling in our communities.

Those tools that you currently have for permitting is actually driving health disparities, and that's how our organization, as a public health organization, came to be involved in many of these issues.

And so there's also a movement in medicine about moving upstream. But in 2000, we were talking about the need to develop a way to assess cumulative impacts and a way to act in a precautionary way. Highly contentious, both of them, but there we are. So this -- this is really an attempt to move us upstream to go up to preventing --

DR. ARGÜELLO: -- exposure. So there's the final report if you want to look it up. Fifty-three mentions in that report -- I know Barbara is laughing, because it was high drama, really exciting. But also some really important thinking came out of the environmental justice movement. Massive amounts of community participation. These rooms were full. We met throughout the State.

And so look at it. Forty-one mentions of precaution, 51 mentions of cumulative impacts. So that was driven by communities saying we need to do better about preventing exposure and harm.

DR. ARGÜELLO: And this is what it looks like,
right, in terms of we talk about data and information. This is what it looks like when you live in an environmental justice community. So if you live in Watts, you're going to -- you life expectancy is 73 years. It's 85 in Bel Air. And there's reasons that happened. Yes, some are land use, but also some are about what we say can happen in a community, and that -- which is also a land-use decision, but it's also related to permitting.

So I'm going to talk a little bit -- because I know that there's -- those are land-use decisions, but they need to -- we need to start moving upstream. Because even at the local level, when we're making those -- when planning departments are making those land-use decisions, they're going to look to an agency, like the Department of Toxic Substances to give us that basic information about what we should and should not be putting in communities.

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DR. ARGÜELLO: So this is, again, what a cumulative impact looks like, and I left a bunch of things out, right?

So I think this morning, I must have used at least 17 personal care products from the time I got up to the time I left my house. And I live in a place where the air pollution is not so bad. But I live less than a half a mile from a haz -- a facility that's using hazardous
chemicals. So those cumulative impacts happen both indoor -- in our homes, some things we actually buy and use willingly, and some are involuntary exposures.

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DR. ARGÜELLO: And then this is something I learned from your past director, and I really loved it. So I'm very stream of consciousness girl, so my presentation is going to be very stream of consciousness.

But this was presented to me at a meeting by Debbie Rafael. And I was -- I just can't stop talking about it. It's three years ago. And she talked about this being the mission of DTSC, right? We're talking about you have functions to deal with the sins of the past, right?

So Exide, among one of them, right? And then there's the sins of the present. And Exide is one of these that lives in all three, right? And that's often a problem that there's not neat little boxes. I have neat little boxes up there, but that's not how it happens.

But DTSC's mission is around preventing these -- addressing this sins of the past, dealing with the sins of the present, and preventing the sins of the future. And in there, these are the kinds of tools we've used. You've used risk assessment, cost-benefit analysis, and other tools to get you to those permitting rules.
But there's a fundamental flaw, right, is that those permits aren't about preventing anything. They're about saying these are the rules of the game for you to operate. And there's a disconnect between those rules and the things that happen to communities who live nearby, right?

So we need better tools. We need better ways of assessing, you know, that in there, right? So there's cumulative impacts assessment. Other tools that we can be using are health impact assessments that are qualitative tools that root decisions in the way people are going to experience them. And so the cumulative impact tool is one more tool.

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DR. ARGÜELLO: And then some of the things that we consider is how do we make sewer -- and cumulative impacts is an attempt to make sure that our assessment or the permitting -- the data that underlies that permitting will reflect how people are going to live and experience that exper -- that contamination, that particular facility, that particular process.

And again, I also understand that it's different from when you're permitting a new process or a new chemical versus a facility. And it's ease for me to talk about them like they're all the same, but I know that in
your day-to-day life, those are really different and they make a difference. So, you know, bear with me for the generalization.

So one of the things that we've been looking at -- and this is a lot informed by the climate work. And while my heart, my passion for the environmental justice movement came out of working on issues of toxins, I have found myself working on climate change for the last 10 years. And it is really interesting to watch a public agency have to shift what it does and how it does it, because the enormity of the problem that it has to confront.

And so there is a book called This Changes Everything around climate change by Naomi Klein. And I think that those of us in the toxics world have been afraid to say that if you want an economy that's benign by designed, it does change everything. And so that thinking within the environmental justice movement around a just transition from fossil fuels has begun to really obsess us in the toxics world, and how do we operationalize that. And then the next question is how do we work with public agencies to actually begin to have technology forcing regulations that help move us towards that benign by design economy, so -- and these are some of the tools that we think can be used, that -- this community driven
decision-making process.
And I'll give you an example. We were working on a football stadium. And those of us in the advocacy world, no, they're not going to get a CEQA exception, and we're going to oppose that stadium. That's just terrible. Why would you put a stadium in downtown L.A. Well, we did a health impact assessment, and we went and talked to residents.

And you know what, 50 percent of the residents wanted the stadium, the other 50 percent were opposed, but everybody agreed on one thing, if there is going to be a stadium, it should meet X, Y, and Z requirements, right? It should not displace people. It should not be a driver of gentrification. The jobs should be local.

And that was a lesson for us advocates, right? It's not always about no. It's about how do we live with trade-offs. And that's, you know -- and so part of it is who benefits and who bears the burdens. And so when you're thinking about the permitting decision, you know, I would start thinking about who bears the burdens a lot more than who's reaping the benefits, right, because that's what happens when there's a scale. Well, we really need these jobs, and this industry.

From our perspective, you're always putting the thumb on the side of industry in -- and I hate to use the 80
word, but that will -- jobs will trump health, right?

And what we're saying is that we need a new model for how regulators do their work that will help us get to that new economy, because I work in a community that has 20 percent unemployment, right?

And so we're acutely aware of this issue of jobs and the environment. But when you talk to that community who lives with 20 percent unemployment, they're saying the traditional things, save every job. It doesn't work for them, right, because you have, in that particular community, a huge reentry population.

So, you know, jobs at the stadium or jobs at the refinery, or jobs -- you know, the one or two jobs at that local oil extraction site don't mean a lot, right? Because if you're reentering from prison, you're not going to be able to access those jobs, right? So it's not just any job that we're talking about.

And we need you guys to know that, right? That communities actually need economic development where we're not choosing -- you know, I know I'm going to go to this job, and I'm going to track home lead exposure, or actually I'm going to go to this job and not know I'm tracking home lead exposure, versus, you know, what if -- you know, we're working with a group of domestic workers, and what if the economic development was about providing
them with technical assistance to create green cleaning products that they make themselves, that they market themselves, they package themselves in safe, reusable packaging, and are able to actually build a business model based on delivering a service that's healthier for the person who gets the service and the person who provides it, right?

So we're really asking you what are the things that you can do when you're permitting that help that vision of a community happen, not the vision that we currently have, where you've got 30 auto body dismantlers in one community and no way to say we would like something else.

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DR. ARGÜELLO: Oh, I guess that's it. There we go. So this is the other thing that we think has to fundamentally shift, right? We have a way of deciding things, and we never find out about it until like Friday 5:00 p.m.

So somebody has decided -- and you work together, and this usually is industry and the regulatory where folks deciding, and then it gets announced. And then you know what happens when you've spent a lot of time and money on something, you're going to defend it, right? That's just an instinct.
And so then it becomes an issue of defending it. And when ends up happening is you end up going to a community where we expect you to do what it says in your mission you're going to do. And what we hear really is a defense of a decision where we are not benefiting, where this balance of benefits and burdens is not working, right?

And so this idea -- so I'm look -- I'm like I want to know who's in the room, right, because they're probably thinking what is she talking about?

So I am talking about a very radical rethinking of what your role as regulators are. You know, and I got the opportunity to work in Nicaragua where in 1986 and '87 -- if you know your history, you know what was happening there. And so we as technocrats who worked in institutions, this is what we sat around and asked ourselves, how are we going to radically change the way we do things, so that we're putting people's health first, right?

And one of the first things they did is they decided health care was a right and a responsibility of government. They had a really -- and we had a very interesting approach to economic development, which was about public-private partnerships. We weren't really great at regulations, all right, because we saw ourselves
as a developing nation, and so regulations got in the way of that.

What is sort of strange is to see that same thing in this country, where we actually have opportunities to do things differently. So, let's see, I think I put my. So we still don't know what goes beyond this, right? For some decisions, we can figure it out. For other, I think we still have a lot of thinking and talking to each other to do to figure out how this gets operationalized and how you ensure community power --

Dr. ARGÜELLO: -- so that we're not having community meetings and processes where we think that we are going to somehow end up being able to participate in a decision only to find out not so much, right? So that's really important, this idea of listening to communities -- actually, listening, not hearing, right? There's a huge difference.

And we see that at every stage, right? There's times when I'm like I don't want to go to that public meeting. Public participation is really important. I'm like yeah, but I'm not a theater major, right? I'm an activist, and so I don't want my public participation to be theater.

And so how do we drive -- that also has to really
fundamentally shift where somebody stands up here, you get three minutes versus opportunities for regulatory agencies and communities to co-power and co-change -- and change things together, right?

It is not about you empowering communities or us empowering you. It's really a process of co-powering to begin to shift, because you're going to need us to make that institutional change, right?

--o0o--

DR. ARGÜELLO: So again, this co-- better models for community participation. Starting the regular -- that consultation process early, much earlier, and you've seen it, right? You -- and even in a process like Exide, there's moments when start to get it right, and then it -- it feels like it slipped away, but in -- you know, institutionalizing the lessons learned from that is going to be really important.

And I'm not even actively involved in that, but you just sort of see and hear that -- the challenges that have been there are about when -- you know, we go into situations wanting to make sure that our agency doesn't look bad. And so sometimes that actually makes your agency look worse, right?

So it's sort of like when we go into conflict resolution, if you don't acknowledge your role, even
though you didn't do it, it's really hard to get to a
conversation, right? So there's this -- I'm feeling very
catholic today. So there's a sense of a mea culpa, but
real contrition, right? Not just guilt but contrition,
which implies you're going to change behavior.

So that's really important. And gaining our
trust on that is really important. Looking at models like
TURI, right? We spent a lot of time on the Safer Products
Consumer Regs. And we actually, you know, did not agree
within even the advocacy community about the best approach
to that upstream thing, right? And so we might want to
revisit that.

And I threw it -- I threw in the South Coast just
because I was finishing that slide as I -- as he was
talking. But I think that approach to let's look at a
chemical like perchloroethylene and let's figure out a way
to get rid of it. That happened because somebody said
let's figure out a technology that's safer, right?

So there is this partnership with research that
is not happening the way that it should be. We are not
saying to research institutions go to paramount and find
me an alternative to chrome plating or find -- go send
your scientist into, you know, some facility that you know
is leaving a mess and figure out how to reengineer or
reprocess or use green chemistry technology.
And that, to me, goes beyond -- I don't want a consumer based approach, right? The Safer Consumer Products regs are good, but they're going to be based on a consumer product, right, and who can shop their way out of being contaminated. I'm asking you to go further upstream who's manufacturing and who's creating stuff, go in there, right, because you've got a hazardous waste problem.

And the only -- and we can't knock on their door because, you know, they see as the enemy, but your scientists can. And you in a partnership with, you know, UC Berkeley or UCLA can go in there and say, well, let's figure this out.

We -- you know, a great example of this was the bill we passed many years ago to remove -- to create pipes with no lead, right? You had a standard for lead pipe that was a really small amount of lead. The chemical manufacturers were like you're going to put us out of business. All jobs will go away. Oh my, God. What are we going to do, right?

And the crazy environmentalists passed a law that's going to put us all out of business. Well, we've just spent the last eight years with UCLA and the California metal manufacturers doing an alternatives assessments on a lead-free solder, right?

It shouldn't take that long to figure out that
the one manufacturer in south L.A. actually does this safer, cleaner. It means jobs. It's not the cleanest of industries, because it's still making metals, but you found a way to make it less bad in the production phase and much safer in the use end, right?

And when the alternatives assessment was done, it looked at effluent. It looked at all -- a bunch of things that we value. Those are the kinds of things that we should be doing, but in a larger scale. And figuring out what you need to do at the, you know, sort of the legislative branch, then come to us, right, because we want this as much as you do.

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DR. ARGÜELLO: We're -- so -- because we want this as much as you do. And we actually don't want to be in a position where we're being told that we're trying to kill jobs, because remember I work in community that has 20 percent unemployment. And so we're trying to change both of those things. So in our advocacy work on the ground, we work on both, right, having a healthy economy, having healthy communities are all related to public health.

And I put this up there, because I just love this. This idea that risk assessment and cost benefit analysis is going to get us the things that we value is
just wrong, right, because markets aren't magic. And
without us moving toward creating a new market that's
benign by design, we're going to keep build -- you know,
doing regulatory stuff on top of a system that's
already -- so it's got the inequality baked in.

The outcomes of our current economy is to create
more inequality. So, yes, you have a role in that, even
though you're not a social service organization, right?
There's a lot you can do to change the economy. I mean,
we were talking the other day in a community meeting
about -- and I didn't bring it up, but about the stuff
that you guys are doing around soil contamination clean
up, and the economic opportunities embedded in training
people to do it well.

And it was about a meeting totally unrelated to
any environmental things, and folks not working on Exide.
But that is spreading in the community. And that's a
model that people want to see, right? And that's where we
get to that model about the sins of the past, the present,
and the future.

And I don't know if that's permitting, but you
have to figure out through the permitting process how to
tell people though shalt not pollute, thou shall reduce
your harm, and that will drive economic opportunities.
That will drive the kind of stuff that we want. We'll
fight with you on those jobs, because we want those jobs.

And, you know, the other part really is that if we continue with any job is a good job, we continue to sort of reify this idea that we have -- that we've taken the best available science about what is risky and said that's okay, because there's a job tied to it, and just -- that's just not okay, and it's not going to get -- you know, that's okay for the short-term, but it's not going to get us where we want. And what our communities are saying is we want economic development not jobs, because there's a difference. And really understanding the difference between that is really important.

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DR. ARGÜELLO: This is how the environmental justice community has evolved. I would say that, you know, 10 years ago when we were in this room fighting over this, we'd not had this conversation about how we, as environmental justice advocates or public health advocates, what is our role in helping this economy transform?

Because what we see is we have an extractive economy. And to many of us that extractive economy is predicated around race, and racism. And we've got -- so we've got big oil. We've got this idea that, you know, we can continue to produce waste, and we're not going to have
to pay a price for it. And we can extract value both from
the earth and from people, and that's not a sustainable
economy.

So communities are starting to talk about this
living or restorative economy that's based on sacredness
on cooperation, deep democracy, and ecological and social
well-being. And we actually want agencies like you to be
partners with us.

And why I bring up what the air district has done
is that now if you look at their four pillars around
climate change, one of those pillars is transforming the
economy. I think they use a different word. But we have
to be partners in that, because this economy has not
worked out well for us.

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DR. ARGÜELLO: And that's it.

(Applause.)

MS. BROSTROM: All right. So I'm going to go a
little deeper into the weeds on specifically hazardous
waste permitting decisions.

(Thereupon an overhead presentation was
Presented as follows.)

