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Testimony on: *At Risk: American Jobs, Agriculture, Health and Species—the Costs of Federal Regulatory Dysfunction.*
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Good morning Chairman Doc Hastings, Chairman Frank Lucas, Ranking Members Markey and Peterson, and members of the committees.

Thank you for the opportunity to testify on this important topic today. I hope that my participation will help to focus Congressional attention on the need for an improved Endangered Species Act (ESA) consultation process for pesticides.

My name is Debra Edwards and I am the former director of EPA's Office of Pesticide Programs. I joined EPA's Pesticide Program in 1985 as an Environmental Scientist and retired from the position of Program Director in 2010. In 2009, I was honored to receive the Presidential Rank Award for Meritorious Service as a Senior Executive. In my career with the Agency, I held several other leadership positions within the Pesticide Program in both scientific and regulatory areas, including Director of the Special Review and Reregistration Division, Director of the Registration Division, Associate Director of the Antimicrobial Division, Associate Director of the Health Effects Division, and Chief of both the Risk Characterization and Analysis and Chemistry/Tolerance Support Branches within the Health Effects Division. From 1997 to 1999, the Agency granted me "leave without pay" status so that I could volunteer for service in the United States Peace Corps. I served in Guatemala as an Agricultural Extension Specialist and taught courses in pesticide safety, U.S. pesticide regulation, and sustainable agriculture. Prior to joining EPA, I earned a Ph.D. in Plant Pathology from The Ohio State University and completed a post-doctoral appointment at USDA's Pesticide Degradation Laboratory.

I am currently employed as a Senior Managing Scientist within the Chemical Regulation and Food Safety Center of Exponent, an engineering and scientific consulting firm with headquarters in Menlo Park, California. I am also engaged with Texas A&M University's Norman E. Borlaug Institute for International Agriculture as an independent contractor, working on sanitary and phytosanitary capacity building activities related to pesticide registration and use in developing countries.

I'd like to begin by explaining what the Environmental Protection Agency does, routinely, as part of its pesticide registration and periodic re-evaluation activities to assess and manage identified risks to non-target organisms, including birds, mammals, plants, fish and other terrestrial and aquatic wildlife. Within the Pesticide Program headquarters office in Arlington, Virginia, there are approximately 75 toxicologists, biologists, chemists and environmental modelers working within the Environmental Fate and Effects Division. These scientists use publicly available, peer reviewed scientific data and methods to assess potential risks associated with the use of pesticide products. In 2008, EPA's Pesticide Program completed re-registration decisions for nearly 400 pesticide chemical cases and through this process many pesticide uses were further restricted in their use or eliminated entirely to protect wildlife. Under the current FIFRA-mandated registration review program, each active ingredient will be re-assessed at least every 15 years, to ensure registrations remain in compliance with the FIFRA risk/benefit standard. Further, prior to registration of any new pesticide use, a full environmental effects assessment is completed to determine whether the pesticide use should be registered at all or, if registered, how ecological risks can be managed to mitigate any identified risks of concern. All of these actions and decisions are managed through a robust, deliberative public participation process that includes public dockets and detailed Agency responses to public comment.

In November of 2001, a coalition of environmental organizations and fishing groups filed a lawsuit, Washington Toxics Coalition (WTC) v EPA, against EPA for failure to consult with the National Marine Fisheries Service (NMFS) on the effects of 54 pesticides on endangered and threatened salmon species in the Pacific Northwest. In July of 2002, the Court ordered EPA to initiate consultation with NMFS on the pesticides named in the lawsuit by December 2004. EPA fully complied with that Court order.

In November of 2007, another law suit was filed by several environmental organizations, this time against NMFS for unreasonable delay in completing consultations requested by EPA. In July 2008, NMFS reached an agreement with the plaintiffs, committing to complete the EPA consultations within four years. On July 31, 2008, NMFS provided EPA with its first 482-page draft Biological Opinion, which included broad species jeopardy findings for three organophosphate insecticides. After some negotiation, NMFS ultimately agreed to allow only 46 calendar days for EPA review of the draft Opinion. EPA posted the draft Opinion on its web site on August 14 to allow public viewing and a limited comment period on the document.

