



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

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

SUBJECT: Special Local Needs Registration [Section 24(c)] for Fipronil (Topchoice®) Use to Control Fire Ants in Arizona (PC Code 129121; DP Barcode D311943)

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TO: Marion Johnson, Acting Branch Chief
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This memorandum provides an ecological risk assessment to support the Section 24(c) for use of fipronil (Topchoice®) to control fire ants. Based on the proposed Section 24(c) label, the maximum fipronil application rate cannot exceed 0.01244 lbs ai/A. Higher fipronil application rates of up to 0.02488 lbs ai/A for sod farm use have been removed from the label. The risk assessment for granule fipronil applications at 0.0125 lbs ai/A indicates risk presumptions are exceeded for acute risk to endangered freshwater aquatic invertebrates (RQ=0.453) and estuarine invertebrates (RQ=1.393) (D26067, D273236, D2732241, D273375, D274014). There is no risk concern for impacts to estuarine invertebrates because there are no coastal boundaries or estuarine areas in Arizona. A critical risk issue, however, are acute effects to aquatic invertebrates.

An analysis of endangered aquatic invertebrates, birds, fish, amphibians, and insects was conducted for the State of Arizona (Table 1). This analysis was conducted using LOCATES for all use sites in Arizona.



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Table 1: List of Endangered Invertebrates, Birds, Fish, Amphibians, and Insects in the State of Arizona.

COMMON NAME	SCIENTIFIC NAME
AMBERSNAIL, KANAB	<i>Oxyloma haydeni kanabensis</i>
BOBWHITE, MASKED	<i>Colinus virginianus ridgwayi</i>
CHUB, BONYTAIL	<i>Gila elegans</i>
CHUB, HUMPBACK	<i>Gila cypha</i>
CHUB, VIRGIN RIVER	<i>Gila seminuda (=robusta)</i>
CHUB, YAQUI	<i>Gila purpurea</i>
FALCON, NORTHERN	<i>Falco femoralis septentrionalis</i>
APLOMADO	
FLYCATCHER, SOUTHWESTERN	<i>Empidonax traillii extimus</i>
WILLOW	
PELICAN, BROWN	<i>Pelecanus occidentalis</i>
PUPFISH, DESERT	<i>Cyprinodon macularius</i>
PYGMY-OWL, CACTUS	<i>Glaucidium brasilianum cactorum</i>
FERRUGINOUS	
RAIL, YUMA CLAPPER	<i>Rallus longirostris yumanensis</i>
SALAMANDER, SONORA TIGER	<i>Ambystoma tigrinum stebbinsi</i>
SQUAWFISH, COLORADO	<i>Ptychocheilus lucius</i>
SUCKER, RAZORBACK	<i>Xyrauchen texanus</i>
TOPMINNOW, GILA (YAQUI)	<i>Poeciliopsis occidentalis</i>
TROUT, GILA	<i>Oncorhynchus gilae</i>

Of the species listed, the bobwhite quail, falcon, pygmy -owl (bolded) would not be expected to be directly affected from fipronil application. In addition, indirect effects from fipronil effects on aquatic invertebrate prey base would not be expected for these species. With the exception of the Kanab ambersnail, indirect effects are possible from fipronil effects on aquatic invertebrate prey base. The Kanab ambersnail is the only species which may be directly affected from fipronil use. The Kanab ambersnail was discovered in the Grand Canyon National Park (Federal Register 50 CFR Part 12 RIN 1018-AB67, Vol. 57, No. 75, April 17, 1992). It is located in a wetland spring (100 x 30 meter area) fed by springs cascading down the cliffs of the canyon wall within the gorge of the Grand Canyon.