

**SNOW OPERATION PLAN
(SOP)**



**COVENTRY DEPARTMENT OF PUBLIC WORKS
DECEMBER, 2017**

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1.0 PURPOSE

The purpose of this Snow Operation Plan (SOP) for Snow Removal is to provide guidelines for the effective management, coordination and response to Snow Events and Wintery Conditions in the Town of Coventry by all Town Departments.

2.0 SCOPE

The Snow Operation Plan (SOP) is applicable to all Town of Coventry Departments and employees involved in Snow Events and Removal Operations.

3.0 OBJECTIVE

The Snow Operation Plan (SOP) establishes clearly defined standard operating procedures (SOPs) for snow removal. The objective is to reduce snow and ice hazards on roads for the safety of our community. It is the goal and intent of the Town to provide timely, efficient and cost-effective winter maintenance, snow removal and ice control on the roadways of the municipality for the safety and benefit of the Town's residents and the general motoring public.

4.0 SITUATION

4.1 General Situation

All areas of Rhode Island are vulnerable to major winter storms. There are two distinct types of winter storms; the snow storm and the ice storm. Snow storms can range in severity from light intermittent flurries to the perilous blizzard. Ice storms are characterized by freezing rain that forms a layer of ice on roads, power lines, and other objects. Snow storms are caused by masses of polar and tropical air confronting each other and bringing about low pressure systems that can churn over areas as great as tens of thousands of square miles. As the winter temperatures in much of this country are cold, the resulting precipitation falls as snow instead of rain. Snowstorms are considered a serious threat in Rhode Island when they begin to approach blizzard proportions. The term "blizzard" is used to indicate the following conditions are expected to prevail for 3 hours or more: 1) winds of 35 mph or greater and 2) considerable falling or blowing snow reducing visibility to less than ¼ mile.

While temperature is no longer a criterion for "blizzard" definition, temperatures below 20 degrees Fahrenheit are highlighted as a life threatening condition in addition to wind and visibility criteria. A Winter Storm Watch is issued by the National Weather Service through the usual media networks when a significant winter storm is approaching. This watch is changed to a Winter Storm Warning

when heavy snow or accumulations of snow, sleet and freezing rain are expected. The Watch is upgraded to full Blizzard Warning when blizzard characteristics are expected.

4.2 Town of Coventry

The Town of Coventry is the largest Town in Rhode Island covering 64 square miles and is the 8th largest Municipality in Population. The Town has varied conditions from rural Western Coventry to urban Eastern Coventry.

5.0 ASSUMPTIONS

- Due to the many variables that are inherent in New England weather, each storm and/or weather event may require slightly different effort and/or emphasis on any number of maintenance tasks, which together, determine the overall winter maintenance, snow removal or ice control strategy.
- It is not possible to maintain a black snow and ice-free road during a storm. It is the intention of the Town to provide access for emergency services as well as practical, safe access to homes, business and municipal facilities during winter storms; and
- The Department of Public Works (DPW) will be the location of all major snow removal operations. A snow storm is considered “major” when the forecast predicts 6” or more of snow in a 24 hour period.

6.0 FUNCTIONAL ROLES & RESPONSIBILITIES

Emergency Management

The Coventry Emergency Management Director is responsible for coordinating all major winter storm emergency activities. He will coordinate the operation of the EOC and work in cooperation with representatives of all involved Town departments.

He will advise elected and appointed officials of the status of the snow removal efforts and effectiveness.

The EMA Director is responsible for:

- Monitoring weather forecasts;
- Providing situational awareness reports;
- Maintaining Town wide communications;
- Assisting the Police Department in determining need for parking ban, road closures; ticketing and towing;
- Coordinating with the School Department on school closure or delays; and
- Acting as liaison to the State EOC.

Public Works Department

The Public Works Director is responsible for:

- Obtaining salt and sand;
- Monitoring weather forecasts;
- Conduct pre-season preparations for snow operation;
- Operator training;
- Safety training;
- Preventive maintenance of vehicles, plows and other related snow removal equipment;
- Physical treatment and snow removal from roads and inspection;
- Clearing debris related to the storm, such as trees, branches, etc.;
- Keeping storm drains open to avoid unnecessary flooding; and
- Coordinate with other departments as required.