MS. BROSTROM: And, you know, just in terms of a
background, you know, hazardous waste and toxics is one of
the first fundamental environmental justice issues that
was identified. There was a recognition that, hey, you know, as a country and across the world, we're putting all of our most hazardous, most dangerous facilities predominantly in low income and in communities of color.

And so, you know, one of the first studies was called Hazardous Waste and Race by the United Church of Christ. And they really -- they put -- they put numbers on the paper, and really started looking at the high levels of disparities.

This is actually the second report. And I teach a class on environmental justice at UC Berkeley. And, you know, one of the things that I mention in what drove me to start The People's Senate was this idea that after 20 years -- the first report was done, I think in the 1980s, and then there was another one done in the 2000s, and the problem despite the recognition of the disparities, the problem had gotten worse in those 20 years.

So despite all of the advocacy, despite, you know, agencies having knowledge of the problem, despite us having better laws and some laws to try to address it, and some processes in, you know, the executive order, nothing had put a dent into where we're putting our hazard waste facilities in the U.S. So this is from Hazardous Waste and Race at 20.

So here, you can see that's -- those are people
of color make up nearly 50 percent of people living within one kilometer of a hazardous waste facility and this is across the U.S.

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MS. BROSTROM: When you start looking at multiple facilities, the disparities are even greater. Where you have 70 -- nearly 70 percent of people living next to multiple hazardous waste facilities are people of color. And so, you know, as there's two or three or four or more hazardous waste facilities, your number -- of your percentage of people color is going to increase.

So this is -- again, this is U.S.-wide. You know, California, we're way more progressive. You know, there -- you know, there's more consciousness about race, right? California has the highest number of people living -- why isn't this going -- California has the highest number of people living next to hazardous waste facilities. We're close to 80 percent of folks in California.

And yes, you know, we acknowledge that California has higher rates of people of color living in California. But even taking into -- that into account, California is in the top 10 states, in terms of the difference between the -- you know, the percent -- the population in general, and the people living next to hazardous waste facilities.
So California has a problem.

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MS. BROSTROM: With CalEnviroScreen, here I zoomed into an area that has all lot of hazardous waste facilities, Los Angeles. This is CalEnviroScreen. One thing that I do like that DTSC has done is they have this on their website. They have an overlay of DTSC permitted facilities with CalEnviroScreen, so you can see that up there.

So this is a map. And you can see that there's a pretty good correlation between where those red -- those red areas are, the highest most -- you know, most impacted census tracts in California and where hazardous waste facilities are located here.

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MS. BROSTROM: So I want to go back in history a little bit. I'm not sure how many of you are familiar with the Cerrell Report this is a dark mark in California's history. And it's one of the smoking guns that we have in the environmental justice. We have long assumed that decision -- land-use decision making was due to political expediency, the fact that facilities will locate where it is easiest to do so. Where is it easiest to do so? It's the places with the least political power. Those places tend to be low income, and they tend to be
non-white.

And we actually have a State-sponsored document that says that, that -- so the Cerrell Report was about where to site hazardous waste incinerators in California to avoid -- like -- to avoid like political impediments.

So these are quotes from the report. And again, I know that this is an older document. This is in the 1980s, but that middle -- that middle quote, especially the one highlighted, I had to read it a few times. When I saw it explicitly stated that, "Middle and higher socioeconomic strata neighborhoods should not fall at least within one-mile and five-mile radii of a proposed site".

So this is it. You don't get much more explicit than that. This is the State saying to hazardous waste operators do not go to wealthier neighborhoods. Don't go to middle class neighbors. You should target, you should target low-income communities. And that is our history in California.

So when have most hazardous waste facilities been permitted in California? It is not in the last five years. It is not in the last decade. We are dealing with a history that was based on racial animus. That's where most of our hazardous waste facilities have come from. The decisions were made back in the day. And today what
decisions DTSC is making are permit renewals.

So what duty does DTSC have to rectify, you know, our problematic history? And I think there is one. I think there's great deal of responsibility.

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MS. BROSTROM: So one thing that I often hear is we don't need to be worried about the proximity of hazardous waste facilities and low income communities, because if you're following your permit conditions, you're safe. So we don't need to worry about that proximity. And that's just false. That's false.

You do have higher risk of physical impacts. And, you know, there -- you know, when you're in close proximity, there's always a higher likelihood that you're going to be exposed. So you have the physical impacts. But that's not the only impacts of living next to a hazardous waste facility.

You have the psychological impacts. That's without exposure. That's with you following everyone of your permit conditions. You have that feeling of loss of control. You have increased stress. You have increased anxiety, depression, suspicion, hyper-vigilance hostility, paranoia. These are all -- these are not things that I came up with. These are things that I -- you know, we did a literature review to figure out what are those impacts.
So if you want the citations, I have them.

You have the economic impacts. Again, without a single exposure, your property values will decrease, you'll have increased blight, you will be inviting other incompatible land uses in. Because once an area, you know, is zoned for hazardous waste, zoned for industrial activity, you're going to get multiple facilities.

You have loss of community. You know, that's a hard one to monetize, you know, but you're driving people out. You're splintering communities. But these things are real, and you can have all of these things with a completely compliant hazardous waste facility.

And in my experience, most hazardous waste facilities are not 100 percent compliant. So there are lots of impacts.

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MS. BROSTROM: I just wanted to quickly point out that we have SB 673, you know, but there are overarching civil rights statute that DTSC must also comply with. So I just quickly wanted to point out that when we're looking at how do we implement 673, we also make sure that we're compliant with California's civil rights laws, which, unlike the federal law which requires some kind of racially discriminatory intent, California's does not.

You really are looking solely at disproportionate
impact. And in California's hazardous waste permitting, there clearly is a disparate impact on people of color.

Some of the regulations specifically dictate that anyone receiving State funds cannot make or permit selections of sites or locations of facilities that have a disproportionate impact. So this really calls out permitting, you know, and figuring out where is a suitable location for certain facilities. So that is State law, and it has not been enforced to the degree it should be. But I just did want to point that out, that over arching framework.

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MS. BROSTROM: So this is what I actually talk a lot about with my students is that the issue of hazardous waste disposal and treatment in California is a bit intractable. So, I mean, I have very strong feelings about California's responsibility to protect low-income communities of color from toxics, but I also understand that it is not an easy task.

You know, you -- one issue that DTSC is going to have to rectify and be very intentional about is that its role with ensuring that there's sufficient capacity to take on our hazardous waste in California until we move to the just transition future, where we're seeing a lot less of it, its role in permitting facilities, and its role in
enforcing its laws.

You know, I think another dark mark on DTSC's history, again predating the current administration, you know, was a public statement made by a top DTSC, somebody in leadership -- I don't know who it was. It was an anonymous quote. But it was talking about DTSC's role as -- in enforcement, and the statement was made that DTSC's role is to make compliance easy and economic, because there -- the fear that -- you know, reading behind -- between the lines -- was that if -- if you put hazardous waste facilities out of business because you're going against -- going against them, you're levying all these fines, or shutting them down, there won't be sufficient capacity, and then there will be illegal disposal.

So that was wrong headed. That's wrong headed. I understand the concern, but DTSC's job is not to make compliance easy and economic to the hazardous waste industry. It is meant to -- meant to enforce and regulate.

So, you know, DTSC does, you know, have to figure out how -- how to ensure that it's not short-changing one of its programs to benefit the other. And I would even go so far as to say DTSC has a minimal -- a lesser role in ensuring capacity, and that we really, as a State, need to
do some statewide hazardous waste management planning to
look at what we produce, and what we need, because until
we do that analysis, we're flying blind.

Another really intractable issue is this idea of
instate versus out-of-state disposal. This is related to
the capacity issue. The question there is what is
California's responsibility to dispose and manage its own
waste? I mean, I think the knee-jerk reaction is of
course. You know, it is unethical for us to ship our
hazardous waste out of California boundaries.

That becomes even maybe more so when you realize
that California has stricter hazardous waste
characterization laws, whereby when you leave California
borders, some of that waste becomes -- you know, we
have -- we have California State waste classification that
must go to a hazardous waste facility. Whereas, in
Arizona or Nevada, it could go to a municipal landfill.
That's concerning. That is concerning.

But when we talk about California managing its
own waste, that's not true. California -- the residents
of Kettleman City and the residents of Buttonwillow are --
you know, are facing 100 percent of the burden of
California's waste disposal -- hazardous waste disposal.
We're putting the burden of the entire State on these two
small low-income communities.
So, you know, it's not an argument that I think is a fair one. You know, if we had -- if we had everybody sharing in the burden of our lifestyles, of our usage of these materials, and our economic benefit as a State, you know, that's a fair argument. But to say that those two communities should bear the entire State's waste, so it doesn't go to Arizona and Nevada, I don't think that's true. There's got to be another solution. There's got to be another way.

The other intractable issue facing DTSC is I just talked about it. It's right now there are a few communities in California, some of the -- that are most overburdened by a lot of different polluting sources that are taking California's burden. Does that mean that we should open up new facilities? Does that mean that we should share the burden across -- across the State, and so that would necessitate us opening new hazardous waste facilities?

I don't have the answer to that. I know that's an issue. I know that's an issue.

And then finally the last intractable conflict is right now, over half -- I think, over 60 percent of California's hazardous waste is contaminated soil. Contaminated soil is coming from EJ communities that have dealt with the legacy of industrial pollution. These are
the communities that are contaminated living on top of hazardous waste sites, not facilities, sites, clean-up sites, remediation sites.

So this soil is contaminating communities. And it's being dug up from one vulnerable community and shipped to another vulnerable community in Kettleman City or Buttonwillow. So if we are to talk about, well, we -- the answers, we need to, you know, just reduce the amount of hazardous waste we generate, which is one of DTSC's long -- I don't know, proposals, programs, goals, promises, 50 percent reduction of hazardous waste, how do we do that without overburdening the clean-up communities? I don't know. I mean, I'm working on it on the Hazardous Waste Reduction Panel. We're work -- we're looking at that issue. So this is complex stuff. This is complex stuff, but we have an opportunity right now with SB 673 where we can recognize -- should I? --o0o--

MS. BROSTROM: Well, we can take on some of this. You know, we can take on what is California's role, what is DTSC's role in stopping this practice or preventing this practice of targeting the least, or the most vulnerable, among us from having to bear the entire burden of our hazardous waste management.

So these are just some general principles, you
know, that I would ask DTSC to consider when looking at what to do with 673, is to recognize that it has a duty to remedy the past processes that have led us to where we are today.

And these may -- these have resulted from racial animus in the past. You know, or over even if they didn't, even if it was just poor land-use planning, these things that happen in California's past are continuing to have a impact on our present and future communities, and we need to take strong action to rectify those.

Another, you know, kind of principle is just the recognition, you know, that local decision making bodies they are not experts on hazardous waste risk. And yet, we're allowing them to pick the locations of all of our hazardous waste facilities. That's what I'm told. That's what I'm told by DTSC is we're hands off when it comes to location. That's not appropriate, you know. This -- you know, the local -- the land use -- you know, the local planning commission they don't understand the risks, the assessments and what that entails?

You overlay that with these are political bodies being asked to make very decisions that impact health, and also recognize that there are conflicts of interest. You know, California has a law where your local county, if you host a hazardous waste landfill facility, you get 10
percent of those proceeds.

That's a huge economic incentive to approve hazardous waste landfills, despite any risks that they may pose to the community. So DTSC does have a role in looking at location, because it is a health and hazardous waste -- hazardous risk based decision, and is not appropriate for land-use deci -- land-use officials to be making those types of decisions.

And this is probably -- this is key. As a State, we need to recognize that there is a point, there is a point where the State must decide that it is not appropriate to site a hazardous waste facility in a certain location. There has to be a point.

And that -- you know, I think that will be easier for us to make that determination for new facilities coming in. It's easier to prevent a facility. But there's a reason why hazardous waste facilities need to renew their permit every 10 years. It's this recognition that this is a dangerous land use, that things change, that different land uses come in, there's moving -- there's people moving in, and that we need to be making continual decisions to make sure that we're protecting public health.

And so even for existing facilities, there is a point where we have to say this is no longer an
appropriate land use in this location.

And I understand the economics of it. I understand that it's difficult to be that person to say that. But 673, there needs to be a mark, there needs to be a point at which this is no longer acceptable. And we have a benchmark in Exide. That was not a facility that should be located there. That facility should not have existed as long as it did. So we do know that there is a point.

So in addition to that point, you know, there's also -- there's a lot of other things that 673 can do, you know, in terms of additional mitigation, additional conditions, additional public processes. There are other things we can do to enhance those decisions, where perhaps a permit denial is not necessary. Permit suspensions should be used more. Permit conditions, extra enhancements for these communities also should be addressed in 673.

And finally, and this is to get back to Martha's point, and I mentioned it earlier on, is California was required in the 1990s to do a statewide hazardous waste management plan in conjunction with all of the counties of the State, and update that every three years. It has never been done. This is the place where we need to look at how much hazardous waste is being produced, what types,
what types of disposal, treatment, and storage facilities do we need and where should they be located? And it was never done. And it's not too late.

Without this analysis, we can't be making good decisions on permitting. So as a first step, we need to fix -- finish that document. We need to -- so we have better information upon which to judge this. And then we really need to move back to pollution prevention. You know, in the -- in 2012, DTSC discontinued its funding for pollution prevention. That was a huge mistake.

Without reducing the total amount of hazardous waste -- and I'm not talking about the contaminated soil. I'm talking about the other big chunk. You know, we will continue to have these intractable problems, so we need to move -- we need to move toward bigger picture thinking, reducing the total amount, we need to know how many facilities we need, and we need to make sure that we're protecting communities of color who have borne this burden for too long.

Thank you.

(Applause.)

MS. BROSTROM: Questions or...

DTSC DIRECTOR LEE: Are there any questions for Ingrid or Martha?

Thank you, both.
We're going to hear a different perspective now. We have Ms. Janet Whittick from the California Council for Environmental and Economic Balance. She is the Policy and Communications Director for CCEEB. And CCEEB is a non-partisan, nonprofit coalition founded in 1973 by the late Governor Pat Brown. And they represent perspectives of business, labor, and public leaders.

Janet currently focuses on cross-media and multi-media environmental impacts with a particular focus on air quality, climate change, and energy policies. She's worked with a diverse range of nonprofit and public interest organizations over the years, including the statewide Flex Your Power campaign, the California Environmental Dialogue, the business energy coalition, which is a cutting edge demand response program, and the University of California, San Francisco, and Hmong American Community Incorporated.

She's an honors graduate from UC San Diego, and serves on boards of the Multicultural Institute and Rivers for Change. And I will add that I've known Janet for many years working with her on a number of air quality and cumulative impacts and toxic risk related issues, when I was working in the air world. And I'm very happy to have her here today.

Janet.
(Thereupon an overhead presentation was
Presented as follows.)

MS. WHITTICK: Thank you, Director Lee. And, you
know, I really want to thank all of the speakers so far
today. There's been almost everything that I've agreed
with. And the challenges that were laid out, both
earlier, but in particular with the last two speakers, you
know, every time I listen to you guys speak, I always come
away pretty overwhelmed with the challenges ahead of us.
Grateful to have people who are bright and talented
working on those issues, but again, pretty overwhelmed,
and trying to think through then how does an organization
like mine and the people I work with, what can we bring to
the table, knowing, you know, that we are industry?

