

Snow Removal Plan

Kelly Williams, Commissioner Marlyn Dietz, Operations Director 2018
Response Overview

Snow Operations Personnel

- All weather events are the responsibility of the Department of Public Works -Street Cleaning Division.
- Assistance and support is provided by additional Operations personnel as needed during the event:
 - **Building Maintenance**
 - Sanitation Division
 - > Street Maintenance Division
- If the event is significant, staff transitions into 12 hour shift rotations.



Command Structure

Public Works staffs and handles all plowing and salting during the event.
 There is close coordination with Emergency
 Management, Police and Fire departments to ensure continuity of services.

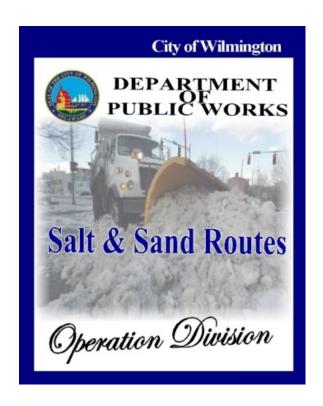
Communications are ongoing throughout the event to Emergency Management and the Mayor's Office.



Classification of Snow Events

All weather events are classified in three categories.

- ➤ Class I Event
- Class II Event
- Class III Event



Class I - Event

- Less than 4 inches of snow on the roadways and the duration of the event is less than 12 hours.
- The event is normally handled by City crews.



Class I - Response

- Plow and salt all primary and secondary roadways, feeder roads and neighborhoods in that order.
- The objective is to complete the operation within 48 hours of the end of the event.



Class II - Event

- A storm with accumulations ranging from 4 to 8 inches and the duration is more than 12 hours.
- This type of storm requires City crews and contractors including equipment.



Class II - Response

- Plow and salt all primary arterial roadways
- Secondary roads
- Feeder & neighborhood roads
- A response team will service complaints and requests of an emergency nature
- The objective is to complete the operation within 96 hours of the <u>end</u> of the event

Class III – Event

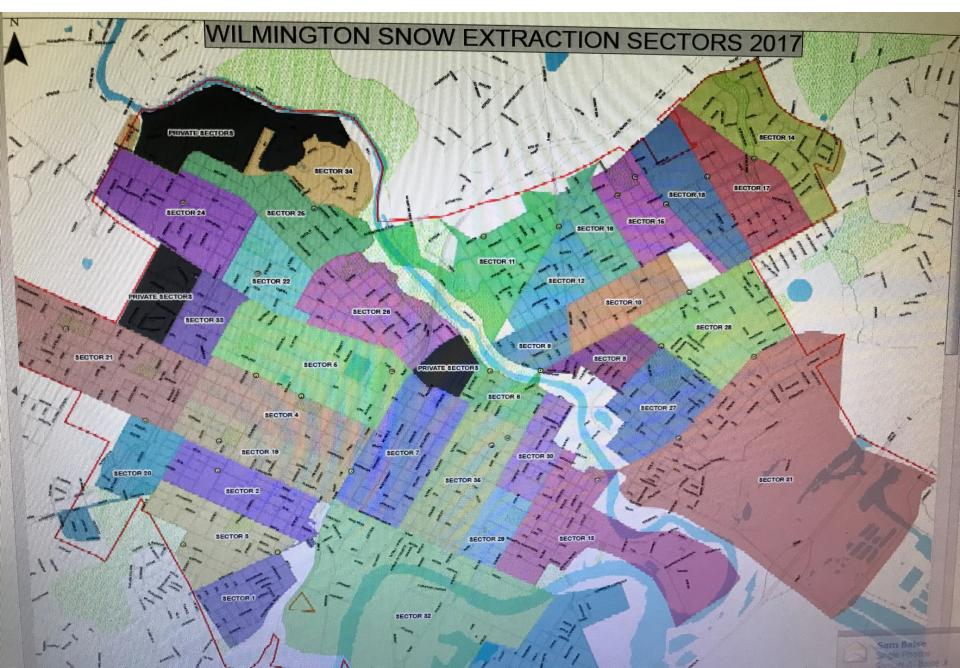
- A storm with snow accumulations greater than 9 inches and the duration is more than 24 hours.
- This will require all Operations personnel along with support from other City departments and contractor services including equipment.