Parks & Recreation Department

The Parks & Recreation Department Director, along with the DPW Director, is responsible for:

- Monitoring weather forecasts;
- Conduct pre-season preparations for snow operation;
- Operator training;
- Safety training;
- Preventive maintenance of vehicles, plows and other related snow removal equipment;
- Physical treatment and snow removal from roads and inspection;
- Clearing debris related to the storm, such as trees, branches, etc.;
- Keeping storm drains open to avoid unnecessary flooding; and
- Coordinate with the other departments as required.

Coventry Public School District (CPS)

The Coventry Public School District is responsible for:

- Monitoring weather forecasts;
- Conduct pre-season preparations for snow operation;
- Operator training;
- Safety training;
- Preventive maintenance of vehicles, plows and other related snow removal equipment;

- Physical treatment and snow removal from roads and inspection of School Facilities; and
- Coordinate with other departments as required.

Fire Departments (FD)

The Fire Department shall be the lead agency for fire suppression, emergency medical services, hazardous materials and technical rescue response to the effects snow / or wintry conditions. The Fire Department will keep clear all fire hydrants in their respective districts.

Police Department (PD)

The Police Department shall be the lead agency for prevention, enforcing towing in response to a parking ban, providing traffic control at critical choke points to the effects of snow and/or wintry conditions.

Facilities Maintenance (FM)

The Department of Facilities Maintenance is the lead agency responsible for coordinating snow removal for Buildings and Facilities under direction of the DPW Director.

7.0 EXECUTION

During major snow events it is the intent of the Town to coordinate all snow removal activities from the Department of Public Works. Those departments involved in Snow Removal will assign staff to the Department of Public Works when directed. While this Snow Operations Plan (SOP) establishes the procedures for winter maintenance, snow removal and/or ice control, one of the following may affect its implementation:

- Equipment Breakdown;
- Snow Accumulation in Excess of 1" Per Hour;
- Excessive Snow Accumulation;
- Freezing Rain or other Icing Conditions;
- Traffic Congestion;
- Emergencies; and
- Personnel illness.

7.1 CONCEPT OF OPERATIONS

7.1.1 Overview

The goal is to coordinate all aspects of snow events, removal and/or wintery conditions for the Town of Coventry.

7.1.2 Coventry Roads Maintained by the Rhode Island Department of Transportation (RIDOT)

Summary of Non-limited Access Highways to be maintained by RIDOT in the Town of Coventry:

Highway

Route 117	Washington Street, Main Street, Flat River Road
Route 3	Tiogue Avenue – Nooseneck Hill Road
Route 118	Harkney Hill Road
Hill Farm Road	
South Main Street	
Wood Street	
Route 33	Sandy Bottom Road
Route 116	Knotty Oak Road
Route 115	Main Street (Harris)
Fairview Avenue	
Old Main Street	
Old Flat River Road	
Route 102	Victory Highway
Hopkins Hollow Road	(Route 117 to Bridge)
Route 14	Plainfield Pike
Old Summit Road	

7.1.3 General Descriptions for Roadway Classification

Principal Arterial:

A major arterial roadway is a system of streets and highways that serve the major centers of activity in the Town of Coventry. These roadways are the highest traffic volume corridors that also carry the major portion

of the trips entering and leaving the Town. These roadways define the principal arterial system that carries much of the major traffic.

Minor Arterial:

A minor arterial roadway is a roadway that services trips of moderate length and serves to augment the principal arterial system. These roadways carry less volume than principal arterials but should not penetrate identifiable neighborhoods.

Collector:

Collector roadways differ from principal and minor arterials in that they collect traffic from local streets in residential neighborhoods and channel it to the arterial system. These roadways receive less volume in traffic than principal and minor arterials. Collectors are moderately traveled local roads, but are functionally separate and serve different purposes in channeling traffic volume than principal and minor arterials.

Local:

Local roadways offer the lowest level of mobility. These roadways are the ones that primarily serve neighborhoods for residential access and local trips. On these roadways, through traffic movement is usually discouraged.