On September 15, 2008, I signed EPA's formal comment letter to NMFS' regarding their July 31 draft Biological Opinion. In that letter I expressed a number of concerns related to NMFS' jeopardy findings. In addition to concerns related to the limited time granted

for review and comment, the letter summarized a number of significant concerns related to data selection and the lack of transparency regarding the scientific methodology used to develop the Opinion. Specifically, the Opinion: (i) provided no target levels of exposure that would not result in jeopardy, (ii) didn't address current pesticide use patterns which had been significantly altered through EPA's re-registration process, (iii) assumed routine unlawful product misuse, (iv) included unrealistic assumptions regarding concurrent use of multiple insecticides at the same time, in the same location, at maximum use rates, (v) didn't take into account data that were provided regarding actual product usage in CA and WA, including time and location of use, (vi) relied upon outdated and inappropriate water quality monitoring data, (vii) made incorrect assumptions regarding the manner in which pesticides are aerially applied for mosquito adulticide control, and (viii) lacked transparency in the methods, underlying data, assumptions, and calculations associated with the population model, such that neither EPA nor the public were able to reproduce the model outputs.

In November of 2008, NMFS issued its final Biological Opinion for the three pesticides. The final Opinion continued to include broad jeopardy findings and also specified "reasonable and prudent alternatives" (RPAs) to avoid jeopardy, including 500-1000 foot spray drift buffers, among other restrictions. Two and a half years later, despite more litigation and numerous inter-Agency meetings and communications, this Biological Opinion has not been implemented. Within the past year, there have been unsuccessful attempts by EPA to seek voluntary compliance; a lawsuit brought by the pesticide manufacturers against NMFS, claiming violation of the Administrative Procedures Act; a lawsuit brought by environmental organizations against EPA for failure to implement the Opinion; and formal petitions to EPA from the pesticide industry as well as from grower groups asking for rulemaking to establish transparent procedures.

In March of this year, EPA Administrator Jackson, on behalf of EPA and the departments of Agriculture, Interior and Commerce, wrote to Ralph Cicerone, Chairman of the National Research Council, requesting that the NRC convene a committee of independent experts to review scientific and technical issues related to FIFRA consultations under the ESA. The NRC expert panel is likely to require at least 18 months to conclude its deliberations, not including the time it will take the Services and EPA to begin to implement the panel recommendations. In the meantime, if EPA is legally or otherwise mandated to proceed to cancellation of a pesticide for which a Biological Opinion already exists, that cancellation process will likely take at least 18 months and constitute a significant resource commitment on the part of EPA's Pesticide Program. Further, I believe there is a reasonable likelihood that such a cancellation proceeding would be unsuccessful, due to the many scientific uncertainties and the lack

of transparency associated with existing Biological Opinions. Thus, nearly a decade after the 2001 lawsuit was filed, no meaningful resolution appears likely for at least several more years. Clearly, this is a frustrating and expensive situation for stakeholders on all sides of the issue.

In addition to my concerns regarding the scientific transparency of conclusions reached in existing Biological Opinions, I am concerned for the future sustainability of the pesticide ESA consultation process in general. There are more than 900 pesticide active ingredients and nearly 20,000 pesticide products registered for use in the United States. Under the current consultation paradigm, each use pattern for each product must be re-evaluated at least every 15 years, taking into consideration each geographic use area and each of the approximately 1200 listed endangered or threatened species or critical habitat within each use area. This complex, multi-faceted pesticide use situation will require literally hundreds of thousands of analyses and decision points and, in my opinion, constitutes a significant resource challenge for the departments and the agency involved.

I hope my remarks today have helped to illustrate the degree to which the ESA consultation process for pesticides needs attention, both from a scientific and a process perspective. Thank you.