

CONTAMINANTS OF EMERGING CONCERN PROGRAM

Imazapyr Screening Profile

Imazapyr is a contaminant that has been found 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 imazapyr for a full review.

Imazapyr Uses

Imazapyr is an herbicide used for a large range of weeds, including:

- Grasses
- Broadleaf plants
- Trees and shrubs
- Aquatic plant species



Imazapyr is applied in a variety of agricultural, commercial, recreational, and residential settings including:

- Crops
- Forests
- Ponds, lakes, streams, and other wetlands
- Homes, patios, and driveways
- Parking lots and sidewalks
- Athletic fields and golf courses

Imazapyr in the Environment

Imazapyr enters the environment through regular land and aquatic application. After it enters the environment, imazapyr is expected to be persistent in the environment.¹ Low levels of imazapyr have been detected in Minnesota waters:

- the maximum groundwater detection was 0.0376 parts per billion (ppb).²
- the maximum surface water detection was 0.0656 ppb.²

Imazapyr may pose low levels of ecological hazard and toxicity to plants. Imazapyr is not expected to build up in the tissues of fish or other wildlife.¹

Exposure to Imazapyr

Exposure to imazapyr may occur through drinking contaminated water, by eating food that contains pesticide residues, or by swimming in waters where imazapyr was recently applied.

Potential Health Effects

Imazapyr is designed to be toxic to plants and has little effects on humans. In laboratory studies, animals exposed to high doses of imazapyr experienced minimal to no health effects.¹

MDH developed a pesticide rapid assessment of 900 ppb for imazapyr in drinking water.³

Concentrations at or below this level are unlikely to pose a health risk.

Based on the screening assessment, a full review of imazapyr may be possible; however, it ranked lower than other nominated CEC chemicals at this time.

References

1. U.S. Environmental Protection Agency. 2006. Reregistration Eligibility Decision for Imazapyr. http://www.epa.gov/pesticides/reregistration/REDs/i_mazapyr_red.pdf
2. Minnesota Department of Agriculture. 2012 Water Quality Monitoring Report. 2013 http://www.mda.state.mn.us/chemicals/pesticides/~/_media/Files/chemicals/maace/2012wqm.ashx
3. Minnesota Department of Health. Report on pesticide rapid assessments. 2014. <http://www.health.state.mn.us/divs/eh/risk/guidance/dwec/rapassrept.pdf>

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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.

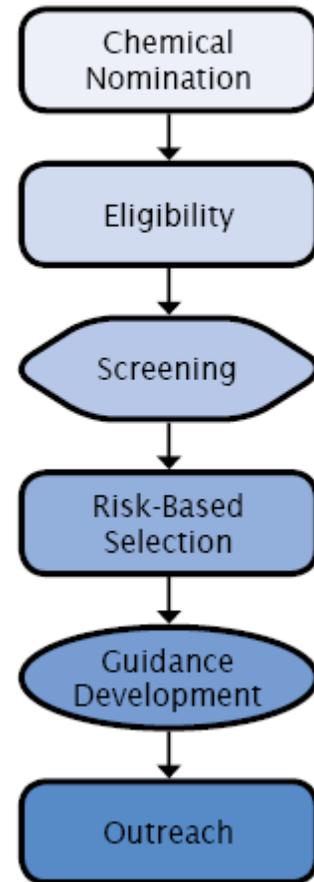
Guidance Development

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>