U.S. ENVIRONMENTAL PROTECTION AGENCY

PESTICIDE PROGRAM DIALOGUE COMMITTEE MEETING

October 28, 2020

11:00 a.m., Eastern Standard Time

Day One

APPEARANCES:
Walter Alarcon
Ruben Arroyo
Amy Asmus
Manojit Basu
Steven Bennett
Carol Ramsey Black
Taja Blackburn
Jasmine Brown
Lori Ann Burd
Douglas Burkett
Bill Chism
Alexandra Dapolito Dunn
Iris Figueroa
Jim Fredericks
Joseph Grzywacz
Gary Halvorson
Gina Hilton
Komal Jain
Shannon Jewell
Mark Johnson
Patrick Johnson
Sheryl Kunickis
Daniel Kunkel
Dominic LaJoie
Charlotte Liang
Amy Liebman
Aaron Lloyd
Lauren Lurkins
Tim Lust
Daniel Markowski
Gary Prescher
Caleb Ragland
Damon Reabe
Karen Reardon
Alan Reynolds
Charlotte Sanson
Steve Schaible
Carolyn Schroeder
David Shaw
Christina Stucker-Gassi
Carla Theriault
Mily Trevino-Sauceda
Cathy Tortorici
Liza Fleeson Trossbach
Tim Tucker
Edward Wakem
Nina Wilson

P R O C E E D I N G S

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MR. MESSINA: We are still waiting for Alex to log in. I think what I'll do is get us a little bit started and kind of talk about some things I was going to talk about and as soon as Alex joins I'll just stop talking.

Oh, Alex, is that you?

(No response.)

MR. MESSINA: Okay, so in addition, I mentioned that Rick had moved up as the deputy assistant administrator for management in the Office of Chemical Safety. Mike Goodis, who was the director of the Registration Division, he's currently serving in my role as the deputy office director for Programs. So we had some moves there.

We also, as a result of Rick moving up, myself moving up and Mike moving up, Marietta Echeverria, who was the director of the Environmental Fate and Effects Division, is now serving as the acting director for the Registration Division, filling in for Mike's role.

I'm now getting a text from Alex. Alex, you're on now. Can you start talking?

MS. DUNN: Yeah. Can you hear me?

MR. MESSINA: We can, great. I was kind of just

doing a little housekeeping on roles, but we are ready to hear your opening. Thank you for joining.

MS. DUNN: Oh, absolutely. Well, I don't want to interrupt what you were doing, Ed, but if you're done, let me just say hello, everyone, and it's a pleasure to be with you all. I will be connecting visually in just a moment. I have just landed coming back from traveling with the administrator on the dicamba announcement yesterday. We were in Savannah, Georgia, and I just landed here at Dulles. So pretty soon I'll see you all virtually, but between now and then, I'm afraid you're going to have to just hear my voice.

Again, thank you, Ed, for the introduction, and hello to all members of the PPDC. I hope you know how much we appreciate you and how much we appreciate your time for being with us. Your service on the PPDC is absolutely critical to all of us here. You are very flexible to participate in this meeting today virtually and we do thank you for that.

I also want to thank our colleagues, Shannon Jewell, Carla Theriault, and our OPP staff for their wonderful work to hold this meeting. I hope you all know how much I believe in engagement with all of you and using these opportunities to meaningfully connect

and share and have information between each other. And I'm sorry for the background noise. I hope that they don't make too many announcements while I'm trying to talk to you.

The PPDC is in its 25th year, and it has been an extremely important committee to us. It is such an effective tool and group for us to gather feedback, diverse insights and perspectives on pesticide policies.

We all worked very hard on putting together what we hope is a meaningful and good agenda for you. We believe that the next two days that you meet are going to be so important to us. We want your feedback on many things, such as our recent activities and accomplishments which we are looking forward to sharing with you. Also, our activities in response to COVID-19, the public health emergency.

I'm also really pleased to hear that you are interested in forming workgroups, and over the last meeting you did some surveying of yourselves, and four workgroups rose to the top, and those are on today's agenda with some foundational charges. And as you have explorations around these topics, we hope that it will come to light that these are the right choices for you, and if not, we certainly have the flexibility to identify additional workgroups.

The main goal is for this experience on PPDC to be beneficial both to you all as participants, and to us as the agency, resulting in a stronger, more effective, beneficial program.

We are very much hoping that the remarks that I can provide you today will give you just a brief update of some of our pesticide priorities and the work that we're accomplishing across these areas. And I'll keep my remarks short, and a lot of them will tee up what Ed is going to talk to, and hopefully between the two of us, you will feel like you have a pretty good sense of what we're up to.

So first, I just want to tell you that we are really honored to be gathering during EPA's 50th anniversary. Over the last 50 years, the agency has truly worked to fulfill our mission of protecting human health and the environment by cleaning up the air, the water and the land, and by ultimately providing a cleaner, healthier environment for the American people.

We know that we do this not just ourself, but with partnerships with the private sector, with the agricultural community, with NGOs, with citizens, with states, cities. I can't tell you that how much we get done because all of you help us be stronger and better.

We have several guiding principles that I have

tried to keep in the forefront of my mind and as I work with my colleagues, I have refined them and shared them, but all of the work we do is grounded in key goals, four key goals. And I hope they're not surprising to you. Protecting public health in the environment, improving our engagement with stakeholders, increasing transparency and certainty in the work that we do, and reducing unnecessary burdens through the work that we do, that is making our programs efficient and effective. And easy to understand.

So let me just talk briefly on the mission of EPA protecting the public health and environment. Everything that this office does every day is focused on this goal. And over the last fiscal year, and at EPA, of course, we think in fiscal years, we have made several impressive accomplishments carrying out our mandate to register pesticides, re-evaluate existing pesticides, and taking regulatory action as needed to continue to effectively provide safe pesticides into the marketplace. Safe for humans, safe for the environment, safe for workers.

So, as you know, an important part of our work is to register new active ingredients, and in FY20 alone, we registered 16 new active ingredients. Of these 16 new active ingredients, we registered one

alphachloralose that we are talking about, a novel rodenticide used to control mice inside homes and buildings, and it is the first rodenticide in over 20 years with a new mode of action. This rodenticide induces hypothermia in the rodents, and is much less toxic to humans and to other animals who might come into contact with the rodent that has been affected by alphachloralose.

We also have been really active in the microbial space. Very exciting there. We have registered a new active ingredient, the clonostachys rosea strain, CR-7, and this product gives a whole new meaning to the interface between nature and agriculture. In this case, the product is an herbicide that is delivered, believe it or not, by honeybees or bumblebees as they leave their hives to go out and pollinate. They walk across a path, pick up a little bit of this herbicide, and then leave it behind on the plants where it does its work and it is of no harm to the insect.

Another example of a biopesticide active ingredient we have registered is nootkatone. Nootkatone, I hope you heard about, because it has the smell and taste of grapefruit. It got a lot of attention because we worked with the Centers for Disease Control and Prevention on this product, and it repels

and kills ticks, mosquitoes and a wide variety of other biting pests.

I also want to highlight that last week we announced the proposed ban or cancellation of certain uses of antifoulants in paint called Irgarol. We have found that Irgarol is toxic to coral reefs and is a cause of coral reef bleaching. There are less environmentally persistent alternatives to using Irgarol in the boating industry, and we are very pleased to be proposing to cancel these uses. There are some uses that still remain. We are looking for opportunities across all of our programs to consider our impacts on the environment.

As I mentioned, I am sitting in the airport, having just returned from rural Georgia, standing in some cotton fields, which were in full bloom and ready for harvest. It looked like snow out there.

We, yesterday, announced, after a thorough and thoughtful process, to register two dicamba products for five years and extend the registration of a third product. We reviewed substantial amounts of new information. We actually had a call yesterday with the administrator and just of the individuals who worked primarily on this reregistration, or new registration, there were over 50 scientists, 50 members of our career

staff, who had invested their time and expertise in analyzing data studies and coming up with what we believe is an extremely protected registration that will allow dicamba to be used on dicamba-tolerant cotton and soybeans, but also addressed the significant issues associated with volatility.

We have put a number of requirements in place that you may hear about later or can read about in our press from yesterday, and are all on our website that will address the issue of this product staying on target, which is most important. And that is our goal, frankly, with all pesticides, we want them to do their job, stay in the place where they are applied and do their job, and not leave that place due to volatility or drift. And we spent a lot of time working on the dicamba registration in that regard.

Another point I'd like to make is the second principle, which is improving engagement with stakeholders. You know, I certainly worked in the private sector outside of the agency for 23 years and I know what it's like to try to get the attention of EPA and to try to make your expertise and points heard by the agency. And so I was very pleased to bring that experience into the agency, and I use it to help me when we're talking with outside groups to remember what it

was like to be outside the doors and trying to engage with EPA and make sure that we're responsive.

So certainly the PPDC is a perfect example of how we like to engage with others, and I'm sure you all are familiar with our FIFRA Science Advisory Panel. And it looks like I have just gotten into the Adobe Connect, so I'm going to turn off the speakers and hopefully have a good connection here. Just give me a moment.

Can you all hear me okay?

MR. MESSINA: The phone was a little better, Alex. Can you try it again? Yeah, actually I'm not hearing anything. I heard you for a second and now I'm not hearing you. So you just might want to dial back in through the phone. Can't hear you.

MS. DUNN: Can't hear me?

MR. MESSINA: Oh, wait, now I can hear you.

MS. DUNN: Okay, I'm back. Can you see me and hear me?

MR. MESSINA: We can. Thank you.

MS. DUNN: All right. My goodness. Well, hi, everyone. I really did want to engage with you in person and you can see by the backdrop here, I am definitely sitting in the airport. So sorry about that.

Okay. So let me just sort of get back to the points that I was talking about, which is engaging with

the agency and how important it is to use all of our different stakeholder groups, including this one, the PPDC, including our FIFRA SAP, which has had a number of very important meetings, including the one in September 2020, where the FIFRA SAP is working on using new approach methods, or NAMs, to reduce animal testing, and also to derive extrapolation factors and evaluate neurotoxicity for human health risk assessments.

Also, the SAP has looked at surface water monitoring data in pesticide drinking water assessments, that was in November of 2019. When Administrator Wheeler spoke at the Nixon Library on September 3rd for EPA's 50th anniversary, he stated that he has a vision for the second term, and that is a look at how we talk about our pesticide work and all of the science that goes into it.

We're calling it a bit of a 21st Century pesticide initiative, but what is most important about this effort is to try to communicate as thoroughly as possible about the decision making that goes into any pesticide approval, the science that we look at, the studies that we do, the wholistic approach we take, the Endangered Species Act assessments that we do, and how these decisions are backed by the best, most credible science. This is very, very important, and the

administrator believes very strongly in our program and wants to put more attention onto the work that we do going forward.

He also has been a champion of our reduction in animal testing initiative, and you'll hear later today how much we have done in that regard. The Pesticide Program has a greater opportunity to be a source of reductions in animal testing.

Let me also tell you that we're very proud of our pollinator work. As you know, this past year, we've held a series of webinars. We also, for the first time ever, declared there to be National Pollinator Week in June 2020, the first time that an EPA administrator, in this case Administrator Wheeler, has ever declared a pollinator week. We did that with other federal agencies, USDA, and Department of Interior.

We also just in September cohosted a State of the Science Workshop with USDA on pollinators. So we are looking forward to the report of that workshop and to continuing a commitment to all of our work to, again, protect our nation's pollinators from off-target impacts of pesticides.

Also important to our work are the stakeholders and in the form of our Tribal Pesticide Program Council, the TPPC, work with our tribes, our first nations, is so

important to us and we learn so much from them, and they have some unique conditions associated with pesticide exposures due to tribal culture and traditional practices.

So we work very, very closely with our Tribal Pesticide Program Council, and only a few weeks ago, we awarded a five-year cooperative agreement in the amount of $975,000 to ITEP, the Institute of Tribal Environmental Professionals, at Northern Arizona University. And they will be, for the next five years, through 2025, helping us support and run the initiatives of our tribal members on the TPPC.

So don't worry, I'm getting ready to wrap up, and I also will answer some questions. We talk about increasing transparency and certainty in what we do, I hope you've seen that in the form of a number of initiatives. We've released this year the new Endangered Species Act revised methods, which we developed with four other federal agencies. You got to see those methods at work in the carbaryl and methomyl draft biological evaluations which were released for comment through July 2nd, and we are reviewing those comments now and will complete those in 2021. We'll also be soon releasing four more draft biological evaluations on herbicides.

Lastly, we have tried to provide certainty by keeping to our schedule of re-evaluating the various pesticides through the reregistration process. We recently took work on the triazines public, and soon we will be releasing, as I mentioned, for herbicides, the draft biological evaluations for simazine, propazine and atrazine. All of this work is very important and us keeping to our commitments of timeliness allows for good input from all of our stakeholders.

And the last thing I'm going to talk about is reducing burdens. I mentioned our animal testing initiative earlier. The animal testing initiative is one way that when we can reduce mandated tests and save animals at the same time, that is the best fit.

Also, we have proposed this month guidance, drafts, for waiving acute dermal toxicity tests, and we would like to hear from you all on that. But once again, this would allow for some data waivers, but not compromise the quality and science behind our work.

We've also had the Plants Incorporated Protectants, or PIP rule, out for public comment, also put out in October. This has been a busy month. Our PIP rule delivers on the President's executive order on modernizing agricultural biotech, and it also is an example of where we believe there isn't a significant

risk from plant incorporated protectants that can be generated using technology, but achieve the same outcome as traditional conventional breeding. In those cases, as you see in our proposed rule, we would essentially not regulate those. We would receive notice of them, but not regulate them under FIFRA, because they don't, in our opinion, pose a risk.

We will hear from everyone through the comment period, but that's an example of how we're trying to look at what's important for us to regulate, so that we can protect people and the environment, and species, but also use our resources not looking at things that don't pose risk. Using, again, always, the best science to inform our decision making.

Just to give you a sense on the plant incorporated protectant rule, there were 12 meetings of the FIFRA Science Advisory Panel that went into the proposal that we have out for comment now.

I'm not going to talk a lot about COVID, because you'll hear, later, tomorrow, about our COVID response, but I hope you see that an example of our ability to be nimble and timely in an unusual time of public challenge. I do have my mask here, just got back, was wearing it the whole way.

We are living in new times, and this has

required our Antimicrobial Division to really step up. They have now over 500 products on our List N, and we are demonstrating that it is important for EPA to review the efficacy of these products. I cannot tell you in a week how many requests we get from companies that have a product that they're looking for the fast track to getting on List N. There is a faster track, if you have your data, and we are moving as fast as possible, but there is no way to avoid the fact that you need data to prove that your product works.

Across our Pesticide Program, efficacy is so important, and EPA's review of efficacy. And we may be able to move quicker with the right data, but we can't make that data something that can't be submitted. We need to see it. We need to know these products work. And our staff is doing an incredible job in that regard.

So the message that I want to leave you with as I wrap up, and thank you for your patience with my slightly late arrival, and then the technology glitch in the middle. So thank you again for accommodating that. I do apologize for any disruption to your meeting.

But I do want to leave you with an assurance that EPA is working hard every single day to find ways to bring new and innovative products to the market, review the products on the market that we have, and

ultimately keep our eyes on the prize, which is protecting human health and the environment so that we have safe and abundant food, safe and abundant healthy lands, and we protect the public from public health risks transmitted by insects, we protect our crops from insect forms, we keep our farmers moving efficiently as they grow plants that feed the planet, and thank you for your time on this committee, because your inputs makes us better in what we do.

I truly appreciate everything that you do for us and we're only sorry we're not meeting in person, because I know this is a wonderful group, and it would have been great to have those side hallway conversations and shake hands and thank you in person, but for now, the virtual will have to do. And with that, I'd like to answer any questions that you might have.

Ed, thank you.

MR. MESSINA: Thank you, Alex, and I personally know you rearranged your schedule to be able to do this opening, and I think it shows how much you care about this group and we really appreciate you doing that.

Shannon, do we have the ability to field some questions for Alex, and how would you like that to happen?

MS. DUNN: And if we don't have time, I would

hopefully try to come back on this group tomorrow morning or another time, so we can always save them up.

MR. MESSINA: I think we have time for a couple of questions.

MS. DUNN: Okay.

MR. MESSINA: I'm just wondering how to facilitate that through Shannon or Carla.

MS. THERIAULT: Hi, Ed, this is Carla. Does anyone have any questions? Just type your name in the presenter chat, we will call on you and then hit #6 to unmute your phone so that we can all hear you.

MR. MESSINA: Thanks, Carla. So I see Mano is typing.

MR. BASU: Yeah, can you hear me?

MR. MESSINA: Yes, thank you.

MR. BASU: Wonderful. Good morning. I appreciate it, Ms. Dunn, and thank you very much for your taking time off from your busy schedule and providing us an overview. It was great.

A quick question on the interagency stakeholder meetings on ESA, if you were able to provide any overview, share any updates on, you know, what the plan is going forward with those interagency stakeholder meetings. Thank you very much.

MS. DUNN: Yes, absolutely. So thank you for

the question, and as you know, under the Farm Bill of 2018, we formed the committee made up of USDA, Department of Commerce, National Maritime Fisheries Service within the Department of Commerce, Department of Interior, TPPC, and the Council on Environmental Quality. That group met quite regularly while we were working on developing the new method. And, in fact, the methods were developed by the career scientists and then reviewed by the principals. The committee is chaired by Administrator Wheeler, who is passionate about animals, as you can tell, given his work on animal testing for the agency.

So there was great interest, and we met, I would say quite regularly, up until the release of the methods in March. And now what we're doing is we're focusing on implementation. So the methods themselves are not going to change any time soon. What is going to change is our learning through doing, as we roll out, again, methomyl, carbaryl, look at those comments, and then follow with the triazines, and glyphosates will be following after the triazines.

Also, our other federal agencies are doing some of their own work using the new methods, and so the best way to sort of think about how we're going to evolve these methods is through their application, and seeing

them in practice, and continuing to make them better.

Also, we are obligated under the Farm Bill to report to Congress every six months. We reported in June on our progress, which, of course, the main deliverable between January and June was getting the message out, and we'll report again in December. And our report will be on some of the work that we've done under the new methods.

