U.S. ENVIRONMENTAL PROTECTION AGENCY

PESTICIDE PROGRAM DIALOGUE COMMITTEE MEETING

Thursday, May 13, 2021

11:00 a.m.

DAY TWO

PESTICIDE PROGRAM DIALOGUE COMMITTEE ROSTER

May 2021

NAME	AFFILIATION
User/Grower Groups/ Farmer Representatives	
Amy Asmus	Weed Science Society of America
Jim Fredericks	National Pest Management Association
Mark Johnson	Golf Course Superintendents Association of America
Patrick Johnson	National Cotton Council
Dominic LaJoie	National Potato Council
Lauren Lurkins	Illinois Farm Bureau
Tim Lust	National Sorghum Producers
Gary Prescher	National Corn Growers Association
Caleb Ragland	National Soybean Association
Damon Reabe	National Agricultural Aviation Association
Tim Tucker	American Beekeeping Federation
	American Honey Producers Association
John Wise	IR-4 Project

NAME	AFFILIATION
Environmental/ Public Interest/ Animal Welfare Groups	
Lori Ann Burd	Center for Biological Diversity
Gina Hilton	PETA Science Consortium
David Shaw	Mississippi State University
Christina Stucker-Gassi	Northwest Center for Alternatives to Pesticides
Edward Wakem	American Veterinary Medical Association
Farmworker Representatives	
Iris Figueroa	Farmworker Justice
Amy Liebman	Migrant Clinicians Network
Mily Treviño-Sauceda	Alianza Nacional de Campesinas, Inc.
Public Health Representatives	
Joseph Grzywacz	Department of Family and Child Sciences Florida State University
Aaron Lloyd	Lee County Mosquito Control District
Daniel Markowski	Vector Disease Control International

NAME	AFFILIATION
Chemical and Biopesticides Industry/Trade Associations	
Manojit Basu	CropLife America
Steven Bennett	Household and Commercial Products Association
Gary Halvorson	Council of Producers and Distributors of Agrotechnology
Komal Jain	Center for Biocide Chemistries American Chemistry Council
Karen Reardon	RISE, Responsible Industry for a Sound Environment
Charlotte Sanson	ADAMA
Nina Wilson	Biological Products Industry Alliance

NAME	AFFILIATION
State/Local/Tribal Government	
Ruben Arroyo	Riverside County Department of Agriculture and Measurements Standards
Carol Black	American Association of Pesticide Safety Educators
Jasmine Brown	Tribal Pesticide Program Council
Liza Fleeson Trossbach	Association of American Pesticide Control Officials
Federal Agencies	
Walter Alarcon	National Institute for Occupational Safety and Health Centers for Disease Control and Prevention
Douglas Burkett	Armed Forces Pest Management Board
Ed Messina (Chair)	Office of Pesticide Programs Environmental Protection Agency
Sheryl Kunickis	Office of Pest Management Policy US Department of Agriculture

NAME	AFFILIATION
Charlotte Liang	Center for Food Safety and Applied Nutrition US Food and Drug Administration
Cathy Tortorici	Endangered Species Act Interagency Cooperation Division National Oceanic and Atmospheric Agency

P R O C E E D I N G S

DAY TWO - MAY 13, 2021

MR. MESSINA: Why don't we throw up the agenda so folks can see it and I can make sure we're looking at the right one.

So we've got welcome. We've got the emerging pathogens, Komal Jain, Tajah Blackburn, from 11:00 to noon. Then we have our pesticide resistance management workgroup update with David Shaw, Bill Chism, Alan Reynolds. And then we have the PPDC member presentations on stakeholder interests. We're going to hear from Charlotte Sanson and Mano Basu from ADAMA and CropLife.

We'll have our lunch break, and then 2:00 p.m. promptly for about 15 minutes, we'll hear from Michal Freedhoff -- I'll do a brief introduction of her -- who's the current principal deputy assistant administrator for the Office of Chemical Safety and Pollution Prevention.

2:15 to 3:00, we'll have another stakeholder presentation. We have the ongoing FIFRA ESA consultation work from Cathy Tortorici from NOAA, and then ESA consultations and species protections from Lori Anne Burd from the Center of Biological Diversity. We'll take some questions and comments

from members for that time frame. Then we'll close it out with what do we expect at the next meeting, kind of really hear from you on topics you'd like to hear, any deliverables or to-dos, takeaway actions that we need to work on, and we can have Shannon maybe review her list as well. And then we'll have time for public comments and then we'll adjourn at 4:00.

So I would say, you know, make sure if you're wanting to speak at the public comment session, you provide your email and send in your name, and we'll add you to the list and then we'll go through it at 3:30. So welcome your input. And with that, I think we're probably ready to begin.

MR. ANNINOS: Excellent, Ed. Thank you very much. And, again, great day yesterday. We have another one in store for you today. We were able to stay on schedule very well yesterday, so I don't think we ever felt rushed, which means that Shannon and her team and the workgroup members did a great job of kind of designing the agenda and you all did a great job using that chat window yesterday to get your questions posed kind of in order of precedence. So thank you.

We're not going to go into details on the

instructions again. You all have got the hang of it. Obviously, if anybody on the call, members of the public, no matter who you are, if you need assistance, you can email Shannon Jewell. It's Jewell.Shannon@EPA.gov, or you can select host from the drop-down list in the chat window and that will put you in touch with Sarah Chadwick who's providing the support -- the platform support today.

A reminder that this is an unusual opportunity for the PPDC members to all be together at once and to provide inputs and feedback to the workgroup presentation, so please take advantage of that. And then for those that are not members of the working groups or PPDC, you may find that you don't have access to the chat window. You can open the chat window and you can read what's happening, but you have read-only rights, so to speak. You won't be able to insert your comments into the chat window.

And just another final reminder because there was some confusion yesterday on this, and that was if you want to make sure your chats are being seen, then you would go to the drop-down list at the bottom -- near the bottom of the chat window. There's a to, T-O, colon and then a drop-down list. Scroll down almost to the bottom of that list past

everybody's name and select everyone, the word "everyone." And then that will be the default whenever you -- whenever you put a chat in the window, you know that everybody's going to see it.

So I think we're ready to get started and we're ready to move to the first working group meeting -- I mean, presentation today. Sorry that we took a few of your minutes for this intro piece.

So I'm going to bring Komal Jain and Tajah Blackburn, the co-chairs of the emerging pathogens workgroup, to step up now. And I think that the presenter role is going to go to Tajah, unless that's been -- unless that's changed. So hopefully, you have access now and can run the slides.

EMERGING PATHOGENS WORKGROUP UPDATE

MS. JAIN: Thank you, Paul. Let's give Tajah a second to get the presentation up. There it is.

Tajah, are you ready?

DR. BLACKBURN: Let's do it.

MS. JAIN: Okay. So good morning, everyone. I'm going to kick us off. My name is Komal Jain. I am the executive director of the Center for Biocide Chemistries and co-chair the emerging pathogens workgroup with the esteemed Dr. Tajah Blackburn. For those that do not know Tajah, she is the current senior scientist in the Product Science Branch in the Antimicrobials Division of EPA and she holds a PhD in microbiology -- sorry, microbiology and infectious diseases.

So we are really pleased to be here with you today. This is a really unique and challenging time in history as we combat SARS-CoV-2 and the disease, COVID-19. So this is a time that demands leadership and thoughtfulness and care, and we are pleased to chair a workgroup on this issue and work with so many colleagues to try to assess the situation and better prepare our communities and the EPA if we should be faced with something like this

again.

So our agenda for this morning is to review with you our membership and, you know, who, in fact, is serving on the workgroup with us, our objectives, the three charge questions and outcomes that we have addressed thus far, and our next steps for the remaining period of time that this workgroup is going to be chartered. And then we will take questions. I will note that we are going to try to take a pause as we go through each one of our charge questions. So anything that is top of mind for you can be addressed along the way. But then, again, there will be time built out at the end to address questions.

Next slide.

All right. So apologies, I know that this is a difficult slide to read, but you do have copies of it. So as you can see, we are a large workgroup. We have 22 members and our members represent a real mix of constituents. We have federal regulators. We have registrants. We have formulators. We have members of academia and science and legal experts, as well as members of the end use community. Specifically, we have representation from the health care industry, the air transport industry and ground transport.

We have solicited members. Tajah and I have worked hard to round out this group. And I will say that I think where we could still use feedback and where I would say this group is open is if there are folks in the end-user community that would still have some availability to commit time to us, we would welcome you into the group.

So to date, we've answered three questions. The analysis has been thorough and our goal is to ultimately provide EPA with recommendations on how to be even better prepared for any future pandemic or emergencies. And I'll get to that idea of emergencies in just a moment. So through these recommendations, we hope to include recommended processes and recommendations on how to accomplish the goals.

So you'll see on the slide we have objectives. This group -- workgroup was formed based on a proposal submitted by my organization, the Centers for Biocide Chemistries, because we thought there was so much to be learned as we make our way through the response to COVID. And so I want to just thank my fellow PPDC members and EPA for supporting this effort.

And, again, as proposed by the CBC and

ultimately accepted by this group, we have three objectives. And that is, one, to assess EPA's COVID-19 response and stakeholder experiences with the emerging viral pathogens guidance for antimicrobials; second, assess the user experience with antimicrobial disinfection products registered by the EPA for infection control; and provide recommendations to for policy improvements and identify education gaps.

So in keeping with those objectives, I will turn this over to Tajah and she will run through our first charge question.

DR. BLACKBURN: Thanks, Komal. More importantly, thank you for providing the dynamics of the working group, our meetings, highlighting the depth of knowledge in the group, the cross-sectional experience of the membership and, most importantly, their dedication to get and gather substantive information for the agency.

Let's spend some time navigating through the current outcomes of our discussion. In the next six months, we do plan to revisit our responses to further enhance the products and deliverables through a couple of mechanisms, prioritization of the answers that have been documented and then develop a process for implementation of those high-priority items.

What I like to say, from concept to completion.

As Komal mentioned, I will pause after each charge question and associated information for comments, questions, and suggestions from the larger body.

So charge question number one, what are the strengths and weaknesses of EPA's first use of the emerging viral pathogens policy during the COVID-19 pandemic? As you can imagine, this was a very concentrated experience field question to unpack that required a plan for dissection early in the process to really get to the nuts and bolts of the response. The EVP guidance document was triggered for the first time in January 2020, following a long span of review and reevaluation that was initiated back in 2006 and finalized in 2016.

The responses that are highlighted on this slide focus on the identify weaknesses to further assist the agency with clarification of the document and defining items that were really unclear doing this additional implementation process. We approached this question by developing buckets and then sub-buckets working from the center of the document and unpacking as we moved towards the perimeter.

The larger buckets represent the main topics in the emerging viral pathogens guidance document, and these topics being background and purpose -- let's see if I can use the arrow pointer -- background and purpose; viral subgroup classification; product eligibility; and outbreak criteria.

The sub-buckets were regenerated based on the relevant topics associated with the buckets or those main topics. The sub-buckets further expanded the background and purpose section, for an example, to communications, trigger, labeling, and hierarchy. For those topics, the following gaps and weaknesses were identified. Communications were limited during the activation phase with the evolving criteria for List N products. There were contradictions with labeling and List N instructions.

The trigger timing was unclear and could be enhanced through a public announcement that may minimize confusion. The required label language was thought to be lengthy and prescriptive with limited options for additional language. The pathogen list was difficult to understand. And, lastly, only a few options existed for List N products. So those were the weaknesses associated with the background and

purpose section.

So let's move to the viral subgroup classification or this List N that you hear me speak about. The members conveyed that the EVP guidance does not direct publication of a list. So this List N isn't explicitly stated in the EVP guidance or any list has to be generated as a function of products that are against a targeted pathogen. The List N could be more user-friendly for products that are difficult to locate.

Another weakness was that List N did not include trade names or ABNs, or alternate brand names, and these were not included, and they were rather included under one registration number. Another weakness was the sub-distributor products were not included on List N. Members conveyed the List N products contradicted EVP language for many products and that, lastly, List N was created without any visibility to the registrant community.

For the product eligibility criteria in this section, with the sub-buckets of efficacy claims, labeling, CSF, a confidential statement form -- a formula, registered formulations and use sites, the members conveyed that the EVP guidance lacked information regarding active ingredient requirements,

that the SARS-2 protocol was an overkill and it was too cumbersome to maneuver. Some members conveyed that the guidance lacked temporary amendments for emerging situations and the guidance lacked flexibility for application methods beyond typical applications that expanded to electrostatic sprayers.

Members also felt that the guidance lacked information concerning concentrations, contact times and use sites. Members conveyed that the document lacked sensitivities for supply chain constraints and new supplier -- changes to existing supplier information had to go through agency review, which may have delayed product registration.

For the outbreak criteria, identified in this yellow section, weaknesses were not identified, but two questions were raised regarding whether the EVP should be applied equally for animal-related outbreaks, such as the African swine flu fever, and whether the agency was concerned about pathogen cross-species transmission or interspecies transmission or, as a layman's term, jump -- as an organism jump species.

Some of the strengths, though not explicitly spelled out on this slide, were that preloaded labels did make labeling straightforward

and that sharing of information with global partners through a blessed List N was and still continues to be a valuable tool.

So let's just briefly recap the terms EVP, List N, and put some context and definition around those -- those terms for the larger PPDC membership. For context, let's briefly revisit EVP guidance, or formally termed, the process for making claims against emerging viral pathogens not on EPA-registered disinfectant labels.

In 2016, as I mentioned, EPA finalized the guidance for making claims against emerging viral pathogens that are not on EPA-registered disinfectant labels. The finalization of the guidance was followed by a 30-day public comment period with a response to comment document. So that's the EVP guidance in a nutshell.

As previously mentioned, the EVP was activated for the first time in January 2020. In March of the same year, EPA began announcing that it would begin to expedite products eligible for emerging viral pathogen claims using the disinfectant hierarchy as outlined in the EVP guidance. Also around this time, in March, List N was posted and accessible. In May 2020, EPA expanded its expedited

review program to include new products and amendments to existing product labels that required the review of new efficacy data.

So what is this List N and why is it termed List N? List N includes disinfectants for use against SARS-CoV-2. As I mentioned, List N was posted on March 55, 2020. The initial list contained 90 products and has grown to approximately 550 products. 377 of those products, about 68 percent, are supported by EVP guidance. It is of important note that, as of two weeks ago, the list had 23.5 million views.

So why is it called List N? Well, it's List N because it represents the next available alphabet in the growing list of products targeted against specific pathogens.

So that's a lot of information to digest. I will take a brief pause here for questions/comments before we transition to charge question number two.

MR. ANNINOS: Thank you, Tajah. Thanks, Komal. We're changing things up a little bit as you can tell. In the other presentations, we waited for everybody to get through their entire deck and then it was open to the PPDC and other workgroup members for comments. This is an opportunity now to pause,

as Tajah has just indicated, and to get some feedback, some direct feedback and thoughts from the committee, the full committee, on this particular charge question. And then we'll move on to the next charge question. And then at the end, hopefully, we'll have a few extra minutes so that -- in case there's general comments about the whole topic.

So let's just open it up. I think you remember the protocol here. You'll go to the chat window. As matter of fact, you should probably just keep the chat window open all day long on the right-hand side of your screen, and just enter your name here if you want to make a -- ask a question or make a comment. Or if you're feeling bold, just blurt something out and suddenly we'll be able to see you and respond to your question.

And I'm not worried about dead air because it's just -- as Tajah just said, it's a lot to absorb. Hopefully, you had a chance to look at -- some of you had a chance to look at this deck beforehand, but this is a great chance to provide some feedback or to get some clarifying questions to the team.

MS. JAIN: So Paul, if I could jump in, something for our members to think about and

that we would love feedback on is particularly List N. Many of you probably are users of List N and have tried to access it, applied it in your businesses or shared it with your community. You know, we would appreciate feedback on the utility of that document and how you could see it being improved.

So, Paul, maybe we'll just let that linger with folks and we can move on.

MR. ANNINOS: Yep. Absolutely, absolutely. We can definitely continue. And for the folks -- everybody else, be thinking about the questions and the comments you'd like to make in the next segment or at the end of the entire deck.

So let's go ahead and continue. Yep.

DR. BLACKBURN: Okay. So Komal?

MS. JAIN: Okay. So the next charge question that the group addressed is, what, if any, documents, policies, guidances, for example, PR-Notice 98-10 and the EVP, should have increased flexibilities to respond to supply chain challenges during a pandemic or other emergency and what revisions should be made?

So first thing to note here is that we decided to broaden our ask of ourselves to more than just a situation of an emerging pathogen. We really

wanted to see, you know, what EPA documents need greater flexibilities to address other emergencies. So when I say other emergencies, things that, you know, could be considered is geo-specific challenges, for example, Brexit or shutdowns that occurred like in Texas or China, Texas being weather-related, China being other emergency type situations, facilities that had to close down.

And then when that emergency is declared, the question is when should it be declared? For example, prior to a pathogen arriving on U.S. soil, African swine fever virus or Ebola, you know, do we want to be able to be more proactive to allow users to stock up on current product in advance of arrival to U.S. borders?

And, you know, what circumstances might we want to consider? Is it quantitative or is it qualitative? You know, consideration of human or animal morbidity or mortality, economic impact, endangerment to species? So we are working to help define what is, in fact, that emergency situation and trying to identify what it is that would trigger classification of the emergency.

Next, we identified the targeted documents within EPA's library that are applicable to these

situations to see what possibly could be needing revision. So the documents that we have, at least initially or immediately identified, include the EVP, which you've just heard a great deal about from Tajah, PR-Notice 98-10. And for those of you that are in the antimicrobial space, you'll know that there is a series of temporary amendments that came into play after COVID or SARS-CoV-2 was declared, all to address the supply chain issues. And there is a petition in place to see whether some of those temporary amendments that are currently in play can be formally adopted. So one of the things we want to do is look at PR-Notice 98-10 in its current version, but also its temporary amendments.

We also want to look at the label review manual and the registration review manual, test guidelines, you know, 158w regulations, and then provisions for importation and international supply chains.

Next question -- next slide, Tajah.

So as I've already gone through, we feel it is an important exercise not to be so narrowly focused on just a situation of another pandemic. We want to consider other possible emergency situations. Something that was suggested to me this morning that

should be part of our definition of emergency possibly is when there's cyber attacks or ransomware, all that can have crippling effects on supply chains.

And then when we think about solutions, you know, we're looking to see how registrants of antimicrobial pesticides can make changes to their suppliers in a more streamlined process than is currently in place. Should it be just a notice? Should it be via a self-certification?

We're also considering whether or not we can take advantage of work that is done on a more global scale. We have sister jurisdictions that are faced with some of the same questions that we are in the U.S. Can EPA rely on the work of the agencies in the EU and those member countries, Asia? You know, if it's not total reciprocity, can it be a work-sharing environment such that some of the hard work is done and the reviews are shared and then EPA goes through its own analysis and makes its own determination?

Another solution is, can, you know, chemistries and formulations be changed for these products, again, based on the self-certification process versus amendments and a thorough review by the agency.

I should be clear, though, that, in no way are we talking about sacrificing the efficacy or the safety of these products. We're really just looking to see how we can streamline the paperwork exercises.

And then, lastly, I keep on saying antimicrobial pesticide products, but there are other products that go beyond disinfectants that have been critical in the response to COVID. So under this charge question, should we be looking at other pesticides, because we do want to at least keep it narrow to OPP matters, but, you know, is it beyond disinfectants and, you know, is it beyond surface contamination and surface transmission?

So those are, again, some in -- some of our pending questions that we do hope to better answer.

So I think that is it for the work that we've done thus far on charge question two. Something that maybe Tajah and I haven't pointed out yet is by no means do we -- do the two of us or the workgroup members feel like any of these charge questions and responses have come to closure. I think this is going to be an evolving process, particularly as we work towards the final report to EPA.

So again, we're soliciting feedback from

you and from others that we can reach out to because we really want our final report and our guidance to the agency to be as comprehensive as possible.

So with that, let me take a pause and see if there is any feedback.

