

Report to Congress

on

Improving the Consultation Process Required Under Section 7 of the Endangered Species Act for Pesticide Registration and Registration Review

U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Department of Agriculture, and Council on Environmental Quality

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Purpose of the Report

This report provides Congress with the results of the interagency working group (IWG) in developing recommendations and plans to implement a strategy for improving the consultation process required under section 7 of the Endangered Species Act of 1973 (ESA), 16 U.S.C. § 1536, for pesticide registration and registration review. The IWG, which comprises the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), the U.S. Department of Commerce (DOC), the U.S. Department of the Interior (DOI), and the Council on Environmental Quality (the covered agencies), presents this report, which includes: (1) proposals on how to improve the ESA consultation process for pesticide registration and registration review; (2) plans to implement those proposals; and (3) areas of consensus as well as continuing topics of disagreement and debate among the covered agencies. This report reflects perspectives of each covered agency at the time of this report's preparation. The covered agencies continue to collaborate and work with one another such that perspectives may evolve, change, and further align in the future.

Background

In January 2018, EPA, DOI, and DOC signed a Memorandum of Agreement (MOA) establishing an interagency working group tasked with providing recommendations to the agencies' leadership on improving the ESA consultation process for pesticides.

On December 20, 2018, President Trump signed into law the Agriculture Improvement Act of 2018 (2018 Farm Bill) (Public Law 115-334). The 2018 Farm Bill codified this IWG and the MOA. As provided in section 10115 of the 2018 Farm Bill and section 3(c)(11) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended, 7 U.S.C. § 136a(c)(11), Congress required a report to be delivered to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate not later than one year after the date of enactment of the 2018 Farm Bill. The intent of the IWG is to improve the consultation process required under ESA section 7 for pesticide registration and registration review. In doing so, the IWG must review practices for the ESA consultation to identify problem areas, areas for improvement, and best practices for conducting that consultation among the covered agencies. A full list of the duties for the IWG is defined in section 10115 of the 2018 Farm Bill, which includes developing scientific and policy approaches to increase the accuracy and timeliness of the consultation requirement process, in accordance with the requirements of both FIFRA and the ESA.

Proposals to Improve the ESA Consultation Process

Under section 7(a)(2) of the ESA, all federal action agencies have responsibility to ensure that any action authorized, funded, or carried out by that agency is not likely to jeopardize the

continued existence of any federally listed endangered or threatened species (ESA-listed species) or result in the destruction or adverse modification of designated critical habitat. For pesticides, certain registration and re-evaluation actions under FIFRA may trigger section 7(a)(2) consultation with the Services under the ESA. The process by which EPA considers ESA in FIFRA decisions is described in Appendix 1.

The Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), USDA, and EPA asked for advice from the National Academy of Sciences (NAS) in 2011 related to conducting national level risk assessments for pesticides on ESA-listed species. In 2013, the NAS identified challenges and issues that the agencies should seek to resolve to improve interagency coordination and provided recommendations on a unified interagency framework.¹ The framework is a three-step process that integrates ecological risk assessment methods with ESA section 7 consultations. The first two steps are performed by EPA in a biological evaluation (BE) where potential risks that a pesticide may pose to an ESA-listed species and any designated critical habitat associated with EPA's action are evaluated. The BE identifies: (1) actions that have no effect on the listed species; (2) actions that may affect and are *not* likely to adversely affect the listed species (NLAA); and (3) actions that may affect and *are* likely to adversely affect (LAA) the listed species. EPA initiates "consultation" with NMFS and/or FWS on actions that "may affect" ESA-listed species or designated critical habitat. Formal consultation occurs when EPA reaches an LAA determination. Informal consultation occurs when EPA reaches a NLAA determination, and no consultation is required when EPA reaches a "no effect" determination.

NMFS and/or FWS conclude a formal consultation by issuing a Biological Opinion (BiOp) that addresses the proposed federal agency action considered during consultation. NMFS and/or FWS determine whether the proposed action assessed in the BiOp is likely to jeopardize the continued existence of an ESA-listed species or to adversely modify/destroy designated critical habitat (step three of the NAS-recommended framework). The BiOp may include reasonable and prudent alternatives (RPAs) to avoid jeopardy/adverse modification and reasonable and prudent measures (RPMs) to minimize incidental take.