So just maybe as a little bit of background,
CCEEB, the California Council for Environmental and
Economic Balance, we're a non-partisan, nonprofit
coalition of business, labor, and public leaders. But we
do represent major sources of pollution. You know, it's
the public and private utilities, the water agencies, the
refineries, the railroads aerospace and other
manufacturers, telecommunications, entertainment.

These are the facilities in California with very
large industrial physical footprints. And they're also
very much -- these are sectors responsible for a lot of
the essential public services and large scale infrastructure projects in California.

You know, and CCEEB has been part of the conversation around environmental justice at CalEPA since the mid-1990s. And I think we're one of the few groups, representing industry and businesses that have tried to be at the table. And, in part, that can make us very unpopular, because we're willing to try to present a different perspective. But we feel it's very important to be there.

And I should also say that, you know, a lot of the comments that I'll make today, they're really my reflections and my experiences as I've tried to represent this coalition in issues like these. And there are a lot of challenges.

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MS. WHITTICK: So challenges, actually. I've tried to think through some of these not so much as challenges, but then what are the key questions. And Ingrid and Martha laid out a number of really hard to tackle intractable questions. And, I think, from my perspective, he have those as well.

One of the big things that was touched on earlier by the Agency speakers is that we don't really have a way to quantify cumulative impacts the same we do when we're
looking at a single source or a single piece of equipment. And there is no real method right now for cumulative risk assessment.

From a business perspective, we think about things like proportionality. We say that a lot. And so if I'm the cause of the problem, what is the effect that I'm causing, and what is my contribution? When we're talking about a cumulative problem, what does my one facility, or my one piece of equipment, what is the contribution to the overall effect? And how do I mitigate for the impacts I'm having, especially if I can't measure them, and a lot of the other drivers are outside of my direct control.

Business will also tell you about uncertainty. We don't like uncertainty, and that uncertainty will discourage projects and investments that could, in fact, modernize facilities, reduce exposures, and improve efficiencies. If you have a facility, and you're afraid to open up your permits because they're going to get opposed, you don't think you're actually going to get through a more robust regulatory process, do you, in fact, end up in a situation where you're going to run your equipment and your facility until the equipment fails and you can't go any further, when you've just foregone an opportunity to try to do something better, and to keep the
economic development or keep the jobs with your facility and improve your facility at the same time?

And kind of reflecting earlier too on the whole risk assessment issue. I think business, along with communities, have long been asking like give us a cumulative risk assessment, like if -- you know, give us the certainty, give us the method so we can run the numbers, because we like a bright clear line. Can we invest, can we not invest? Just let us figure out a -- tell us what to do.

And I think when I first started this work, personally, I was one of the people asking come on, OEHHA, give me a cumulative risk assessment. And after having been in it now for, you know, more than a dozen years, I've finally stepped away and realized what a daunting task it was, and how naive in some ways it was to be asking for that bright clear line, so that we could just get on with our business models.

And if you can't quantify it then, what are the analytic tools everybody should be using to make these decisions? Because it's true, you can't just not make the decision, and you have to use the best science available.

So what will be the decision making tools that will protect communities and individuals while still giving businesses that investment certainly or clarity,
and also allowing the California economy to transform and rebuild critical infrastructure that we all know needs to happen?

So more and more lately I've been trying to think in terms of, if I can't measure it, how then can I think through what is a meaningful benefit that we can get out of the system and the decisions that we're making?

And I think as we saw with CalEnviroScreen too, there's now been this shift to start to look at indicators of vulnerability beyond environmental exposures, so that at least we're trying to grapple with new data and understanding of public health. But that's tricky too, because when we talk about vulnerability, we're not just talking about vulnerability to environmental exposures, we're talking about vulnerability to all health drivers. And so things like, you know, wealth and poverty, which we know really are some of the main drivers of health outcomes, access to health care, psychosocial stress, our built environment.

Not only are these indicators of vulnerability to environmental exposures, they are independent drivers of health outcomes in and of themselves. And also when we look at the vulnerability indicators, they don't necessarily tell us that a disproportionate environmental exposure has taken place, but it also doesn't mean that
one hasn't taken place. It's really hard to understand what to do with the new data.

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MS. WHITTICK: So this is CalEnviroScreen and this is actually Version 2.0 that I drew on here. And we know that there's an association between asthma and PM2.5. But when we look at the data that we have, we don't see the correlation that one would expect. You know, we really don't see the picture as straightforward as we would think. And so we have to ask ourselves why? So first of all, we can see by these maps and by the data we're given, that you can't actually demonstrate a causal relationship just looking at these maps. And when we ask ourselves why, it's because the data we have doesn't give us that local scale granularity. It's not equivalent to a community risk assessment, or a project risk assessment.

And it doesn't either -- and but -- you know, I also want to be clear, because I've shown this slide once before and it was very provocative to people. This isn't meant to de-bunk those studies either that show the relationship between PM2.5 and asthma, it's just saying that sometimes our data sets right now are incomplete and we don't have the right -- we don't have all the tools that we need.

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MS. WHITTICK: We start to look at the new data sets. So for cardiovascular disease, we see the same problem is we're not clearly seeing the correlations that one would expect with these data sets.

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MS. WHITTICK: So now for industry too, we think a lot about exposure versus vulnerability. And we're being asked now to consider new complexities around vulnerability. We often sit back and say, well, what problem are we trying to solve, and what tools are we going to need to solve those problems?

So within vulnerability, I often think of this is the disadvantaged communities, regardless of there environmental burden. And then you also have other communities where you know that there are environmental burdens that are probably disproportionate. CalEnviroScreen is showing you that subset, where vulnerability and environmental burden are overlapping, and you want to prioritize those communities.

If we're just looking at the environmental toolkit though, we're talking about permits, controls on equipment and operations, on-site and off-site mitigations, fees, penalties, incentives. There's kind of a limit to how far you can go to address vulnerability using that toolkit.
And you also end up with as we improve
environmental exposures, and environmental conditions, you
kind of end up with diminishing rushes. So an example
would be that with the gas tax, you know, rely on that for
roads and for even a lot of our air quality programs. As
we electrify the vehicle fleet, we run out of gas tax
money. So we've done a great, job but now all of a sudden
it's disrupted some of our financial structures.

With vulnerability and looking at trying to
address what's happening in disadvantaged communities, you
know, as industry, we want to do our fair share, and we
want to do what's needed to be part of the solution, but
also we want to see a bigger toolkit in play. We're
talking about education, affordable housing, healthy
foods, jobs and workforce development, transportation,
land use, recreation, quality of life. These are all
things -- these are all different levers that can be used
to go after vulnerability, and to try to help drive both
public and private investments into communities where we
think they really do lack resources.

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MS. WHITTICK: So this will be probably another
very provocative slide for people. This is -- again, this
is based on CalEnviroScreen version 2.0. And this was
analysis that OEHHA had done to kind of map out on -- you
have pollution burden scores on one axis, and population
characteristic scores on the other axis.

So I kind of pulled out two different L.A. county
census tracts. And let's say community A, it's kind of
mid-level CalEnviroScreen total score. And what we see
from a pollution burden score, it's pretty much one of the
most polluted communities. From an environmental burden
score point of view, it's in the 99.7 percentile. But
from a population burden score, it's a wealthy white
community, quite frankly. And so CalEnviroScreen just
ranks it down kind of in the middle of the State.

We see another community in L.A. County where
it's kind of, you know, you can say two-thirds of the
State maybe has some higher pollution burden. But in
terms of the socioeconomic and the population
characteristics, it's pretty much at the top of the list.
And it's coming up -- you know, it's going to score in the
top 20 percent of CalEnviroScreen communities.

So then when we ask ourselves from a policy
making point of view where would we want to site a new
project? You know, if we want to distribute the burden of
projects across California and not burden two communities
in general or, you know, not pick on the disadvantaged
communities all the time, if we look at it from an
environmental lens, you know, community A is looking
pretty good, like let's site it there, but it has a really
high environmental burden already.

If we look at it from an environmental burden
point of view, well, then why don't we go to community B,
but we know that doesn't make any sense, because they're
very vulnerable.

And again, this is not -- I don't have a solution
to this. I just point out that the policy questions are
very challenging, and it calls upon all of us to kind of
think through a little bit what is being asked.

And the other thing, does a no net increase
policy should that apply to either of these communities,
to both of the communities, and what will we get out of a
policy like that?

You know, and for CCEEB, what we look at with
CalEnviroScreen is that it alone and those scores alone
should not be the sole basis for decision making, but we
would agree wholeheartedly that these scores tell us we
should be looking at these communities more closely, and
that we do need the tools to investigate what's actually
happening in the community. It's not about ranking
anymore. We want those community level analytic tools or
measurement tools, so that we can start to make the hard
regulatory decisions, and the hard policy decisions, and
that we can better understand the trade-offs.
MS. WHITTICK: And so, yeah, I think probably my whole slide deck is maybe a little provocative and controversial. Where I know I struggle is that as industry, if you mention jobs, it's a buzz word. It's a trigger word. Martha went over that very, very well, and very eloquently. But it's hard for industry, who are the employers, to not be able to talk about jobs, to not care about the job's health connection, and to also recognize that, you know, I'm often in conversations where people are like, well, look at the unemployment rate. It's getting better. You now, we're employing more and more people, so there is no problem. You shouldn't be crying wolf.

And I've also had meetings with decision makers who's told us, point blank, we don't worry -- we don't want your jobs. Google is going to hire everybody. Google is going to take care of the problem. And that's a hard conversation to be a part of.

When we start looking at some of the data though, and we do want people to think more carefully about how unemployment data isn't the whole story. You have to look at the shifts among economic sectors, and how that's going to affect opportunities among different demographic groups and different communities.
I think a lot of this too reflects back on gentrification and displacement. I mean I live in Oakland and I'm a renter. And so I see it every day in my own life. We're also looking at new -- the lack of affordable housing causing people to have to move further and further away from job centers. And at a certain point, people are commuting longer and longer distances, what is that doing to your environmental goals, in terms of reducing vehicle miles traveled, in terms of greenhouse gases? Are you really going to reach those goals, if you're not thinking about the land use and transportation side of it?

Also, public financing systems. In the Bay Area, as we see wealth getting concentrated, and the cities are being revitalized, what does that do to the tax base? Are you moving all of the low income people away from where your tax centers are, and then further depriving them of public investment in services?

And then there's also just a lot of cultural changes happening. You know, again having lived in San Diego, San Francisco, and now Oakland, you can feel these communities changing almost on a daily basis. And so what does that mean to us as part of the community and our quality of life and how we look at it ourselves?

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MS. WHITTICK: So this one -- this next one, I
have to actually apologize to Jack, because I didn’t know he was going to be here or be presenting today. But I was at -- I was at a board hearing in the Bay Area at the Air District, and I was listening to a presentation from staff talking to their board members. And it was about, you know, a facility in the City of San Jose that is right next to the City of Milpitas. And this one is fun for me, because these are not CCEEB members, so I can pick on somebody, other than my own members. And it's also communities that, for all intents and purposes, really aren't, you know, EJ communities.

But they -- this example kind of hits along the same problems of legacy land use, jurisdictional conflicts, and computing mandates. So the situation is in San Jose, they have this large waste facility. It's solid waste landfill, sewage treatment plant, recycling and material recovery, composting, gas-to-energy facility, and it has solar and wind as well. So it's state of the art. It's everything that we need in California in order to start reaching our State goals of recycling, waste diversion, composting, bioenergy. It's all wholly sited within the City of San Jose, and Santa Clara County.

Again, it's right adjacent to the City of Milpitas, and Alameda County who don't have decision making authority over the facility. And we also know that
the nearby communities, there are thousands of complaints
about this facility, and mainly around odor facilities.
And all those complaints go to Jack and his staff, who
again don't have the land-use authority.

And we're also looking at a legacy land use
issue, in that I was doing a little research on this
facility, because it was so striking to me hearing the
discussion that I had to look into it.

The facility was opened in 1930. The City of
Milpitas was incorporated almost a generation later in
1954. So as in many cases, and many of the organizations
I work with, the industrial facilities and sites were
zoned and cited and built before the communities that were
brought to them. And that's a hard problem to solve then.

So this is a familiar story. We have land use
decisions that co-located, you know, people in industry,
you know, chicken and the egg, which came first, but now
they're together. And so this does go well beyond
compliance and enforcement and rules and regulations. We
also have competing environmental objectives where we're
asking these industries and businesses to do a lot, and to
transform and to built a new infrastructure for the State,
but you're not really supposed to open up your permits,
and you can't expand, and every time you do it becomes,
very, very controversial.
And we see -- I don't want to just pick on a facility that I don't represent. We see this in a number of different areas and situations. One that CCEEB worked on for many, many years was with the State Water Board and the phase-out of the once-through cooling generation facilities along the coast.

And we did this to try to protect marine and aquatic life. There were impacts shown, and so Water Board came up with a very elaborate schedule to try to repower or retire these facilities.

Meanwhile, you know, decisions were made to close the State's two nuclear facilities. And we also want to have our renewable energy backed up with reliable power that still for the time being needs to be fossil fueled.

And so as these facilities are gearing up to repower, and they have to open up their facilities, and change their operations, local communities are like, no, we actually don't want you here anymore. We've had to take your impacts all along. And even if you are able to repower, you're actually trading some of your marine impacts for air quality impacts. So for Ian in South Coast, they're going to have to look at, can they really site these new cooling tours that are going to replace the once-through cooling facilities.

And so that's the problem then of competing
mandates and environmental goals all coming together, and then trying to balance the environmental and community interest with the business interest of I just kind of want to keep my business operating.

And that kind of got me to this, so do we invest in making these facilities cleaner and reducing exposures, or do we have to start to have the conversation about planned retreat. And if you know the facilities are getting cleaner, does that make sense to go down the conversation of planned retreat, and do we mean that the communities need to move or the facilities need to move?

And I think, you know, on each -- each of us in each situation may have a different thought. For me, I may have a different thought day-to-day on each situation. And is it really enough to transition or retire industries and businesses, if we aren't going to tackle the land-use transportation and jurisdictional issues that were driving some of these problems to begin with?

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MS. WHITTICK: So for my closing thoughts, you know, the things that I've been trying to think through, we need clear problem identification. What problem are we trying to solve, and what is your toolkit for tackling that? We definitely want to see more analytic tools that can help us understand what's happening at that local or
So beyond CalEnviroScreen, what happens when we need to make a permit decision or a siting decision. We need to recognize progress made. We have made incredible strides. And I -- I too, when I stumbled across the Cerrell report, it was -- it's a very hard read. And I'd like to think that since 1984 when it was -- I think that's the year it was published, that we are thinking differently and we are making progress, and that all of our hard work on air quality and other impacts that we are making progress.

As industry, it can be hard working on solutions, only to be told that's never good enough and we -- actually, we don't want your jobs or your industry here anyways.

Sometimes it does help to recognize that we're people at the table too, and we need to go further, but it does sometimes help to stop and reflect where we've come from. We need to be honest about the competing goals that we're asking of industry and businesses. And just like we're trying to break down silos between the different media, you know, air, water, climate, waste, soil, we also need to think holistically about the regulatory approaches, and not have silos among the agencies asking for different things, and not coordinating among
themselves.