MR. BASU: Thank you very much.

MR. MESSINA: Any other questions for Alex?

(No response.)

MR. MESSINA: Well, I know this isn't a shy group, so I'm sure we'll get warmed up as we get rolling.

MS. DUNN: Yep. And just to give you a sense of whether people are actually traveling, this is Dulles Airport, an international airport. Do you see anyone? Anyone?

MR. MESSINA: You look like the only person -- I was going to say, you should do a screen grab of that to make it your background. You can make it your fake background.

MS. DUNN: It's surreal. There's probably -- if I look around -- another 15 people in this terminal. So let's hope we all get back to normal soon. And thank

you all. Have a great meeting. And, Ed, I'm going to turn it to you.

MR. MESSINA: Thank you so much, Alex. I'm going to turn my screen on.

All right, so back to sort of logistics. I'm going to talk a little bit about some of the office moves, the personnel moves, because that was of some interest to folks when we surveyed about where that sort of kicks this off.

So I mentioned that Rick has moved up to the director of the deputy assistant administrator for management in OCSPP. Mike Goodis is now in the deputy office director spot that I served. I am currently the acting office director for the Office of Pesticide Programs, which makes me the PPDC chair. So, thanks.

I mentioned that Marietta Echeverria moved over to be the director of the Registration Division, to fill in for Mike, and Jan Matuszko has filled in and she's the associate division director of the Environmental Fate and Effects Division, and she is now serving as the acting division director.

We also had Bob McNally, who many of you know. He was the division director for the Biopesticides and Pollution Prevention Division. He is entering an agency agreement where he, at his election, phased into

retirement, and he has joined the OPP head office as a senior advisor to help with coaching and transitioning for new staff that are coming in.

Billy Smith, who was the deputy director of the Pesticides Reevaluation Division has been now serving as the acting division director for the Biopesticides Pollution Division, which Bob had previously run.

And then lastly, Jeff Herndon, many of you heard, passed away recently. He was just an incredible member of the OPP family and OPP team. He did a lot of work on the international front with OECD. And so we are mourning the loss of our wonderful colleague and friend Jeff Herndon. Thank you for those who have sent wishes to the family and to our OPP family. So I would be remiss if I did not mention the loss of Jeff and we will dearly miss him.

So with sort of those organizational personnel moves, which I know folks are interested in, I'll talk a little bit about, you know, welcoming you. I think you heard a wonderful introduction from Alex and how much we really care about hearing from our stakeholders through this process.

The makeup of the PPDC I think this year is really great. You know, we strive to have diverse viewpoints represented on the committee, and as Alex

mentioned, we really appreciate the robust conversation that we've had in the past, and I want to continue that in this medium. I know it's a little difficult, but please don't be shy with your comments or criticisms of the agency. We are here to hear them and see if collectively together we can improve the things that now make OPP great.

You know, Alex mentioned all the great work. I'm going to talk a little bit later on in the agenda to expand on some of those things. It's just been an amazing year in the telework environment. OPP hasn’t missed a beat, in fact in some areas, we exceeded our measures for this year, working hard. Some of the career scientists that you all work with and know are some of the, you know, world-renowned and recognized for the work that they do, and I am honored to be part of that team.

So with that in mind, our goal for this meeting is to also share information and some background with the group, have some productive conversations and receive your input, and I'm going to do a go-around for the PPDC members to sort of introduce themselves.

And I also wanted to personally thank Dan Kunkel for his service on the PPDC since 2015. Dan has let us know and it is okay for us letting folks know that he is

going to be retiring from IR-4 next month, and so he will no longer be representing IR-4 on the PPDC. So thank you, Dan, for your years of service to the PPDC. I personally appreciate all of the work that you do with IR-4. This year was a banner year for IR-4 and their lead in all the work that we're doing and supporting us also on the international front. So appreciate the work of Dan.

Happy anniversary, too. We have been functioning basically since 1995, September, so this is sort of an anniversary, a big milestone year for PPDC in providing advice to the EPA administrator. All of the issues associated with pesticide regulatory development and reform initiatives and evolving policy and program implementation issues and policy issues associated with evaluating and reducing risks from pesticides. So it's been a number of years of robust discussion that I hope we can continue into the future.

So I'm going to go into some housekeeping items now for folks. There are seven one-pager updates on a variety of topics that are on the website for PPDC, for ongoing policy-related issues. Basically status updates that are available on the website you can find by typing in Pesticide Program Dialogue Committee into your browser and then going to the EPA.gov site, which many

of you probably used to join this meeting.

And if folks who are not speakers, we would ask that you participate through your computer audio, which hopefully is coming through okay. I think we've been doing a good job of having folks on mute and we're going to have our chairs and our speakers talk about the workgroups.

We are also going to have two 15-minute public comment periods per day at 12:45 and 4:45 Eastern time. If you would like to make a public comment, please email Shannon Jewell at Jewell, which is J E W E L L, .Shannon, which is S H A N N O N, @EPA.gov, and her email address will be shown during the breaks, but please send her an email if you would wish to make any public comments during our two 15-minute public comment periods at 12:45 and 4:45.

We did that consciously this time, and that was actually an Alex suggestion, to maybe not just put them at the end of the day, with everyone, you know, sort of wrapping up. We wanted to make sure there was plenty of opportunity for public comment, so we had two sessions, and one is in the middle of the day so that folks don't have to wait until the very end of the day to hear comments from the public. So please take advantage of that and please email Shannon Jewell if you are

interested in speaking.

For committee members that are on the phone lines, please remember to mute your line when not speaking. We will sometimes mute all lines to reduce interference and then you'll need to personally unmute, and Shannon Jewell has sent instructions to the speakers on how to do that.

And then because we're not in person, because we don't have the normal tent card that we would raise, if you would like to make a comment or jump into the conversation, if you can just type your name in the presenter chatbox to signal that you would like to make comments or ask questions, please do that, and I have some folks monitoring the chatbox to see folks that want to talk.

And then if you need to contact Shannon to let her know that you are not going to be using the computer and using the telephone only and you won't be online so that we can make sure we do have the opportunity for comments. You can also email Shannon at the email that I provided. So if you're not able to be on the Adobe Connect for some reason, but you would like to make a comment and jump into the conversation, just send an email to Shannon and she will recognize you as well.

Make sure your computer microphones are muted

and so that when you are talking, you are not getting the reverb and the double feedback. So those are some of the small logistical items. What I'm going to turn to now is the agenda, and ask Shannon to pull that up on the screen, which she has already done.

So you've seen we've done the welcoming remarks already. We're going to do introductions of the PPDC members next. We're going to -- I'm going to do an update of the recent activities, expanding on some of the information that Alex shared. We'll do a slide deck there. Again, we've got our public comments. We'll do a lunch break. We're going to have our PPDC workgroup update, which Shannon is going to talk about. She is our designated federal officer. And Shannon is going to talk about sort of how the workgroups are formed, the suggested topics that PPDC members provided, sort of the selection process, and the PPDC topics that were selected for pesticide resistance management, emerging agricultural technologies, emerging pathogens, and the farmworker and clinician training.

And we're going to hear from each of those workgroups. And the goal today for that is to sort of understand and develop charge questions for where those issues are most important to the agency, you know, how we selected the right charge questions and then the

workgroup will then be able to report out in the spring meeting for potential answers to those charge questions.

So we're going to hear a little bit of an overview from the workgroup. Some of them are going to be short and quick because we did have some presentations at the last PPDC meeting, back in May, we'll do a brief overview from the chair. We will then show and display some of the potential charge questions, and we will ask for participation on the workgroups and ask for refinement of the charge questions so that after the end of the two days, when we have these sessions, we can have final charge questions, have an understanding of who may be on the workgroup, and then setting up meetings.

As I mentioned, we were having a Teams training for folks of the workgroups to have a collaborative place where the workgroups can go up and do some work, and then in May, in the future, we will hear from the workgroups and the answers to the charge questions.

So that is sort of the overall goal. So as we dive into the agenda, after the update for PPDC workgroups at 2:30, we will hear from the resistance management workgroup, that will be chaired by Bill Chism and Alan Reynolds, and there's your session goals. And then at 3:45 to 4:45, we are going to do the emerging

agricultural technologies workgroup, which I am the chair of, and for which we had nominations for, which was great.

Then we'll have our second public comment session at 4:45 to 5:00. And then on day two, tomorrow, at 11:00, I'll be doing the overview of the EPA's COVID-19 activities to address the ongoing health crisis and talk a little bit about sort of the great work that our scientists have been doing in response to that.

We'll go into the emerging pathogens workgroup, which is chaired by Taja Blackburn from the Antimicrobials Division. We will do another public comment period. We will have a lunch break. And then we'll go into the farmworker and clinician training workgroup, and Carolyn Schroeder, who is the chief of the Certification Worker Protection Branch and Steve Schaible, are going to lead some of that session.

And then, 3:15, we will have our training regarding the collaboration platform. At 3:30, we will do the moving forward, sort of wrap up, you know, what are things that we want to do for the May meeting, how did this meeting go, any improvements we want to make, sort of wrapping up and tying up loose ends. And then we will go into our last and final public comment, and then we will adjourn.

So that is an overview of the agenda. And so now, what I would like to do is go through and introduce the committee members and then we can go into our program for the agenda. So I've got a list of the PPDC members, I'm going to ask that -- I'm going to call on you and just, you know, ask that you can sort of announce yourself and let us know that you're there and if you'd like to say a couple of, you know, short opening remarks, feel free to do so.

And my list is in alphabetical order by first name, and so the first person to call on is Aaron Lloyd from the Lee County Mosquito Control District in Lee Acres, Florida.

MS. JEWELL: Hi, Ed, this is Shannon. I do see that Aaron is on the webinar portion. Perhaps he's not called in. Aaron, make sure that both your phone is unmuted and you've pressed #6 to unmute the global mute of the Adobe Connect meeting, if you're trying to speak. Otherwise, maybe we should just loop back.

MR. MESSINA: I'll give Aaron a minute.

All right. So next person is Amy Asmus from the Weed Science Society of America.

MS. ASMUS: Hello.

MR. MESSINA: Amy, are you there?

MS. ASMUS: Hello, this is Amy Asmus. I am

representing Asmus Farm Supply, who is a farm dealer that deals with farmers and growers in northern Iowa and southern Minnesota. I am here to represent the Weed Science Society. Thank you for allowing us to join.

MR. MESSINA: Great. Thank you for your service, Amy.

Amy Liebman from the Migrant Clinicians Network. All right, we'll come back to Amy.

Caleb Ragland from the National Soybean Association.

MS. JEWELL: Folks, make sure that you are unmuting your device and pressing #6 on your keypad as well. Just letting you know, because you may be double muted because of the global mute we have on the conference line.

MR. RAGLAND: All right, this is Caleb. Can you hear me now?

MR. MESSINA: Yes, thank you, Caleb.

MR. RAGLAND: Okay, very good. I represent the American Soybean Association. I'm a farmer in Kentucky, raise soybeans, corn, wheat and pigs on my farm. So thanks for the opportunity to be on the call today.

MR. MESSINA: Great. Thank you, Caleb, for participating.

Carol Black?

MS. BLACK: This is Carol Black with Washington State University, and I have been a pesticide safety educator for 33 years and I am representing the American Association of Pesticide Safety Educators as well as pesticide applicators throughout Washington State.

MR. MESSINA: Thank you, Carol.

Cathy Tortorici, if I got that correctly, Endangered Species Act Interagency Cooperation Division.

MR. TORTORICI: Yes, this is Cathy. Can you hear me?

MR. MESSINA: Yes. Thank you, Cathy.

MR. TORTORICI: Great. Yes, my name is Cathy Tortorici and I work for NOAA Fisheries here in Silver Spring, Maryland, and my staff and I work on the ESA Section 7 consultation work that Alex mentioned in her remarks regarding FIFRA pesticides. So I'm very glad to be here and looking forward to the conversation. Thanks so much.

MR. MESSINA: Thank you, Cathy.

Charlotte Liang?

MS. LIANG: Yes. Hi, this is Charlotte Liang, I am with the U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, Office of Food Safety. I work on policy issues related to pesticide residues in food. I am glad to be here. Thank you.

MR. MESSINA: Thank you, Charlotte.

Charlotte Sanson?

MS. SANSON: Oh, hi, this is Charlotte Sanson. I am head of regulatory affairs for North America, for ADAMA Crop Protection, we're a global crop protection company. And it's a pleasure to serve on PPDC representing the crop protection industry. Thank you.

MR. MESSINA: Thank you, Charlotte.

Christina Stucker?

MS. STUCKER-GASSI: Good morning, everyone. This is Christina Stucker-Gassi with the Northwest Center for Alternatives to Pesticides. We've been around since the mid-1970s, and are happy to be involved.

MR. MESSINA: Thanks, Christina.

Damon Reabe?

MR. RAEBE: Yes, thanks. Damon Reabe, I'm an aerial applicator from Wisconsin representing the National Agricultural Aviation Association.

MR. MESSINA: Thanks, Damon.

And Dan Kunkel, is Dan on? Is this your last PPDC?

MR. KUNKEL: Yes, I am.

MR. MESSINA: All right, Dan.

MR. KUNKEL: Can you hear me all right, Ed?

MR. MESSINA: We can, yeah.

MR. KUNKEL: All right. Thank you, Ed. I'm Dan Kunkel, I'm with the IR-4 program, we're a minor use program. We register products for the specialty crop growers. And thanks, Ed, I really appreciate the kind comments. I have very much enjoyed my work with IR-4 and a big highlight of that has been working with EPA. So I wish you all the best. Thanks again.

MR. MESSINA: Thanks. We will miss you.

Dan Markowski?

MR. MARKOWSKI: Hello. Good morning, everyone. I am the vice president of Vector Disease Control International. I have been here for, oh, 17 years, I think, doing mosquito surveillance and control operations nationwide. I'm representing the American Mosquito Control Association, districts and governmental agencies throughout the U.S., several thousand members, and most interested in public health pesticide use here. And this is my first year, second meeting of the PPDC.

MR. MESSINA: Great. Thank you for your work.

David Shaw?

MR. SHAW: Yes. My name is David Shaw, and I am a faculty member here at Mississippi State University, weed scientist research and teaching by background. I've been working for the last several years especially

with a very broad group of individuals through the Weed Science Society of America's Herbicide Resistance Education Committee, focused on community-based approaches to resistance management.

MR. MESSINA: Thank you.

Dominic LaJoie?

MR. LAJOIE: Yes, hello, everybody. This is Dominic LaJoie, I'm a potato farmer from Maine, and I'm currently the first vice president of the National Potato Council, who I'm representing on this committee. I appreciate being with you all today. Thank you.

MR. MESSINA: Thank you, Dominic.

Douglas Burkett?

MR. BURKETT: Yeah, good morning, PPDC. I hope you can hear me okay. I'm Doug, I'm with the Armed Forces Pest Management Board, that's under the office of the Secretary of Defense and our office is kind of a pest management policy and guidance organization for the Department of Defense. And we're one of those federal agencies that has its own applicator certification program, and thanks to the EPA, they've been super helpful with that, and I appreciate being involved with this group.

MR. MESSINA: Great. Thank you, Doug.

Edward Wakem?

MR. WAKEM: Yeah, good morning, Ed, and PPDC. I'm a veterinarian living in Virginia. I work with Ceva Animal Health and I am on the PPDC representing the American Veterinary Medical Association which has more than 90,000 members of practicing veterinarians in a variety of different disciplines throughout the United States and abroad. I've been on the PPDC now for three years and looking forward to our meeting. Thank you.

MR. MESSINA: Great. Thank you.

Gary Halvorson?

(No response.)

MR. MESSINA: All right, we'll check back with Gary later.

Gary Prescher?

MR. PRESCHER: Yes, good morning.

MR. MESSINA: Good morning.

MR. PRESCHER: I represent the National Farm Growers Association and I live in a farm in south central Minnesota, and my second meeting, and appreciate the opportunity. Thank you.

MR. MESSINA: Great, thanks.

Gina Hilton?

MS. HILTON: Good morning, my name is Gina Hilton and I am a toxicologist working for PETA, also known as the People for the Ethical Treatment of

Animals, and I have ongoing collaborations with regulatory agencies specifically for projects focused on the development and validation of nonanimal test methods for agrochemical risk assessment. And yeah, I just want to say thank you for the opportunity to serve on the PPDC and I'm looking forward to hearing updates during this meeting.

MR. MESSINA: Great. Thank you.

All right, so you can tell in this world of COVID and teleworking, my office includes closet doors that people need to get to from time to time. But welcome, Gina.

Iris Figueroa?

MS. FIGUEROA: Good morning, everyone. My name is Iris Figueroa and I work for Farmworker Justice. As our name suggests, we advocate improved both living and working conditions of farmworkers.

MR. MESSINA: Thank you, Iris.

Jasmine Brown?

(Technical difficulties.)

MR. MESSINA: I'm getting some feedback. I can't tell if that's Jasmine or if that's somebody who put us on hold. So, Jasmine Brown, we'll come back to you.

Jim Fredericks?

MR. FREDERICKS: Hi, Ed. Good morning, PPDC. Jim Fredericks with the National Pest Management Association. NPMA represents pest control companies across the United States, working in homes and businesses to help protect public health, food and property from dangerous pests. Thanks for having me this morning.

MR. MESSINA: Great, welcome, Jim.

Joseph Grzywacz?

MR. GRZYWACZ: Hey, good try. My name is Joe Grzywacz, I'm from Florida State University. I do research on occupational health and safety among farmworkers, and this is my second meeting. I'm glad to be here.

MR. MESSINA: Great. Thanks, Joe.

Karen Reardon?

MS. REARDON: Hi, thanks, Ed. This is Karen Reardon, with RISE. Can you hear me? I'm sorry.

MR. MESSINA: Yes.

MS. REARDON: Hi, this is Karen Reardon with RISE, and we are the trade association that represents the companies that supply pesticides to consumers and professionals for nonagricultural uses. Thanks.

MR. MESSINA: Great.

Komal Jain?