USDA, while it has no formal role in the ESA consultation process between EPA (the federal action agency), NMFS, and FWS, does play an important role in providing these agencies with pesticide use and usage data² and information on agricultural production practices when requested. USDA's National Agricultural Statistics Service has also provided assistance on the appropriate use of the Cropland Data Layer and other geospatial information related to the location of agricultural crops.

¹ Assessing Risks to Endangered and Threatened Species from Pesticides, National Research Council of the National Academies, The National Academies Press (2013).

² Use refers to labeled pesticide application sites and practices (i.e., the legal purposes and manner in which the end user may use the pesticide product under the EPA-registered label). Usage refers to actual application sites, practices, and the amount and intensity of pesticide applications based on best available data.

Leaders of the covered agencies met on June 6, 2019, to discuss improving the ESA consultation process for pesticides to ensure that the process is protective of species, timely for pesticide regulatory decisions, and transparent to the public. The IWG directed agency staff to work together to develop recommendations to improve the consultation process. The following proposals set out in this report were developed by these staff and submitted to the IWG for consideration on November 12, 2019. To date, the IWG has not made final recommendations based on these proposals.

- 1. Incorporate the recent revisions to the implementing regulations associated with the ESA consultation process into the consultation process for pesticides.** FWS and NMFS (collectively referred to as the Services) revised the regulations at 50 C.F.R. Part 402 that implement section 7(a)(2) of the ESA (84 Fed. Reg. 44976). The revisions are intended to clarify, interpret, and implement the consultation procedures for section 7 consultations, including applicable pesticide consultations.
- 2. Continue the ongoing work that the agencies have started to improve the accuracy of the data and efficiency of the analyses that support pesticide consultations.** The Services continue to refine the range maps for ESA-listed species to produce reliable and authoritative data and maps that will support endangered species consultations. The IWG has also noted that incorporation of usage data is particularly important to a credible pesticide consultations process under the ESA and has directed staff to develop recommendations to incorporate usage data into consultations so as to meet the best available scientific and commercial data requirements of the ESA. The agencies began discussing usage data and how to incorporate that data into pesticide consultations in a February 2018 interagency meeting, which was attended by leadership from FWS, NMFS, EPA, and USDA. They provided direction to the agencies to improve the consultation process, specifically through incorporation of usage data. This led to the creation of the interagency pesticide usage workgroup and recommendations for incorporation of usage data into the malathion consultation. In May 2019, EPA also proposed revisions to its BE methodology (hereafter referred to as Draft Proposed Revised Method) that are designed to ensure this process is efficient, protective, transparent, and based on the best available science to better inform BiOps.³ The revisions include incorporation of usage data, and EPA is currently reviewing public comments on the proposed revision and providing the Services and USDA opportunities for input. EPA plans to publish an updated Revised Methods document in March 2020, along with publication of draft BEs on methomyl and carbaryl.

³ Draft Revised Method for National Level Endangered Species Risk Assessment Process for Biological Evaluations of Pesticides, EPA-HQ-OPP-2019-0185-0002, 84 Fed. Reg. 22120 (May 16, 2019), available at <https://www.epa.gov/sites/production/files/2019-05/documents/epa-revised-interim-esa-methodology.pdf>; these are referred to as “revised methods” in this report.

- 3. The IWG will continue consulting with representatives of interested industry stakeholders and nongovernmental organizations.** A later section of this report documents outreach and collaboration with stakeholders and nongovernmental organizations to date. The members of the IWG anticipate that this outreach will improve the consultation process for pesticide registration and registration review.

Together, these efforts are consistent with the charge and duties of the IWG as outlined in section 10115 of the 2018 Farm Bill. Plans for implementing these proposals are described below.

