

# SODIUM & CHLORIDE in WELLS - REFERRALS to CT DEEP



<https://valuhomecenters.com/get-the-scoop-on-ice-melter>

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CT DEEP Potable Water Program Coordinator

Private Well Conference

Chrysalis Center, Training & Conference Center



Connecticut Department of Energy and Environmental Protection

# Sodium & Chloride Well Water Complaints



## Referring Well Water Quality Complaints to DEEP

CT's Potable Water Law  
Connecticut General Statutes  
Section 22a-471

DEEP investigates complaints regarding potential impacts to drinking water wells as the result of **man-made sources of pollution**



Connecticut Department of Energy and Environmental Protection

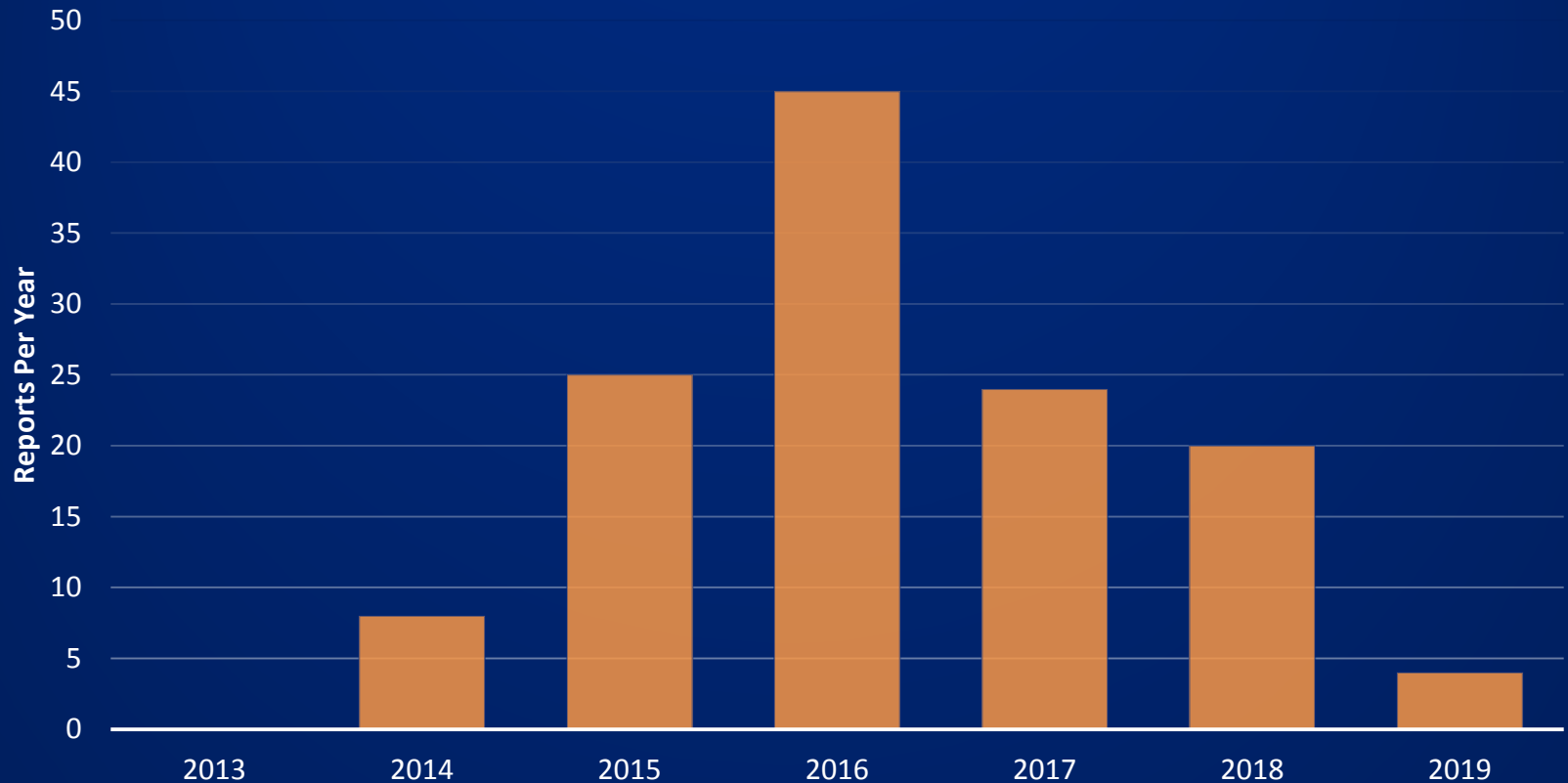
# Overview

- 2014 - increase in complaints relating to **elevated sodium and chloride in private wells**
- Typical concentrations in road salt impacted drinking water wells:
  - **Sodium = 100 – 600+ mg/L**  
(100 mg/L Guidance)
  - **Chloride = 300 – 1,600+ mg/L**  
(250 mg/L MCL)



