



Center for Limnology WISCONSIN
UNIVERSITY OF WISCONSIN-MADISON

SALT & OUR LAKES



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'You can taste it': Road salt making GTA rivers, streams as salty as seawater

MPRnews

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Think road salt won't reach your drinking water? Ask Madison

Road Salt Contamination In Lakes

Widespread

Study Looks At 10 Northern States, Including Wisconsin

Minnesota waters deal with excess chloride from road salt

Road salt threatening health of freshwater lakes, study finds

Study of 371 North American lakes finds melting snow and runoff put ecosystems at risk

Science

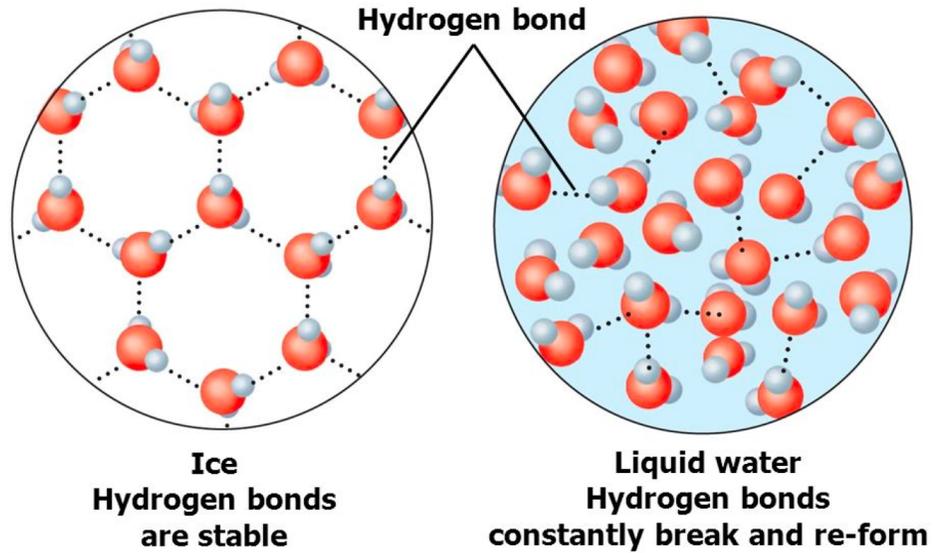
Salt from icy roads is contaminating North America's lakes

Experts seek ways to protect environment from rising road salt runoff

STATE + LOCAL

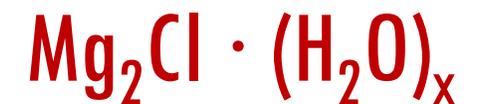
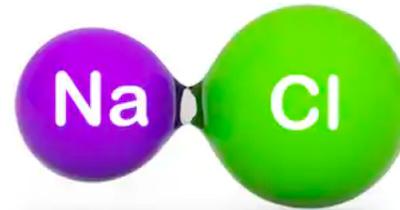
Rising salt levels threaten Twin Cities lakes by 2050

