EPA Releases Draft Biological Evaluations of Dinotefuran and Acetamiprid Effects on Endangered Species

The U.S. Environmental Protection Agency (EPA) is releasing two draft biological evaluations (BEs) that include EPA's draft effects determinations for the neonicotinoid insecticides dinotefuran and acetamiprid on federally listed endangered and threatened (listed) species and designated critical habitats. The draft BEs will be available for public comment for 60 days.

Background on Dinotefuran and Acetamiprid

Dinotefuran is an insecticide to control aphids, whiteflies, thrips, leafhoppers, scales, leaf miners, and other insects in agricultural crops such as root vegetables, leafy vegetables, berries, cereal grains, and oilseed crops (*e.g.*, cotton). In addition to the agricultural uses, there are a wide variety of non-agricultural uses, including Christmas trees, forestry, turf, and ornamental applications.

Acetamiprid is an insecticide to control piercing sucking pests (such as aphids) on a variety of crops including fruit and fruit trees, tree nuts, vegetables, sweet corn, cotton, soybean, and tobacco, as well as non-agricultural uses such as ornamentals, nurseries, and vegetables grown for transplant.

The timing of the issuance of these draft BEs is tied to a lawsuit filed by the Natural Resources Defense Council (NRDC) against EPA on October 3, 2017, alleging that EPA violated the Endangered Species Act (ESA) by failing to consult with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (the Services) on the effects to listed species of pesticide product registrations containing one of three

pesticide active ingredients—acetamiprid, dinotefuran, and imidacloprid. In January 2021, EPA and NRDC agreed, through a stipulated partial settlement agreement, to resolve the claim concerning imidacloprid by requiring EPA complete a final BE with an effects determination for imidacloprid, which was released in June 2022. EPA also initiated consultation with the Services on imidacloprid. In March 2022, EPA and NRDC agreed to resolve the remaining two claims (acetamiprid and dinotefuran). Specifically, by October 2024, EPA must complete its final effects determinations and request initiation of any necessary ESA consultation from the Services on the potential effects of acetamiprid and dinotefuran on any listed species and critical habitat. EPA's release of the draft effects determinations for these two insecticides is an important step in meeting its October 2024 commitment to complete final effects determinations.

Draft Biological Evaluations

EPA's draft effects determinations in the draft BEs finds that dinotefuran and acetamiprid are "likely to adversely affect" (LAA) listed species and designated critical habitats. An LAA determination means that EPA reasonably expects that at least one individual animal or plant, among a variety of listed species, may be exposed to dinotefuran or acetamiprid at a sufficient level to have an adverse effect. This is the case even if a listed species is almost recovered to a point where it may no longer need to be listed.

In these draft BEs, EPA also refined its analysis to predict the potential likelihood that dinotefuran or acetamiprid use could result in "jeopardy" (*i.e.*, potential impacts to the survival of listed species) for any listed species or "adverse modification" of any critical habitats. In contrast to its LAA determinations, EPA's predictions of the potential likelihood of future jeopardy and adverse modification examine the effects of both active ingredients to populations of a species, rather than to an individual. EPA predicts that there is a potential likelihood that approved uses of dinotefuran and acetamiprid could result in future jeopardy or adverse modification findings for some listed species and critical habitats. The Services, however, are responsible for making jeopardy/adverse modification findings in their biological opinions.

As part of its assessment, EPA evaluated the effects of dinotefuran and acetamiprid on over 1,700 listed species and over 800 designated critical habitats in the United States and its territories.

EPA's draft determinations are that dinotefuran:

- Causes no effect on 240 listed species (14%) and 111 designated critical habitats (13%).
- Is not likely to adversely affect 216 listed species (13%) and 91 critical habitats (11%).

- Is likely to adversely affect 1259 listed species (73%) and 624 critical habitats (76%).

Of the species with LAA determinations, EPA predicted a potential likelihood of jeopardy for 151 listed species (9%) and a potential likelihood of adverse modification of 59 (7%) designated critical habitats.

EPA's draft determinations are that acetamiprid:

- Causes no effect on 278 listed species (16%) and 293 designated critical habitats (35%).
- Is not likely to adversely affect 432 listed species (25%) and 224 critical habitats (27%).
- Is likely to adversely affect 1,005 listed species (59%) and 309 critical habitats (37%).

Of the species with LAA determinations, EPA predicted a potential likelihood of jeopardy for 169 listed species (10%) and a potential likelihood of adverse modification of 51 designated critical habitats (6%).

After considering the public comments on the draft BEs, EPA will make appropriate changes, issue a final BE, and initiate consultation, as necessary. If a formal consultation is necessary, the Services would use EPA's effects determinations to inform their biological opinions, which will include the final determinations of whether a pesticide jeopardizes listed species or adversely modifies critical habitats.

The draft BEs will be available for public comment for 60 days in the dinotefuran docket (EPA-HQ-OPP-2023-0506) and the acetamiprid docket (EPA-HQ-OPP-2023-0513) on regulations.gov.

Learn more about EPA's work on ESA and the Agency's plans to meet its ESA obligations on the EPA website, which features interactive, visual StoryMaps about EPA's Vulnerable Species Pilot.