MS. JAIN: Good afternoon, everyone. It is afternoon. So, hi, I am the executive director of the Center for Biocide Chemistries. We're based here in D.C. We are a trade association of more than 50 companies that produce antimicrobial pesticides related to disinfection and material preservation. I believe this is my fifth year on PPDC, and I appreciate the continued opportunity.

MR. MESSINA: Thanks, Komal.

Lauren Lurkins?

MS. LURKINS: Hi. My name is Lauren Lurkins. I am the director of environmental policy at Illinois Farm Bureau, and I am the representative for American Farm Bureau Federation. Thank you.

MR. MESSINA: Thank you, Lauren.

Liza Fleeson Trossbach?

MS. TROSSBACH: Good afternoon, this is Liza Fleeson Trossbach, I am with the Virginia Department of Agriculture and Consumer Services, and it is my continuing privilege to serve as a representative for the Association of American Pest Control Officials, or AAPCO. AAPCO represents state and territorial pesticide regulatory officials. Our responsibilities include applicator certification, licensing of businesses, registration of products and, of course, ensuring the

proper use of pesticides. So, again, it's a pleasure to be here with PPDC.

MR. MESSINA: Thank you, Liza.

Lori Ann Burd?

MS. BURD: Hi, this is Lori Ann. Can you hear me?

MR. MESSINA: Yes.

MS. BURD: Great.

MR. MESSINA: I'm getting a little bit of feedback, so maybe if you can turn your computer down.

MS. BURD: Is that better?

MR. MESSINA: Yes.

MS. BURD: Great. Hi, my name is Lori Ann Burd, I am the environmental health director at the Center for Biological Diversity. I am here to give voice to the people, plants and animals imperiled by dangerous pesticides, and my focus is on keeping endangered species, like whooping cranes and the rusty patched bumblebee, from going extinct.

MR. MESSINA: Thank you, Lori Ann.

Mano Basu?

MR. BASU: Good afternoon, Ed, and good afternoon, PPDC. I am Mano Basu, I represent CropLife America. We are a trade association representing developers, manufacturers, formulators and distributors

of plant science solutions for agricultural and pest management in the United States. This is my first year on PPDC. Thank you for the privilege to serve on PPDC, and I look forward to this PPDC meeting. Thanks, Ed.

MR. MESSINA: Thanks, Mano.

Mark Johnson?

MR. MARK JOHNSON: Good morning, everyone. My name is Mark Johnson, I am Mark Johnson with the Golf Course Superintendents Association, we represent 19,000 members involved with golf course management. This is my first year and I'm very happy to be here. Thank you.

MR. MESSINA: Thanks, Mark.

Mily Trevino-Sauceda?

(No response.)

MR. MESSINA: Do we have anyone from the Alianza Nacional de Campesinas?

(No response.)

MS. JEWELL: I wonder if -- yeah, let's come back to Mily. Maybe Mily has the double mute, so when we come back around, maybe make sure to unmute your device and press #6.

MR. MESSINA: Great. Nina Wilson?

MS. WILSON: Good morning, everybody. I'm Nina Wilson with Gowan Company. Hello, everybody, can you hear me now? I'm Nina Wilson with Gowan Company, I

represent the Biological Products Industry Alliance where I am the vice chair of the board. BPIA promotes the responsible development and use of fate and insectal biological products which include biopesticides, biostimulants and biothermalizers, and I thank everybody at EPA for overcoming the technical challenges of bringing such a group together.

MR. MESSINA: Thank you, Nina.

Patrick Johnson?

MR. PATRICK JOHNSON: Good morning, I'm Patrick Johnson, I'm a farmer in northwest Mississippi. We grow cotton, rice, corn and soybeans and I'm representing the National Cotton Council on the committee and I look forward to the meeting.

MR. MESSINA: Thank you so much.

Ruben Arroyo?

(No response.)

MR. MESSINA: All right, we'll come back to Ruben.

Sheryl Kunickis, welcome. If you're speaking, you're on mute. Sheryl?

(No response.)

MR. MESSINA: We can wave, we can see you, we can work that out. So we know you're here. Thank you, Sheryl. And we'll get you set up so we can hear you,

because we definitely want to be able to do that.

All right, Steve Bennett?

MR. BENNETT: Good afternoon, I am Steve Bennett with Household and Commercial Products Association. We represent companies selling commercial and/or conventional and antimicrobial products in the consumer and household space.

MR. MESSINA: Thank you, Steve.

MR. ARROYO: Ed, this is Ruben. Can you hear me now?

MR. MESSINA: Yeah, Ruben Arroyo?

MR. ARROYO: Yeah, sorry about that, I had the double mute on there. So Ruben Arroyo, I'm from Riverside County in California. This is my first year on the committee. I'm the California Agricultural Commissioner. We handle the local pesticide use enforcement, which includes the field worker safety and label interpretations as far as inspections out in the field and make sure that our growers and our industry is following the label. Thank you.

MR. MESSINA: Great. Thank you, Ruben.

So back to Tim Lust.

MR. LUST: Tim Lust, I serve as CEO of the National Sorghum Producers, a trade association representing growers of sorghum around the United

States. I've been involved in registration, reregistration process for over 20 years on products related to our commodity.

MR. MESSINA: Great. Thank you, Tim.

Tim Tucker?

(No response.)

MR. MESSINA: All right, we can come back to Tim Tucker.

And Walter Alarcon. I pronounced that incorrectly, I'm sure.

MR. ALARCON: Yeah, that's fine, this is Walter Alarcon. Can you hear me?

MR. MESSINA: Yes.

MR. ALARCON: Yes. This is Walter Alarcon. I work for the National Institute for Occupational Safety and Health, NIOSH, which is a center for disease control and prevention in Cincinnati, Ohio, and we do pesticide monitoring and tracking in the sense of pesticide products. Thanks.

MR. MESSINA: Great. Thank you so much.

So the only individuals we didn't hear from today are Aaron Lloyd, Amy Liebman, Gary Halvorson, Jasmine Brown, Mily Trevino-Sauceda and Tim Tucker. I just want to see if Aaron Lloyd has been able to join or figure out the mute button.

(No response.)

MR. MESSINA: All right, Amy Liebman?

MS. LIEBMAN: Hi, good morning. Can you hear me?

MR. MESSINA: Yes, thank you, Amy.

MS. LIEBMAN: Hi. I'm Amy Liebman from the Migrant Clinicians Network. I head up our environmental and occupational health programming. Migrant Clinicians Network is a national network serving over 10,000 clinicians who are caring for farmworkers, immigrants and their families.

MR. MESSINA: Thanks.

All right, so Gary Halvorson?

(No response.)

MR. MESSINA: Jasmine Brown?

(No response.)

MR. MESSINA: And Mily Trevino-Sauceda?

MS. TREVINO-SAUCEDA: Hi, can you hear me?

MR. MESSINA: Yes. Thank you, Mily.

MS. TREVINO-SAUCEDA: Okay, yes. Mily Trevino-Sauceda, I apologize. I'm new with the technology. Well, this kind of technology. Mily Trevino-Sauceda with Alianza Nacional de Campesinas, which is the National Alliance of Farmworker Women, and I'm here in California and we have 15 different

organizations that are representing all farmworkers, and we care a lot about farmworkers and the exposures of pesticides and the community surrounding the agricultural areas where there's a lot of negligence. This is why my presence in being here. Thank you so much.

MR. MESSINA: Thank you so much for joining.

All right, lastly, Tim Tucker? One more time for Tim?

(No response.)

MR. MESSINA: Okay. Is there anybody that I left out that did not get to announce that is on our Pesticide Program Dialogue Committee roster?

(No response.)

MR. MESSINA: All right. Well, again, welcome, everyone. I think you can see we have a wonderful, diverse group and an incredible level of expertise represented on this PPDC committee to help OPP out. So we really appreciate your time and commitment to this process.

So with that, in looking at the agenda, I am going to move quickly into the OPP updates. I will end at 12:45, and I will go into our public comments, we will have a lunch break and then we will get rolling with our PPDC workgroup process or updates, and then

also diving into each of the workgroups to develop some charge questions and staffing up the workgroups. So thank you.

So, with that, oh, look, it's up on the screen. Perfect. Okay. Thank you.

All right. So OPP responsibilities, you heard a little bit of what Alex talked about this morning. These are our big priorities, protecting human health and the environment, ensuring pesticide users have information, examples, you know, clear labeling that allows for proper use, ensuring any pesticide residues on food are safe, ensuring decisions reflect the best science and policy judgment, meeting market needs so that industry gets their produce on the shelves and farmers and other consumers get products that they need, and then meeting milestones in our statutorily mandated deadlines for regulatory actions.

A number of statutes govern these responsibilities and we keep a close eye on those to make sure we are continuing to work through the issues under FIFRA and FFDCA and PRIA and we've gotten ESA work as well. You've heard a number of the issues that are there.

So as we suspected, when you put the PowerPoint through Adobe, it does not like it. So I think what I

can do is later on I'll display the sort of the new org structure. So as you know, OCSPP went through a reorganization very recently. This is the first week. In essence, for OPP, what that means is the former division that we had, which were our Field and External Affairs Divisions, which did our communications and outreach, and our ITRMD, our Information Technology Branch Division, was moved into a new organization called Office of Program Support, and that's called OPS.

And so a number of those individuals that were in those divisions that were formerly in OPP are now in a separate office of OPS, and thank you for putting the slides through so you can see on slide 3, we can click on that, and folks can see kind of what the new org structure looks like for OCSPP. And it's the Office of Pesticide Programs. We have OPPT, and then we've got our Office of Program Support, which is newly formed.

And on the next slide, which I guess I can navigate, there's a window in the way of my view, and I'm wondering if it's there for others as well.

MS. JEWELL: Okay, Ed, I think I have to get out of slides to take care of that, but I'll get it and get those slides right back up for you.

MR. MESSINA: Okay. Yeah, we're waiting for the slides to sort of load.

So the bottom line, and I don't really need the slide, because I know it, but for others. So we were nine divisions, with our ITRMD and our FEAD Division. We are now at seven divisions. And also the independent structure program, screening program, was moved to the OPP front office. So with that addition, we have our Antimicrobials Division, Anita Pease; Biological and Economic Analysis Division, which is Kimberly Nesci; the Biopesticide and Pollution Prevention Division, as I mentioned, is Billy; our Environmental Fate and Effects Division, that's Jan Matuszko; our Health Effects Division is Dana Vogel; and our Pesticide Reevaluation Division is Elissa Reaves; and then we have our Registration Division, which is Marietta Echeverria.

So basically impact to OPP is the IT folks and the communication folks are now in a separate organization, we're still working seamlessly with them, they're still part of the OCSPP family, but I know there was interest in understanding how OPP was faring through the OCSPP reorganization, which has just been effective this week.

So the next slide, which I can do I guess, and it's kind of small because it's in presenter mode, it's not in presentation mode. Shannon, if there's a way to fix that.

MS. JEWELL: Okay.

MR. MESSINA: So I think you need to change the primary screen to be the presentation screen, versus the primary screen.

MS. JEWELL: I'm going to call on Carla or Jeremy to please do that if possible, just because of the way I have the slides here, it's not giving me that option. So hold on just a second, Ed, sorry about that.

MS. BLACK: Actually, you can just go to the top of the screen and hit Display Settings, on Display Settings, go from Presenter View to Display View. That screen. You've got to --

MR. MESSINA: Yeah, thanks. Thanks, Carol. It doesn't work for me. I don't have control, Shannon or someone. Right after Show Task Bar, to the right is Display Settings.

So these are our OPP priorities, meeting our PRIA statutory deadlines, progressing the registration review program, advancing critical science and policy issues, working collaboratively with our state partners and stakeholders to implement the program. And then I've got a slide, we are undertaking within OPP trying to be a lean organization, so we implemented EPA's lean management system within our Office of Pesticide Programs and within OCSPP, and we've made a number of

improvements across OPP as a result.

On the next slide, which I can now no longer advance. All right. So just to give you an understanding of the volume of work within OPP. This past year, we received about 13,000 submissions via our portal. We also processed about 71,000 documents through our IT system and all the various decisions that we're working on. Just to give you a sense of the raw numbers.

When I present, I go right into the new active ingredients, which are a small subset of the 13,000, but it is one of our priorities is making sure that growers have new technologies and tools at their disposal. Also these new chemicals tend to have a lower toxicity profile than some of our legacy chemicals. So ensuring that when we get a new application for a new active ingredient, it becomes one of our top priorities. And last year, we were able to deal with around 16 pretty interesting products, and you heard Alex mention a couple of those.

We also registered 163 new uses for existing pesticides. We had about 2,300 PRIA actions completed. And as I mentioned, this year we did about 200 more PRIA actions completed than we had last year in terms of our metrics. So even though we were teleworking 100

percent, we didn't miss a beat and continued to be very productive in this new sort of normal of the teleworking.

Our on-time completion rate, that's based on renegotiations that happened, but where there are renegotiations, we're meeting the new renegotiated rate 98 percent of the time. Our renegotiation rate has been creeping up, so we are renegotiating more PRIA actions, but we're trying to focus on that metric and reduce that number over time, and we have a number of lean efforts to try to reduce the renegotiation effort and continue throughput.

So these are some of the new active ingredients that Alex mentioned. So you have a slide and a takeaway after the session in the PPDC notes, you can at your leisure read some of those sort of new and exciting work that's coming out from industry and other work within EPA approving needs for safe and effective new pesticides.

We also processed about 68 Section 18 emergency exemptions. So these are critical areas where, you know, in particular states that don't have certain tools seek an emergency exemption from EPA. We tried to minimize the number of section 18s that we are doing. We do focus on them and we want to make sure if there's

a Section 18 we sort of ask ourselves, you know, why isn't there a Section 3 for this, if this is a critical use, and we make sure that we constantly revisit the Section 18s. But we have them come up from time to time as a particular pesticide where there isn't a control. We are definitely willing to work with the states to make sure that we're addressing ongoing emergency situations where we can through our Section 18 process.

We work closely with the consortium of pesticide industry and trade organizations to address supply chain challenges. So we were approving efficiencies in the registration process by allowing manufacturers to obtain certain inert ingredients, commodity ingredients from different suppliers without the need to check in with the agency for approval.

Part of our streamlining effort, and we've been doing that, also, in the COVID context, where I'll talk tomorrow, where because of the vast supply chain disruption as a result of COVID-19, the people are needing to change suppliers, you know, whether it be wipes that are used for disinfectants or actual active ingredients. So how we can address those supply chain issues because of the -- we understand sort of, as folks have been shopping, you realize maybe there aren't as many disinfectants as are needed, so what can we do as

an agency to make sure that products make it to market and are available for consumers and growers.

So on the registration review program, as folks are aware, under FIFRA, we are required to complete every 15 years the reevaluation of pesticides that are in the marketplace. The first round of registration review needs to be completed. It was completed on October 2007, and that encompassed about 1,000 pesticide active ingredients, and now we need to complete the registration review, the new registration reprocess under Section 3 of FIFRA by October 1st, 2022. And we are marching towards that goal. It's actually 726 cases now, but a small point.

And we did 98 registration review decisions and 100 draft risk assessments that were completed in 2020, but the draft risk assessments were above our goal, and 98 registration decisions were slightly below our goal. So we continue to be on track.

And then in fiscal year 2020, we focused on pyrethroids, rodenticides and the neonicotinoids and some of the pesticide chemicals that folks are interested in.

So this is what we have remaining. We have 646 draft risk assessments completed, which leaves about 11 percent of the 725 or 726. That's good news because the

draft risk assessments are the first step in the process for completing registration review, as you know, and that leads into the proposed interim decisions, and then the final interim decisions to be completed, for which we have about 34 percent remaining to meet the October deadline.

We've also had a number of registration review updates for takeaway, and we've got some one-pagers for you on the particular chemicals of interest. Atrazine is one that was of interest this year. In September we released the interim decision for the triazines, which are atrazine, propazine and simazine, which finalized our measures to protect human health and mitigate potential ecological risks. We required additional mitigation measures, which are listed here, and we are working with the states and the registrants to improve and approve new labels.

Chlorpyrifos and glyphosate were recent announcements that you would have seen in the Federal Register and through press releases. So we recently announced in the Federal Register the publication of the draft ecological revised risk assessment, and as many of you know, during the registration review process, there are a number of opportunities for the public to comment on the work that EPA is doing. The draft risk

assessment stage, the proposed interim decision stage are areas where there's time for public comment. So right now we are looking at public comment. On chlorpyrifos, we're going to issue the proposed interim decision for chlorpyrifos pretty soon and it's scheduled to be made available say in the fall of this year, and we're also going to be jointly taking comment on the DRA and the PID.

Glyphosate was in early February of this year, we issued the interim decision, which included additional mitigation and language changes for glyphosate, and so we are working that issue through our process. As you also heard from Alex, the draft BEs for glyphosate are also expected, as well as the draft BEs for the atrazine and the triazines. They will be hopefully coming out fairly soon in the fall.

So the rodenticides were another big list for registration review. The draft risk assessments for the rodenticides were completed this fiscal year. The next step in the registration review process is public comment, as I mentioned, and are expected to have a proposed interim decision in early 2021.

And the pyrethroids we've been working, as I mentioned, pretty hard on those and we published a number of the interim decisions related to the classic

pyrethroids, as well as some interim decisions for the pyrethroids, and we're planning to publish the remaining pyrethroid interim decisions in 2021. So that's coming as well.

Neonicotinoids, February 2020, we published the proposed interim decisions for the class of neonicotinoids. This includes proposed language on residential labeling, noting that the products for use on environmental plants are intended for use by professional applicators. And you have additional mitigation as part of the interim decisions related to that class of neonicotinoids. And there's also mitigation to address aquatic invertebrates from the applications and working on developing stewardship programs and best management practices.

We received almost 200,000 comments on this particular class of chemicals, and of great interest to many. And after reviewing public input, we're anticipating issuing our interim decision by 2021, in advance of the 2022 deadline.

