



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 18, 2012

Dr. Helen M. Golde, Acting Director
Office of Protected Resources
United States Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Silver Spring, MD 20910

Dear Dr. Golde,

This letter provides the Environmental Protection Agency's comments on the National Marine Fisheries Service (NMFS) May 11, 2012 Draft Biological Opinion (BiOp) "*National Marine Fisheries Service Endangered Species Act Section 7 Consultation on Environmental Protection Agency's Registration of Thiobencarb*" regarding the effects of the herbicide thiobencarb on endangered and threatened Pacific salmonids, specifically the Central Valley spring-run chinook, Sacramento River winter-run chinook, and the California Central Valley steelhead. The draft BiOp addresses formal consultation EPA initiated with NMFS between 2002 and 2004, based on potential risks to the subject species from the registered uses of thiobencarb. NMFS' draft BiOp concludes that the registration of thiobencarb is not likely to jeopardize the continued existence nor is it likely to destroy or adversely modify designated critical habitat of the three assessed listed Pacific salmonids. Although NMFS has concluded "no jeopardy", NMFS has identified non-discretionary measures in the form of Reasonable and Prudent Measures (RPMs) to avoid or minimize "incidental take." EPA acknowledges that incidental take is only authorized if the action complies with the terms and conditions of the RPMs to be covered under the "incidental take statement" in a BiOp.

As a general comment, EPA would like to commend NMFS on their efforts to engage stakeholders including the California Department of Pesticide Regulation (CDPR), the California Rice Commission (CRC), California Department of Water Resources (CDWR), and California Department of Fish and Game (CDFG) prior to issuance of the draft BiOp.

Specifically, EPA's comments on the draft thiobencarb BiOp are organized in the following sections:

- Definition of Salmon Bearing Waters;
- Draft Reasonable and Prudent Measures (RPMs);
- Conservation Measures; and
- Risk Assessment Process.

Definition of Salmon Bearing Waters

EPA remains concerned with the description of salmonid habitat described in this draft BiOp. Starting with the first NMFS BiOp (July 31, 2008), the description of salmonid bearing waters has not been consistent for the same species and Evolutionary Significant Units (ESUs). As stated in comments on previous NMFS' BiOps, the definition of salmonid bearing waters for the same species and ESU should be consistent across BiOps.

Draft Reasonable and Prudent Measures (RPMs)

The Federal Action which is evaluated in this BiOp is approval of labels that allow use of thiobencarb on rice in California. Although thiobencarb is currently registered for other uses, the only use that is relevant for this assessment, which covers listed salmonid species in Washington, Idaho, Oregon, and California, is rice grown in California. The draft BiOp specifies two RPMs, each of which includes two Terms and Conditions for the listed species considered. Given that the focus of the draft BiOp is thiobencarb use on rice within the range of listed Pacific salmon species, the RPMs are applicable only to areas where listed Pacific salmon species co-occur with use of thiobencarb on rice.

RPM 1

The Terms and Conditions of RPM 1 are:

Term and Condition 1.1) Adhere to California Department of Pesticide Registration PRESCRIBE database's use limitations for thiobencarb and ESA-listed salmonids within the Central Valley of California. <http://www.cdpr.ca.gov/docs/endspec/precscint.htm>

Term and Condition 1.2) Adhere to California Department of Pesticide Registration application permits for thiobencarb products as described in the Pesticide Use Enforcement Standards Compendium, Volume 3 (Rev. 2-11), in Appendix C, Section C.1 General Drift Minimization and Section C.2 Recommended Permit Conditions for Rice Pesticides.

http://www.cdpr.ca.gov/docs/enforce/compend/vol_3/append_c.pdf

EPA thinks it is entirely appropriate for NMFS, in preparing a BiOp, to consider the protections for listed species and designated critical habitat established by state programs. With respect to the requirements in proposed RPM 1, the draft BiOp references the California PRESCRIBE database and the permitting program that already apply in that state. Further, the entire extent of this use pattern is limited to California where these measures are in effect. We therefore believe that so long as use conforms with the provisions set forth in PRESCRIBE and the permitting requirements, the user should be covered by the Incidental Take Statement without need for changes to the FIFRA action.

In that regard, EPA notes that the draft BiOp states, with respect to RPM 1, that "EPA must reference and require the following risk reduction measures on all thiobencarb labels or ESPP Bulletins." There are significant legal and policy reasons why EPA could not and will not simply convert the requirements established through the California programs into binding federal requirements by citing the California documents and website. As a general matter, EPA does not believe it is appropriate for EPA to require compliance through the pesticide label with use limitations which are maintained through the efforts of state agencies or non-governmental authorities and that may change without any process for EPA review and approval. Further, EPA thinks an approach whereby EPA references the California programs is not consistent with NMFS' policy objectives. Therefore, EPA believes that the easiest and best course is for NMFS to make it clear that RPM 1 applies only to people who use thiobencarb on rice in California. If NMFS thinks that EPA must take some action to implement the proposed RPM 1 as FIFRA requirements, EPA and NMFS need to discuss the legal and policy considerations that bear on the kinds of actions EPA could take.

RPM 2

Term and Condition 2.1 EPA shall include the following instructions requiring reporting of fish kills either on the labels or ESPP Bulletins:

NOTICE: Incidents where salmon appear injured or killed as a result of pesticide applications shall be reported to NMFS OPR at 301-713-1401 and EPA's Office of Pesticide Programs. The finder should leave the fish alone, make note of any circumstances likely causing the death or injury, location and number of fish involved, and take photographs, if possible. Adult fish should generally not be disturbed unless circumstances arise where an adult fish is obviously injured or killed by pesticide exposure, or some unnatural cause. The finder may be asked to carry out instructions provided by NMFS OPR to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.