WATER

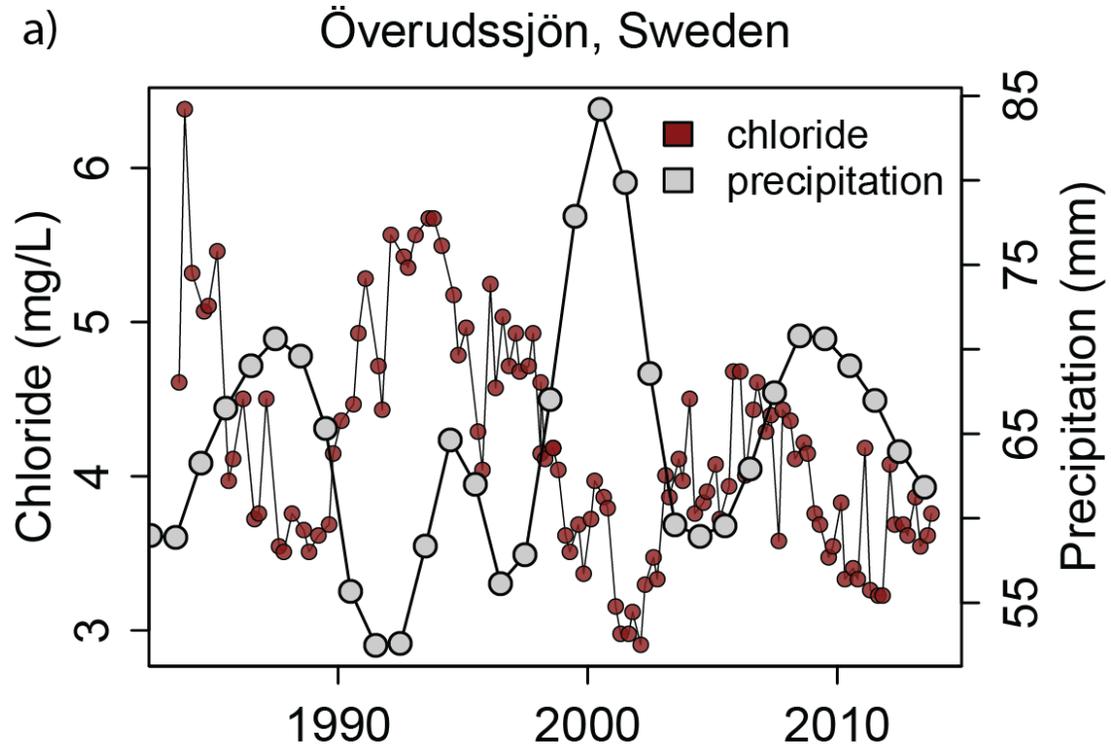


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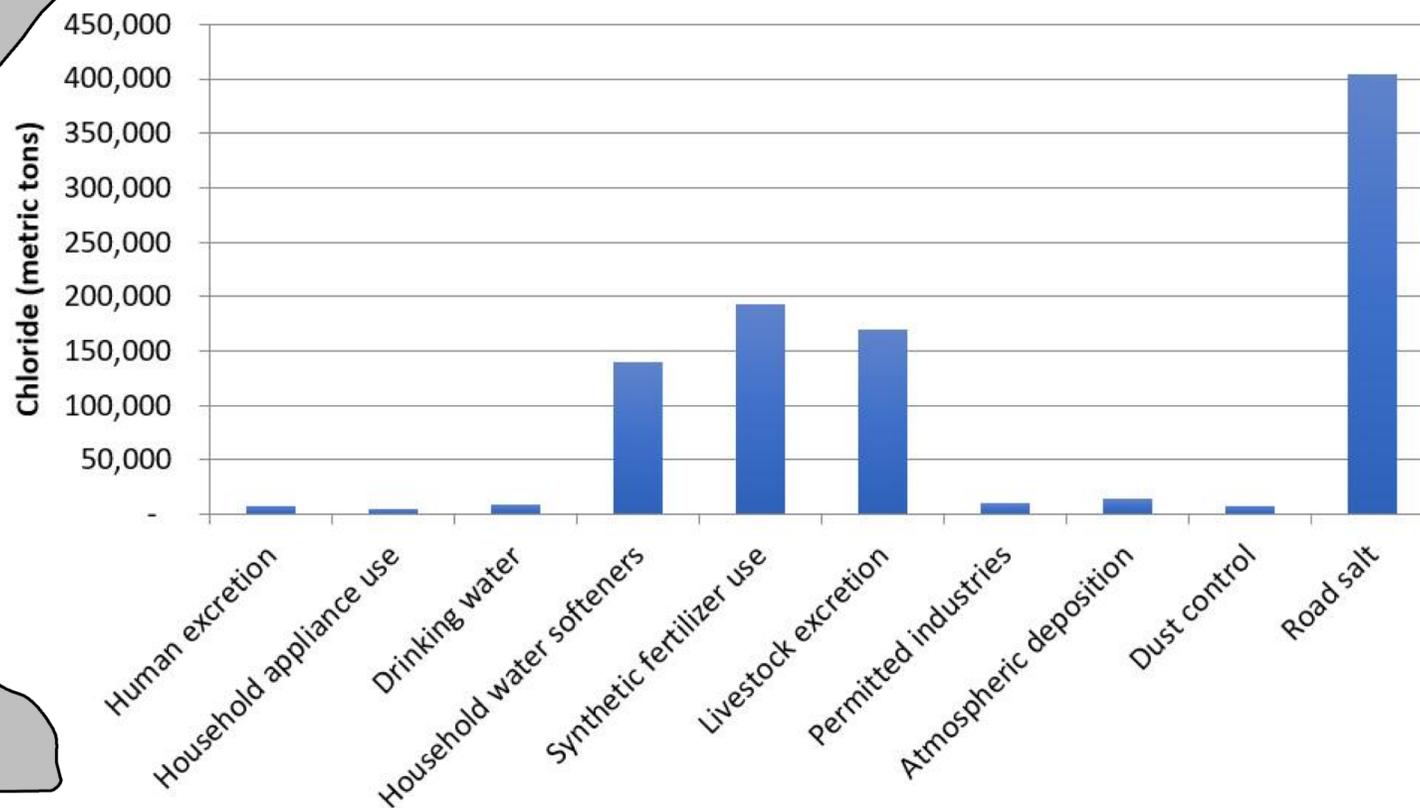
SALT