MR. ANNINOS: Thank you, Komal. And, folks, we're taking a pause again. This is a chance to weigh in on charge question two and some of the recommendations that this team has -- is considering.

MS. JAIN: I will also invite we have two members of our workgroup that are on the line with us, and I'll invite to Alex Cook or Elaine Black to chime in if you feel like we've missed anything or I've missed anything on charge question two. And then we have other PPDC members that serve on this workgroup, and I believe they can also unmute themselves and chime in.

MR. ANNINOS: Absolutely. The mic is open.

MS. BLACK: This is Elaine. I'll just say you've covered everything very well. Thanks, Komal.

MS. JAIN: Thanks, Elaine.

MR. WISE: This is John Wise. I have a comment.

MS. JAIN: Yes.

MR. WISE: I was thinking about your

question about how the work you've done might relate to pesticide use and/or I'm thinking agricultural pest management, and it did strike me that there is a hydrogen peroxide product called Jet-Ag that's being used in specialty crops and it doesn't have direct lethal effects on the target pest, but it eliminates some of the yeast and other necessary foods for Drosophila flies and, thus, is useful in the field to be sprayed like a pesticide. So that's one that has some relationship to the work you folks are working on.

And the other thing that comes to my mind is post-harvest, many fruits and vegetables, once they're in a sorting or processing plant, go through a series of washing steps that, in some cases, include some kind of sterilant or agent that is disinfecting fruit.

So those areas have some tangent relationship to the work you're doing. So I just wanted to share that as a source of information.

MS. JAIN: Thank you. That's very helpful. I appreciate it. And I've taken notes.

DR. BLACKBURN: Yes, and thanks, John, for that. I think that's critically important to feedback. And so that charge question number one,

where possibly expanding that EVP guidance to other use sites, other applications, you know, and just kind of looking at this thing comprehensively so that we can -- you know, we can think of all these other industries -- and that's going to lead me to charge question number three -- but all these other industries that may be impacted while we're operating in our silo, just the importance of expanding that to these other entities. So thanks so much for sharing that.

MR. WISE: You're welcome.

MS. BLACK: I want to just build on that. This is Elaine. Yeah, we saw lots of kind of knock-on effects of high demand for certain ingredients that went into disinfectants that were on the List N. But that, you know, once we saw stresses on that supply chain, other products that were not considered definitely kind of felt the pain, and we saw it in, you know, rising prices and other issues and availability of ingredients.

So, yeah, thanks, John. I think those products, in particular, are very important. We know that just the -- you know, like for the food supply, we have to -- for all of these emergencies, we have to consider all the things that we need when we're in

an emergency. So thank you.

DR. BLACKBURN: And then, too, I think it's important that as Komal mentioned, we're expanding that to beyond a pandemic, but considering emergencies as well. And then what we're going to do -- and what I'm going to mention as it relates to charge question number three -- is we're going to go back and try to define what an emergency is and make that a quantitative type of approach so that, you know, if it's impacting multiple industries, if it's impacting the supply chain, that could feed into the emergency and then may trigger some of these documents and policies so that these items can be addressed in a timely fashion and products can still be made available. So thanks very much for that insight Elaine as well.

So charge question number three, as we seek to wrap this up and have further discussion, is, what education is needed during a pandemic or other emergency for the public end-users and other regulating authority? Again, this is a very, very weighted question. We're still unpacking it and really trying to get to, again, the nuts and bolts to get this question addressed.

So we utilize a bucket approach, again, but

across time as well. We analyze across multiple industries and sectors to include ground transportation, airlines, the cruise industry, government facilities, office buildings, entertainment venues, the food service from agriculture through process to retail, restaurants and bars as well, healthcare, and schools across the time periods of pre-pandemic/emergency, during the pandemic and emergency, and then finally post-pandemic and emergency.

Again, we're going to have additional discussions around defining what those emergencies are, so be assured that it's going to be a quantitative type of approach that's -- you know, it's not a gray area, if you will. It's really clear as to when an emergency is triggered. But as it relates to the industry's outline on this slide, I tried to not include a whole lot of information, but focus on those industries that provide unique, isolated challenges and gaps and potentially conflicting messaging with their respective industries.

To some of these -- these isolated challenges include compatibility concerns, conflicts with sister agency regulations provided maybe by DOT

or FAA -- and/or FAA for materials incompatibility and corrosivity testing, challenges with international regulations for vessels that travel into the international spaces. So we first have to identify those nuances, if you will, against all of those industries and those sectors, so then we can better understand what those educational gaps are.

So just still kind of high level as we're working through this question, significant educational gaps during the pre-pandemic or during a pandemic or emergency phase were identified and we felt that there was a need for consistent and centralized messaging from our government partners and even on the state level, but including the trade associations as well, to bridge those gaps as it relates to education and training. And this can be accomplished through informational webinars, to address and mitigate conflicting messaging with ongoing dialogues to address and convey changes and updates through a timely and centralized matter.

As it relates to materials compatibility, concerns require awareness across EPA's landscape to better understand these issues and the potential limitations of the FAA list, of compatible products for use on airplanes and DOT's challenges and even

the impact on the food service sector as it relates to compatibility as well.

Another gap across all industries was how do we manage these high-touch surfaces? And how does that translate into proper use of the products via what the label is stating and translating that, like I say, from prose to practice. How do you take that word -- take those words on a label and make those mean something when they're actually being used?

So post-pandemic/emergency and ongoing through a pandemic, and I was thinking about the different phases of a pandemic, but the working group highlighted that surveys, high wash -- hot washes may prove useful in gathering lessons learned and understanding lessons and best practices from past maybe isolated contained outbreaks on a large or small scale. And what brings -- what comes to mind is maybe the cruise ship industry and how they manage outbreaks on their vessels or maybe an outbreak within a health care suite in the hospital.

So in closing, as it relates to our charge questions, one of the members provided this context that really kind of frames these educational gaps in our exercises in answering these charge questions, in that these educational gaps and challenges seem to be

getting to this idea, and I like this, of competing commitments or competing priorities, where one set of rules of best practices is at odds with another. And working through this space to better understand the individual gaps and the collective processes for it is what we're challenged to do in this space and for the next six months.

So I'll pause there for any questions and clarification.

MS. JAIN: I'll just chime in to say, in many ways, I think this is one of the harder charge questions that the workgroup is faced with. Look, we know education is needed. We know that it can be improved. But when we think about how to accomplish that, it's really challenging because we're talking about anyone and everyone. So that means, you know, how we approach our communications can be -- might need to be really technical and might need to be really basic. It should be bilingual. What type of platform should we use? Does everybody have access to the platforms that we want to use and how we go about crafting the proper messaging that can be easily understood by our targeted audiences. So I really do believe this is the hardest one and probably the one that we're going to spend the

greatest amount of time trying to unpack.

And, again, as all of you on the phone are users of disinfectant products, hopefully, you have guidance or thoughts that you can share with us.

MR. ANNINOS: Tajah, Komal, thank you very much. We do have some time here, so let's just -- oh, I see, you have more slides. I'm sorry, I thought that was the last slide. So go ahead. I'll let you finish up the deck and then we'll open it up to insights, comments, questions from the larger group.

MS. JAIN: Sounds great. So I think we've really said this repeatedly, but for the next six months we really hope to go back to the three charge questions that we've already identified and prioritize our responses, and we really do want to rank in order of priority what some of those solutions are and provide specific processes or guidance to the EPA or others that should be, you know, a part of the solution to work our way to a better situation in in the future.

So we do have these three charge questions. We feel like they're pretty comprehensive. And while we have toyed with additional questions, we feel like the ones that we've identified thus far get wrapped

up in our original three. So this last bullet here is we are open to addressing additional charge questions if we feel like they haven't already been covered. So again, this is another area where we invite feedback. If you think this group has missed something thus far, there is an area that really should be addressed that hasn't been, then there's time in the next six months for us to dig in.

So with that, I will say on behalf of Tajah and our workgroup members, thanks for giving us time today to explain what we've been doing thus far, and we'll open it up to questions.

MR. ANNINOS: Mily Trevino-Sauceda has a question. So, Mily, go ahead and unmute yourself and join us.

MS. TREVINO-SAUCEDA: Yes, I'm leaving my screen off because I'm having problems with my internet. Yesterday, I just got cut off and for whatever reason I could not get back, too much wind. I'm in another place right now, but nonetheless.

Can we go back to the prior slide that you used, please?

MS. JAIN: This one?

MS. TREVINO-SAUCEDA: No, the other one before.

MS. JAIN: Charge question three?
MS. TREVINO-SAUCEDA: Yes, please, yeah.
MS. JAIN: Okay.
MS. TREVINO-SAUCEDA: Okay. So because of what -- I remember that when we were presenting yesterday and we were talking about any -- and this goes for any group or any community, any whatsoever and this also goes for any kind of industry. It is whatever the -- whatever is -- following, you know, the questions and it's talking about education with -- about pandemic and other any other kind of emergency, in terms of get prepared whatsoever.
Are we also thinking, you know, what, you know, mainstream end uses, cultural competency, all these other -- all these other areas of how people will understand the messages or the education that would be provided so that people get the message based on how they really, you know, would understand it. Am I making sense in terms of my question?
MS. JAIN: Maybe I can take a stab at it. I think what you're trying to say is that as we develop education material and communications, we really need to do so with the lens of the receiving audience and make sure that --
MS. TREVINO-SAUCEDA: Yes.

MS. JAIN: -- in fact, we're talking their talk. Right?

MS. TREVINO-SAUCEDA: Yes, yes.

MS. JAIN: So if we're trying to reach out to a largely Spanish-speaking population, have we taken effort to, one, develop material in Spanish; two, are we shying away from vocabulary that they might not be familiar with because it's so colloquial to English speakers, things like that. Do I have that? Have I captured it?

MS. TREVINO-SAUCEDA: Yes, yes. And I would just think about -- because this is -- you're doing it to a wider audience -- audiences and this would be multiple languages and multicultural, whatsoever. I mean, it just -- I'm not saying, you know, that this group would be providing everything, all the details, but it would help if that is taken into our account, especially because we're talking about -- you're talking about education using materials, you know, and whatsoever with anything that -- that's going to be used to get to the audiences.

MS. JAIN: I think you make a really good point. And, certainly, as we provide recommendations to the educators -- and when I say that, you know, I

think that's going to be a shared responsibility as Tajah mentioned. It's not just the Government; it's industry, you know, those that produce the products that would be responsive to a pandemic or an emergency. The onus is also on the trade associations, you know. And perhaps we can partner with academia, so -- but that has to be part of our recommendation. I absolutely agree.

Tajah, any --

MS. TREVINO-SAUCEDA: Yeah, and just yeah, I'm sorry. I just want to add in terms of -- based on your response and looking at, you know, your -- there's a large gap many more times in terms of how government, either agencies and community and even community organizations have, based on terminologies, even in English, based on terminologies, based on anything, there's a lot more times that people will not understand what you're talking about or -- and will -- I mean, we're talking about communicating and it -- we have found in our 30-plus years of organizing with just farmworker women, we just -- it's -- there's more details to look at than just thinking that everybody will understand because we think we're talking the same language. Even if it's the same language, that's where I'm getting at.

And this is why we call it the -- working within the cultural context of those audiences. It's not just, oh, she's a Latina or she's an Asian or -- no, it's looking at wider -- so it's not black and white. It's not English/Spanish. It's not -- you know, it's a little bit more than that to be efficient, yes.

DR. BLACKBURN: I really agree about the cultural sensitivities, and I know, as an officer, when we get dropped into certain places, that's some of the first training that we go through is better understanding the population that we're going to work with and what we do and how it impacts that. So I think -- I thank you for raising that salient point and we will take note of that as we move through our recommendations. Thank you so much.

MR. ANNINOS: Absolutely, thank you.

And thank you, Mily.

Liza Fleeson Trossbach has also requested a moment for a question or a comment. Go ahead, Liza. You can unmute yourself.

MS. FLEESON TROSSBACH: Thank you. Can you hear me?

MR. ANNINOS: Yep.

MS. FLEESON TROSSBACH: Okay. Fantastic.

I appreciate the presentation. Obviously, with SARS-CoV-2, this is near and dear to all of us. And just a somewhat related comment, throughout this, as pesticide regulatory officials, we obviously are directly involved with the use of pesticides, and then also with the registration process, particularly for those products that are trying to be approved under an emergency exemption, one of the challenges that we had as pesticide regulators, and I think some of those registrants had, was understanding what the data requirements are going to be for this. You know, we have a new pathogen, we have a new situation.

And there were quite a few states that had emergency exemptions that were submitted, but there was a lack of information or it wasn't really clear necessarily what the data requirements would be for registrants on some of those processes for quite long. And so I think as part of this education, it should really include educating the registrants and the peptide regulators about how you meet these during an emerging pathogen. I don't know what might be next, but certainly we'd like to be prepared.

And I think there needs to be a little -- maybe a quicker response or an ability to get some of

that information out. You know, maybe there's a way that there can be kind of a baseline of information and then maybe there are things that could be specific to certain pathogens. I don't really know. That's not my area of expertise, but I think there were some -- potentially some pesticides that could potentially have helped at least a certain -- during certain periods that perhaps couldn't get to market soon enough or couldn't get through the approval process. So just a little bit about that to let regulators help registrants and vice versa.

So thank you.

MS. JAIN: That is really helpful, Liza. Thank you. And I know that's also responsive to challenges that AD specifically faced. There were a lot of new registrants that entered the market and, you know, to AD's credit, they spent a lot of time walking these newcomers through the regulatory process. And it would be nice if there was some go-to material that could at least provide that baseline that you referenced. So yes, we will add that to the list.

Tajah, anything you want to add?

DR. BLACKBURN: No, nothing on that point. I mean, even though I work with a lot of the Section

18 data, we did see -- the standard, of course, is a little different for the Section 3 data, but I can understand some of the frustration that may have been experienced as it relates to that. So it's noted. Thank you.

MR. ANNINOS: And, Liza, this is Paul. I apologize for mispronouncing your name when I introduced you. I have a staff member with the same spelling of your name and she goes by Lisa and so I -- it was like an automatic mispronunciation of your name. So I apologize.

And the floor is still open. We have a few minutes left, two or three, four minutes left. If anybody has a final thought, comment, question, insight, advice for this hard-working working group.

And hearing none, I can turn the floor back to you, Komal or Tasha or any member of your working group, if you have any -- if you all have any final thoughts or comments.

DR. BLACKBURN: I would just like to say if things come up and you have additional questions, comments and suggestions, please send those to Shannon and she will get those to us, and we will definitely add them to our list of things to consider as we work through the rest of our six months in

answering questions and prioritizing and developing new processes forward. So that's all I have.

Komal?

MS. JAIN: I just echo that we welcome the feedback and, again, for those that are on the workgroup with us and you're listening in, we thank you for all your hard work. So hopefully more to come, I guess, with the next PPDC meeting.

Paul, I'm going to turn it over to you.

MR. ANNINOS: Okay, all right. Very good. Well, listen, thank you very much. Excellent presentation. Really appreciate the feedback that we did get and, obviously, people know they can contact you offline with anything that relates to your objectives and charge questions and even the work over the next several months. So thank you very much. Great job to all of you.

I think with that we're -- even though we're kind of three minutes early, I think we should move into the next part of our agenda, and for that, we're talking about pesticide resistance management. The co-chairs for this workgroup are David Shaw from Mississippi State University and both Bill Chism and Alan Reynolds from EPA as the government co-chairs. And so I'm actually not sure who we're handing this

off to first. I think Alan might be the one kicking it off. I could be wrong, but let's try that.

MR. REYNOLDS: You're correct, Paul. It's going to be me to get the presentation started.

MR. ANNINOS: Great.

MR. REYNOLDS: So if it's okay with you, I'll just go ahead and dive right into it then.

MR. ANNINOS: Yeah, that's -- absolutely, you know, you're up.

MR. REYNOLDS: Okay. Terrific.

PESTICIDE RESISTANCE MANAGEMENT WORKGROUP UPDATE

MR. REYNOLDS: Okay. So along with my co-chairs, Drs. Bill Chism and David Shaw, I'm going to be presenting our interim progress report on our resistance management workgroup. And just some quick intros, I'm -- both Bill and myself are in EPA's Office of Pesticide Programs. I'm a lead biologist in the Biopesticides and Pollution Prevention Division. Bill is a senior scientist in our Biological and Economic Analysis Division. And Dr. Shaw is a distinguished Professor of Weed Science and Provost at Mississippi State University.

Okay, so just to recap our workgroup goal, what we're looking at is we're looking to develop recommendations to EPA on how the agency can assist stakeholders, addressing the challenges of conventional pesticide resistance. And just a reminder that what we'll be talking about today, we're not going to be talking about final recommendations. This is really a progress report and we'll be going through the topics of discussion that we've been focusing on so far over the past few months.

Okay, so for our group, we have four charge questions. And I'm just going to read through these

really quickly to recap. So the first question is, are there current EPA policies that positively or negatively affect conventional pesticide resistance management and what policies could be reworked to more positively address resistance management?

The second charge question is, are there current industry programs that positively or negatively affect conventional pesticide resistance management and would EPA have a role in those programs and what might that be to positively influence industry?

The third question is, are there incentives for registrants or pesticide users that could be considered related to conventional pesticide regulation that might positively affect resistance management and are there other ways in which the agency can work with stakeholders, for instance, growers, commodity groups and academics, to cooperatively address resistance management?

And then, finally, the fourth question is, are there elements from EPA's current Bt PIP resistance management program that could be used in conventional pesticide resistance management?

So given the broad depth and breadth of these charge questions, we felt it would be better to

create breakout groups within our workgroup to individually address each one of these charge questions. And on the next slide, I'll show how we've done that.

So on this slide, we've got our workgroup roster, and first, I'll just point out that like the emerging pathogens workgroup, we are also a very big group. And it's a terrific group to work with. We have very diverse stakeholder viewpoints represented, including industry pesticide developers. We've got grower groups, independent growers. We've got academia as well as government and regulatory. So for each of our groups, we've identified a organizer to help moderate the discussions, and also in each group, there's also an EPA representative.

So what we'll be doing is, for the next part of the presentation, we'll be going through each group. Each group will be presenting what they've been talking about, what their progress has been to date, as well as identifying some of the questions we have and some of the opportunities for input from the larger PPDC group.

So for Group 1, we're going to have Bill Chism from EPA is going to give that update. From Group 2, it will be Caydee Savinelli, will give the

update there. From Group 3, it will be Amy Asmus. And then it will circle back to me for the Group 4 update.

Before we dive in, I also want to give a shout out to our PPDC program support folks, Shannon Jewell and Carla Theriault. Without their assistance, this workgroup would not have gone very far at all. They've been just absolutely invaluable to helping us make this work.

And so with that, I'm going to turn the next part of the presentation over to Bill Chism to go through our workgroup 1 -- or our breakout group 1 progress.

DR. CHISM: [Audio issue] EPA policies that positively or negatively affect conventional pesticide resistance management?

Next slide.

And I want to just reiterate what Alan said, these aren't really recommendations at this point. These are just some of the areas of discussion that we've had so far. So we've talked about establishing a federal interagency workgroup on resistance management. There's a lot of federal agencies that have a potential role in resistance management. Regulations clearly can help or hinder

resistance management. And there's also cross-country movement of weed seeds, insects, pathogens. So there's lots of agencies that interact on this topic.

We've also discussed having a yearly resistance management meeting, and with the recommendations that stakeholders, both public and private, be involved, have a yearly meeting to coordinate and discuss resistance management plans across disciplines, and specifically we've been thinking in terms of insects, plant pathogens and weed so far.

Establish a grant program to support community-based programs. There's a lot of research that suggests community-based programs are much more effective. And then think about some sort of reporting incentives, getting people to report early signs of resistance. There's those first key years when we hear about resistance are really important. So see if we could develop incentives for researchers users and suppliers to reward people who report suspected resistance or reveal lack of performance patterns very early on.

Also, develop tools and regional centers, through the universities or IPM centers for rapid

identification of resistance.

Next slide.