Plans to Implement the Proposals

Incorporating recent revisions to the implementing regulations associated with the ESA consultation process

Section 7(a)(2) of the ESA requires that federal agencies, in consultation with and with the assistance of the Services, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of their critical habitat. In this case, the registration of a pesticide is considered the action and EPA is the action agency.

On August 12, 2019, the Services revised the ESA implementing regulations at 50 C.F.R. Part 402. The revisions clarify, interpret, and implement the ESA section 7(a)(2) consultation procedures, which are applicable to FIFRA pesticide consultations. These revisions addressed several topic areas including, but not limited to:

- revising the definitions of “destruction or adverse modification,” “effects of the action” and “environmental baseline;”
- establishing a definition for “programmatic consultation;”
- establishing a deadline for the Services to respond to federal agencies’ requests that their actions are not likely to adversely affect ESA-listed species or critical habitat; and
- codifying consultation streamlining mechanisms.

These revisions will help EPA and the Services work through the numerous and complex issues associated with pesticide consultations. The agencies will use the most current regulations for upcoming pesticide consultations as appropriate.

Continuing to Improve the Accuracy of the Data and Efficiency of the Analyses that Support Pesticide Consultations

Improving the Accuracy of Species Ranges

NMFS has mapped the ranges of ESA-listed species within NMFS' jurisdiction and has provided them to EPA. FWS is developing refined range maps for ESA-listed species within FWS' jurisdiction. To accomplish this task, FWS developed a process for refining listed species range maps in a way that is transparent, repeatable, and based on the best available data and methods. This effort is producing reliable, authoritative species range maps that will support the endangered species consultations, including pesticide consultations.

Improving the Accuracy of the Data and the Efficiency of BEs

After the framework developed by NAS was published in 2013, EPA, the Services, and USDA (to some extent, regarding data-related matters) worked closely to develop "interim methods."⁴ EPA applied the interim methods to three pilot pesticides – namely chlorpyrifos, diazinon, and malathion – in final BEs in January 2017. Since then, NMFS has released nation-wide BiOps on chlorpyrifos, diazinon, and malathion (December 2017) and has drafted additional BiOps for prometryn and bromoxynil (November 2019). The completion of these BiOps was made possible through EPA's implementation of the interim methods toward development of comprehensive BEs, which NMFS could seamlessly fold into BiOps. However, the agencies envisioned the interim methods as the beginning of an iterative process that would continue to evolve as the agencies gained experience with national pesticide risk assessments. EPA continues to work with the Services, USDA, and stakeholders to improve the consultation processes. The agencies have learned valuable lessons from the first three pilot consultations, and this experience will inform decisions moving forward.

Public outreach on the pilot BEs resulted in suggestions to improve the consultation process, including but not limited to incorporating usage data, probabilistic metrics, and uncertainty analyses more directly into effects determinations.

In preparation for the next nationwide BEs (for methomyl and carbaryl) and consistent with the objective to revise and refine the method used for the first three BEs, EPA proposed refinements to the BE process with its Draft Proposed Revised Method. The DOI, DOC, and USDA provided comments on the Draft Proposed Revised Method. EPA sought public comments on this Draft Proposed Revised Method from May to August 2019 (45-day public comment period, extended for an additional 45 days), held a public meeting on June 10, 2019, and formally consulted with Tribes. EPA is currently evaluating public input, and will meet with the FWS, NMFS, and USDA prior to release of the next BEs to discuss the comments from the public and input from

⁴ More information is available on EPA's website at <https://www.epa.gov/endangered-species/interim-approaches-pesticide-endangered-species-act-assessments-based-nas-report>.

the agencies. EPA anticipates releasing an updated Revised Methods document in March 2020, as noted earlier in this report. Some elements of the proposed revisions include: (1) incorporation of usage data to inform the likelihood that an ESA-listed species or designated critical habitat may be exposed to a pesticide; (2) incorporation of probabilistic approaches to determine the likelihood that an ESA-listed species will be adversely affected by a pesticide given the variability in the range of potential exposures and toxicological responses to listed species; and (3) incorporation of a weight of evidence framework for informing effects determinations.

