



Snow Removal Winchester Department of Public Works

Town of Winchester
Board of Selectmen Meeting

Neil H. Amwake, P.E.
November 4, 2013



Presentation Outline

Goals and Objectives

1. Connecticut snowfall statistics
2. Managing expectations
 1. Snow removal objectives
 2. Mailbox policy
 3. Parking ban
 4. Snow removal timeline
3. Snow plow routes and DPW staffing
4. DPW vehicles and equipment

Presentation Outline

Goals and Objectives (continued)

5. Costs
6. Storm scenarios
7. Sand/salt available to residents
8. Snow plow ride-along

Town Seal

Town of Winchester – City of Winsted



Connecticut Snowfall

Yearly Snow Averages

- Hartford
 - 20.1 days
 - 40.5 inches

- Norfolk
 - 40.1 days
 - 78.4 inches

<http://www.currentresults.com/Weather/Connecticut/annual-snowfall.php>

Managing Expectations

Snow Removal

- **Cost effective** snow and ice removal
- Keep town roadways **passable during storm events**
- **Minimize hazards** caused by slippery road conditions
- **Restore safe traveling conditions as soon as possible** after each winter storm

Managing Expectations

Mailbox Policy

- Inspect mailboxes and mailbox posts for **cracks, dry rot** and **how the post is installed in the ground**
- Town will reimburse if the snowplow **actually hits the mailbox and/or post**, and the post does not have rot or deterioration
 - \$25.00 for the mailbox
 - \$25.00 for the post
- Town will not reimburse for damage from **snow or ice cascading off the plow blade**

Managing Expectations

Parking Ban Ordinance

- Section 40 of the Town Ordinances
- Parking prohibited along town roadways
- November 1st to April 1st
- **1:00 a.m. to 6:00 a.m.**
- **Up to a \$50.00 fine**

Managing Expectations

Parking Ban – Proposed Revisions

- Begin parking ban at 12:00 midnight
- Increase fine up to \$100.00
- Ability to tow vehicles illegally parked
 - Safety for snow plow driver
 - More efficient snow plowing
 - During and after storm
- Declaration of snow emergency by Town Manager

Managing Expectations

Snow Removal

- As practicable, have local roadways wet and bare, **within 24 hours after the conclusion** of a storm
- During long duration storms, **snow removal operations may be reduced or stop temporarily from 11:00 p.m. to 4:00 a.m.** to allow DPW staff rest breaks
- The Department of Public Works is not responsible for snow removal at any of the schools

Managing Expectations

Snow Removal (continued)

- **Not all town roads will be plowed if there is less than 2 inches of precipitation**
 - Focus on hills, roadways at higher elevations and common trouble locations
- **Snow removal and sanding priority**
 1. **Emergency locations** (fire, ambulance and accidents)
 2. **School bus routes**
 3. Through roads
 4. Cul-de-sacs and other sites

Snow Removal Operations

Routes

- **13 snow plow routes**
 - **3 routes with 100% treated rock salt**
 - Same as last year
 - **Trial of 2 additional routes with 100% treated rock salt**
 - One route in Winsted, one route in Winchester
 - Will evaluate at the conclusion of each storm
 - **8 routes with 75% sand and 25% treated rock salt mixture**
 - Same driver assigned to each route throughout the winter
- For specific storms, DPW may pretreat individual streets and sections of roads with 100% rock salt

Snow Removal Operations

Staffing

- Full complement of DPW staff
 - 1 Street Services foreman
 - 6 Street Services maintainers
 - 2 Mechanics
 - 1 Water and sewer foreman
 - 3 Water and sewer utilitymen
 - 1 Water treatment operator
 - 1 Building and grounds maintainer

- 93.75% of available Street, W&S & Crystal Lake staff

Snow Removal Operations

Vehicles & Equipment

- 12 snow plows
 - 8 cubic yard capacity
 - 11 trucks + 1 spare
 - Mean age of 13.9 years for the 2013-2014 winter
 - Median age of 13 years
 - Youngest trucks - 7 years (quantity 3)
 - Oldest truck (#13) – 22 years
 - 9 out of 12 (75%) of snow plows are 10 years or older

Snow Removal Operations

Costs

- Wage rates as of July 1, 2010
 - Current contract is expired
- Equipment rates per FEMA standard rates
- Materials
 - Sand \$16.14 per ton
 - Salt \$78.62 per ton

Snow Removal Operations

Costs – Regular Time

- Labor \$552.56 per hour
 - Includes payroll taxes paid by the Town at 7.65%
 - Includes health insurance paid by the Town
- Equipment \$497.00 per hour
- Sand/Salt \$1,689.07 per hour

Snow Removal Operations

Costs Summary per Hour – Regular Time

	No Sand/Salt	Spreading Sand/Salt
■ Labor	\$552.56 (52.65%)	\$552.56 (20.18%)
■ Equipment	\$497.00 (47.35%)	\$497.00 (18.15%)
■ Materials	\$0.00	\$1,689.07 (61.68%)
■ Total	\$1,049.56	\$2,738.63
■ Cost Per Minute	\$17.49	\$45.64
■ Cost per Second	\$0.29	\$0.76

Snow Removal Operations

Costs – Overtime (1.5x)

- Labor \$574.90 per hour (4.04% ↑)
 - Includes payroll taxes paid by the Town at 7.65%
 - No health insurance (include in 40-hour base rate)
- Equipment \$497.00 per hour (same)
- Sand/Salt \$1,689.07 per hour (same)

Snow Removal Operations

Costs Summary per Hour – Overtime (1.5x)

