

Post Event Review: The Blizzard of 2016

Snow Plow Planning and Operations



**Town of Westfield
425 East Broad Street
Westfield, New Jersey 07090**

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SNOW PLOW PLANNING AND OPERATIONS

INTRODUCTION

The preparation for “act of God” (or “act of nature”) events that may call upon the Town of Westfield’s municipal resources to address takes place on a continuing basis. An “act of God” is a legal term for events outside human control such as natural disasters and extraordinary weather events (including major snow storms and blizzards).

Winter weather events that produce accumulations of ice and/or snow on municipal roadways and public parking lots trigger Town of Westfield (“Town”) snow plowing operations. In simplest terms, plowing operations encompass a cyclical series of actions – preparation, development of a deployment plan, execution of the plan, and post-storm activities and review.

To be sure, the *preparation* for snow plowing operations occurs well before the forecast of a storm. Such preparations can be thought of in 3 interconnected stages: year-round, as winter approaches, and as a storm approaches.

PREPARATION

1. Year-round preparation includes, but is not limited to:

- Post-event reviews of past experiences including:
 - ✓ Analysis of performance by department heads regarding their respective departments (Police, Fire, Public Works, and any other department involved) in the context of the resources they had and the conditions they faced;
 - ✓ Comments, complaints, and requests from the public (direct and via Council representative);
 - ✓ Obstacles and dangers encountered by staff in the performance of their duties.
- Analysis of needs by affected department heads in terms of:
 - ✓ staffing,
 - ✓ equipment,
 - ✓ outside supplemental support (i.e. equipment rentals, contractual services, etc.),
 - ✓ new or amended ordinances (Code of the Town of Westfield),
 - ✓ communication enhancements,
 - ✓ training.
- Conduct research to keep abreast of safety, technological, mechanical, and procedural advances in snow plowing operations; sources include professional affiliations, other governmental units, regulatory agency standards (such as the NJ DOT and NHSA), other communities, and industry standards.
- Hands-on training.
- Preventative maintenance and proper storage of equipment.
- Cost – benefit analysis of acquiring and maintaining new equipment, utilizing contractual service providers, alternative staffing levels, amending practices, and any other preparation item considered.

- New Jersey climate and long term forecasts. The average annual snowfall in Westfield is 23.8 inches distributed as follows: 0.4” in November, 4.9” in December, 6.2” in January, 8.1” in February, and 4.2” in March and early April. The Town is well-equipped, well-staffed, and well-trained to handle more than the average snowfall for the entire season.
- Generators and gasoline supplies are checked and readied.

2. Preparation as winter approaches:

- In the autumn of each year, road salt is ordered to replenish stock as needed keeping in mind storage capacity.
- As late autumn approaches, simultaneous with routine autumn operations (field and park maintenance, leaf collection, tree plantings, pothole patrol, street sweeping, etc.), the Town begins to focus on transitioning to winter time operations.
- Such focus includes, but is not limited to:
 - ✓ Vehicles are inspected and routine maintenance is performed.
 - ✓ Plow assemblies including hydraulic systems, controls, cables, and connectors are inspected and readied.
 - ✓ Other equipment such as snow blowers are inspected and prepped.
 - ✓ Any necessary repairs are prioritized and scheduled. (Most are performed by in-house mechanics and staff. If there are any repairs that cannot be done in-house, the budget is reviewed and repairs by outside specialists are scheduled as appropriate.)
 - ✓ As leaf collection operations near conclusion (or sooner if there is a forecast of snow), plows are attached to all DPW vehicles that are capable of hosting one.
 - ✓ Supervisors, Department Heads, and the Town Administrator discuss readiness and any outstanding issues.

3. Preparations as a storm approaches:

- At the earliest forecast of a snow event, the Town develops a snow plowing deployment plan. Since every storm is different in terms of time of day, day of week, duration, air temperature, ground and pavement temperature, sustained wind speed, wind gusts, moisture content of the precipitation, snow and/or ice accumulation, post-storm forecast and the like, the plan must be custom tailored accordingly.
- In addition to the regular snow plows and snow blowers being readied, specialty vehicles such as the army surplus heavy duty tow truck and hummer vehicles are primed for service by the Public Works mechanics.
- Forecasts are monitored 24/7 as they most often change, sometimes significantly.
- Timing the start of plowing activities is crucial to assure the most efficient and effective use of equipment and manpower.
- Since most of the Public Works’ employees do not reside in Town, a decision must be made as to when the employees must be at the Public Works yard to ensure that they can travel safely and that there is enough manpower to fully execute the snow plow plan.

- The general plan assigns one supervisor to each of the four Wards to oversee plowing operations. Each ward is divided into sections. A plow operator is assigned to each section and within that section, the roadways are generally tended to in the following order:
 - ✓ arterial roads
 - ✓ school areas
 - ✓ collector roads
 - ✓ inclines and known trouble areas
 - ✓ the downtown area
 - ✓ secondary roads
 - ✓ tertiary roads, dead ends, and cul de sacs.
- Certain areas, such as cul de sacs and narrow streets, may require specific plows or loaders to be assigned and such assignments are made as needed.
- To keep residents informed, the Mayor, the Town Administrator, the Police Chief, the Fire Chief, and the Director of Public Works work together to post “Snow Alerts” on the Town’s website and broadcast messages via Twitter, Facebook, and Nixle.
- In addition to developing a customized plan for plowing operations, other departments prepare as needed, particularly the police and fire departments. Such preparations include, but are not limited to:
 - ✓ The Fire Department readies its pick-up truck equipped with a plow and installs chains on the tires of its fire engines. Staffing needs are projected. All firefighting and rescue apparatus is readied for immediate activation and response (as is always the case).
 - ✓ The Police Department readies its dispatch center and the Mobile Command Center so that power to the 9-1-1 system and communications are not interrupted, prepares portable generators to control major traffic signals should there be a power loss, stocks appropriate vehicles with barricades and temporary signage in case of need, broadcasts storm related information via Nixle, projects staffing needs, and equips hummers with all the supplies and emergency equipment needed to assume patrol, rescue, and extraction operations.
- Communicate with PSE&G regarding power outage response readiness.
- Communicate with the Volunteer Rescue Squad.
- Communicate with the County and State Offices of Emergency Management as warranted.

PLAN EXECUTION

- Regarding “act of God” events, not every possible scenario is predictable, and as explained above, every storm has unique characteristics. Consequently, a very important component in the execution of the snow plow plan is to continually evaluate the conditions at hand and be prepared to adapt as may be needed. It is important to keep in mind during this discussion that the response to the weather conditions is *in addition to* other services that may need to be provided simultaneously.
- The plan must proceed systematically and in a general sequence in order to achieve the goal of plowing the municipal roadways, the municipal parking lots, and sidewalks abutting municipal properties as completely as possible and as quickly as possible under the conditions and challenges presented over the duration of the weather event.