Educational topics: Consider updating training modules from -- and provide them from OPP on resistance management, provide those training modules to states for applicator training. The Weed Science Society has a series of educational trainings that would be a good framework to consider for starting to provide resistance management training for NRCS staff. Provide mode of action training. OPP should consider having a training requirement for resistance management as part of pesticide licensing. And the training should obviously include retailers and distributors because if they are [audio issue] then they're not able to help when their -- when their part of the role is called.

There's conflicting impacts of some of our current policies. We need to consider balancing off-target movement and weed resistance. Off-target movement guidelines, for example, buffers, can have a negative effect on weed management, and the Endangered Species Act may have indirect effects on resistance management. We should consider leveraging the reduced risk status for faster registration of pesticide for resistance management and also create

an incentive to develop tank mixes for resistance management.

Next slide.

We have a series of questions -- and I just wanted to point out, we will come back at the end for all these questions, but I wanted to read through our section first, and we will be coming back to these at the end for your input. So did we miss any policies or topics? Do you have any suggestions on incentives to raise awareness and actions to help on resistance management?

And with that, I'd like to turn it over to Caydee Savinelli for the second question.

MS. SAVINELLI: So thank you, Bill. Can you hear me okay? Good, excellent, thank you.

So just as a reminder, I was the organizer for the breakout group 2 and this shows the question that we're dealing with. And we had a number of clarifying questions for the EPA as we went through this. And the other comment I want to make is, as I go through the various slides, you'll start seeing some overlap because each group has kind of worked in isolation. So there's some overlap between a lot of our recommendations. So that's actually a good thing.

So in this slide, the few things I wanted to point out is really about industry. What is industry? What's a program? Because I was originally thinking it was just resistance management, but I'll show you that it's actually more. And then also, you know, elaborate on some of the roles that EPA can have.

Next slide.

So the first area of discussion, you know, when we were first talking about it, industry was viewed as just the registrants, but between our group and some other input from the other groups, when we were having trouble getting into our rooms, we really came up with an extensive list. And you can see there's commodity groups, community-based, government, can't forget government, NOGs, professional societies, such as like the RAC, the resistance action committees, registrants, and retailers. And so this is the list that we've come up with so far. It's a pretty comprehensive list and it definitely goes beyond just to registrants.

Next slide, please.

And to me, this is probably one of the most important slides I'm going to show you. And the way I view just all of this is really the farmers, the

golf course managers, the mosquito control operators, everybody, they're really talking about managing the pests. I mean, they think of resistance management as part of it, but you're not saying I will use this product because of resistance management. That could be part of it, but they're really trying to control the pests. And what I believe is that the pest management programs will use the same tools as resistance management. How they deploy that may be different, but I think it's something important to remember.

And then really the outcome is to manage the pest while minimizing resistance. So that's kind of what farmers and others are looking for. It's just a pest is eliminated or controlled. And that's a good thing.

And the other thing that I think that's going to be developed in our group and across our groups, there's really multiple tools. We have tended in all of our groups to really focus on the pesticides, but I think we need to really think about others tools in the toolbox because that will certainly help with resistance management.

I just want to give a couple of examples. Certainly, when you think about mechanical control,

so when you're thinking about mosquitos and you have pots with saucers underneath and it collects water, it's probably a good idea to empty that out for the mosquito control. And then a cultural control is really about, there's this fly, it's called Hessian fly, and it attacks wheat, and there's these Hessian-fly-free, wheat-planting dates, in other words, you plant it after the fly is a problem. So there's a lot of other tools that can be used in the toolbox.

Next slide, please.

And, as I mentioned, though, there will be some overlap. So certainly, education is probably foremost in underpinning a lot of the things that we do and it's not just one group that educates, there's lots of different groups that educate. I think Bill mentioned fast track registrations. Certainly, that would help if there's a new active ingredient that could actually control some of these resistance pests.

I think there's some opportunities with EPA to participate in either consortiums that are looking at pest management and resistance management. I'm part of the Insecticide Resistance Action Committee, and we typically annually meet with BE just to talk about what's happening in the insect world and

(inaudible) and I think just kind of get a handle on what's going on. So I think that's important.

Promoting programs, and then also the pesticide safety -- sorry, that was my cat -- the pesticide safety education programs. And, finally, I just said work with the federal governments and agencies. There's probably so many I can't even count on one hand. But, certainly, I think that's another area that could be considered in these recommendations.

Next slide.

So that was just sort of a highlight of sort of the three key areas, but some of the other things that we've been having some discussions but haven't really necessarily gotten into it very much is what programs are being used. And a lot of times when we talk about programs, they differ by what you're trying to control. So controlling mosquitoes is a lot different than, let's say, controlling weeds. And we always have to keep that in the back of our mind when we're making recommendations.

Some of the behavior considerations are important. And we have an economist who also, you know, thinks about social recommendations. So that's important.

Economic motivation, a lot of times some of what we're recommending is really long term versus short term. And so there's -- you know, there's some tradeoffs there.

Risk versus reward, a lot of people are very risk averse. So there's a reward with that. So that's something else we're going to delve into.

And, finally, you know, it's all good to have all of these things, but if you can't engage and get commitment from the stakeholders or the people that are using products or growing crops or managing golf courses, et cetera, then all the work that we've done is for naught.

And the last -- next slide and this is my last slide.

So really these are the questions to the PPDC, and as Bill mentioned, we're going to be taking questions at the end of the session, but I wanted to put these out to everybody just to see them. So with regards to industry types, have we missed any as we go through this extensive list? With regards to programs, are there other areas regarding EPA's role in pest management?

And then also, you know, some other considerations, as I mentioned, social behavior, that

type of thing.

So that is all that I have and I would like to turn it over to Amy Asmus.

MS. ASMUS: Hello. Hopefully, you can hear me. I was having some voice issues earlier.

Breakout group number 3, we had a very, very broad ask. So we've taken our question and kind of broken it down into two different questions, and one is to consider incentives for registrants or pesticide users that could be considered related to conventional pesticide regulation that might positively affect resistance management. The second half is, are there other ways in which the agency, in this case EPA, can work with their stakeholders to cooperatively address resistance management?

Like the others, I'd like to say we're just in the exploratory stage of our task and our comments today are a brainstorming session. They are not weighted comments at this time to pros, cons, and their ability to be implemented. Right now, it's just a thought process.

So if you go to the next stage, I'd kind of like you -- to walk you through the thought process that our group took as we addressed these questions.

So next slide, please.

So the first thing we looked at is the target audience for our incentive. The charge question asked us to look at registrants or pesticide users. We will eventually look at both, but for this time being, we have focused less on the registrants for incentives and more on the end pesticide users, which would include retailers, consultants, applicators, producers, landowners, municipalities. And we also want to look at -- I live in a world of annual row crops. We also need to make sure that we're looking at some of the perennial crops and maybe some of the pesticides used to control pests in municipalities, tribals, and other areas and try not to get just focused on the annual row crops.

So one thing I would like to point out as we look at the users is the bullet point that says some users may need additional incentives to overcome the hurdles to implementation of those practices. And how do we segment the users to address those hurdles? Because not all incentives will apply to all end-users and so it's going to be really important for us to segment those users. And how do we structure those incentives not to penalize the good actors while encouraging the bad actors in this space?

Next slide, please.

So we tried to identify some of the hurdles to adoption. We took some of these from the expertise of my group, and I have a really great group that brings a lot of different perspectives. We also took some of this from listing sessions that the Weed Science Society had held across the U.S. So some of the hurdles that we identified, our growers may not implement best management practices until resistance is in their area or field.

There are economic thresholds that cost -- the added cost of resistance management best management practices may be a hurdle to some growers to implementing that. There's issues affecting efficacy of the products. And so one of the things we want to make sure we don't jump to is not every time a weed doesn't die, can we contribute that to resistance? We have to look at some of the other issues with the efficacy and how do we address those as well?

There's social factors, what's acceptable if I'm spraying next to a school, I really want to time that out while there's no children in the school, which may then affect the efficacy of that application, may apply a reduced rate because maybe

the plant is not growing or the pest is not present or active at that time when the spraying is socially acceptable, and that can have effects on resistance.

We also have conflicting messages from trusted advisors. Trusted advisors may include people like landlords or the banker that controls your operating loan, and that gets us back to the economic issues. So there may be priorities of some of your trusted advisor partners that have conflicting messages.

And also we looked at if we use label language exclusively, that does not reach all audiences and really doesn't touch on the integrated pest management aspect of resistance management.

Next slide, please.

So we tried to figure out what we needed to address some of these hurdles. Education has been talked about in every group so far. So that's a biggie. Incentives to address the hurdles to adoption, so we need to look at each of those hurdles and see if there are incentives and then to take it a step further and see if EPA has control over those incentives or we need to move to some of their stakeholders, to provide those incentives.

And that leads to the next one, which is

the realization that the EPA can't do this alone. Integrated pest management, including nonchemical practices, must be included in education and resistance management plans. And a community of stakeholders would more completely influence all pesticide users.

So this will take us to the next slide, please, which is, are there ways or are there incentives that the EPA can do, or work with their stakeholders to do, to cooperatively address resistance. So we looked at -- a lot of you have heard the terminology carrots, which is an incentive; sticks, which is some of our sticks are very big hammers and we don't want to go there, or are we throwing carrot sticks, which would be incentives that are backed by regulations.

So again, education is one of our big things. It would be a carrot definitely to incentivize more knowledge and better implementation of best management practices. We can look at what are the long-term economic benefits of good pest control. So there may be some short-term economic difficulties, but education around the long-term benefits of resistance management. How do we reach that decision-maker? How do we include those people

that are private or commercial applicators and the trainings that they are required to take? Can we include resistance management?

And then how do we link education with information gathering as well? If we educate these growers as to what to look for, retailers, applicators how do we get some feedback on their in-field practices? And we can use that to fuel further education.

Again, we talked about a points program for participation in those practices. That's kind of a carrot stick, this is what we'd like you to do. We'll incentivize you to do them. USDA has some models for that we'll be looking at. We can incentivize stakeholder community involvement. How do we get communities to come together around resistance management and address it in their cropping systems and their local environmental and social aspects around resistance management?

What are the role of industry marketing programs? We're looking at how do you make it a mandatory enforceable part of the label. This is a big stick. Our group would favor more incentives than support heavy regulation, but it's on this list to consider. Pest commissioners to control

uncontrolled pests. Again, that's a very big stick at the state and local level. And mandatory reporting and mapping of target resistance issues. We'd like this accessible to all stakeholders who are involved in creating resistance management plans and carrying those plans out, but we do have a lot of conversation to have around suspected resistance versus proven resistance.

Next slide, please.

So these are some of our questions that we can talk about at the end. It's our conclusion that registrants have internal incentives to steward their products for resistance management and should not need external incentives. That's a question.

Have we identified the hurdles to adoption of resistance management? Are there other categories that we need to address in resistance management? In our discussions of carrots/sticks and carrot sticks, are there are other types of incentives we should explore that we haven't yet? And do you have any other considerations you'd like us to look at as we move forward with our charge?

Thank you. I will turn it back to Alan for Group 4.

MR. REYNOLDS: Thanks, Amy.

So for breakout group 4, we were tasked with looking at EPA's current Bt PIP resistance management program and determining whether there are any elements from that program that could be used for a conventional pesticide resistance management strategy.

So the first thing we did is we really drilled into the core elements of the current PIP resistance management strategy. And so that really consists of, you know, different mitigation strategies for PIPs. So it's primarily been the use of non-PIPs refuges, IPM stewardship, best management practices, acreage limitations in some cases. There have also been crop destruct measures for -- in other scenarios.

Also, our resistance monitoring and scouting is a very important part of the PIP strategy. And then the remedial action plan, if we actually do find a resistance developing to PIPs. Grower education, another critical aspect of the resistance management strategy. And then the respective roles and responsibilities of the registrants and EPA as far as overseeing the resistance management program.

So so far in our group discussions, we

really have drilled down primarily into the mitigation and the resistance monitoring aspects. We've had some discussions on remedial action, grower education, but those have been relatively preliminary and we're going to be following those up with that more detailed discussion in the next months.

Okay. So what have we talked about so far? So in terms of mitigation, the first thing we really looked at were some of the PIP-specific mitigation measures, particularly refuges or acreage limitations. Crop destruct-type scenarios are really not going to be adaptable to most conventional pesticides. So instead, we've really focused on the IPM stewardship aspect and is that something that we could really work on and develop for conventional pesticides.

So that's led to some general questions and the challenges that we've identified. So first, in terms of an overall goal, should we be looking at IPM stewardship as a measure to be taken proactively to prevent resistance, or is this something that we should really be focusing on when we see cases of resistance in the field to deal with those cases in a more reactive manner.

There are some challenges. So who would be

responsible for implementing a a stewardship program? You know, as we've -- as some of the other groups have talked about, you know, the EPA has authority over the product registrations and the product label. But as far as the registrant goes, you know, there may not be a direct link from the registrant right to the user of that product given the distribution network can be quite complicated. That's a little different than the scenario we have in PIPs where there's an actual contractual relationship between the registrant and that grower, which can be leveraged to implement resistance management.

Another challenge, you know, we've been -- particularly for PIPs, one of the things we've been criticized is that the resistance management strategy is more or less a "one size fits all" approach, particularly at the federal level, and has really not been able to account for regional differences or regional distinctions as far as (inaudible) resistance. And so thinking about how we would look at conventional pesticides, is that something that we could look at? Can we make a program flexible enough that we can respond on a more regional or local level?

So also in terms of mitigation, we've been

talking about the role of product labeling and particularly the role of growers, so where do growers get their information and how do they make decisions? So, you know, can a product label actually influence a grower's behavior. And how would we modify that label to accomplish those goals?

You know, how do growers play into this? Where are they getting their information? You know, where are they -- what would be impactful ways to interact with growers? We talked about grower meetings that can be conducted by registrants or the role of extension personnel. And, of course, social media in this day and age has a critical role in reaching users. So all of those aspects could play into how we use stewardship and how we implement a stewardship type program.

This leads to the question, you know, how can we make pesticide users into good stewards, particularly when most growers already consider themselves good stewards? So, you know, convincing folks to actually implement sound resistance management strategies in addition to measures they may already be taking.

One of the interesting things we've talked about is a certification type program to incentivize

stewardship. There are examples of that that we talked about. One is a water quality program that was developed in Illinois, the STAR program, that awards points for growers who adopt certain measures to deal with nutrient and soil loss. And they could get those points and work towards a certification. So we thought about, is there something similar that we think about for resistance management? You know, users who are adopting good practices, can they be -- essentially get points for -- to show that they've employed these good practices?

Pivoting to resistance monitoring and scouting, so for the PIPs, EPA has historically employed two strategies. The first is a more proactive measure in which the registrants will go out and actively sample for -- sample target pests and then conduct bioassays in high selection pressure areas, trying to more actively look for shifts in susceptibility before you would see field level effects.

The second component has been to investigate cases where we have had field damage in PIP fields where you would have the unexpected pest pressure or pest damage, and conducting investigations to see if those are actually resistant

insects. That, of course, is more of a reactive approach. So our group has been deliberating, you know, which of those approaches would make sense for conventional pesticides.

Of course, there are questions and challenges when we think about resistance monitoring, the first being, you know, who's responsible for doing it. On the PIP side, there's an industry group, ABSTC, that essentially conducts some of the resistance monitoring activities. So they have been able to essentially pool resources between different registrants, so they conduct one monitoring effort. But would that really be feasible for other types of pesticides, particularly when you have a lot of different companies registering similar chemistries?

The question of resources is a huge one. You know, resistance monitoring is -- it is resource heavy, so who would be doing the work, who would be managing the populations that are collected, doing the testing, those types of activities? And, of course, there's a huge financial investment there. So who's paying for that?

In terms of damage investigations, can they be standardized or would each company kind of be on their own to conduct their own type of investigation

and then their own follow-up based on that? So there's a lot of questions that need to be answered there.

So our discussions have led to a number of overarching questions, and these -- so a lot of these questions have cut across our breakout groups. So we do have some common themes here. So a first basic question we've been asking is, should we be conducting resistant management for all different types of pesticide chemistries? For the Bt PIPs, it was the PPDC back in the 1990s that actually established a public grid criteria for Bt, and that was due to the lack of human and environmental risks and, you know, the very favorable safety profile of Bt being in the public interest and public good and, you know, the need to maintain that. You know, is that true for all chemistries, though?

Of course, our breakout group, and I think some of the other breakout groups, have been largely ag-centric in our discussions, but that leaves out other pesticides and other pesticide type uses, things like vector management or, you know, structural pesticides, residential use pesticides. You know, should they be considered?

The question of voluntary versus mandatory,

you know, should the program be voluntary? That might be easier to implement, but what kind of adherence would we get to that? You know, that might depend on a number of socioeconomic factors.

If the program is mandatory, who's going to enforce it? You know, it could be EPA via pesticide labeling. You know, we've talked about that. But certainly overly complicated or complex labels could be a burden for the user and could lessen the likelihood that they'll actually comply with those measures.

And then the question as to what role EPA should have and what level of oversight. With the PIPs, we've had a very prescriptive program in place, so they're at a very high level of oversight. But should that be the case for -- you know, for other types of pesticides.

Okay. So those are our breakout questions. And so at this point, I'm going to just give a very quick update on what we conceive to be our next steps in the process here before we pivot to the overall question and answer and discussion period. So as far as our next steps, after this meeting today, we'll reconvene our full workgroup. That will be next week.

We'll be asking ourselves based on the input we get today, do we need to make any course corrections, you know, in terms of the general direction of our discussions? Is there anything else we need to consider, any other topics? Should we tweak the charge questions in any way to, you know, to better focus our discussions?

We, of course, are planning to continue our breakout group discussions. You know, we'll be ongoing with those and then the strategy or the plan is going to be to make recommendations to the full group in the September time frame with the goal of creating a final workgroup report and full recommendations to the PPDC at the October meeting.

Okay. And so with that, I think we can pivot to the Q&A/discussion portion of the hour here. And I'm going to turn to our session moderator, Paul, as to how he would like to have this work. So I've got the breakout group questions up here and I don't know if you want to just go through them one by one or just open it up for a larger discussion.

MR. ANNINOS: Thank you very much, Alan. Thanks to this whole team. Really well done presentation. And I really liked that as you moved through these breakout groups, you had very specific

requests to the PPDC, we need your feedback, we need your input on these very specific topics. And, again, it's a lot to absorb in a 30-minute presentation. We do have a fair amount of time now to just get into conversations.

I'm assuming that this slide and the next one are the -- there must be a breakout group 3 and 4, also. For those of you -- I think we have a link in the chat that takes you to all the presentations for yesterday and today. If you go open that link and then select the pesticide resistance management presentation, you can, yourself, go through and have those questions in front of you. But we -- I'm going to suggest that we open it up. If someone has a response -- there we go, Sarah just posted. Sorry, Shannon -- Shannon and Sarah just both posted the links in the chat if you wanted to have those kind of front and center for you.

I'm going to suggest we kind of open it up broadly. If someone has an insight or a comment or a question that pertains to a specific breakout group, they can say that. But I think we should open it up broadly for any kind of comments, insights, questions, clarifying questions for your team. A really fantastic job. So let's pause and we will

wait to hear from folks.

And Damon Reabe has a comment. So, Damon, go ahead and unmute yourself and join us.

MR. REABE: Hey, thank you, Paul. I really appreciate this presentation, a lot of great information. On behalf of the National Aerial Applicators Association, I'm formally requesting that that -- the aerial applicators in the United States are very much okay with more complex label language for the purposes of better risk assessments. You know, right now, the -- and the EPA has worked very closely with the National Ag Aviation Association, but -- and continues to do so, but we welcome the idea of more prescriptive label language as it regards to aerial applications so that risk assessment that is based on worst case scenario is based upon best management practice. And I think what that will do is better risk assessment outcomes.