And we have to be really honest about the trade-offs that we're going to end up with. And that's both again among media, so water versus climate versus air, but also among the sectors, that as we're transitioning the economy at a statewide level, that there are going to be social, environmental, and economic trade-offs that we should be honest about.

And, you know, just maybe, as a personal closing, being the voice of industry on these topics is very, very hard, and just -- it's -- there's a lot of mistrust. A lot of that is very well placed and comes from a very important historical background, but we are trying to be there at the table. We think that collaboration can lead us to better solutions. And so as CCEEB, and as myself, we're going to keep trying and want to share perspectives.

I don't know how to get to consensus, but I want to keep trying. And if nothing else, I always learn more from all of these forums, and every time I attend. So again, thank you for your inviting me here today and for allowing me to be part of this conversation. I'm very excited about the work that DTSC is doing, and I'm hoping that you build us all the tools that we need.

Okay. Thank you.
DTSC ASSISTANT DIRECTOR MASCAREÑAS: I thank everyone. We have the time set aside right before lunch for public comment. And we had a public comment come in earlier during the presentation, so we want to make sure and read and provide a response to. And then we'll see if there are other public comments from folks in the room, or others that have come in.

We can also provide public comment as we come back from lunch for folks who would prefer to submit their public comment at that time.

So, Allie, if you have it pulled up in front of you, if you could please read the public comment.

MS. HOSTLER: So this comment comes from LaDonna Williams. She asks, "How can South Vallejo and the EJ community use SB 673 and the CalEnviroScreen to prevent the Vallejo City Council from approving or allowing a toxic company, VMT, to put a cement plan being marketed as a clean slag producer less than a quarter of a mile from an elementary school, Grace Patterson Elementary. There's also the city's waste treatment plant, numerous auto dismantling and repairs and other polluters in this very vulnerable health compromised community".

It's a very detailed question. So do you want a copy of it?

DTSC ASSISTANT DIRECTOR MASCAREÑAS: Sure.
So thank you, LaDonna. And for any others who would like to submit a public comment on-line, the email address is permits_hwm@DTSC.ca.gov. So thank you LaDonna for listening to the symposium today. We hope there are others listening who will submit comments as well.

From the presentations earlier, CalEnviroScreen is a tool that is open and accessible that can be used in all local decision making, State decision making, federal decision-making processes. It's information provided, and that we encourage communities across the State to use in their deliberation.

At any local decision making, the specific community experiences and the data presented will be very important to understand as well. I also just want to clarify that these important discussions are leading up to a package of potential rules and regulations to implement SB 673, so there will still be regulatory workshops before moving forward with any regulatory package on issuing new permit criteria for DTSC in particular.

So this is one step in building the conversation, and there's going to be more opportunities. So there's no new regulations being promulgated right now, but it's important with South Vallejo, and other communities that we understand that kinds of decisions that local decision-makers are facing, and how that relates to what
we're putting together as criteria for the State as well. So thank you for sharing that, LaDonna. I'll also offer Rizgar Ghazi is the Chief of Permitting sitting here. For any potentially related DTSC permits on that issue, we can follow up with you directly to see if we can offer information and guidance as well.

Thank you.

Are there any public comments in the -- for folks in the room. You have the option of sharing right now for your public comment, or also when we come back from lunch, because I know that we're pushing into the lunch hour.

I think -- I think folks are ready for lunch.

(Laughter.)

DTSC ASSISTANT DIRECTOR MASCAREÑAS: Thank you very much. We will come back at -- is it 1:15?

Great. We'll come back at 1:15 for lunch. Thank you, everyone, for our fantastic speakers today, this morning. And we'll look forward to the Panel a very interactive discussion this afternoon.

Thank you.

(Off record: 12:20 p.m.)

(Thereupon a lunch break was taken.)
AFTERNOON SESSION
(On record: 1:22 p.m.)

DTSC DIRECTOR LEE: Welcome back from lunch, everyone. We're going to get started with the afternoon program. We have a brief overview of the DTSC's hazardous waste permitting program by Evelia Rodriguez again. And then we'll get into our afternoon panel session with policymakers to talk about future directions we may be able to go to make sure progress on addressing cumulative impacts in communities.

So, Evelia, would you like to come up?

DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER RODRIGUEZ: Welcome back, everybody. I'm going to give everyone just a brief overview of what the permitting program that DTSC manages.

(Thereupon an overhead presentation was Presented as follows.)

DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER RODRIGUEZ: So as to get a picture of how all these other factors and criteria that we need to evaluate may be in -- enveloped and enrolled into it.

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DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER RODRIGUEZ: Our mission statement is for the permitting division is that we protect Californians and the
environment from toxic harm by making timely enforceable
and protective permit decisions for the operation of
hazardous waste facilities in accordance with all
applicable laws, and sound science.

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DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER
RODRIGUEZ: Our core activities require that we review
hazardous waste permit applications, both for new permits,
for permit renewals, for modifications to existing
permits, and emergency Permits. Then we make a permit
decision, which is to approve or deny these applications,
and then we move on to preparing an approved draft permit,
or a draft permit, if we've decided to move forward with
an approval.

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DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER
RODRIGUEZ: This is a graphic representation of the
process. And I know you can't read the little writing, so
we've handed out flow charts. They were available out in
front. But again, the administrative completeness is our
first review, where we ensure that the applicant has
submitted all the required elements of the permit
application.

We then proceed to the technical review, which
then ensures that every hazardous waste management unit
meet the applicable regulatory requirements. We also go through, and if any of those elements are missing data or do not describe the operations in a detail that is necessary, we typically will send them a Notice of Deficiency letter, which would outline to them what is deficient, what are the requirements that we're trying to assess, if they can meet or not, and then when is the response from them due.

The next thing we look at is their financial assurance. We want to ensure the financial solvency of all these facilities that are before us for a permit decision.

Once we've decided that we can make a decision, the two decisions are denial or approval. If we decide to approve it, then we proceed to a draft permit. And here, we draw up what we believe to be the controlling document that will ensure that the facility continues to operate in a manner that is protective of human health and the environment. We have these draft documents, reviewed by our Legal, by Compliance, and sometimes we have it reviewed by other outside agencies.

When we think we've addressed all the issues, we go into a public participation by law we're required to put out our draft permit for 45 days at least. We have been known to put them out for longer, especially if
they're more complex.

A copy of all the supporting documentations are put in a repository nearest to the community affected. And then we have a hearing, where we can again take additional comments. Now, as I lay this all out for you, this is kind of the big overview. We are in the process right now of, what we call, permitting enhancement efforts.

And so when you see some of this, we've layered in additional issues. For instance, we have a requirement now that facilities that are coming in for permits now have to go fee-for-service, as opposed to a flat fee. And as part of that, we then prepare a reimbursement agreement with the facility. So we explain to them all the elements that we're going to be responsible for completing, and there will be a cost estimate.

We also want to engage the community early. And as we've noted that as one of the elements that we have to bring in earlier, public participation. So we're thinking that the best early communication is to have a meeting with the community before the permit is fully even submitted to us. And again, we're going to try to assess the interests of the community and try to bring them in.

When all of these things are taken into account, we will then go to a -- an assessment of whether we go do
the final permit. And even before we go to a final permit, there's another opportunity for permit denial, if there is adequate concerns about the operation of a facility.

And then we go to final permit. And in here is our final supporting documentation, a statement of basis, as to why we feel this is the appropriate regulatory decision.

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DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER

RODRIGUEZ: When we look at permitting, DTSC is only responsible for the top two tiers of the five hazardous waste permit tiers allowed in California. Full permit and standardized permits are issued by DTSC. And all the lower tiers are issued by our Certified Unified Program Agencies, which are the local environmental agencies like San Diego County, or some fire departments.

Now the difference between the two -- the two -- the differences between a CUPA permit and a DTSC permit is that the CUPA permits tend to be more simple. They are all issued to the generators of the waste for on-site treatment. The minute hazardous waste is generated and sent off-site, it is elevated to either a standardized permit or a full permit. Standardized permits being typically the California or the non-RCRA waste, and the
full RCRA permits being what's comparable to a federal Permit.

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DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER RODRIGUEZ: Now, the types of permits we issue are operating permits, treatment and storage facilities. Post-closure permits. Those are for waste that are left in place, that we have to issue a permit to allow them to either treat on-site contamination or for monitoring to make sure that the waste is being contained.

We also do permit modifications, if they have a change of ownership, if they have new waste streams that they want to take on, or any other -- or even changing a monitoring well. Those require that DTSC review these modifications and make a permit issuance.

There's also emergency permits. Emergency permits are very short term. They're 30 days, and they tend to be exactly what the name implies. These are typically issued for like fire departments to deal with explosives or fire departments to issue -- to deal with unstable fireworks.

And the last type of permit is a closure. Now, a closure permit is issued to a facility that may have been operating and has decided not to proceed with an operating permit. So we just still need to close the facility.
They cannot just walk away. We need to ensure that everything is closed according to our requirements.

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DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER

RODRIGUEZ: Now, requirements. We have a very broad set of requirements. So not only is it the State hazardous waste laws, which are more extensive than the federal laws, but it's the federal RCRA, the Resource Conservation and Recycling Act, the California Environmental Quality Act requires that every discretionary decision we make be subject to an environmental analysis of 18 resources.

Financial -- facility financial solvency. We want to make sure that these entities will be able to take care of any contaminants left behind, any closure requirements that they have, and so that the taxpayers of the State of California are not stuck with those costs.

Environmental justice issues, oversight of the facility, transparency with the community, and public participation requirements, protection of air and water quality and local land use are just some of the requirements that we look at when we review these permits.

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DTSC SENIOR HAZARDOUS SUBSTANCES ENGINEER

RODRIGUEZ: So what is a permit? At the end of the day, what does this permit look like?
Well, it's permission for these hazardous waste facilities related to all their hazardous waste activities. It's an allowance to treat, store, transfer, and dispose of hazardous waste. Now, California, unlike the Feds, also regulate transfer. So if you transfer waste from a tank into a drum, or so forth, and these activities happen throughout a facility, it's just one of the ways we're different from the federal permit.

It's a very comprehensive description of those operations. We need to make sure that they meet -- that they're being done meeting operational constraints that are protective. When you look at our Title 22 requirements, they are written to be protective of human health. And I see them as the minimum requirements for a facility to operate by.

Closure and financial information is included in the permits. And, in fact, if there's any corrective action, that is also outlined in these permits. They include enforceable terms and conditions. If there's anything special over and above what is required in regs, they're written into these requirements. And they're valid for up to 10 years, and they continue upon the timely submittal of a new application, which is typically six months before the pre -- before it expires.

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RODRIGUEZ: Our universe of California permitted facilities include 113 facilities with 121 hazardous waste permits. Some of these facilities have two permits. You could have a post-closure facility with a treatment or a storage permit. You could have a standardized hermit, a landfill that also has a treatment. So there's some double counting here, and that's why we split it out, 121 permits, but only 113 facilities.

And that is the overview. Does anyone have any questions?

(Appause.)

DTSC DIRECTOR LEE: Thank you, Evelia for the Reader's Digest of federal -- of hazardous waste facility permitting.

I'm going to now ask my partner agencies to come up and join me as Corey is making sure we have all of the tent cards on the table.

So I'm going to start reading some bios. Please just make your way up. We have with us today Ms. Cynthia Marvin, she is Chief of the Transportation and Toxics Division at the California Air Resources Board. This division is currently leading the development of the California Sustainable Freight Initiative, implementing existing diesel rules and Prop 1B incentives for cleaner
ports and railyards, updating the State's air toxics program to characterize and reduce the health risk from stationary and mobile sources, and guiding multiple State agencies responsible for investing over $2 billion annually in cap-and-trade auction proceeds in transportation, energy, and natural resources projects that reduce greenhouse gases and maximize co-benefits for disadvantaged communities.

Ms. Marvin's prior division assignment also included climate change policy and planning, low carbon fuels and energy issues. Her background includes 25 years of experience with the Air Resources Board managing California's State Implementation Plans, developing ARB's clean air strategy for mobile sources, fuels, and consumer products, and drafting air toxics regulations to protect public health.

I would also add that I have known Cynthia for probably all of her 25 years that she's been at ARB as we've worked on a number of air and air toxics issues. And I'm really happy to have her joining us.

We also have Mr. Brian Leahy. He was appointed as Director of the Department of Pesticide Regulation by Governor Brown on February 2nd of 2012. Before joining DPR, Mr. Leahy served as Assistant Director for the Division of Land Resource Protection in the California
Department of Conservation for five years. His focus was the potential for maximizing benefits from open space management, including farm land management to improve public health, transportation, biodiversity, climate change adaptation, and natural resources.

He has held many leadership roles in agriculture, and has a strong history of working collaboratively with environmental organizations, agricultural groups, trade associations, local government officials, and other stakeholders.

We also have with us on the panel John Faust, who gave us our demonstration of CalEnviroScreen earlier today.

Next to Mr. Faust, we have Ms. Shahla Farahnak. She's the Assistant Director for State Water Resources Control Board. As Chief of the Groundwater Branch, she is responsible for and oversees the groundwater protection, recycled water, underground storage tank, oil and gas monitoring, and site clean-up programs. So she has some overlap with the work that DTSC also does. And we do a lot to try to coordinate between DTSC's clean-up efforts and the Water Board's clean-up efforts.

Ms. Farahnak has been with the State Water Board for over 25 years working in various program areas, including the underground storage tank and funding
Throughout her career, she's been active in engaging, coordinating, and building partnerships with various local, State, and federal agencies, and diverse stakeholder groups for information and data sharing, developing technical standards, policies and permits, and funding criteria and recommendations.

She holds a Master's Degree in chemical engineering from the University of California, Davis, and is a Registered Professional Engineer.

Losing myself in my paperwork here.

From the federal government, we have Ms. Deldi Reyes. She's the Environmental Justice Coordinator for U.S. EPA Region 9. Deldi received her Bachelor's of Science degree in biology from Texas Wesleyan University, and her Master's of Science and Environmental Science from Oklahoma State University.

Her career with the U.S. EPA includes Environmental Justice Coordinator for Region 9, Manager in the Office of Chemical Safety and Pollution Prevention, Air Toxics Enforcement Coordinator, Environmental Justice Training Coordinator, and she also served as an inspector for the National -- NPDES -- and I'm blanking on what the acronym is for, but it has to do with stormwater runoff.

I did not give Jack Broadbent a fair introduction.
earlier when I put him on the spot and asked him to pinch hit, so I'm going to -- going to go ahead and do that now.

Jack is the Chief Executive Officer and Air Pollution Control Officer for the Bay Area Air Quality Management District. Under his direction, the air district strives to protect healthy breathing environment for every resident in the nine county San Francisco Bay Area Region.

Jack joined the air district after serving as the Air Division Director at U.S. EPA Region 9, where he was responsible for overseeing implementation of the Clean Air Act, as well as Indoor Air Quality and Radiation Programs for the Pacific Southwest Region of the United States.

