

# Snow Fighting: 2020-2021 Season

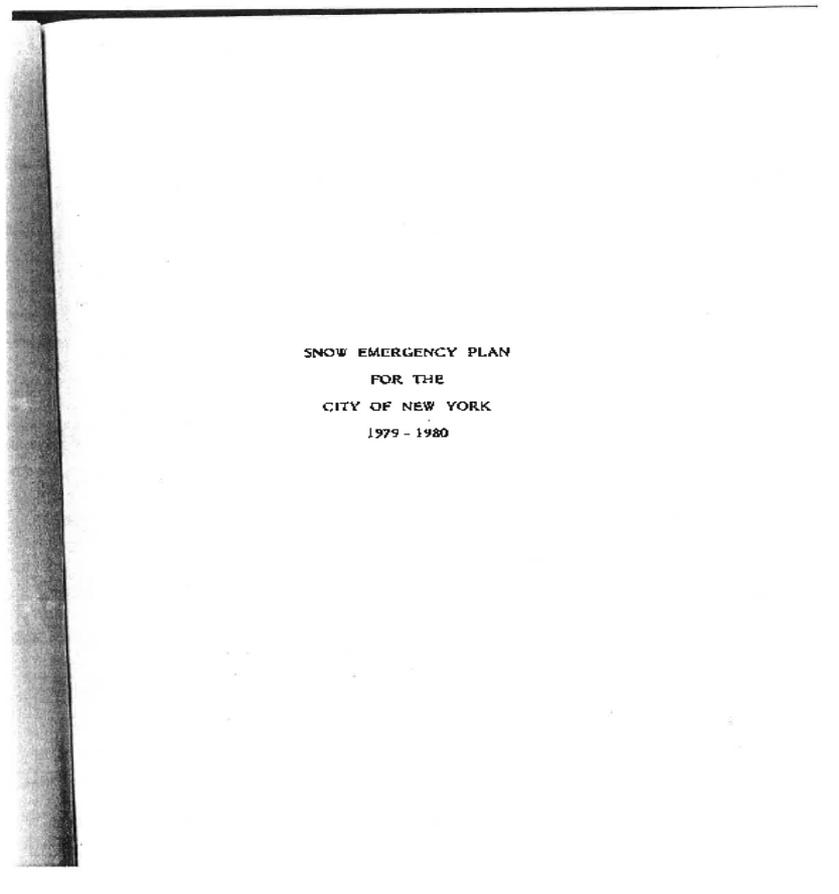
---



Edward Grayson  
Commissioner, Department of Sanitation

# A Look at History

- Let's take a look at the Snow Emergency Plan from 1979-1980



# A Look at History

## SNOW EMERGENCY PLAN-SECTION VI-OBJECTIVES

### VI.a Streets

Plowing will begin along all primary routes and progress to secondary and then tertiary routes. It is the objective of this plan to provide uniform snow clearance capabilities on primary routes throughout the boroughs. In order to achieve this, monitoring of progress reports will be conducted and used to redeploy plows and personnel within the first 24 hours of a storm.

Depending upon the nature of the storm and the operational capabilities of the Sanitation Department, secondary and tertiary route monitoring will be implemented. Monitoring results will be used to make shifts of plows and personnel on these routes 36 to 48 hours into the storm.

The Plan objective for clearing a 16 inch uniform snowfall throughout the city is:

<u>ROUTE</u>	<u>CLEARING TIME</u>
Arterial	One to Two Days
Primarys	One to Three Days
Secondarys	Two to Four Days
Tertiarys	Three to Six Days

### VI.b Pedestrian Areas

Once assigned, Parks and Highways manual snow clearing forces shall stay in the field until their work is completed. Generally this work will continue after the street emergency is over.