- The Town Administrator is the point person, communicating and coordinating as needed with the department heads and elected officials.
- Within the Town's borders, there are 380 municipal roadways of varying dimensions that if placed end to end would extend approximately 100 miles in length, or greater than the distance between New York and Philadelphia. Factors such as the width of the roadway, the composition of the snow (moisture content affects the weight), the duration of the storm, sustained winds and wind gusts, the amount accumulated on the roadways, the air temperature, the ground temperature, and physical obstacles, determines the number of passes necessary to clear each roadway curb to curb. Consider that there are approximately 400 miles of driving lanes, shoulders, and parking lots to tend to. If 4 passes are needed to clear the roadways during a given storm, our plows must cover 1,600 miles; if 6 passes are needed, our plows must cover 2,400 miles, and so on. Remember, too, that plow blades are angled. A 14' plow blade will cut a swath through the snow 12' foot wide or less.
- Simultaneous to plowing the streets, when weather conditions are moderate and resources permit, plows and loaders address the public parking and commuter lots and crews attend to the public buildings and the sidewalks abutting Town property.
- When the conditions are severe and all hands must be dedicated to clearing the roadways, the parking lots, municipal buildings, and sidewalks abutting municipal property are tended to as soon as the roads are cleared and mobility is sufficiently restored.
- There is approximately 5.9 miles of sidewalks abutting municipal property to be cleared. If these sidewalks were placed end to end, they would stretch from Springfield Avenue at East Broad Street, down East Broad Street to Central Avenue, and down Central Avenue to the Parkway entrance in Clark.
- To help provide the separation of ice and snow from the road surface, salting of major roads and intersections may commence prior to the snow beginning to fall.
- Depending on the forecast and moisture content of the snow, plowing operations may commence when 2 to 4 inches of snow has accumulated on the roadways. However, should a significant snowfall be forecast, plowing may commence when there is more than 4 inches of snow on the roadway, depending on the time of day, day of week, and other factors. The timing and duration of plowing efforts are important to ensure that resources are available throughout the entire snow event.
- The police department deploys hummers for patrol operations as soon as the snow accumulations hampers the movement of regular patrol vehicles.
- Once plowing operations begin, it generally continues throughout the storm and for several hours afterwards. Historically, even under the worst weather conditions and taking into account the many challenges that sometimes occur (equipment breakdown, emergency situations, physical exhaustion of staff, plows getting stuck, etc.), the Town is almost always able to complete plowing activities on all 380 streets within approximately 8 to 10 hours after the snow stops falling, if not sooner.
- Opening municipal roadways the width of the largest piece of fire apparatus is the first objective, conditions permitting. As explained above, each of the four Wards is divided into sections. A plow and an operator (or 2 for the wing plows) are assigned to each section. Within that section, the roadways are generally addressed in the following order: arterial roads, followed by school areas, the downtown area, secondary roads, and tertiary roads.

- Per New Jersey Department of Transportation standards, plowing always occurs to the right (with the flow of traffic).
- The “line of attack” depends upon the conditions and variables presented with each storm. For example, a dry, “powdery” snow with modest accumulations and no drifting that begins to fall after the rush hour and ends 6 or 7 hours later enables plowing operations to take place overnight while most residents are safely in their homes sleeping and there are few vehicles traveling on the roadways. Provided emergency vehicles are able to navigate under these conditions, plow operators may be able to plow each street within their assigned section one at a time, curb to curb. Residents awaken to their entire street being plowed. On the other hand, a significant storm or blizzard may require that all operators focus on plowing and sometimes re-plowing a lane down the center of all primary and secondary roadways to assure that emergency vehicles are able to traverse all areas of the Town. Under this scenario, there will be unavoidable delays in making additional passes on each street and getting to tertiary streets, dead ends, and cul de sacs.
- The Town has the necessary vehicles and equipment to respond to and reach anyone in need whether a street has been plowed or not. In a true emergency situation, the police, fire, and public works departments and the volunteer rescue squad work together to assure a prompt response to a call for help.
- The Town’s professionals and elected officials continually monitor and “triage” conditions throughout the weather event to measure progress as well as to identify any unpredicted circumstances that may warrant extra attention. As explained above, roadways that carry the most vehicular traffic (e.g. arterials, collectors) and areas where people assemble (e.g. schools, downtown, train station) necessarily take precedence. While the Town’s staff and officials wish they could satisfy the number of “special” plowing requests and demands received, the focus must remain on the bigger picture of serving all 30,600 plus residents. Customer service is always important, but the Town cannot always provide “custom” service, especially during emergency operations. Diversions from the plan are extremely inefficient, slows progress, and may detract from others.
- Curb to curb plowing is a necessary objective:
 - ✓ First, the roads not only provide mobility, they must also provide access for emergency vehicles.
 - ✓ Second, two-way travel lanes are necessary in order to avoid “bottlenecking” where only one-way passage is possible.
 - ✓ Third, the roads must be as clear as possible in the event of a second storm, which could choke off access.
 - ✓ Though complaints about curb to curb plowing are sometimes received, residents generally understand the reasons for it as they are similar to the reasons why residents are quick to point out when leaf piles remain on the roadways “too long” during the fall.
- While clearing roadways, the plows are only capable of pushing the snow, not removing it, so snow buildup (the dimensions of which depends on the snow composition and total accumulation) along the edge of the roadway, including in front of the more than 9,000 driveways in Town, is unavoidable. Further, as previously explained, during a snow emergency, the first objective is to open at least one travel lane on all primary and secondary roads. The plows will need to return after the emergency lanes have been established to complete plowing operations on each street. When this occurs, residents may find more snow in front of their driveway apron, including those driveways that the residents may have already shoveled out. This is unavoidable.
- The posting of Snow Alerts updates on the Town website continues as does broadcasting messages via Twitter, Facebook, and Nixle.

- Communications via telephone and e-mail are reviewed and if time permits, responded to by the recipient. Though an individualized response is not always possible due to volume and focus, any concern expressed or answer to an inquiry that would benefit the entire community is distributed to all as an addition to the Snow Alerts.
- Salting and re-salting may be ongoing. (Simply put, salt works to lower the freezing point of water. However, if the temperature of the roadway is lower than 15 degrees Fahrenheit, the salt won't have a measurable effect because it cannot penetrate the structure of the solid water to induce the dissolving process.)
- The Mayor and Town Administrator “ride along” with plow operators and supervisors to assess conditions and progress first-hand.
- Although part of the Town’s preparation for a snow event includes preventative maintenance measures on all equipment, mechanical equipment that runs nonstop for many hours may experience breakdowns and have to be taken out of service. Personnel must then be diverted to make necessary repairs.
- The Town’s Public Works Director and supervisors keep in touch with their peers in other towns to keep abreast of “global” challenges and exchange potential solutions.
- After the roadways and parking lots have been plowed and mobility has been reasonably restored under the conditions presented, the Town will designate a number of crews and appropriate equipment to concentrate on snow removal in the municipal parking lots and in the downtown area. Whenever possible, such efforts are scheduled during the overnight hours for obvious reasons. The snow is transported to the Conservation Center and, depending on volume, to other Town properties.
- There are areas in Town that are the responsibility of others:
 - ✓ The school district is responsible for clearing the sidewalks around the public schools.
 - ✓ The State of New Jersey is responsible for plowing Route 28 (portions of North and South Avenues).
 - ✓ The County of Union is responsible for plowing County roads (Springfield Avenue, East Broad Street to Mountain Avenue, West Broad Street, Central Avenue, and Mountain Avenue).
 - ✓ Private property owners (residential and commercial) are responsible for clearing the sidewalks abutting their property as well as their private driveways.
- Depending on the conditions presented, plowing and salting operations may continue for hours or days after the storm to address “tidying up” matters such as widening travel lanes, snow drifts, refreezing of melting snow, “tucking” corners, etc. With increasing frequency, there are vehicles left parked in the roadway during snowfalls that create obstacles for plows and problems later when they are shoveled out and mounds of snow are then left in the street.
- The police department may need to order vehicles parked in violation or those that obstruct safe passage towed from roadways.