	No Sand/Salt	Spreading Sand/Salt
■ Labor	\$574.90 (53.63%)	\$574.9 (20.82%)
■ Equipment	\$497.00 (46.37%)	\$497.00 (18.00%)
■ Materials	\$0.00	\$1,689.07 (61.18%)
■ Total	\$1,071.90	\$2,760.97
■ Cost Per Minute	\$17.87	\$46.02
■ Cost per Second	\$0.30	\$0.77

Snow Removal Operations

Costs – Double Time (2x) on Sundays

- Labor \$766.54 per hour (38.73% ↑)
 - Includes payroll taxes paid by the Town at 7.65%
 - No health insurance (include in 40-hour base rate)
- Equipment \$497.00 per hour (same)
- Sand/Salt \$1,689.07 per hour (same)

Snow Removal Operations

Costs Summary per Hour – Double Time

	No Sand/Salt	Spreading Sand/Salt
■ Labor	\$766.54 (52.65%)	\$766.54 (20.18%)
■ Equipment	\$497.00 (47.35%)	\$497.00 (18.15%)
■ Materials	\$0.00	\$1,689.07 (61.68%)
■ Total	\$1,263.54	\$2,952.61
■ Cost Per Minute	\$21.06	\$49.21
■ Cost per Second	\$0.35	\$0.82

Snow Removal Operations

Costs – Storm Scenario A

- **Small overnight storm**
 - Begins at 2:00 a.m.
 - Contact DPW staff at 3:00 a.m.
 - Crew arrives at 3:30 a.m.
 - **4 inches** total accumulation
 - Snowfall at 1 inch per hour
 - End plow operations at 8:00 a.m. (2 hours after storm ends)
 - One-half time plowing only
 - One-half time plowing and spreading sand/salt or salt
- **\$9,023.89** for labor, equipment and materials

Snow Removal Operations

Costs – Storm Scenario B

- **Small late morning storm**
 - Begins at 10:00 a.m.
 - Pretreat for two (2) hours prior to storm
 - Begin plow operations at 11:00 a.m.
 - **4 inches** total accumulation
 - Snowfall at 1 inch per hour
 - End plow operations at 3:00 p.m. (2 hours after storm ends)
 - One-half time plowing only
 - One-half time plowing and spreading sand/salt or salt
- **\$9,979.89** for labor, equipment and materials

Snow Removal Operations

Costs – Storm Scenario C

- **Evening commute storm**
 - Begins at 2:00 p.m.
 - Pretreat for 2 hours prior to storm
 - Begin plow operations at 3:00 p.m.
 - **6 inches** total accumulation
 - Snowfall at 1 inch per hour
 - End plow operations at 10:00 p.m. (2 hours after storm ends)
 - One-half time plowing only
 - One-half time plowing and spreading sand/salt or salt
- **\$15,807.40** for labor, equipment and materials

Snow Removal Operations

Costs – Storm Scenario D

- **Large overnight storm**
 - Begins at 10:00 p.m.
 - Contact DPW staff at 10:30 p.m.
 - Crew arrives at 11:00 p.m.
 - Crew break from 1:30 a.m. to 4:30 a.m.
 - **12 inches** total accumulation
 - Snowfall at 1 inch per hour
 - End plow operations at 2:00 p.m.
 - One-half time plowing only; one-half time plowing and spreading
- **\$27,437.04** for labor, equipment and materials

Snow Removal Operations

Costs – Storm Scenario E

- **Saturday weekend storm**
 - Begins Saturday at 10:00 a.m.
 - Contact DPW staff at 10:30 a.m.
 - Crew arrives at 11:00 a.m.
 - Crew break from 1:30 p.m. to 2:30 p.m.
 - **8 inches** total accumulation
 - Snowfall at 1 inch per hour
 - End plow operations at 9:00 a.m.
 - One-half time plowing only; one-half time plowing and spreading
- **\$19,700.32** for labor, equipment and materials

Snow Removal Operations

Costs – Storm Scenario F

- **Sunday weekend storm**
 - Begins Sunday at 12:00 noon
 - Contact DPW staff at 12:30 p.m.
 - Crew arrives at 1:00 p.m.
 - **6 inches** total accumulation
 - Snowfall at 1 inch per hour
 - Cease plow operations at 9:00 p.m.
 - One-half time plowing only; one-half time plowing and spreading
- **\$17,496.34** for labor, equipment and materials

Snow Plow Ride-along

Policies and Rules

- Winchester resident.
- **18 years of age, or older.** Proof of age required.
- Rides will last approximately **90 – 120 minutes.**
 - No bathroom breaks
- Must be physically able to climb into and out of the plow truck.
- Participants will not be assigned to the snow plow route that traditionally plows their street.

Snow Plow Ride-along

Policies and Rules (continued)

- Day, early evening and evening times available.
 - Weekdays or weekends
- Complete and submit application.
 - Available from the Department of Public Works.
- **Sign a waiver of liability.**
- **Rider participation is at the discretion of the Director of Public Works.**

Sand/Salt Mixture for Residents

Bring Your Own Bucket

- Available at the Public Works facility
 - Gated area in front of property
 - 189 Rowley Street, Winsted
- Available prior to each storm
- **Sand/salt mixture**
- **Two (2) bucket limit**

CIP Committee

Questions

- ❖ Comments?
- ❖ Questions?



Snow Removal Winchester Department of Public Works

Town of Winchester
Board of Selectmen Meeting

Neil H. Amwake, P.E.
November 4, 2013