

St. Anthony Village: Drinking Water and 1,4-Dioxane

James Kelly, M.S.
Manager, Environmental Surveillance & Assessment



Protecting people in Minnesota...

Unregulated contaminants in drinking water – part of a Special Monitoring Program

- Special testing every 3-5 years by EPA and MDH
- Compliance with guidance value is voluntary
- Guidance values are based on health only
- Testing is done in community water supplies serving 10,000+ people
- Public is notified of test results through the CCR



Emerging Contaminants...

- No clear definition...some “new” awareness
 - new chemical
 - new toxicological info
 - new level of detection
 - new media
 - new pathway
- Health “standard” lacking or changing
- Not yet regulated in drinking water



1, 4-Dioxane is...

- Used to stabilize chlorinated solvents.
- Found in small amounts in personal care products, laundry detergents and food.

In the environment...

- 1,4-Dioxane released by spills or disposal of solvents that contain it as a stabilizer.
- Likely to stay in water once there - does not break down.

*This is why it can reach groundwater, surface water,
and potentially drinking water.



1,4-Dioxane in Minnesota...

- 1,4-Dioxane has been detected in several public water supplies in Minnesota.
- MDH does not regulate 1,4-Dioxane in public water supplies.
- MDH does have a health-based guidance value for 1, 4-Dioxane.

1,4-Dioxane in St. Anthony Village...

- Small amount was found in your city's public drinking water system.
- **Do not** exceed the guidance value recommended by MDH.



MDH Guidance: 1, 4-Dioxane in drinking water 1 ppb (1 ppb = 1 microgram per liter, or $\mu\text{g/L}$)

- 1,4-Dioxane was found to cause liver cancer in animal experiments - no human cases of cancer have been linked to it.
- Based on drinking water daily, over long-term or lifetime of exposure – **not an immediate health risk.**
- Includes factors to account for other exposures (diet, consumer products).

MDH first reviewed 1, 4-Dioxane in 2011;
adopted the guidance as a rule in September 2013.



The risk of developing cancer from exposure to 1,4-Dioxane, at the amounts found in the city drinking water, is *very low*.

- It won't have any impact on your health if you drink the water for a few days, a few months, or even a few years.
- Other activities, like housecleaning, washing dishes, bathing, showering, or watering your lawn will not place you at increased risk for health problems.

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Conclusions

- St. Anthony Village is proactively addressing the 1, 4-Dioxane issue in the public water supply.
- Carbon filters and other point-of-use, household technology will generally not remove 1,4-Dioxane from drinking water.
- Treatment at the source (city wells) will be the most effective remedy.

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