



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

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

October 16, 2009

MEMORANDUM

SUBJECT: Effects Determinations for Trifluralin Relative to the California Red-Legged Frog, Delta Smelt, San Francisco Garter Snake, and San Joaquin Kit Fox, as well as the Designated Critical Habitats for the California Red-Legged Frog and the Delta Smelt

FROM: Christine Hartless, Ph.D, Wildlife Biologist
ERB 1
Environmental Fate and Effects Division

Christine Hartless
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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 (CRLF: *Rana aurora draytonii*), the federally threatened Delta smelt (DS: *Hypomesus transpacificus*), the federally endangered San Francisco Garter Snake (SFGS: *Thamnophis sirtalis tetrataenia*), and the federally endangered San Joaquin Kit Fox (SJKF: *Vulpes macrotis mutica*) arising from FIFRA regulatory actions regarding all registered uses of trifluralin in California. In addition, this assessment evaluates whether the action is expected to result in modification of designated critical habitat for the CRLF and DS. 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 DS, SFGS, and the SJKF for which trifluralin 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 trifluralin use in California are summarized below. Details of the effects determinations can be found in **Tables 1.1 and 1.2** 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 the CRLF, DS, SFGS, and the SJKF for all labeled uses in California.** This is based on the potential for direct effects and indirect effects due to potential decreases in prey items as well as potential habitat effects.

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.

- **The Agency has determined that there is potential for modification of CRLF-designated critical habitat from the use of trifluralin.** This is based on the potential for indirect effects for all labeled uses. This is based on the non-targeted water monitoring data that indicated observed concentrations could be high enough to cause direct effects to the CRLF. In addition, there is the potential for indirect effects are due to 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 (terrestrial plants).
- **The Agency has determined that there is the potential for modification of DS-designated critical habitat from the use of trifluralin.** This is based on the non-targeted water monitoring data that indicated observed concentrations could be high enough to cause direct effects to the DS. In addition, there is potential for indirect effects due to the potential loss and modification of 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 (Anita Pease).

Please let me know if you have any questions regarding this assessment and effects determination for trifluralin relative to the CRLF, DS, SFGS, and the SJKF, as well as the designated critical habitats of the CRLF and the DS.

Attachments