

EPA, Services Detail Pact For Assessing Species Risks From Pesticides

EPA and federal wildlife agencies have agreed on a new approach for assessing and addressing potential impacts from pesticides on listed species, a plan that draws on recent advice from the National Academy of Sciences (NAS), which provided a blueprint for how the agencies can overcome differing mandates that have complicated past efforts.

EPA Nov. 13 released a paper, entitled “Interim Approaches for National-Level Pesticide Endangered Species Act Assessments Based on the Recommendations of the National Academy of Sciences April 2013 Report,” that outlines a default, three-step process for assessing potential risks of pesticides to endangered species, and lists additional steps for improving inter-agency consultations in the future.

Federal officials will use the new interim approaches for assessments for new pesticide registrations, as well as for already registered chemicals if an EPA risk assessment

first determines that the risk a pesticide may threaten a species has increased, according to the Nov. 13 inter-agency document outlining the interim approaches.

The aim of the interim approach “is to collaboratively develop a streamlined consultation process that meets the needs of the [agencies’ statutory] workload and” helps federal officials determine whether a pesticide causes jeopardy to an endangered species, the inter-agency document says.

EPA and the other federal agencies are slated to begin taking comment on the interim approaches during a Nov. 15 workshop in Silver Spring, MD.

Although the agencies may take more than a year to implement the NAS recommendations, environmentalists are welcoming the new approaches. In a Nov. 14 statement, the Center for Biological Diversity said the plan provide significant reforms including requiring first-time consultations on

pesticides’ sublethal, indirect and cumulative impacts on endangered species and their critical habitats.

It added that the agency will now also consider the effects of pesticides on listed species and their critical habitat in areas downstream of agricultural areas where the chemicals are used. The group noted that EPA will only be able to bypass consultation with the services for endangered species when the anticipated risk of exposure is less than one in a million.

“It’s time for the EPA to start using the best available science and put in place common-sense conservation measures,” CBD’s Brett Hartl said in a statement. The group said the framework will help ensure implementation of a law that is intended to protect species and “determine reasonable conservation measures . . . such as using less-toxic chemicals, creating no-spray buffer zones next to creeks and rivers, and adopting integrated pest-management solutions to reduce overall pesticide use.”

But EPA say that the agencies still have to develop several additional measures, including common weight of evidence analyses, information sharing protocols, methods for assessing risks to aquatic species and other methodological requirements.

And environmentalists have also called for additional measures to address potential scientific uncertainties that the agencies may have to address as they assess pesticides' risks.

Competing Requirements

Section 7 of the Endangered Species Act generally requires federal agencies to consult with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Services (NMFS), collectively known as the services, to determine whether an agency action could cause jeopardy to an endangered or threatened species and then take steps to mitigate or prevent those impacts.

As part of the process, the services conduct biological opinions (BiOps) that assess risks and lay out reasonable and prudent alternatives that agencies then must implement to better protect species.

But federal officials have long struggled to consult on EPA

pesticide registrations, in part because of different statutory requirements. For example, the services' assessments and mitigation measures conducted under the ESA are aimed at ensuring "no jeopardy," while EPA's registration requirements under Federal, Insecticide, Fungicide and Rodenticide Act (FIFRA) are intended to ensure no "unreasonable adverse effect" to the environment.

The agencies' failure to consult has prompted a series of lawsuits from CBD and other groups aimed at forcing officials to consult over past registrations, suits that have so far met with mixed success. In one case, known as the "mega suit," environmentalists originally sought to require consultations on the effects of 382 pesticides on more than 200 species.

In another case, CBD v. United States Fish and Wildlife Service, the parties Nov. 4 entered a settlement in the U.S. District Court in the Northern District of California that gives EPA and FWS two years to complete ESA consultation on seven pesticides that environmentalists say pose the greatest threat to a species of endangered California frog. The seven pesticides include the common herbicide glyphosate.

A source with CBD says the case resolves a decade long effort to compel federal officials to assess pesticide risks to just one species, and that hopefully the seven consultations will serve as a blueprint for future assessments as federal officials move toward addressing a backlog of ESA consultations.

While the litigation has been aimed at addressing past pesticide registrations, policymakers sought an NAS study to help overcome differences that have made it difficult to consult. The NAS report, issued April 30, urged the agencies to develop a common risk assessment framework with parameters applicable to both ESA and FIFRA.

Common Framework

The common interim approaches the agencies and the services are now adopting seeks to do that. The approach includes a three-step process to determine whether a pesticide may cause an effect, whether an adverse effect is likely and whether jeopardy or an adverse modification to a species will occur. Each step is based on the agency's existing risk assessment framework.

Information generated in one step of the process, through

data, analytical processes and models shared between agencies, will then be used in the subsequent steps of the process.

In the first step, which seeks to determine whether a pesticide “may effect” or has “no effect,” officials will focus largely on whether an area where pesticides are used, called an “action area,” overlaps with the critical habitat of endangered or threatened species. For this step, EPA will provide the services with maps showing all projected pesticide use areas, and the services will provide maps of endangered species habitat.

Through exposure modeling, officials will estimate environmental concentrations, and they will use fate and transport models to evaluate transport off-site and estimate aquatic concentrations. The approach also calls on federal officials to develop methods for determining the lowest concentration of a pesticide that causes no biological effects, and to use that concentration to determine the maximum amount of off-site transport.

“The action area will be based on the lowest relevant toxicity value for the most sensitive species in the environment that results in the farthest distance

from the use site(s),” according to the inter-agency paper.

A “may affect” determination will be reached in cases where the action area overlaps with a critical habitat. If there is no overlap a no effect determination will be reached.

The second step requires federal officials to use weight of evidence analysis and multiple lines of evidence to determine whether a pesticide is likely to adversely affect populations of an endangered species or their critical habitat. This step considers direct and indirect effects, as well as mixtures and sublethal effects. To protect animal species, the interim approach sets a risk threshold of one death in a million for direct effects, and for indirect effects, the approach sets a risk threshold based on a concentration, or dose, that would result in a decrease of 10 percent of individuals, according to an EPA presentation to be given at the Nov. 15 workshop.

The final determinations of whether a pesticide causes jeopardy or adverse modification will rely on information generated in the first two steps as well as the duration of potential exposures that exceed effects thresholds. The final step will also rely

on population models, which the federal officials say have not yet been developed for all species.