SNOW AND ICE POLICY

Throughout the winter months the Public Works Department monitors the weather and after hours the Public Works Department relies on the Police Department to notify them when a snow event starts.

The Public Works Department has been combined into one department under the Public Works Superintendent so all personnel are required to plow snow. The personnel will be notified by the supervisors in advance of a possible snow event coming after hours. The personnel will respond to a call out and if they do not respond, they will be disciplined.

At the start of the snow event the top priority are the mains, secondaries and hill streets. The mains, secondaries and hill streets are divided into 3 zones. North of Ridge Road is one zone, between Ridge and 45^{th} is the second zone and south of 45^{th} is the third zone. Each vehicle is equipped with a map that shows the snow routes. Residentials are broken down into 6 zones. Each vehicle is equipped with the 6 residential zones. (These maps are attached to this report.)

ANTI-ICING OPERATIONS

Anti-icing is the operation of applying liquid chemicals to the roadway prior to a snow event to prevent the formation of ice on the roadways. The liquid chemicals are applied to the roadway at a predetermined rate. Our anti-icing sprayer is capable of applying between 15 to 60 gallons of liquid chemicals per lane mile. Two years ago the policy was to just do the mains before the snow event. Last year, 24 hours prior to the snow event, we applied liquid chemicals at 50 gallons per lane mile on all mains, secondaries and hill streets prior to the snow event. By adding the hill streets and the secondaries, we saved on salt usage. This year we are adding Lions Club Drive in Community Park and the drive through the south parking of the High School.

This year at the Public Works Garage we have added a mixing station and four 6,000 gallon tanks. The mixing station will allow the Public Works to add beet juice and calcium chrloride to the salt brine. (See attached pictures) The mixing for anti-icing chemical this year will be 80% brine, 10% beet juice and 10% calcium chloride. With the addition of the new tanks we will be able to keep 12,000 gallons of finished liquid chemicals on hand. Last year we were only able to keep 5,000 gallons of liquid chemicals on hand.

SALTING

Due to the high cost and possible shortage of salt, during the snow event we will no longer salt the mains and secondaries all the way through. Mains and secondaries will only be salted at intersections, railroad tracks, school zones, curves, bridges and around hospitals. Once the snow event has stopped, we will salt the mains, secondaries all the way through. It has been our practice in the past to salt at stop signs and mid-block on all residentials. We will only salt residentials at stop signs once the snow event has stopped. During the snow event, we will not salt residentials and we will no longer salt mid-block of the residentials to cut down on the salt usage. The only time a residential is salted all the way through is when the road conditions are very icy and it will be at the discretion of the Director of Operations.

When trucks are plowing in tandem and salt is being applied, only the rear truck can apply salt. This will be strictly enforced and any snowplow driver not abiding to this policy will be disciplined. The policy this year is no salt will be applied at any time without being pre-wetted. All salt spreaders have saddle tanks which allow the operator to spray the salt before applying it to the roadway. We will spray the salt with a liquid chemical (80% brine, 10% beet juice and 10% calcium chloride) when the temperature is above 20 degrees and spray the salt with calcium chloride when the temperature is below 20 degrees. Pre-wetting the salt makes the salt stick to the road better and it cuts down on the use of salt by 30%. When you use dry salt, you loose approximately 30% of that salt from bouncing into the curb line or onto the parkway. When pre-wetting the salt we use 10 to 15 gallons per lane mile on an average. All the salt spreaders are computerized systems that allow us to set maximums on how much salt is put down per lane mile. Two years ago the settings were 300 to 400 pounds per lane mile. Last year the settings were cut to 200 to 300 pounds per lane mile, which saved on the usage of salt.

Last year the town paid \$101.89/ton for salt. By rewriting and applying our new snow and ice policy, we were able to cut in half our consumption of salt, but we spent more out of the budget due to the high cost of salt. This year, with our current policy, we will be able to save by staying with this policy and the lower cost of salt. Last year we used 2,724 tons of salt, for a cost of \$277,567. This year the cost of salt is \$54.67/ton and if we use the same amount of salt, it would cost us \$148,921, which would be a savings of \$128,646.

PLOWING

Our policy is that we will start plowing when there is an inch of snow on the road. Mains, secondaries, hill streets are plowed first. On our mains and secondaries we have a bare pavement policy once the snow has stopped. Residentials have a lower priority and cul-de-sacs are the lowest priority.

Once the mains and secondaries are completed, we will move into the residentials and break the crews up into the 6 zones. If it is a heavy snow event, we will open the mains up and once all the mains have been opened, we will curb them. In an effort to save on overtime funds, we can open the mains and only curb them on regular hours. We no longer push up corners because it blocks sidewalks and it is a safety issue backing up the trucks in residential areas. Most snow seminars that we have attended, strongly recommend that you do not push corners.

We will continue the practice of plowing the alleys if we have a 4" snowfall or more. Alleys will be done last. We will also only plow or remove snow from sidewalks and bike paths that are combined sidewalks and parking lots that are municipally owned. During a snow event, one employee is assigned to town hall to shovel and put down salt on the sidewalks for safety and plow the parking lots.

MAILBOXES

It has been our practice to replace mailboxes that are damaged when streets are being plowed. 99% of the time, the snowplow does not hit the mailbox, but the snow that is thrown off the snowplow damaged the mailbox. Many mailboxes that are damaged when plowing were in disrepair before the snow season. This snow season we want to start a new policy that we will send an employee out before the snow season and inspect mailboxes. Any mailbox that is in poor condition will be noted and the resident will be notified by mail that they need to make repairs to the mailbox before the coming winter season. During the inspection, if we find a mailbox that has a loose screw or missing a nail, we will make immediate repairs to that mailbox. Any resident that is notified that they need to make repairs to the repairs, we should not be responsible to repair the mailbox.

TRAINING

Each year the employees receive training on ice and snow removal. Each employee will have training in a classroom setting that covers safety, snowplowing techniques, speed control when plowing, defensive driving, cold weather safety tips, snow and ice removal procedures and they will also participant in a snow rodeo. Each driver is assigned a snow route, when possible. By keeping the same driver on the same route, they become more familiar with their routes and become more efficient. They are also accountable for their route. During training the drivers are updated on the proper forms they must fill out at the beginning and end of each shift and each truck has to be inspected prior to snow removal by the driver.

This year we sent employees to the Transportation and Snow Plow Roadeo Expo at Grissom Air Force Base and they received training on winter maintenance and methods of managing winter snows with liquid chemicals.

PRIVATE CONTRACTORS

If the snow event gets too large for the town crews to handle, private contractors will be used to supplement the public works crews. The use of private contractors will only be used as a last resort.

Listed below is the inventory of equipment that is used for snow removal.

- 6 large dump trucks with salt spreaders, calcium chloride tanks and plows
- 1 large dump truck with brine system and snowplow
- 1 large dump truck that is assigned to the water dept that doesn't have the capabilities of salting
- 8 1-ton dumps trucks with snowplows, 4 of them with tailgate salt spreaders

• 10 pick up trucks with plows

During large snow events, we have the capabilities to use 2 loaders and 2 backhoes to clear streets and cul-de-sacs. This equipment is normally available for snow removal unless it is needed on a water break.

As stated earlier, we do monitor the weather during a snow event and if the event lasts longer than 8 hours, we have to divide the employees into shifts. The employees will work up to a 16 hour shift. If we have to go to a second or third shift, we have to use employees from fire and police departments to cover the shifts, including some part time employees. (Due to possible budget cuts, we may no longer authorize overtime for snow removal and employees will be sent home after an 8 hour shift.)