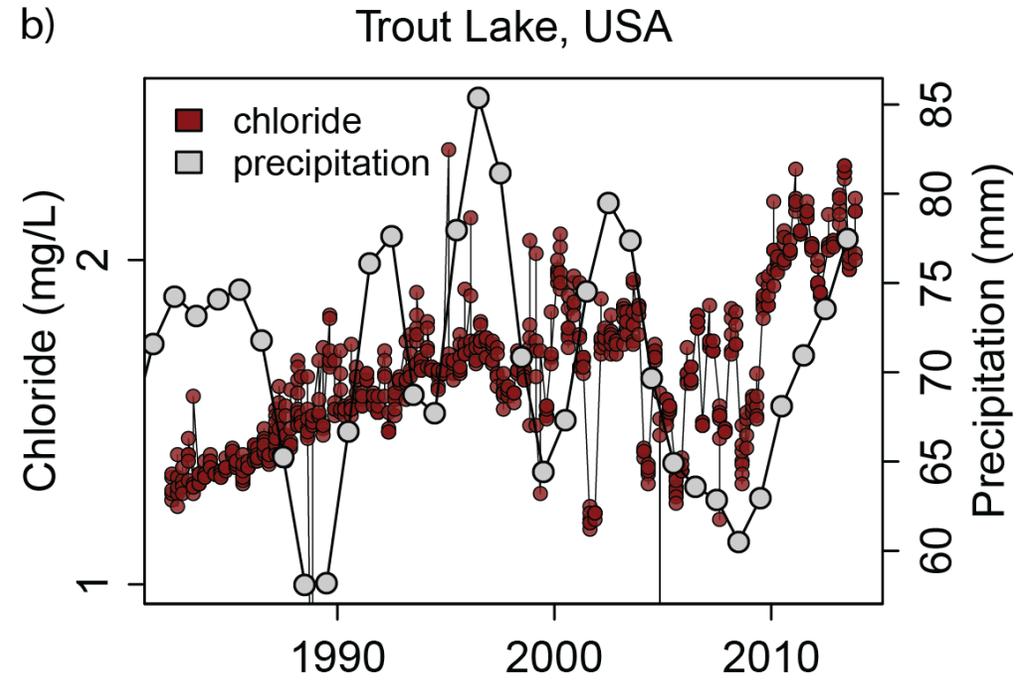
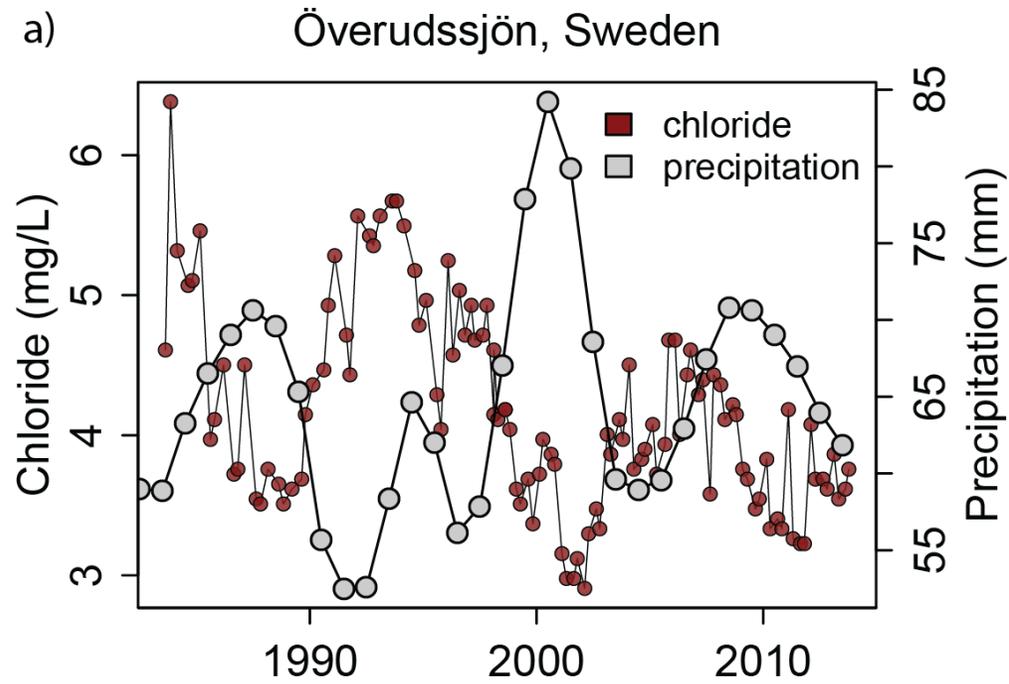
PRECIPITATION CORRELATION