7.1.4 Winter Storm Maintenance

Upon notification of a winter storm, the Public Works Director or his designee will call out the appropriate Town employees to surface treat roads in the following manner:

- At the onset of the snow storm, the Public Works Director or his assign shall have salt/sand spreaders treat the initial 1 to 2 inches of snowfall on asphalt road surfaces. This will prohibit additional snow accumulations from bonding to the road surfaces. It will enable our asphalt roads to remain free as possible from ice or snow pack, during the actual storm as seen effective and following the storm. It should be noted that salt has a much slower effect on melting snow and ice at temperatures below 25 degrees, and may not be applied until it is warmer.

- As the storm develops and 2 to 4 inches of snow has accumulated, all of the drivers and available equipment will begin to plow their assigned routes. Trucks with sand spreaders will spread sand on slippery areas after they clear away the snow. There are times when weather conditions are such that snow plowing will not take place until after the storm has ended. For example, snowfall has occurred or is occurring and the weather forecast is for a change to freezing rain. Plowing operations might be suspended to allow traffic some traction without the “glazing over” of a cleared surface. At the end of the freezing rain, normal plowing operations would begin again unless accumulations of ice and/or snow get to a point that traveling is determined to be hazardous by the Public Works Director or his designee.
- When a storm has ended, all road surfaces will be treated if needed, as determined by the Foreman in charge. Asphalt roads are treated with salt and/or salt/sand mixture (depending upon the severity of buildup on the asphalt surface.) Weather conditions may require changing to another option and will be the responsibility of the Public Works Director or his designee.

7.1.5 Manning

There will be Foreman assigned to a specific period that will be responsible to direct and coordinate the activities for snow removal during their assigned period. Employees assigned to snow removal shall be responsible for the completion of the assigned route and appropriate snow removal based on weather or roadway conditions. Each person assigned to a specified route shall be responsible for monitoring its condition and shall maintain communication with the Director to report on their progress and the effectiveness of the de-icing and plowing efforts. Foreman will be responsible to direct and coordinate work crews to complete snow and ice removal in accordance with established priority rules.

7.1.6 Safety

For the most part Department of Public Works resources are utilized to do pre-treatment of roads for snow plowing Town roads.

There are **NO SPECIAL** driving privileges for snow plow operators. The primary objective for snow and ice removal operations is the safe travel for all motorists and snow plow operators. Snow removal personnel must constantly evaluate their actions and monitor their ability and effectiveness to provide safe travel for all motorists and pedestrians. Snow removal personnel shall familiarize themselves with safety inspections and safe-operating guidelines as established below as well as additional procedures that may be implemented as necessary.

- Thoroughly inspect all equipment before, during and after each use. All lights, brakes, windshield wipers, exhaust systems, tires and steering components are to be maintained in a safe and dependable manner;
- All mechanical problems will be reported promptly to the appropriate supervisor;
- Employees are to utilize good judgement and appropriate driving speeds during limited visibility;
- The rights of other motorists are to be considered. Employees are to utilize appropriate discretion when assisting or reporting stranded motorists or vehicles to the Police Department;
- Know your route;
- Traffic laws are to be observed at all times;
- Seatbelt use is mandatory;
- Appropriate safeguards will be utilized to prevent frostbite and hypothermia including the use of proper clothing and maintaining communication with other snow removal personnel at all times.

7.1.7 Defensive Driving for Snow Plow Operators

There are only four (4) accidents that are considered as non-preventable:

- When legally parked;
- When struck in the rear while proceeding in the proper lane of traffic at a safe and lawful speed;
- When struck in the rear while stopped in traffic due to conditions and in compliance with traffic signs, signals or officer; and

- When struck in the rear while waiting in the proper lane to make a turn.

Drivers are highly encouraged to use the “Scan-Communication-Cushion of Safety (SCC)” technique to improve safety for themselves and the traveling public.