# Pre-Season Planning

- The City's FY 2021 Snow Budget is \$101.4 million
- In November, DSNY begins Night Plow organization
  - Increased manpower on both night shifts to ensure coverage for snow or winter weather response
- DSNY has three 24-hour weather reporting services
  - Provide forecasts 4x per day from October through April
- All 6,300 Sanitation Workers received snow training this fall



# Snow Operations: Salt Spreading

- In advance of approaching winter weather, DSNY issues alerts to media outlets and other city agencies and through social media with information about a storm
- **When snowfall is forecast to more than 2 inches**, DSNY transitions to two 12-hour shifts starting at 7am and 7pm
- Salt spreaders begin applying salt to roadways at the first trace of snow or frozen precipitation
  - Each salt spreader can hold 16 tons of rock salt
  - Saddlebag tanks hold 180 gallons of calcium chloride



# Snow Operations: Brine Application

- Historically, DSNY has used salt in combination with calcium chloride to treat roadways ahead of snow storms. In 2019, we piloted the use of salt brine in liquid form.
- The sodium brine solution will be used as an anti-icing measure to further help prevent dangerous road conditions in conjunction with rock salt.
- As of last year, this takes place in all boroughs.
- Brine is generally applied in advance of a snow storm and starts working as soon as the first flake falls.

# Snow Operations: Plowing

- **Plowing begins when the snowfall accumulation exceeds 2”**
- Plow blades are not designed to scrape the roadway surface and may leave some clearance between the blade and the street
- Plows are fixed to the right to avoid blocking oncoming traffic and left-turn lanes
- Plows operate continuously on their assigned route
  - New Magellan devices installed in all equipment generate a specific route that makes sure no street segment is missed
  - Plows cannot be diverted to resolve customer complaints or routes will not be completed



# Snow Operations: Pedestrian Infrastructure

- DSNY and DOT recruit snow laborers to assist with bus stops, crosswalks, and other pedestrian infrastructure
- DSNY uses haulsters and pickup trucks to plow narrow, hilly, or dead-end streets
- DSNY added additional skid steers last snow season to better clear crosswalks, bus stops, and pedestrian areas



Snow laborers clear snow in front of a bus stop

# Snow Operations: Outdoor Dining

- Working with DOT and other stakeholders to plan for year-round roadway dining and communicate expectations to restaurant owners
- Snow plows are currently engaged in practice runs on streets being used for outdoor dining, making sure plows can fit safely.
- Need business owners to conform to all rules and keep the streets as wide as possible as weather turns – plus clearing snow and ice!
- Make common-sense choices to ensure safety of DSNY operators, patrons and passersby.



# Snow Operations: Snow Clearing

- When conditions permit and plowing is completed, DSNY transitions to snow-clearing operations
  - Plows may be angled away from the curb to break down ridges and encourage faster snow melt
- In addition to snow plows, DSNY uses front-end loaders, snow melters, and other heavy equipment to clear, haul, and melt snow