MINNESOTA SALT USE



PRECIPITATION CORRELATION



GUIDELINES

	Chronic	Acute
EPA	230 mg/L	860 mg/L
WI	395 mg/L	757 mg/L
Canada	120 mg/L	

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1 teaspoon road salt in 5 gallons of water = 230 mg/L

GUIDELINES

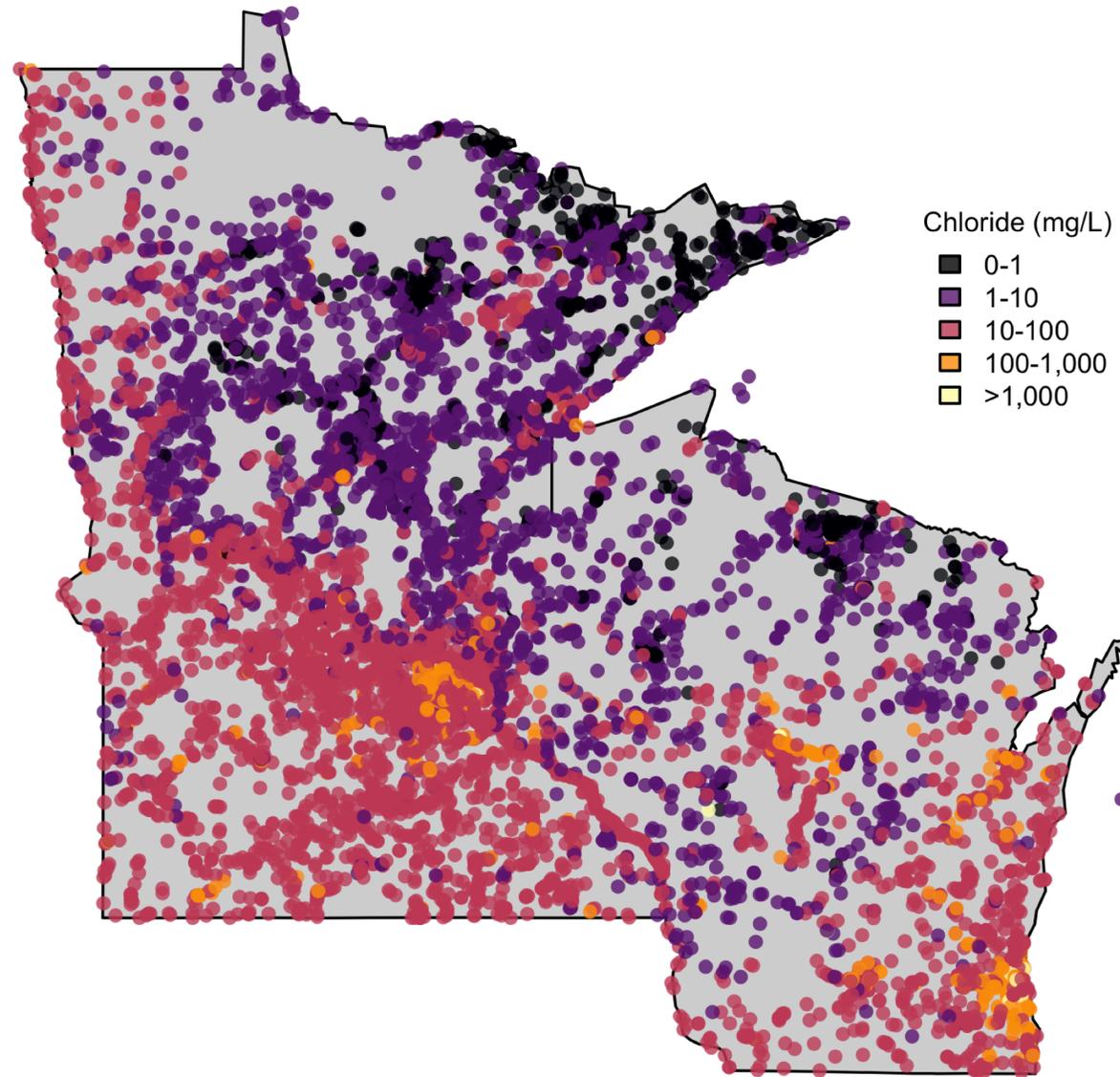
	Chronic	Acute
EPA	230 mg/L	860 mg/L
WI	395 mg/L	757 mg/L
Canada	120 mg/L	

Lake Mendota is 507 million m³ of water.