Class III - Response

- Plow and salt all primary roadways
- Secondary roads
- > Feeder roads and neighborhoods
- > Put Snow Grid Extraction Plan into action
- Create extraction teams utilizing Public Works crews, other City departments and contractors

35 Snow Extraction Sectors



City Owned Equipment

- > (26) Dump Trucks with Plows & Spreaders
- > (13) Pickup Trucks with Plows/(10) with V Box Spreaders
- > (3) Stake Body Trucks for Snow Removal
- > (2) Backhoes
- > (2) Front End Loaders
- > (3) Small Bobcats
- > (6) Mechanical Brine Units
- > (2) Utility Trucks with Plows







Weather Event Personnel

- > (1) Director of Operations
- > (1) Administrative Coordinator
- > (9) Supervisors
- > (21) Equipment Operators
- > (17) Sanitation Drivers
- > (2) Building Maintenance Employees
- > (3) Street/Sewer Maintenance Employees
- > (5) Call Center Representatives (1 Supervisor)
- (6) Motor Vehicle Shop personnel (FVS)

> <u>65 TOTAL</u>

(If event requires additional personnel, other City departments will be called in for assistance)

Pre-Event Operation Planning

Based upon the Weather Intelligence Reports and the type of event, pre-planning includes:

- A liquid Salt Brine Mixture and Beet Juice is applied to prepare streets prior to the event.
- In addition, salt and sand may be applied just prior to the event on known problem areas.

Location Priority for Pre-Event Applications

- Primary roads arteries leading into/out of the City
- All routes leading to hospitals and emergency facilities, in order to assist Police, Fire, and Ambulance Services
- Secondary feeder roads supporting entry and exit of City
- All Dart Bus Routes
- Geographic problem areas: hills, narrow side streets
- Side streets and neighborhoods



PRE-PLANNING

BRINE TANK MIXING



Operational Plan

- Crews are sent out to the primary roads first. There are <u>9 Primary Routes</u> with <u>15 City plow trucks</u> assigned to clear those routes.
- As the event continues and primary routes are cleared, supervisors will redirect crews to emergency routes.
- After clearing primary routes and emergency routes, trucks move into 17 secondary grid routes



OPS PLANNING

Primary Streets

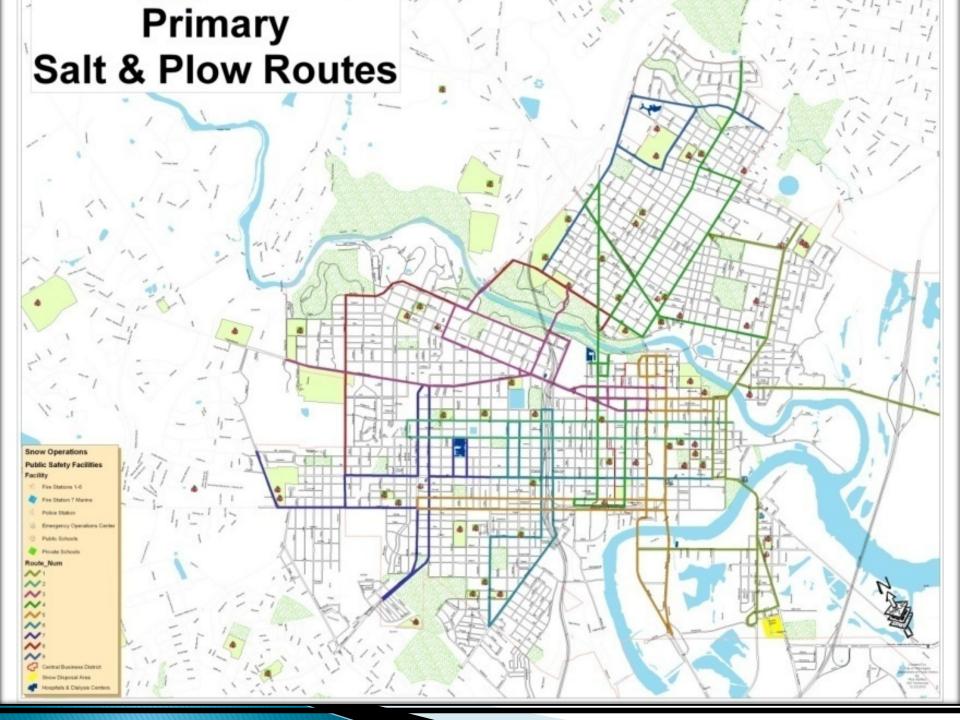
- ➤ 2nd and 4th Streets
- ➤ 10th,11th, & 12th Streets
- ➤ Martin Luther King Boulevard
- ➤ Lancaster Avenue
- Union Street
- Washington Street
- Concord Avenue
- North & South Market Streets
- ➤ Miller Road