Before serving at U.S. EPA, Jack served as the Deputy Executive Officer for the South Coast Air Quality Management District, as well as their Director of Planning. While at the South Coast Air District, Jack directed the development of a number of landmark programs that contributed to significant improvements in air quality in the Los Angeles region.

During the 1980s, he also served as the corporate environmental programs manager for the largest private employer in California Hughes Aircraft Company. He holds a Master's Degree in Environmental Administration, and a Bachelor's of Science degree in Environmental Science both
from the University of California at Riverside.

And then rounding out our panel, we have Mr. Howard Levenson -- sorry, Dr. Howard Levenson. He's CalRecycle's Deputy Director for Materials Management and Local Assistance. He previously held the position of Assistant Director of the former California Integrated Waste Management Board, and then CalRecycle's Materials Management and Local Assistance Program.

For four years Dr. Levenson served as Deputy Director of the Board's Permitting and Enforcement Division, and prior to that position was supervisor of the Board's Organic Materials Management Section. From 1991 to 1998, Dr. Levenson served as an advisor to the California Integrated Waste Management Board member Paul Relis.

Prior to his service at the Board, Dr. Levenson worked as a Senior Associate in the Environment Program of the Office of Technology Assessment, a non-partisan analytic support agency of the U.S. Congress. While there, he worked on a range of environmental issues, including marine pollution, groundwater pollution, climate change, and municipal and industrial solid waste management. He was the primary author of OTA's 1989 assessment Facing America's Trash: What's Next for Municipal Solid Waste.
I am looking forward to having this discussion with our panel. Our goal this afternoon is to talk a little bit about what each of us are doing in our individual agencies, and what it is that we think we can do going forward to try to improve the tools that we have, and the decisions that we make around cumulative impacts and community vulnerability.

So I'd like to start off by posing a question to the group, and what I would like to start off with is what opportunities are there that we could explore to partner and better coordinate the data and analyses that we already have in our individual agencies, boards, and departments in order to improve our understanding of cumulative impacts?

Cynthia do you want to start us off.

ARB TRANSPORTATION & TOXICS DIVISION CHIEF MARVIN: Thank you, Barbara. And I appreciate the long version of the introduction.

(Laughter.)

ARB TRANSPORTATION & TOXICS DIVISION CHIEF MARVIN: I don't usually hear all that.

So it's my pleasure to be here today and talk a little bit about what ARB brings to the table. And I think many of you who know us understand that we primarily regulate on a statewide basis rather than a facility
specific basis. So cumulative impacts as it relates to a particular facility is a reasonably new challenge for us. It's something that the legislature has directed us to be more aware of, and to be more active on. It's certainly something that our Environmental Justice Advisory Committee encourages us very strongly to pay attention to.

So I would characterize ARB as being in the process of moving from very much a statewide perspective, not just to a regional, but to a local perspective, and considering individual facilities.

In terms of responding to Barbara's question about partnering, one of the main things that I think we can offer to DTSC is our EJSM model. It is similar to CalEnviroScreen, but it has a much longer list of indicators that capture the different types of air pollution facilities around the State. It also has more information on sensitive populations, and specifically schools, child care facilities, things like that, that might be a good reference as you're looking at individual facilities in the permitting process to calibrate what else is nearby in a fairly fast and easy fashion.

So I think that's probably the main data resource that we would bring. The other thing that I would offer is that as ARB is taking a fresh look at its own air toxics work, we recognize that there's a number of
hazardous waste problems in the State that were originally created by air emissions, for example, metals that have deposited. And so that is something that we need to be more aware of, and we need to make a higher priority on those sources that not only create ambient air quality -- or ambient air pollution, but also create deposition that then becomes a problem for a long time in people's yards and in other sources, such that it becomes a waste to be cleaned up.

So I didn't say that very well, but it's basically recognizing that the best place to capture a problem is before it becomes a problem. And so we're trying to increase our focus on that angle.

DPR DIRECTOR LEAHY: Okay. So from the world of pesticide, we are a data rich institution. I think we start from -- created mega data as I think.

And so the use of that data is really important. You know, I mean CalEnviroScreen took a look at that, uses that a lot. We very much enjoy working with other departments. I think we have a history of working with you all, Lompoc and Kettleman City, Parlier. So -- and every time we do that, we learn. That's what's been really interesting.

I was looking at some of the history. And, you know, from what we learned trying to help you all, you
know, we have really got a much more robust air monitoring program. Many years ago -- it wasn't that long ago for some of us, the eighties, you know, there was a real problem with one of the pesticides used that was not breaking down and getting into groundwater, so it became your problem.

But our response was, with the help of the legislature, to create a basically a groundwater protection program. So now, anything that comes into the State is screened to figure out how to ensure that it basically breaks down, doesn't get beyond the root zone, so that prevention is really important. And, you know, that's -- that's the key is preventing things from moving off site. And so that's one of the ways we can help you.

But the biggest way is simply dialogue. You ask us, we sit down, we work together with our other sister departments, and, you know, we all learn from that. So that's our commitment.

DR. FAUST: All right. Thank you. So if it wasn't really clear from my presentation about the CalEnviroScreen earlier, you know, we rely on data that come to us from other entities. We don't collect data ourselves, but we essentially evaluate the data that come to us from other boards and departments, from the federal government, from the Department of Public Health.
So we have an active role in working with the boards and departments, and these other entities to understand the data, make sure we're getting it right, and are appropriately characterizing it. So, you know, while we don't have a specific schedule for the next version of CalEnviroScreen, we have been doing it every couple years, and we expect, you know, in the next few years to continue working with the boards and departments to continue to update and understand the data.

You know, we have had some very productive collaborations, you know, even U.S. EPA they've helped us to better understand air pollution issues along the U.S./Mexico border. And, you know, we've had a lot of opportunities to better understand conditions there.

I would also support Cynthia's comment about some of these additional data sources that are available. You know, to us, for example, the locations of sensitive receptors like schools and so forth, that might provide better information about local conditions. You know, CalEnviroScreen has made a choice to evaluate things at a census tract scale, which represents an area, and sort of is, as we're thinking about this cumulative impact issue, you know, around facilities, we're going to be needing to look a bit closer at sort of where these things are in location to these facilities, where census tract data
might not necessarily be the most -- most useful.

So I think actually with that, I might move it along.

SWRCB ASSISTANT DEPUTY DIRECTOR FARAHNAK: Good afternoon. I'd like to thank Barbara Lee first and her staff for inviting the Water Board to this symposium, and we look forward to partnering and collaborating with DTSC as you're moving forward with implementing both programmatic and data elements of SB 673.

The presentations today were very informative. I'd like to congratulate your staff for such a great agenda also informative speakers.

In terms of, you know, the cumulative impacts, I wanted to start just kind of continuing Water Board's commitment to stakeholder engagement and transparency. Obviously, as part of CEQA process, all our policies and permits were subject to CEQA.

So besides that analysis, we also have heavily focus on doing outreach to disadvantaged communities, tribal communities, and engaging and understanding the EJ issues and communities. And our Office of Public Participation's Director Gita Kapahi is lead for statewide efforts, and very often partners with U.S. EPA and other agencies in dealing with the statewide EJ issues. And I think some of the examples were mentioned this morning in
terms of like once-through cooling power systems.

With respect to data, you know, we are committed. And we understand that in order to be a transparent organization, you need to have transparent data. So we have many data systems. We have a groundwater quality, surface water quality data, drinking water data systems. We have our 303(d) listing data.

So all of our information we're in a fortunate position that we do share like EnviroScreen actually taps into our data systems and provides that information.

Also, we pull the information with other -- from other sources, like the information that DTSC gets from responsible parties for hazardous site clean-ups, that gets into our system.

So, on one example, I brought a few kind of handouts, is that we are -- we contribute data to California Environmental Data Exchange Network, where they actually have this portal, which you can go and say what's my water quality in my area. It's called water quality portal. And the reason I mentioned that as an example, is that as we're looking at our data systems and assessment tools, it's important to have the user in mind. We're looking at systems that an average person can get in and get the information.

And we're also looking at complex analysis that,
you know, systems like EnviroScreen needs to do that. So I think continued collaboration, training our staff to understand what each data system has, and how we can integrate our resources to better those data systems, is what I would recommend.

The other thing that maybe it's more specific, Barbara, is that while we pull the DTSC's site clean-up information, that information currently is in a PDF format. We're really striving for our systems to have live data. So if you're doing any analysis, you don't have live data, it's impossible to analyze it. So we're looking forward to see how we can help you overcome. We do have regulatory authority to require electronic submittal of the data. And many of the same laboratories submit data to DTSC for site clean-ups as well.

So I would offer our staff and our expertise and resources to continue working with you and OEHHA and other agencies to better our systems, so that we can have -- avoid duplication, have automatic sharing and upload and download of the data to minimize staff resources.

US EPA REGION 9 EJ COORDINATOR REYES: Thank you, Director Lee and also thank you to Ana Mascareñas for inviting U.S. EPA to be part of this day and this panel. I appreciate it very much.

In terms of opportunities that I see as an
observer on this tissue that are -- could be relevant here, one thing that EPA could do, and actually has done at the national level from one of our offices in our Office of Land and Emergency Management is to look across the country at every State universe of hazard -- of permitted hazardous waste facilities. So again, the top two tier permits that Evelia talked about in her presentation, and to really compare each of the states in terms of the numbers of those types of facilities, the nature of the waste, the way that the waste is disposed of, also some information, of course, about the generators of the waste. So that could be something we could share, if that could be useful.

Then in terms of EJSCREEN, there's been all -- so much talk today about CalEnviroScreen. EJSCREEN is the federal version of a cumulative impact screening tool, even though EPA does not really refer to it as such. It is much more limited than CalEnviroScreen, in part because we had to find nationally available and nationally consistent data. And so that automatically limits the number of indicators you can put in it, and it also does not include health data.

But it's very interesting to see all of the great work that's happening with CalEnviroScreen. And much of which California is doing, we are actually attempting to
try to, you know, pursue similar types of improvement for
EJSCREEN. As an example EJSCREEN right now only includes
hazardous waste TSD facilities, and we are now trying to
work to include the generators as well, because that's a
big component of potential risk.

And then the other thing I would say about this
question of data, these tools, you know, look at
relatively objective data. But you as an agency, as DTSC,
and -- also have at your disposal the experience that
you've gained from some very, very challenging and
long-term issues involving permitting of hazardous waste
facilities. And so that -- how you sort of draw the
experience, the lessons learned, the things you wish you
could have done diffidently, you know, that's also an
opportunity to mine those experiences.

And I'm thinking specifically the issue with Chem
Waste Management and permitting of that silty in Kettleman
City. That was an action that many, many agencies were
involved in, in terms of coordinating, but it -- you know,
of course, DTSC was the lead Permitting agency there.

So having someway of harnessing lessons learned
from that experience, which continues to this day, I think
could be useful in helping shape next steps for this --
for this bill.

Oh, and the other thing I would say is there was
reference earlier to the use of the Health Impact Assessment. And this could be a really interesting approach to maybe perhaps pilot in some of the higher priority permitting actions that could again give a sense of the information that could be most useful, whether it's already in CalEnviroScreen or whether it's yet to be mined or determined in some other way.

BAY AREA AQMD AIR POLLUTION CONTROL OFFICER
BROADBENT: Well, good afternoon. I'm, I think, the designated local agency person up here.

But in terms of opportunities to explore and to partner and better coordinate data, the local air pollution control districts, of course, collect a considerable amount of information, not the least of which include emissions information from facilities, ambient air quality data. And the emissions data include source test information, which is where we actually take stock Samples and things like that.

I mentioned ambient air quality information. So we have -- we all maintain a pretty extensive air monitoring network. And as Ian was mentioning earlier, we have also -- undertake a lot of special monitoring in and around communities. That information rests a lot with both the district as well as CARB.

And then I -- as Cynthia mentioned, there's --
there's the CARB EJ information that I think is in addition to the CalEnviroScreen. So, to me, I believe we're somewhat living in a very data rich time, and it's certainly, I would say, over the last 10 years really exploded in terms of information that I think could be very useful

What I think is needed now is the compilation of that information, making it useful, and to try to understand cumulative impacts, and to go along with that, to me I guess at a very local level, a process in which all voices, all concerns are provided the same information; and as was mentioned earlier, a dialogue, which is I think -- that's where DTSC I think should and could be focusing into the future is really facilitating that dialogue, so that this information can be pulled together in a meaningful way, and pulled together in a way that I think the person who hears all this information can understand.

I think the person that, in the community, hears air quality information, water quality information, hazardous waste information coming together and really, I think, some good minds pulling together to try to make sense of it all, what does it really mean to a person living in that community is really what's needed at this point?
Those are my two cents.

CalRECYCLE DEPUTY DIRECTOR LEVENSON: Thanks, Jack. And I also want to thank Director Lee and the DTSC staff for putting this symposium on and inviting us. And in the back I have our Chief for Permitting of Solid Waste Facilities – Sue, if you can just raise your hand – in case you have questions on that.

From a CalRecycle standpoint, you know, we do regulate facilities, but the solid waste facilities. So we kind of butt up to the hazardous waste world, and we intersect with DTSC on a number of different issues, particularly for things that are regulated as household hazardous wastes under the universal waste framework, so paint, used oil, covered electronic waste and things like that.

And one of the areas where I think we’ve done a good job with collaboratively between the two departments – certainly we can improve – is on trying to get information out about those programs when people have questions, and along with Jack was saying, when people in the community have questions about what is going on with one of those programs, we need to be more adept and flexible at responding to those and providing succinct regulatory interpretations that everyone can understand. So that’s something that we’ve all been working on in the
past, and I think it's something we can continue in the future.

You know, we also have a lot of information that we do provide to both OEHHA for inclusion in the CalEnviroScreen, to DTSC in the form of information on our solid waste information system. It's got all the feedstocks, and CEQA documents, and enforcement actions related to the solid waste facilities. We have information that we get from local jurisdictions on the collection and disposition of the household hazardous waste, which is our form called Form 303 for those of you who are familiar with that.

So there's a lot of information that I think we can continue to provide, both in internally to the agencies, but also to make more transparent to stakeholders out in various communities.

One of the things that I think Shahla mentioned, and I know DTSC does as well, is kind of the public outreach. And we get a lot of feedback from community groups about how do they get involved early on in the planning and permitting process for a facility?

Often, they're getting good involved when CEQA comes along or when there's something at the Planning Commission, but many folks feel that that's too late. And so kind of an earlier -- I won't say warning system, but
an earlier communication system about what is the planning
process, what is the permitting process, how do you get
involved in an appropriate time I think is really critical
for all of us who are working in this area.

And just as a couple of examples to that, speak
to that, thanks to Cynthia and the Air Board, you know, we
have some funds available from -- and the legislature, of
course -- some funds available from the greenhouse gas
reduction fund to provide grants for infrastructure
development. And any time you put in a facility, that's
obviously going to be of concern, whether it's a hazardous
waste facility, or a solid waste facility, or anything of
the like.

So we have built in, in our latest round of
grants, new requirements for project applicants to be
engaging with the community very early on, above and
beyond CEQA, so that there's early engagement and
continuing engagement of the community throughout that
planning process, and then the subsequent project
implementation process.

So I think those are -- that's less a data
suggestion, but more of a process suggestion that I think
we can all continue to work on.