SCAN

- On highway 12-15 seconds ahead
- On secondary roads ¼ mile ahead or 1 city block
- Check mirrors every 3-5 seconds

COMMUNICATION

- Use signals
- Lane Position
- Tapping the Horn
- Use Warning Lights

CUSHION OF SAFETY

- Minimum of 5 Second Count (double in bad weather)
- Adjust Speed
- Watch Blind Spots
- Scan 3-5 Seconds
- Avoid positioning in Blind Spot

7.1.8 Reporting Accidents

All accidents are reportable. For accidents involving Town plow trucks the operator should report it immediately to their supervisor and call the police to investigate. For all other accidents drivers should render assistance as needed (call for help, police or emergency medical services), use universal safety precautions in treating injured and immediately to their supervisor.

7.1.9 Training

All employees of the Public Works Highway Department and any other Town employee holding a Commercial Drivers’ License (CDL) are expected to attend all training and/or instructional classes as deemed necessary to perform their jobs satisfactorily. All training activities must

be approved by the department head and related expenses will be covered by the Town of Coventry, unless noted prior to training.

7.1.10 Parking Ban

During declared snow emergencies parking bans may be issued in the Town of Coventry. The purpose of the parking ban is to allow winter maintenance crews unobstructed snow removal and ice control routes, as much as possible, to maintain the maximum effectiveness of their efforts.

7.1.11 Towing

The Town has the right to tow or ticket violators. When a parking ban has been issued, parking regulations are strictly enforced and abandoned vehicles will be towed, including permit issued vehicles. Motorists are encouraged to observe traffic rules to avoid tickets or towing. The Town will make every effort to alert the public of the parking ban through the news media, community contacts, Social Media and the Town's website.

7.1.12 Level of Service

It is the intention of the Town to maintain a snow and ice free environment during a storm. The Town shall strive to reduce snow and ice hazards on roads. All operational decisions regarding the pre-salting, scheduling equipment operators and drivers shall be based upon this goal. The Public Works Department shall conduct removal operations throughout snow storms to keep priority accesses open for vehicles. It is the policy of the Town to begin snow removal operations upon accumulation of two inches of snowfall. Pre-treatment and ice control may be addressed in advance of a storm and during the actual storm as seen effective and preceding the storm. It should be noted that salt has a much slower effect on melting snow and ice at temperatures below 20 degrees and may not be applied until it is warmer.

7.1.13 Snow Management

Snow Management involves staff and services. The responsibility for providing snow and ice management for the Town of Coventry infrastructure rests entirely with the Department of Public Works, with the cooperation of the departments listed above. Snow and ice management is considered emergency work in that roadways must be

cleared any time of the day or night to provide the best reasonable road conditions for the Police and Fire Departments to respond to emergency calls. The Department of Public Works will salt and sand for black ice and light snow conditions and plow off the roadways during more significant storms. The Town's snow and ice management strategy has been carefully prepared to meet the needs of the Town of Coventry. The resulting plan follows clearly identified routes when removing ice and snow from the streets.

7.1.14 Equipment

The Town Snow Removal Crews utilize all the assets available as needed to address snow emergencies. Equipment is maintained by staff as well as outside services on a regular basis. The goal is to have all snow equipment operational by November 1st of each calendar year.

7.1.15 Plowable Roadways

The Town is responsible for maintenance of 220 miles of roads which is 440 lane miles.

7.1.16 Ice Removal

- The Town does apply road salt to their roadways at a minimum amount;
- The Town does add salt to the pile of sand to keep it pliable all winter; and
- Salt is applied in drifting situations to hills, curves and intersections. Otherwise it is used for all other roadways. Sand is used in below zero weather (salt does not work).

7.1.17 Driveways & Sidewalks

The Town does not have any obligation nor are we able to clean the snow out of driveways or sidewalks. It is the responsibility of residents and business owners to clear snow on private property. Considerations about snow removal from driveways:

- Standing in your driveway facing the road, shovel all your snow to your right at driveway entrance. This way the snow plow will take the snow down the road;
- If possible, do not plow your driveway until the snowplow has gone by; and
- Do not plow any snow from driveways onto the Town roads.

NOTE: See Town Snow Ordinances

7.1.18 Schools

The Public School Department has the responsibility for clearing of snow and winter treatment of the Town school access roads, parking lots and side-walks. On days when school is in session winter maintenance efforts must be timed to coincide with bus routing and delivery.