Front-end Loader dumps cleared snow into a snow melter

# Snow Equipment



Salt Spreader



Haulster



Plowable Truck



Front End Loader



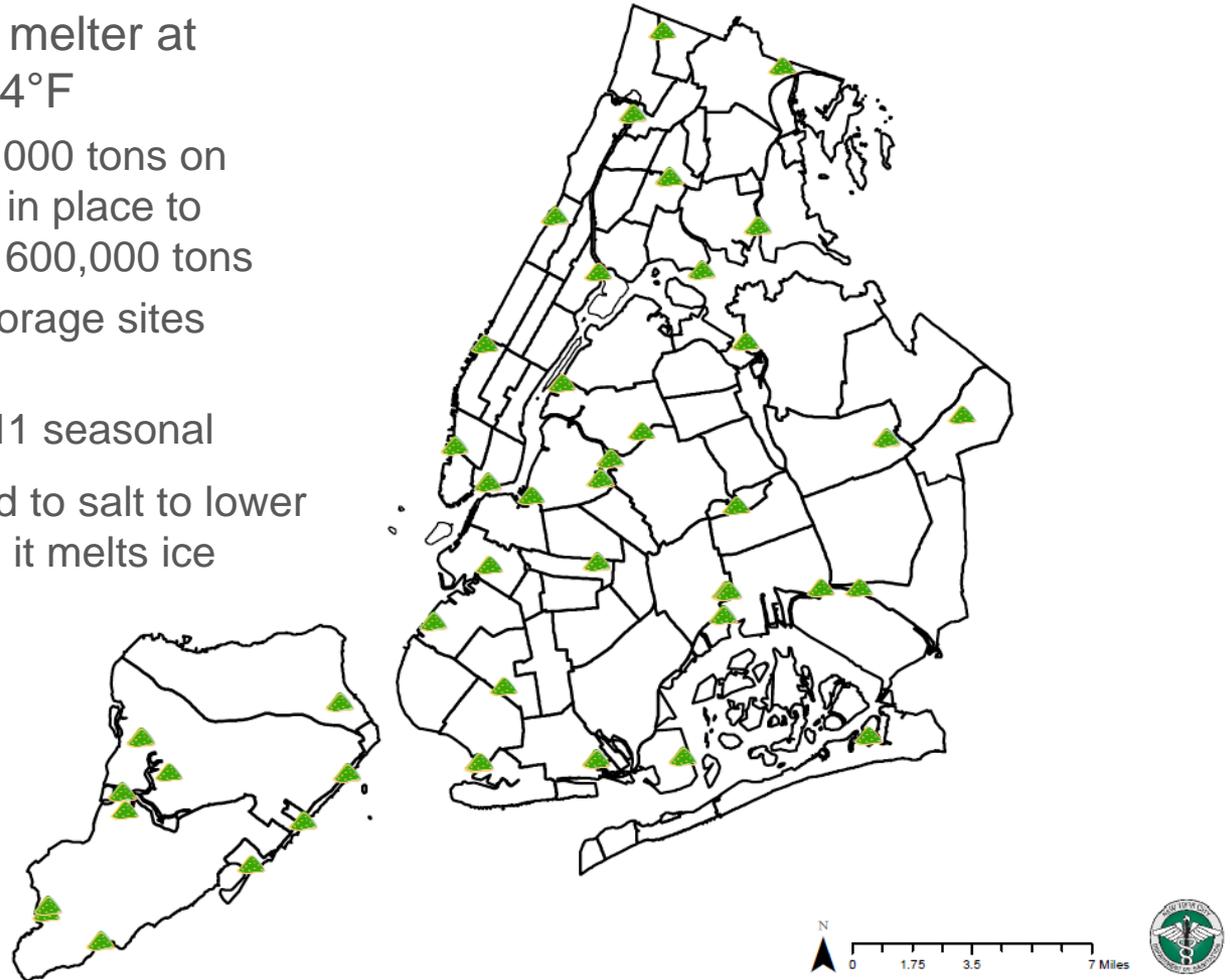
Skid Steer



Melter

# Salt

- Salt is an effective ice melter at temperatures above 24°F
  - DSNY has over 300,000 tons on hand, with contracts in place to deliver an additional 600,000 tons
  - DSNY has 42 salt storage sites citywide
    - 31 permanent; 11 seasonal
- Calcium chloride is added to salt to lower the temperature at which it melts ice effectively