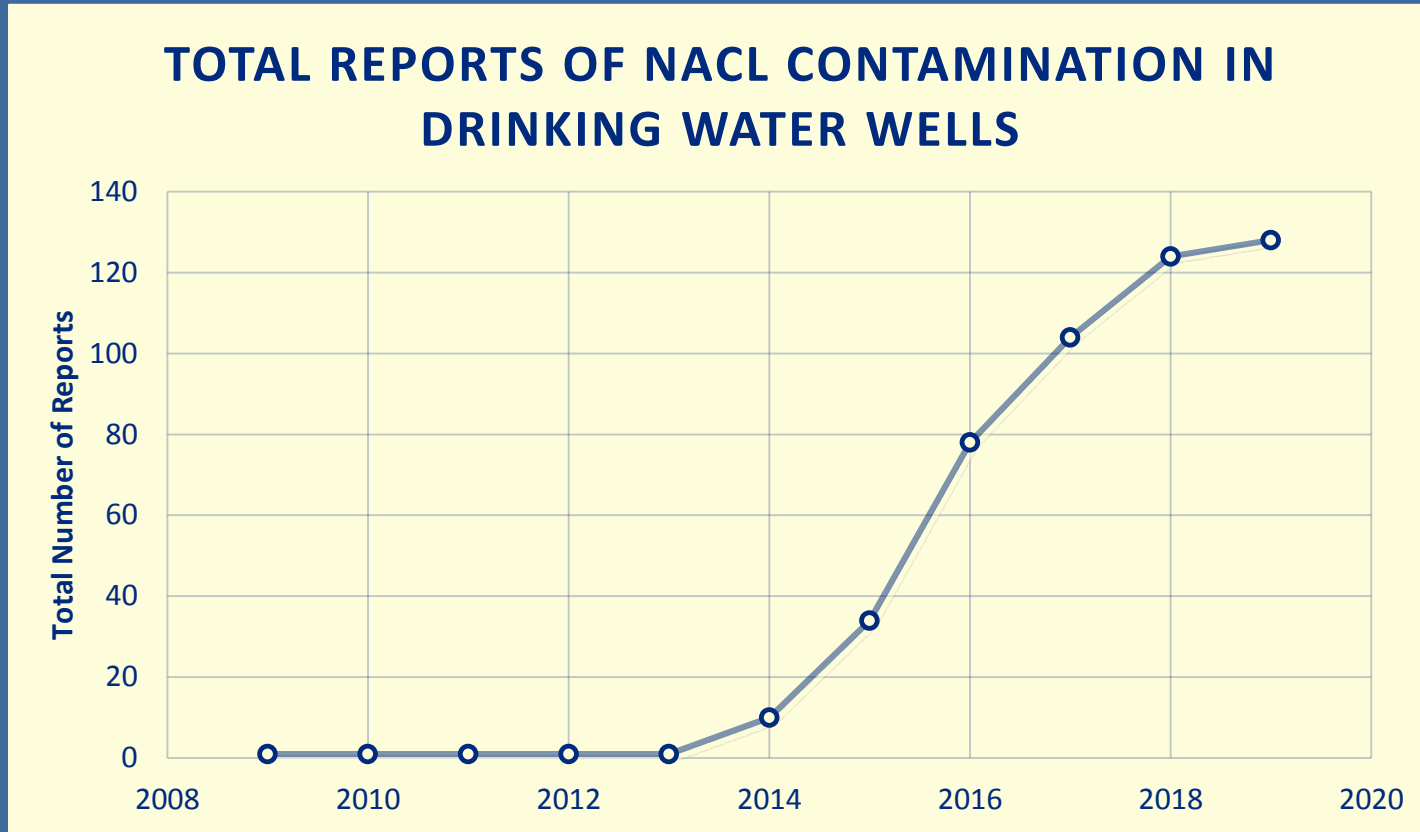
# Overview

## NaCl Contaminated Drinking Water Wells Reported to DEEP



# Overview

~130 impacted wells identified within past 5 years  
all attributed (primarily) to road salt applications



# Sodium & Chloride Well Water Complaints

## Questions to ask well owner

1. Has the well been tested recently?

- Recommend full potability scan
- Evaluate changes in water quality (past vs. recent)