EPA intends to require that pesticide users report incidents. However, rather than reporting these incidents to EPA, we intend to require that they be reported to the pesticide registrant who is already required to provide information regarding incidents to EPA through a system established under section 6(a)(2) of FIFRA. By approaching incident reporting in this manner, EPA will avoid establishing a secondary system for receipt of such incidents and ensure appropriate treatment of all incidents reported. In addition, incidents can also be reported through the National Pesticide Information Center (NPIC) at 1-800-858-7378. EPA also requests clarification on how NMFS will determine the extent to which such salmon incidents are due to thiobencarb exposure.

Term and Condition 2.2 EPA shall report to NMFS OPR annually any incidences regarding thiobencarb effects on aquatic ecosystems added to its incident database that EPA has classified as "probable" or "highly probable".

While EPA will work with the Services to develop more efficient methods for reporting incident information in a routine manner, EPA would like to better understand how the Services intend to utilize this information so we can optimize our reporting for their needs. In addition, given Term and Condition 2.1, EPA would also request that NMFS provide to EPA any reported incidents on listed salmonids related to thiobencarb exposure.

Conservation Recommendations

Conservation Recommendation 1. Conduct mixture toxicity analysis in screening-level and endangered species biological evaluations;

This topic has been referred to the National Research Council (NRC) of the National Academy of Science. EPA will review the Council's recommendations on mixture toxicity evaluation and work with the Services to develop and implement a scientifically sound approach.

Conservation Recommendation 2. Develop models to estimate pesticide concentrations in flood plain habitats.

Models currently available to EPA are capable of simulating processes in a wide range of aquatic habitats including flood plain habitats of concern to NMFS. However, in order to make use of these modeling tools for simulating flood plain habitats, the geometry and hydrology of these systems need to be defined in a way that can be used to develop site-specific scenarios for the models. Given the wide range of flood plain habitat sizes and shapes used by Pacific salmonids, it is currently possible to assess only a small fraction of these environments, given the nature of current assessment tools. EPA has previously discussed the nature of these environments with the Services and looks forward to further discussion on the characteristics of these water bodies that would enable development of scenarios for flood plain habitats.

EPA has developed higher tier modeling tools for the evaluation of exposure from rice culture, specifically, the model PFAM (Pesticides in Flooded Agriculture Model) to augment its Tier 1 rice calculation. A provisional version of PFAM has been developed and is currently under evaluation. The model is available at <https://sites.google.com/site/pfamodel/> along with supporting documentation. It should be noted that input parameter guidance and standard scenarios for use with this model have not been developed for its use in OPP.

Conservation Recommendation 3. Collaborate with CDPR to review applicability of use limitations with PRESCRIBE to other pesticides and other listed species.

As noted above, EPA thinks it is entirely appropriate for NMFS, in preparing a BiOp, to consider the protections for listed species and designated critical habitat established by state programs, EPA does not, however, believe it is appropriate to require compliance through the pesticide label with use limitations which are maintained through the efforts of state agencies or non-governmental authorities and that may change without any process for EPA review and approval. In general, EPA notes that we have worked closely with our state regulatory officials on issues affecting pesticide use and will continue to do so.

Risk Assessment Process

EPA commends NMFS on the effort to spatially and temporally refine the overlap between thiobencarb use and listed salmonid occurrence that has been made in this BiOp.

NMFS used, in part, the EPA's Tier 1 rice model augmented by a degradation routine to estimate the concentration in water near rice paddies as part of the exposure assessment. This assessment was completed based on a similar approach and input parameters that were used in the EPA's thiobencarb endangered species assessment for the California red legged frog¹. Future exposure assessments by the EPA will use a degradation rate rather than a dissipation rate in the degradation routine with the Tier 1 Rice model in order to avoid double counting adsorption to the sediment. Alternatively, the provisional tier 2 aquatic agriculture model, PFAM, can be used to assess thiobencarb use on rice.

In the toxicity assessment, NMFS assigns a high/medium/low ranking to the available data. EPA requests that supporting documentation and decision rules for assignment of high, medium, and low ranking in data such as those on pg. 250-251 of the draft BiOp be made available for review.

As you are aware, EPA makes draft BiOps related to pesticide actions available through the EPA website² and a public docket³ for purposes of obtaining input to any draft RPAs and RPMs in the draft. The Excel spreadsheet transmitted with this letter provides all public comments received by EPA in the public docket for consideration by NMFS. EPA believes that public transparency and accountability are core values for our agencies. EPA recommends that NMFS include a section in the final BiOp that responds to all the public comments received. More specifically, NMFS should: 1) indicate for each comment accepted how that acceptance is reflected in revisions to the draft BiOp and 2) for each comment rejected, the rationale for rejecting the comment and not revising the BiOp. EPA anticipates working with NMFS to finalize this BiOp and appropriate RPMs over the next month.

¹ <http://www.epa.gov/oppfead1/endanger/litstatus/effects/redleg-frog/index.html#thiobencarb>

² <http://www.epa.gov/oppfead1/endanger>

³ <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2008-0654-0499>

Thank you for providing the draft BiOp for EPA's review and comment. EPA appreciates the methodological improvements NMFS has made relative to previous BiOps and believes there are areas that would benefit from further scientific review, discussion and continued collaboration between EPA and NMFS. In this regard, the upcoming NRC review of scientific issues associated with the development of BiOps will be very informative. Please do not hesitate to contact me if you have any questions regarding our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Bradbury", with a long, sweeping underline that extends to the right.

Steven Bradbury, Ph.D., Director
Office of Pesticide Programs

Attachment

cc: Jim Jones
Larry Elworth
Donald Brady
Bill Jordan
Anita Pease
Richard Keigwin
Catherine Eiden
Mark Dyner
Melissa Grable