Paraquat is also a chemical of interest to many. We issued the proposed decision for paraquat and we proposed new measures to reduce risk for human health. There's a certain human health element to it, as folks are aware. We've taken steps also outside the standard

registration review process to ensure that paraquat is used in a manner that's safe and effective and consistent with the labeling. It includes additional safety awareness campaigns and specialized training for those using paraquat because of the high-risk nature and impact to human health that this particular active ingredient poses, but that was work that we did this year as well.

So there's plenty more to talk about on the registration review update. There's plenty more active ingredients out there and products. If you're looking for more in-depth analysis of these products, you can find them on the PPDC website. We also have a website in the agency that was well south of schedule for our registration review, and you can find that on EPA's website for registration review.

So on the critical science policy issues, so first I talked about the active ingredients and I talked about registration review, now we're talking about the science policy achievements. So we released three new methodologies to improve drinking water assessments this year. As we mentioned, we released new methods for biological evaluations under ESA, and we are releasing, along with the revised methods, we actually released specific application of those methods to methomyl and

carbaryl.

We had a webinar on the draft BEs, and as Alex mentioned, we submitted our second ESA report to Congress highlighting some of the things that Alex mentioned. That happened as part of the interagency workgroup and review for tackling this real policy and science issue, which is the intersection between FIFRA and ESA.

So we spent a lot of time this year trying to work through those issues, and I really applaud the ESA teams within EPA and the other agencies for coming together to develop a plan going forward. So you'll continue to see, as time goes on, EPA using their revised protocols, working with those services.

And then we worked on collaborating with PETA in Canada, with the carcinogenicity assessments for agrochemical projects and that group. And we have continued advancing science in that area.

We have made significant strides in several areas to support the pollinator initiative as well. This year we cohosted with USDA the Pollinator State of the Science Workshop Webinar. We hosted webinars, the agricultural stewardship and best practices to reduce pollinator risk. We conducted a series of five pollinator-focused public webinars, including two on the

design of honeybee studies and bee risk assessment frameworks, and we established, as Alex mentioned, the first ever Pollinator Week, joining our federal partners with similar initiatives in the Department of Agriculture and Department of Interior. So the pollinator work within EPA continues and we continue to advance the science in that area.

Collaborating with our state partners, we do a number of webinars for integrated pest management, which supports our state partners. We had our IPM webinar series, an eight-part series that drew over 3,000 attendees. We had a Region 1 tick and mosquito management webinar, Alex spoke of that, which hosted two webinars in Region 1 on mosquito threats to control for camp and recreational land managers as well.

And then we did an international teleclass on mosquito management presented to about 3,000 views. We had about 1,000 people that attended and we continued to get views of these webinars and sessions through our IBM center. So we're really proud of the work that we're doing there.

Lots of rulemaking. PIPs, which is the plan incorporated protectants, and we've got crop groupings, so creating efficiency by grouping data and crops together for data generation, saving resources. We had

the AEZ final rule, which we're continuing to work on. We've made the list of pesticides of the public significant health pests, updating that with the USDA. So we're continuing to work on that.

And cytosine on minimum risk was something that we put out there as well. We're continuing to work on how 25(b) intersects, and that's the list of low-risk pesticides under FIFRA Section 25(b), which is of great interest to a number of folks. And we did put out a public comment on, in particular, 25(b). We're continuing to do work internally to take comment on our 25(b) process. So you should see something hopefully soon on that. So we continue to do lots of rulemakings.

We get lots of FOIAs every year and we tend to have a backlog. We had a Lean A3 project designed to try to reduce the backlog and it's certainly an interesting process because we get so many. OPP is by far one of the largest FOIA recipients within the agency. The administrator's office sometimes gets the most, but sometimes in a month we are number one for FOIA requests. So a lot of folks are really interested in the work that we're doing.

We opened 160 dockets and we received, you know, half a million public comments on the work that we're doing. And we updated over 900 webpages this year for

making sure that the public had accurate information on the work that EPA was undertaking.

We also had 9,000 web mail inquiries. We had 15 press releases, 48 OPP updates. If you're interested in receiving information from the Office of Pesticide Programs about the work we're doing in realtime, you can go to the Office of Pesticide Programs webpage and you can sign up to be on the listserve so that the minute that press releases come out, you can get information through our OPP updates channel.

And so when some of the active ingredients that I've talked about are announced for public comment, we do those OPP updates. When new active ingredients are noticed, we do an OPP update. And we also do our particular Federal Register notices, but really getting realtime and understanding sort of the work that everybody is doing.

And we did -- you know, basically it's -- you know, there's something happening every week just showing by the numbers, and in some cases, I feel like, you know, there's two or three times a week that we're doing some pretty significant press on some of the items that OPP is working on.

And then we responded to press inquiries and had a number of letters that folks send in. We have

petitions that we are responding to as well as part of our involvement.

So, lastly, and rounding us out to the 12:45 mark, where we can take public comment from those that have asked Shannon to speak, we have our EPA Lean Management System. I was the sort of spearhead within the office for putting the ELMS program in place, and I can say this chart shows the progress we've been making, if it would show through Adobe Connect. So, Shannon, if you want to pull that up. But basically 80 percent of the staff are engaged in Lean management processes.

And so what that means is if you're a fan of Lean or practitioner of Lean, what that means is we take a look at the workflow and the process that's occurring to examine how there can be efficiencies in that process. And a lot of what OPP does on a daily basis is the science review and the risk assessments. And so we have taken that process and looked for ways where we can streamline that workflow. Working with staff. So staff are the ones deciding, you know, how can this workflow be improved.

And there's a number of Lean topics, you know, which is called SIPOC, which is supplies, inputs, process, outputs, and the customers of the process. So a customer of a process can be the next person along the

chain. So are you getting that next person along the chain the information they need to act on a decision.

So we've put a number of Lean practices in place within OPP. We've also been doing some modernization of our IP systems using a customer relations management software approach where we can see the work and visualize where the work is going, where some of the bottlenecks are, where the workload is. So we have instituted that as part of the process efficiencies.

And then we take our measures, you know, our visual display measures and we report up to them as part of our agency-wide measures. And we track things like how long is it taking us to act on new active ingredient applications. How are we doing on our PRIA dates. How long and how many renegotiations are we doing is some of the metrics that you've seen. How are we doing towards progressing towards meeting the 726 cases by October 2022. What are some of the cases that are lagging behind.

Looking at when you are setting goals as part of your Lean process. So that's another thing, you sort of say, okay, what is the work, what is the goal for when you want this completed, and are you meeting your goals.

And you could use visual management to say, we are in the green, in the yellow or in the red, and you

can for this chart, this is an easy sort of example of kind of what the bowling chart looks like, and it shows kind of how we're doing towards meeting our measures. And if it's red, it means we didn't meet our measure; if it's green, it means we met our measure; and if it's yellow, it means we kind of just missed our measure. And so these are some of the things that we do.

So, with that, we can take these slides down and put our thank you slides, and take any quick questions before our 12:45 kick off. So I put us back on time on the agenda.

Oh, can you go back to the home slide? That's our progress and you can see how we track over time. Too late. We track over time how we are progressing towards meeting our ELMS goal and at the end you can see that we hit our mark. So that was what I was supposed to display. So thank you, and thank you for your time, everyone.

So, Shannon, it looks like we're ready for public comments. Did you receive any emails for folks to make comments? And we can kind of use the next period for public comments and questions.

So the next slide, please. If you want to show the ELMS. There it is. So you can see every month we tracked how we were progressing and then we finally got

into the green in September. We're at 80 percent of the OPP staff are now using ELMS processes for the work that they are doing.

All right, with that, Shannon, I think we can move into the public comment period, since that's where we are on the agenda. And, Shannon, you're on mute, if you're trying to talk.

MS. JEWELL: Can you hear me now, Ed?

MR. MESSINA: Yes.

MS. JEWELL: Okay. Yeah, well, we should have Jessica Ponder, she would like to make a public comment. Jessica, are you on the phone?

MS. PONDER: Hi, Shannon. Can everybody hear me?

MS. JEWELL: Yep.

MS. PONDER: Thank you. My name is Jessica Ponder and I am a regulatory testing analyst for the Physicians Committee for Responsible Medicine.

The Physicians Committee for Responsible Medicine is a nationwide nonprofit that supports modernized test methods that replace or reduce the use of animals. We support the EPA's efforts to refine and modernize testing requirements to reflect the most updated science because it offers the opportunity to save animals and resource while maintaining or even

improving environmental and human health protections.

We appreciate OPP's efforts over the past several years in this regard, including a recent proposal to allow waivers for dermal toxicity where those tests or not used in regulatory decisionmaking. This single proposal, based on a retrospective analysis of the practical utility of dermal toxicity LD50 end points is expected to conserve significant EPA resources and spare 750 rabbits per year from testing.

Additionally, we are particularly enthusiastic about the introduction of transparency for the establishment of open access to metrics by which agency efforts to replace or reduce animal testing with 21st Century science methodologies can be evaluated for efficacy. Novel methodologies that better inform the agency and the public of human health risks continue to be developed and therefore establishing these metrics is paramount to driving effective policy changes to integrate these technologies into decision making.

We would also like to commend the OPP's use of the Federal Insecticide, Fungicide and Rodenticide Act Scientific Advisory Panel to evaluate new approach methodologies to inform human health risk assessment. Most recently, for the developmental neurotoxicity assessment of organophosphate pesticides and for in

vitro inhalation toxicity in 2018.

Envisioning the application of new approach methodologies to complex risk assessment challenges can be difficult, so taking this case study approach makes good sense to demonstrate the added value of new approaches to specific problem formulations and will help to make progress in the adoption of these approaches for additional applications.

We look forward to a continued partnership with the EPA supporting these efforts and we look forward to seeing progress in implementing non-animal approaches for dermal penetration, skin and eye irritation, and acute lethalityity in the coming months. Thank you very much.

MR. MESSINA: Yes, thank you for those comments. So, yeah, in addition to the work that I showed on the science side, we've definitely been supporting the administrator's call for the agency to reduce animal testing, and we had a number of significant decisions this year and actions, and thank you for mentioning that. I appreciate it.

So any other public comments, Shannon?

MS. JEWELL: We don't have any more public comments right now, Ed.

MR. MESSINA: Any questions from the OPP update

presentation? And tomorrow we'll be doing, after we do our sessions from the workgroups today, tomorrow are COVID updates, so you can hear some risk-specific activities we've been doing for the COVID response, but any questions on today's materials?

MR. BASU: Hi, Ed, it's Manojit Basu from CropLife America. Can you hear me?

MR. MESSINA: Yes.

MR. BASU: Great, thank you. Thank you for the overview. I just had two follow-up questions. One was if you can share anything about OPP office moves from Crystal City to downtown, anything on the timeline. And second, with all the focus on Lean and, you know, some of these IT visualizations, too, what kind of impact will these division moves have on some of your IT process improvement work that is high priority right now, specifically the R&D and IT and the other division moving away from OPP? Thank you.

MR. MESSINA: Yeah, great question. So no word on the physical moves. So as folks know, OPP has been in Potomac Yard and on the Virginia side of the river for 20 years, even longer. And so the whole telework, working from home, has sort of put a pause in people, you know, physically going to the office to pack up their boxes. So until that issue gets resolved, I don't

think we'll have any additional information on when the move is happening, although it is something that is still on the agency's radar to do.

So the reorganization that's effective this week, in fact, was tied a little bit to the move because if OPP were moving across the way, to D.C., it made sense to consolidate the organization structure first, because we would have people that were more physically located and collocated. So if we had an IT shop that was serving both OPPT and OPP, why would there be a need for them to be separate, if OPP and OPPT were going to be collocated.

Similarly for communications and new work. So that's another sort of reason, but, you know, among the many structural and process improvement pieces for consolidating those resources made sense. The move also sort of played into that, too, because simply we're to be collocated, it made sense to sort of have common functions being serviced by a common entity.

So the IT program within OPP has moved to OPS. There should be no impact on the digital transformation that OPP is undergoing through that move. In fact, this morning, we had a check-in with the team on how the digital transformation was going, and for folks that are interested in the deep dive, as I mentioned, we launched our

CRM. We selected Salesforce as the vendor, which is a low-code, license-based, and reasoning agile development, and we're actually live in our BPPD division. So it's being used right now for workflow in BPPD.

We recently launched, and it's working. We have a number of experiments that we are doing to continue to add functionality for BPPD, and it's been a great learning process, like any digital transformation. It's sometimes messy while you're in it, but the enhanced productivity I think is going to pay off in the long run.

So, for an example, and I've mentioned this before, one of the enhancements for productivity is when we did sort of an analysis of the risk assessments that were trying to do their work, a lot of their time is spent on collecting the various documents that they needed to even review to begin their work. And then using the email client to sort of find what was next on their list, you know, where is this particular document. And so just by having a universal view into the data will save time for the risk assessors. And then once they've done their work, that entire package and document flows from the next person to the next person, and all of the information, including the prior

correspondence, notes to the file, any chats sort of along the way with that document.

And then you can use your control management to take a snapshot, a daily snapshot, it's called Omni Channel View. So you get the same view on your mobile device as you do on your computer, to show dashboards that are personalized to you. Say, here's what's coming up, here's what's pressing, here's what's sort of highest priority, here's what's behind schedule.

And so you get different user stories from the staff to the branch chief to the senior leader to understand for the first time where the work is in the workflow, rather than just using the email client and multiple Excel spreadsheets that we have throughout the building that are tracking the work. Which is, you know, as you can see, we did a great job last year, we continued to do the work we're doing, but I feel like there's going to be some pains in efficiency as we deploy this new digital transformation piece. I don't see any disruption happening as a result of the reorganization.

Our next step and our next division that we're looking to launch in would be the Antimicrobials Division, and, of course, because they are working so hard on the COVID work, how we do that transition is

going to be of particular importance because we don't want to lose any steam for all the great work that folks are doing there, but we know that by deploying the system we're actually going to have some efficiency gains in processing, you know, the ability to move the Antimicrobials Division to work.

And tomorrow we will talk about, you know, some of the workload that's happening there. I mean, we had six times the number of requests that come through that office for information, and we've had about 40 percent increase in the number of submissions from the same period last year before the emergency.

So the great folks in the Antimicrobials Division, part of that reorg includes getting some additional resources to the Antimicrobials Division.

So to answer your question, no word on the move. It is something that's going to happen, and the reorg for digital transformation and IT should have no impact on OPP's ability to perform under that. And, in fact, from an OCSPP standpoint, I think some of the technology pieces will be beneficial and we'll see how we can consolidate those multiple systems that we have across OPPT and OPP and there's a future sort of discussion for the office.

So thank you for your question.

MR. BASU: Thank you very much, Ed.

MR. MESSINA: All right, we've got about five minutes left before lunch. We can end early or we can take some final questions and we'll go right into 2:00. We'll have Shannon kick us off with an update of sort of how the workgroups were formed, your input, the process internally that we decided and sort of EPA's needs and how that met up with some of the suggestions you guys had. And then we'll go into talking about particular workgroups with resistance management and the agricultural emerging technologies workgroup, and then we will take public comments and adjourn for the day.

And, Sheryl, were you able to say hi and use your voice? I know you wanted to say a couple of comments. I saw her in the chatbox. Thank you for saying hi, but if you wanted to say anything.

(No response.)

MR. MESSINA: All right. Thank you, everyone. Shannon, any last-minute things before we adjourn until 2:00?

MS. JEWELL: I don't think so. We don't have any more questions in the chatbox, so I think let's go ahead and start back at 2:00 Eastern.

MR. MESSINA: Okay. Thank you so much for your time this morning and we will pick it up in one hour.

MS. JEWELL: Thanks, all. Thanks, Ed.

MR. MESSINA: Bye, everyone.

(Whereupon, a lunch recess was taken.)

AFTERNOON SESSION

MS. JEWELL: -- workgroup recommendations, just as an FYI, must be adopted by the full committee to be recommended to the agency. Over its 25-year history -- and again, happy 25th birthday or anniversary to the PPDC -- the committee has had many workgroups and they have helped inform the committee's work, which has, in turn, informed the work of OPP.

Worker groups in the past have considered issues like 21st Century toxicology and non-animal testing strategies, integrated pest management, comparative safety statements to improve labels, pesticide spray drift, and more.

So I wanted to highlight a couple of the most recent of the PPDC workgroups. One of these was a public health group and another was a pollinator protection plan metrics workgroup. So many of you may be familiar with pollinator protection plans, something that also has groundwork laid in PPDC workgroups.

So first, the public health workgroup, the charge of that group was to develop recommendations to the PPDC to help OPP be able to respond more effectively during emergencies, like public health emergencies, particularly when it comes to interactions with other agencies and communication materials about pesticides.

That workgroup delivered on its charge. At the May 2020 meeting, they reported out on an emergency preparedness action plan that they had written.

So the pollinator protection plan metrics workgroup had as its charge recommendations for how to evaluate and measure the effectiveness of state and tribal recognized pollinator protection plans at the national level and a strategy to communicate the effectiveness to the public.

In November of 2017, at the fall PPDC meeting, the workgroup delivered on their charges. They recommended to the full PPDC measures to evaluate the effectiveness of pollinator protection plans. The committee recommended a survey instrument to EPA. And, by the way, survey results from 2019 are now serving as lines of evidence in determining the efficacy of pollinator protection plans.

So the workgroup proposals that we received this time and the new groups. So a little bit of history. The May 2020 PPDC meeting, which was the first of the current membership, members discussed forming their workgroups on the types of issues the committee wanted to engage with the agency on. After the meeting, OPP received six workgroup proposals from PPDC members. OCSPP's leadership discussed these ideas in light of the

advice made from the office, and the availability of resources required to coordinate the groups. And they decided that of the six proposals, four would be formed.

The work workgroups will be on topics of: Emerging agricultural technologies, emerging pathogens, farmworker and clinician training, and resistance management.

So we would like to take a minute to thank those who brought proposals forward to OPP. Dr. Manojit Basu of CropLife America proposed the emerging agricultural technologies workgroup; Komal Jain of the American Chemistry Council proposed the emerging pathogens workgroup; Dr. David Shaw proposed a resistance management workgroup; Mily Trevino-Sauceda with Alianza Nacional de Campesinas proposed a farmworker and clinician workgroup; thank you also to Amy Asmus, representing the Weed Science Society, for proposing a labor standardizations workgroup; and to Joe Grzywacz of Florida State University for proposing a cross-cutting issues workgroup.