DTSC DIRECTOR LEE: Thank all of you. Jack and
Cynthia know that in my prior job working at a air
district, I worked at a fairly small one, and I became very adept at looking around the field and seeing who was doing something and had information or processes that I could steal, and I shamelessly did that in order to improve what I was able to do myself. And I have every intention of continuing that here, especially because DTSC is relatively late coming to this space, and so much good thinking is already underway.

And as I've said a couple of times today, what we really want to do is understand how we can be mindful of the good work that is already underway, and add our -- our contribution in such a way that it makes the whole greater. One example I can think of of something DTSC has done more recently related to sharing information and trying to make something synthetic in terms of making that information meaningful is some of the staff in our clean up program developed a spatial prioritization and information -- Spatial Prioritization Geographical Information Tool, which they refer to as SPGIT. And it's used to evaluate groundwater data that comes to us from the Water Board from their drinking water program, where they have information about contaminated drinking water wells.

We overlay that with spatial information from DTSC's known hazardous waste sites and known contaminated
sites, and we overlay that with information from CalEnviroScreen. And what we've been able to do using it in that way, this tool, essentially is an added visualization that looks like CalEnviroScreen, but gives us a little hexagons of space on the map that allow us to quickly zero in on where we have evidence of contaminated drinking water, and see where we nearby have potential sources of that contamination. And it has shaved time off of the analysis that usually goes into identifying contaminated sites for further characterization.

So I'm excited to hear about different wells of data and the commitment to work together to see how we can marry those different wells of data together, because I believe that in sifting through that information, we're most likely to find those nuggets of gold that allow us to move forward and create a stronger system for looking at impacts across all of the media that we regulate.

What I'd like to do is I'm going to throw another question out there and start at the other end of the table just to mix it up a little. I'm interested in hearing from folks. When you look at what you have done or are currently work on in your own agencies to assess impacts, and in particular to look at cumulative impacts, what do you think have been the most productive avenues of exploration?
CalRECYCLE DEPUTY DIRECTOR LEVENSON: I guess I get to go first.

(Laughter.)

CalRECYCLE DEPUTY DIRECTOR LEVENSON: I would say a couple things. One, clearly having a solid research foundation on what the potential impacts are that are coming from various operations or processes is critical. And we've -- at CalRecycle we've done a lot of research for example on emissions from composting and organics management. That's just an example.

But we need to have a much better understanding of what the various emissions are or impacts associated with different management practices. And I think that's -- overall, we're getting more and more information about that, but a lot of that's been conducted in silos. And I think we need to start working across agencies more and more to be conducting kind of multimedia impact assessments.

And along those lines, I think you have to consider both the impacts and the benefits. One of the issues that we are facing at CalRecycle is the ability to get facilities sited that may have some impacts on a community, but then have positive benefits elsewhere in the State in terms of carbon sequestration or health -- soil health quality or things likes that. So how do we
balance cumulative impacts versus cumulative benefits that aren't necessarily part of the regulatory decision-making process?

BAY AREA AQMD AIR POLLUTION CONTROL OFFICER

BROADBENT: So, this morning, I spoke to some of the efforts that the Bay Area Air District is undertaking with regard to trying to understand cumulative impacts, how to weave it into our permitting and regulatory system. But I will tell you, Director Lee, one of the -- one of the aspects, frankly, that has been the most success to date has been taking our permitting program and just allowing more time.

I know these are some simple things and don't sound very complicated, but we just actually -- it's frustrating some of the folks that require permits from us, but we have agreed to lengthen the time for people to engage with us, and indeed review and make comments. That's been a big change.

Also, changing the way we notify communities of upcoming permitting actions has also been an important win-win frankly for everybody. And then -- but all of this comes about as a result of a dialogue and process that we put in place to really get the input from affected communities.

And so as -- from the District's standpoint, we
hired and really got people into positions that that's really all their job is to do is to sit down with community representatives, establish working groups, establish processes by which we can notify them of upcoming permitting actions, and then put the tools in place for people to comment.

That hasn't dealt with what is the cumulative impact in their communities. That's something that is really a tough nut as we've all been talking about all day. But we're confident that we have the good and right people around the table for us to ultimately, I think, come back with some potential ideas on this subject. But that's -- that's been some of the success story so far.

US EPA REGION 9 EJ COORDINATOR REYES: Well, at the national level, U.S. EPA is no stranger to the idea of cumulative impacts. As far as back as 1992, in our Reducing Risk for All Communities Report, we acknowledged, as an agency, that some communities were harder hit, that they had more than their share of hazardous waste sites, of pesticide exposure, of drinking water issues.

So what the challenge has been at EPA has been this distinction between traditional quantitative, cumulative risk assessment to support standard setting versus this seemingly nebulous idea of what -- what does it mean when we talk about cumulative impacts?
The fact that we now have a nationally consistent EJ screening tool has been incredible support, because it gave all of us, you know, one way to sort of think about it in a more objective way. Up until that time, 2014, every single of the 10 EPA regions had their own method for screening environmental and demographic information to try to lift up places, and it just wasn't very workable. So having a nationally consistent tool, you know, added a lot of consistency.

And one of the ways I've seen it be used more effectively has been actually in the compliance realm, where use of EJSCREEN information is very helpful in, as one element of many, in developing inspection plans for different universes of regulated facilities. It also, in terms -- when we're in settlement mode, if we have -- if we know we're dealing with a facility that's in a place that has -- ranks high on a number of EJSCREEN indices, we're going to work very hard to try to achieve a supplemental environmental project to help resolve those complaints that will have someway to impact health and environment in a positive way that's also connected to the violations.

On the permitting front, I think we have fewer success stories to offer. Much of what has been more successful than not comes not so much from the treatment
of what are considered to be cumulative impacts that would
result in a more stringent permit condition, but more in
procedural issues, particularly those where engagement can
happen much, much earlier on in the process, like even to
the point before an application is formally submitted.

If we know there's going to be a very
controversial facility, whether an expansion or a brand
new facility, if there is a way to work with the applicant
and work with the community to have those conversations
earlier, that's a lot better than, you know, waiting a
year down the pike when your application has already been
determined to administratively complete.

And frankly, on that side, what we need, and I
think all of us need, are some companies that are willing
to have those conversations with communities. And I'm
looking at you Janet. Thank you for your remarks earlier
today. It does put you in a hard spot, but we do need
those companies to step up and be part of those early
dialogues.

SWRCB ASSISTANT DEPUTY DIRECTOR FARAHNAK: So in
response to your question, I think there's three key
elements that I'd like to mention. One is really having
that readily accessible data in order to be able to do
assessments and make informative decisions. And that's
the reason for my earlier remarks, emphasizing the
importance of electronic reporting for our compliance data monitoring.

The second thing is really having staff that are well trained and have a good understanding of the data, and the limitations, so the data is only as good as the user. So it's important to have that broader training and cross training of staff amongst different agencies to know what we have, what the limitations are, before we take data from one system and put it somewhere else.

And the third element is really feedback, loop, and mechanism. You know, the data is being used out there getting feedback on what the data gaps are and how you can improve it. And I'm going to take this opportunity to introduce my -- one of my managers John Borkovich that most of you know before he leaves, that John oversees our groundwater ambient monitoring program and they've been putting a lot of emphasis and reaching out to different agencies, looking at what information is there, and figuring out how we can directly link to that data, and also what other data system or assessment tools are out there that we can use. So ultimately, I think for us is having good data to help us make informed decisions.

DR. FAUST: All right. I think probably the thing that I'll mention is, as being particularly valuable or productive for us in developing the CalEnviroScreen
tool, is having a robust public process. You know, in some respects, you know, we're a small office with a big charge to understand all these environmental conditions across the State, and the different types of vulnerabilities that exist.

And, you know, California is a very large State, with a lot of different communities that face a lot of different types of burdens. And, you know, through the original, you know, concept of the tool, you know, and through the first diversions and second versions, you know, we've tried to incorporate public input in a meaningful way, you know, by holding workshops in communities that we sort of know face these burdens or are perceived to face burdens, you know, to try and understand conditions there.

You know, and we -- and we bring in the information that we think we know about a place, and you know, we basically ask the question is this -- is this right? Does this reflect what you think things are like here. And through that process, you know, we've learned a lot. We've, you know, been brought forward new things that we didn't know about places, and get a sense of what's on people's minds in these different communities.

So I would sort of hold that up as the thing that's probably been very -- most productive for us in
terms of the development of CalEnviroScreen.

DPR DIRECTOR LEAHY: For some reason when --
turned it off. All right. For some reason, Barbara, you
left out the fact that I was an organic pioneer.

So almost 40 years ago, I was doing about 900
acres of organic land, when no one knew what you even
meant by organic. It was pretty different.

But the reason why I did that was because the
concerns about pesticides. I figured if we could grow
without any, we could probably relook, reassess. And in
40 years, society -- California has made remarkable
progress in how we apply pesticides, especially around
farms, but all of it. And there's been a number of
reasons for that.

First and foremost, of course, is science, and
the application of science, the requirement that any
pesticide that comes into the market is reviewed very
intensely. There's a number of -- quite a few number of
studies that are required. There's very intense protocol,
sort of a continuous improvement. You know, the
pollinators are a good example.

The number of studies required to get a new
pesticide in the marketplace for pollinators. You know,
it's five times more studies than it was 10 years ago, and
our knowledge of pollinators has just increased 10-fold in
the last decade or so. So we probably -- going into it, we know more about pesticides than just about any other thing in commerce easily.

So the science is really important. And then that's the -- our federal level. And then it comes to California, California has created a pesticide regulatory program that is almost as large as the federal government. We're approaching $100 million a year. And we started hiring our scientists about 35 years ago. Our first one retired not that long ago, a medical toxicologist. And we've become a very science intense organization.

And we look at California specific conditions, because California is very different than the rest of the country. I mean, just an example, when I farmed in Nebraska, you could sit on a tractor to the curvature of the earth you'd see three tractors.

We have folks in Monterey County that are harvesting, planning, thinning, doing everything you can imagine all at the same time within a square mile, so it's very different. We have half a million ag workers out in the fields that we need to protect, and we have 400 crops. So we have built a very robust program to address California issues. And I have to remind you that most of the pesticides used in society are not on the ag side. They're on the other side, water being number one.
So we have intense science. We have very intense knowledge going in, but then we have to look at -- and we do a lot of data information. You know, every pesticide used on the ag side, we know where, when, why all of that. We've had that for decades. We also do air monitoring to see how good we're -- a job we're doing. We do water, surface water and groundwater monitoring. We look at food, so we do residues, testing for pesticides.

We review illness reports to make sure that we're capturing anyone that did get harmed by a pesticide. So we have a lot of data, but data is the easy part, because then what do you do with it. You have to figure out mitigations.

How do you continue to use something that provides a very essential service? You know, in our case, these -- our food supply, our public health, our resource management all rely on us keeping pests at a certain acceptable level.

So then how do we do that, but keep it on site, make sure it does its job, and move forward? And that's what mitigation is all about. We have medical toxicologists on staff. We have the people that -- the folks that look at workers protections and all that. I'll think of that name in a minute.

Harvard, what is he?
Okay. Industrial hygienists. Thank you very much.

So we really have to look at that. We have to do enforcement, so we put $27 million a year into our local county ag commissioners to do enforcement. We also -- it's probably our largest branch. We have regional offices. We have lawyers. So enforcement is really important. You have to have good revenue. So basically 2.1 cent of every dollar for the first point you sell of a pesticide goes to fund our program and a few others.

And so it takes a lot to really make a difference. And the reality is you start -- you attack cumulative impacts at the source, making sure it doesn't move off target, or off site into the human body of the environment.

And so that has been the -- kind of the core of our program. Education works. So people handling material are educated. They have -- we have licenses for everything from the folks that do your right of way, you know, Caltrans all those people, to people using, you know, most intense ag pesticides. You know, when I was a kid, I was the life guard, and I would roll 55 gallon drums of chlorine, and do other things, and just -- and one alligator, two alligator, all that good stuff.

Those things -- education works, you know, so
licensing works, and enforcement works. So that's a lot of cumulative discussion there, so you can go with that.

ARB TRANSPORTATION & TOXICS DIVISION CHIEF

MARVIN: Thanks. Two thoughts on this point. In terms of what ARB is working on now, I'd like to go back to what several of my fellow panelists have mentioned in terms of a richness, a wealth of data, but the need to compile it, and the need for the data to be accessible.

So along those lines, ARB is spending a fair amount of time in responses to Assembly Bill 197, working on an emissions visualization tool that brings together the emissions from facilities around California, both from a climate perspective, a criteria air pollutant perspective, and a toxics perspective.

And the whole point was to link things up so that you can see what's happening at a neighborhood scale, zoom in, zoom out, and see the whole spectrum of air pollutants. So that's a -- that's a big effort now. And the prototypes are available to start taking a look at there.

In terms of Barbara's question about what have we found to be productive in the past, I'd like to go back to an example I was very involved with personally, and that was a community scale assessment of health impacts from diesel pollution. We started in the community of West
Oakland. And that's a case where we started out wanting to do a health risk assessment for the Port of Oakland, because of our regulatory work on ports.

We met with community folks with the Port, with the local railroads, and with other members of the community. And what we found is that it was good to be looking at the port, but that really didn't answer the community's questions and concerns. They wanted to know, from a community-wide perspective, what are all the sources of diesel pollution that are impacting their health, and providing grit on their window sills and their cars. And so we expanded the scope of the analysis from the ports to include the near dock railyards, to include the trucks on the nearby freeways. And then with much assistance from Jack Broadbent and his staff, to also include the stationary sources of diesel pollution in West Oakland.

And so what we were able to do was a pretty data and resource intensive look at all of the sources we were able to put our fingers on, that were contributing to high diesel exposure in West Oakland. What we got was a health risk assessment that was not only informed by the community's concerns and suggestions, but there was strong buy-in and there was strong trust in the outcome.

And so the message that I have, and potentially...
an approach for DTSC to consider, if you have the resources and the time is that that kind of community scale on the ground assessment, the working with the community and the emitters or the polluters to frame the analysis getting an agreement on what that analysis should be, what's the scope, what's the depth, really gives you results that everybody is prepared to accept and embrace and then that provided the basis for us for future regulatory efforts, and there was a lot more community confidence, not just in the data, but in the actions we took after that.

The last thing I would say to wrap that up is that the relationships that we built with the community members in West Oakland through that process survive and thrive today, and they're a core part of that credibility and trust.

And I'm not suggesting that's true across every member of the West Oakland community, because I didn't get the opportunity to meet everybody, but there are a core number of leaders who are very comfortable calling us and saying, hey, we're having a problem with trucks idling in front of this apartment building, can you guys help? And in a lot of cases, we can. So I would encourage you to be considering a community perspective.

DTSC DIRECTOR LEE: That's all very helpful. And
I want to just give some context for my laughter. When Jack said take more time on issuing permits, DTSC has been under extraordinary pressure to take a lot less time issuing permits. But the point about the need to have robust and meaningful public engagement in the process of assessing, not just the facility and its performance, but also impacts in the community, whether they stem directly from that facility or from other activities around that facility to the point of understanding better cumulative impacts, and layering in community vulnerability.

