

Human Health and Ecological Risk
Final Report
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Excerpt

Imidacloprid is not very toxic to fish, amphibians, and even some aquatic invertebrates. No effects on any aquatic species are likely after either tree injection or soil injection applications to predominantly clay or loam soils. In addition, worst-case estimates of peak or longer-term exposures from broadcast applications indicate that adverse effects are not likely to be observed in aquatic vertebrates. Differences between sensitive and tolerant aquatic invertebrate species are substantial, spanning a factor of over 400,000 for acute NOEC values and over 11,000 for longer-term NOEC values. Depending on the application method and soil type, hazard quotients for sensitive aquatic invertebrates could range from about 2 to over 80. As in the human health risk assessment, the ecological risk assessment uses a scenario for an accidental spill that involves the contamination of a small body of water with 0.4 lb to 40 lbs of imidacloprid. Over this range, the hazard quotients for sensitive aquatic invertebrates are extraordinarily high, ranging from about 500 to over 50,000. While the likelihood and plausibility of such spills may be remote, these hazard quotients clearly suggest that the greatest risk in the event of an accidental spill will be to aquatic invertebrates. As with fish and amphibians, tolerant aquatic invertebrates are not at risk in the event of an extreme spill.