The workgroups will have OPP staff and PPDC members as cochairs. The following OPP officials will serve as the OPP side cochairs. They will also chair the workgroup sessions coming up in this meeting. So we have Dr. Taja Blackburn, senior scientist in the

Antimicrobials Division serving as the chair for emerging pathogens; Ed Messina, acting director of OPP, will serve as the co-chair for the emerging agricultural technologies workgroup; Carolyn Schroeder, she is chief of the Certification and Worker Protection Branch, and Steve Schaible, who is the office's PRIA coordinator, will serve as cochairs for the farmworker and clinician training workgroup; Bill Chism, senior biologist in the Biological and Economic Analysis Division, and Alan Reynolds, lead biologist from Biopesticides and Pollution Prevention Division, are going to serve as cochairs on the resistance management group.

The workgroup discussions during this PPDC meeting will focus on ensuring that the charge questions position these workgroups to make the most impactful contributions possible to a specific question or questions and in a measured time frame. The goal for these groups is to provide final reports, products and/or recommendations to the full PPDC at the fall 2021 meeting. The date of that meeting is still to be determined.

So the way the sessions during this group are going to run is the OPP chair is going to provide some background on the topic and discuss current issues. Then we will have a discussion of the draft charge

questions. This will be in light of the agency needs and what is within the agency's authority. Then we will hopefully have time to move into the talk of administrative and other aspects, such as the frequency of meetings, what will be needed to address the charge or charges, the maximum number of participants for effective decision making for a given topic, and whether there are people outside of PPDC that group members think we should recruit for expertise and group balance.

So for those interested in joining the workgroups, we're requesting that they can please email me. We will be putting my email address up periodically. And also to a copy of the relative group chair. We will provide email addresses of the chairs, like I say, throughout the meeting. If you miss them, just email me and I will forward the messages to the chairs.

Members of the full PPDC are automatically members of the workgroups, as long as space permits, up to half the committee, but not more. So no more than 20 committee members in a workgroup. OPP will receive the full list of other applicants and will look to put together a balanced roster.

So to apply, if you're interested in the workgroups, we're asking that you send an email to

myself, and I'll spell my email address again and put it in the chat as well. That's jewell.shannon, J E W E L L.S H A N N O N, @EPA.gov. My email address is also in the Federal Register notice and on the PPDC site, so it should be pretty easy to track down.

So what we're asking that you email to me and the chairs is your name, your organization and position, your contact information, your stakeholder point of view, whether you're a grower, farmworker representative, et cetera, and a brief statement of interest.

So that's it for my presentation. I wonder if I have covered everything for you all. Does anyone have any questions?

Okay, so Mark asked, how do we make recommendations for the workgroups, during those session discussions or via email? Okay. So I think, Mark, that you mean for the charge questions. If you want to #6 to unmute yourself and unmute your line, I certainly would invite your question.

So what you're going to see in the presentations from the group chairs is that they will present a couple of draft charge questions, and then the group discussion will center around those charge questions. We want to hear from members from around the table what they think

of those charge questions. We want to be sure that we have a full understanding of what the stakeholders are thinking about those various charge questions.

MR. MARK JOHNSON: This is Mark. So I'm referring to non-PPDC members that we would want to recommend for a particular workgroup.

MS. JEWELL: Okay, great. Yes. Please just email those on to me. So --

MR. MESSINA: Hey, Shannon, this is Ed, too.

MS. JEWELL: Hi, Ed.

MR. MESSINA: Yeah, hi. I want to add, also, if you look in the PPDC meeting materials for today, you can see all of the presentations that have already been loaded. And each of those presentations has the draft charge questions that are being suggested. By no means are those the final, but there are some draft charge questions for each workgroup for you guys to ponder on your own and then also to talk about during those sessions.

MS. JEWELL: Great. Thank you for that, Ed.

So Mano had asked if the chatbox is noticeable to all attendees, and that actually, it is not, Mano. The primary function for this chatbox is to allow members to enter their name so that we can call on them for orderly discussions.

So while we are waiting for potential other questions, I did think it was interesting how the PPDC charter and workgroups dovetail, and I would like to just take a minute to read a little bit of the PPDC charter and how it relates to working groups. And this has to do with the major duties of the PPDC.

The major duties of the PPDC are to: Provide policy advice, information and recommendations on: Developing practical protective approaches for addressing pesticide regulatory policy; program implementation; environmental, technical, economic and other policy issues; and reviewing proposed modifications to OPP's current policies and procedures, including the technical and economic feasibility and any proposed regulatory changes to the current process of registering and reevaluating pesticides.

And as Ed said, for everyone, for attendees and members, if you Google Pesticide Program Dialogue Committee, you will be able to find the website and materials for this meeting.

MR. BASU: Shannon, it's Mano Basu from CropLife America. Thanks for answering the previous question. I do have questions on PPDC workgroup, especially around, you know, we discussed about PRIA timelines and PRIA process improvements and everything and what the agency

has done in 2020. Is there an opportunity to propose a new workgroup at this time, or is it too late for this year? And if that's the case, is there an opportunity to look into PRIA process improvement opportunities, maybe, you know, some of the Lean exercises or a joint group within the industry in one of the existing workgroups?

MS. JEWELL: Thank you Mano.

MR. MESSINA: I can tackle that if you'd like, Shannon.

MS. JEWELL: Yeah.

MR. MESSINA: I think we're open maybe as part of the PRIA coalition committee to explore those issues, Mano. I think with the PPDC and the diversity of all of the members, picking that narrower topic for this group might not be the best use of resources here, and given that we do have the four, I would say, you know, let's focus on these four, but I would not rule out the desire to have a discussion about PRIA timelines and efficiencies in the future with folks who are interested or through a separate process.

MR. BASU: Thanks, Ed. That's helpful.

MS. JEWELL: Thanks, Manojit.

So we can just wait here and answer any other questions that come up, and then otherwise, if anyone

wants to step away from the computer, we will be starting the next session at 2:30. I see Christina is writing.

So Christina's question, do PPDC members need to officially join workgroups? No, there's no -- that's a great question. So that choice is yours, certainly. You might choose to join one or more groups; however, there's no obligation to do so. And as a full PPDC committee member, you will actually field the work of the workgroups, because as I mentioned, all of the products that the workgroups create, the reports, recommendations, suggestions of any kind to the agency, those will actually be brought to the full committee and the full committee will deliver on those and it's the full committee that decides actually whether to recommend those products or recommendations, et cetera, to the agency. So that choice is completely yours, if you would like to refer others to be part of the working groups.

So by when would we need suggestions from our PPDC numbers? So what we're looking to do right now is see how the talks go and what members think is the optimal number of people to join the various working groups, and depending on that, we will kind of let you know. But I will say we do want to form the groups very

quickly because we are trying to answer the charges within a very defined period of time.

As I mentioned, we will try to complete the charges, if at all possible, by the fall 2021 meeting. So that will happen some time around October of 2021. So to make that happen, we will want to form the groups quickly. So let's see what comes from the discussions today, and depending on that, we'll go ahead and send out to group members a date by which we will hope to have the groups staffed up.

And I'll say, too, that someone may not necessarily have to be a member of the group to be able to provide feedback or some input to the group. This brings up another point, and this has to do with feedback that I've heard from members of other workgroups, which is that what I've been told is that people should really come with the ability of contributing to the groups. That workgroups can be a lot of work, and that people should come prepared to be able to pitch in and do the work.

MR. MESSINA: So, Shannon, do you think we should start our next session?

MS. JEWELL: I do, yes. I saw someone was typing a question, but let me go ahead and I'm going to bring up the next slide show.

So thank you for that question, Christina. I think perhaps during discussions, members --

MR. MESSINA: Hey, Shannon, you might want to repeat the question.

MS. JEWELL: Oh, I'm sorry, yes. Thank you so much. So the question is, the estimated time commitment based on previous workgroups. And that seems to vary based on group. So hopefully some members who have been on working groups in the past can speak to that during the discussions. Because I couldn't really say, and I think that that will also come out of the conversations that we have about the groups and the charges that are chosen. Thank you for the question.

And so with that, if -- Ed?

MR. MESSINA: Yes, Shannon, did you answer the deadline question about when we were expecting to receive information for workgroup numbers? Did we give folks a date?

MS. JEWELL: I didn't give a date. I wanted to see what came out of the administrative kinds of conversations, but do you want to go ahead and set a date, Ed? Do you think we should go ahead and set a date for maybe two to three weeks?

MR. MESSINA: Yeah, I think certainly what I would say is, you know, try to provide names as soon as

possible, and we can kind of get the logistics and the trainings and team pages set up. And then, you know, if folks want to join and it's taking some time, I would say by the end of November, we could make that the cutoff date for accepting new members, but certainly if the workgroups, you know, are saying, oh, it's great to have this person and then it's taking some time to get them, you could kind of consider that, but I would like to get at least the fully formed workgroups in place, you know, just before Thanksgiving and give a final date of the end of November for forming the workgroups, if that's okay.

MS. JEWELL: Great. Great. And also I'll send an email to the members about this as well.

So if Bill Chism and Alan are on the line, we can go ahead and start the next session.

MR. CHISM: Hi, Shannon, this is Bill Chism. Can you hear me?

MS. JEWELL: Hi there. Yep, we can hear you, Bill.

MR. CHISM: Oh, technology is wonderful.

MR. REYNOLDS: Hi, this is Alan Reynolds, I'm also here as well.

MS. JEWELL: Hi there. Great. So just as a reminder, Bill and Alan, we'll hand it off to you to go

ahead and advance the slides, and then members will enter their names in the presenter chat to let you know that they want to make comments and have questions, okay?

MR. CHISM: Great. Well, this is Bill Chism and I'm going to start off for the first couple of slides and then hand it off to Alan.

I'm a senior biologist in BEAD and Alan is a lead biologist in the Biopesticides and Pollution Prevention Division. The workgroup goal is to develop recommendations to the EPA on how the agency can assist stakeholders in addressing the challenges of conventional pesticide resistance.

We're going to start at 2:30, we're going to go through some background between Alan and myself and then we will read the draft charge questions, then have some discussion about those charge questions with the PPDC members, and then go through some of the logistics and query on member interest in participating.

Why is the EPA interested in encouraging resistance management? The EPA would like to enhance pesticide stewardship to sustain effectiveness of these pest management tools, while also ensuring no unreasonable adverse effects to human health or the environment.

Effective resistance management should result in lower overall pesticide loading in the environment by reducing the need for repeated pesticide treatment. The program itself has a couple of additional personal interests, considerable agency resources are put into review and approval of these programs -- of these tools, and we would like to help preserve the safe, effective pest management options for growers.

The regulatory context for this. Pardon me. For all agricultural pesticides, except the plant incorporated products, the PIPs, EPA takes a voluntary approach in implementing a more consistent effort aimed at helping pesticide users slow or avoid the development of pesticide resistance.

We use pesticide registration notices, or PRNs, to provide nonbinding guidance to pesticide registrants and EPA personnel regarding pesticide registration activities and decisions.

In 2017, the EPA released two PRNs for conventional pesticides, trying to enhance resistance management. The first PRN, 2017-1, looks at resistance management labeling. This looks at labeling for insecticides, fungicides, herbicides and nematicides, and it updates an earlier existing PRN from 2001 and makes recommendations for resistance management

information on pesticide labels.

So, for example, we've had really good luck getting all the registrants to start putting mode of actions on labels. We've gotten them to remind people that they should use resistance management plans. We've gotten information on the label such as you should scout before and after application, before so you make sure you've got the correct test and after to make sure it was controlled.

PRN 2017-12 focused specifically on herbicide resistance. We had gotten a lot of feedback from groups saying herbicides were having a number of challenges with resistant leads, so we thought we would look at herbicides first and see if we could give some additional guidance and see if that would be helpful. And in both cases, we've included information on labels about resistance management, mode of action and that sort of thing.

In addition, for herbicides, we've also attempted to include management information or best management practices on labels to help the users prepare for resistance management. And both of these PRNs are used to guide resistance management label development in the registration and reregistration review work.

And now I'd like to turn it over to Alan.

MR. REYNOLDS: Thanks, Bill.

So I'm going to present an overview of how EPA has implemented resistance management for BT crops, and in particular, what we're doing for BT crops can serve as a model for resistance management for other pesticides. So, first of all, the abbreviation BT, that stands for bacillus thuringiensis. It's a bacterium that's been widely used for pest control and has also been -- or some of the Cry toxins produced by BT have been engineered into various crops for infectious insect control.

So this will be a simplified overview. I think you could probably teach a semester-long course on BT crops insect resistance management, but I'm going to try to do this in 10 slides or so, so it's going to be a very condensed version of what we do.

So first off, the goal of IRM for BT crops is to keep these tools as effective for as long as possible. BT crops have many benefits for growers, for human health, the environment, from reduced conventional pesticide use to increased crop yields.

In addition, the agency has considered that resistance to PIPs could be an unreasonable adverse effect under FIFRA. And I should also point out that the PPDC group had an important role in establishing the

insect resistance management paradigm for BT crops. There was a meeting held in the mid-1990s, I think it was one of the first PPDC meetings, that established this concept of public good of BT.

So, in other words, BT, as a very low risk pesticide with a specific insecticidal activities, has such a high value that pest susceptibility to BT is in the public good.

Okay, so some background on OPP's role with genetically engineered plants. So when a plant is genetically engineered to produce a pesticidal substance, EPA refers to it as a plant incorporated protectant, or PIP, and PIPs are defined specifically in the Code of Federal Regulations as a pesticidal substance that is intended to be produced and used in a living plant or in the produce thereof, and genetic material necessary for production of such a pesticidal substance.

So to date, EPA has registered well over 100 PIP products. Actually I think the number is closer to 150 now. The majority of these are bacillus thuringiensis based, traits that have been engineered into corn and cotton events.

Okay, so what does EPA do for BT PIP resistance management? The first thing to consider is that the

program is mandatory, as Bill indicated earlier. It's implemented to the terms of registration for each of the BT crop -- for each registered BT crop product. The primary mitigation strategy we use in BT IRM has been refuges, and I've illustrated this concept on the slide here on the right. And basically what the refuge is designed to do is produce a lot of insects. And these insects are going to be, since they're not exposed to BT, they're presumed to be susceptible to the BT trait. That contrasts with the BT fields, that will be planted, you know, with this refuge, there is the expectation that there will be very few surviving insects coming out of those BT fields, and those survivors that do come out are most likely going to be resistant to the BT trait.

So the idea is that the refuge produces many more susceptible moths. They're represented by that SS genotype on the slide there. They will then be available to mate with any resistant individuals designated by that RR genotype, resulting in what we call a heterozygote that has one resistant allele and one susceptible allele. But if you had a high dose of the BT trait, or what we call a high dose, that high dose will kill that heterozygous genotype. So all of the offspring coming from this process will not survive. So the only thing that can truly survive a high dose trait

would be a truly resistant RR insect.

We also conduct resistance monitoring as part of the resistance management strategy. I'm going to talk about that in a separate slide in a little bit here. And in addition, we've also more recently utilized insect -- or, sorry, integrated pest management as a resistance management tool. And I'm going to talk about that in a little bit more detail in the next slide.

Okay, so in addition to refuge, EPA has also encouraged the nexus of IPM and IRM as a means to reduce selection pressure for resistance, and also as a response to resistant populations, should they arise. And we first started working or integrating IPM into our IRM strategies in 2016 with BT corn products targeting corn rootworm.

As part of our revised training work for corn rootworm resistance management, EPA required registrants to develop an IPM stewardship plan. So under the stewardship plan, registrants encouraged growers to voluntarily adopt best management processes, such as crop rotation, the use of pyramided products, and pyramids refers to BT products that contain multiple PIP traits targeting the same insect.

Also, I've used some alternate modes of action, or just conventional regular non-BT corn. So

registrants are under the stewardship strategy are also limiting the use of single-trait BT PIP products. These single trait products have a higher risk of resistance than the pyramided varieties expressing multiple traits. Also for corn rootworm, EPA has discouraged the use of soil insecticides with the BT corn, since they can exacerbate resistance risks.

Okay, so how does EPA implement IRM for BT PIPs? It's important, and a really important component of that, as I mentioned previously, it is a mandatory program, but an important component of that is both EPA and industry have the shared goal of preserving the durability of these PIPs. So although the IRM program is mandatory, this shared vision is really critical for the success of the program.

And that's because the registrants are the ones responsible for implementing the components of resistance management, and that's done through the terms of registration. You know, therefore the companies are the ones who are going to be implementing these refuge requirements down at the grower level. EPA still maintains oversight; however, the companies are the ones who are directly implementing the resistance management strategy. And one of the ways we do is we get a number of annual reports from registrants and these cover items

like refuge compliance, resistance monitoring, IPM stewardship activities and some of the other components of the IRM strategy.

Okay. Since there are mandatory aspects of the IRM strategy, EPA has also focused on compliance and education initiatives. In terms of compliance, there's what we call a compliance assurance plan that is part of the terms of registration. And this compliance plan lays out a step-wise process for assessing refuge compliance, and responding to noncompliant growers. And just like the refuge itself, this is implemented by the registrants at the grower level.

Education is also an important component. In fact, you know, it's a major component, and I can't, you know, state that enough. Since generally I think our experience has been that growers who are informed and are aware of their requirements and understand resistance risks are generally likely to comply with the refuge requirement. And as I mentioned earlier, EPA receives annual reports on refuge compliance.

Okay, another aspect of our PIPs IRM strategy has been resistance monitoring, and similar to refuge implementation, the registrants are responsible for conducting the resistance monitoring plan. So we require resistance monitoring for the major targets of

each pest, or sorry, each PIP. And monitoring has been done at two levels. So the first is an attempt to proactively detect shifts in susceptibility, and this is done by sampling insects throughout major adoption regions for the BT crop. And then testing those insects in the lab to try to tease out shifts in susceptibility to see if they're becoming less susceptible to the BT traits.