I do agree that we need to allow a larger space for that to happen. And that's indeed why we're -- why we're moving down this path. And I think that there's quite a bit of experience out there that is going to provide some good signposts to us, not just overall the direction to go in, but also in the near term some things that we can do, either all together or in smaller groups to try to answer very specific questions and make more efficient use of the information we currently have.

In light of the time, what I'm going to do is just throw out the last two questions I was going to ask, but also give each of you the opportunity to sort of, you know, wrap-up and throw out any additional information you think is important for DTSC to have in its sites as we're taking these next steps.
So the two questions that I had sort of the converse of what we just discussed: Given your experience, what are the -- what do you see as the biggest challenges in front us looking at cumulative impact assessment, especially where it's being undertaken in the context of permit review, and what would you recommend DTSC focus on as we move forward into this space?

So I'll come right back to you Cynthia, and we can move down the table. And, you know, please feel free to just take -- take those questions. But if you have something that you think is really important that we consider and that everyone here today, feel free to just jump to that.

ARB TRANSPORTATION & TOXICS DIVISION CHIEF MARVIN: I'm detecting a pattern here.

(Laughter.)

ARB TRANSPORTATION & TOXICS DIVISION CHIEF MARVIN: So a few thoughts on that. I think in terms of challenges, as -- certainly as regulatory agencies, we have to base our decisions on rigorous peer-reviewed science. It has to be defensible. It has to be thorough. There's no question about that, but it also has to be accepted by the community. And I think that finding a way to get both of those -- satisfy both of those challenges is one of the biggest hurdles ahead. I personally don't
think it's a challenge in terms of community members being able to understand and improve on the scope of what we as regulators think is necessary. I think that's essential, but it is very much a time and a resource issue.

So that's a challenge that all agencies will face. The other thing that I might say is that there is always a challenge in trying to go from estimated information or derived information, like our emission inventories for example, to the extent that they're based on monitors that are placed on stacks like Jack Broadbent mentioned, great. That's pretty real data. We love ambient air quality monitors in communities, and being able to say here's what we think that people generally -- here are the concentrations that people are generally breathing. That's real.

But trying to link that and attribute that back to specific sources is the other ongoing challenge, I would say, so that you -- you know what's in the air, or water, or other places, but attributing that to the source because the source is where you're going to take action, is the second big challenge.

DPR DIRECTOR LEAHY: Yeah. Barbara, you have a hard job. A couple of things. In the world of pesticides, we have something called Integrated Pest Management, IPM. What it is is how do you get the job
done, control that pest with the least toxic method possible.

In your world, society, especially us in this country, we haven't had that really hard debate about why do you put something in the marketplace that's going to create a disaster downstream? And we need to really start doing that.

You know, so a lot of toxics could be eliminated if we had a good understanding up front, you know, of the lifecycle. I think that's really important.

Land use. My -- I thought I had a huge challenge when I was running a department that had a third of all the private land in the State, as well as Strategic Growth Council grants and watersheds. And then I came to pesticides, found out that bad land use is my biggest nightmare. You know, we have the most productive farmland in the world, and we stick a school in the middle of it.

Until we start to figure out, and accept the fact, that we need a place to put our toxins as we use them, you know, when we're done with them, and figure out how we're going to site those, and create protective areas to site them, and figure out transportation and all of that, because I dealt with that in the Williamson Act, we're going to have a huge battle.

You know -- I grew up, my across-the-street
neighbor when I was a kid was the 10 Freeway. And that
was when we still had level 3 smog alerts in Ontario, you
know, and all that. You know, this environmental justice
is really real, and people don't want to look out their
window and see trucks full of toxins going by every day,
so -- but we've got to figure that out, you know, and
we've got to -- and it starts with figuring out what kind
of places we're going to put these things. And that's
hard in a state with 38 million plus.

So -- well, that's enough. Knowledge is also
good. Science. I'm a firm believe -- science and good
risk management, those two together are really core, and
then process. You know, process -- no matter what you do,
you've got to have good process that your customers
understand and can work with.

How that's for a lecture?

(Laughter.)

DR. FAUST: All right. So, yeah, I guess -- I
guess what I might add here sort of goes back to something
that Dr. Zeise said in her introductory comment about sort
of the limits of risk assessment and understanding
cumulative impacts, sort of as we've -- as we've sort of
laid it out, at least in CalEnviroScreen with respect to
this, you know, multiplicity of things happening.

I mean, our office, OEHHA, you know, has a charge
to work both on specific chemicals. You know, we do health risk assessments for individual chemicals trying to understand what the nature of the concerns are from exposures at a very specific level. We set guidance levels. We establish cancer potencies and so forth.

You know, and then -- you know, on the other hand, we know in this real world that we have all these exposures that exist. And really, we frequently have very little information about what it means for all of us to be occurring together.

You know, so a tool like CalEnviroScreen helps, you know, bridge that gap between some of those individual chemical level knowledge with this idea that these multiple impacts exist. So, you know, I think, you know, it may be that a decision, you know, like a permit that needs to be thinking about this maybe falls somewhere in between, because it's a very specific facility and a specific location. And there's information to be known about the things that are happening there.

So, you know, I guess I'm sort of moving towards this idea that, you know, even -- you know, even though we're in a big world of additional information and large data sets, and having a lot of information at our disposal, sort of moving towards using in a way that's meaningful and helpful is sort of the biggest challenge, I
think, in terms of what you all face.

SWRCB ASSISTANT DEPUTY DIRECTOR FARAHNAK: So the biggest challenges I think are the disparate data systems that are not connected, and they don't communicate is the data quality, in terms of having a mechanism to have data quality assurance verified, and also kind of assessment tools.

I know that we do currently have some assessment tools. But in terms of how you select those indicators, how do you balance different environments with respect to water quality, air quality, but also eventually make the system not so complex that you can't use it ultimately. You need to be able to communicate that assessment decisions, and how you arrive to those.

And I -- my recommendation on how DTSC could focus on addressing those is really kind of a long-term vision of working with members of public, EJ communities, amongst the different agencies to create a workgroup -- an interagency workgroup that will kind of look at what we have, and how we can create the infrastructure at the multiple agency level to utilize what we have and create a better system and assessment tools looking at existing indicators, whether they need to be refined and assessments.

And while that long-term vision is happening, I
also think it's important to know that there are communities that are currently impacted that we need to deal with. So I'm glad that, Director Lee, you brought up the example of the groundwater convening workgroup, where, you know, Water Board, DTSC, EPA Region 4, and EJ communities are working together in a targeted area to look at what the impact water supply wells are, what the sources are to analyze -- look at the plumes, and help lead into expedited clean up.

So I think looking at around the states and identifying a few other areas to the extent we have resources to focus on as a targeted thing, while we rebuilding this long-term capacity, it would be important in our opinion.

And we're more than happy to help with those efforts. I'm looking forward. We're continuing working with DTSC and OEHHA and other agencies that were presented here to be able to achieve that goal.

US EPA REGION 9 EJ COORDINATOR REYES: So a few things to just wrap-up.

Ingrid did a really nice job early of talking about the tensions inherent in this challenge. And I would add to that one additional thought, which is anticipating trends within the hazardous waste sector, particularly for new facilities, to attempt to locate new
projects, perhaps in indian country where EPA is the permitting authority. So that, I think, is something that's going to need to be anticipated. And there -- a lot of coordination should be had around that.

And then on a more human element from the perspective of the actual permit engineer. Now, at EPA, I work with a lot of permit engineers. I've never had to write a permit myself, but I have had to enforce them.

And this permit world savior complex dynamic, if you were a permit engineer sitting here today and hearing everything that you heard about the scope of the issues that you're going to be expected to address through a permit -- a very complex permit decision, it can seem hugely overwhelming.

And one of the things I think is going to be necessary is to really think about implementation of this program from the agency level, because you don't want the permit person to feel that way. You want -- you want there to be a real team approach, not only in coordination across all the agencies, but within that agency, so that that issue is getting all of the resources it really needs and it's not left to just one -- one individual.

I don't know if that made any sense. But if you've been on the receiving end of these concerns, you might get that.
And then the other thing I would just suggest as an opportunity is SB 1000, and the focus on land use that we heard so much about today. Well, SB 1000 offers a great vehicle for planning at the local level that now is going to require for certain cities, municipalities an environmental justice element. And these things are going to supposedly also include things like siting or setbacks for these types of facilities for hazardous waste facilities. So that's another, I think, real opportunity for some coordination on a more macro level within the State.

And there are quite a few really promising geographic focused examples that we've heard about, primarily from our air districts here, South Coast and the Bay Area District.

There's another, the Minnesota Air Pollution Control Agency has a cumulative impacts law that was actually generated by community members and State legislators to carve out a specific neighborhood in Minneapolis that would be the subject of cumulative permitting conditions under their air program.

And then I think another example that's worth looking at from the -- that's more community driven is the clean-up green-up approach from the California Environmental Justice Alliance, and a lot of the work that
they've been trying to do in three neighborhoods in Los Angeles. So I think that would bear some focus.

Thank you.

BAY AREA AQMD AIR POLLUTION CONTROL OFFICER

BROADBENT: So from the local air pollution control agency perspective, I think the biggest challenge, and I think this would relate, Director Lee, over to DTSC is the really biggest challenge I think we have is the fact that when a source comes to us and they have met all the requirements, we, as an agency, are required to issue that permit actually.

And I think all of us living in a world where we want government agencies to follow the law, we basically want that, right? We don't want discretion being applied.

So the alternate side of that whole thing is we face a situation where we end up having to issue a permit to a facility, have it increase its emissions potentially in an already impacted community.

And it's something so that I think what we see is the biggest problem, frankly, in our minds is it's land-use issues. And we've talked about it, but we at the Bay Area have been struggling with this issue for some time, and have felt a really strong sting when it comes to this issue.

I'll just, as a aside note, give you a sense of
what I'm talking about. And this is the fact that back in 2010, we amended our CEQA guidelines to essentially require that as a developer puts, say for example, a new development next to a freeway, they have to account for the impacts of the environment on that new development.

That all sounds very straightforward that when you prepare an EIR that you would understand what the environment by which those people are going to be exposed.

Well, we were sued by BIA. We actually -- it's because CEQA has only a one-way look, so your supposed to look on the impacts of the development on the environment, not the environment on the development. And, indeed, the Supreme Court -- California Supreme Court agreed with the BIA and we ended up losing. We just settled that case actually last week.

So it's one in which land use is considered to be a sacred -- sacred something in this -- in this state, but it needs to be cracked, because I think along with -- along with our best science, along with our best information we can, I think we're going to need to make sure that local communities take into account local exposures. If you look at the paper over the weekend, it was -- they announced the fact that 1.2 million people already live in high pollution areas or within 500 feet of
roads down in L.A. just to give you an idea.

That's a similar statistic you can have in the Bay Area, not so much 1.2 million, probably half a million people. So it's a problem, and it's just going to get worse as the State continues to grow. And as we try to get people into affordable houses, this is a problem that is going to need to be addressed. And I think DTSC is on the forefront of going down this path.

And so Director Lee we stand ready to help you.

(Laughter.)

BAY AREA AQMD AIR POLLUTION CONTROL OFFICER BROADBENT: And good luck. And thanks for inviting me.

(Laughter.)

CalRECYCLE DEPUTY DIRECTOR LEVENSON: Thanks, Jack. It's hard to add on to what everybody has already said. And, you know, I concur with everything my colleagues have said. Sound like we're trying to get the unified theory of physics that's been working on for 100 years --

(Laughter.)

CalRECYCLE DEPUTY DIRECTOR LEVENSON: -- and we've made a lot of progress in the last 20, so we've got to keep working on it.

I guess I would put myself -- try to add
something different -- put myself in the perspective of
the community member or the regulated entity who's kind of
going all this information. I've been told at a number
of different workshops, this one, I was at one a couple
weeks ago in Fresno from CalEPA. I was at another one
before that from CalRecycle. We all are presenting this
enormous amount of information and posing various issues
that are very difficult to everyone, the community
members, and, you know, the regulated entities, how do
they handle all that?

I think we need to have a much better process for
making sure that folks are aware of all the different
activities that are going on, and somehow how they are
linked together and where there are cross-overs, and
that's -- unifying that is very difficult.

But I would think it's pretty overwhelming right
now to be on the outside and getting all this information
from all of us on the regulatory side. So if we can maybe
work on that angle a little bit, that might help.

One other thing I wanted add Barbara. I wanted
piggyback on what Brian said about his history in organic
farming and the amount of science that goes into, you
know, labeling and registering a pesticide.

I think we need a lot more focus up front on
product design, process design, things that DTSC is doing
already and others are doing. I don't think that gets enough attention.

DTSC DIRECTOR LEE: Well, thank you for that, Howard. I know that, you know, our Safer Consumer Products folks are really trying to change the paradigm with regard to identifying chemicals of concern, and the products that they are used to manufacture and then requiring the manufacturers to evaluate the entire lifecycle of that product to see if there is a way that it can be made safer.

And, you know, it's -- we're at the beginning of that journey, but -- and that's -- that's a hopeful forward look to, you know, a stepping stone towards the future that Ingrid and Martha were talking about where we are able to avoid some of the impacts before they're even created. And I certainly have taken that to heart as an important tenet.

Just from the time that I worked in air quality, it's always easier to prevent something from happening than it is to fix it after it's happened. And -- I do very much agree with that.

I've heard some important areas where I think we -- we have work that we can do together collaboratively. I heard discussion about opportunities to better use the vast amounts of data we as individual...
government agencies all possess, and to try to look at
some new -- look at those data through new eyes or with
new tools, and perhaps even to collaborate on the
development of those new tools.

And certainly there are challenges in marrying up
disparate data sets, but I think that it is -- it's an
important effort to try. I think we're going to probably
focusing our next symposium on tools and data, and
advances that have occurred and opportunities that are in
front of us, particularly, in light of the rapidly
expanding field of personal scale data, not just
environmental sensor data, which I think all of us at the
table are aware of, but also fitness tracking and health
monitoring.

And there are whole fields of commerce now that
are generating vast quantities of data that if we can
figure out a way to harness that information, could
potentially provide us a lot of useful decision-making
tools.

So we will be looking at -- our next symposium in
Southern California at the South Coast Air Quality
Management District in their auditorium probably in the
June time frame, and they actually have an institute,
their AQ-SPEC Institute, that actually evaluates some of
these sensor tools that are available. And I look forward
to continuing our conversation there.

I also have heard reference to land use --
land-use decision making, compatible and incompatible land
uses as presenting both challenges and opportunities. And
I also heard Jack Broadbent offer that the Bay Area would
be happy to partner with us on a future symposium or
meeting.

And since you have so much very valuable
expertise now in trying to find ways to address that land
use question, perhaps that's something that we can
collaborate on for later in the summer.

And then I would say the third thing that I heard
is really expanding ways to engage communities in the
decision making and provide them early information not
just about what we're looking at, and what we think is
important, but a whole host of things that are perhaps
related or occurring contemporarily in their communities,
and -- so that communities have more tools to engage with
us on the things that are important to them and advance
issues that they need resolved.