And then the additional benefit to that will be reducing the size of buffer zones, which in-field buffer zones are, in fact, the place where the resistance is born. And we can work towards making these wind-directional. Currently, buffer zones typically, on most pesticide labels, are not wind-directional. So we're leaving a buffer in a place

where the pesticide can't drift to on the up-wind side. And then on the downwind side, we're getting partial rate applications performed there, which accelerates the resistance to pesticides. And we don't have the ability after the wind has switched to go back and re-treat that area to prevent that resistance development.

The other final thing I'd like to mention is our state regulatory officials -- Liza's here and she can comment on this -- right now, a lot of state enforcement policy is when there is a drift allegation, the investigation is based on foliar resident testing as far as what the offsite drift was and that is driven primarily by the science -- the science of being able to find the product itself and is not weighted in any way as to what that amount -- if that amount of product is, in fact, actually harmful.

So I think the EPA could work really closely with state lead agencies on sharing what actually is an amount of offsite deposition that, in fact, is in no way harmful. And so that would then allow applicators to, again, get more of that field actually treated at the intended use rate.

Thank you for all the hard work on this

subject.

MR. REYNOLDS: Thank you very much. Great comments to consider. Absolutely. And something we should -- you know, as we think about pesticide labels, you know, over a huge range of products, different types of chemistries, there's a lot to think about there. So very good -- great insights. Thanks a lot.

MR. REABE: I mean, it's a call out to the registrants as well because obviously the EPA is doing risk assessments based upon what the registrants submit. So, you know, I'm addressing the EPA, but, of course, obviously our registrant community as well.

MR. ANNINOS: Thank you very much, Damon. Very, very thoughtful comments. I'm sure the workgroup appreciates that.

We have a line forming for you all. This is great. So we're going to hear from the four people in line right now. You can kind of follow along with me in chat window. First, we'll hear from John Wise and then Cathy Tortorici and then there's two more beyond that.

So, John, you're up.

MR. WISE: Okay, thank you. I have just a

short suggestion in relation to Caydee's presentation of the breakout group. And her question was, are there other industry types that should be considered? And I thought about food processors of, at a minimum, of fruits and vegetables that are becoming more prescriptive to growers on what their past management programs should be and what MRLs they accept for their products as they're being sold around the globe. And I think about Nestle Gerber and other packers, processors.

So it's just a thought to be considered that's an industry type. That's all I had.

MR. ANNINOS: Great. Thank you, John. Thanks very much.

MR. SAVINELLI: I just wanted to thank John. It was good to see you. Thanks.

MR. ANNINOS: All right. Thank you, Caydee. So Cathy Tortorici from NOAA Office of Protected Resources at Fisheries.

MS. TORTORICI: I just -- thank you. I just have a quick question. Early on in the presentations, you made mention of the ESA having some kind of an indirect influence or effect on what you all were doing or thinking about. I'm not phrasing this correctly. I should have written down

the bullet. But I think you know what I'm referring to and I'm hoping you can go into a little bit more detail on what you were thinking of when you said that. Thanks.

DR. CHISM: Yeah, thank you. This is Bill Chism. One example might be because of endangered species, we have a larger buffer area between the treated area. So an area in which pesticides cannot be applied, so that potentially leaves a large area for pests to accumulate in and potentially accumulate, survive and thrive in. So is that helpful?

MS. TORTORICI: That is helpful and maybe we should talk more about those sort of items that you might be thinking of indirect effects because that would be interesting to have that conversation with you all, because we would -- I think that's important. If you have concerns along those lines, we should know that. Thank you.

MR. ANNINOS: Very good. Thank you very much, Cathy.

Thanks, Bill, for your response as well.

We're going to move now to Liza, Liza Trossbach, and then followed by Mark Johnson.

Liza, go ahead.

MS. FLEESON TROSSBACH: Thank you very much. Again, another great presentation as all of them have been over the last two days. A lot of great information and discussion. I just wanted to kind of mention from a pesticide regulatory official's standpoint -- and we certainly believe that an educated community is a compliant community. And so we're always very happy to participate in training. We absolutely believe in training. I would just caution or just bring up that there have been -- there seems to be a move towards requiring additional training for the use of certain products and we've seen that as pesticide regulatory officials and end-users and registrants.

And while -- again, while we appreciate training, you know, all states have a pesticide certification program that determines the minimum competencies of applicators. They go through annual training. They are certified or recertified. And to add additional training for specific product uses or to put something on top of that can be burdensome. And, again, I do think it's important, but I also think that, you know, all of us, as pesticide regulatory officials and end-users, the pesticide application begins with the label. And there's been

mentioned about labels being complicated, and they are, but pesticides are complicated.

And just because a pesticide provides a lot of information doesn't mean it can't be -- you know, that the language can't be clear and we can make it clear how it needs to be applied. And I think if there are use requirements or use directions that can help facilitate a reduction in resistance or can further resistance management, then they should be on the label.

The label is the law. We preach it all the time. The EPA preaches it all the time. That's where users go to when they're making their product selections. And so I would really encourage, to the extent possible, in addition to continuing to educate and perhaps be able to incentivize users, is really that those requirements -- I mean, they should be requirements and I think that they should be on the pesticides label.

And just real quick to Damon's comments about, you know, enforcing the proper use and drift. Damon is correct. You know, I would say, in general -- I mean, there may be some limited exceptions -- but, in general, in drift cases, pesticide regulatory officials are looking for absence or presence of a

pesticide residue. There are no harm standards. It's been discussed over the years. There's been a lot of conversations about that, but currently it is presence or absence.

So thank you very much.

MR. ANNINOS: Thank you, Liza. Thanks. I don't know if the workgroup wanted to respond to any of that, but that's really good feedback and input for the team.

MR. REYNOLDS: Yeah, I would just say thanks for those comments. They're very helpful. I really appreciate it. Good points.

MR. ANNINOS: Thank you, thank you.

Mark Johnson is up and then followed by Nina Wilson.

MR. M. JOHNSON: Yeah, I want to say great work. I think the work of the policies is pretty comprehensive. Thank you. And as the other breakout groups were, too.

I'd like to make a couple of points, you know, and as far as in light as a professional industry, in applications, the label is the law. We fully support that. Before things boil down to the label, though, I want to address a couple of things. You know, we rely upon the resistance action

committees for both herbicides, insecticides, and the information that comes out of that with the researchers that are involved there as, you know, the researchers provide a lot of education to the extension agencies and to -- especially through the state level, and turf grass programs in golf specifically are continuing professional education and professional applicator points. Right?

So the education venues exist. What's missing perhaps is a lot of research that's necessary in specific crops, and there are a few in the turf grass industry that are doing research related to weeds, insects, et cetera, and then the whole fungicide aspect. You know, in industry, we do provide best management practices for pesticide selection. We're strong in IPM. We're strong in providing that education on IPM and setting that stage. And, also, pesticide selection is stepping up some in resistance management.

It's important that these university programs are supported. So if you want to think about incentives, we might be able to incentivize golf course superintendents through our association, but what's probably going to be more important is making sure that the resistance management topics are

adequate and presented at the education, that not only our members take, but everyone in the turf grass professional aspect, right?

And so I would encourage you, as you think about those incentives, think about the existing venues to educate professionals applying pesticides, herbicides and fungicides, right, in the outdoor landscape setting, you may be better suited to ensure that resistance is addressed in those education venues with incentives. I'm not saying no to incentives. We'd certainly take a look at how we could participate with that as an organization and would encourage you to do that.

I will post a link to everyone for where our BNPs are located. They do the conversations on buffer strips and, you know, pollinators alone and making that selection. This is a very deep important project not only to water quality, habitat, wildlife, it's across the board and it's the future of ensuring sustainable businesses.

So we want to make sure when we make policy recommendations to be represented in the label that you do address everyone and the application of those pesticides in, like, turf and the approaches as you do so well now. And, second, you know, the regional

aspect that was brought up is critical. It's going to be critical for the growing season, the species that are available, right? If you build it, they will come, right? And you know what I mean by they will come, the disease, the insects, and they're going to be pertinent to those regions, warm season versus cool season to be very specific to you.

And across the 50 states and what we deal with with the 50 states, we do want to adhere to the label. It is the law. It's what we train. It's what we preach. We need the resources in order to ensure that we minimize resistance out there. And the stage is set to do that, we just need to be able to do it effectively while not closing the door when there's no alternative products.

So thank you for the time and for the comments. Congratulations on great work. Keep ramping it up and we're here to support you. Thank you.

MR. ANNINOS: Thanks very much, Mark. I think those are also very, very helpful comments for the workgroup going forward. So thank you.

Also, so Nina is up, Nina Wilson, followed by Charlotte Sanson.

So, Nina, you're up, if you can unmute

yourself.

MS. WILSON: Hi. Hey, Alan, how are you? Thanks very much for those presentations. They were great.

I wanted to make one -- and I may have missed it. I was trying to listen for it, but what interaction have you had with the HRAC, IRAC, you know, the FAC, these people -- you know, the resistance management groups that have been categorizing the families and that I think we're using on our labels? Because they've been thinking about this for a long time. And I think as well as if we're going to be using them to annotate or identify different products and families, that we just make sure we use the same language whenever we're talking about our labeling and whether or not we're talking about any education.

Because I know, like, when gallon -- when we try to do resistance management, we tend to -- we try to use the same language because it gets very confusing when people start branching out. So I didn't know whether or not they're a part of it or that we had reached out to them or incorporated them in any thinking about the training.

DR. CHISM: Alan, shall I take this?

MR. REYNOLDS: I was going to suggest just that, Bill. Thanks.

DR. CHISM: Okay. Nina, that's an excellent point. In my workgroup, we have -- I believe he's the chair of a HRAC and, in general we meet with the different RACs -- well, in the past before the pandemic, we used to meet with RACs about once a year, the HRAC and IRAC, and then we would have conversations with FRAC. So we do meet with them on a regular basis and they are represented here in our meeting, in our workgroup.

MS. WILSON: Great, thank you.

MR. ANNINOS: Excellent, Nina.

Thank you very much for your comments, Bill. Thanks for your response.

Charlotte Sanson is up.

And, Charlotte, you might be on mute or unmuting yourself at the moment.

MS. SANSON: Well, maybe it's better if I take my headset off, that might be the problem.

MR. ANNINOS: Oh, there you go. You're loud and clear right now.

MS. SANSON: Yeah. Sorry about that. So, yeah, there is so much information packed into here. It's a very complex topic. I see there are questions

directed to registrants, which are good questions. And I think it probably would be helpful for us registrants to take this offline. On the spot, it's a little challenging to provide some direct feedback. I see there are some registrants obviously in the breakout groups. So it's just a comment. We'll get back. Thank you.

MR. REYNOLDS: Thanks, Charlotte.

MR. ANNINOS: Thanks, Charlotte.

MR. REYNOLDS: Yeah, and I would just say to -- you know, to anybody, please feel free to, you know, after this meeting to email us any additional suggestions or input that you might have or questions. Certainly, you can direct those to Shannon Jewell or myself or my co-chairs. And we'd certainly be happy to entertain further discussion.

MR. ANNINOS: Thanks, Alan. I think that goes for all the workgroups. Obviously, this two-day meeting is like an event in time, but time is going to move on past today and I know these workgroups have a lot of work to do between now and October. So your feedback to them, one on one, one on multiple, however you want to provide it, I know they're anxious to get it. So thanks.

We have a few minutes left in this segment

if -- let me just pause for a moment just to see if anybody else from PPDC, the other workgroup members, anybody that's participating that wants to pose a question, make a comment, et cetera. So let's just see.

You had a lot of engagement on this -- so oh, did someone say something? I'm sorry. I might have cut someone off. Maybe not.

So we've had a lot of engagement on the topic, so you got some really good feedback here real-time. And not surprising, you had a really good set of trigger questions that you were, like, really anxious to hear feedback on. So I think you got some of that today.

And any other -- again, any other last-minute comments or even members, the co-chairs, our presenters today, you know, Alan, Bill, David, Amy, Caydee, any last or final words you'd like to --

MR. BURKETT: Yeah. Hi. Can you hear me? For some reason, my chat doesn't seem to be working.

MR. ANNINOS: Oh, okay, yeah.

MR. BURKETT: This is Doug Burkett from the Department of Defense. And I have a question for the various working groups. I did see in the membership list that you do have some members that are involved

in public health, insecticides and resistance, I think Janet McAllister there from the CDC and maybe some others.

But I have a question for the group in terms of -- and maybe this is way outside the scope of this particular group, but, you know, periodically in Defense, we're always kind of asking whether or not there's a standardized or a preferred list of places you can go to for the best methods for using insecticide resistance testing, as an example, whether it's molecular testing for KDR or whether it's bioassays or for various forms of resistance, if there's any kind of standards or [audio issue] that outline the preferred bioassay methods for determining resistance for various pests that are out there, particularly in the public health career field but others as well.

MS. SAVINELLI: I'd like to answer the question. It's okay, Paul. So this is Caydee Savinelli and I'm -- you know, I represent -- I work for Syngenta. They pay my salary, but I also represent the Insecticide Resistance Action Committee. And you can go into the Insecticide Resistance Action Committee and find standards for testing. And we definitely recommend it because it's

a lot easier to compare across studies. And this is publicly available. You don't have to be a member of IRAC. And I can talk to Janet McAllister because she's on the subgroup to just make sure that she has the right information.

MR. ANNINOS: Thank you, Caydee. That's helpful. And also Dan Markowski has chimed in to say he might be able to comment on this as well.

MR. MARKOWSKI: Yes, this is Dan Markowski. I'm with VDCI. I've worked with Janet quite a bit. And probably the easiest and most standard tool for testing in the public health field, mosquitoes in general, is the CDC bottle bioassay. It's a fairly simple tool. They actually have free kits that they send out to most of the mosquito control districts, if requested, and have standardized the testing of mosquitoes for resistance. So that's probably the most standard and simple.

There are other assays you can do. Certainly, if anyone wants to contact her she'll tell you all about that. But the CDC bottle bioassay is a pretty standard and simple tool to use. Thank you.

MR. ANNINOS: There you go, Doug, you ask a question and you get two really great responses right on the spot.

MR. BURKETT: Awesome. The PPDC is working, yeah. Thank you very much. That was pretty useful. So the Insecticide Resistance Action Committee, their website you say has some recommended insect resistance or pesticide resistance testing protocols there. I'll have to check that out. So thank you so much for your feedback. Appreciate it.

MR. ANNINOS: Well, thank you for your question, Doug.

And Dan and Caydee, thanks for providing some help to Doug right here in the midst of things. So that's great.

We're about out of time and, again, I've just got to -- I got to thank, you know, Alan, Bill, David, Amy, and Caydee for your presentations today. Really well done. I hope you got some good feedback that you can put to action over the next few weeks and months. And, again, that's an open-ended -- that's an open-ended ask, right, for all the workgroups. So thank you all very much.

Any final words by any of you?

MR. REYNOLDS: I'd just like to thank the PPDC group. We really appreciate your feedback and input today. It's invaluable for us and we look forward to working with you over the next few months.

MR. CHISM: Yes, thank you very much.

MR. ANNINOS: Thanks. Thanks, everybody. And so with that, what we can do is we can move to the next segment of the agenda. And so yesterday we had the first of four segments, what we're calling the PPDC member presentations on stakeholder interests. So now we're on the second of the four, information and perspectives on the crop protection industry, and Charlotte Sanson and Mano Basu are our co-presenters here today.

And so we'll go ahead -- I think this is a 15 or 20-minute segment. Actually, my notes are a little bit fuzzy on that. We have until 1:20 Eastern time for this segment. Is that right, Shannon?

MS. JEWELL: That's right. Yep.

MR. ANNINOS: Okay, very good. Very good. So let me turn it over -- I think Mano is getting the presenter role, so maybe that is happening as we speak. And whoever's going to take it away, go ahead.

PPDC MEMBER PRESENTATION ON STAKEHOLDER INTERESTS INFORMATION AND PERSPECTIVE ON THE CROP PROTECTION INDUSTRY

MR. BASU: Thank you very much, Paul. Yeah, I have the presenter role now. Shannon -- sorry, Charlotte was going to start on this presentation. So, Charlotte, please say next and I will move the slides.

MS. SANSON: Okay, sounds good. Thanks, Mano.

And thank you for the opportunity for this presentation.

So, okay, next.

I'm going to share a brief overview of the product development process for a conventional active ingredient and describe the underlying robust process that ensures the associated scientific integrity. And then Mano will share the strategic priorities of our trade association, CropLife America.

Okay, next slide.

So this slide of -- I could speak to this slide all day, but I'll try and condense it here. This is a high level illustration of the typical timeline and investment relative to a registrant's path to obtain registration of a new conventional

active ingredient, be it a fungicide, a herbicides, insecticide or plant growth regulator. A company will initially screen thousands of potential compounds at the discovery phase before selecting the one that has the best market potential and chance of success going through the regulatory development process.

So it all starts with biological screening in the lab, in the field, while toxicology screening is done and a business case is developed. And as you can see, there are several processes that can occur in parallel. When things are looking favorable, by the end of year three and upon approval of the business case by company management, the required regulatory studies are initiated. Some cases are already started. But that process can typically take about three years and sometimes even up to four years to complete. And, of course, that depends on the complexity of the molecule, the target uses, the formulations, et cetera, with an overall cost for all these activities that can run more than $250 million, over a period that can take up to 11 years from discovery to market.

So during the development phase, the company usually plans pre-submission meetings with

EPA and also with PMRA in the event the review is planned to be a joint review between U.S. and Canada, and this is to inform the agency of the intention to register the product and then also an opportunity to obtain guidance or feedback on the study strategies. So the application to register the active ingredient and the associated end use products is submitted to OPP after the data package is complete. And this can contain over 200 individual study reports. And, of course, that's quite an overwhelming job at both ends. But then the PRIA timeline is designated at 24 months. I think we've noticed an average of about 33 to 34 months in terms of EPA review.

If a company's applied for reduced risk status or goes through review as a reduced risk candidate, the PRIA timeline is 18 months, and that's as an incentive, and PRIA 4 also established a reduced fee for a reduced risk chemical, as you can see. So this slide is sort of simplified, but it encompasses the whole process.

Okay. So next slide.

So from a registrant's perspective, there are key expectations at the foundation of a sound regulatory process, and this is what I would consider priority areas. We rely on scientific integrity both

on our part, as well as the agencies, for sound decisions. The studies that a company conducts and submits to EPA in support of a product's registration are done under strict conditions, and that's in accordance with good laboratory practice or GLP. This ensures such things as data integrity, quality, and reproducibility, and I'll speak to those further in a minute.

We rely on consistency of EPA reviews and interpretation of supporting data and the companion product labels. And we know that predictability for when to expect a PRIA decision does not guarantee registration will happen by that date. However, with a business that is so seasonal-driven as ours is, it's critically important that surprises are minimized and unexpected issues are addressed along the way.

And then the one thing that we've all experienced internally, especially in the past year, is the value of efficient processes, which are critically important to maintain timelines and help ensure that predictability. And I'm encouraged that at the OPP end, a lean initiative is underway as presented by Ed during the previous PPDC, and look forward with the expectation when the registration

division will begin to employ that.

Next slide.

So as everyone knows FIFRA regulation of pesticides is data driven and the PPDC panel members were well educated on this topic as well as the associated risk assessment and evaluation process by the OPP teams during our onboarding session. So I don't intend to repeat any of that, just except to emphasize the GLP, or good laboratory practice, aspect of data generated in support of a product's registration.

So next slide.

So in the previous version of this week's PPDC agenda, we noticed that there was originally a presentation planned OECA that was going to discuss the topic of the GLP inspection process, which hopefully we'll still get to here at a future meeting. So maybe in preparation for that, we thought we would take the opportunity to provide a very high-level overview of GLP and describe what it is for those who may not be familiar and the efforts that registrants put into ensuring compliance. And so GLP is a quality system of controls for research laboratories and organizations, and in the end, EPA should be able to reconstruct a study in its

entirety.

Adherence to GLP ensures uniformity, consistency, reliability, reproducibility, quality, and data integrity. And you can find more about GLP requirements and the compliance standards in 40 CFR Part 160. It is all spelled out in there in great detail.

So next slide.