Re-initiating Consultation on First Three Pilot Chemicals

EPA finalized BEs in January 2017, and NMFS finalized its BiOp in December 2017 on EPA's registration review of pesticides containing the active ingredients chlorpyrifos, diazinon, and malathion, which were the first three pilot chemicals evaluated using the interim methods. EPA opened a public comment period where stakeholders were asked for feedback on jeopardy findings; Reasonable and Prudent Measures (RPMs) and Reasonable and Prudent Alternatives (RPAs); and additional information, including the availability of national- and state-level use and usage data. Since NMFS issued the final BiOp, staff from the Services, USDA, and EPA have continued to work collaboratively and productively to develop approaches for better integration of pesticide use and usage data throughout the consultation process.

On July 19, 2019, EPA re-initiated formal consultation with NMFS on chlorpyrifos, diazinon, and malathion. EPA re-initiated consultation because additional information became available that the agency believes shows that the extent of the effects of the action may be different than what was previously considered. In particular, EPA identified additional usage data that they believe was not considered by NMFS in its earlier BiOp. EPA also posted the earlier BiOp for public comment. EPA believes this information informs the extent to which the pesticides may be applied and the potential consequences of those applications to listed species. The re-initiation process includes consideration of public comments submitted on NMFS' BiOp and continued discussion and consideration of new data and any processes that may be developed through the IWG. During the re-initiation process, the agencies will continue their collaborative work to develop improved methodologies for pesticide consultations. In addition, FWS, EPA, and the applicant for malathion also agreed to extend the consultation timeline to allow for incorporation of usage data into the process. Because a final BiOp had not been completed by FWS, this extension did not involve re-initiation.

The agencies believe it is critical that stakeholder feedback is considered to ensure that the BiOp reflects the best available information and that RPAs and RPMs can be readily adopted and implemented by those who use these products to meet their pest management needs.

Continued Stakeholder Engagement Efforts in 2019

Pursuant to the 2018 Farm Bill, the agencies are required to increase opportunities for meaningful stakeholder feedback on the working group's activities. Stakeholder feedback is a vital part of sound regulations, and the agencies are committed to continued outreach to stakeholders. Public input opportunities for the pesticide consultation process is outlined in a 2013 publication “Enhancing Stakeholder Input in the Pesticide Registration Review and ESA Consultation Processes and Development of Economically and Technologically Feasible Reasonable and Prudent Alternatives.” This paper was developed in response to stakeholder feedback and was finalized in March 2013 after taking public comment on the draft.⁵

Since the 2018 Farm Bill was enacted, EPA and the Services have actively sought stakeholder feedback on a number of key activities, examples of which are summarized below.

Between February 2019 and October 2019, FWS hosted meetings with the registrants (*i.e.*, applicants) for malathion on four occasions and in conjunction with other stakeholders on two occasions, in addition to numerous informal interactions during that timeframe. FWS continues to seek input and expertise from the registrants to clarify and refine the information used to complete the malathion BiOp.

On May 16, 2019, EPA, the Services, and USDA met with the American Mosquito Control Association (AMCA) to discuss mosquito control challenges and the potential impact of federal regulation on mosquito control operations. The AMCA presentation included the importance of mosquito control, new technologies for monitoring mosquito populations and targeting pesticide applications, and best practices for integrated pest management. In addition, AMCA provided specific usage information for each of the eight AMCA regions that cover the United States in order to inform the pesticide consultation process.⁶

On June 10, 2019, EPA hosted a public meeting on the proposed revised methods used for conducting BEs for listed species (described above).⁷ The meeting was attended by members from industry, states, federal government, and environmental non-governmental organizations (e-NGOs). The purpose of the meeting was to enhance stakeholder input on the proposal during the public comment period. The proposal was made available for public comment from May 16, 2019 to August 15, 2019, and for formal tribal consultation through October 2019. During the public comment period, EPA received approximately 70 sets of comments from a variety of stakeholders, and EPA is now considering how these public comments will inform the Proposed Revised Methods.

⁵ See docket EPA-HQ-OPP-2012-0442 at www.regulations.gov.