POST EVENT ACTIVITIES

Briefly, post event activities cycles back to preparation for the next event. See “**1. Year-round preparation includes, but is not limited to:**” above.

Consider the following:

- All of the equipment and vehicles that were readied and put into service in preparation for the storm must now be serviced and, if applicable, properly cleaned and stored.
- For future reference and needs assessment, Department heads evaluate the challenges they faced and their department's performance in the context of the resources they had and the conditions presented. Part of this evaluation includes collecting relevant data regarding plowing efforts in the event the Town is included in a federal disaster area declaration and eligible for FEMA reimbursements.
- Department Heads, the Mayor, the Town Administrator, the Council's Public Works Committee, and other members of the Town Council confer with each other to share concerns and experiences. The Public Safety Committee, the Code Review and Town Property Committee, and the Finance policy Committee may also be involved.
- Communications from the public received by Town's employees working out on the streets, the Town's professionals, and elected officials are evaluated.
- Preparation for the next event is a continual work in progress.

WINTER STORM JONAS: THE BLIZZARD OF 2016

WEATHER FORECAST

On January 22, 2016, Governor Christie issued an Executive Order declaring a State of Emergency throughout the State of New Jersey, reading in part: “Whereas the National Weather Service has issued storm warnings throughout New Jersey, including Blizzard Warnings and Winter Storm Warnings;” and, “Whereas the impending weather conditions constitute an imminent hazard, which threatens and presently endangers the health, safety, and resources of the residents of one or more municipalities and counties of this state”.

On Monday, January 18, 2016, the Town began to closely monitor the potential development of a snow event based on early forecasts by the National Weather Service (“NWS”). However, as reported by Stephen Stirling of NJ Advance Media for NJ.com on January 24, 2016, “...even 24 hours before snow started falling in the Garden State, the outcome was very much in question. It was Friday and forecasters had seen this before. A powerful winter storm was poised to strike the Eastern Seaboard, threatening to dump massive amounts of snow across the Mid-Atlantic. But most forecast models showed the storm staying far enough south that Northern and Central Jersey might just get clipped with a few inches of snow. The potential was there, but the forecasting data wasn’t.” The report continued, “Nearly a year ago exactly, meteorologists around the region had seen this same potential blow up in their faces. On January 26, 2015, the entire state was shut down, anticipating upwards of 30 inches of snow that never came, courtesy of a storm that tracked just 65 miles east of the going forecast.”

As of 7:00 a.m. Friday, January 22, 2016, the NWS was calling for accumulations of 7 to 12 inches with sustained winds and gusts causing drifting snow and whiteout conditions. In an unusual move so close to the predicted arrival of the blizzard, the NWS issued no updates for more than 8 hours. At 4:00 p.m. that afternoon, the NWS upped the potential snowfall to 18 inches. By Saturday morning, January 23, 2016, the NWS upgraded its total snowfall predictions to 20 to 25 inches with persistent bands of snow dropping 2 to 3 inches per hour. The Blizzard warning was in effect until 7:00 a.m. Sunday, January 24, 2016.

THE TOWN’S EFFORTS, ACTIONS, AND COMMUNICATIONS

The Town’s efforts, actions, and communications were chronicled in great detail on the Town’s website in a special section on the homepage under “Westfield Winter Snow Alert”. There is no reason to repeat that information here. A copy of the section in its entirety is attached and labeled “Appendix A” and should be reviewed as part of this discussion. (Because Appendix A represents postings to the website, the most recent are at the top. To read the postings in chronological order, it must be read from the bottom up.)

In addition to the information provided in the snow alerts (Appendix A), consider the following:

- As previously explained, making sure staff can get to work and timing the start of plowing operations is crucial, and the uncertainty of the forecast up to almost the last minute presented a tremendous challenge. The Director of Public Works and the Town Administrator agreed that all Public Works employees should report for duty early Saturday morning and plan to stay for the duration of the storm and longer if necessary. On Friday afternoon, with all the equipment ready and pre-salting of certain high volume roadways completed, the DPW workers left work at the end of the regular work day with instructions to report as rested at possible as 6:00 a.m., Saturday morning.
- It should be duly noted that 39 of 40 DPW workers reported for duty. The only one that did not report was out of state and could not get back home. Additional police and fire personnel also reported for duty.

- It should also be duly noted that due to retirements, 14 of the public works employees were hired in 2015 and although hands-on training with the equipment was performed on dry land prior to the start of winter, the approaching blizzard provided the “rookies” with an intense indoctrination to municipal plowing operations.
- Department of Public works employees worked for 35 hours straight including throughout the duration of the storm. For safety reasons, they were sent home to rest, check on their own families, and dig their own driveways out, reporting back to work at 5:00 a.m. on Monday, January 25, 2016.
- All vehicles that could support a plow were placed into service. Twenty-two trucks including 4 “wing” plows plus 4 front end loaders, a total of 26 vehicles, were deployed by the Department of Public Works.
- Trucks are designed to carry or pull cargo, not push it. Add to that the wear and tear of many hours of continuous use and breakdowns do occur and equipment does fail, despite all preventative maintenance efforts. During the Blizzard of 2016, 6 trucks and 1 loader broke down. 2 of the trucks were at the end of their useful life and not repairable.
- The Town does maintain a working relationship with several contractors in the event it needs to rent trucks on an emergency basis. However, availability when there are many competing demands and the ability to get the vehicles to the Town are two of the controlling factors. The Town did look into renting additional loaders but they could not be delivered. The Town did hire 2 dump trucks from a contractor to assist with hauling snow away from the downtown at a cost of \$3,500 for 8 hours.
- The Town is well-equipped, well-staffed, and well-trained to handle the average annual snowfall of 23.8 inches. The Town, however, received more than that amount in just 11 hours or so. The NWS reported that Westfield received 24 inches at one of its reporting stations as of 10:00 p.m. on Saturday, January 23. Newark Airport recorded 28.1 inches. Sustained winds and wind gusts made it difficult to measure exact snowfall totals with the usual gauges.
- According to the New Jersey State Climatologist, “the particular crystalline nature of the snow, ongoing compaction from the deep snow, and perhaps also the wind led to a more dense snowfall than might have been expected.” The weight of dense, compact snow makes it very difficult to push, even by plows on trucks with heavy duty engines.
- Town plows and loaders had to be extricated numerous times (supervisors stopped counting at 75) by the military surplus “dumps” and the military surplus heavy duty tow truck acquired over the past summer (at no cost to the taxpayers).
- During the height of the storm, the snow was falling at such a rate that roads that just had a path plowed down the center appeared untouched shortly thereafter.
- From the e-mails received and from the phone calls made to Town official’s homes, it was evident that some residents were concerned that their street had been “forgotten”. Although no street had been forgotten and any perceived delays were due to the magnitude of the task at hand, it was understandable that residents were seeking reassurances that the plows were working their way to their location. With the storm falling on a weekend and without staff available to man the DPW phone line, residents were calling the police to report that their street was not plowed and expecting the police to know and offer a definitive time frame when the plows would arrive. To free up police emergency lines and to offer residents assurance that their street was not forgotten, on Sunday morning, January 24, the webmaster

created a “plowing portal” on the Town’s website which enabled residents to enter their block number and street name and be assured that their request will be sent to the Department of Public Works. Once entered and submitted, the resident received an automated “Thank You” to confirm that their request was received. Over 700 entries were submitted, but there were an overwhelming number of duplicates and repeats. Almost all were tertiary streets, single blocks, or roadways where vehicles parked in the street blocked plow access. The list was maintained by the Director of Public Works and the Town Administrator until all areas were addressed.