So the main elements of GLP include organization and personnel and companies who generate their own data have their own QA staff who serve to make certain that GLP procedures are being followed. They'll audit a study that's in process and ensure the integrity of the study's final report. They also will audit CROs with whom the company might outsource a study to ensure that the lab is adhering to GLP because the sponsor company is ultimately responsible.

Roles for others involved in the study are also defined and GLP also addresses, as shown here, the test facilities, equipment, how the test facilities should operate, which is using SOPs, the test substances, study protocols, as well as study reports and records.

So next slide.

So I'm only going to discuss a couple of those areas and primarily the study protocol and the record-keeping requirements. So within the company and in coordination with the CRO if a study is outsourced, a study protocol is created and agreed by all parties involved and signed off. And at that point, any changes to the study protocol must be fully documented.

Okay. Next slide.

There's also strict record-keeping requirements that apply to SOPs detailing how a specific task is done, by whom, et cetera. Persons who perform these duties are required to sign off on the SOP to certify they understand the procedures as written.

Okay, next slide.

And record-keeping is intended to provide the Government with a fully auditable study record, allowing them to reconstruct the study according -- that's done according to GLP, and the raw data that has to do with GLP are maintained for long periods of time. Companies typically maintain these records for as long as the product is registered and usually for a period of five additional years after that.

So okay, next slide.

So there is an audit component. Independent audits are done to ensure study integrity and, typically, study auditors are employed by the same organization as the laboratory staff, but they're removed from participating in the study itself. So one of the things an auditor does is to ensure the raw data matches that which is reported and that calculations are correct and so on.

And then EPA's Office of Enforcement and Compliance and Assurance, or OECA, they'll do public or, excuse me, periodic audits of studies and facilities.

So next slide.

So here's an example of a GLP statement that's required for inclusion in every study report that's submitted in support of a registration action. As you can see, it's signed by the study director, the study sponsor, the person who submits the study itself. If a report is submitted and the information contained was not done according to GLP, that needs to be stated and explained here. And an example would be maybe a waiver rationale where there's no data generated, but the information is relevant and important for consideration by reviewers. And a separate quality assurance page is also included that

is signed by the QA personnel.

So in the end, the process is very robust, it's taken seriously by all parties involved to ensure the scientific integrity. And I hope this provides some useful insights into GLP compliance and helps inform GLP members in advance of a future presentation by EPA on the GLP inspection process.

So now I will turn it over to Mano who will discuss CLA's strategic priorities. Thanks.

MR. BASU: Thank you very much, Charlotte.

And my presentation is just before a very timely lunch break for those on the East Coast, so I'll be quick.

Again, as Charlotte mentioned, CropLife America, we are a trade association representing manufacturers, formulators, distributors of pesticides and plant science solutions for ag and pest management in the U.S.

From an organization point of view, we have identified three strategic imperatives, priorities for us, one around environmental sustainability, industry perception, and regulatory integrity. For today's presentation, what I'm going to do is focus on two of our priorities, one around environmental sustainability and some of the work we are doing on

regulatory integrity.

So what the industry is looking into is continually improve our environmental outcomes through voluntary conservation measures and innovative technologies. There's a lot of innovation that is going on within our industry. You heard some of the innovative technology, emerging technologies that are coming out on the application side yesterday, but there's also work on the chemistry side that our members are doing on almost a daily basis.

As we were thinking about agricultural sustainability and how do we define sustainability for ourselves, we started this journey where we said, let's see what's the best way for defining sustainability for us as an industry. We were aware of the United Nations' sustainable development goals that were out there. The staff conducted a series of interviews from members, NGOs, other associations, the food industry, people on the Hill to see what are those -- out of the 17 UN SDGs, what are the ones which are relevant to our industry?

What we did, based on the effort, is identify three UN SDGs, one around innovation and agricultural productivity, the second on

biodiversity, and the third on climate change. As part of our ag sustainability work, once we have defined what sustainability means, what are the focus areas we have that we will be working on in the next five years? We were looking for engagement. So what we are looking into is outreach to academics where research is going on on agriculture productivity, biodiversity, climate change. We are engaging with a few environmental NGOs -- we would like to engage with more -- and conservation organizations where we are having discussions.

Finally, the goal is, from a communication perspective, talk about pesticides and sustainability, talk about what our members are doing, the amount of work that they are doing around sustainability, develop some of the fact sheets on greenhouse gas emissions, habitat restored, some of the soil health productivity work. Our research plan is to focus on life cycle analysis and do some monitoring and reporting on ag sustainability overall.

Thinking specifically on defining sustainability and what does it mean from a biodiversity perspective, we then started looking into specific metrics or indicators that would help

us understand how biodiversity is being improved,

looking specifically into improving soil health and resiliency, reducing topsoil erosion -- we know topsoil erosion is a major issue -- cover crop, reduce stale agronomic practices, reduce topsoil erosion, how our products help in reduction of topsoil erosion. Contributing to soil health is something we are going to look into. Improving pollinator health and then, again, promoting conservation. There's a lot of effort going on within our member companies. How do we bring those efforts and share that with the audience.

MR. BASU: From a climate change perspective, focusing again on lowering greenhouse gases, whether it's through cutting fuel consumption because of few tractor runs that need to happen with a cover crop or reduced-till practices and in promoting reduced-till practices in itself.

Moving on to the innovation and productivity, looking into newer chemistries. You heard about robotics and precision ag yesterday, looking into decreasing yield and also focusing on enhancing farmer education on the use of these tools.

Just to give you some example of some of

the conservation work our member companies have done, and these are just a few examples, there are several examples out there, last year, Corteva Agriscience announced a two-year agreement to support efforts of the Nature Conservancy, and this work was around growing more sustainability while protecting water quality.

Another example was pollinator health, and since 2011 Bayer Bee Care Program has supported more than 30 collaborative projects, addressing local and regional threats and opportunities facing pollinators.

Finally, another example on rescuing farmland, and this is Syngenta's Good Growth Plan Program, where the company benefitted about 26.7 million acres of farmland on the brink of degradation, roughly the size of Tennessee.

So you can imagine these conservation programs, these programs our members are supporting, has a huge impact on environmental sustainability. And what we are looking into is how can we promote these efforts and how can we advocate for -- on these efforts.

The second issue I want to talk about briefly here is around regulator integrity. Again,

we are committed to a transparent and reliable federal risk-based pesticide regulatory process. And within that, the one area I want to focus today is on the endangered species evaluation. Talking specifically on the endangered species, ESA FIFRA, we at CLA have submitted several comments on the challenges that we see with the biological evaluation process. There are lots of conservative assumptions that are being made.

In the BE, we have submitted extensive comments whether it be on the revised methods or the BE's -- some (inaudible) have come in. We are aware of challenges with limited expertise. On the services side, a lack of transparency with the whole handoff process, a 12,000-page document being handed off to the services. Errors with the modeling, issues with the legal standard, the limited collaboration and the BE workload that's going to be there in the next few years.

This is not, again, the full list of problems we have identified, but you could boil all these problems down into three issues, one around inefficient process, the second around opaque communication, again that huge technical complex document being passed over to services, and the lack

of resources within services who are doing all the work that is coming their way in the next few years.

So what happens because of these challenges? I mean, we know -- we are aware of the registration delays, litigation and farmers' access to key tools, maybe in the middle of the growing season or just before the growing season. These are real concerns and issues. But, most importantly, the current process does not provide any benefit to species. So what we propose and what we are looking at from a CLA strategy -- industry strategy perspective is how can we benefit species and at the same time ensure legal certainty.

Working around efficiency, as I said, there are challenges with efficiency. Working on resources, what are the resource allocation that needs to happen? And, finally, stakeholder engagement, we truly believe that more stakeholder engagement needs to happen between the federal family, the registrant, NGOs, grower groups, and everyone who is involved in the process.

Finally, from the presentation on ESA, some key takeaways, what we support and we request is more collaboration between the federal family, EPA services, USDA, the stakeholder engagement around

federal family, registrants, farmers. Better communication within the federal family. Explaining the limited purpose of the biological evaluation in non-tech -- for the non-technical audience. There's a lot of details in those. And the biological evaluation is not the end of the risk assessment process. There is the bio (inaudible). There is the whole registration process. So how can the agency help explain the limited purpose of the biological evaluation?

Explain avoidance and minimization aspects of pesticide registration, these are key. There's so much of avoidance and minimization as part of the label registration that happens, and there is no recognition for those avoidance and minimization.

Finally, around improving efficiency, we know the risk assessment, it's a continuous improvement process and there are challenges that we have identified with the risk assessment. Those issues with the risk assessment need to be fixed. And the second part of improving efficiency is on leveraging existing and seeking additional resources for conservation of listed species.

We know, I mean, last year Congress appropriated about $8 billion towards ag

conservation. How can we utilize some of those funds towards benefitting the species? What are the additional requirements from a funding perspective that we can consider for benefitting the species? At the end of the day, we are looking at benefit to the species and the legal certainty.

Paul, back to you. I saw the reminder. Thank you.

MR. ANNINOS: No problem at all, Mano. No problem at all. And thank you. Thank you, Charlotte. Thank you, Mano, for these great presentations. Maybe we have time for one question, just to see if there's anybody that has a burning question for -- or a comment for either or both of you on your presentations. I don't see anything in the chat window, but I'll just make it open for one person.

(No response.)

MR. ANNINOS: Hearing none, I think I just wanted to thank you very much for the presentations. We're ready to move to the lunch break. I see that Ed has come on the screen there. I didn't know if you had anything you wanted to add before we broke for lunch, Ed.

MR. MESSINA: No, just thanks for the great

presentations today, the great discussions. We really appreciate it. And be back promptly at 2:00, where we'll hear from Michal Freedhoff.

MR. ANNINOS: Exactly, exactly. So I would suggest people just stay connected to the Webex. They just go -- maybe just turn off your video, turn off your audio, set a reminder on your calendar on your phone to ping you at 1:55 p.m. Eastern time. Log in a little bit early so we can get started right at 2:00 Eastern time. Okay?

Thank you very much. Enjoy your lunch. Take a break.

(Lunch break.)

WELCOME FROM PRINCIPAL DEPUTY ASSISTANT ADMINISTRATOR

MR. MESSINA: So welcome, Michal. Thank you so much for joining the PPDC meeting that we've been having for the last couple of days.

So for those of you who don't know Michal, she is currently the Principal Deputy Assistant Administrator for Chemical Safety and Pollution Prevention, which is the office that sits above the Office of Pesticide Programs. So she is my boss. And she's been here for a couple of months and I've gotten a chance to know her a little bit and it's very obvious to anyone who meets her that she's incredibly smart, shows great judgment, and is extremely willing to listen to the career scientists and the professionals at EPA. So it's really been a delight to work with her for the past couple of months.

But my introduction here really pales in comparison to the reception that Michal had yesterday at her hearing. I'm going to call it, quote, unquote, "hearing." It was almost like a homecoming. President Biden recently nominated Michal to be the Assistant Administrator for the Office of Chemical Safety and Pollution Prevention. And as I mentioned

yesterday, her confirmation hearing was yesterday, which is why we're hearing from her today.

And some of the things that were mentioned at that hearing were that Michal was referred to as a brilliant scientist. Senator Inhofe, in his own words, said that it was basically the only thing that Senator Markey and he agreed upon was Michal's qualifications. She was credited for making Senator Markey sing on the Senate floor, a song about TSCA and chemicals. She's received numerous endorsements from various organizations, including multiple past administrators and assistant administrators.

And then, lastly, near and dear to my heart, when she was asked sort of a final question, which was was there any question that she wished she had been asked but wasn't, she chose to highlight the great work of OPP in response to COVID as something that she wanted to talk about. And so that was really great to see her continuing to be a cheerleader for the office that she is representing.

So it's safe to say she did a pretty good job yesterday visiting with the committee, for which she has obviously -- which obviously has assessed her abilities quite well. And it's where she worked in the past. So it's great when your colleagues and

your boss sing your praises at the hearing.

So please join me in welcoming Michal to talk to us at the PPDC and thank her for her time today. With that, over to Michal.

DR. FREEDHOFF: Thanks so much, Ed. That was really nice. And I promise everybody there will be no singing. Like for the whole four years if I'm lucky enough to be here, there will be no singing.

So thanks to all of you on the PPDC for the work we do to partner with EPA and other stakeholders to develop practical and protective approaches for pesticide regulatory policy implementation. And, you know, I really first wanted to say that I appreciate your flexibility on scheduling and I was kind of busy yesterday morning, as Ed let you know, and I'm very glad I was able to join you this afternoon.

So I'd like to just share briefly some of the priorities that I see our office addressing over the coming year. And let me start by saying that I want you all to know how important it is to me that EPA prosper a meaningful and cooperative relationship with our stakeholders. And, you know, coming to EPA after spending more than two decades in Congress, most recently with the Senate Environment and Public Works Committee, I really did develop a tremendous

respect for the role that all stakeholders play in moving environmental and health policies forward, and even more importantly than that, making sure that they're robust and long-lasting. And I think that when you can find consensus in as many places as possible, that's when we end up with the most durable and lasting policies, outcomes, and solutions.

I also know that in many, if not most, cases, you know the issues you're concerned about better than we do because you're the ones who see firsthand how EPA's policies play out in the real world. So I know and value the importance of the collaboration that regulators at EPA must have [audio issue].

So the first step towards effective environmental protection is ensuring the integrity of our science because our actions are really only as effective as the [audio issue]. And as you know, President Biden has issued executive orders and direction to review all Trump-era environment rules. And that will ensure that what we do is protected and will restore scientific integrity to EPA's decision-making process.

Political interference with the work of

scientists and blocking the communication and critical information to the American people was unfortunately a bit too commonplace in the last administration, even though I just want to say a great deal of a fantastic science and work did happen in the last four years as well.

But one high-profile example of a time when science wasn't really the driver of our policy was when OCSPP's previous senior leadership interfered with the 2018 Dicamba decision by discounting (inaudible) facts assessments of Dicamba's risks and benefits. And that probably contributed to a court vacating EPA's 2018 Dicamba pesticide registrations. And the court found that EPA failed to even consider reports of damage to millions of acres of crops, for example, to non-Dicamba resistant varieties of soybeans, along with damage to high-value crops like peaches and tomatoes, which affected many farmers. And, in addition, there were other reports of damage From Dicamba to residential gardens and ornamental plantings.

And so the political interference that the 2018 decision had and the court's subsequent decision to throw it out impacted all of growers' ability to (inaudible) product. And it also contributed to an

aversion in the trust that the public has in the agency.

When EPA says that a pesticide can be used safely, it's in everyone's interests that the people believe that what we're saying is grounded in the science and the law. And it's also in the industry's interest because if the public has confidence in the safety of the product industry makes that's good for industry, too. And, right now, I don't think the agency's trusted in the way that it needs to be.

Unlike 2018, the 2020 decision on Dicamba does reflect the insight of EPA scientists. EPA stands behind that decision.

More generally, I want to affirm my commitment to scientific integrity, communication, trust and transparency in EPA's decision-making process. And I want to know that OCSPP is home to world class scientists and I will ensure their voices will guide our decisions during this administration.

So part of our commitment to sound science involves keeping pace with scientific investments and adjusting our regulatory approaches when necessary to align with those advancements. And in recent years, our agency has made strides towards reducing the use of laboratory animals in testing -- in pesticide

testing. Some of the briefings that I've had on that have been really, really exciting.

Our pesticide program is developing and evaluating new technologies in molecular, cellular, and computational sciences to reduce and replace more traditional methods of toxicity testing in risk assessment, and OPP is also modernizing data used in risk assessment. And the transition from relying primarily on laboratory animal studies to non-animal approaches is being done in a transparent and scientifically robust way (inaudible). We're working collaboratively with stakeholder groups, including animal welfare groups, states, academic and industry scientists to ensure that new methods made agency needs to protect human health and the environment.

We're also encouraging and implementing novel effective ways to minimize pesticide drift. Spray draft is routinely evaluated in the registration review process using peer review risk assessment (inaudible). And I'm sure you all know there's multiple ways to reduce spray drift, including changes in nozzle selection, hooded sprayers, choice of application method and application rate changes. And we're also supporting precision agriculture approaches that better manage

the use of pesticides and application processes, like GPA guidance and (inaudible) which can turn sprayers on and off as appropriate. We need to help growers use pesticides efficiently and better ensure chemicals stay within (inaudible).

As a country, we're also facing the crisis of a rapidly changing climate. We know many of our stakeholders are already grappling with climate-related challenges, like changing weather patterns and increasing temperatures, changes in insect and pest behavior, more frequent and extreme precipitation and drought, all of which can dramatically alter plant growth patterns.

Within hours of taking office, President Biden issued an executive order that made clear his commitment to tackling climate change in the ways this administration [audio issue].

Looking through an expanded lens for OCSPP, we're thinking creatively of ways to manage some of the effects of climate change, like further leveraging integrated pest management, or IPM. We want to build IPM capacities and evaluate the feasibility of new innovative IPM approaches and methodologies that will combat pesticide resistance, reduce risk, and protect the environment. In some

instances, the flexibility of using IPM as an alternative to conventional pesticides will also reduce the impact to climate change.

There's a couple of examples. Allowing cover crops to grow can keep moisture and nutrients in the ground and that will lower greenhouse gases. And pesticide use itself, particularly the use of fumigants, can be a contributor of climate change. So it's important to ensure that we're using these chemicals just when and where they're needed. A significant percentage of the world's food supply is lost annually to pests and climate change has rapidly introduced new pests. So improving pest management with a focus on integrated sustainable practices is a way to ensure (inaudible) security while decreasing greenhouse gas emissions.

And decreased pesticides are also Often an outcome when IPM practices are implemented. Less pesticide use and reduced use of the equipment needed for those applications would also reduce greenhouse gas emissions, furthering the fight against climate change.

In addition, in January, EPA renewed its commitment to working with the agricultural community as a partner in the pesticide environmental

stewardship program. We're reinstating the PESP grants for projects that explore innovative solutions, that promote adoption of IPM, furthering the agency's role of providing a healthier environment for all Americans. We expect a call for submissions sometime in the next few weeks, so we need to be on the lookout for that.

The President has also directed EPA and other agencies to advance equity for all Americans, including people of color and others who've been historically underserved, marginalized, and adversely impacted by persistent poverty and equality (inaudible). And this also includes some of our nation's farmworkers, their families, and residents of agricultural communities, all of whom would benefit most from our national pesticide safety training, education, and outreach efforts.

As a part of our commitment to farmworker protection, we're continuing our important work with the Association of Farmworker Opportunity Programs, or AFOP, toward our common goal of protecting our farmworkers and their families. Starting this year through 2025, AFOP will receive up to $500,000 annually through our National Farmworker Training Grants Program to conduct training across the

country. They'll provide occupational health and pesticides safety training to migrant and seasonal farmworkers in more than 25 states with a network of over 200 (inaudible) and we know this will have a big impact because through our previous cooperative agreement with AFOP, the program trained 184,000 farmworkers and 40,000 children.

We're also committed to upholding farmworker protections through the historic 2015 Agricultural Worker Protection Standard, which improved protections against pesticide poisoning and injuries for more than 2 million workers.

Now, I mentioned that I brought up COVID and the agency's response to that in my hearing yesterday and I really had hoped to get a question on that and was really very happy to have the opportunity to talk about it, because EPA really played an important role in the nation's response to (inaudible). Since the declaration of the public health emergency, EPA worked aggressively to ensure that Americans are aware of the facts as to surface disinfectant products that would be used effectively against the virus.

And in OCSPP, we expedited the review process for products eligible for emerging viral

pathogen claims (inaudible) requiring the review of new data. We expedited applications to add directions for use with electrostatic sprayers to products intended to kill SARS-CoV-2. We created flexibilities for manufacturers by temporarily allowing registrants to notify EPA of certain formulation and manufacturing facility changes and immediately released the product for sale without first waiting for EPA approval. We provided flexibility for the annual worker protection training requirements, pesticide applicator certifications, and to address respiratory equipment shortages.