⁶ See docket EPA-HQ-OPP-2018-0141 at www.regulations.gov for meeting materials.

⁷ See docket EPA-HQ-OPP-2019-0185 at www.regulations.gov for background materials and a recording of the June 10, 2019 public meeting.

On October 16, 2019, EPA hosted an Environmental Modeling Public Meeting (EMPM). The topic of the meeting was “Incorporation of Pesticide Usage Data into Environmental Exposure and Ecological Risk Assessments.” Presenters included federal and state regulatory agencies, mosquito control authorities, and technical consultants. A number of the presentations specifically focused on how to incorporate usage data into listed species assessments. Discussions included descriptions of available usage data and their utility in ecological risk assessments. The EMPM provided a forum for stakeholders to present scientific and technical feedback on this important data source in ecological risk assessment methodology. The consultation process benefited from the information sharing and technical discussions that occurred during this public meeting.

In addition to public meetings, the agencies will continue to seek public input on its risk assessment methods as applied to draft BEs, RPMs and RPAs, and draft BiOps when they are completed. Consistent with the enhanced stakeholder input document, the proposed revisions to the risk assessment methods were subjected to a public comment period as previously stated, and draft risk assessments that utilize the revised methods will also be available for public comments for at least 60 days.

After the next BEs are released, the agencies plan to participate in stakeholder workshop(s) to continue dialogue with government, industry, commodity organizations, and e-NGOs. Stakeholders will also have the opportunity to discuss additional available information for potential refinements in the ESA risk assessment and mitigation process.

In addition, since the Farm Bill was enacted, EPA has received a stakeholder letter submitted by members of industry, e-NGOs, and commodity groups that made recommendations regarding the consultation process. Recommendations included short-term and long-term goals, such as including usage data, making improvements to species ranges, and enhancing stakeholder input into the ESA process. A letter was also submitted by the U.S. House of Representatives Committee on Natural Resources that expressed concerns with elements of the Draft Proposed Revised Methods described earlier in this report. This feedback, along with comments received through public comment periods, stakeholder workshops, and additional interagency discussion, is being considered as we move forward on improving the consultation process for pesticides.

Areas of Consensus and Continuing Topics of Disagreement and Debate

As mandated by the 2018 Farm Bill, this report identifies areas of consensus and continuing topics of disagreement and debate. The covered agencies are committed to working together to align their views in order to improve the ESA consultation process.

The Agencies Agree to Incorporate Usage Data into Consultation

The agencies have agreed, in principle, to incorporate pesticide-specific usage data (*e.g.*, agricultural survey data) into the listed species consultation process to incorporate estimates regarding where and to what extent a pesticide has been applied. The pilot nationwide BEs relied on maximum labeled uses to represent where the pilot chemicals could potentially be applied (*e.g.*, maximum potential area, intensity, and timing) to determine potential effects to listed species. The key difference between use and usage is the difference between labeled pesticide application sites and practices (use) and actual application sites, practices, and extent of use (usage) based on best available data. The agencies have been working collaboratively and productively to develop approaches for better integration of pesticide usage data throughout the consultation process.

The Agencies Agreed that EPA Should Take Comment on EPA's Draft Proposed Revised Methods for Conducting BEs

As previously discussed, EPA has proposed revisions to the methods used to conduct biological BEs. The revisions are intended to better distinguish species that are at risk of pesticide exposure from those that are not at risk, by incorporating additional data, such as usage data, and analyses, including probabilistic and weight-of-evidence criteria. DOI, DOC, and USDA provided comments on the Draft Proposed Revised Method. EPA is currently evaluating public input on the proposed revisions and met with the Services and USDA to discuss input from them in December 2019. EPA plans to release an updated Revised Methods document in March 2020 as noted earlier in this report.

EPA Re-Initiated Consultation on the First Three Pilot Chemicals and Agreed to a Process for the Re-initiation with NMFS

As discussed earlier in this report, on July 19, 2019, EPA re-initiated consultation on its registration review of pesticides containing the active ingredients chlorpyrifos, diazinon, and malathion. Continued collaborative work to develop improved methodologies for pesticide consultations will also occur during the re-initiated consultation. The process allows for consideration of public comments submitted on NMFS' BiOp. As part of the process for re-initiation, EPA provided a summary of the public comments submitted on the final BiOp to NMFS on August 19, 2019. Additional details are described earlier in this report.