The second aspect of that, of monitoring, is to investigate reports of unexpected damage in the field. So these would be cases where a grower has a field of a BT crop and observes unexpected damage to that field, or damage that, you know, was left with a profile for that BT crop. They then report that case to the registrant who then conducts the investigation, which can include insect sampling and bioassays to determine if there has, in fact, been a shift in susceptibility or possibly resistance developing.

Okay, so EPA's IRM plans have largely been successful in growing resistance in some cases, but there have been some instances of the documented resistance to BT PIPs. So, yeah, even with the best resistance management strategies, the bugs may still preserve or persevere in the end. But EPA does have a mitigation strategy in place to try to limit or contain

resistant populations, with a minimum goal of preserving PIP durability in areas where it is still effective.

So measures that are part of this remedial action plan include best management practices such as alternate control measures for immediate and subsequent growing seasons, the use of crop rotation or alternate modes of action to try to manage the -- you know, the potentially resistant population in the affected field. Certainly increased resistance monitoring, as part of that we want to, you know, certainly understand that the population is spreading or ruling out from what was initially detected.

Another critical aspect is communication. Certainly if there is resistance we want the important stakeholders to be aware of that and to be notified. So those would include growers or consultants, seed distributors, university cooperators, extension folks or federal and state authorities.

Okay, so how have we done with our BT PIP IRM strategy over the years? So as I mentioned, I think so far it's been fairly successful. For a number of our key target pests, we have not seen any significant cases of resistance in the U.S. These include insects like pink bollworm, which was recently declared eradicated from the southwestern U.S. by USDA. Also European

cornborer, a major pest of corn in the corn belt. Tobacco budworm, a thing that's been a pest to cotton. And the one common factor for these successes has been the availability of high-dose traits. So as I had shown on the slide with refuge, having that high dose to eliminate that heterozygous genotype is really a key aspect of being able to successfully delay resistance.

So for these insects, we've had that high dose. In other cases, though, we have seen reports of resistance in recent years. Certainly with corn rootworm, we've seen a number of documented cases of resistance. More recently with cotton bollworm and fall armyworm, in cotton-producing areas in the south, we've seen increased cases of resistance there. And the common factor here is really the lack of high dose.

So for these insects, we don't have that high-dose expression for BT traits, and what that means is that heterozygous genotype will actually not be controlled by the trait, and that can lead to the relatively rapid adoption of resistance.

Okay. So in summary, BT PIPs have a lot of positive benefits, including pesticide use reduction and yield benefits for growers. Certainly the traits are very popular with growers in this industry, and the agency, as a low-risk pesticide. And we see IRM as

really being key to preserve those benefits.

You know, another take-home here is that EPA and industry have worked together collaboratively on resistance management. In my experience, this has been a really big part of the success. You know, particularly for challenging insects like corn rootworm, which have a long history of overcoming the tools designed to control it, you know, working together with industry is I think really the only way we're going to be successful in managing an insect like that.

So this has been a very brief summary of BT PIPs IRM. I can certainly answer questions at the end of the presentation, but for now, I'm going to give control back to Bill to discuss the workshop goals and the charge questions.

MR. CHISM: Thank you, Alan. I'm getting a little ahead of myself. First, I just want to say that I'm always pleasantly surprised how well the resistance management program has worked for the PIPs, and I'm hoping with some input from the groups we can improve our chances of controlling resistant pests in the conventional pesticides.

So the workgroup goal, once again, is to develop recommendations to the EPA on how the agency can assist stakeholders in addressing the challenges of

conventional pesticide resistance. And if I may, I was just going to go through the charge questions once and we can back up to them as needed for discussion, but I'd like to just go through them once.

One, are there current EPA policies that positively or negatively affect pesticide resistance management -- sorry, conventional pesticide resistance management. What policies could be reworked to more positively address resistance management?

Two, are there current industry programs that positively or negatively affect conventional pesticide resistance management. Would EPA have a role in those programs and what might that be to positively influence industry?

Three, are there incentives to the registrant or pesticide users that could be considered related to conventional pesticide regulations that might positively affect resistance management? Are there other ways in which the agency can work with stakeholders, growers, commodity groups, academics, to cooperatively address resistance management?

And then, four, are there elements from EPA's BT PIP resistance management program that could be used in conventional pesticide resistance management?

So that's the end of the presentation, and I

guess I'd like to open it up for questions and comments if I may.

MS. JEWELL: Thank you, Bill. So are you able to see the presenter chat, Bill? I just want to make sure.

MR. CHISM: Yes, I can, thank you.

MS. JEWELL: Okay, great. So I see folks are beginning to type away in there. Charlotte Sanson has a question. Do you want to just unmute, Charlotte?

MS. SANSON: Yes, hi, thanks. Thanks, Shannon. Yeah, thanks for the presentation. And perhaps this is something that can be added to the charge questions. On slide number 6, I believe Bill had mentioned that guidance for herbicides was addressed first, as we've seen with PR notice 2017-2. So I expect this means that similar guidance would be drafted for pesticides and insecticides. So is that something that a workgroup would also attempt to address, or would that be outside the scope?

MR. CHISM: This is Bill. It would be a lovely suggestion and something that we would probably carry out ourselves. The initial intent with the herbicides was to give it a few years and see if we felt like we were helping the matter, and then, too, seeing if we were picking the best target for trying to write up a PR

notice. So it may be time to consider the other types of pesticides as well.

MS. SANSON: Okay, that's fine. So nothing has been done yet in that regard, I assume?

MR. CHISM: No.

MS. SANSON: Okay. Thanks.

MR. REYNOLDS: Hi, this is Alan. I would also add that I think that idea would fit very nicely into charge question one, where we're considering agency policies that could, you know, benefit resistance management. Certainly, you know, we have the two PR notices, but, you know, the addition of additional guidance or, you know, other pesticide types might certainly be something we could pursue.

MS. SANSON: Okay, thank you.

MS. JEWELL: Did Damon have a comment?

MR. RAEBE: Yes, thanks, Shannon. Can you hear me, Shannon?

MS. JEWELL: Yes, yes, we can hear you.

MR. RAEBE: So I think these charge questions are written really well, and my intentions are to be volunteering for a different workgroup, but I think in the interest of being realistic of the time requirements, I couldn't volunteer for two of them.

I would just like to make sure that this

particular workgroup have a particular focus on making sure that all available active ingredients are available to be aerially treated. And we have some examples, particularly in weed control, where we have a lot of weed resistance issues in many of these products are not able to be treated using aerial application equipment, which actually destroys weather windows that are ideal for safe application due to just equipment restraints.

We funnel certain active ingredients away from aerial application and then to only ground application and we combine that with wet soil conditions when we have ideal wind conditions for application, as well as lack of inversion, and nothing is getting done. Which then forces those applications to be done by ground when the soil dries out when maybe we don't have the other ideal weather conditions, using the dicamba products as an example.

The other issue we run into is the spray drift risk assessment is not accounting for all of the existing very simple technologies that have been used for many, many years with larger droplet sizes, reduced effective bloom lengths, among other techniques and equipment, and those aren't being considered during registration, the spray drift risk assessment process. So we don't end up with an aerial label, which again,

falls right into this resistant management problem that we're dealing with.

So I just want to make sure this workgroup pays very particular attention to making sure that if an active ingredient is sprayed by ground, it can also be sprayed by air. Obviously there needs to be more complicated label language, which when there are other risk factors, but aerial applicators are very equipped and very used to following specific label instructions so that these things can happen safely.

MS. BROWN: This is Jasmine Brown. Can you hear me?

MS. JEWELL: Hi, Jasmine. We can hear you. Hello? Jasmine?

MS. BROWN: Yeah, sorry. My only comment is I want to make sure our workgroups are communicating with each other. So this workgroup really needs to communicate with the pollinator workgroup, for instance, on developing these PRs. As an inspector in the field, when imadacloprid was having resistance issues or PR labeling changes, one of those changes was that it could only be applied once a year, and a lot of the growers felt that the product could still be applied more than once a year, but the actual issue was that it shouldn't be applied after June because that's -- prior to June

when everything is blooming was really when it was having an impact on pollinators, for instance. But the label didn't say that, it just literally said once a year.

So I think just having the two workgroups communicate a little bit better for resistance, or whatever the issue is, would be ideal.

MS. JEWELL: All right, thank you, Jasmine.

I see Carol Black has a comment. Carol, you may be muted. Hit #6 on your phone to unmute.

MS. BLACK: That's working now. So I just posted in the chat -- I just posted in the chat the pesticide environmental stewardship website that was recently updated with some resistance management outreach, and some of the challenges. And so I think for this workgroup, that would be a good resource when -- you know, one of the major components that Bill and Alan mentioned was, you know, engaging the stakeholders. So just passing that along.

MS. JEWELL: Thank you, Carol.

Bill, would you like me to read the question here from Mark Johnson that's in the chat?

MR. CHISM: Sure. Or I can.

MS. JEWELL: Okay. Go ahead.

MR. CHISM: The question is, are we going to

engage the resistance action committees for the insecticides, fungicides, herbicides, to address the charges? They were one of the groups we thought might be an outside member of the workgroup. Yes, definitely.

MS. JEWELL: And, Mano, would you like to make your comment?

MR. BASU: Yes, thanks, Shannon.

Just a quick follow up from what Carol mentioned about the pesticide environmental stewardship. There are several other resources, some IPM programs from academic universities, extension and several registrants. So how do we make sure that when this workgroup meets, all the information, especially around IPM programs which have been successful, is available? So maybe something for the workgroup to think as they have their kickoff meeting.

MS. JEWELL: Thank you.

So, Bill, Mark is asking, are you considering additional resistance management issues for specialty crops such as turf grass?

MR. CHISM: Yeah, that's an excellent question. In the past, we haven't spent a lot of time on turf, but they are definitely a huge marketplace, and there were some considerations. So maybe if he's involved, he can help us to make sure that we figure out a way to address

their needs, because they are a bit different.

MS. JEWELL: Thank you. It looks like Jasmine has a suggestion that we recruit Carol Black to the group. And a question from Cathy, what is the process to add new members to a workgroup? Would you like to take that one, Bill? Would you like to answer that one, Bill?

MR. CHISM: Well, I was hoping -- that's an excellent question. I'm hoping the people can send either me or Alan some suggestions for additional members that might be interested in joining this, and we can contact them and see if they would like to participate.

MS. JEWELL: Great, thank you. And for all of the groups, what we're asking, for those who are interested, or if there is someone that you would like to refer to the group, to please go ahead and email myself and then I will stick both Bill Chism's email address and Alan Reynolds' email address in the chat here, too, so that both can reach out to you guys as well.

And so let's see, Mark Johnson has said that he will be submitting some professional scientists recommendations. So Jasmine answered the question that an email was required to us, and that's correct.

So Daniel Markowski has asked, what has been

done to address resistance in the public health sector? In mosquito control, we have very limited number of active ingredients.

So, Bill and Alan?

MR. REYNOLDS: Bill, I don't know whether you had any other information to share. We have not done anything specifically in the public health sector, other than, you know, the PR notices that have been issued, but this certainly points to a very good -- you know, a very good consideration here, and that's when we -- particularly when we do have limited numbers of AIs, it does point to the need to try to preserve the durability of those active ingredients, particularly in something like the public health arena where those are very valuable products. So that's a very good point to consider.

MR. CHISM: Yeah, this is Bill. I am not aware of what's been going on with the public health tests, but I think it's an excellent point that we may need to figure out a way to make some of these very specific uses and high-value uses, make sure they get included in our recommendations and discussions.

MS. JEWELL: Hi, Bill and Alan, can you hear me?

MR. CHISM: Yeah, I can hear you fine. I think we're seeing some comments that phones cut out.

MS. JEWELL: Right, yeah, I wonder. I seem to have somehow muted myself, so maybe that was an accident on my part.

MR. CHISM: Oh, I guess we're back.

MS. JEWELL: Can you hear me? This is Shannon.

MS. THERIAULT: Yes, Shannon, this is Carla, I can hear you.

MS. JEWELL: Okay, great. Great. Okay. Yeah, so it looks like lots of folks are typing in that they can't hear, but I'm hoping that we have that resolved. Can everybody hear now? Okay, so it looks like Gina and Dominic and Doug said yes, so folks can hear again. Great.

MR. RAEBE: Yeah, Shannon, this is Damon. Yeah, there was a long period of silence, but it seems like everybody's back. Thank you, Shannon.

MS. JEWELL: Thank you so much.

Okay. So, Bill and Alan, would you like to talk about the other aspects of the group? Do either of you have ideas for what might be the optimal number of people in a group like this or decision making and to fulfill this charge?

MR. REYNOLDS: It's a great question, Shannon. Unfortunately, I'm not -- this is my first PPDC workgroup, so I'm not familiar with the typical number

of folks that are on a workgroup. You know, I like to think the charge questions we're asking here are fairly broad and we think that resistance management for, you know, conventional pesticides or -- conventional pesticides, that's a huge group of vastly converse chemistries targeting, you know, all different things, you know, pests.

So given how broad this is, you know, it might help to have, you know, a good representation of perspectives from the group there. So, Shannon, I don't know, is 20 too many?

MS. JEWELL: Twenty is a number I know that has been had on other workgroups and has seemed effective. So I wonder if anyone in the group who has served on PPDC working groups before, too, might like to chime in because I think that there are some members of the current PPDC that may in the past have served on workgroups. And so that sounds like a good idea.

I know that in the past, on the public health working group, they had an approximate number of 20 that they sought and then at points they had another person or two because they recruited expertise for the group. So those are a couple of possibilities.

Let's just give it a minute to see if anyone else has ideas about the optimal number for the group or

other questions.

MR. BASU: Shannon, a quick clarification question. If we go for 20, ten of those have to be PPDC members. Is that correct?

MS. JEWELL: No, Mano. No, it's not, Mano. It could be a variable number. I believe there needs to be at least one member of the PPDC, but there doesn't have to be a large number from the PPDC.

MR. BASU: I misunderstood the 50 percent somewhere, so that's fine. Thank you.

MS. JEWELL: Oh, sure. So no more than 50 percent, no more than half the PPDC.

MR. BASU: I see, sure, thank you.

MS. JEWELL: Okay. Well, similar question, and that is, Bill, Alan, do you guys have a sense as to how often you think the group might meet?

MR. REYNOLDS: I was thinking about this a little bit, and again, I don't have a whole lot of experience with PPDC workgroups, but given the charge here, that is fairly broad. I was thinking maybe once a month, but I don't know if that's too much of a burden for committee members.

MS. JEWELL: Okay. Okay. Well, please, members of the committee, chime in with your thoughts about these things. And I see Mark Johnson has said, perhaps

representatives could participate and meet separately with their peers within their industry in order to best expand the reach of this workgroup.

MR. REYNOLDS: You know, I think that makes sense. Given, you know, the diversity of, you know, what's out there and user groups and I think, it might make sense to have these kind of separately operating sort of subgroups working to expand the reach.

MS. JEWELL: What are your thoughts on various expertise or have you thought about that kind of thing at this point, Alan, or Bill?

MR. REYNOLDS: Yeah. So that's a great question. So, you know, in my experience on the BT side, you know, it took many, many years to develop and we're still working to refine it. And the process that we used, you know, for that was primarily the FIFRA scientific advisory panel that gave us, you know, very specific scientific feedback.

I see this as not -- you know, not really an SAT here, so I don't know that we need to go through exhaustive discussions about, you know, the science of resistance and, you know, those types of things, but I think our charge here and our goals are more on the policy side. So I think particularly folks who have more experience there as far as like labeling, you know,

with pesticide use issues. You know, we heard one perspective on, you know, herbicides and the need for application. You know, so I think folks who have experience more along those lines I think would be probably best suited to address this charge.

Bill, if you have other thoughts, please chime in.

MR. CHISM: Yeah, one of the things I thought might be helpful is people who have had some sort of experience seeing how these resistance programs worked, you know, the things that worked versus the things that don't work. Because you've said with the BT crops, some of the things worked really well and other things didn't work so well. So maybe if we could have one or two individuals that have had some experience with things that don't work and communications plans that didn't work or did work really well would be very helpful. But you're right, I don't think we're discussing the impacts of resistance plans, it's more the implementation and how effective can they be and where the agency should attempt to help things.

MS. JEWELL: Did Charlotte Sanson have a question?

MS. SANSON: Yeah, hi, Shannon, thanks.

Just brainstorming on this, I think it might be

helpful, when somebody's name is put forward as a candidate to participate in the workgroup, that there's just a little bit of background or just a few sentences on what value that person will bring to the discussion. Because it sounds like you're looking for, you know, the best way forward is to get a cross-section of different perspectives.

So it might just help -- I don't want to make it too bureaucratic, but, you know, a very simple form or just a simple format so there's some consistency in terms of what's provided on the individuals so, you know, it's understood why it's important for them to be part of the committee, or the workgroup.

MS. JEWELL: Thank you for that.

Okay, thank you. Amy Asmus suggested that we may have lost sound again. Actually, we're not having any questions right now, so maybe those of us at OPP on this session can stay on the line and then otherwise we'll take a little bit of a break until the start of the next session. So that will be 3:45.

Bill and Alan, thank you so much for talking to the PPDC today. I don't want you to have to wait on the line if there aren't questions. I know that you're both very busy. So we will be back in touch about getting the workgroup formed and we really thank you for your

time today.

MR. REYNOLDS: That sounds great. Thanks a lot. We really appreciate it.

MR. CHISM: Great. Thank you very much for being here.

MS. JEWELL: Great. Have a good afternoon, bye-bye.

MR. REYNOLDS: Okay, you, too, bye.

MR. CHISM: Bye.

MS. JEWELL: And we will resume at 3:45.

(Whereupon, there was a recess in the proceedings.)

MR. MESSINA: Okay. Welcome back, everyone. Am I coming in?

MS. JEWELL: Yes, you are.

MR. MESSINA: Great. All right, 3:45, we'll get started. Shannon, do we have any requests for the public meeting after this session?

MS. JEWELL: We do not. We do not.

MR. MESSINA: Okay. All right, so just giving folks an update. We may end the day early, but if you are interested in making a public comment, please send your email to Shannon and we will get you on the schedule.

