

# Adirondack Road Salt Reduction Task Force

## DRAFT FINDINGS AND RECOMMENDATIONS

Dan Kelting  
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PAUL SMITH'S COLLEGE  
**ADIRONDACK  
WATERSHED  
INSTITUTE**

# The Randy Preston Road Salt Reduction Act *Signed into Law on 12/02/2020*



**REDUCING SALT USAGE IN ADIRONDACKS**  
LEGISLATION NAMED AFTER RANDY PRESTON OF WILMINGTON

**3** 42°  
6:20

**3 MAX**  
Advantage  
WEATHER

WEATHER

**RUTLAND**

**SATURDAY**  
HI 37 LOW 24

**SUNDAY**  
HI 30 LOW 21

**MONDAY**  
HI 28 LOW 19

LAMOILLE; ORANGE; WASHINGTON | WINTER WEATHER ADVISORY

# Members

## New York State Agency Commissioners

Marie Therese Dominguez	Department of Transportation
Basil Seggos	Department of Environmental Conservation
Mary Bassett	Department of Health
Megan Phillips (designee)	Deputy Director of Planning, Adirondack Park Agency

## Appointed by Governor Hochul

Dan Kelting, PhD	Executive Director, PSC AWI
Joe Martens	Chair, Olympic Regional Development Authority
Kris Stepenuck, PhD	Associate Director, Lake Champlain Sea Grant & UVM
Phill Sexton	Director, WIT Companies
Robert Kafin	Chair, GrowNYC
Brittany Christenson	Former Executive Director, AdkAction
Gerald Delaney	Executive Director, AP Local Government Review Board
Kevin Hajos	Superintendent of Public Works, Warren County
Tracy Eldridge	Superintendent of Highways, Hamilton County

# Charge

## **Assess:**

1. road salt contamination of water resources
2. current policies and practices used for winter maintenance

## **Recommend:**

1. Road salt reduction targets to protect water resources
2. Best management practices to achieve reduction targets
3. Training programs for winter maintenance workers
4. A public education campaign about winter driving and salt
5. A publicly accessible database on salt purchases and use
6. Rapid response best practices for addressing contamination
7. A road salt reduction pilot that:
  - a. Implements best management practices (BMPs)
  - b. Monitors road conditions and water quality responses to BMPs
  - c. Establishes the public education and outreach campaign

# Working Groups

**Salt Impacts**  
(Dan Kelting)

**Best Practices**  
(Tracy Eldridge)

**Traffic & Safety**  
(Jerry Delaney)

**Training & Outreach**  
(Bob Kafin)

Weekly to biweekly virtual work group and  
work group lead meetings

Work group meetings included agency representatives

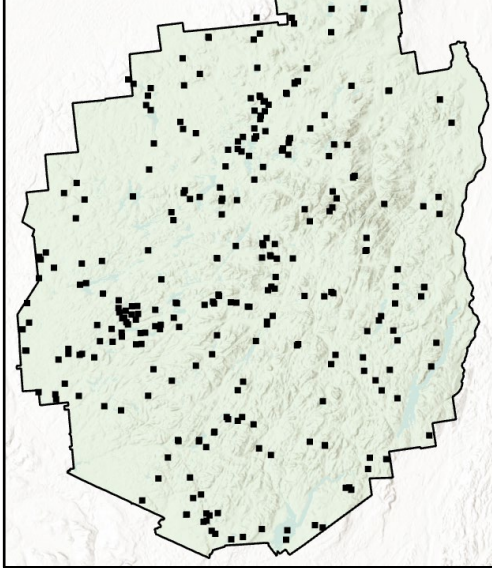
# Timeline

- 2/28/2022 Public Meeting #1 - Kickoff
- 4/11/2022 Public Meeting #2 - Progress & Input
- 5/20/2022 In person task force meeting
- 6/01/2022 Assessment draft due
- 7/01/2022 Recommendations draft due
- 7/28/2022 Full draft report due
- 8/30/2022 Final report due
- 9/01/2022 Implementation of pilots
- 8/30/2024 Final report on pilots