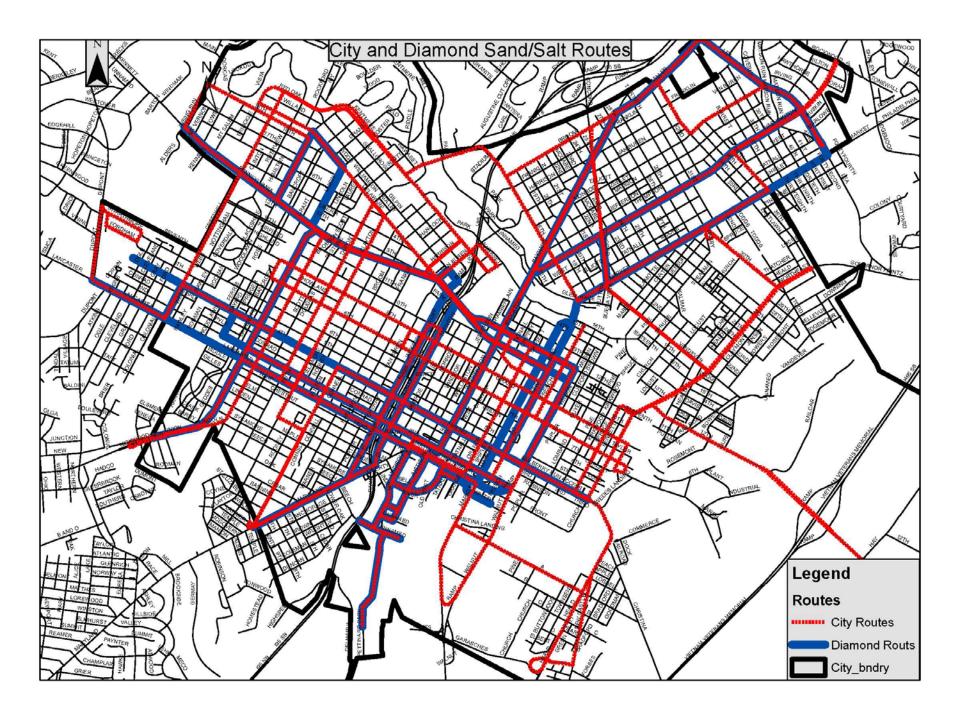
- > Delaware Avenue
- > Pennsylvania Avenue
- > Adams Street
- > Jackson Street
- ➤ North & South Walnut Streets

Bus and Hospital Arterials

- ➤ 8th and 9th Streets
- Claymont Street
- ➤ DuPont Street

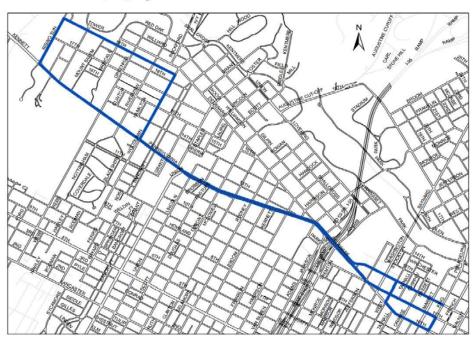






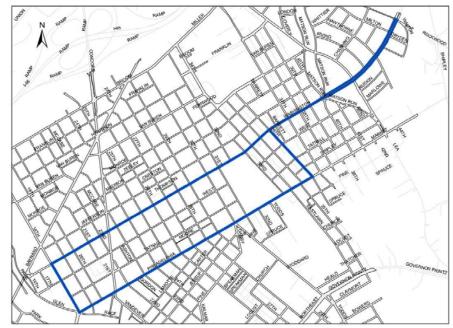
ROUTE 3-B

- 12th Street to Pennsylvania to Rising Sun (Right)
- Rising Sun to 19th Street (Right)
- 19th Street to Rising Sun to Woodlawn Ave. (Right)
- Woodlawn Ave 19th Street to Pennsylvania (Left)
- Pennsylvania Ave to 11th Street to King Street (Right)
- King to 10th (Right)
- 10th to West (Right)
- West to 12th (Left) Repeat Route



