

Fluridone Screening Profile

Fluridone is a chemical that may be present in potential drinking water sources in Minnesota. The information in this profile was collected for the screening process of the Minnesota Department of Health's Contaminants of Emerging Concern (CEC) program in March 2012. The chemicals nominated to the CEC program are screened and ranked based on their toxicity and presence in Minnesota waters. Based on these rankings, some chemicals are selected for a full review. CEC program staff have not selected fluridone for a full review.

Fluridone Uses

Fluridone is an herbicide used to control aquatic plants in ponds, lakes, reservoirs, and irrigation ditches.

Fluridone in the Environment

Fluridone enters the environment through regular aquatic application. There is some evidence that fluridone can be present in food crops irrigated with water that has been treated with fluridone, or in edible aquatic plants collected from lakes treated with fluridone.¹

Fluridone is not currently being monitored for in Minnesota waters. The U.S. Environmental Protection Agency (EPA) has developed a human health benchmark for pesticides (HHBP) value for fluridone of 1,050 parts per billion (ppb).² Concentrations at or below this level are unlikely to pose a health risk.²

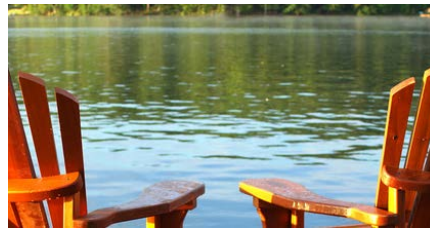
Fluridone is designed to kill aquatic plants, but it is not expected to build up in tissues of fish or other wildlife.³

Exposure to Fluridone

Exposure to fluridone may occur through drinking contaminated water or by swimming in areas where fluridone has recently been applied.⁴

Potential Health Effects

In animal studies, exposure to high levels of fluridone for an extended amount of time has been shown to affect the liver.⁵



Based on the screening assessment, a full review of fluridone is possible; however, it ranks much lower than other nominated CEC chemicals at this time.

References

1. U.S. National Library of Medicine. Hazardous Substances Data Bank <http://toxnet.nlm.nih.gov/cgi-bin/sis/search2/r?dbs+hsdb:@term+@DOCNO+6653>
2. EPA. TRED 2004. https://archive.epa.gov/pesticides/reregistration/web/pdf/fluridone_tred.pdf
3. Wisconsin Department of Natural Resources. Fluridone Chemical Fact Sheet. 2012. <http://dnr.wi.gov/lakes/plants/factsheets/FluridoneFactsheet.pdf>
4. EPA. Integrated Risk Information System. Fluridone. 1990. https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=54
5. EPA. Emergency Exemption for Fluridone Use on Cotton. 2012. <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2012-0756-0002>

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Contaminants of Emerging Concern Program

Chemical Review Process

The Contaminants of Emerging Concern (CEC) program investigates the potential health concerns of contaminants of emerging concern in drinking water. This investigation includes a rapid assessment ('screening') to prioritize nominated chemicals for in-depth research and evaluation that result in drinking water guidance and information about exposure.

Chemical Nomination and Eligibility

Minnesota risk managers, stakeholders, and the public are encouraged to nominate contaminants for review. After chemicals are nominated, MDH program staff determine eligibility by examining the likelihood that the chemical will enter Minnesota waters and whether adequate guidance already exists.

Screening and Risk Based Selection

Program staff conduct a screening of where and how a contaminant is used in the state, its potential to enter the water supply, and its potential to harm humans. The results from the screening are used to prioritize nominated chemicals.

Chemicals having higher exposure and harm potential are selected for in-depth review and development of guidance (a contaminant water concentration that is not harmful to people). Chemicals that rank lower remain candidates for future in-depth review. For some contaminants, however, the information is too limited. For chemicals that are not selected for in-depth review, the results of the screening assessment are summarized in a Screening Profile. The screening and prioritization process is repeated as additional chemicals are nominated and screened.

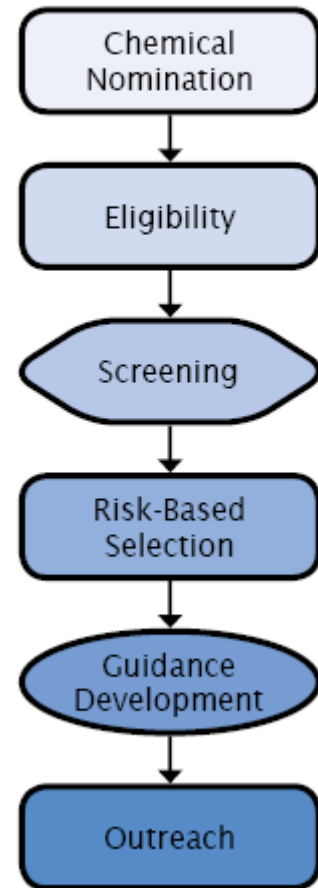
Guidance Development

When a chemical is selected for a full review, program staff carefully review exposure and toxicological information to understand how humans may be exposed and what adverse health effects occur from exposure. Staff combine the results of in-depth analyses of toxicity and exposure to calculate a guidance, a level of contaminant in water that causes little to no harm to someone drinking the water.

Outreach

CEC program staff work to communicate the results of the chemical review process. This includes making key findings publicly available on web pages and at a variety of meetings and events. An email subscription service (GovDelivery) is also used to alert the interested public (subscribers) of chemical review activities and guidance values.

Chemical Review Process



Subscribe to the CEC Program GovDelivery service to receive notification when reviews are initiated for water contaminants and other announcements by visiting: <http://www.health.state.mn.us/cec>