7.1.19 Weather

Adverse weather is unavoidable but it is possible to mitigate the threats it poses on the surface transportation system through timely, accurate, reliable and user-friendly road and weather information that supports surface transportation. In addition to ensuring the safety, mobility, efficiency and productivity of the transportation system, weather information for surface transportation will play an increasingly important role in emergency preparedness at all levels of federal, state and local planning and response.

Because of their responsibilities involved in snow removal, personnel need to travel in all weather conditions and knowledge of current forecasted and historical road and weather conditions assists in the completion of the department's mission. Furthermore, they can use road and weather information to make the surface transportation system safer for the traveling public and to inform travelers of potentially dangerous conditions.

7.1.20 Other Considerations

Every effort should be made to keep individual and equipment time sheets up to date. If at any time an operator is involved in an accident of any kind he must immediately notify the police and supervisor and fill out an accident report. These accidents include vehicles, equipment, private property, manholes, etc. If unable to reach a foreman or the police, the operator must make sure to document the incident, recording the date, time, type of accident, vehicles, property, or persons involved and any other information available at the scene.

7.1.21 Operator Guidelines

Pre-Operation:

All fluid levels will be checked and filled to proper levels. All lights must be in working order. A visual walk-around inspection of the truck or equipment must be made. Any repairs must be made and reported to a supervisor or mechanic before leaving the yard.

Operation

During operations the operator is responsible for watching all gauges on the truck or equipment, the chain condition and cutting edge condition. The cutting edge will be replaced when there is a ½" minimum between it and the moldboard. All bolts must be in place and kept tight at all times. Shear bolts on the plow frame should be checked periodically. If the cutting edges need repair or replacement, or the chains need attention, it will be done right away to avoid costly and time consuming repairs later. Care should be taken to maintain even and straight cutting edges.

Vehicle speed is of primary concern during snow operations. It is the Town's goal to get streets cleared as quickly as possible after a storm event, but not at the expense of safety. Drivers must resist the urge to get the job done in a hurry at the expense of their own safety or safety of others. Plow drivers must use their best judgement to determine what vehicle speed is safe for their vehicle. In accordance with Snow Operations the following maximum vehicle speeds shall be followed:

- 25 mph maximum at any time during Snow Operations;
- 20 mph maximum when applying treated salt to avoid bounce scatter of the product off the roadway;

- 20 mph maximum when plowing travel lanes; and
- 15 mph maximum when plowing gutter line (curb to curb).

Post-Operation

Before parking any truck or equipment, all fluid levels will be checked and filled. Blades or bolts, which need replacing, will be taken care of unless told to do otherwise. Chains that need repairs will be repaired. All minor repairs will be done by the operator. Any repairs the operator cannot perform will be written up on the proper forms and turned in to the Lead Mechanic Foreman. The Foreman will determine importance and will assign the repairs according to schedule. Hour meters will be checked and if service is due mechanics and Foreman must be notified. All trucks are to be fueled and all sand/salt removed from sander at the end of each storm.

7.2 COORDINATING INSTRUCTIONS

7.2.1 Activation

Activation of this Snow Operation Plan (SOP) begins when the need for enhanced coordination between Town Departments in response to a major winter storm is deemed necessary.

7.2.2 Snow Removal Planning

Planning for snow removal operations begins when (1) one inch or more of snow is expected to accumulate.

7.2.3 Ride-Along

The Town has established a policy for prohibiting “ride-along” on any Town owned resource.

7.2.4 Plow Down Policy

The Town “plow down” policy when transiting the Town. Town plow drivers, when practicable and safe, have their plow blade in the down position at all times. This applies to activities such as traveling back and forth to Public Works for shift changes, to reload material and for breaks.