- On Thursday, Jan. 28, the National Oceanic and Atmospheric Administration confirmed the Category 4 (5 being the most powerful) ranking for the Blizzard of 2016. A category 4 storm is defined as “crippling”.
- After the major snow plowing operations were completed, crews tended to the *removal* of snow from the commuter parking lots and downtown streets. The snow removal was the most complete ever, clearing the most parking spaces more quickly and more thoroughly than in the past.

FROM THE PUBLIC: COMMENTS AND COMPLAINTS

In a community with a population of more than 30,300 people and approximately 10,000 households, the Town received a very temperate amount of comments and complaints - in the low hundreds. Most were the same comments and complaints received in previous snow storms, such as residents of tertiary roads requesting a faster response, complaints about cars parked in the street, and complaints about plows depositing snow in driveway aprons. In post event review, all comments and complaints are brought to the table. It should be noted that not all comments and complaints are an indication of underperformance on the part of the Town; rather, many residents are expressing their personal preferences as to priorities.

The following were the most common comments and complaints received by the Town from the public, in order of frequency.

C: *My [tertiary] street or my cul de sac was not plowed.*

A: This order in which streets are plowed has been previously addressed in this report and is also discussed in Appendix A.

C: *The Town plowed my driveway in after I shoveled it out.*

A: Plows are designed to eject snow as they push it. Plows do not remove snow. This is discussed in great detail in Appendix A.

C: *My neighbor left his car or cars parked in the street:*

- *which makes it difficult to maneuver around, or*
- *and snow was thrown back into the street while digging the car(s) out, or*
- *the plow could not reach the curb so to clear my driveway, I had to shovel into the street to the point that was plowed.*

A: This is a concern shared by the Town’s plow operators and the police and will be addressed later in this report.

C: *I haven’t seen a plow since it made its first pass.*

A: In the midst of a “crippling” (Category 4) storm, to assure that emergency vehicles are able to traverse all areas of the Town, plow operators focus on plowing and sometimes re-plowing a lane down the center of all primary and secondary roadways before returning to widen individual streets.

Residents were assured via the Snow Alert that because they do not see a plow on their street doesn't mean that all the plows aren't out working in other locations in Town.

C: *The commuter parking lots at the train station were not ready on Monday morning.*

A: Plows and loaders were assigned to the commuter lots at 5:00 a.m. on Monday morning. This was the soonest crews could be assigned as opening the roadways took precedence. (The streets must be a priority. Commuters can't get to the lot if the roads are not passable.) Clearing of the lot took longer than usual due to the volume and weight of the snow. NJ Transit trains were running an hour and a half late and PATH was not running as yet. The lot was cleared by 9:00 a.m. There is more information on this in Appendix A. The good news is that after the initial clearing, the crews returned to remove the snow and opened more parking spaces much more rapidly than ever before and there were no additional complaints.

C: *Plowing is proceeding too slowly.*

A: The Town was fully prepared and all hands were on deck. The time it was taking to address all the streets and public areas was an indication of the magnitude of the task at hand, not a lack of planning or effort. See Appendix A.

C: *The snow plows are speeding and throwing snow onto my sidewalk.*

A: Snowplows generally travel between 15 and 20 mph and must maintain their speed to push heavy snow and keep it from sticking to the plow blade. Because of the weight of the truck and plow along with the approximate 5 tons of ballast in the truck bed, plows are generally not capable of speeds over 25 mph when pushing tons of heavy snow ahead of it. The trucks are usually in a low gear and using high engine RPMs to maintain the power needed to push the snow. The human perception of speed is affected by the noise of the high RPMs, which can create the impression of speeding. The distance of the snow discharged from the blade is determined by the composition and volume of the snow.

THE TOWN'S ISSUES AND CONCERNS

The following are issues identified and concerns expressed by plow operators, the police department, the fire department, the Director of Public Works, the Town Administrator, other department heads, and Town officials:

- *Vehicles parked on the street during snow events.*
This situation been monitored for many years. Plow operators report that the vehicles are obstructions that seriously hamper operations. The police and fire departments are concerned about expedient accessibility. All are concerned about safety. Despite pleas on Twitter and Facebook and advisements on the Town's website and from the Police department via Nixle, vehicles continue to be parked on the street.
- *Residents and private contractors blowing snow into the street.*
This has been witnessed first-hand on numerous occasions by both Town employees and officials. Placing snow back in the street is clearly creating a hazard.
- *Business and property owners in the Central Business District ("CBD") and/or their private contractors plowing and blowing snow into the CBD roadways.*
Placing snow back in the street not only creates hazards in the CBD, it creates numerous traffic and pedestrian movement issues that proliferate into congestion and safety issues.

- *People trying to “block” approaching plows by standing in the street in front of their driveway apron.*
This has been witnessed first-hand by officials participating in ride-alongs during plowing operations. This is an extremely dangerous practice as the plow operator may not be able to see the person. It is also ineffective as the plows are only capable of pushing snow to the right – snow deposited at the foot of driveways is unavoidable.
- *People “playing” in the street during storms while plowing operations are underway.*
Though the Town, County, and State issue warnings to stay inside and stay safe during extreme weather events, there are some people who put their well-being at risk by taking to the streets to play (cross country ski, snowball fights, etc.). Plow operators in particular expressed concern as visibility is always a challenge and the plow’s maneuverability and stopping distance makes it dangerously difficult to avoid someone in the road.
- *Residents calling the police department regarding plowing operations.*
The police department is on duty 24/7. On weekends, overnights, or on weekdays when the office staff cannot get in due to weather conditions, residents call the police department with questions regarding plowing operations and seeking specific information as to when their street will be plowed. Though the police will try to provide whatever information they may have, it is not desirable to tie up emergency lines for this purpose. The Town addressed this by setting up the “plowing portal” described earlier. Not only was this helpful to residents, it also gave the police a site to direct residents to when they called.
- *Communication among the Director of Public Works and individual plow operators.*
The Director of Public Works and plow operators communicated with each other by way of their personal cell phones. This method is time consuming as it requires multiple phone calls to reach multiple operators. The Town was already looking into installing new radios in the trucks prior to the arrival of the storm. The most recent capital budget provides funding for the radios to be purchased.
- *Aging equipment and “tired” trucks.*
New trucks with greater capabilities were already being discussed prior to the arrival of the storm. The recent capital budget provided funding for the purchase of 4 new long bed, multifunctional pick-up trucks equipped with plows. Among other uses, the new trucks will help with plowing operations on cul de sacs and narrow roadways. (Fleet management and a vehicle replacement schedule is an ongoing task not solely related to plowing operations.)
- *Frustration and exhaustion.*
Plowing snow is a very important job that takes skill, endurance, patience, and intestinal fortitude. Because of circumstances out of the plow operator’s control and competing demands from the public, it can also be a thankless job at times. Riding atop a plow for hours upon hours while keeping focused on the road ahead under challenging weather conditions is hard work. Plowing and re-plowing the same area over and over again can seem like progress is not being made. On occasion, plow operators are confronted by dissatisfied members of the public. For example, while removing snow from a municipal lot, a DPW worker was confronted by a gentleman who proceeded to belittle him and rant about “poor planning”. In a letter to the editor, a resident accused a plow operator of deliberately dropping his plow on a dry road surface for no reason and went on to suggest that each plow driver put \$1,000 in escrow “to pay for damage to the equipment we have them use”. The letter to the editor and the Mayor’s response to set the record straight is attached as Appendix B.

