



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

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

February 20, 2009

MEMORANDUM

SUBJECT: Effects Determinations for 2,4-D Relative to the California Red-Legged Frog and the Alameda Whipsnake and their Designated Critical Habitats

FROM: Christine Hartless, Ph.D, Wildlife Biologist *Christ Hartless* 2-20-09
ERB 1
Environmental Fate and Effects Division

TO: Arthur-Jean B. Williams, Associate Director
Environmental Fate and Effects Division

Attached is an assessment to evaluate potential direct and indirect effects on individuals of the federally threatened California Red-legged Frog (*Rana aurora draytonii*) (CRLF) and Alameda Whipsnake (*Masticophis lateralis euryxanthus*) (AW) arising from FIFRA regulatory actions regarding all registered uses of 2,4-D in California. In addition, this assessment evaluates whether the action is expected to result in modification of designated critical habitat for the CRLF and AW. This ecological risk assessment has been prepared consistent with the settlement agreement in *Center for Biological Diversity (CBD) vs. EPA et al.* (Case No. 02-1580-JSW(JL)) which addresses the CRLF and was entered in Federal District Court for the Northern District of California on October 20, 2006. This assessment also addresses the AW for which 2,4-D was alleged to be of concern in a separate suit (*Center for Biological Diversity (CBD) vs. EPA et al.* (Case No. 07-2794-JCS)).

The attached assessment was conducted consistent with the Agency's Overview Document¹. Effects determinations for this assessment on 2,4-D use in California are summarized below. Details of the effects determinations can be found in **Tables 1.3 and 1.4** of the "Executive Summary" section of the assessment.

- **Based on the best available information, the Agency makes a May Affect and Likely to Adversely Affect (LAA) determination for both the CRLF and the AW for all uses except Citrus and Potato.** This is based on the potential for direct effects and indirect effects due to potential decreases in aquatic (CRLF only) and terrestrial prey items as well as potential habitat effects.
- **Based on the best available information, the Agency makes a May Affect but Not Likely to Adversely Affect (NLAA) determination for both the CRLF and the AW for Citrus and Potato.** Although there is the potential for indirect effects indicated by LOC exceedances for

¹ Overview of the Ecological Risk Assessment: Process in the Office of Pesticide Programs, U.S. Environmental Protection Agency: Endangered and Threatened Species Effects Determinations: January 23, 2004.

terrestrial plants and terrestrial prey items, these effects were determined to be insignificant and/or discountable.

- **The Agency has determined that there is potential for modification of CRLF-designated critical habitat from the use of 2,4-D.** This is based on the potential for indirect effects for all labeled uses except for Citrus and Potato. These indirect effects are due to potential decreases in aquatic and terrestrial prey items, and for modification of designated critical habitat due to the potential loss of aquatic and terrestrial prey items and habitat (aquatic and terrestrial plants).
- **The Agency has determined that there is the potential for modification of AW-designated critical habitat from the use of 2,4-D.** This is based on the potential for indirect effects for all labeled uses except for Citrus and Potato. These indirect effects are due to potential decreases in terrestrial prey items, and the potential for modification of designated critical habitat due to the potential loss of aquatic and terrestrial prey items and terrestrial habitat (plants).

As required by the Alternative Consultation Agreement EPA entered into with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services), I have been trained by the Services to make such determinations. Additionally, this assessment was subjected to internal Agency peer review throughout its development. The review panel included one scientist who has been trained by the Services to make such determinations (Greg Orrick).

Please let me know if you have any questions regarding this assessment and effects determination for 2,4-D relative to the CRLF, the AW, and their designated critical habitats.

Attachments