128,000 tons of salt = 230 mg/L

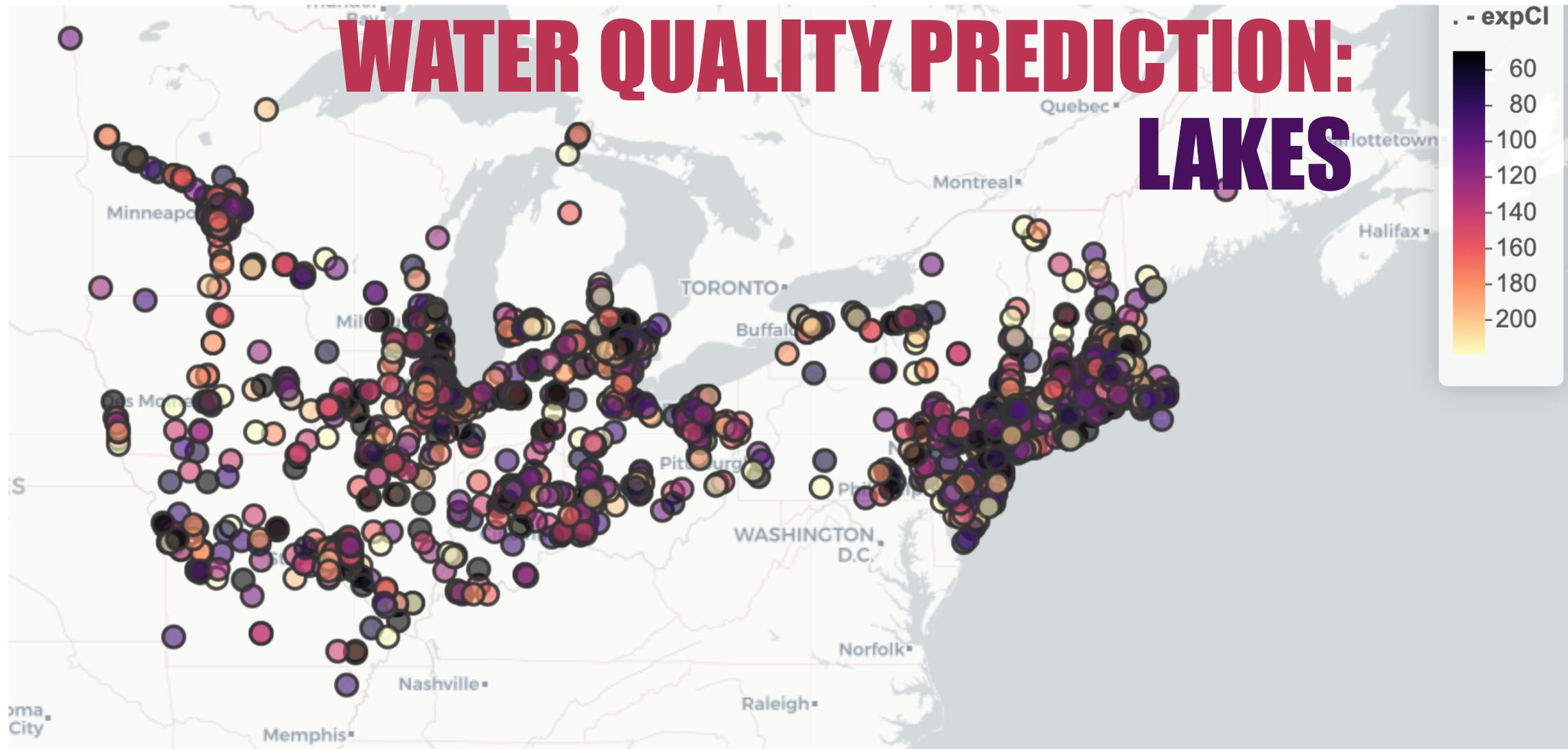
Flushing rates is ~4 years, so only 32,000 tons per year
(roughly Dane County volumes)