RECOMMENDATIONS

1. *Enact an ordinance to prohibit parking on snow covered roads.*
The Town has been monitoring this issue for many years. Despite pleas and warnings communicated via “Snow Alerts” on the website and announcements broadcast on Twitter, Facebook, and Nixle, not to mention common sense, compliance continues to be an issue. The Town has received requests from residents to enact such an ordinance. It is anticipated that the effect of the proposed restriction would improve safety and emergency vehicle access and significantly improve the efficiency and quickness of plowing operations.
2. *Enact an ordinance that specifically prohibits the blowing, plowing, shoveling, or otherwise depositing snow into the street.*
Simply put, blowing, plowing, shoveling or otherwise depositing snow into the street creates hazardous conditions.
3. *Plan to purchase and install new radios in DPW vehicles to enhance communications.*
This has been accomplished during the recent capital budget process.
4. *Continue with fleet management practices and budgeting for replacement vehicles as they reach the end of their useful life.*
This is an ongoing task and not solely related to snow plowing. DPW vehicles are necessarily multi-functional. When purchases are made, consideration is given to the vehicle’s capability to improve snow plowing operations.

CLOSING

Preparation for events that may call upon municipal resources to address are continuous. Part of the post event review includes gauging performance. In doing so, the Town does reach out to other communities to determine their experiences. Attached as Appendix C are excerpts from other communities’ websites from around the country regarding their snow plowing operations. The excerpts reveal that many of the issues presented here are experienced in other towns as well.

In closing, the ultimate question to be answered at the conclusion of the post event review is: Did the Town do the best it could with the resources it had under the conditions presented? This report provides the information necessary for each reader to answer that question.

Appendix A

Mayor's Message and Blizzard Alerts – Blizzard of 2016

January 26, 2016 at 7:00 p.m. – Today the Department of Public Works worked to widen travel lanes as needed, with special attention on the areas around the schools. The snow in commuter Lots #3 (south side train station) and Lot #6 (Watterson St.) was removed with front end loaders, maximizing the number of available spaces. Crews also began addressing sidewalks abutting public parking lots. Tomorrow the crews will continue to clear sidewalks and address any roadways or areas that warrant additional attention. Next on the list is attending to our municipal parks and using front end loaders to remove snow from the downtown area.

When extraordinary snow events occur, I ride along in a plow for several hours so I can gauge the conditions and observe the plowing operations and progress first hand. I want to reassure residents that the Department of Public Works is putting forth its maximum effort. All Public Works employees (with the exception of one who was out of state) responded to the call and worked 35 hours straight. For safety reasons, they were sent home early Sunday evening to rest, check on their own families, and dig their own driveways out. By 5:00 a.m. on Monday morning, everyone was back on duty.

I also want to brief residents on some of the preparations that take place before a major weather event occurs. First, long before the predicted blizzard, the Town is thinking about such an event. Thanks to Police Chief Wayman, the Town has acquired numerous pieces of military surplus equipment at no cost to help with any possible scenario. For example, once regular patrol vehicles were having difficulty navigating through the snow, the police immediately placed military surplus Hummers into service, ensuring patrols were out throughout the blizzard. Further, amongst other functions, the Hummers are capable of assisting with medical transportation as may be needed. A military surplus heavy duty tow truck acquired over the summer had to be used on numerous occasions to extricate stuck snow plows and front end loaders. Right before the storm, the mobile command center was readied in the event of a power outage affecting our 9-1-1 system. The Fire Department installed chains on the wheels of its engines. The DPW mounts plows on every available piece of equipment and performs preventative maintenance to avoid breakdowns from the heavy duty wear and tear of prolonged plowing. Staffing levels are assigned.

Thank you to our Public Works employees, our Police Department, our Fire Department, and our volunteer Rescue Squad for braving the extreme elements throughout the blizzard.

THANK YOU WESTFIELD RESIDENTS

I want to thank our residents for staying safe and for their patience and cooperation during and after this unprecedented event. Over 2 feet of snow fell in approximately 11 hours, the conditions made worse by sustained high winds and wind gusts. I want to offer special thanks to those residents who dug out the fire hydrants in front of their homes, to those who checked on and assisted their neighbors, and those who offered to feed the Town employees that were working long hours.

I understand the personal frustration a resident may feel when snowed in, especially residents of tertiary streets, cul de sacs and dead ends, while the crews necessarily attended to arterial, collector, and secondary roadways. At times like this, it may be difficult to understand that the Town is mobilizing its resources to best address all the residents and all the 380 streets in as timely a manner as possible with the equipment and resources available. To be sure, there are many competing demands. Unfortunately, the plows just can't be on every street simultaneously.

To the residents who provided feedback, both positive and negative, regarding plowing operations, thank you. All comments received are welcome and all will be included in post-event reviews. Please be aware, however, that it would not be prudent for the Town to maintain a higher level of staffing or purchase the additional equipment to manage a snowfall event that may occur once every 20+ years. The Town is well-equipped to handle the average snowfall of 23.8 inches for the entire season. We received more than that amount in approximately 11 hours.

January 25, 2016 at 7:00 p.m. – The crews continue to work on roads and at this time all arterial, collector, secondary and tertiary roads have been opened. In addition, the commuter parking lots have been opened and the shopper lots are being cleared as I write this message. All shopper lots will be open later tonight. The Town apologizes for the inconvenience this morning for the commuters that arrived at the lot and were unable to park. It was the Town's intention to have the commuter lots open in time for the commute but our crews needed a rest for safety reasons after working 35 hours straight and they needed to check in on their own families. When they returned this morning at 5:00 a.m., the task took 2 hours longer than anticipated with the lots opening at 9:00 a.m. rather than 7:00 a.m. The commuter spaces that remain snow covered in the main lot are expected to be cleared tomorrow.

As I have said previously, pushing over 2 feet of snow is slow going and the time it is taking to plow the entire Town is evidence of the magnitude of the task at hand.

Now that all roads are open, the crews will refocus their attention on, town owned sidewalks, "tucking" corners, and any areas or roadways that warrant follow up attention. In addition, we will be removing snow from parking lots and from the downtown area in the coming days. The sheer volume of snow will require several days to fully complete snow plowing operations. Thank you for your patience as we address the aftermath of this historic storm.

IMPORTANT MESSAGE FROM FIRE CHIEF KELLY: If you are fortunate enough to have a fire hydrant in front of your home, please remember to dig it out so that it is accessible to fire fighters in the event of an emergency.

DO NOT BLOW OR SHOVEL SNOW BACK INTO THE STREET: When cleaning your sidewalks and driveways, do not blow or shovel snow back into the street. It should be blown or piled on your own property.

DRIVEWAY APRONS: Residents sometime complain that the plows leave snow in front of or in driveway aprons, especially those residents who have already shoveled. This, of course, is not intentional on the part of the Town. While clearing roadways, the plows are only capable of pushing the snow, not removing it, so snow buildup (the dimensions of which depends on the snow composition and total accumulation) along the edge of the roadway, including in front of the more than 9,000 driveways in Town, is unavoidable. During a snow emergency, the immediate goal is to open at least one travel lane on all the roads. The plows may need to return after all the roads are open and re-plow certain areas that require the travel lanes to be widened. If this is the case on your street, you may find snow in front of your driveway apron after you have shoveled. Again, this is unavoidable under these conditions.

