

estimates of a pesticide's concentration in water (EECs). DWLOC values are not regulatory standards for drinking water. DWLOCs are theoretical upper limits on a pesticide's concentration in drinking water in light of total aggregate exposure to a pesticide in food and residential uses. In calculating a DWLOC, the Agency determines how much of the acceptable exposure (i.e., the PAD) is available for exposure through drinking water e.g., allowable chronic water exposure (mg/kg/day) = cPAD - (average food + residential exposure). This allowable exposure through drinking water is used to calculate a DWLOC.

A DWLOC will vary depending on the toxic endpoint, drinking water consumption, and body weights. Default body weights and consumption values as used by the U.S. EPA Office of Water are used to calculate DWLOCs: 2 liter (L)/70 kg (adult male), 2L/60 kg (adult female), and 1L/10 kg (child). Default

body weights and drinking water consumption values vary on an individual basis. This variation will be taken into account in more refined screening-level and quantitative drinking water exposure assessments. Different populations will have different DWLOCs. Generally, a DWLOC is calculated for each type of risk assessment used: Acute, short-term, intermediate-term, chronic, and cancer.

When EECs for surface water and ground water are less than the calculated DWLOCs, EPA concludes with reasonable certainty that exposures to the pesticide in drinking water (when considered along with other sources of exposure for which EPA has reliable data) would not result in unacceptable levels of aggregate human health risk at this time. Because EPA considers the aggregate risk resulting from multiple exposure pathways associated with a pesticide's uses, levels of comparison in

drinking water may vary as those uses change. If new uses are added in the future, EPA will reassess the potential impacts of residues of the pesticide in drinking water as a part of the aggregate risk assessment process.

1. *Acute risk.* No endpoint of concern attributable to a single oral dose was identified for either the general U.S. population (including infants and children) or females 13–50 years old population subgroup.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that exposure to flufenpyr-ethyl from food will utilize less than 1% of the cPAD for the U.S. population, less than 1% of the cPAD for all infants less than 1 year old and less than 1% of the cPAD for for children 3–5 years old. There are no residential uses for flufenpyr-ethyl that result in chronic residential exposure to flufenpyr-ethyl.

TABLE 4.—AGGREGATE RISK ASSESSMENT FOR CHRONIC (NON-CANCER) EXPOSURE TO FLUFENPYR-ETHYL

Population Subgroup	cPAD (mg/kg)	%cPAD (Food)	Surface Water EEC (ppb)	Ground Water EEC (ppb)	Chronic DWLOC <sup>2</sup> (µg/L)
U.S. population	0.4	<1%	2.0	0.07	14,000
All infants (<1 year old)	0.4	<1%	2.0	0.07	4,000
Children (1–2 years old)	0.4	<1%	2.0	0.07	4,000
Children (3–5 years old)	0.4	<1%	2.0	0.07	4,000
Children (6–12 years old)	0.4	<1%	2.0	0.07	4,000
Youth (13–19 years old)	0.4	<1%	2.0	0.07	12,000
Adults (20–49 years old)	0.4	<1%	2.0	0.07	14,000
Females (13–49 years old)	0.4	<1%	2.0	0.07	12,000
Adults (50+ years old)	0.4	<1%	2.0	0.07	14,000

3. *Short-term risk.* Short-term aggregate risk assessment was not performed because there are no registered or proposed residential non-food uses. Flufenpyr-ethyl is not registered for use on any sites that would result in residential exposure. Therefore, the aggregate risk is the sum of the risk from food and water, which do not exceed the Agency's level of concern.

4. *Intermediate-term risk.* Intermediate-term aggregate risk assessment was not performed because there are no registered or proposed residential non-food uses. Flufenpyr-ethyl is not registered for use on any sites that would result in residential exposure. Therefore, the aggregate risk is the sum of the risk from food and

water, which do not exceed the Agency's level of concern.

5. *Aggregate cancer risk for U.S. population.* Flufenpyr-ethyl is not carcinogenic.

6. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, and to infants and children from aggregate exposure to flufenpyr-ethyl residues.

#### IV. Other Considerations

##### A. Analytical Enforcement Methodology

The Agency has a method (Method RM-36–1) for determination of flufenpyr-ethyl per se and a method (Method RM-36–3c) for determination for free and conjugated S-3153 acid-4-

OH. An enforcement (confirmatory) method capable of measuring both parent and metabolite is being requested by the Agency.

##### B. International Residue Limits

There are currently no established tolerances for residues of flufenpyr-ethyl in/on any plant or livestock commodities. As there are no Mexican, Canadian or Codex maximum residue limits established for flufenpyr-ethyl in/on field corn, soybeans and sugarcane, there are no compatibility issues to be reconciled.

##### C. Conditions

Confirmatory storage stability data for the metabolite S-3153 acid-4-OH in field corn forage and stover and an