2. Water treatment/filtration present?

3. Well construction

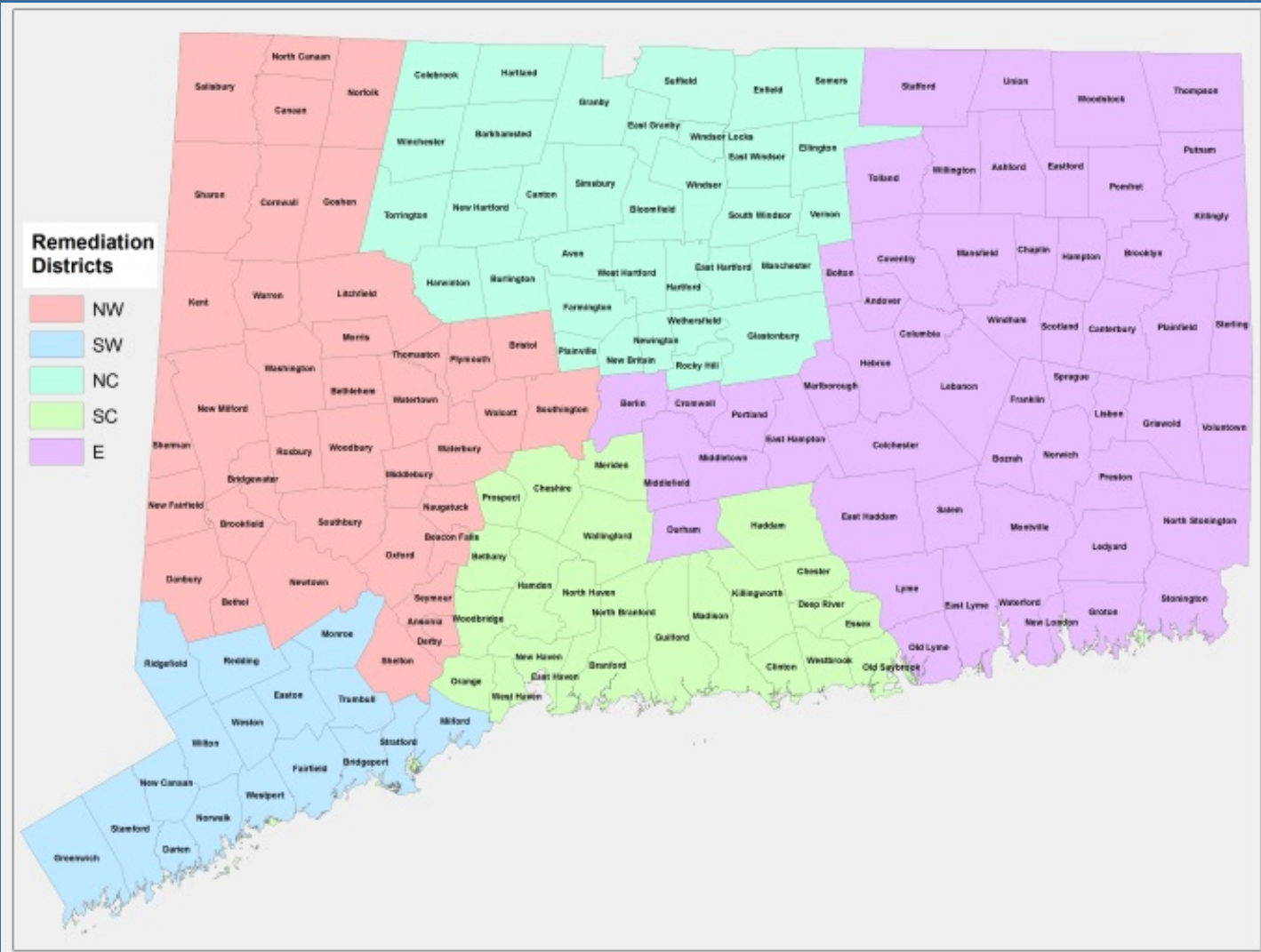
4. Contact information for well owner

- OK to share with DEEP/DPH?





# Remediation Division Districts



# Remediation Division Contacts

DEEP Remediation Division General Number: **860-424-3705**

Road Salt Complaint Referrals: Email/phone call to DEEP Remediation Division [District Supervisor](#) and/or [Potable Water Program Coordinator](#)

DISTRICT	SUPERVISOR	PHONE	EMAIL
Eastern District	Bill Warzecha	860-424-3776	<a href="mailto:william.warzecha@ct.gov">william.warzecha@ct.gov</a>
North Central	Rob Robinson	860-424-3775	<a href="mailto:robert.robinson@ct.gov">robert.robinson@ct.gov</a>
North Western	Pat DeRosa	860-424-3501	<a href="mailto:pat.derosa@ct.gov">pat.derosa@ct.gov</a>
South Central	Tom RisCassi	860-424-3781	<a href="mailto:thomas.riscassi@ct.gov">thomas.riscassi@ct.gov</a>
South Western	Peter Hill	860-424-3912	<a href="mailto:peter.hill@ct.gov">peter.hill@ct.gov</a>
Potable Water Program Coordinator	Drew Kukucka	860-418-5955	<a href="mailto:drew.kukucka@ct.gov">drew.kukucka@ct.gov</a>

[www.ct.gov/deep/remediation](http://www.ct.gov/deep/remediation)

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# Referrals to DEEP

## Information to send

1. Water quality data for affected wells
  - Past & present
2. Well completion report
3. Any additional notes/observations