IMPORTANT SAFETY MESSAGE FROM MAYOR SKIBITSKY - January 24, 2016 at 11:30 a.m.

I have been riding along in a plow with a supervisor all morning to gauge the conditions of the roadways throughout the Town. I have witnessed first-hand a very dangerous practice by some residents who stand in front of their driveways in an attempt to have the snow plow swerve so as not to push snow in front of their driveway apron. DO NOT STAND IN FRONT OF YOUR DRIVEWAY AS A SNOW PLOW APPROACHES - YOU ARE PUTTING YOURSELF AT SERIOUS RISK. From where the plow operator sits, you may not be readily visible. Further, the heavy trucks cannot stop or maneuver like a smaller vehicle.

The Town plows as closely to “curb to curb” as possible for good reason. First, the roads not only provide mobility, they also provide access for emergency vehicles. Second, two-way travel lanes are necessary in order to avoid “bottlenecking” where only one-way passage is possible. Third, the roads must be as clear as possible in the event of a second storm, which could choke off access. As has been emphasized below, while clearing roadways, the plows are only capable of pushing the snow, not removing it, so snow buildup (the dimensions of which depends on the snow composition and total accumulation) along the edge of the roadway, including in front of the more than 9,000 driveways in Town, is unavoidable. During a snow emergency, the immediate goal is to open at least one travel lane on all the roads. The plows may need to return after all the roads are open and re-plow certain areas that require the travel lanes to be widened. If this is the case on your street, you may find snow in front of your driveway apron after you have shoveled. Again, this is unavoidable under these conditions. You are not alone in this. When I go home later today, I too will have to shovel my driveway apron.

I have also been witnessing first hand many people blowing and shoveling snow back out onto the roadway. Again, as has been emphasized below, when cleaning your sidewalks and driveways, do not blow or shovel snow back into the street. It should be blown or piled on your own property.

January 24, 2016 at 11:30 a.m. – As noted in the 9:00 a.m. message below, please be assured that none of the 380 municipal roadways have been forgotten. It is understandable that you may wish to make sure that your street is on the Department of Public Work’s list. To do so, you may go to the Town’s website, www.westfieldnj.gov, click on “Snow Removal Request” in the message ribbon, and enter your block number and street name in the form provided. This information will be forwarded to the Department of Public Works.

January 24, 2016 at 9:00 a.m. – Overnight, once the record breaking snowfall stopped and the winds finally moderated, the plowing efforts were able to accelerate. Arterial, collector, and secondary roads have been cleared. The crews are currently working on getting to every tertiary roadway, such as cul de sacs, dead end portions of roadways, and small “one block” streets. The crews will also be addressing commuter parking lots #3 and #6 overnight tonight in an effort to have the lots ready by early Monday morning.

Please be assured that none of the 380 municipal roadways have been forgotten. Pushing over 2 feet of snow is slow going, and every road requires several passes. Our plow operators have been on duty for 27 straight hours and will continue to work until all roads are open.

Once every road is open, the crews will focus their attention on areas such as parking lots, sidewalks abutting the parking lots, “tucking” corners, and any areas or roadways that warrant follow up attention. The sheer volume of snow will require several days to fully complete snow plowing operations.

IMPORTANT MESSAGE FROM FIRE CHIEF KELLY: If you are fortunate enough to have a fire hydrant in front of your home, please remember to dig it out so that it is accessible to fire fighters in the event of an emergency.

PLEASE TAKE CARE WHILE SHOVELING SNOW: There is more than two feet of snow on the ground. Remember to take frequent breaks when shoveling, use your legs and not your back when lifting the shovel, make sure you are hydrated, and please check on any neighbors who may be in need.

DO NOT BLOW OR SHOVEL SNOW BACK INTO THE STREET: When cleaning your sidewalks and driveways, do not blow or shovel snow back into the street. It should be blown or piled on your own property.

DRIVEWAY APRONS: Residents sometime complain that the plows leave snow in front of or in driveway aprons, especially those residents who have already shoveled. This, of course, is not intentional on the part of the Town. While clearing roadways, the plows are only capable of pushing the snow, not removing it, so snow buildup (the dimensions of which depends on the snow composition and total accumulation) along the edge of the roadway, including in front of the more than 9,000 driveways in Town, is unavoidable. During a snow emergency, the immediate goal is to open at least one travel lane on all the roads. The plows may need to return after all the roads are open and re-plow certain areas that require the travel lanes to be widened. If this is the case on your street, you may find snow in front of your driveway apron after you have shoveled. Again, this is unavoidable under these conditions.

January 23, 2016 at 3:00 p.m. – Please be advised that Elm Street and Prospect Street in the area surrounding Trader Joe’s is completely blocked off as Trader Joe’s experienced a major roof collapse apparently due to the structural stress of the heavy winds and the weight of the snow. The Fire Department, the Police Department, and the Department of Public Works are on site to assist with access for emergency equipment and ensure safety. The good news is that there has been no report of injuries at this time, but this exemplifies the potential dangers that this blizzard poses. Please continue to stay indoors and stay safe. It is likely that Prospect St. and Elm St. in this vicinity will remain closed beyond the conclusion of the blizzard conditions as the full extent of the damage is determined and the cleanup of external debris is completed.

January 23, 2016 – According to the National Weather (NWS) service, the Blizzard Warning remains in effect until 7:00 a.m., Sunday, the 24th. Due to persistent bands of snow dropping 2 – 3 inches of snow per hour, the total snow accumulation potential has been increased to 20 – 25 inches. The NWS issued the following warning: “extremely dangerous travel due to heavy snowfall and strong winds with whiteout conditions likely... secondary and tertiary roads may become impassable....strong winds may down power lines and tree limbs.”

With a statewide State of Emergency in effect, the prolonged duration of the storm, the potential for total accumulations of over 2 feet, and wind conditions causing significant drifting, it is imperative for your safety and the safety of others that you remain indoors.

Please be assured that the Town has all hands on deck and every available piece of plowing equipment is in service. The extreme weather conditions dictate that clearing the roads of the volume of fallen snow as well as the windblown drifts will take multiple passes.

IMPORTANT WARNING FROM FIRE CHIEF KELLY: Prior to starting your vehicle, first make sure that the exhaust pipe is not covered or encased with snow, even if the vehicle is unoccupied and you are just warming it up. When the tailpipe is blocked, extremely dangerous and potentially deadly carbon monoxide fumes will be forced back into the passenger compartment and could overcome a person in a matter of seconds. The very first action you should taking when digging out a vehicle is to clear away the snow from the tailpipe a distance of at least 3 feet and keep checking that it remains clear.

January 22, 2016 at 4:00 p.m. – The National Weather Service updated the timing of the Blizzard Warning to being in effect from midnight tonight to 7:00 a.m. on Sunday morning, with the potential for higher accumulations than previously projected, possibly up to 18 inches of snow with significant drifting due to sustained high winds and gusts.

January 22, 2016 – The National Weather Service has issued a Blizzard Warning effective from 4:00 a.m. on Saturday, January 23, and continuing through noon on Sunday, January 24, though snow may begin falling earlier. A blizzard is defined as a severe snowstorm characterized by sustained winds or frequent gusts of at least 35 mph with little or no visibility and lasting for a prolonged period of time. The

National Weather Service forecast for our region calls for potential accumulations of 7 to 12 inches. Sustained winds and gusts may cause dangerous snow drifting. Temperatures are expected to remain in the high 20s. The heavy snowfall and high winds will make for dangerous driving conditions with visibilities at times at or near zero in white out conditions. PSE&G advises that the high winds may cause downed trees and power lines.