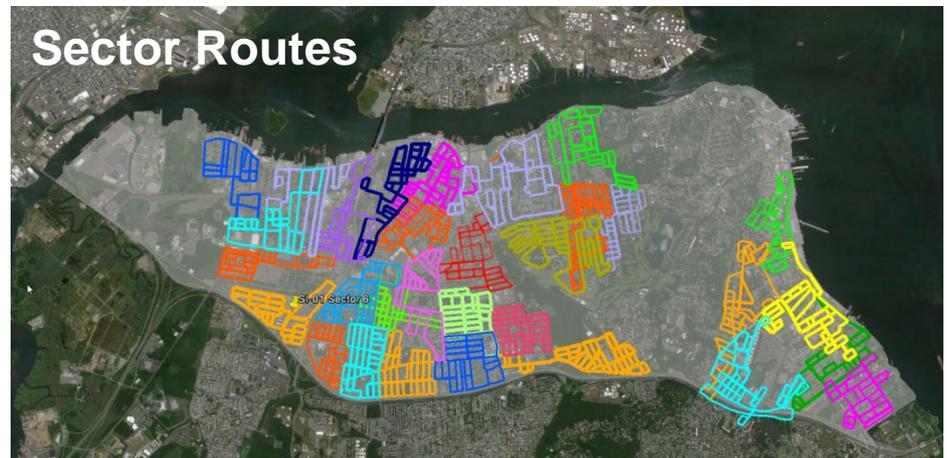
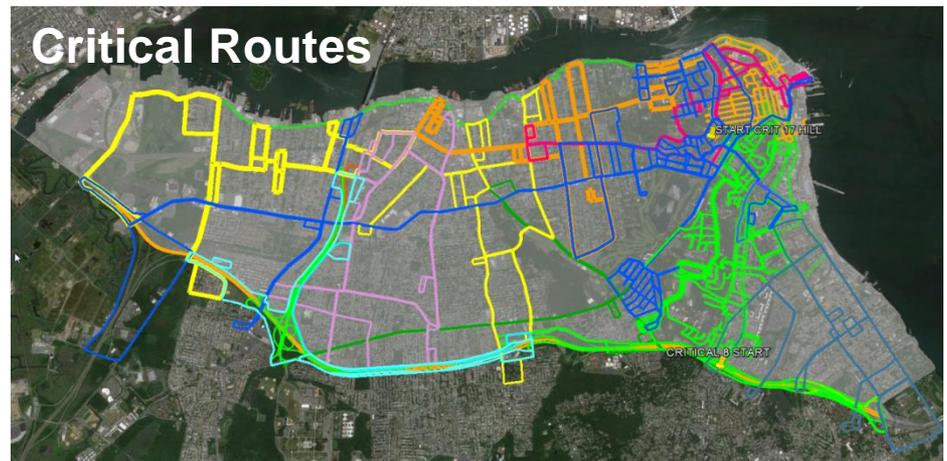
**Citywide Salt Locations**