ROUTE 4-B

- 18th &Washington Street to 36th Street (Right)
- 36th Street to Market Street (Right)
- Market Street to 18th Street (Right)
- 18th Street to Washington Street (Right)
- Washington to Rockwood (Turn Around)
- Washington to 36th Street (Left)
- 36th Street to Market Street (Right)
- Market Street to 18th Street (Right)
- 18th Street Market Street to Washington Street (Right) Repeat Route



17 GRIDS FOR DEPLOYMENT

- Canby Park
- Union Park Gardens
- > Westmoreland
- **Browntown**
- > Hedgeville
- Lancaster-Pennsylvania (Jackson to Union Street)
- ➤ Brandywine Hills
- ➤ 31st to Lea Blvd -Market to Miller
- ➤ 18th to 30th Street-Market to Broom
- ➤ South Wilmington (Riverfront)
- Front to 16th -Locust to Walnuts
- Northeast Blvd to Market-12th to 35th Street
- ➤ Delaware Ave to Lovering Avenue-Scott to Adams
- Pennsylvania Avenue to 19th Street-Broom to Rising Sun Lane
- ➤ French to Washington-Front to 16th Street
- ➤ Washington to Adams-Front to Brandywine River
- Northeast Riverside Eastlake Area



Emergency/Hospital Routes



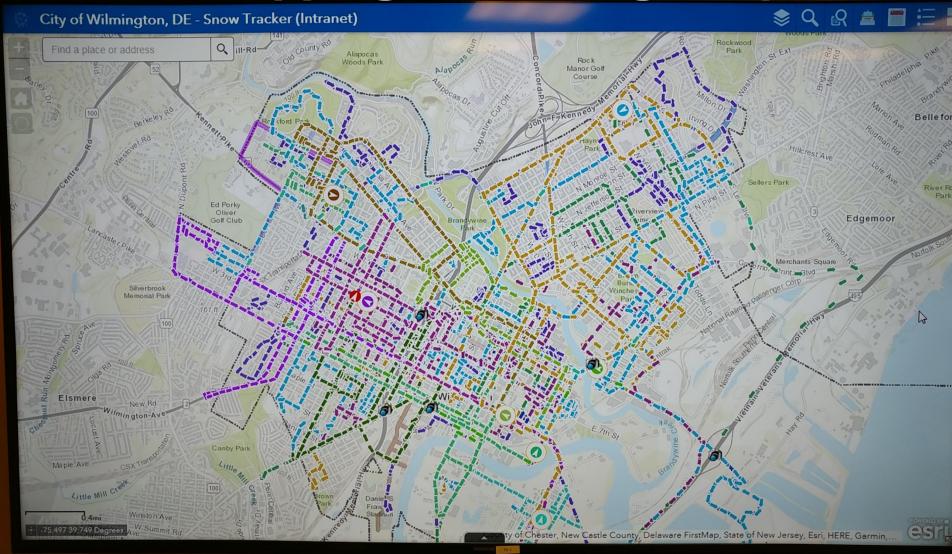


Secondary Roads





Snow Tracker GPS Mapping &Tracking Response





Common Issues

- Public (residents) and private contractors returning snow back to roadways after it has been cleared.
- Clearing snow emergency routes due to parked vehicles.
- > Snow that reverts to ice causing additional hazards.





City Code Governing Snow

- > Sec. 42-419. -Procedure for making pathways and snow clearance.
- (a) In removing ice and snow from sidewalks, it shall be unlawful to deposit any part thereof in the gutters or on the roadway forming a part of such public street. Such snow and ice shall be deposited on the sidewalk at or near the curb
- In removing ice and snow from private motor vehicle parking areas, including commercial parking lots for motor vehicles, or from any area which is not open and used by the public, the following procedures shall apply:
 - Snow and ice shall be deposited wholly to the interior of the perimeter of the private lot or behind the building line and shall in no case be deposited so as to obstruct an adjacent sidewalk, gutter, or roadway forming part of a public street
- > (2) The snow and ice removed from a lot or parking area shall not be piled beyond a height of five feet without specific permission to do so by the public works commissioner, nor shall such snow and ice be placed within 15 feet of any fire hydrant.
- (Code 1968, § 45-117; Ord. No. 92-053(sub 1), § 1(j), 7-2-92)