And over the course of the past year, we also learn a lot more about COVID-19, how it spreads and the role contaminated surfaces play in the transmission process. And the more we learned, the more we were able to adjust our decisions, actions, and requirements to make some of these changes accordingly.

So recent information from the CDC notes that the risk of being infested with COVID-19 by touching contaminated services is actually pretty low and that airborne transmission is a much higher risk. So given the release of that new information, we've updated our disinfectant policy to align with new CDC

science.

And two weeks ago, we announced the agency was no longer prioritizing public health emergency requests for new products that address surface transmission of SARS-CoV-2. And, instead, we're going to shift our resources to the evaluation of innovative and novel products, like those that kill airborne SARS-CoV-2. And, in addition, in light of the hundreds -- I think we're up to 550 -- of EPA registered surface disinfectants, we won't be expediting new product registrations and other actions for products intended to kill SARS-CoV-2 on surfaces. We'll just continue to review them using standard registration process (inaudible). Working with our counterparts at CDC and other federal and state agencies, we ensure our guidance continues to reflect the most up-to-date findings.

In closing, I'd just like to to reiterate our commitment to returning to our core mission of protecting human health and the environment, which starts with effective cooperation with our stakeholders. It's an exciting time at EPA. We're moving ahead with fresh ideas and a renewed commitment to our mission, science, and transparency. We'll be taking on the climate crisis and deliver environmental(inaudible)

justice.

I'm looking forward to your advice and input over the rest of this meeting on important topics that PPDC (inaudible) minimizing pesticide resistance, how to bring new agricultural technologies to the market, and how we can enhance existing policies to better respond to challenges from viral pathogens. It's all very important work. And I thank you all again for your time and service.

And I'll turn it back to Ed so you can resume with this meeting. Thanks again.

MR. MESSINA: Thank you so much for joining us, Michal.

All right. So we are -- I know your schedule is tight and I know Michal has got to run, so it was great to have her. So I appreciate her stopping in.

So now we're going to go on and hear about the Endangered Species Act. We've got some great presenters on this topic. Obviously, a topic of great interest to the agency and the public and we've heard some initial information from industry and we're going to hear from the Government and then also hear from NOGs on this topic.

So with that, I'll kick it over to you,

Paul.

MR. ANNINOS: Thank you. Thanks a lot, Ed. And for those of you that want a chance to see Dr. Freedhoff's testimony yesterday, it's all online. And I have a chance to peek into that today, this morning before this meeting, really great comments that she made in front of the Congressional members and a great ambassador of EPA and, of course, very focused on the mission of OCSPP.

So we're going to move now, but before I introduce Cathy, I think Charlotte Samson wanted to -- I'm not sure if it was like correcting a statement or maybe expanding on a statement from earlier in the day.

So, Charlotte, let me just hand it to you for just a minute to do that.

MS. SANSON: Yeah, thank you. Thank you so much, Paul. This will be really quick.

During my talk, I had referenced Ed's presentation from the last PPDC where he described OPP's Lean initiative. And I just wanted to make a correction in something I had said. And I meant to say that we understand that the Registration Division is already putting Lean into practice and we know that they'll be implementing some -- a Salesforce

that is intended to replace legacy tracking systems. And we expect this will greatly contribute to efficiencies once it's implemented following the pilot that is being done with the Antimicrobial Division and BPPD. So I just wanted to be sure that I was clear on what I had said there with regard to efficiency.

So thank you, Paul. I appreciate it.

MR. ANNINOS: You bet, you bet, Charlotte. No problem at all. Thank you.

MR. MESSINA: Thank you, Charlotte.

MR. ANNINOS: Okay.

MR. MESSINA: Yeah. At some point, when we deploy the Salesforce instance in the Registration Division, we'll definitely come to this group and talk to you about what that looks like, maybe even do a demo. It's a pilot right now for BPPD and the Antimicrobials Division. And I have presented on that topic. I'm happy to put that on maybe as a future deliverable for us to talk about at the PPDC. It might be good timing in the fall.

MR. ANNINOS: Perfect, perfect.

So we've heard two stakeholder interest presentations so far. Now we're going to hear, back-to-back, numbers 3 and 4 of 4. So both topics are

ESA related. Cathy Tortorici from the Office Of Protected Resources, focused on endangered species at NOAA fisheries. And so we're very happy to have her with us today.

And I'm assuming by now you've been handed the -- oh, actually, I think Sarah Chadwick may be actually running the slides.

MS. TORTORICI: Yes, that's correct.

MR. ANNINOS: So all you have to do is give her a verbal cue and she'll know when to move to the next slide.

So, Cathy, you're up. And then -- you're up at this point. So good.

PPDC MEMBER PRESENTATIONS ON STAKEHOLDER INTERESTS ON-GOING FIFRA-ESA CONSULTATION WORK

MS. TORTORICI: Thank you. Thank you so much. It's great to be here, and I want to spend the next few minutes just giving everybody some updates on what we've been doing from the ESA-FIFRA consultation standpoint. And I'm presenting some information not only from the Fisheries Service, but also from Fish and Wildlife and EPA as well. So it's kind of a round-up of where we are right now.

So let's take it away. Next slide, please.

So you've been -- you've heard about the ESA already in this meeting, and just to orient folks who may not be aware in terms of the Endangered Species Act, it's really a -- it's a law that's based on species conservation in terms of protecting species and the environments in which they live.

Ed had brought up this issue earlier in the meeting about Section 7(a)(2). This is what we call interagency consultation and this is where the Fisheries Service and also the Fish and Wildlife Service, because we share responsibility to implement this act, are working with federal agencies to ensure that the federal agency -- and you can see the text

there -- their actions are not resulting in adversely affecting species or resulting in destruction or adverse modification of what we call critical habitat. And so we've been working with EPA on this for a number of years, many years. So this is not new to us, not new to EPA in the work that we're doing here.

Mano brought up the biological evaluation, and just quickly in terms of the process, I'll speak generically now, but when an action agency, like EPA, comes to us and they're asking for consultation on a particular action, they prepare a document called a biological evaluation that basically summarizes what is the action that they're going to give to us, either NMFS or Fish and Wildlife to consult on, and that document also describes what they believe the effects of their action are to the ESA-listed species that are within the action area of the project.

And then if we believe that there's going to be some level of take associated with this action, we're preparing what we call a biological opinion. And in this case, it's about how pesticides could or could not jeopardize, threaten endangered species or destroy or modify critical habitat. So that's the mini, mini version of the process that we've been

engaged in for years on this particular topic.

Next slide please.

So I think Ed might have mentioned this, EPA recently released, in March 2020, a revised method document for the way that they're conducting the analytical assessments around the development of their biological evaluations. Okay? This is important because it really sets the stage for what's in those documents that then we, as the Fisheries Service or Fish and Wildlife Service, are going to react to in terms of the development of the biological opinion. We certainly consider everything that's in that biological evaluation when we're making determinations. We may also include additional information that we've determined to be best available science.

So we're bringing that all together in the biological opinion, but the core of it is with the biological evaluation, and this revised methods document is the core of what EPA is using to develop their documents.

Next slide, please.

So EPA has been working on biological evaluations using this revised method for the chemicals, carbaryl and methomyl, atrazine, simazine,

propazine and glyphosate, and there's a website that Ed mentioned as well, and here's the link to it and I invite you to go to that website because I think that it has a lot of really good information to help understand the process of what we're trying to accomplish, at least from the EPA side, with the consultation process.

Next slide.

So we have a schedule for biological evaluation development that EPA has put together. We've actually completed some of this, which is great news for the first two sets of chemicals. The final BE for atrazine, simazine, propazine and glyphosate is going to be ready in November. We've already done good work on carbaryl and methomyl. And the rest of those chemicals you can see when the draft BEs are coming and when the final BEs are coming and those graph BEs are out -- you know, they will be put out for public review on the EPA docket so that stakeholders will have the opportunity to provide review and comment of those documents.

Next slide.

So the Fish and Wildlife Service just recently released for public comment and review a draft biological opinion related to malathion. This

has been a long time coming in terms of the Fish and Wildlife Service working to prepare this document. It's a complicated document. And so the document is out for public review. The comment period ends in June. And you can see also the docket number and the docket, at www.regulations.gov.

If you are interested in spending time reviewing this document, I would encourage you to do it because -- I will say the following, we have a unique relationship with EPA on this issue of draft documents or draft biological opinions. It is not normally the process of, at least the Fisheries Service, to release documents at a draft stage for public review and comment. This process has really been envisioned as an interagency conversation between, for example, the Fisheries Service and the action agency in terms of what is going on with the proposed action, and sometimes applicants are brought in on a case-by-case basis.

What we have with the EPA, ESA, FIFRA services process is really quite different about putting draft documents like this out for public review and getting feedback on those. So if you're interested, I would invite you to take advantage of what is being offered in terms of the opportunity to

provide review and comment.

Next slide, please.

So what did Fish and Wildlife say about malathion? They said that of the species they looked at, and they looked at many species, that 78 of those listed species could be jeopardized and there were 23 critical habitats that could be adversely modified.

And what the document does, which is interesting, is rather than presenting defined reasonable and proven alternatives, which are approaches to relieve the jeopardy, the BiOp has included categories of different types of techniques or ways that you can then adapt or adopt into an RPA alternative, and then also it's going to include reasonable and prudent measures to help minimize incidental take. And then that it's Fish and Wildlife Service's intention to work with EPA and the appropriate registrants to craft those final reasonable and prudent alternatives.

Next slide, please.

So we have two biological opinions that we recently put out for public review, and that comment period closed in April of 2021. And you can see the chemicals there. We analyzed the impacts not nationally -- the malathion BiOp was a national

biological opinion. These particular biological opinions, for the way that they were set up from court orders, et cetera, really only covered 26 listed species, and those are salmon and steelhead in Washington, Oregon, and California.

So we put those documents out for public review. We got a lot of really good feedback on those. The common period is closed on that. And now we're projecting to complete those opinions in 2021.

And what I want to say -- next slide, please -- is that we ended up with a no jeopardy conclusion for the species that were involved and we worked very closely on these two opinions with stakeholders, meaning the registrants, as well as EPA, to help craft those reasonable and prudent measures in terms and conditions, which is also a normal part of the EPA process with other federal agencies, not just this one.

And what we have in terms of RPAs -- RPMs and terms and conditions is that -- I call it a pick list. There are a variety of different risk reduction measures from a list of alternatives that the grower can choose from to end up in a certain place that's going to avoid and reduce the risk to listed species. And you can see some of the examples

there in terms of filter strips, riparian buffers, et cetera.

Next slide, please.

So we also issued a biological opinion on chlorpyrifos, diazinon and malathion back in 2017, and that was a jeopardy conclusion biological opinion for a number of species. And so as a result of a request from EPA, with new information that they felt they had, they reinitiated consultation in 2019 on that biological opinion. We've been working with EPA and the registrants in terms of providing -- reviewing additional data that they've given us, and we hope to complete that process per a court order settlement in June of 2022.

And I'm saying court order in a couple of places because I think some of you know, but maybe not all of you know, that a lot of this is very litigation-driven in terms of due dates for these various documents. So there's a certain amount of contents under pressure, so to speak, in terms of reviewing and completing documents within a certain time frame because many of the due dates are court-ordered-driven due dates.

I've also included on the slide the EPA website that you can go to to find out additional

information about reducing exposure to nontarget plants and animals, where they focus on listed species because as part of this re-initiation effort and also part of implementing the biological opinion while this is going on, EPA developed a website with this information. And I would also invite you to go to that website and take a look at what they're doing regarding these issues.

Next slide.

So I'm going to close with the following -- a couple following statements. You know, Mano mentioned about maybe some difficulties or challenges with the consultation process. I think Ed brought that up as well in terms of maybe there are some challenges going on. I don't disagree with that. This is a very complicated process.

The consultations that we're preparing are probably some of the most technically complicated consultations that the Fisheries Service does across the country. And with that comes a lot of back and forth and a lot of information sharing, agreeing, disagreeing, you know, talking it through about how to do this in a way that's not only efficient but protective in terms of species conservation and also fulfills the mandates under FIFRA and ESA.

And we're really committed to enhancing -- looking where we can to improve this consultation process because just like anything, it can always be made better. We can always be in a process of continuous improvement as I like to say.

And so a couple of the ideas that we're considering are, you know, where can you have protections for listed species and move them earlier into the consultation process, so that rather than them coming later, they're included within the proposed action. And in doing so, then that becomes part of the consideration of what we're actually consulting on in terms of looking at effects and levels of effects. And this is not new to the consultation process. This is something that we would like to talk more about in terms of maybe emphasizing it in this consultation process.

The other thing that we're thinking about is the following, we need to look at all species, especially when we're doing a national consultation, right? We're looking at all of the listed species under our purview in terms of the analyses that we're doing in our biological opinions. But how can we maybe think about especially sensitive species and how we're doing that analysis and the way that we're

doing that compared to other species that might not be as sensitive.

This is sort of thinking about what is a prioritization scheme, et cetera, et cetera. It doesn't mean that we're not going to analyze all the species or do a full-throated analysis, but where are the places where we can really home in on a chemical basis and think about those essentially especially sensitive species and what we might be doing with those?

With that, that is the end of my presentation and thank you for the opportunity to speak and I'd be happy to take any comments or questions that you have later. Thanks.

MR. ANNINOS: Thanks very much, Cathy. And I think given the time and the fact that the next segment starts around 3:00, I'm going to turn this immediately over to Lori Anne.

Hi, Lori Anne. And you can unmute yourself and you can take it from here.

MS. BURD: Can someone advance to the next slide, please?

Good afternoon, everyone. So we've spent a lot of time here talking about the Endangered Species Act, but you'll notice a few things never really come

up in the conversation. The first is, what's at stake? And the second is, how do we actually implement protections to stop extinction? Because, ultimately, the ESA is not about the process. The ESA is not about working hard. The ESA is not about stakeholder extinction. The ESA is about stopping extinction and the stakes could not be higher.

I hate to say this again. I've said this at many meetings, but extinction is forever. And after years and years of hard work, we still don't have ESA consultations that have been completed and implemented on the ground. We don't have measures to benefit our most imperiled plants and animals, even the most narrow endemics or the most sensitive species. And I'm really glad that Cathy brought that up, the need to look at a path forward for them. So I'm going to talk about what's at stake and I'm going to talk about a path forward.

The American bald eagle is a great conservation success story. The symbol of our nation, bald eagles almost went extinct. One of the key factors driving them towards extinction was DDT. Action was taken to stop that extinction. DDT was banned. Bald eagles were listed under the Endangered Species Act. EPA was created in response to all

this.

Fast forward a few decades, bald eagles are once again imperiled by pesticides. A new study that just came out has shown that 82 percent of bald eagles have anticoagulant rodenticides in their blood, 82 percent. Poisoning and death by anticoagulant rodenticides is an awful, awful way to go, and that's the fate that we are giving to bald eagles.

And this is the results of our choices. This is the result of the actions of this office. This office plays a significant role in driving our current heartbreaking extinction crisis. What are casually called off-target impacts around these parts are not a de minimis issue. I'll say it again. The actions taken by these people in this office play a major role in driving extinction. And we've too long pretended that this is a side issue to deal with. Study after study shows this is not true. We have to face this fact.

Next slide.

It's not just bald eagles. It's countless species that are being impacted by pesticides. A new study released just a few weeks ago found 55.8 percent of Florida manatees sampled have glyphosate

in their plasma, 55.8. The level of glyphosate exposure in these manatees is enough to cause both kidney and liver damage. This is not an insignificant off-target impact. This is not something to look at with endless refinements. This is real harm, real suffering to real endangered species right now.

Next slide, please.

The insect apocalypse is here. Study after study shows the populations of insects, birds, amphibians, and mammals are decreasing. For many of them, pesticides play a significant role in their population level declines. I'm going to highlight insects in my presentation because, of course, a significant portion of crop protection efforts target insects.

Next slide, please.

Monarch butterflies. Monarch butterflies are right now on a freefall towards extinction. In the upper left corner, you can see blue is the total number of monarchs we have; green is the increasing glyphosate use that corresponds with the time of their population level decline. You can see about the same amount of corn and soy has been grown, but the big thing that has changed is the widespread

adoption of RoundUp Ready or glyphosate-tolerant crops.

Glyphosate is really good at killing milkweed. A few decades ago milkweed was considered a pesky weed. Now, people are desperately planting milkweed in their gardens. I won't even tell you all what I just paid for a packet of native milkweed seeds for my garden. But all of our gardens planted can't be enough to replace the milkweed that has been destroyed in the Heartland.

The amazing migration of monarchs could end right now. We have more Starbucks locations in California than Western monarchs, 1,900 Western monarchs total. Of course, there are other factors impacting monarchs. I will not say that, you know, pesticides are the only thing impacting them, but they play a significant role.

Next slide, please.

Monarchs aren't the only insects we're tracking. As many of you know, populations of native pollinators are in severe decline nationwide, not all of them, but many of them. A few months ago, we petitioned the U.S. Fish and Wildlife service to list the American bumblebee as endangered. It was once found in 47 of the lower 48 States, every state

except Washington. It's now experienced an 89 percent population level decline. And pesticides are playing a major role in this.

And, you know, often we talk about how pesticides are getting more sophisticated, more targeted, we have all these new technologies, but the fact of the matter is that study after study shows that U.S. agriculture is getting more toxic.

Next slide, please.

On Monday, the U.S. Fish and Wildlife Service took a big step in proceeding with our 2020 petition to list the Suckley's Cuckoo bumblebee, an amazing bumblebee. It issued a 90-day finding, the first step towards being listed.

If you look at this map, you'll see that this bee has basically disappeared from all areas with heavy pesticide use, and the blue -- the green dots, I'm sorry, are the dots that show where it remains. The yellow dots or historic occurrences, not many left.

So next slide, please.

The Endangered Species Act is both a legal and a moral imperative. I show this picture of Aleutian geese because they're an amazing ESA success story, and there are so many of them. The Endangered

Species Act is 99 percent effective at stopping extinction, but we have to actually implement it for it to work. And success stories cannot happen when agencies do not carry out their duties under the ESA. And the ESA asks for more than hard work; the ESA asks for completion of consultations and their implementation. The ESA doesn't ask for refinements or multi-led stakeholder processes. The ESA asks agencies to use the best available science.

I also included this picture of geese because the actual use -- the chase for actual use data of the past four years has been a wild goose chase. Career staff in OPP have long considered actual use data in their ESA consultation processes. It's a very small part of the data that's required in this process. It's a very incomplete subset. Any of you look who look at the malathion BiOp will read the part where they talk about how they reached out to all the states and most states didn't get back to them, and even the ones that did didn't get back to them after that. The data just doesn't exist.

But, luckily, that's not what the ESA asks for. The ESA asks for data -- asks for consultation to happen on the agency action, not some extrapolation of how the action might play out but

what the agency authorized.

This all has been a huge distraction, this actual use data and the 2017 Bernhardt intervention that axed the almost completed biological opinions on malathion, diazinon and chlorpyrifos, and has really set this work back. The time lost is sad. The wheels spun are sad. But the real issue is that this has precluded actual progress and it's species that bear the brunt of the suffering. Zero on-the-ground protections have been implemented, even after biological opinions, draft or final, have shown jeopardy.

There's no real work plan. EPA has taken no proactive steps on consultation without litigation. None. There's no plan for moving forward. There's just adhering to the deadlines that are coming down.

So I'll say, you know, we can continue litigating, we can continue bringing cases, or we can find a path forward that makes sense and gets species the protections they need to dodge extinction.

Next slide, please.

I think one myth that is successfully circulated around these parts is that ESA consultation is extraordinarily hard. And I will

acknowledge that pesticide consultations, nationwide consultations are not the easiest consultations by a long shot. However, consultations happen every single day. Between 2008 and 2015, there were almost -- there were over 88,000 consultations. None of them stopped projects. However, they did result in important conservation measures. And that's not what's happening here.

Every other agency routinely consults on their actions. They don't have to be sued every single time. There's no other agency that has consistently flouted the law like this. I'll just say complying with the ESA is like paying taxes. It's something everyone has to do. You might not like it, but you've got to do it. You can't just opt out of taxes or ESA compliance. We are, after all, a nation of laws.