G:\Dan\2015\Nov\Council\salt.mxd  
Production Date: 11/23/2015

# Snow Routes

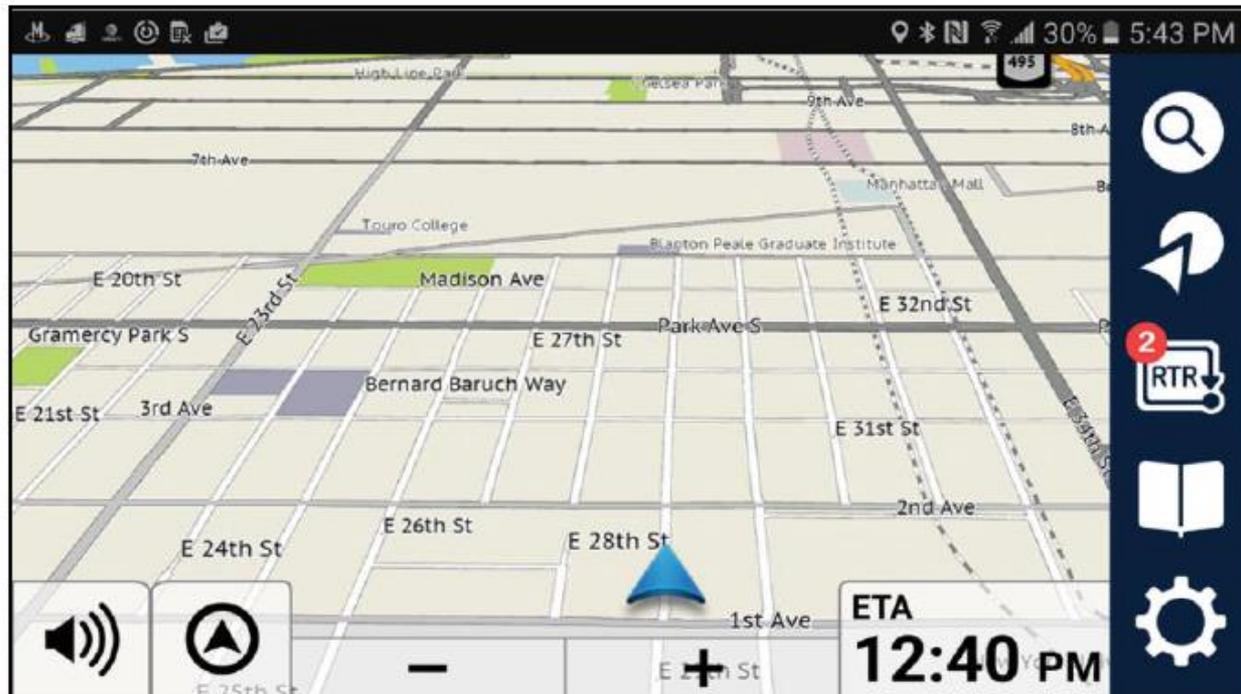
- All streets are “critical” or “sector”
  - Critical: highways and major thoroughfares, plus schools, hospitals, emergency services (FDNY, NYPD, hospitals etc.)
  - Sector: all other streets
- Achieves efficiencies by removing redundant travel mileage

## Snow sectoring example: Staten Island CB1



# Technology: Turn by Turn Navigation

- Turn by turn Navigation
  - Installed in all salt spreaders and all collection trucks



# Technology: Situational Awareness

- **GPS Command Center**
  - Monitor internal AVL systems and PlowNYC to report problematic areas
  - Monitor equipment, Rapid Response and 311 snow complaints



# Technology: PlowNYC

- PlowNYC is fed from DOITT's RAStrac vehicle tracking system
- **Streets are color-coded based on the amount of time elapsed since a plow or spreader last passed down the street; updated every 15 minutes**
- View the map at [nyc.gov/plownyc](http://nyc.gov/plownyc)



# Residents and Sidewalk Shoveling

## At first snowfall:

- Reports of sidewalks that haven't been shoveled or de-iced are suspended.
- Instead, the public may call 311 to note locations of concern for plowing or spreading.

## After snow ends:

- Reports for sidewalks that have not been shoveled generally resume four hours after snow has stopped falling citywide, as this is the minimum amount of time residents have to clear a path. If the snow stops falling during the evening hours (near or after sunset) between:
  - 5:00 p.m. and 8:59 p.m. - you must clear within fourteen hours
    - *Example: If the snow stops falling at 7:00 p.m., the owner, lessee, tenant, occupant or other person in charge of any lot or building has until 9:00 a.m. the following morning to clear.*
  - 9:00 p.m. and 6:59 a.m. - you must clear by 11:00 a.m. the next day
- After DSNY concludes storm operation, reports will be taken of individual streets that need re-plowing or spreading. (This does not include driveways and plowed-in parking areas)

# What to do if you have a complaint?

- **The public should call 311 to note locations of concern for plowing or spreading.**
  - During the initial storm operation, these reports are tracked, mapped and used as part of our situational awareness.
  - Remember, DSNY starts salting / plowing “critical” and “sector” streets across the city at first snowfall to stay ahead of the storm; we cannot respond to individual plowing or spreading requests until the City-wide response is complete.
  - Complaints are addressed once all roads and streets have been plowed and or spread and are in passable condition. In times of heavy snowfall this may be several hours after snow has stopped.