And that's something that Ana Mascareñas is
working on for us in her capacity as heading up our
Environmental Justice and Tribal Affairs Program. But I
think that there is potentially a nexus also for us to
better collaborate on the sharing of information.
And perhaps one of the things DTSC can explore is how we can do that as we approach permit decision time we have a small universe of facilities, so it -- and they -- those permits are renewed, as Evelia said, over a 10-year time period. And so we have opportunities in that time frame perhaps to collect and make available broader amounts of information about the communities and the exposures around those facilities to help them understand what they're presented with in terms of cumulative impacts and engage with us in our decision-making process. So these are some of the things I've taken way, and I think it's really helpful.

What I'd like to do now is open it up for questions for a little bit. And we'll start here in the audience and then we'll collect questions from our on-line participants and see where we get to.

Ingrid, we're going to bring you a microphone so it can be captured by our court reporter.

MS. BROSTROM: Ingrid Brostrom With CRPE.

I think it's really great to have such a host of BDOs represented today. And one of the structural issues I've grappled with, when looking at a lot of these environmental justice issues, is the proper role of CalEPA. I think initially when the structure was developed, the idea was having everyone in the same
building by having this umbrella group, we would build in this natural cooperation and collaboration. I don't think that's been borne out in history.

So are there roles for CalEPA, especially around cumulative impacts and environmental justice, that your agencies see would be an important step to move forward?

And then I have two other comments, but I'll wait until later.

ARB TRANSPORTATION & TOXICS DIVISION CHIEF MARVIN: I'm curious to see how many people are leaping for the microphone here.

(Laughter.)

ARB TRANSPORTATION & TOXICS DIVISION CHIEF MARVIN: So what I wanted to do actually was just mention an effort that CalEPA leads that I think works, and I think it does fulfill those objectives, and that is the multi-media enforcement effort, the strike teams, that look at multiple communities, impacted communities around the State, bring in inspectors from all of the different media and all the different boards and departments so that we can try to address all the concerns.

I know that there's that work going on in couple -- at least a couple handfuls of communities around California now. I would like to see that expand. I think that's something that is productive, both for the agencies
and is certainly productive in terms of understanding for a particular community what are they concerned about, and then who can solve the problem.

And the interesting thing is that, at least at the Air Resources Board, we found a lot of times the answer is no one at this table can solve the problem. It's city code enforcement officers or it's other folks. But the important thing is to identify the problems, figure out who can solve them, and then take action to make that happen. So I think that's maybe an effort we could build on.

DPR DIRECTOR LEAHY: My wife happens to be a an attorney in the Water Board. Sometimes we ride in tandem into work. And that's really the only time you're going to get two State Departments going in the same direction at the same time.

(Laughter.)

DPR DIRECTOR LEAHY: That being said, we do -- I think there's a lot of collaboration in this State building. You know, we work with the Water Board when we have an issue, and they have an overlapping issue. Pesticides are an issue for everyone, so we have water quality issues. And we're really learning to work together with that. We have air quality issues, we work closely with the Air Board on things.
And so they tend to be issue specific. You have to remember we each have a different statute. We have a different world view, different culture, different science base. So we are really individuals. You know, it's like a family. We all love each other, but it's intense sometimes.

But we do -- I think there's been a real collaborative, you know, in this administration, and -- but you have to remember, we really are different organizations. You know our -- what our -- what our statute tells us to do, you know, drives my friend here nuts, you know, and vice versa, because we just -- we see the world differently. And by law, we're supposed to see it differently but we do -- I think we really do do a good job of working together.

And that's -- you know, we all bring different things to the table, so...

DTSC DIRECTOR LEE: I would -- I would actually echo both of the comments. I do think that there are -- there are focused areas where we collaborate. You know, the SPGIT tool, I mentioned, is one where we're working very closely with the Water Board with -- and with U.S. EPA, as well as NGOs to use the data we have, and use the tool creatively to try to make things happen faster.

As Cynthia mentioned, the coordinated
environmental justice enforcement program that CalEPA heads up, that's also a good example of all of us working together under that umbrella. CalEPA was an important driver in the development of the CalEnviroScreen tool with OEHHA. They really took a leadership role there, and we're talking with them now, as well as with our sister agencies about what opportunities there are either to enhance the CalEnviroScreen tool or to develop a companion tool looking at additional pieces of information that will help inform cumulative impacts decision making.

So we're going to helpfully be moving out with some sort of a contract to do some research and support that work in the near future. And that's a convening function that CalEPA plays.

So while the creation of CalEPA has not resulted in a complete alignment or pulling all of the boards, departments, and offices into a single path, I think Brian's point is well taken that that it -- we do have very, very different statutes, and none of those statutes was changed when CalEPA was created, so we have -- we have specific missions, specific authorities, specific processes that are dictated in law. And our job as administrators of these programs and the Secretary's job as the head of this Agency, is to help us respect what we are required to do, and try to leverage each other's
strengths, so that we can do the work that we do better.

And I would expand that outside of CalEPA. You know, DTSC works with the CUPAs. ARB works with the air districts. I am very interested in trying to build more collaboration with local governments, with the air districts, with local land use planning authorities, so that we can -- we can achieve a better outcome for the people that we serve.

If there are others who want to jump in on this, please do?

SWRCB ASSISTANT DEPUTY DIRECTOR FARAHNAK: Yeah, I was just going to kind of add a specific example. As was mentioned before, you know CalEPA's leadership in terms of how they get involved in making sure we talk and coordinate and play well. Some of them are not necessarily transparent outside the organization, in terms of, you know, the workgroups, and teams, and efforts we do that I think you heard some examples.

But also as opportunities has allowed, they actually have implemented programmatic changes. One of them is the CUPA program, this Certified Unified Program Agencies. Prior to CalEPA, each agency issued permits, and we had the same facility being permitted and inspected by multiple local agencies and State agencies. So through extensive effort, that has been consolidated, and the
program has consolidated. The data system has been consolidated.

So CUPA program is one of the examples that was opportunity for CalEPA to look at how the permit program could be consolidated. And there's some examples, like the Healthy Soils Initiative that different agencies, as well as the Department of Food and Ag are involved. With respect to oil and gas monitoring, there's coordinations, but we haven't had specific legislation of programmatic changes. It's more internal.

And in terms of data, I think the discussion has started, but it seems like we may be looking at expanding to the symposium, which I think is a great idea.

DTSC DIRECTOR LEE: Do we have other questions here in the audience?

MS. BROSTROM: Ingrid Brostrom.

So one thing I heard a lot of you talk about was the importance of science and data, but I also heard something that we're familiar with, which is the difficulty -- especially in the toxic world of having enough information to establish causation or find a source. And something that was really important in the -- you know, the late 1990s, and it has always been very important in the environmental justice world is the use of the precautionary principle. And I did not hear anybody
talk about that.

So I was wondering what is the role of the precautionary principle now, and especially as it relates to cumulative impacts, and the difficult with an imperfect data set, and absence of scientific certainty, especially in the toxics field?

DTSC DIRECTOR LEE: So I will start by saying even though I didn't call it out specifically, and Cynthia didn't call it our specifically, you did hear us, and I think others as well, talking about the importance of preventing the problems before they arise, and I'm a big believer in that.

The challenge we have, and the opportunity we have, is figuring out how to more explicitly embed that premise in the decision making that we are required to undertake with the statutes that we have.

So at DTSC certainly our Safer Consumer Products Program is an example of the precautionary principle being more fully embodied in a regulatory structure. And it's still in its youth. It hasn't -- it hasn't, you know, grown up into a full and well seasoned program yet, but we are definitely moving it forward.

We are moving into this question of cumulative impacts, and community vulnerability, and how can information about that better inform our processes for
permitting decision making, and specifically with the idea of identifying the outcomes that we are trying to achieve. And I think that's the suite spot, where a greater emphasis on precaution is appropriate.

That said, we do, as Jack pointed out, have certain obligations under the law to take actions when certain conditions are met with regard to issuing permits.

And so what we're doing now is trying to understand where there is room to move forward, just as you were pointing out earlier, on land use, it isn't exclusively a local land use decision. Although, our constitution would say that land-use decision making is exclusively a local issue, because there are some competing statutes that you pointed to regarding civil rights, and that others have pointed out to us. And we are in the position now of having to understand how to balance those competing directives that we have.

And again, it's the challenge, but it's also where the opportunity lies. And I think we can better clarify what those opportunities are, we can make progress. I am not expecting that in the next year or so, we're going to have the unified field theory answer to this question, but I do think that we will be able to find ways to get closer, and to make better decisions that are more protective of communities and better acknowledge the
realities that they face, so that we can achieve better outcomes for them.

And if anybody else wants to jump on the precautionary principle question, you are welcome.

DPR DIRECTOR LEAHY: You know, in the world of risk assessment, if you -- you have what you feel fairly confident. It's kind of the sort of known. I'm learning sort of not, but then there's always questions. So when a question is raised when there's uncertainty, then you take that data set that you know, and then you add additional risk factors. So maybe you think you could be exposed to one part per billion, but you have some tests or some studies that are a little inconclusive or they're done on a different species than humans, and then you add those additional factors in there.

So it's sort of an acknowledgement that we don't -- you know, our science takes us so far, and then we have to build in this -- these other factors. And you have to also remember that we're in a -- we're in a balancing game. You know, if we're putting something in to control Zika or, you know, Ebola or something like that, I mean, there's supposed to be a benefit to the use of that compound.

And so not -- not that we -- I mean so, you know, you sort of know going into it, what you're -- what you're
introducing into the environment. And you're trying to manage that to, you know, acceptable levels with the benefit that you're hoping to gain, which is food supply or risk -- you know, or public health resource management, things like that, water purification.

So that's kind of how we deal with it.

DTSC DIRECTOR LEE: All right. Are there other questions from the audience? Do we have any -- we have one more here, and then I don't know, do we have any on-line?

Have we gotten any?

No, Okay.

MR. SHIRAI: Have the -- you know, besides pesticides, have they looked at like biological methods of containing pests that -- you know, on crops? You know, as -- you know, they've been thinking about doing that for all mosquitos, you know, to stir all the mosquitos, so that these, what they call those -- but it doesn't seem like the State of California is looking much into that.

DPR DIRECTOR LEAHY: There's -- pest management and the world of agriculture is very broad. There's a lot of biologicals -- what we call, biologicals, so that people are putting out beneficial insects to control the ones that -- you know, that control the ones that threaten their crop. The new science is pretty amazing.
They're -- just a couple days ago, I listened to some folks that technology that a plant -- sort of inherent in every plant is this ability to push away nematodes that are -- do damage to the root system.

And they're figuring out how to sort of stimulate that, so that it's active before the nematode comes in. You know, so the world is changing. It's really different, but IPM practices, as we call it, the biological, that has become pretty mainstream in California agriculture.

We were here a few weeks ago. The cotton folks had figured out how to release millions and millions of bugs that come in and eat the -- you know, the Lygus bug. So I would say that's become pretty mainstream.

DTSC DIRECTOR LEE: Shankar, it looks like you have a question.

DR. PRASAD: It's not a question. It's more a comment. Looking back history-wise, we -- I mean, you may recall. You were part of the team who wrote the cumulative impacts definition. And cumulative impacts definition essentially moved intentionally away from the concept of risk, because we could not characterize the risk of the health impact. It is multi-factorial. Proportionality is difficult to establish, and whereas, an emission or an exposure is a reasonable way to move.
So it is good to see after 15 years that this cumulative impact is now really entering into the area of permitting. That is where we want it to go then.

Having said that, how do we move? I'm glad to hear that you mentioned that you have a relatively small world of 120 pockets of facilities. So in one way or the other, the tool that you want to -- you have in mind could move in that direction taking from EJSM, CalEnviroScreen, and other data sets. So we are at the right stage to move in that correction, and your leadership will be very helpful.

DTSC DIRECTOR LEE: Thank you, Shankar.

Are there any other last questions or thoughts.

Ingrid, you said you had a couple of other comments. Is there anything you want to add in?

MS. BROSTROM: Yeah. My last comment was about this benefit versus cost that a couple of people spoke about. And couple of the agencies I think this would be more applicable to the CalRecycle, DPR, DOGGR, who's not here DTSC, where there are these larger societal benefits, but there's burdens placed on a few number of people and are very hybrid.

And so my comment is for the agencies that are in charge of regulating these various industries, I think it's very important to try to take out this idea of
needing to promote a certain interest. And I talk about it in my presentation about the comments about compliance being easy and economic, because we need these hazardous waste facilities. And I've always thought it was inappropriate for DTSC to be in that role of making those decisions, or even considering that, as its predominant role is to protect public health.

So I just wanted to note that I think -- I think there's conflicts inherent in lot of these agencies up here. And so what -- you know, really to be intentional about what the agency role is versus, you know, what either the State has a larger role to play or the industry or consumer groups or whatever, but trying to really divorce promoting that public good.

So that was my comment.

DTSC DIRECTOR LEE: Well, thank you for that. I will say on the subject of compliance, while I don't think it would be the role of a regulatory agency to make compliance quote easy and economic in the sense of lowering hurdles, so there is less to comply with, I do think that it is incumbent on us to make it very clear what we mean by compliance, so that there isn't ambiguity about what's involved in coming into compliance.

And to that end, it does make it easier for a facility to comply, if they know what it is that they have
to do. And certainly it has been said that in the past perhaps DTSC didn't do a very good job in making it clear what was expected in terms of compliance.

And in terms of the economics of it, I think it is also incumbent on us to make sure that we don't inadvertently incentivize noncompliance. And there are a lot of tools that agencies have to make sure we aren't doing that. And that's something that DTSC is also looking at.

So I would not disagree with your comment about what our role ought to be, but I would offer that there are other ways to think about what it means to make compliance easy, in that it certainly shouldn't be hard to figure out what it is you have to do in order to comply, and it shouldn't be clearly more beneficial not to comply.

So we've had a really interesting day together. I've enjoyed very much hearing the thoughts of all of the speakers and of the folks who generously gave their time to this panel as well. It's given us some good information to think about in terms of, you know, planning our next symposium, but also in how to layout the path, so that we make real progress on addressing -- identifying and addressing cumulative impacts and community vulnerability as part of our permitting process.

I want to -- so I want to thank everybody who
presented, and just thank you very much.

(Applause.)

DTSC DIRECTOR LEE: I also want to thank DTSC staff who were instrumental in setting this up from our Hazardous Waste Management Program, Corey Yep, Evelia Rodriguez, and Linda Oxley. In our EJ and Tribal Affairs program, Allie Hostler, and Abraham Zhan. And then in our Communications office, we have Adam Calvillo-Cain who is filming this whole thing, and has been moving his camera around to make sure he catches everyone in the best possible light.

So thank you to everyone for your participation, and I look forward to continuing to move forward on this.

(Thereupon the California Department of Toxic Substances Control Symposium adjourned at 3:16 p.m.)
CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Department of Toxic Substances Control Symposium was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California.

That the said proceedings was taken before me, in shorthand writing, and was thereafter transcribed, under my direction, by computer-assisted transcription.

I further certify that I am not of counsel or attorney for any of the parties to said symposium nor in any way interested in the outcome of said symposium.

IN WITNESS WHEREOF, I have hereunto set my hand this 3rd day of April, 2017.

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