8.0 ADMINISTRATION & LOGISTICS

8.1 Materials

The Public Works Department (DPW) uses approximately 2,000 tons of rock salt and 6,000 cubic yards of sand each season. The sand is used as an abrasive and is applied to the road to improve the public's motor vehicles traction. Salt is employed by the Department of Public Works as a de-icing and anti-icing agent. The entire supply of sand is stockpiled at the Department of Public Works yard. The material is stockpiled untreated. Rock salt is purchased from a supplier as needed. Department of Public Works stockpiles a quantity of up to approximately 500 tons. Unless weather conditions require a different approach, winter maintenance routes are treated with a mixture of sand and salt. The mixture is maintained at a minimum of one part salt to three parts sand. The mixture, as determined by the Public Works Director, is applied to the roadway where traffic can work the mix traveling either way. The mixture, in conjunction with traffic action, creates a watery brine melting snow and/or ice and resisting snow and ice packing on the roadway. The road crown further assists with the spreading of the mixture brine. The sand/salt mixture is only effective to approximately 20 degrees Fahrenheit. Other deicing agents are effective to lower temperatures, but cost and need for specialized equipment have forestalled their use to this time.

9.0 DEFINITIONS

In an effort to avoid confusion, the following standardized terminology with activity definitions is established. When directed to do so, operators will perform winter maintenance tasks in accordance with these definitions.

Cleanup

Clean up and push back all roads. Clean-up intersections, turn-arounds, routes and cul-de-sacs. Some areas may require more than one pass.

Collector

Collector roadways differ from principal and minor arterials in that they collect traffic from local streets in residential neighborhoods and channel it to the arterial system. These roadways receive less volume in traffic than principal and minor arterials. Collectors are moderately traveled local roads but are functionally separate and serve different purposes in channeling traffic volume than principal and minor arterials.

Local

Local roadways offer the lowest level of mobility. These roadways are the ones that primarily serve neighborhoods for residential access and local trips. On these roadways, through traffic movement is usually discouraged and weight limits or restrictions on large truck access are likely.

Minor Arterial

A minor arterial roadway is a roadway that services trips of moderate length and serves to augment the principal arterial system. These roadways carry less volume than principal arterials but should not penetrate identifiable neighborhoods.

Open

Just keeps the center of roads open; not spending a lot of time clearing routes, intersections or turn-arounds. This normally will be requested while snow is falling and there is a need to finish the drivers' routes in as short a time as possible. (One-inch per hour would result in three to four inches of snow at the beginning of routes before a truck gets back to it.) As snow gets deeper, the driver will need to make extra passes at routes/intersections to allow vehicle traffic to flow better. This is also aimed at intersections getting the whole route done in as short a time as possible.

Priority Roads

The general approach to categorizing snow plow routes is to identify those traveled corridors that, for reasons of function or geography, are the most important for moving vehicular traffic through the Town of Coventry.

- **Priority Roadways Major**
Roadways which, due to the nature and composition of travel it serves, are of fundamental importance to commerce, industry, public safety and vehicular travel. These roadways must be cleared first during a snow event, as they are of systemic importance to the functioning of our urban roadway system. These roadways are primarily principal arterial and minor arterial roadways.
- **Primary Roadways Minor**
Roadways which serve to enhance the principal arterial system and in most cases interconnect minor arterials with principal arterials. Primary Roadways Minor serve slightly less volume than Priority Roadways Major but for some reasons of topography or daily traffic flow are a top priority for snow plow routing.

Principal Arterial

A major arterial roadway is a system of streets and highways that serve the major centers of activity in the Town of Coventry. These roadways are the highest traffic volume corridors that also carry the major portion of trips entering and leaving the Town.

Push/Back

After several large storms it may be necessary to send a truck or the grader out to shelf or back snow windrows. A loader will normally go along to clean up intersections.

Chip Stone Roads

Roads will be spread with chip stone over the travel width of a gravel road. It may be necessary to spread in both directions to get a complete coverage.

Slush Off

Scrape off any snow/ice that has loosened up from treating with salt. Normally it will require one pass each way unless advised to push slush off and clean up.

Treat Roads

Roads will be spread with a mixture of sand and salt. Mixture will be spread along the centerline of the roadway in a width of two to four feet.

Treat Route

Go over assigned route spreading a sand/salt mix on all roads, intersections and cul-de-sac in such a manner that one backtracks as little as possible.

Treat Main Roads

Treat just the high traffic volume roads. Depending on conditions, drivers may be requested to do side streets.