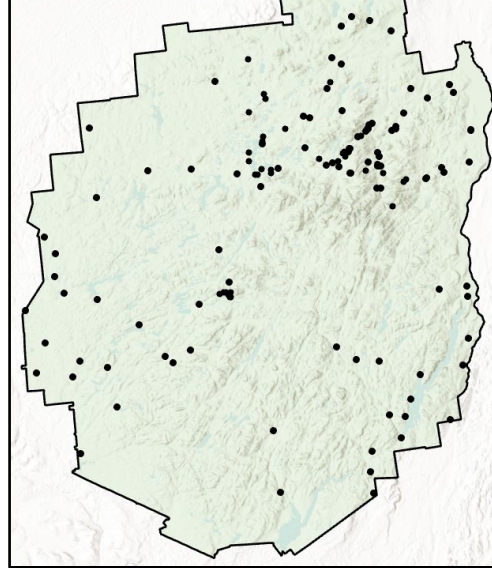


# Assessment Findings - Contamination

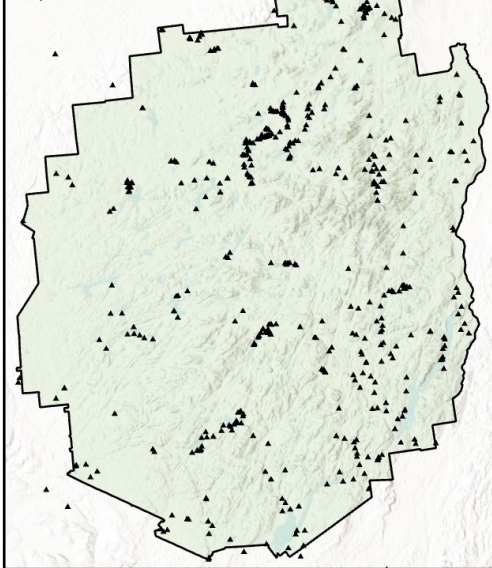
a) Lakes & Ponds



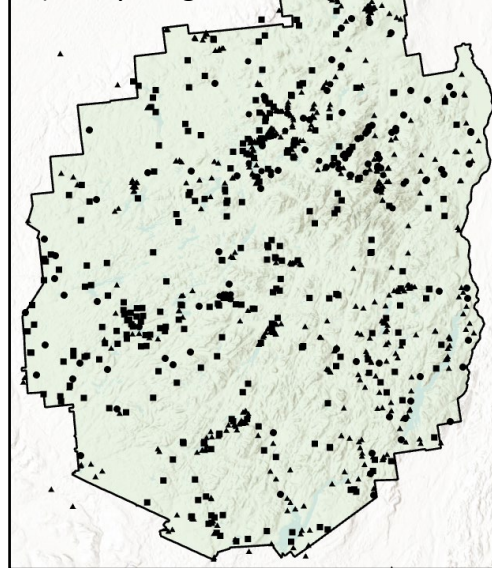
b) Rivers & Streams



c) Private Wells



d) Everything



## Lakes & Ponds

- DEC, AWI/ALAP, ALTM
- 240 waterbodies
- 1,350 observations

## Rivers & Streams

- DEC & AWI
- 139 locations
- 2,327 observations

## Private Wells

- DEC & AWI
- 594 wells

## Total Dataset

- 973 locations
- 4,271 observations

# Assessment Findings - Contamination

- An estimated 820 lakes and ponds, 3,687 miles of rivers and streams, and 43,273 private residential wells receive runoff from paved roads
- Surface water quality has been impacted by road salt, particularly for waters associated with the state road network
  - Chloride levels exceeded aquatic life thresholds in 50 lakes and 62 streams sampled
- Groundwater quality has been significantly impacted by road salt
  - Most wells sampled downslope of state roads exceeded sodium thresholds for severely restricted diets and had corrosive water
  - An estimated 16,985 homes may have corrosive water and many of these homes may contain lead in plumbing and fixtures
  - Statewide an estimated 495,000 private well users may be impacted by road salt