All right, so emerging technologies. Thank you

to Manojit Basu for suggesting this as a workgroup for PPDC. And it's an issue that is sort of near and dear to my heart. When I was the deputy, this was sort of an area of focus for me as well. And I did a presentation -- actually, I've done a number of presentations on this at various PPDCs, but at the last PPDC, I did a presentation and I used this one. And so I'm going to go through quickly just as a refresher, so that we have time to focus on the charge questions and workgroup members and building on from there.

So basically the premise of this workgroup and the issues that we deal with in OPP are how we use pesticides to help grow our food tomorrow will look very different from how we use them today. And then what policy and label changes are necessary as a result.

So as a regulatory body, an agency, we want to make sure that we are addressing new technologies and looking at their human health impact, their environmental impact, and their efficacy, and we want to make sure that these new tools are made available for members and users of these technologies.

So we don't want to stand in the way of them and we know that they tend to be disruptive and they can disrupt entire industries. So how do we stay ahead of these technologies, which are beneficial, but also

present regulatory challenges for us because they are not something that were contemplated at the time that we published our existing regulations.

And so there are a number of examples of these technologies that I will quickly go through, and then the question is, you know, how as regulators can we stay ahead of the technology curve so that we are not a hindrance to their development while also ensuring their safety.

So some of these examples that we're seeing coming up in the agricultural space include precision farming, robotics, use of artificial intelligence and predictive analytics, advanced sensor technology that provide realtime information about crop health and pest pressures, hyperspectral imaging, which can provide realtime information about pest pressures and water moisture, you know, moisture in the soil, growth rates, and the ability to feed that information into artificial intelligence predicted analytics and algorithms to basically define the correct ratio of nutrients and pesticides, depending on those, you know, real-time analysis of pest pressures. So really sort of exciting things that will increase the efficiencies of agriculture as we know it today.

The Internet of things, so if you've got smart

homes and, you know, you're using these technologies. I think one of the interesting tidbits that I've sort of come to -- has come to me in my research in this area and paying attention to sort of these emerging technologies is we have already surpassed sort of the humans that are using the Internet. So when you think about the Internet as a highway, and how you do your, you know, Google queries and get your information today, we are users of the Internet.

Well, because of all the connectivity of devices, the users of the Internet are expected to grow exponentially. So your smart home device, your lights, different monitors, industrial equipment, they're all connected to the Internet, are users of the Internet. And so that's just going to increase the amount of traffic on the Internet.

So when you think about the Internet of things, there are going to be more robots using the Internet than there are people using the Internet in the future, and we're almost at that point right now. So, you know, very interesting times.

The QR codes, quick response codes, being able to take a photo of a code and having information that's specifically directed to your specific needs that sends you to a website probably has some great promise here.

So if I'm a grower and I know that I'm using something on, you know, corn for a particular pest, rather than having to read a 75-page label, I could just, you know, take a quick scan of that product and I could have a dropdown menu of the things that I'm interested in and I could have the instructions delivered to my phone or my device or my tractor automatically.

And at some point, you know, the tractor is going to be communicating with the label. There might not need to be a user. Who is the user of pesticides? If it's the tractor, you know, what does worker protection standards look like, sort of the thing that's applying the pesticide if it's not a human being, it's an actual automated piece of equipment that's reading data directly from a label, or from information contained on a website through a label.

Product traceability is a really interesting concept. You know, the large food chains already have this in place. So if you are, you know, a large retailer of sandwiches, let's say, without naming any names, and you want to know that, you know, if there's a particular lettuce that's been recalled because of a particular outbreak, because of product traceability, you can go back to your distribution chain and find out whether that lettuce was picked in a field that had a

particular outbreak and whether that lettuce traveled with any other products on the trucks as it was in transit that was affected by that outbreak.

So, you know, product traceability creates some real interesting agricultural efficiencies and information and data that could be mined to make better decisions.

Of course, unmanned aerial applications and aerial vehicles. I presented on this a number of times for PPDC in the past. Damon recalled and made his point about labels, that some of the first things to go and get off labeled as part of registration review, because of the human element and potentials for drift, in the modeling that we have, are the aerial applications. So, and airblast is another one.

So if unmanned aerial vehicles present an opportunity for a more precise application of pesticides, it's possible that aerial application could be preserved on those labels, whereas if it's able to be inches above the canopy, versus feet above the canopy, certainly the drift profile could be reduced. There is automatic geofencing, which you can apply to these technologies.

I know that the current manned aircraft have some of these capabilities as well. They're flying with

a lot of the tech that the unmanned aerials vehicles are flying with. And we're seeing the application of unmanned aerial vehicles be used in particular niche areas. So, for example, in high terrain areas, where it's difficult to get a large aircraft in those areas, like high forested areas, for planting and seeding and pesticide application, where you may not want a human being flying around the high mountain areas, unmanned aerial vehicles present a potential new technology for those users.

We have seen them and we have had some conversations in the past in PPDC from our vector control specialists who rather than taking a, you know, swamp buggy out into the marshes and disturbing the wetlands, unmanned aerial vehicles present a new tool where you cannot disturb the wetlands and you can address your mosquito abatement control issues by using for scouting and also pesticide application.

And you couple that with some of the advanced sensor technology and Internet of things and the ability for those devices to connect to the Internet, and you have, for example, the mosquito traps that have a 3G chip in them, a chip so they can -- if they start getting high readings, they can notify our public health officials that there are high populations of mosquitoes.

We can use the unmanned aerial vehicles to do some scouting and then to develop and deploy technologies to reduce the mosquito population.

So unmanned aerial vehicles is an area that we have been having conversations with. We have been talking with universities, with data developers, to understand how this technology can be beneficial.

There's also questions that we have. So an unmanned aerial vehicle could actually present a higher risk profile for drift. They tend to be lighter, so maybe you have to refill them more. The rotors come in very different sizes and types. So what does the modeling show for whether that small aircraft is actually increasing the drift while applying those pesticides. That's something that we are looking at in part of our analysis and building our models and working with the data generators to understand the potential risk profiles.

But certainly an area that shows promise and an area that is growing and one that OPP, Office of Pesticide Programs, needs to stay ahead of so that when people are asking and this technology continues to grow, we will have the answers that are based on science to determine the efficacy and human health and environmental exposure and benefit for these types of

devices.

And then augmented reality, I've got a picture of that. You know, it's kind of a neat tool, sort of a what happens when you put your Apple Glass or Google Glass to your eyes and you can see the pests, you know, through some hyperspectral imaging in real time. You know, what does that world look like. You can actually see pollution or maybe you can see drift.

And so as an agency, you know, what happens when we get that call from somebody who's using this hyperspectral imaging and seeing, you know, drift happening or seeing pest pressures and seeing the world through this different lens. And, you know, what do we do about that. So making sure that we're keeping an eye on this space is sort of interesting as well.

These are some draft questions, again, just draft. Happy to take some refinement. Some of the questions in this space, particularly are for UAVs, has been asked by our state counterparts, our AAPCO and SFIREG partners, and OECD, because this is an international issue, and PMRA in Canada, a lot of the regulatory agencies are trying to get an understanding of the data needs and scientific methods.

So this is a draft question, how should EPA obtain a greater understanding of how the use of

emerging technologies leads to reduced or increased risks that differ from those resulting from current methods? And then what changes to EPA's approach to labels, if any, are needed to accommodate emerging technologies.

So these would be potentially workgroup charge questions for the folks in this space. And I think because the space, it's a fun area, but it's also expansive. So I think some triage and some prioritization of the technologies that EPA should examine would also help form the workgroup in terms of what data we should look at and which areas of emerging technologies should we focus on first.

There's a whole list on the prior slide, but, you know, should we just focus on UAVs and try to get that right now? So I think some prioritization would help the agency as well.

So we have been undertaking some projects within EPA. The digital transformation that I mentioned, the ability to upgrade our IT systems, so we can actually handle the data that's coming in to review is a first step. I mean, if we have legacy systems where we're getting lots of data on something and we're not able to process it, that really impedes our ability to kind of be proactive around this area.

Our OPPEL smart labels, QR codes, red distributed labeling, our UAV workgroup. We visited the Commodity Classic Association of Equipment Manufacturers, so that the tractor manufacturers and the aircraft manufacturers are interested in partnering with EPA. There's probably some folks in this space that would be good workgroup members.

There is a number of industry representatives who have an international presence. And so if you're a company and you are working around the world, you'll know that there's a large use of UAVs in Asian -- on the Asian continent. There's some use of UAVs in Latin America. There's some UAVs in Canada, in Europe, in Great Britain and in France and some of the European countries. They have taken a more sort of cautious or restrictive look at the UAVs. I think the U.S. is somewhere in the middle.

So I think having some international or companies that are dealing with the space internationally so we could learn from are OECD, which is exploring this issue, and PMRA, and Latin American countries. How they're using these technologies in Asian countries who already -- sort of already are at the cutting edge of the opportunities in this space.

And then we have the states have an emerging

technologies workgroup which I participate in and members of EPA participate in as well. So there's some cross-fertilization, some of the projects that relate to emerging technologies.

So these are an appendix now. These are some of the pictures that I showed the last time and I'll cut it short to make time for discussion. But this is not your little red tractor anymore, this is what a tractor looks like. You know, the amount of tech in this tractor is more than an F15 fighter. It's just the amount of computers and processing power that this tractor delivers is impressive.

Harvesters. You can get real-time information for what the harvest was last year, what the moisture content was, are there any dips in the ground. You know, did this area result in higher amounts of throughput, you know, last year, and so you're going to adjust your rates depending on that. It's GPS positioned, so it's driving itself in many respects, across the field. So this is the state of how tractors are being used today.

We talked about UAVs. We talked about how farmers ground microtractors as a possibility. So you have artificial intelligence being used to understand and look at the crops and look at the weed pressures and

address them in real time.

So what does that mean for label rates? You know, how are we using label rates as a label requirement to make sense when you're doing spot treatment 24/7 and you're able to sort of just do a micro application whenever you see a weed and how is the label set up to handle those types of scenarios.

This is a robot inspecting an indoor growing facility for lettuce, which is new innovation, sort of rotating bins of crops that's been through the controlled lighting scenarios and the ability to control weed pressures through an example of hyperspectral monitoring that can show you the health of crops where moisture is low, where weed pressure breakthroughs are happening, and then you can apply and change your application for fertilization, which can also have an environmental benefit to reduce nitrification, and also how much pesticides you need to use. And you can have a variable application. And the tractor takes measurements to automatically dispense the right amounts of nutrients or pesticides as needed.

This is an example of sort of what a QR code looks like and then you can use your phone to find information on the web. This is the augmented intelligence, using a sensor to use nonvisible light or

light that's not visible for the human eye, but may be visible on a different spectrum that can be identification of the redness of the fruit or the health of the fruit in real time.

So in your materials, this is something that was sent around, there's some fun reading in this area. But what I'll do is back up to our charge questions and open it up to see if these are the right questions, if you want to add some more, and go from there.

So with that, I will stop talking and sit in the uncomfortable silence that may result for a little bit.

Liza has a comment. Please go, Liza.

MS. TROSSBACH: Thank you. Ed, are you able to hear me?

MR. MESSINA: Yes.

MS. TROSSBACH: Okay, great. Well, thank you for the presentation and the refresher on the emerging technologies. Just two comments. One, I absolutely am hopeful that this workgroup will communicate with the AAPCO emerging technologies workgroup and perhaps AAPCO will have an opportunity to nominate somebody to participate in the PPDC workgroup just so, you know, those two can move together and share some of their resources.

The other thing that I wanted to say, and I've

mentioned this previously, is I would encourage this workgroup not to look strictly at agricultural applications of those emerging technologies, but many of these emerging technologies are being used in non-ag applications, and one that comes to mind are the use of UAVs for disinfection in large areas like stadiums, et cetera, but any of these technologies could be made available to the non-ag sector. And we usually think of UAVs that there are, you know, a number of other ones as well, so I would just encourage that.

And the other thing that I think is important, and, Ed, we've talked about this before, is the future of labels. And so how you can make them such that it's easier when new technologies come on because the label is the law, to make the label a little more flexible or make a mechanism by which some of those things or labels can be changed so we're readily able to adopt technology. As long as the data's there.

So how do you develop data that can be used across a wide variety, you know, of applications and types of product. Thank you.

MR. MESSINA: Yeah, great comments. Thank you so much, Liza. So I want to make some notes.

Okay. Next comment or question? Shannon, is there a way if we want to change or add to this language

here for the workgroup, we can add? So I would just type in, you know, like the workgroup should consider non-ag is as well as ag technologies. All right, so if we could capture this on this one slide as the takeaway for the workgroup, that would be great.

MS. JEWELL: I'll work on that.

MR. MESSINA: Thanks, yeah. Maybe you could just copy and paste and put it in, or use the PowerPoint document version and just document it.

MS. JEWELL: Yeah, that's what I'll try to do. Yep.

MR. MESSINA: Thank you, Shannon. Should emerging technologies -- [technical difficulties] -- application of pesticides would you anticipate the need for interagency development of regulations and guidance such as EPA and USDA?

So, Ed Wakem. Ed, do you want to expand on that? I think that's a great point and maybe you want to follow up.

So, Ed Wakem made a comment in the presenter chat but away from the group and I'm just reading through that. I think it's a great concept and I think if there's others that want to react that should emerging technologies be applied to livestock application of pesticides, would you anticipate the need

for interagency development of regulations and guidance such as EPA and USDA. Wondering if there's any reaction now or if Ed wants to expand on that comment.

All right, and I see Damon is typing. Damon, rather than typing it, if you want to just unmute your phone and give us a comment or two. Yeah, great. Damon, if you want to unmute your phone.

MR. RAEBE: Thank you, Ed. And my comment is just in the response to your presentation, and I don't want to beat this like a dead horse, right, we've got a great interplay and a great relationship with the EPA. It's been a real open door.

I want to point out, though, that our loss of aerial application labels in my opinion has been a result of unnecessarily overly conservative spray drift risk assessments, and, you know, just to give you an example of one of the inputs that's used that it's setting up the atmosphere in conditions that would be found in an inversion, that it's actually illegal to make a pesticide application in an inversion.

So we've seen ourselves, you know, utilizing the model in a way where we're losing access to a tool and if maybe to address that issue if we could as a result of that committee meeting formalize making some significant changes to those investments so that we're

not putting in either illegal application parameters, unnecessarily small droplet sizes, unnecessarily large effective boom length relative wingspan, measuring wind speed at a height that doesn't match the boom height, which arbitrarily increases the estimated weed speed, not making use of multiple application assessment method tool that's found within ag drift.

If we could start utilizing all of those tools that are already available to us, I think we would have a much higher likelihood of holding on to existing aerial application language. And actually be forwarding techniques that are likely to be used across other pesticides that don't even have those same problems. Many times these aircraft are equipped in a certain manner and all of the other applications that they do are then done in that same manner.

So there's a real net positive there. So that's just a comment.

As far as charge questions to the workgroup, there's two points I'd like to make. The first is, we have spent, in PPDC, a lot of time on unmanned aerial vehicles. Much of the described benefit comes from the autonomy of the spray system itself. All of those components are currently available to manned aerial application equipment. They're not put together so that

they're talking to each other at this point. So I want to make sure the charge questions are worded in a way that manned aircraft are part of the discussion, particularly as it relates to autonomous spray systems. And I think that could be a -- you know, 30 percent of the crop protection products are put out by manned aerial application equipment, and if there's a better way of doing it that's safer, more efficacious, that's a big footprint, and that has a lot of room for environmental improvement from that type of technology.

The last piece that I'd like to make sure gets into the charge question of this workgroup is to make sure we do not overlook what the operator does that currently sits in these devices, whether it's the ground machine or an aerial-based machine. One of the responsibilities of all pesticide applicators, it says it on all ag labels, is do not allow this product either directly or through spray drift to come in contact with a worker or other persons. And the vantage point that a pesticide applicator has when they're sitting in either the cab of the tractor or the cockpit of the aircraft is the best possible view of what's happening around the application site.

And it provides the ultimate level of protection from human exposure if there is a person actually there

near where the product is being released. We want to make sure that this technology includes, if there's not going to be someone present near the nozzles, it includes some form of sensing equipment or whatnot that would make sure that we don't have an inadvertent human exposure that nobody can even see is happening except for the person being exposed.

MR. MESSINA: Yeah, all great comments. Thank you, Dan. And I made -- hopefully you heard me, because I've heard you say this before, that a lot of the fixed wing piloted aircraft have some of the similar technologies as the new UAVs. And so I made that point based on feedback you've provided in the past. So I think we've heard that.

MR. RAEBE: Yeah, very much.

MR. MESSINA: Thanks. And then on the ag drift piece, yeah, that's an interesting point. So I wonder -- so I mean, maybe the way we capture this in the workgroup is, you know, there are emerging technologies on the fixed wing and piloted aircrafts, and so even those technologies are a part of sort of this discovery. And I think the connection is if the ag drift models are doing a disservice to these emerging technologies, which includes the emerging technologies on the fixed wing piloted aircraft, how can we be sure

that we're not creating an impediment while also ensuring the health and safety.

So, you know, maybe we can capture that charge question, Shannon. So can you add, Shannon.

MR. RAEBE: Ed, I just want to make it clear that the ag drift model does capture those things that I mentioned. It has to do with EPA policy on what inputs are used within the model, and parts of the model that have yet to be used. Those were all developed and passed through many scientific advisory panels.

And so we just want to make sure that before we begin -- I mean, I'm not saying that that should have anything to do with this workgroup, this workgroup needs to move forward, but we have a situation here where we're losing access to aerial labels while we have a model showing that we probably could meet the spray drift risk assessment goals of EPA by having more restrictive label language on how the application is performed with the existing technology and those modeling parameters are just simply sitting there waiting for us to use an ag drift.

So I don't know that we need to wait for this workgroup to begin to start better utilizing that stuff. And I don't want to make a -- the EPA has listened to us very patiently, the USDA's Office of Pesticide Management has

as well. We're making great strides in improving labels, but there's a lot of work left to do that. I don't know that that would need to be part of this workgroup.