  - Water treatment (assess backwash location)
  - Topography
  - Road drainage
  - Maps/Photographs



# DEEP's Investigation

- Well water sampling/data review
- File Review:
  - ✓ Well completion reports
  - ✓ Well water quality reports
- Geologic mapping data:
  - ✓ aerial photos
  - ✓ bedrock geologic map
  - ✓ surficial geology map
- Well-head inspection
- Water treatment system use/backwash?



# DEEP's Investigation (cont.)

- Topography/road drainage
  - ✓ Curbing
  - ✓ Storm water system
  - ✓ Drainage swales/outfalls
- Road salting policy/practices
  - ✓ Application rates
  - ✓ Snow plowing BMPs
- Further well testing



# DEEP's Investigation (cont.)

## Source Determination

22a-471 requires the Responsible Party to provide a short-term supply and long-term solution for safe supply of drinking water

- Meet with State DOT or local DPW to discuss complaint
- Engage local health departments to assist town officials
- Collaborate to find solutions to reduce impacts to well



# Short and Long-term Solutions for Road Salt Impacted Wells

## Short-term:

- Providing bottled water
- Roadway drainage improvements
- Road salt application BMPs
- Source removal
- On-going monitoring of well water quality

## Long-term:

- Secondary well seal
- Drilling a new well
- Connecting to public water
- Community well
- POU or POE treatment (Reverse osmosis)



# Questions?



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