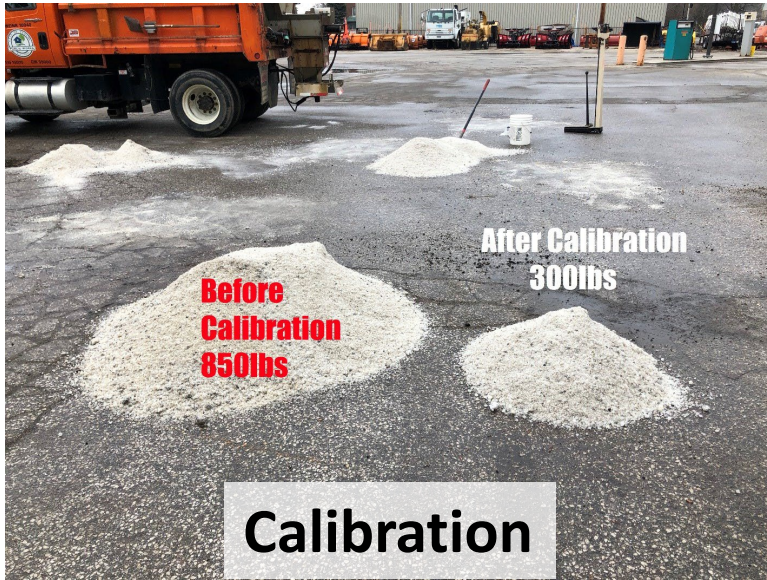
# Assessment Findings – Policies & Practices

- New York State's public and private sectors combined are the largest purchasers of salt in North America and 14% of winter maintenance businesses are employed in the State
- The expectation for “bare roads” has been normalized by society, which is a major driver of salt use
- Lack of standardized tracking and reporting of actual salt applied is a major barrier to reducing use
- Industry best practices exist for reducing salt use, but these practices are inconsistently applied across public and private sectors and across the region
- Implementation of best practices is the major barrier to achieving salt reduction in the Adirondacks

# Draft Recommendations – Water Quality

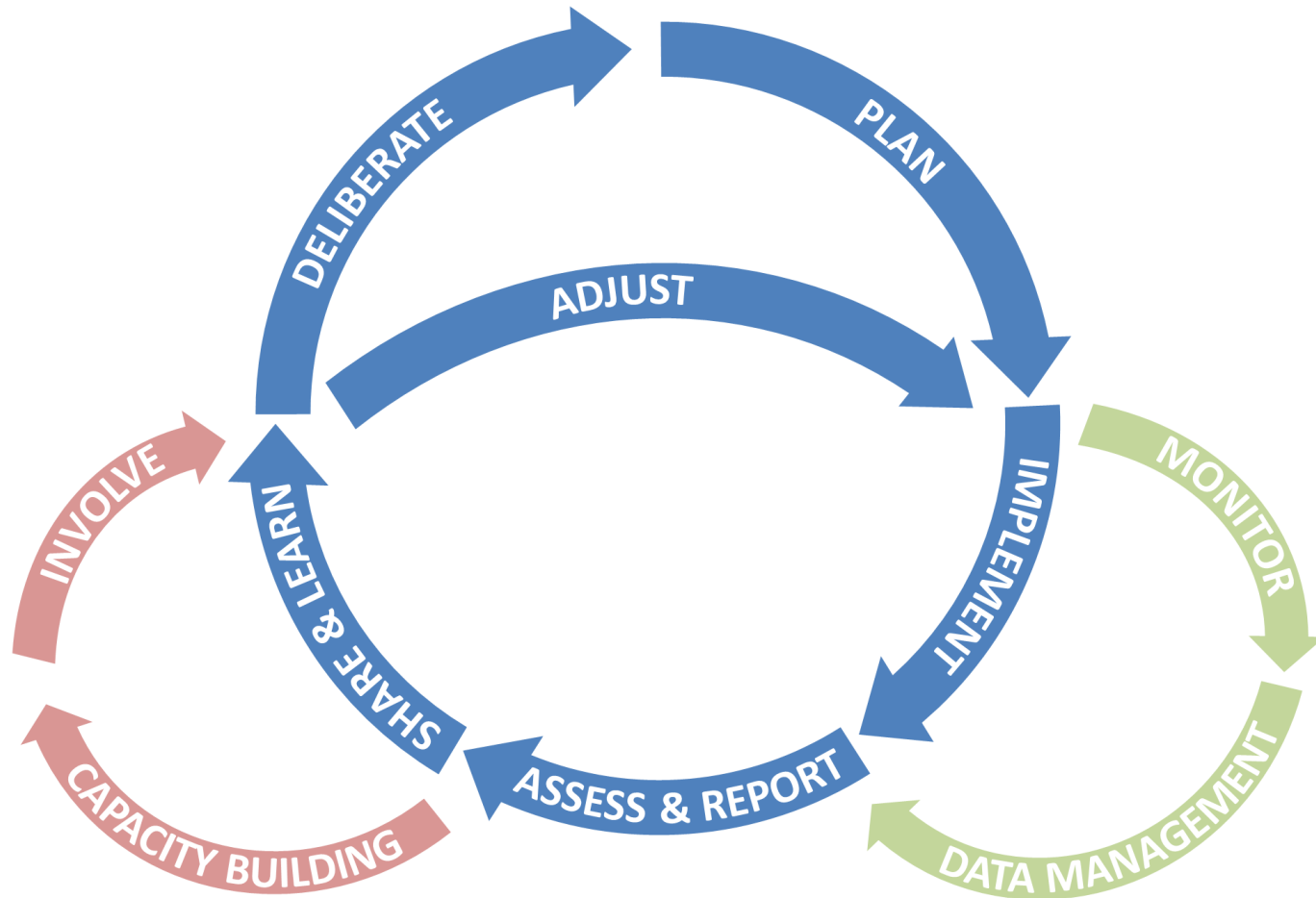
- NYSDEC adopt, in regulation, both the Chronic and Acute aquatic water quality criteria for chloride set forth currently by US Environmental Protection Agency
- Adopt a management target chloride concentration of 10 mg/L for surface waters within the Adirondack Park to protect aquatic life
- Reduce road salt application rates to a level that achieves the 10 mg/L protective target in the majority of lakes
  - Rudimentary modeling suggests this recommendation would be achieved at a 50% reduction in salt use