The FWS, EPA, and the Applicant Agree to Extend Consultation Timeline

As discussed earlier, FWS, EPA, and the applicant for the malathion consultation agreed to extend the consultation timeline to allow for incorporation of usage data into the process. The

FWS has been working closely with the applicant in particular to discover any further information that will help to define how and where malathion is used.

Continuing Topics of Discussion and Debate

The agencies have worked closely together since the NAS report on pesticide consultations was published in 2013. There have been numerous interagency workshops and public stakeholder meetings which fostered robust dialogue and helped resolve complex scientific and policy issues. Several topics remain sources of disagreement and debate among the agencies. For example, the agencies are discussing more specifically how usage data can be applied to make effects determinations and jeopardy and adverse modification conclusions. Usage data describes the actual application sites, application practices, and the amount and extent of pesticide applications. Ongoing discussions include how to incorporate usage data in a manner that remains protective of species and accounts for data uncertainty. The agencies are also addressing the comments received on the Draft Proposed Revised Method from the public and the agencies prior to finalizing the method. Staff and management from the agencies met in December 2019 to discuss changes to the Revised Method resulting from this input. In addition, the agencies are still discussing the processes used to conduct and streamline BiOps, which are conducted by the Services. Elements of the BiOp include reasonable and prudent alternatives (RPAs), reasonable and prudent measures (RPMs), and jeopardy and adverse modification determinations. The agencies are currently discussing the incorporation of best available data to refine the BEs from EPA as well as the BiOps from the Services. The agencies expect that these productive discussions in this iterative approach will result in better analyses with the goal of protecting ESA-listed species.

Conclusion

The IWG was formally established in December of 2018 and this report is the first required under the 2018 Farm Bill. A subsequent report is scheduled to be submitted to Congress six months after submission of this report. The second report will describe the progress of the working group in further developing the recommendations described in this report. In addition, one year after submission of this report, then every six months thereafter for a period of five years, implementation reports are scheduled to be submitted to Congress that describe: (1) the implementation of recommendations described in this report; (2) the extent to which that implementation improved the consultation process; and (3) any additional recommendations for improvements to the process.

The agencies are committed to producing BEs and BiOps that are scientifically credible, legally defensible, and consistent with the mandates of the ESA, and that produce tangible benefits to

species conservation. The agencies are equally committed to continue a robust dialogue with all stakeholders to ensure transparency throughout the pesticide consultation process that appropriately considers effects to and from agricultural and non-agricultural uses of pesticides. The sustained interaction between the agencies and with the stakeholders has created a continued spirit of cooperation and dialogue concerning this work. Revised tools and methodologies on the part of the agencies have set the stage for long-term improvements and efficiencies to the ESA consultation process.

Appendix 1. Current Status of ESA Considerations for FIFRA Decisions

In the interest of meeting the requirements of timely EPA regulatory actions in sections 3 and 33 of FIFRA, EPA is continuing to implement a three-pronged strategy intended to address potential effects to ESA-listed species and designated critical habitat. This approach was also outlined in a joint report to Congress in 2014,⁸ and is described below.

First, EPA is consulting with the Services on certain registration review actions using the “interim methods” recommended by the NAS as part of a pilot process. Registration review under FIFRA section 3(g) is EPA’s periodic review of a pesticide to determine whether it continues to meet the FIFRA registration standard. The pesticides being evaluated early in the pilot process generally have high ecological risks or high pesticide usage. Therefore, consultation on these pesticides could result in additional protections to ESA-listed species and designated critical habitat from pesticides with higher risk or exposure profiles. Chlorpyrifos, diazinon, and malathion were the first three pesticides evaluated under the interim methods. The schedule for conducting the next nationwide BEs was negotiated as part of a partial settlement agreement pursuant to a joint stipulation filed on October 18, 2019 and entered by the court on October 22, 2019, in *Center for Biological Diversity et. al. v. EPA et al.* (N.D. Ca) (3:11-cv-00293).⁹

Currently, NMFS has scheduled Opinions, which cover prometryn and bromoxynil, due to be released in early 2020; and Opinions covering 1,3-D and r-metolachlor, due at the end of 2020. FWS also has opinions scheduled covering M-44 and 1080 due in late 2021. These ongoing consultations were initiated with BEs using previous methods. These Opinions are in addition to those that will result from the BEs described below.

