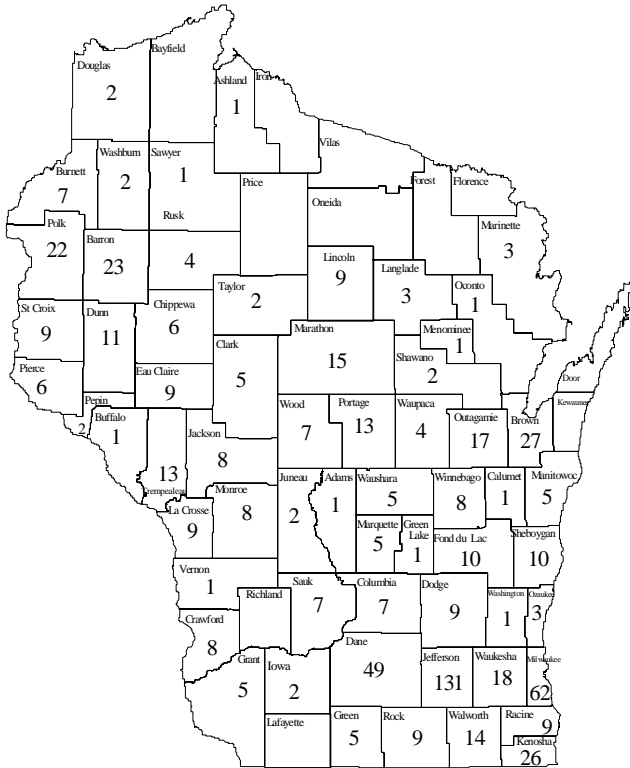


1993 - 2005

Ammonia Events by County

Total number = 667



Total Ammonia Victims (not on map)
N = 268

Total Ammonia Evacuees (not on map)
N = 7,827

Funding Attribution Statement

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Wisconsin Department of Health & Family Services
Division of Public Health
Bureau of Environmental and Occupational Health
One W. Wilson St, Room 150
Madison, WI 53702
Phone: 608 266-2663

<http://dhfs.wisconsin.gov/eh/HSEES/>

Ammonia Spills in Wisconsin (1993-2005)



Wisconsin Hazardous Substances
Emergency Events Surveillance
(HSEES) Program

Ammonia Characteristics and Effects

Ammonia is a colorless gas with a sharp, suffocating odor.

Ammonia gas can be detected by most people at a concentration of 1 to 8 parts per million (ppm).

Ammonia exposure can cause headache, nausea, and a pronounced burning feeling of the eyes, nose, throat, and skin.

Anhydrous ammonia expands when released and can form large clouds of toxic vapors.

Under certain conditions ammonia can be flammable or explosive.

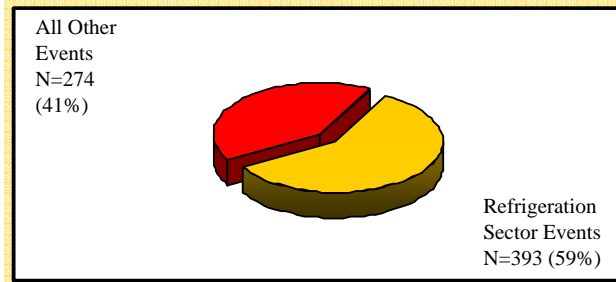
Ammonia can react with other chemicals to produce lethal vapors.

Liquid ammonia can cause freezing burns and frostbite within seconds.

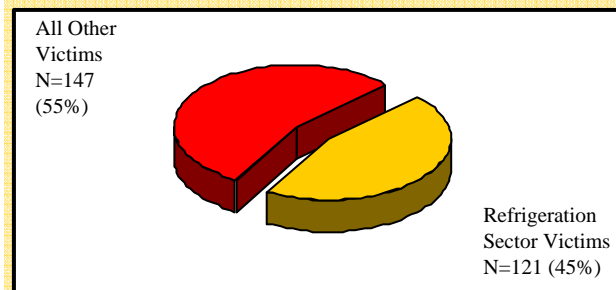
Ammonia burns can cause permanent scarring of the lungs and eyes.

Ammonia Events, Victims, and Evacuees in the Wisconsin Refrigeration Sector, 1993-2005

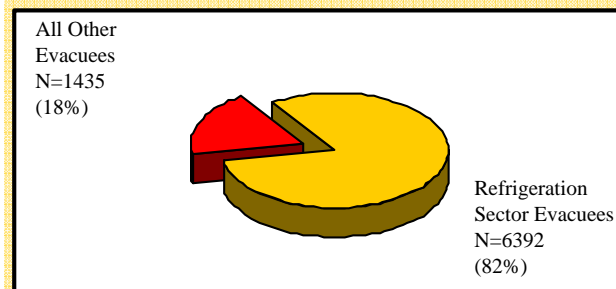
Total Ammonia Events, N=667



Total Ammonia Victims, N=268



Total Ammonia Evacuees, N=7,827



Ammonia Spills in Wisconsin, 1993-2005

Since 1993, Wisconsin has had 667 uncontrolled ammonia releases. This represents ~ 50 ammonia spills per year.

12% of all Wisconsin HSEES events have involved an ammonia release

393 (59%) of Wisconsin's ammonia releases involved refrigeration systems

268 people have sustained injuries as the result of exposure to ammonia during an event. This number represents 19% of all HSEES victims.

121 victims were involved in refrigeration-related ammonia events. This is 45% of all ammonia victims.

7,827 Wisconsin residents were evacuated from their homes or workplaces due to uncontrolled ammonia releases. This is ~ 600 evacuees per year and 17% of all HSEES evacuees.

6,392 people were evacuated due to a refrigeration sector event. This is 82% of all ammonia evacuees.

Ammonia spills have occurred most frequently in the refrigeration sector, the agriculture sector, and associated with illicit production of methamphetamine.