Next slide, please.

I recognize we're running low on time, so this is just a slide that shows some admissions of noncompliance. It's not an open question. EPA is not even pretending even to the court that it is complying with the ESA aside from instances where litigation deadlines are set -- or work deadlines are set by litigation. And there has been no attempt to

explain how OPP will achieve compliance with the mandates of ESA.

Next slide, please.

I want to talk about Aldicarb for a few minutes, because this isn't just a backlog issue, this is an issue of OPP making an affirmative decision to ignore the ESA every single day. For example, just in January, it approved the use of Aldicarb for Florida citrus. This decision affects a small number of species, a very small number of species, and many of them are narrow endemics.

Consulting on this decision would have been relatively simple. It would have been an opportunity for OPP to demonstrate a willingness to consult to get started, to find a path forward where it does not continue to add to the backlog. But, once again, it affirmatively chose to violate the ESA.

And you'll hear a lot from OPP about how they're not consulting on new decisions because they're working on getting these new pesticides online that will replace the bad old ones, but I'm not sure how that logic actually would apply to something like Aldicarb. And Florida also didn't buy it. Florida said because OPP failed to comply with federal law, under their state law, they could not

abide by that decision and will not allow Aldicarb to be used for the uses that EPA authorized.

Next slide, please. And this is my final one.

Atrazine I think really provides us with a good indication of what a path forward might look like. And it's simple. It's really extraordinarily simple, because at the end of the day, all we're looking for is common sense actions to protect our nation's most vulnerable species, and by extension, many of our most vulnerable people.

The path forward that atrazine shows could happen provides certainty. It reduces workload. And what does it involve? It involves registrants proactively working with the agency to modify labels to minimize the effects on endangered species. The picture of the bird here is an 'i'iwi. It's a Hawaiian species that now is not going to have to have endangered species consultation completed on it because atrazine will no longer be used in Hawaii per in agreement with the registrant and OPP. These are the kinds of common sense actions that provide a way forward that doesn't continue to have us mired in litigation and endless delay.

I'm asking registrants to get proactive.

If you want certainty, then sit down and figure out a path to certainty that reduces the scope of pesticide use in endangered species habitat. Once you do that, the process will be faster. The expert agencies can do their jobs. EPA can implement the consultations. Species can get protections. We can stop suing. Everyone is happy.

And in the meantime, we ask OPP to get serious about on-the-ground protections, especially for the most sensitive species, especially for the narrow endemics. These actions will protect communities and they'll stop extinction. Endangered species are the canary in the coal mine. When we protect them, we protect everyone.

So, you know, in closing, I'll say we're not going away. The attempts to exempt pesticides from the ESA in the last Farm Bill failed. We ask you to set a schedule. We ask you to set an ambitious schedule. Categorize it as you like. You know we will sit down with you and work with you. If you want to do all the neonics at once, insecticides at once, broad spectrum herbicides, whatever it is, set a schedule, come up with a plan, stick with it.

Enough refinements, enough process. We want to see protections implemented. We want to see

20 consultations completed and implemented each year while you get the hang of this process and get a grip on what catching up with the backlog is going to look like. We will support you. We hope industry will support you as well. This era of lawlessness and endless delay has to end and we have to get serious about ending this office's role in driving extinctions and finding a path forward to spare species this terrible fate.

Thank you.

MR. ANNINOS: Thank you very much, Lori Anne.

I see we have about five or six minutes before the next segment. Let's take some questions, comments from the audience. They could be for either Lori Anne or Cathy.

MR. MESSINA: Yeah, please don't be shy about this important issue. And thank you to our presenters for those presentations.

Surely someone must have a comment.

MR. ANNINOS: So it looks like Mano would like to chime in. Mano, you're up.

MR. BASU: Thank you very much, Paul.

Again, a great presentation from Cathy and Lori Anne. I just want to reiterate what I mentioned

in my presentation, that we, as industry, are willing to sit and have conversation on moving the process forward and looking for a path forward on the extremely important, complex ESA-FIFRA issue, where, you know, as I mentioned in my presentation, at the end of the day, it's what are we doing to benefit the species. Let's focus on the benefit of species and the legal certainties. Again, any future opportunity that may exist for all of us to come together, sit down and explore opportunities, we are looking forward to those opportunities.

Thank you.

MR. ANNINOS: Thank you, Mano.

The mic is open, folks.

MR. MESSINA: About maybe examples of good mitigation, I think Lori Anne had an easy one that's right on the slide here and thanks for highlighting that one, Lori Anne. Are there other examples or things the agency should consider with regard to early mitigation that could be some quick wins that folks want to suggest or talk about?

MR. ANNINOS: Mano, did you -- it looks like you popped up again. Let's go.

MR. BASU: Yes, I did. Thanks, Paul. Not necessarily around mitigation, but one comment that

we have made through our public comments to the BEs, as well as the revised method, we have suggested the extremely complex tools that have been used for the BEs, the MAGtool and the plant assessment tool, tools like these should be reviewed by a scientific advisory panel as a normal practice. So I just want to reiterate that at the PPDC here. Thank you.

MR. MESSINA: Thanks, Mano.

Who's going to be brave to talk about this topic? Come on, this is like the topic we need to talk about, right? So let's hear some talk.

MR. ANNINOS: Joe Grzywacz, go ahead. You might want to go off mute. Take yourself off mute. We still don't hear you, Joe. Maybe -- Sarah, is Joe on mute?

MS. CHADWICK: No, he is unmuted, so we should be able to hear him. I would just recommend to make sure that your mic isn't off on your computer.

MR. MESSINA: And, Joe, are you dialed in by your phone or is it possible you're double muted on the phone? Give me a thumbs up. Are you dialed in from the computer? Give me a thumbs up if you're dialed in by computer. Okay. He's on by computer, yeah. So...

MR. ANNINOS: Okay. Well, while Joe is figuring that out, Jasmine has popped into the chat. So Jasmine Brown and then we'll come back to Joe.

MS. BROWN: I just wanted to add that a path forward, not just for atrazine, but its breakdown products are sometimes more toxic than the parent compound and so that should be a consideration. Simazine, triazine, and atrazine seem to all have same effects. And this is something I'll bring back to the Tribal Pesticide Program Council for discussion and then, hopefully, they can provide their collective comments back to the group.

MR. ANNINOS: Excellent. Thanks, Jasmine.

And, Joe, how about now, can you say something and see if we hear you?

MR. GRZYWACZ: Can you hear me now?

MR. ANNINOS: You bet.

MR. MESSINA: Yes, we can hear you now.

MR. GRZYWACZ: All right. Sorry about that. And I have to admit, I am totally dumb about all of this stuff. So this question is probably not wisely raised and it may throw oil on fire, but I'm really compelled by Lori Anne's presentation. And it seems as though part of the presentation is sort of the notion of all the litigation that's at play. And

so one of the questions that I have is clearly doing away with litigation would be a nice thing, but that's a hard thing to do.

So what is the source -- why -- you know, what are the different points of view on why the litigation is coming? Because it seems as though industry is happy to play, but yet, you know, who is rendering or who is putting forward the litigation, which groups is it coming from and how is that bogging down the system I guess, is my question.

MS. BURD: Ed, do you want to answer that or do you want me to?

MR. MESSINA: It's such a great question. Why don't you take a stab? And it's sort of a 30-year history, that you've asked that great question and maybe Lori Anne can talk and then I can fill in some of the gaps. But, please, yeah, Lori Anne, that would be great.

MS. BURD: So there has been zero USA compliance except for with litigation. It's the only thing that's gotten any action under the ESA. So we'd be happy not to bring it if there was ESA compliance. But without it, endangered species would be completely ignored. And there is nothing on the schedule that has not been because of litigation.

And, again, you know, I'll reiterate, we're happy to talk about a schedule any time so we don't have to continue bringing litigation.

MR. MESSINA: Yeah, so I think I'll talk about the challenges, right? Because you want to talk about sort of past administrations on both sides of the aisle have struggled with this issue, ESA, and this is a 30-year, sort of how do you show that a -- let's take an herbicide, for example, that is designed to kill plants won't land on an endangered plant. That's sort of the scientific questions that we're trying to answer in the thousands of pages that are written about that, right?

And there's a number of mitigation and approaches you can take. And now we're talking about thousands of species, we're talking about plants and animals and insects, right? So now we have an insecticide that is designed to kill things. It's not an insecticide if it's not killing things. I mean, that doesn't work. So how do you then do that scientific review? That's been the struggle for the last 30 years with multiple administrations.

Go ahead, Joe.

MR. GRZYWACZ: I'm sorry, but, I mean, again, now we're in a space where I actually know

something about it and that is this is not unlike the challenges of those of us who do public health research with humans, you know, are kind of grappling with the same question. And it usually comes down to which hegemonic science really has the advantage. You know, is it the basic biology or chemistry or whatever else it is? And what models are those sort of set up upon and the assumptions that we're willing to make or not make?

So it seems as though that's the issue at play and it's a matter of not being able to come to consensus on, well, which one is the right one or should there even be a right one.

MR. MESSINA: Well, and then so take your point and extrapolate it. It's even developing those methodologies and having scientific consensus around those methodologies for this area where these two things sort of got mashed together, right? And it's an important legal obligation for the agency to satisfy, Endangered Species Act, because as Lori Anne points out, once you're extinct, you're extinct. So we want to make sure we're not contributing to that and we're meeting our ESA obligation.

I'll say, you know, I'm hopeful. You know, the fact that we put this on the agenda and the fact

that we've invited Lori Anne, we've invited government, we've invited industry to talk about these issues. This is going to take a collaborative effort. We can keep litigating around it, but that is -- I think everyone's in agreement, that's not going to help solve the problem. And we're not doing a -- we're doing a disservice to those species that need us to focus on this.

So I think, you know, going into the next session, which is sort of next steps, we will start seeing some things would come out from the agency on this. There is a willingness to work with industry and the NGOs on this topic, to develop a plan going forward. And let's try to [audio issue] and keep talking about this and maybe that's one of the new workgroups we form for PPDC, right, which is a workgroup that deals with ESA. So it's an important topic.

MR. ANNINOS: If you'll note, Gina Hilton has put -- entered something in the chat, a link to EPA cross-species toxicity assessment that might be of interest to folks.

MR. MESSINA: Thanks, Gina.

MR. ANNINOS: Lori Anne, you put some stakes in the ground in your presentation. No doubt

about it. And you've had a chance to hear Joe's question and Ed's remarks. Anything you'd like to respond with?

MS. BURD: Yeah, thank you. I'll just note that the ESA doesn't ask for perfect science. It asks for the best available science. And endless refinements towards perfection are not getting us anywhere. And so we submitted a notice of intent to sue over the revised methods. You'll notice we haven't sued yet because what we want is action and implementation. Obviously, that action still exists, but, again, like, this pursuit of perfection is getting in the way of anything. And so, you know, more stakeholder process, more conversation, I don't think is the solution. I think the solution is a work plan going forward.

And, like I said, you know, atrazine shows us that we can eliminate a lot of species from consideration by taking some common sense measures to take them out of play. And I think that there needs to be a lot more consideration of that, because at the end of the day all consultation will result in, you know, it's not going to bring the whole house down, all consultation will result in are some common sense measures, some increased buffers, maybe some

areas where a pesticides can't get used where there's a very narrow endemic, really, you know, steps that protect species and that's it.

So getting to that point is the goal and following what the ESA says, which is consulting on the action, not every possible way the action might play out or has played out, following the best available science that we already have in front of us, rather than continuing to look for more, that's how we find a path forward that will protect species and provide certainty.

MS. TORTORICI: So, Paul, I would like to make one comment, which is, you know, I believe that those opinions that we just released, for example, the ones that we just completed in April and now we're putting out in June, are achieving the concept of what we're talking about here in terms of reaching a level of species conservation that makes sense, allowing for flexibility on the part of growers to be able to manage the process that they are going to be using to implement that work, the kind of items that Lori has on this slide about a path forward.

These are the kind of conversations that we need to be engaging further in, not only EPA but also with the registrants, because some of this might

involve label changes. And so that's the kind of conversation that we're hoping to have with EPA and registrants about not only mitigation measures, conservation measures, but also appropriate label changes that can be brought forward into the process. And then at the end of the day, what you're consulting on is already have a level of protection, because those items have been already built into the action on which we're looking at.

And so I think part of the litigation issue has been, yeah, it's like we don't all agree on the science, whoever's suing us, there's a process, we don't all agree on that either. But I think that we're making progress in certain areas. And it's really not about trying to get to a perfect thing. It's about trying to continue to get to a practical workable thing that makes sense in terms of implementing on-the-ground protections to conserve species, and we really are trying hard to do that.

MR. ANNINOS: Thank you, Cathy.

And with Ed's permission -- and I know we originally had a one-hour block for this topic and then we had to kind of shift that a little bit with Dr. Freedhoff joining us after lunch, so what I'm -- Lauren -- sorry, how come I'm thinking -- yeah,

Lauren Lurkins and Mano had a couple of comments. Do we have -- can we go ahead and take those?

MR. MESSINA: Yes, please.

MR. ANNINOS: And then we can close this out.

MR. MESSINA: Yeah, I'm not going to cut this conversation short.

MR. ANNINOS: Okay, thank you.

Go ahead. Lauren, go ahead and go off -- Lauren Lurkins, go ahead and go off of mute, followed by Mano.

There you are.

DR. KUNICKIS: I've not figured out how to get off of mute.

MR. ANNINOS: Oh, we can hear you.

MR. MESSINA: Sheryl, we can hear you, Sheryl, Dr. Kunickis.

DR. KUNICKIS: Oh, did you call me?

MR. ANNINOS: Oh, no, no, no.

DR. KUNICKIS: Or did you call Lauren?

MR. MESSINA: We called Lauren.

MR. ANNINOS: Lauren Lurkins. Is Lauren Lurkins in the house?

(No response.)

MR. ANNINOS: Probably on mute or having

trouble unmuting.

Let's move to Mano and then maybe, Sarah, you could help Lauren get unmuted.

MR. BASU: And I just want to check since Dr. Kunickis is on the line, if she had a comment or not, given Dr. Kunickis' involvement with the ESA process for such a long time.

DR. KUNICKIS: Actually, I did, and I'm on a different computer today, and I don't have any way to raise my hand. So that's why I'm kind of waving. So thank you very much, if you don't mind.

This is mainly for Ed. Ed, I just want to acknowledge that over the 11 years I've been working working with -- working with your staff has been incredible. They're very dedicated to making sure that the work they do is very thorough, very well done, and they are credible scientists.

The other thing I want to note, too, is that many of us working in this space over the years have looked at the recovery plans on the species, and it's very interesting to note -- and I've talked about this in a previous public meeting and we have noted that pesticides are not generally even listed as one of the stressors for some of the endangered or listed species. As a matter of fact, what we've

learned, and we're very much aware of, is that the fact -- and I think every -- Lori Anne and Cathy would agree that the fragmentation of habitat is a huge effort.

So I would think often that if we're truly trying to work on taking care of the species -- and I assure you that I am not aware of anybody who isn't interested in doing that -- that we really should put our efforts toward improving habitat in the areas where species need to be or that they need to thrive. I don't know what problem it is we're trying to solve with going after and spending millions and millions of dollars and hours working on the issue of pesticides and not getting anywhere, where those dollars could be invested on habitat improvements.

And then there was one other thing I wanted to mention, also, the question that you asked about measures that that could be done or mitigations that could be done. It's absolutely essential that America's farmers have to be included in looking at what those mitigations are. We've been really challenged with some of what we've seen. What works in the EU does not work for farmers in America. Our farming systems are so very different.

And so I would hope that everybody would

look and make sure that farmers, representatives for growers, are included in any mitigations that are put forward or required to be implemented.

That's all I have to say. Thank you for the time. Thanks, Mano, for seeing my hand up.

MR. ANNINOS: Thank you, Sheryl.

And, Mano, go ahead. We're still working with Lauren on how to release her voice.

MR. BASU: Thanks, Paul. And I'll make it quick.

Again, it's great to see so many questions/comments coming up. I mean, this is an issue there -- you know, everyone has had challenges with resolving this, making progress. A great presentation from Lori Anne, suggestion on the path forward. Cathy as well. You know, the question is, how could we continue with the discussion on prioritization? How do we start the conversation?

I mean, certainly, we have to bring all stakeholders and that's what I mean when, from my presentation, I said broader stakeholder engagement, federal family, growers, registrants, NGOs, mitigation bank, conservation groups and who (inaudible), and how can all of these folks come together focusing on conserving the species,

protecting the species. Because, you know, none of us want extinction of a species. So the focus should certainly be on the species here. Thanks once again, Paul.

MR. ANNINOS: Thank you, Mano. Thanks very much.

Lauren, let's try you once more, then we're going to go to Iris.

MR. ANNINOS: Okay, I think what Lauren's going to try to do now is maybe get her comment or question into the chat window.

In the meantime, Iris, you have the mic.

MS. FIGUEROA: Thanks. And I'm really heartened to hear that it seems like this is an area where there might be space for collaboration. Admittedly, endangered species is not my area of expertise, but to Sheryl's earlier comment, I think from Lori's presentation and other presentations, it's clear pesticides are not the only factor, but, of course, we're having this meeting under the auspices of OPP. So I think it's absolutely relevant and important and a concern for this group. Whatever those other factors may be, this agency and this office doesn't have authority over many of those other factors.

So we need to really be focused on making sure that the responsibility and the ability and the capacity that we do have within the auspices of OPP and of EPA are really maximized to be able to mitigate some of that damage, again, even though it might not be the sole cause of the damage that is what's within our purview.

MR. ANNINOS: Thank you, Iris. Thanks for that comment.

Let me give Lauren one more shot of this. We're trying to troubleshoot it behind the scenes, but we are having trouble with that. So let me just pause and see if Lauren is there.

Well, here we go. What she's done is she's put her thoughts or a comment into the chat box. Let me read it, if that would help.

I would like to offer the perspective of someone who works alongside growers in the middle of the country. FIFRA is complicated. ESA is complicated. Farmers are a bit perplexed by the intersection of the two and particularly the court challenges. At the end of the day, the pesticide products are needed in ag, even as we look to address climate change.

Lauren, thanks for contributing that. She

goes on to say, there's also a significant amount of species conservation that occurs due to the action by farmers on their private lands.

MS. TORTORICI: So, Paul, maybe Ed wants to say something about this as well but I don't agree -- I don't disagree with what Lauren is saying. I mean, part of the dilemma that we're struggling with here is trying to integrate two pieces of legislation that weren't necessarily lined up, per se, when they were developed. Do you know what I mean? So that integration of those two things is simply complex.

And, yes, I can certainly appreciate that, you know, from the grower perspective, this might this might look like just a -- I don't even know what it would look like, you know. And so that's why we're trying to figure out ways, not only to understand through EPA, for example, and USDA through Sheryl, you know, what are growers thinking about all of this, but try to pull that information into how we're talking about implementing our work in a way to make it implementable, right? So that it's easier to implement on the ground and then you're going to get the result that you want, because people understand it and can embrace it and implement it in a way that makes sense for them.

So there is a role in terms of bringing in individuals like that and groups like that to get that practical approach in the same way that we work, for example, in the Fisheries Service with the fishing industry, right? As we're regulating them on commercial fishing, so we're not doing that in a vacuum, there are fishery management councils that we work with and we work very closely with them in terms of implementation of regulations. So it's an analogous kind of activity that we're trying to do here with all the bumps and the warts and trying to make progress as we move along.

But I want to say thank you, Lauren, for that comment because it's right in the bailiwick of what we need to be thinking about to balance out the species conservation aspect with the implementability aspect.

MR. ANNINOS: Great point, Cathy, especially this analogy with the fishing industry. It's a harvesting-related industry. There's economic value associated with the take of commercial fish and recreational fishing for that matter.

MS. TORTORICI: Yes.

MR. ANNINOS: And so constant balance between the economic considerations and the species

protection consideration. So great point.