Currently scheduled BEs include BEs for two insecticides (methomyl and carbaryl), two herbicides (atrazine and simazine; two additional herbicides, propazine and glyphosate, are scheduled to be evaluated with atrazine and simazine as part of a different agreement), and four rodenticides (brodifacoum, bromadiolone, warfarin, and zinc phosphide). The first milestones associated with this settlement agreement are scheduled to be completed in early 2020, and the first final BEs for methomyl and carbaryl are currently scheduled for early 2021.

⁸ Interim Report to Congress on Endangered Species Act Implementation in Pesticide Evaluation Programs, EPA, FWS, NMFS and USDA (November 2014), also available at <https://www.epa.gov/sites/production/files/2015-07/documents/esareporttocongress.pdf>.

⁹ <https://www.regulations.gov/docket?D=EPA-HQ-OGC-2019-0478>; Additional information on ESA-related settlement agreements in general can be found at <https://www.epa.gov/endangered-species/endangered-species-litigation-and-associated-pesticide-limitations> and <https://www.epa.gov/ogc/proposed-consent-decrees-and-draft-settlement-agreements#centerforbiologicaldiversity>.

Concurrent with ongoing ESA work on these chemicals, EPA is identifying necessary environmental restrictions that will reduce exposures and risks to both listed and non-listed species currently through the registration review process that are expected to help narrow the scope of future consultations by reducing the extent to which species may be exposed. For example, a number of interim registration review decisions have identified specific label changes as necessary to reduce the off-target spray drift of pesticides regardless of proximity to listed species' locations, which, as labels are amended in response to these decisions, is expected to reduce the geographical footprint of environmental exposure and may reduce risk to listed species whose range and/or critical habitat co-occur with the use of these pesticides. This approach is intended to achieve efficiencies by refining the scope of consultation as a result of mitigation measures implemented through interim decisions. Once the agencies have sufficient success completing effective consultations currently being developed in the context of the ongoing pilot consultations, ESA determinations will be integrated into additional FIFRA actions.

Second, consistent with the 2014 Interim Report to Congress,¹⁰ for new uses on pesticide-tolerant crops, EPA is using methods set out in the *Overview Document* for endangered species assessments to make effects determinations.¹¹ The *Overview Document* details EPA's general risk assessment approach for pesticides and its specific application to endangered species. This approach is being used to address EPA's FIFRA and ESA obligations while EPA continues to develop and implement methodologies to assess the potential risks of pesticides to listed species and their designated critical habitat through the interagency pilot process described earlier.

Third, for new pesticide active ingredients, EPA is comparing their toxicity with that of registered alternative pesticides. This information allows stakeholders to compare the relative inherent toxicity of the proposed registration with available alternatives. EPA believes that older, currently registered chemicals typically have the potential to pose greater risks to ESA-listed species than do the newer, generally lower-risk pesticides being introduced into the marketplace today, and that the comparative hazard information illustrates this point. The additional hazard information contributes to information sharing, promotes communication with the public, and improves relationships and trust with stakeholders.

¹⁰ <https://www.epa.gov/sites/production/files/2015-07/documents/esareporttocongress.pdf>.

¹¹ Overview of the Ecological Risk Assessment Process in the Office of Pesticide Programs, U.S. Environmental Protection Agency, Endangered and Threatened Species Effects Determinations, Office of Prevention, Pesticides and Toxic Substances Office of Pesticide Programs (January 23, 2004), available at <https://www.epa.gov/sites/production/files/2014-11/documents/ecorisk-overview.pdf>.