

Additional Information

Information on chlorine alternatives is available online at :

<http://health.utah.gov/enviroepi/activities/NTSIP/watertreatmentalternatives.htm>

The Utah Department of Health and NTSIP have information to help you switch to alternative methods of disinfection. We can help you locate funding opportunities and provide contact information for wastewater facilities in Utah currently using chlorine alternatives. Please contact us at:

EEP@utah.gov

The EPA has many resources on their website about how to fund switching from chlorine gas to an alternative disinfection processes.

The EPA website for grants and funding:

http://water.epa.gov/grants_funding/
<http://water.epa.gov/infrastructure/infrafin/>



The National Association of Clean Water Agencies (NACWA) developed a Chlorine Gas Decision Tool for the Department of Homeland Security's Advanced Research Projects Agency. This CD application provides both water and wastewater utilities with a thorough means of evaluating alternatives to chlorine gas disinfection.



<http://www.nacwa.org>

Search "Chlorine Gas Decision Tool"

National Toxic Substance Incidents Program
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National Toxic Substance Incidents Program

UTAH NTSIP Chlorine Alternatives

Reducing injuries and death of first responders, employees, and the general public resulting from toxic substance incidents in Utah



Chlorine Alternatives Outreach Program

Utah NTSIP

The Utah National Toxic Substance Incidents Program (NTSIP) has created this brochure to provide you with information regarding current wastewater treatment.

Our program collects and analyzes data related to the release of toxic substances and encourages Utah businesses to consider safer alternatives to current industrial practices.

Risk-benefit analyses show that using gaseous chlorine disinfection may pose unnecessarily high risk to neighboring populations when compared to the use of other available disinfection methods.¹

In Utah's five most-populated counties, more than 47,000 people live within one mile of a wastewater treatment facility that uses chlorine gas. Several wastewater treatment facilities in Utah have already taken the initiative to switch to safer alternatives such as UV light and ozone disinfection. Though making a safer switch comes at a monetary cost, these expenses can be reduced through funding from the U.S. Environmental Protection Agency.

We encourage all water treatment facilities in Utah to weigh the cost of switching to safer alternatives against the risks chlorine gas disinfection poses to Utah citizens.

Using Geographic Information Systems (GIS) technology, NTSIP mapped the location of chlorine-using wastewater treatment facilities in the five highest-populated Utah counties: Salt Lake, Utah, Davis, Weber, and Washington Counties. Among these 20 locations, four elderly care facilities, 28 schools (including 11 elementary and seven high schools), and over 21,000 homes are within one mile of a facility. See website for maps of facility locations and surrounding vulnerable sites.

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Although Salt Lake County has the greatest population, it ranks 4th for risk due to treatment plants switching to chlorine alternatives (Table).

Prior to 2010, Central Valley Water Reclamation Facility, the largest wastewater treatment facility in Utah, was consuming an estimated 800 to 1,000 pounds of chlorine gas per day. The high volume of chlorine stored drew concern from Homeland Security regarding potential health threats from a

Through funding from Homeland Security, Central Valley switched to a safer UV method to treat wastewater. This has reduced the risk of chlorine exposure for over 4,000 residents, four elderly care facilities, and four schools within one mile of the facility.

Chlorine Alternatives

Sodium Hypochlorite

UV light

Ozone

Dechlorination

Oxidation ditches

Combined sewer overflow technology

County	Population, 1 Mile	Total Population, 2010 Census	% Affected	Risk Rank
Utah	31,401	516,564	6.1%	1
Davis	10,793	306,479	3.5%	2
Washington	2,871	138,115	2.1%	3
Salt Lake	19,089	1,029,655	1.9%	4
Weber	3,358	231,236	1.5%	5
Total	67,512	2,222,049	3.0%	

¹ Michigan Department of Environmental Quality. *Report on Gaseous Chlorine Reduction Initiative in Michigan*, 2008, p. 1.