WATER QUALITY DATA: STREAMS + LAKES



Data from waterqualitydata.us. Figure by Hilary Dugan

WATER QUALITY PREDICTION: LAKES



LOCAL GROUNDWATER

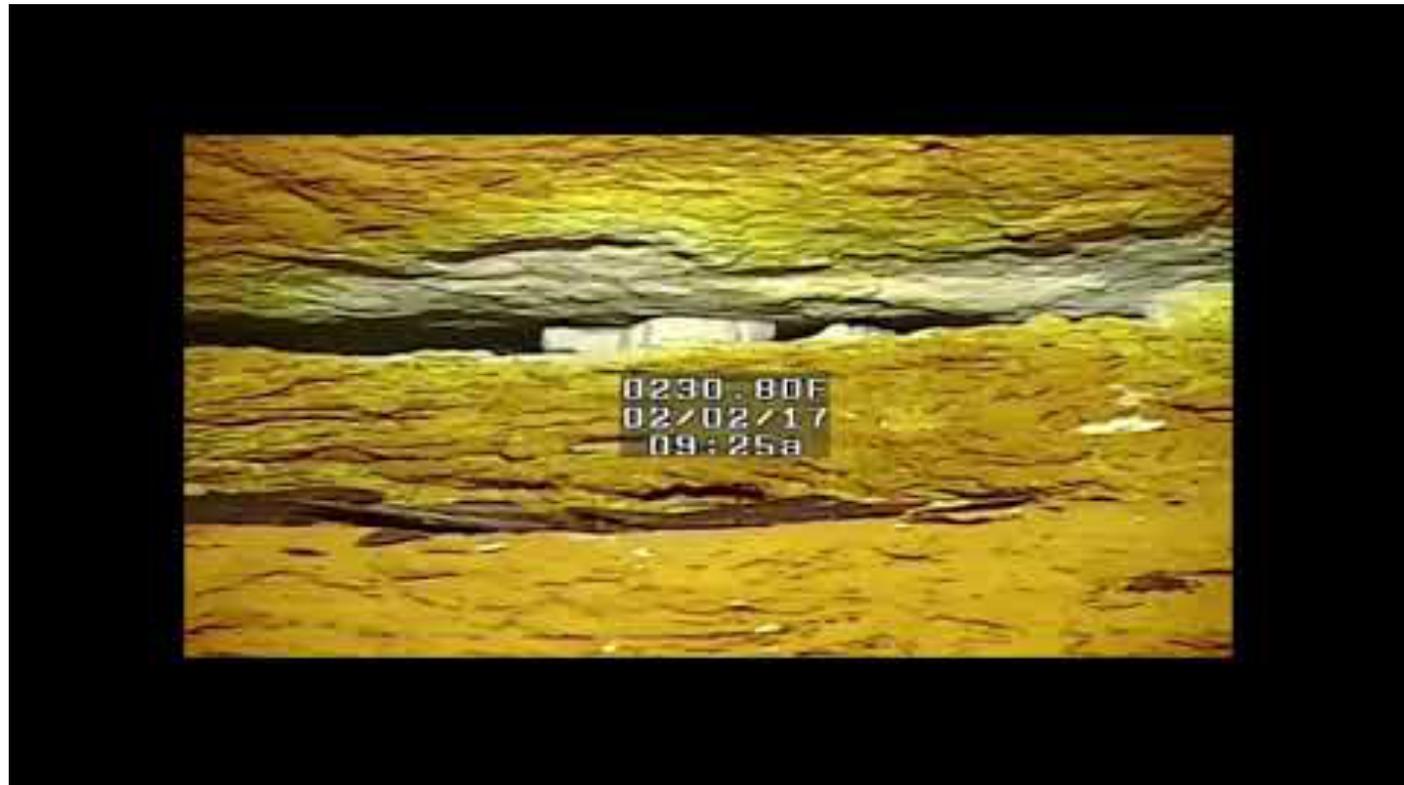
Madison Water Utility studies solutions for salt problem at West Side well

Madison Water Utility Well 14:

2000 = 58 mg/L

2016 = 135 mg/L

2018 = 150 mg/L





WHAT'S NEXT?

This is a problem we **can solve!**

- 1) Optimize salt use
 - a) Use less
 - b) Alternatives/green infrastructure
- 2) Policy options
 - a) Information dissemination
 - b) Incentivized self-governance
 - c) Regulations
 - d) Economic measures