# Draft Recommendations – Best Practices



# Draft Recommendations – Best Practices

## Management Plan & Adaptive Management



# Draft Recommendations – Training

- Create programs for state and local winter road maintenance workers and commercial and private applicators
- Program elements:
  - Salt reduction targets and reasons to achieve them
  - Best management practices
  - Types and purposes of equipment
  - In person instruction on calibration and use of equipment
- Trainers should be peers in winter road maintenance
- Decision makers should also receive training

# Draft Recommendations – Education

- Create a public education campaign about salt contamination and the need to reduce road salt use
- Campaign tailored to reach various audiences
  - General and driving public, policymakers, roadway maintenance operators, business owners, property managers
- Include the following message content:
  - Background on salt use
  - Environmental and human health impacts of salt use
  - Actions you can take to reduce salt use
  - Winter driving tips (e.g., reduced speed, winter tires)
  - How to report contamination and steps to respond

# Draft Recommendations – Rapid Response

- Simplify process for homeowners to report suspected well contamination by road salt and provide clear guidance on next steps
- Increase the statutory deadline for filing a claim to allow sufficient time for discovery
- Create funding sources to assist homeowners with remediating contaminated wells and for their replacement with public water supplies if available
- When homes are sold, wells should be tested for salt and results should be disclosed to the buyer

# Draft Recommendations – Pilots

- Continue existing pilots that evaluate best practices along segments of SR 73, SR 86, and US 9N used by NYS DOT and by Warren County and the Town of Hague on local roads
- New pilot that evaluates use of selective tree-pruning and cutting to reduce “cold spots” that require more salt use
- New pilot that evaluates use of chloride-free alternatives such as potassium formate
- New pilot with zero salt use combined with lower speed limits to evaluate groundwater recovery
- New pilot associated with lakes that exceed 20 mg/L of chloride to assess water quality response to reduced salt loads



# Draft Recommendations – Other

- Establish funding streams to support:
  - training & education programs
  - purchasing advanced technology and new equipment
  - testing private wells
  - remediating and/or relocating wells
  - developing winter road management plans for reduced salt use
- Establish a permanent task force of agency representatives and key stakeholders that fosters collaboration, accountability, and transparency

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