And so we've got to -- boy, I tell you, we definitely didn't reserve enough time on the agenda for this. We got everybody all energized here at the end of the day. I did notice the Jasmine Brown popped into the chat.

Jasmine, a brief comment from you.

MS. BROWN: Yeah, I just wanted to briefly comment. So we have sampled for atrazine and while a farmer may follow a label and do the application perfectly legally, during rain, we see spikes of it in wells and drinking water. And in our streams, when there's a storm, so there's a lot of rain -- a rain event, we'll see spikes of it. And so these products are very easily displaced from the site of application downstream.

And then in drier climates, if we're thinking ahead for climate change -- and just for any registrants on the call, drier areas, there's higher pesticide carryover in drier areas, because there's just not the soil microbes, insects, and rain and things to start breaking those down. Same as Alaska. They have higher persistence because of their cold weather and snow pack. So there's different persistence and different things happening regionally

and just to keep that in mind.

The buffers are great. We don't allow picloram or atrazine in any wetlands, period. But, like I said, even if they applied to up to 15 feet away, doesn't mean that's actually protective on the ground for that species. Chances are it will still be displaced in the environment 15 feet away. I'm not saying taking off the market. I'm just saying consider that when you're thinking of how you're going to mitigate it. Thank you.

MR. ANNINOS: Thank you very much, Jasmine.

So I think one thing I wanted to ask maybe Shannon and Carla, we've got quite a little bit of a conversation going in the chat window. Maybe we could -- I don't think the chat windows are preserved in the recordings. I could be wrong about that, but maybe just grab this chat, copy it and paste it somewhere so -- just in case a workgroup does emerge on this topic, which sounds like there might be some energy behind that based on a question I see from Mano in the latest entry in the chat window. And maybe this also leads into the next segment when we talk about next steps, moving forward, et cetera. Maybe this topic is part of that.

But what I think we'll do is because I

think if we just left it open, we could probably stick around for another hour or two talking about this topic. And so I want to suggest unless there is an objection, which is perfectly legit, I'm going to maybe ask Ed if it makes sense for us to move to the next segment of the agenda now and --

MR. MESSINA: Yeah, I'll close this out with a couple of comments --

MR. ANNINOS: Okay.

MR. MESSINA: -- and then we'll move to the next session.

And so certainly, you can see why we put this on the agenda. I agree with Sheryl's, Dr. Kunickis', views that the scientists at EPA that are working on this issue are just some of the smartest minds we have in the world. They are dedicated. They've done some incredible work these last couple of years, considering these issues, and they deserve our credit and respect. And so I could not agree with Sheryl more on that issue.

I think grower concerns really need to be taken into account in terms of the implementability of mitigation. I know and I've met a number of growers who have ESA pollinator gardens and pollinator strips and areas where they've set aside

to protect species where they need to. So we need to definitely consult with the growers on any aspect of this.

As Mano mentioned, there's multiple stakeholders, which is why I think this is a great venue for us to have this conversation. But there's probably going to be a need for other venues as the agency puts out more policies around this. And I think I -- and hopefully this came through -- I think one of -- rather than, you know, more workgroups and more conversation and -- you know, I'm not implying that that's all we need to do. I think the conversation around what are some early mitigation that we can put in place while we continue to refine the science, which we need to, and while we continue to refine the procedures here is an important aspect of this as well.

I think we need to try to find some quick wins here and focus on what we're trying to protect, which is the endangered species, while also preserving tools for growers who desperately need these tools to provide safe food for the citizens of this great country. So it's been a great topic, multiple perspectives that need to be taken into account, and so I appreciate everyone for taking

their time to listen to this and also to our speakers for taking the time to prepare remarks and provide your important perspectives on this.

So with that, I think we will move on to sort of next steps. I know we've captured aspects of things that we'd like to move forward, but I really wanted to -- a couple of things, to remind folks for the PPDC next meeting, we'll have a similar format. We're going to have the workgroups present. Maybe it will be shorter, but it will be this is what -- the work product that was developed by the workgroup. Suggest that it go to the full PPDC where the full PPDC will recommend yea or nay as to whether those work products should be moved to EPA for consideration, representing the full PPDC consensus on any products that are going to go forward to EPA for consideration on the various workgroups that you've heard from today. So that's going to be one of the main objectives for the next meeting.

The other thing is there are certainly some new topics that came up today that we can sort of highlight and talk about whether we add to the next agenda. I think, you know, for example, on the emerging technologies workgroup, we heard that possibly a future topic is hearing from the non-ag

space for emerging technologies. And so maybe if somebody wanted to take the baton to volunteer to take that on and present or find some speakers that could present on those non-ag technologies, we could make that a potential agenda topic.

I think we're automatically going to put ESA on just as a topic and then our -- so to the group, are there any tasks, deliverables that you heard, and topics for the next meeting that we want to put on the agenda? And so with that, Shannon's going to take some notes. Feel free to just type it in the chat, too, and we can copy and paste that chat into the document and sort of collect where we want to go moving forward.

So with that, I'll stop talking and let others sort of chime in.

MR. ANNINOS: I can sense the wheels turning so feel free to keep thinking about this. It's a chance to help shape the agenda for the next --

MR. MESSINA: Yes, I think non-ag would include specialty crops. Yes. Sorry. Non-ag is not the best term to use for that. So we could say non-ag and specialty crops. And, Mark, if you're volunteering to present, feel free to indicate in the

comments.

All right. So we have from now until the fall. I know there's more topics that folks want to talk about. I don't want to be the only one to suggest them. Maybe there's a presentation from the worker community on what it's like to be -- you know, the challenges that are in the field. Maybe it's a grower who wants to provide information on the challenges for how to comply with labels. Maybe it's a state organization that wants to present on some of the issues on the enforceability of language in the labels.

There's lots of expertise out there that I, hopefully, would encourage you to discuss. How does EPA interface with RNAI technology. So I think -- let's add a session on biotechnology. I think that we heard from BPIA today, but I think maybe -- I think we could do a presentation on some new activities for biotechnology. That might be a good time in the fall.

MR. ANNINOS: Ruben, I see you're lighting up.

MR. ARROYO: Yeah, Ed, I just wanted to mention, you know, when we talk about label changes and languages, you know, as far as an enforcement

agency, you know, we run into a lot of Spanish-speaking people and, yeah, that would be great. Or I think Mily had maybe mentioned it before about, you know, having our manufacturers or registrants having a link to having it translated in another language.

The only question that comes up to me as an enforcement person is the enforcement end of it. So we can have all the label changes we want, it's just, you know, in some states I know there's one state agent or a few for -- that actually do the enforcement versus California where we have close to 3- to 400 inspectors out in the field doing pesticide use enforcement. And so that's the big challenge I see in some of these states and districts is who's enforcing it. And, you know, we can make all the label changes we want, but it's the enforcement end of it that we have to deal with.

And granted, like I said, California, yeah, you can make the changes and it will happen the next day once we see it on the label, but how do we know who's enforcing it in these other states? And what's the, I guess, the goal and how do we get that outreach out to those enforcement agencies and the state agencies? And how do we know if it's being effective or not, I guess? Because I don't know

about the other states; I just know about California.

And maybe you can shed some light as to if we make label changes, how does that occur in the other states, as far as the enforcement end of it.

MR. MESSINA: Yeah, and I see Liza chiming in. So maybe there's an AAPCO presentation in the works, Liza. That might be helpful to refresh.

MS. FLEESON TROSSBACH: Sure, Ed. I mean, I'm certainly happy to provide that information. I mean, I can speak to it now, but I can certainly provide a broader presentation to the group about the regulatory activities in states and territories.

MR. MESSINA: Yeah, why don't we put that on for the fall agenda as a topic for consideration.

MS. FLESSON TROSSBACH: Okay.

MR. ARROYO: And, Ed, I'd be more than happy to help in giving, you know, at least the California perspective and what we see in our enforcement end of it, along with the California Department of Pesticide Regulation.

MR. MESSINA: That would be phenomenal. Thank you, Ruben.

MS. BROWN: And, Liza, I'd be happy to give you the updates for the tribes and territories enforcement actions.

MS. FLEESON TROSSBACH: Fantastic. Happy to help there, Jasmine.

MR. MESSINA: Shannon, I think another topic we -- I mentioned, just seeing if the group is interested, if there were maybe just 30 minutes on the technological improvements that the agency was trying to undertake in-house to address the registration workflow and workload issues. I had a couple of slides just on the workload issue, but we could expand a little bit on that and maybe even do a demo of the tool if folks are interested. You could say yea or nay in the chat if you don't mind.

Okay. Well, I think this was a good start. I want to be sensitive to the fact that we preserved this time for public comments and allow folks to provide that. And we can kind of wrap this up. Any closing comments from anybody? And certainly feel free -- GLP inspection update from OPP. Okay, great, we'll add that and see if our OECA friends are interested in providing an update on that. I think we had had them potentially -- they weren't ready to speak at this session, but I think in the fall, we'll get them geared up and we can have a GLP inspection update from OECA. Yep, thank you, Charlotte.

So why don't we close this out. Keep your

ideas coming in the chat and then Shannon will record them and -- risk communication, yep. Thanks. We definitely -- we're going to try to get Casey Buell to present in the fall.

And then, of course, as part of the normal procedure we'll send out to this group the list of topics and then have the group decide sort of what are the best issues for the agency to hear about collectively.

So with that, we'll open it up for the public comment period, Paul.

MR. ANNINOS: Great. Thank you, Ed, and thank you, everybody. That was a rapid fire set of fodder for the next meeting. So that's excellent. Great job.

So we're now prepared to, in this segment of the agenda, which is our final segment -- and after this segment, I certainly will ask Ed to come back and, you know, close out the day or the two days really. But we're in the process now of kind of receiving comments from the public. Earlier today, I checked in with Sarah, with Sarah Chadwick, and she indicated that we had five individuals that had -- that are on our list, so to speak, for speaking today.

So just a couple of things. One, I just want to confirm verbally with Sarah while we're online here, is that still the number, Sarah, about five people?

MS. CHADWICK: Yes. Last time I checked, there were about five of our preregistered speakers on.

MR. ANNINOS: Okay. So if we give each of those people, let's say, three minutes -- three or four minutes apiece that still leaves a little bit of time for anybody that wants to provide "last-minute" public comments. So with no objections, I think that, Sarah, I'd like you to just kind of walk through the instructions for the public comment period. We'll then throw the slide up that shows the five names and then we'll work our way through that list.

MS. CHADWICK: Great. Thanks, Paul. So as Paul mentioned, everyone will have three minutes to speak and provide their public comment. I'll give kind of a warning slide when you have about 30 seconds left and then once your time is up.

We'll start with the names of those who have preregistered to speak and, as Paul said, we'll be showing those on the next slide in a moment. And

we'll be going in alphabetical order by first name. And then if there's additional time, at the end, we'll open the public comment period to those who have not preregistered. And you can identify your interest to speak in two ways. One is by sending a chat message to the host or Sarah Chadwick, and you can use the chat box to do that and let us know that you're interested in making a comment, or you can email Shannon Jewell, and her email address is there on this slide. And if you're interested in speaking, you can also email her and she'll let us know. So I think that covers all the instructions.

So I'll pass it back to you, Paul.

MR. ANNINOS: Thank you, Sarah.

PUBLIC COMMENT PERIOD

MR. ANNINOS: And these are the folks that are preregistered, and I'm not sure if you can -- if you can help me. Yesterday, I went down the list and we didn't -- we went pretty far down the list before I got to somebody that was ready to speak. So we can do that again. And we'll just make sure that we get everybody a chance.

So Abdeljalil Mekkaaoui (phonetic), are you present and want to speak?

(No response.)

MS. CHADWICK: I don't see him in the meeting. The first person on our list that I see is Laura Campbell.

MR. ANNINOS: Okay.

MS. CHADWICK: So I can go ahead and unmute you and you can provide your comment.

MS. CAMPBELL: Thank you very much. I appreciate the chance to be able to comment on this process and I also appreciate the commentary and the dialogue that's been going on, especially this afternoon as we've been kind of talking about how to move forward with combining Endangered Species Act regulations with FIFRA pesticide labels and how do

you review registrations.

I think Lauren Lurkins said it very well, that, you know, farmers really want clear guidance, and I think we also want a process that we can look back to to say, okay, this isn't just based on estimations, it's not models, it's not something that someone could interpret differently, you know. That we want to be able to look back at evidence and results and know that if we're going to require someone to do something that it's for a reason and not just, you know, because we're taking a precautionary principle to it, you know, but that there's science behind the decisions that we make.

So I really -- I have been glad to see that this is a topic that the group wants to continue to work on and wants to continue to have more discussions about to figure out how do we get to that place where these two statutes that don't really fit together very well can hopefully find a process to make not only label restrictions but also the registration review process a little bit more straightforward and a little bit better for farmers trying to use them out in the field. Thanks.

MR. ANNINOS: Thank you very much, Laura.

Sarah, is Olga speaking today?

MS. CHADWICK: I do not see Olga on our list.

MR. ANNINOS: Okay. How about --

MS. CHADWICK: I also -- Ray is on the line, however, he indicated that he will not be making a comment today. Therefore, the next person on our list is Sydney Morgan. Sydney, I'll go ahead and unmute you and you can make a comment.

And it looks like Sydney actually just signed off. So I will move down the list to Todd.

Todd, you're unmuted, so you may make your comment.

MR. SCHOLZ: Well, good -- for me, it's afternoon, I guess it's afternoon for you, too. Thank you for giving me the opportunity to comment.

I really learned a lot attending this two-day session. I appreciate all the presentations. They were great. And I just want to remind everybody that, you know, as we use pesticides, there is an economic disincentive to use too much or to use it incorrectly. And so I'm really excited about the upcoming technologies that are available to my producers. And the other thing I -- to be able to be more targeted and be able to only spray where we need to spray.

The other comment that I'd like to say is, you know, one of my farmers reminded me that sustainability isn't just about the environment, it's also about him. So part of what we're trying to do here is keep farmers sustainable. And so sometimes pesticides are necessary, they're needed tools to be able to to do that. And so we appreciate your work and I really appreciate the presentations and the earnestness of everybody involved. Thanks.

MR. ANNINOS: Thank you very much. Thank you very much. Mr. Morton.

MR. SCHOLZ: I'm Mr. Schultz.

MR. ANNINOS: Sorry, Mr. Schultz. Sorry about that. I thought we were -- okay, I messed up. I'm very sorry.

MR. SCHULTZ: It's okay. You've done a great job, Paul.

MR. ANNINOS: Okay. I'm finishing on a low note, I guess. I'm sorry about that. All right, Mr. Schultz, thank you.

Sarah?

MS. CHADWICK: We also have William Jordan in the meeting, so I will go ahead and unmute you and you can make your comment.

MR. JORDAN: Thank you for the opportunity

to comment again. I'll be speaking on behalf of the Environmental Protection Network about the ESA path forward.

I want to say that I think Lori Anne Burd nailed the problem that's facing EPA and all of the rest of the stakeholders, and that is that pesticides may be harming endangered species and there has simply been, over the last 30 years, no effective way of identifying those problems and putting in place measures to protect the species. And that is something that really has to change.

For the first time, although I worked on this for 30 years and really made no progress, I'm encouraged. And I'm encouraged because I've heard today interest on the part of the pesticide registrant community, on the part of NGOs, on the part of agriculture, on the part of EPA and the services to get together and figure out a new way. And I think that new way has to start with setting priorities.

Currently priorities are based on litigation and that is, at best, a very poor way of doing it. There should be, I think, a better scientifically based way of setting priorities. And I want to suggest that there are three elements that

should be considered in this. First of all, what chemicals do you look at? You probably want to focus on the chemicals that pose the biggest risk because of their inherent toxicity and their widespread use. Second, you want to focus on the species that are probably at biggest risk, the ones that are most sensitive, the ones that have the least -- the poorest chances of survival. And third, and this is a new idea that I understand from both things that Cathy Tortorici and Lori Anne Burd said, you want to focus on the risks that are the biggest.

One of the problems that has affected the scope of the biological evaluations is that EPA is chasing after not only direct effects, but also indirect effects that vastly complicates the analysis and means more and more work needs to be done. If you zero in on direct effects, using information that EPA already has you will identify, I think, the most risky chemicals to the most sensitive species, certainly obvious things, as Ed Messina said, like an insecticide that's used in the areas where endangered insects are found and that in turn, I think, can lead to the kind of ideas that Cathy Tortorici was talking about for identifying protective measures earlier in the process.

I want to end by one more note on this kind of approach. This is a fairly big approach and I'm not sure everybody will agree. That's why everybody needs to talk about this and work through this and exchange ideas. So some sort of collaborative process, I would say that based on my experience, the FIFRA 88, the FQPA amendments and the PRIA amendments all were successful because of that collaborative process, but all of them were mediated through external stakeholder collaborative processes. And that's probably what's needed here. A PPDC workgroup, for all that I respect the PPDC process, seems to me to be not the right kind of vehicle for that. And so I encourage people to pursue a collaborative mediated public dialogue kind of process that involves a broad range of stakeholders.

Last thing I want to talk about is the point raised by Mr. Arroyo and Ms. Trossbach, and that has to do with compliance. I think one of the assumptions that EPA makes about its label changes is that people will comply. And EPA should know, from its experience with resistance management's programs, as well as state reports on enforcement activities, is that not everybody does. And I think EPA lacks information, critical information about the extent of

compliance. And so understanding the effectiveness of enforcement programs and then bringing that information back to the risk assessment process will be essential to understanding whether the measures that EPA decides are necessary to address pesticide risks are actually going to be effective. Thank you.

MR. ANNINOS: Jordan, thank you very much.

That's the entire list we have in front of us, but I should pause just in case, Shannon, if you've gotten any emails or, Sarah, if you've gotten any private messages from anybody else who would like to speak.

MS. CHADWICK: I have not received anything in the chat so far.

MS. JEWELL: No, not for me, Paul. Sydney Morton did email me just to say that he had no comment, but wanted to say that he was really appreciative of the presentations today.

MR. ANNINOS: Okay, very good.

MS. JEWELL: She. I think Sydney was a female.

MR. ANNINOS: Okay, got it. Thank you.

All right. So, Ed, before I hand it over to you to close out, I just wanted to thank you and your office, of course, for sponsoring the PPDC,

sponsoring this two-day meeting and all the transparency of the work performed by the committee, by the workgroup members, by your professional staff, et cetera. So thank you very much for that.

And a special thanks, of course, to Shannon and Clara behind the scenes for their kind of expert work in designing not only a realistic agenda, but an engaging agenda.

And thank you Sarah Chadwick for a great job kind of managing this engagement platform for the meeting today.

And to all the workgroup co-chairs and their leadership in making these days very productive.

So thanks to everybody. And I'll turn it over to Ed for a final closeout.

CLOSEOUT/REMARKS

MR. MESSINA: Well, thanks, and back at you, Paul for the thank yous coming your way for facilitating. I think it was a really a great addition to have you and your team here. Shannon and Carla, for all the technological wonders you've done. I know COVID sometimes feels like one endless Zoom meeting or, you know, teleconference meeting and, you know, kudos to you guys, for everyone on this call for hanging on for two days while we did have a great discussion. So the technology worked and held up in many cases and I think that's a testament to the great behind-the-scenes work that's been going on.

So I want to thank each and every PPDC member for attending. I want to really thank the workgroup leads. I know how much work goes into that, watching Mano manage that group for me, who's been doing a lot of work there on the emerging technology group, and there's lots of folks who are pitching in. So thank you for really being a sort of contributing member to those groups and particularly to the heads of those.

Members of the public, all the different stakeholder communities that came here today to discuss and debate these important issues, your

engagement here will really help EPA make sound decisions in the future and help us tackle some of the toughest issues that we have to. And I so really appreciate you hanging on here for the whole presentation and in both days.

Looking forward to doing this at some point in person where we can not have to do the virtual hands going across the screen to clap for everyone. But thanks again, everyone. And hopefully have a safe and healthy summer and we will see you guys in the fall. So thanks. Take care.

(Day 2 adjourned.)