Wintery Conditions

Any winter condition that generally produces wind driven snow, freezing rain, road freeze, white-out or blizzard like conditions where Town resources are required to ensure safe travel.

9.1 Additional Definitions – Weather

Blizzard

A blizzard means that the following conditions are expected to prevail for a period of 3 hours or longer.

- Sustained wind or frequent gusts to 35 miles an hour or greater; and
- Considerable falling and/or blowing snow (i.e., reducing visibility frequently to less than ¼ mile.)

Blowing Snow Advisory

Issued when wind driven snow reduces surface visibility, possibly, hampering traveling. Blowing snow may be falling snow or snow that has already accumulated but is picked up and blown by strong winds.

Drifting Snow

Drifting snow is an uneven distribution of snowfall/snow depth caused by strong surface winds. Drifting snow may occur during or after a snowfall. Drifting snow is usually associated with blowing snow.

Flurries

Snow flurries are an intermittent light snowfall of short duration (generally light snow showers) with no measurable accumulation (trace category).

Freeze

A freeze is when the surface air temperature is expected to be 32 degrees Fahrenheit or below over a widespread area for a climatologically significant period of time. Use of the term is usually restricted to adverse situations or to occasions when wind or other conditions prevent frost.

Freeze Warning

Issued during the Winter Season when surface temperatures are expected to drop below freezing over a large area for an extended period of time, regardless whether or not frost develops.

Freezing Drizzle

A drizzle that falls as a liquid but freezes into glaze upon contact with the cold ground or surface structures.

Freezing Drizzle Advisory

Issued when freezing rain or freezing drizzle is forecast but a significant accumulation is not expected. However, even small amounts of freezing rain or freezing drizzle may cause significant travel problems.

Freezing Fog

A suspension of numerous minute ice crystals in the air, or water droplets at temperatures below 0 degrees Celsius, based at the Earth's surface, which reduces horizontal visibility; also called ice fog.

Freezing Level

The altitude at which the air temperature first drops below freezing.

Freezing Rain

Rain that falls as a liquid but freezes into glaze upon contact with the ground.

Freezing Rain Advisory

Issued when freezing rain or freezing drizzle is forecast but a significant accumulation is not expected. However, even small amounts of freezing rain or freezing drizzle may cause significant travel problems.

Glaze

Ice formed by freezing precipitation covering the ground or exposed objects.

Heavy Snow

This generally means...

- Snowfall accumulating to 4" or more in depth in 12 hours or less; or
- Snowfall accumulating to 6" or more in depth in 24 hours or less

In forecasts, snowfall amounts are expressed as a range of values, e.g., 8" to 12" (inches). However, in heavy snow situations where there is considerable uncertainty concerning the range of values, more appropriate phrases are used, such as "...up to 12 inches..." or alternatively "...8 inches or more..."

Heavy Snow Warning

Issued by the National Weather Service when snowfall of 6 inches or more in 12 hours or 8 inches or more in 24 hours is imminent or occurring. These criteria are specific for the Northeast and may vary regionally.

Ice Jam

In hydrologic terms, a stationary accumulation that restricts or blocks stream flow.

Ice Storm

An ice storm is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of $\frac{1}{4}$ " or greater.

Ice Storm Warning

This product is issued by the National Weather Service when freezing rain produces a significant and possibly damaging accumulation of ice. The criteria for this warning varies from state to state, but typically will be issued any time more than $\frac{1}{4}$ " of ice is expected to accumulate in an area.

Nor'easter

A strong low pressure system that affects the Mid-Atlantic and New England States. It can form over land or over the coastal waters. These winter weather events are notorious for producing heavy snow, rain and tremendous waves that crash onto Atlantic beaches, often causing beach erosion and structural damage. Wind gusts associated with these storms can exceed hurricane force in intensity. A nor'easter gets its name from the continuously strong northeasterly winds blowing in from the ocean ahead of the storm and over the coastal areas.

Major Storm

A major storm is when the forecast predicts 6" or more of snow in a 24 hour period.