For your personal safety and the safety of others, and to avoid interfering with snow plowing efforts and emergency responders, motorists and pedestrians should stay off the roads.

THE TOWN IS READY

At the earliest forecast of a snow event, the Town prepares a general snow plowing deployment plan and mobilizes its resources to manage any storm related issues that may arise. Since every storm is different in terms of time of day, day of week, duration, composition of the precipitation, accumulation, and the like, the plan must be custom tailored accordingly. Consideration must be given to the most efficient and effective use of equipment and manpower. The timing and duration of plowing efforts are vital to ensure that resources are available throughout the entire snow event.

BE PREPARED

Residents are advised to prepare for the storm. Common sense steps such as making sure your cell phones are fully charged, that you have water and non-perishable food on hand, that you have a full tank of gas in your car, and that you have a battery operated radio and flashlights available can go a long way in assuring your own safety and comfort. The website, www.ready.nj.gov, offers helpful tips on emergency preparedness.

BE SAFE

Please, please, vehicles and pedestrians, for your own safety, please stay off the roads. Do not “play” in the street. Do not cross country ski or have snowball fights in the roadway. Plow operators work long hours, have to concentrate on the task at hand, and experience limited visibility, especially during white out conditions. Further, the added threat of downed tree branches and power lines due to the weight of the snow poses additional dangers. Please heed the warnings and stay home with your family unless you have a true emergency.

CALL 9-1-1 IN AN EMERGENCY

Should an emergency arise, do not hesitate to call 9-1-1. Please do not, however, tie up emergency lines by calling 9-1-1 in a non-emergency, such as inquiring when your street will be plowed. Be assured that all streets will be plowed. To expedite mobility, secondary and tertiary roadways may be plowed after arterial roads, collector roads and streets around schools have been addressed.

DO NOT PARK YOUR VEHICLE ON THE STREET

To expedite snow plowing operations, please keep the streets clear of vehicles. Residents should park their vehicles in their garages or on their driveways. In addition, Chief David Wayman of the Westfield Police Department advises that parking on the following streets or the identified portions thereof is prohibited when snow has fallen:

- Central Ave. (entire length);

- Clark St. (between W. Dudley Ave. & Edgewood Ave.);
- E Broad St. (between Mountain Ave. & N. Euclid Ave.);
- Prospect St. (between E. Broad St. & E. Dudley Ave.);
- South Ave. (between Westfield Ave. & Central Ave.);
- W. Broad St. (entire length)

EXERCISE COMMON SENSE AND PATIENCE

Understandably, residents are eager to have their roads cleared and resume their normal activities. However, stay off the roads as much as possible. Remember, with approximately 400 miles of driving lanes, shoulders and parking lots to tend to, plowing the Town's 380 roadways is a formidable task. High accumulations, gusting winds, and drifting snow adds to the challenge. Please be assured that if you do not observe a plow on your street, it is not an indication that the plows are not out! Depending on the width of the roadway, the composition of the snow, the duration of the storm, sustained winds and wind gusts, the amount accumulated on the roadways, and physical obstacles, numerous passes may be necessary to clear each roadway curb to curb. (The plow can only push the snow in paths that are the width of the blade.) Consider this - if 4 passes are needed to clear the roadways during a given storm, our plows must cover 1,600 miles; if 6 passes are needed, our plows must cover 2,400 miles; and so on! Further, Public Works must also attend to municipal parking lots, sidewalks abutting municipal property, and all municipal buildings. Although part of the Town's preparation for a snow event includes preventative maintenance measures on all equipment, mechanical equipment that runs nonstop for many hours may experience breakdowns and have to be taken out of service. Personnel must then be diverted to make necessary repairs.

The good news is that even under the worst weather conditions, and taking into account all of the challenges that sometimes occur, such as equipment breakdown, emergency situations, physical exhaustion, and even our own heavy plows getting stuck, the Town is almost always able to complete plowing activities on all 380 streets within approximately 8-10 hours after the snow stops falling, if not sooner.

DO NOT BLOW OR SHOVEL SNOW BACK INTO THE STREET

Sidewalks in residential areas and the downtown area are the responsibility of the abutting homeowners and businesses respectively. Further, the State is responsible for the state roads and the County is responsible for county roads that pass through Westfield. The Westfield School District is responsible for all school property, including the sidewalks around each school.

When cleaning your sidewalks and driveways, do not blow or shovel snow back into the street.

PLOWS CAN ONLY PUSH SNOW, NOT REMOVE IT

Residents sometime complain that the plows leave snow in front of or in driveway aprons, especially those residents who have already shoveled. This, of course, is not intentional on the part of the Town.

While clearing roadways, the plows are only capable of pushing the snow, not removing it, so snow buildup (the dimensions of which depends on the snow composition and total accumulation) along the edge of the roadway, including in front of the more than 9,000 driveways in Town, is unavoidable. It is suggested that, unless you have an urgent matter, you hold off shoveling your driveway apron until curb to curb plowing operations have been completed.

IMPORTANT FIRE DEPARTMENT WARNING:

Do not run any type of fuel-powered equipment inside of your home or in any enclosed space such as a garage, even if the garage door is open. This includes generators, gas grills, charcoal grills and portable fire places. All equipment should be at least 15 feet from your home. Running fuel powered equipment in or too close to an enclosed structure, including a garage with its door open, can lead to deadly carbon monoxide poisoning. Make sure all candles and all fires inside an approved wood burning stove or fireplace are attended to at all times.

PSE&G READINESS

The Town has reached out to PSE&G for assurance of their readiness. PSE&G issued the following report:

PSE&G Prepares for Approaching Storm System

Extra personnel and equipment at the ready

(NEWARK, N.J. – January 21, 2016) Public Service Electric and Gas Company (PSE&G), New Jersey's largest electric and gas utility, is preparing for the approaching storm system that could bring snow, freezing rain and high winds to the company's service territory. The utility is scheduling additional personnel in the field, fueling trucks and has spare poles and other equipment available.

"While snow and wind normally don't pose a serious problem, icing on lines and trees can increase the possibility of downed wires and power outages," said John Latka, senior vice president of electric and gas operations for PSE&G. "Those types of conditions also make it difficult for our crews to get around, and we can't go up in buckets to make repairs if there are high winds. We will respond to outages and no-heat calls around the clock -- as quickly and safely as possible."

In advance of the storm, PSE&G advises customers to prepare an emergency kit that includes:

- Water, one gallon of water per person per day for at least three days
- Food, at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio
- Flashlight and extra batteries
- First aid kit
- Manual can opener for food
- Cell phone with chargers

PSE&G urges its customers to be cautious during and after the storm:

- To prevent carbon monoxide poisoning, do not run any gasoline powered engine, including generators and snow blowers, in a garage or any other enclosed space.
- Downed wires should always be considered "live." Do not approach or drive over a downed line and do not touch anything that it might be in contact with.

To report downed wires or power outages, call PSE&G's Customer Service line at 1-800-436-PSEG. Also, customers can report outages by logging into their PSE&G account online or by texting "OUT" to 4PSEG (47734). The utility's mobile-friendly website includes an "Outage Map" that is updated every 15 minutes and displays the location and status of power outages in PSE&G's service area.