MR. MESSINA: Yeah, I'm happy to talk offline about this topic, you know, as we have in the past, and I mean, I want to be -- it fits within the framework of, you know, how as an agency can we include and encourage different tools for growers, while also managing the health and safety. Whether it's the inputs or if there are opportunities to, say, aerial application on the label, where we're able to demonstrate health and safety, we should do that, and if for some reason by way of a policy determination that isn't based on science, we're doing that, we should work to correct that.

So, you know, my commitment to sort of talk offline and see whether there are specific things for aerial application that we might want to take a look at outside this group, or within this group.

So, Shannon, can you write on this slide that the workgroup could prioritize among the emerging technologies on where EPA should focus first and that's a separate bullet, that's not related to ag drift. But I think we could look at whether or, you know, the inputs into the ag drift model, as Damon -- and policy

calls related to ag drift model, should that be examined for both emerging technologies, including fixed wing manned aircraft.

So I think Mano had a comment, since he's the sponsor of this workgroup, I'll turn to him and see if he has any comments or questions.

MR. BASU: Thank you very much, Ed. Can you hear me?

MR. MESSINA: Yes.

MR. BASU: Wonderful. And again, thank you for the opportunity to draft the description for this workgroup and allowing me to propose the workgroup. I look forward to working on this emerging technology workgroup.

As you mentioned in your presentation, emerging technologies encompasses many aspects of digital precision ag, software enhancements, UAVs and definitely much more. One way as we are thinking about prioritization, one way to look at the long list of emerging technologies that you shared in your slide would be, as mentioned in my description document, which one of those are truly a technology versus which ones of those are platforms to build additional or more technologies in the future.

That may allow us to narrow the list that we

really need to prioritize. Because we really need to look into a posture to enable the development of these emerging technologies. So looking at it from a platform versus a technology may allow us to easily prioritize.

Talking about the data requirements a bit here, that came up in your presentation and some other comments as well. Another way of looking at it may be what scientific data or regulatory data already exists that may allow us to answer some of the regulatory questions that may arise with these emerging technologies. Maybe just a different way of looking at emerging technologies specifically.

Finally, the question, moving on to that page, there's a lot of work, and specifically --

MR. MESSINA: Hey, Mano?

MR. BASU: Sure?

MR. MESSINA: Before you go with the question, if you wouldn't mind, can we capture those comments on this slide right now, because I thought they were good ones. So, Shannon, can you do that before we get to the question.

MS. JEWELL: Can you just repeat that for me so I can type it.

MR. BASU: Sure. One, the first one would be differentiating a technology versus a platform for

developing a technology.

MR. MESSINA: So what would the charge question to the group look like? The workgroup should examine the technologies and -- I think I understand what you're saying, but I don't want to put words in your mouth. So what might you want the workgroup to think about in the difference between the technology in the applied form?

MR. BASU: Yeah, I would say, and again, I am open to suggestion here from other members of PPDC. What I would suggest is we should look into technologies rather than spending time on platforms to develop these technologies. I mean, artificial intelligence is a platform. There could be many products coming out from artificial intelligence. Some may be ag use, some may be completely different use.

So how do we focus specifically on -- and when I say ag, I do want to include non-ag use as well. So how do we focus on those specifics rather than artificial intelligence being used for a cell phone or, you know, some other kind of technology. That's how I look to differentiate these things.

MR. MESSINA: Okay. So then your other comment, which I thought was a good one.

MR. BASU: The other comment was specifically on data requirements. And on that piece, I mean, is there

existing scientific and regulatory data that is available which will allow us to answer regulatory questions related to these emerging technologies.

Now, once you identify the gaps, then there may be questions on what additional data requirements are there, but if existing data can answer the questions we have, then, you know, it may be a completely different way of looking at what the emerging technology is.

MR. MESSINA: Great. And I see that Shannon is capturing that concept. Thank you, Shannon. Okay, and then you have questions? Other questions?

MR. BASU: Yeah. The question specifically on collaboration with international bodies. I know EPA participates at OECD. There is some discussion going on, PMRA is doing some work, you mentioned. In the Asian content, there is a lot of work that has already happened, specifically with drones and UAVs. How do we align and engage with some of these international platforms and make sure that, you know, we are not going in a completely different direction, if I may say so.

MR. MESSINA: Yeah, that's a great question, and is that a question that you think we should charge the workgroup with answering?

MR. BASU: I think so. That should be a question that the workgroup should be looking at for

alignment with OECD and other international bodies.

MR. MESSINA: Great, thank you.

MR. BASU: Thank you very much.

MR. MESSINA: Damon, did you have another question?

MR. RAEBE: Yeah. Sorry, Ed. I don't know that it got captured with the concept of posing in the charge question to make sure we're accounting for the potential loss of an operator being at a pesticide application site.

MR. MESSINA: Yeah, okay, great. Thank you, Shannon. And let us know what specific words you'd like to charge the workgroup with, Damon. This is that opportunity.

MR. RAEBE: You want me to just type it in the comments, maybe? Would that be the easiest?

MR. MESSINA: Oh, yeah, that would be great. And, Mano, if you want to do the same, you know, to develop the charge question and then Shannon can copy and paste it, because she's sort of shortening it right now.

MS. JEWELL: Yeah, that would be really helpful.

MR. BASU: Yep, will do.

MR. MESSINA: Thank you. Other comments and questions? And, Liza, hopefully we captured your

comment as well on the non-ag piece, but if you've got a question for the workgroup, I would like to see it, and please type it in the chat.

Let's hear from some others. Not to pick on anybody, but anybody in our worker protection space want to provide some input on kind of the worker exposure piece of emerging technologies and how the agency should address those concerns and do we want to charge the workgroup with examining some of those aspects?

MS. TREVINO-SAUCEDA: Hi, this is Mily Trevino-Sauceda. Can you hear me?

MR. MESSINA: Yeah. Yes, thank you.

MS. TREVINO-SAUCEDA: Yes, only like two or three days ago, I was contacted by your office and I was happy that was done, but it should have been done before now. I know that this group is going to be of vital importance in terms of the worker protection standards or the worker protection and to review the standards. Because years back we did have regulations that were approved and then there was some drawback.

And meanwhile, workers are not being protected or were not being protected, and that has caused a lot of problems. So here, it's about trying to make sure that we get more serious about the health of farmworkers, specifically our farmworkers that I'm talking

about, and the agricultural area.

And so we have not talked as of yet, but we will, pretty soon, hopefully, and I hope several other people will join.

MR. MESSINA: Yeah, thank you. So maybe I should have been clearer. We are going to be talking about the farmworker workgroup tomorrow, so this topic on emerging technologies has been on prior PPDC workgroups and we talked about it in May as a potential workgroup. So my question was, you know, are there any charges for this emerging technologies workgroup where we should consider farmworker issues.

So we'll talk about the farmworker group tomorrow, and we'll kick things off and we've got some draft charge questions, which we can develop, and there will be plenty of time to work through those issues in the fall and winter and spring, and, of course, there's the May meeting. So this is really a kickoff.

But are there any issues for this workgroup, the emerging technologies one, which has sort of been on EPA's radar for a couple of years now, but for worker protection?

MS. FIGUEROA: Hi, this is Iris. Can you hear me?

MR. MESSINA: Yes, thank you, Iris.

MS. FIGUEROA: So as you said, this has come up before. So, you know, we still have a lot of similar concerns that we've brought up in the past. So the issue of drift is obviously a very big one that you had mentioned. The issue of visability of who's controlling, you know, the technology and what is that person's viewpoint in terms of other people who might be in the area. And also the reaction time and how that differs from a human being.

And so those are some of the aspects that we're really concerned about, about not having, you know, the same amount of ability -- first of all, the same context, you know, sort of human, real-life context of what's going on, if it's just these inputs, and the ability to react to that reality on the ground.

MR. MESSINA: Okay. So I think that's a great concept. Is there a question that you think the agency needs to answer there, and then is there a question you think that the workgroup should be charged with providing information to the agency about? How would you frame that question? Which I think is a good one.

MS. FIGUEROA: I think Lori Ann and Christina just typed in a good summary of what I was saying in terms of the visual determinations. So a similar question about the visual determination, but also of

human beings present in the area. And then Christina also had a good question about how does the interplay between the emerging tech and the WPFP requirements work and, you know, what tweaks that need to be made.

MR. MESSINA: Yeah, awesome. I'm reading those now. I think those are great, great questions. So, thank you, Christina and Lori Ann, for suggesting those. I think we'll copy and paste those into the Word document. I'll read it for the folks that are on the phone right now, and the first charge question for the emerging technologies workgroup related to worker protection would be what is the interplay between emerging tech and WPS training requirements, and then where labels include making visual determinations on whether or not endangered species or other sensitive wildlife are present, how will those determinations be made? And I guess that's a dot, dot, dot, given the use of an emerging technology.

Great questions. Thank you. I'm glad I asked.

MR. ARROYO: And this is Ruben Arroyo.

MR. MESSINA: Yeah, Ruben, please.

MR. ARROYO: You know, when you mentioned the field workers or farmworkers in relation to new technology, I think it was mentioned there about the proximity of field workers and based on, you know, what

the new technology is. I mean, we still need to consider that as part of worker protection standard, if there's a buffer or something like, you know, as far as like I said, the proximity to them.

And the handler, of course, even though, you know, these new technologies are requiring less and less hands-on touching, we're still going to have a handler, which could or could not be a farmworker or somebody working for the -- you know, the applicator. And, you know, somebody is still going to have to load the chemistry into a tank or, I mean, maybe it would get so far into this as far as using closed systems, although those are required for certain chemistries, but not all. But if we're looking at the safety and the handling of these and maybe with these emerging technologies, we consider, you know, how these are dispensed into the new technology.

MR. MESSINA: Yeah, great question. Great comment, too. I've seen examples of where, you know, the UAV takes off, it docks, it has a little sort of stinger, if you were, feeds into the tank, sucks up the pesticide that it needs and then takes off. So it is a bit of a closed system, and the worker exposure piece of this is, in fact, less. So there are examples where the worker exposure profile can be reduced because of these

emerging technologies. So, yeah, thanks for that comment. Appreciate it.

Do you have a question for the workgroup that you think isn't captured yet by the ones that are in the comments field related to worker protection issues and farm issues?

MR. ARROYO: I think it was captured. I don't know if it was specifically captured as far as, you know, the new technology and the distance, or buffer, from field workers.

MR. MESSINA: Okay. Yeah, I think if we -- you know, so far we can -- it looks like we can keep it general, and I think, Iris, I'm looking at Iris' comment, Shannon, about relating Lori Ann's comments about visual determinations for worker safety while emerging technologies are being used. Hopefully that captures some of it.

Okay. Any other comments or questions on this topic? We've got about 10 minutes left. And, Shannon, do we have any public commenters at our requested time, at our 4:45 session?

MS. JEWELL: We don't for today, Ed, no.

MR. MESSINA: Okay. And it's okay, if you don't get to a comment today, we'll have two more comment sessions tomorrow. And tomorrow we will also be joined

again by Alex, in the morning, for a brief introduction and some updates as well. And then we will roll into the COVID updates and then we'll go into the remaining workgroups and do a similar drill here by trying to build some charge questions and launching of the workgroups.

So Mark Johnson commented, more than workers in systems like turf landscapes provided safety related to -- so, Mark, do you want to expand on that? I think reading into your language, it's probably also public exposure, but I just want to make sure I'm getting that comment correct.

MR. MARK JOHNSON: Yeah. So it's obviously more than golf courses who I represent when you consider in the 60 million acres as an estimate until they get done with the survey, but, you know, workers obviously in some environments like airports and that that are on the outside, but all turf systems and landscape systems where pesticide applications are going to take place, probably more UAVs for now, precision agricultural, but some of our equipment feeds off of agriculture, but in other cases lags behind agriculture.

So when it comes down to the safety of turf grass systems in any urban environment, right, public safety, and beyond, whether those are at universities,

schools or whatever, with small UAVs that may be doing some of this work. So I would just say expand the question in light of it beyond workers in that immediate area but the followup with people, right, periods of time following treatments and things like that that might want to be addressed by this workgroup.

MR. MESSINA: Great. So, Shannon, can you capture that in the PowerPoint? We're not seeing the PowerPoint anymore, so if you're pulling it into the PowerPoint, we're just seeing the comment chats. Just FYI.

So, Cathy Tortorici, what are the interplay between workgroups because of the overlap between spray drift and the use technology? And, you know, Dr. Joe Grzywacz from Florida State University proposed a cross-cutting issues workgroup and it was one of the ones that we didn't select, in part because we thought that the workgroups could certainly partner and where there was overlap, we would sort of leave it to the workgroups and also point out the overlaps that existed, which is why I sort of asked the worker protection question, because we do have a worker protection, you know, field worker workgroup. And so certainly if there are folks that have expertise in that area that we're going to want to invite to our workgroup sessions to

obtain a better understanding, that can certainly happen.

So, Cathy, to answer your question, I would say feel free to use your colleagues and members of the other workgroups to develop more robust answers that your workgroup is charged with.

MS. TORTORICI: This is Cathy. I just wanted to add something to that. I'm not asking for like a cross-cutting workgroup. I just found it interesting that in listening to the conversation there are some common themes that are coming up, and it would be really good to make sure that as recommendations are developed that those are cross-checked between the workgroups so that you've got synergy versus conflict to the extent you can in terms of what folks are recommending.

And I also wanted to say one other thing quickly about the comment that Lori made about species that there is a connection in terms of application for species and how it could affect them and people, right? I mean, there is some -- I see some conversation clearly about, you know, what are the buffer areas and how are you applying things to minimize impacts to people. That certainly goes for species and the concerns that we have as well.

So I'll be interested in the conversation about

that to see the overlap between those two things, because we certainly don't want to be talking about species protections that could be a problem for worker protection or vice versa. Thanks so much.

MR. MESSINA: Great. Yeah, thank you.

MS. JEWELL: And, Ed, let me just chime in. I hate to interrupt, but I will capture all of these notes and will get them in the transcripts, too, and in the PowerPoint. The reason I was letting the presenter chat show is just so members of the public are privy to the comments in the presenter chat, too. I hope that's okay.

MR. MESSINA: Oh, no, that's fine. Right now I'm not seeing anything.

MS. JEWELL: Okay, I'm going to go back to sharing. I'll work on that while you address the comment, though.

MR. MESSINA: Yeah. So I was going to go to the next comment, and I can't see who the next commenter is. I think it was Amy Asmus, if I'm recalling. And, Amy, if you want to just unmute your phone and make a comment, that would be great. I think I saw that you commented and I don't see the comment anymore.

MS. ASMUS: Thanks, yeah. Okay, this is Amy. I was just listening to some of the comments. Should one

of the questions be since one of the charges is having flexibility in what the EPA does for the labeling or to accommodate some of this emerging tech, does there need to be some kind of innovation analysis, not only on the tech that is currently emerging, but as an ask to what are some of the needs that somebody could develop emerging techs to address?

MR. MESSINA: So is there a workgroup charge question in that comment?

MS. ASMUS: I'm not sure. I guess my question was, are you looking at existing emerging tech or is this group also charged with looking at tech that may be innovative coming down in the next five to ten years?

MR. MESSINA: Yeah. Well, my personal view was trying to get ahead of the emerging technology, which when I use the word emerging, I'm thinking things that are here, but also are kind of on the horizon, and I think that's why I included sort of the farther out kind of technologies like, you know, augmented reality as a farmer. You know, how soon is the farmer going to be using augmented reality in the field, I don't know, but it's certainly already being put into practice for the indoor growing areas.

So, yeah, I think it includes both, but that's just my personal opinion. I think others on the

workgroup can chime in.

I think it includes both, but I think that's why I asked the prioritization question. I think there's plenty to do right now with the technology that's existing, that is new, that we haven't yet done, but I think the other piece of that is keeping an eye towards the future as well.

All right. So we have two minutes left. Any other final comments or questions for this workgroup?

And I think we have some charge questions. You know, the workgroups can modify them a little bit, but I think from my personal perspective, I think we have some good charge questions. I think we've got plenty to do. Please volunteer for this workgroup, it won't work unless we have some good members. And then Mano and I as the chair and co-chair can talk to folks about who might be good to be on this group, as well in reaching out and commenting on the international piece will be helpful and we can think of some contacts we've had in the past or researchers who were in the space in universities, companies that have an international presence that are using these technologies already internationally. I'm sure the NAAA folks might be interested.

And I would like to have, Damon, you on the

workgroup as well. So please think about volunteering and think about other charge questions that the group can undertake.

So with that, any final questions or comments before we close the session for today?

(No response.)

MR. MESSINA: All right, we are ending exactly on time, and we have our public comment session from 4:45 to 5:00, but having received no comments for public comment, and, Shannon, I just want to confirm that we still have nobody who's requested to speak at 4:45?

MS. JEWELL: Yes, I confirm that. If there was anyone, I have gotten quite a few emails pouring in, if there was anyone, it came at the very end of the day and we will make sure we schedule them for tomorrow.

MR. MESSINA: Okay. Well, thank you, everyone. Any parting comments from you, Shannon? Thank you for running a wonderful session today. The technology and all the remote folks from around the country, it was fairly seamless, certainly going to be definitely hiccoughs along the way, but I would say all in all, thank you so much for your work behind the scenes and Carla's work behind the scenes and the folks that have given our translation.

And for all of you on the PPDC workgroup for

your time, I really appreciate your comments, your thoughtful comments. We really take them to heart, and I think it helps us be better as an agency, and I certainly appreciate hearing from you all.

So with that, Shannon, any last parting comments before we conclude?

MS. JEWELL: No, not other than thank you so everyone for joining. Thanks, Ed.

MR. MESSINA: Great. Thank you, Shannon. Have a good night and we will see you bright and early tomorrow, starting at 11:00 a.m. where we will have a slight agenda change, Alex will talk to us again at 11:00 a.m. She's got a couple of program updates for us, and then we'll go into our COVID-19 activities, emerging pathogens workgroup, public comments, lunch break, farmworker and clinicians training workgroup, the training on the online communication platform, and then a wrap up on moving forward, public comments, and then adjourning for tomorrow at 5:00.

So have a great night, everyone. Thank you.

(Whereupon, at 4:52 p.m., the meeting was adjourned.)