Sleet

Sleet is defined as pellets of ice composed of frozen or mostly frozen raindrops or refrozen partially melted snowflakes. These pellets of ice usually bounce after

hitting the ground or other hard surfaces. Heavy sleet is a relatively rare event defines as an accumulation of ice pellets covering the ground to a depth of ½” or more.

Sleet Warning

Issued when accumulation of sleet in excess of ½” is expected; this is a relatively rare scenario. Usually issued as a winter storm warning for heavy sleet.

Snow

Precipitation in the form of ice crystals, mainly of intricately branched, hexagonal form and often agglomerated into snowflakes, formed directly from the freezing (deposition) of the water vapor in the air.

Snow Advisory

This product is issued by the National Weather Service when a low pressure system produces snow that may cause significant inconvenience but do not meet warning criteria and if caution is not exercised could lead to life threatening situations. The advisory criterion varies from area to area. If the forecaster feels that it is warranted, he or she can issue it for amounts less than the minimum criteria. For example, it may be issued for the first snow of the season or when snow has not fallen in long while.

Snow Flurries

Snow flurries are an intermittent light snowfall of short duration (generally light snow showers) with no measurable accumulation (trace category).

Snow Shower

A snow shower is a short duration of moderate snowfall. Some accumulation is possible.

Snow Squall

A snow squall is an intense, but limited duration, period of moderate to heavy snowfall, accompanied by strong winds and possibly lightning (generally moderate to heavy snow showers). Snow accumulation may be significant.

Wind Chill

Reference to the Wind Chill Factor; increased wind speeds accelerate heat loss from exposed skin, and the wind chill is a measure of this effect. No specific

rules exist for determining when wind chill becomes dangerous. As a general rule, the threshold for potentially dangerous wind chill conditions is about -20 degrees Fahrenheit.

Wind Chill Advisory

The National Weather Service issues this advisory when the wind chill could be life threatening if action is not taken. The criteria for this warning varies from state to state.

Wind Chill Factor

Increased wind speeds accelerate heat loss from exposed skin. No specific rules exist for determining when wind chill becomes dangerous. As a general rule, the threshold for potentially dangerous wind chill conditions is about -20 degrees Fahrenheit.

Wind Chill Warning

The National Weather Service issues this warning when the wind chill is life threatening. The criteria for this warning varies from state to state.

Wind Gust

Rapid fluctuations in the wind speed with a variation of 10 knots or more between peaks and lulls. The speed of the gust will be the maximum instantaneous wind speed.

Wind Speed

The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust or squall).

Winter Storm Warning

This warning is issued by the National Weather Service when a winter storm is producing or is forecast to produce heavy snow or significant ice accumulations. The criteria for this warning can vary from place to place.

Winter Storm Watch

This watch is issued by the National Weather Service when there is a potential for heavy snow or significant ice accumulations, usually at least 24 to 36 hours in advance. The criteria for this watch can vary from place to place.

Winter Weather Advisory

This advisory is issued by the National Weather Service when a low pressure system produces a combination of winter weather (snow, freezing rain, sleet, etc.) that present a hazard, but does not meet warning criteria.

Town Snow Ordinances

Chapter 209 Streets and Sidewalks

209-7 Removal of snow required; restrictions on deposit of snow

- A.** All owners, occupants or persons having care of any building or lot bordering on any street, highway or public place within the Town shall, within the first four hours of daylight after the end of any snowfall or the fall or deposit of snow on the sidewalk of the building or lot from any cause whatsoever, remove or cause to be removed all snow from around any fire hydrant, police and fire box or alarms, and any other emergency call box or alarm, on the sidewalk in front of the building or lot.
- B.** No owner, lessee or occupant of any premises or any person cleaning or removing snow therefrom shall deposit or cause to be deposited any snow from the premises upon any highway.
- C.** No owner, lessee or occupant of any premises or any person cleaning or removing snow therefrom shall deposit or cause to be deposited any snow from the premises in front of any fire, police or other emergency alarm box.
- D.** No owner, lessee or occupant of any premises or any person cleaning or removing snow therefrom shall deposit or cause to be deposited any snow from the premises upon the property of another, including the driveway of another, so as to prevent that person from egress or ingress into or off his property.