APPENDIX B

Letter to the Editor, The Westfield Leader, February 18, 2016:

Dragging Snowplow On Dry Pavement

I have lived in Westfield for a long time. Love where we live and love the town. With that said, I always ask why taxes are so high. Okay it is a nice town with many things worth the taxes we pay. One thing that has always bothered me is our DPW. Last weekend I heard a story of one of our Westfield DPW trucks hitting a parked car near town, during the blizzard. The driver didn't stop. The witness to the accident contacted the town. The town said the witness must of been wrong. Today I was walking my dog and saw a Westfield DPW truck drop his plow right in front of me. A crash on the road with such a noise I thought he hit something. There was no snow on the road. None. Not a speck. Dragging the plow for blocks. As I looked to see who was driving the truck, the driver was looking down texting. So my question is, are my taxes going to repair the DPW trucks the DPW destroy. I have an idea. Each DPW driver is to put \$1,000 in escrow, to pay for the damage to the equipment we have them use. Dragging a snowplow on dry pavement cannot lead to anything but damage.

Richard Dobra

Letter to the Editor, The Westfield Leader, February 25, 2016:

The Chain Broke on the Westfield Snowplow, Not Operator Malfeasance

Social media and printed news serve as important outlets for citizens to share their opinions. They don't always, however, serve the public good when discussions are based on hearsay and not on facts. When discussions based on hearsay propagate through neighborhoods, such "gossip" may be downright detrimental to the community at large.

Although I respect that Mr. Dobra is entitled to express his opinion as he did in his letter to the editor in last week's Leader, I am compelled to present the facts regarding his assumption that the DPW truck deliberately dropped his plow on dry pavement as well as the story he "heard" regarding a parked car being struck by a plow.

Regarding the assumption that a Westfield plow operator deliberately dropped the plow on dry pavement, what actually occurred was a heavy duty chain that secures the plow to the frame assembly in the up position broke, causing the plow to drop unexpectedly. The operator was not "texting", but contacting the yard to report the mechanical failure.

Regarding the story that a Westfield plow hit a parked car during the recent blizzard, the Police Department received 2 reports of a plow striking the side view mirrors on 2 vehicles parked in the roadway. The evidence suggests that no Westfield plow was involved in either accident as the whereabouts of all the Westfield plows were accounted for at the time of the accident. "The Town" did not say the witness "must have been wrong". It is important to keep in mind that the Police Department investigates all such reports without prejudice, and it is also important to keep in mind that Westfield plows are not the only ones working in or traveling through town – there are also State plows, County plows, and private plows.

Regarding the allegation that the Public Work's employees "damage the equipment" they use, such an accusation is unwarranted and empirically unfounded. The Public Works' employees deserve praise for their efforts and mechanical creativity to do the very best with the resources they have, including keeping aged equipment running under very trying circumstances. Let me add that in my 10 plus years as Mayor, I can count on one hand the number of times the Town of Westfield has received a claim involving a Westfield plow

striking a parked vehicle. This clearly reflects on the skills, the endurance, the patience, and the dedication of our plow operators. I have spent many hours riding along with our plows and I have witnessed first-hand the challenges they face - from obstacles in the roadway, to the rough ride, to the noise, to the poor visibility, to the exhaustion (they worked 35 hours straight during the blizzard with only short breaks to eat), to the worries about their own families. To be clear, one problem the Town of Westfield does not have is Public Works' employees damaging the equipment that they depend on.

I share Mr. Dobra's love of this Town, which is precisely why it is important that I present the realities and dispel with the hearsay.

Andy Skibitsky,
Mayor

APPENDIX C

The following is a sampling of excerpts from other municipalities' websites:

From Owatonna, Minnesota:

Residents may find it less frustrating to wait until the plow trucks have completed their street before cleaning the end of their driveway. City plow units are designed to discharge snow to the sides of the road and are not capable of skipping driveway areas.

From the North Carolina Department of Transportation:

How did the NCDOT determine its priority order?

1. Connectivity
2. Traffic volume, amount of use
3. Major business avenues and trucking routes
4. Importance to hospital and other emergency routes

From Brunswick, Maine:

Finally, please be patient. Whether it is your driveway for which you are responsible or the 140 road miles that the Town is responsible for, snow removal is an arduous and time consuming job. If a storm is of long duration, understand that we are small organization with limited reserves and our workers continue around the clock until the job is done. We strive for the safest streets and roads at a reasonable cost in the shortest period of time.

From Iowa City, Iowa:

Why can't you plow my street now?

We wish we had enough snowplows and drivers to take care of every street right away, but our resources are limited and so we must adhere to a carefully laid out system for clearing the streets. If we allowed our plows to be diverted each time a special request was made, our system would be destroyed and it would take far longer to get all the streets in the city cleared. To keep our snow removal operations as effective and efficient as possible, plows are not permitted to deviate from their assigned routes. Bus routes and arterial streets have first priority for snow plowing. Residential streets with hills of 2 percent or more grade are second priority. The remainder of the streets are then plowed.

From Cranbury, New Jersey:

BLOCKED DRIVEWAYS AND MAILBOXES: Remember, the Township does not plow out driveways or dig out mailboxes. Despite popular opinion, crews do not place snow in driveways on purpose.

From Darien, Illinois:

During plowing operations, the City's priority is getting snow off the streets to allow movement of traffic. Unfortunately, during the plowing process, snow will be pushed onto curbs and driveways. As a result, snow banks become higher and driveways can become filled with snow, an unavoidable process. Please do not push snow out onto the roadway or approach a snow plow to prevent snow from being pushed into the driveway. Both of these actions are dangerous. If possible, residents are encouraged to shovel several times throughout a heavy snow period to prevent snow filled driveways. Your patience and cooperation are appreciated.

From Poynette, Wisconsin:

During a snow plowing operation the DPW will start by plowing main arterial streets, the school areas on week days, Police station, Fire station, and the 100 block of Main Street. After these areas are plowed, operators will move to the residential streets followed by the alleys. In intense snow storms the DPW may only plow the center of the road to try and keep as many roads open as they can. A full width plowing will be completed as the storm ends. Village parking areas will be cleared as soon as equipment and manpower allows.

From Park Ridge, New Jersey:

For plowing, we divide the town into four zones and use three trucks in each zone. As with salting, the trucks focus on the main roads initially and then the residential streets. While the storm is active, we generally plow the middle section of the road to keep them passable. Eventually, when the snow stops falling, we plow and clear the roads from one curb the other. If the snow lasts for an extended period of time, we also need to schedule our plowing crews in shifts to allow them to get rest. Please remember that snow removal operations are being performed under emergency conditions. Please help us in protecting the safety of your children playing in areas of accumulated snow. The best step to take is to not allow unsupervised children out to play when snowplow operations are expected and until they are completed.

From Plymouth, Massachusetts:

Why is snow pushed into my driveway by sidewalk and street plows?

Answer:

It's really unavoidable. We know of no other Town of our size in New England which removes snow from residents' driveways. It would cost literally hundreds of thousands of dollars to handle such a service. Our crews move snow back to the curb as soon after the storm as possible.

From Cranford, New Jersey:

COMMUTER ALERT – PARKING INFO FOR WEDNESDAY JAN 27th

The Township of Cranford is requesting that resident commuters be dropped off or carpool to the Train Station until snow can be removed from the upper levels of the parking garage and all municipal parking lots.