



WINTER STORM MAINTENANCE UPDATE

**AUBURN PUBLIC SERVICES DEPARTMENT
FEBRUARY 3, 2014**

STORM PROCEDURES

- **Prestorm meeting with PW staff (PD, Fire and School invited if warranted). Review forecast, discuss equipment and personnel.**
- **Supervisory staff watches the weather and calls in crew as conditions warrant.**
- **Typically 12 salt trucks called in initially to treat roads when the storm begins.**
- **11 remaining trucks are called in when plowing begins (usually 1 inch of accumulation of snow.)**

OUTLINE OF OPERATIONS

- **7:00 am to 3:00 pm – 27 employees available to plow**
- **3:00 pm to 11:00 pm – 23 employees available to plow**
- **11:00 pm to 7:00 am – 23 employees available to plow**



LEVEL OF SERVICE

PRIORITY WINTER ROADWAY CLASSIFICATIONS

PRIORITY 1 - 102.48 LANE MILES

During a winter storm event average cycle times for plowing on Priority 1 roads will be between 2 and 2½ hours.

- Center Street**
- Minot Avenue**
- Washington Street**
- Court Street**
- Riverside Drive**



PRIORITY 2 – 97.14 LANE MILES

During a winter storm event average cycle times for plowing on Priority 2 roads will be between 3 and 4 hours.

- **Academy Street**
- **Broad Street**
- **Hotel Road**
- **Park Avenue**

PRIORITY 3 – 48.32 LANE MILES

During a winter storm event average cycle times for plowing on Priority 3 roads will be between 4 and 6 hours.

- **Granite Street**
- **Perkins Ridge Road**
- **Beech Hill Road**
- **Western Prom**

PRIORITY 4 – 208.32 LANE MILES

During a winter storm event average cycle times for plowing on Priority 4 roads will be between 6 and 8 hours.

- **Reginald St**
- **Dee St**
- **Orchard Street**
- **Partridge Lane**
- **Jennifer Drive**
- **Towle Avenue**

TRUCK #8 - New Auburn West

STREET	LANE		PRIORITY	SALT
	CL MILES	MILES		
BROAD ST (Hackett Rd to South Main St)	2.71	5.42	2	Y
MILL ST	1.04	2.08	2	Y
SOUTH MAIN ST	2.57	5.14	2	Y
BOLSTER ST	0.21	0.42	3	N
COOK ST (Fifth St to South Main St)	0.73	1.46	3	Y
FIFTH ST (Mill St to Pulsifer St)	0.09	0.18	3	Y
MARIAN DR	0.17	0.34	3	Y
NINETEENTH ST	0.09	0.18	3	Y
SHERWOOD DR	0.25	0.5	3	Y
WITHAM RD	0.97	1.94	3	N
AVON ST	0.05	0.1	4	N
BECKETT ST	0.08	0.16	4	N
CANDIA ST	0.12	0.24	4	N
DEE ST	0.14	0.28	4	N
EIGHTH ST	0.30	0.6	4	N
ENFIELD ST	0.14	0.28	4	N
FIFTH ST (Pulsifer St to South Main St)	0.14	0.28	4	N
FLANDERS ST	0.13	0.26	4	N
GOSNOLD ST	0.12	0.24	4	N
IPSWICH ST	0.11	0.22	4	N
KILSYTH ST	0.09	0.18	4	N
LAFAYETTE ST	0.08	0.16	4	N
LANE RD	0.52	1.04	4	N
LAUREAT AV	0.04	0.08	4	N
NINTH ST	0.34	0.68	4	N
PATTON ST	0.11	0.22	4	N
PULSIFER ST	0.05	0.1	4	N
ROY AV	0.21	0.42	4	N
SEVENTEENTH ST	0.04	0.08	4	N
SEVENTH ST (South Main St to Westerly Dead End)	0.28	0.56	4	N
SHORT ST	0.10	0.2	4	N
SIXTEENTH ST	0.04	0.08	4	N
SIXTH ST (South Main St to Mary Carroll St)	0.24	0.48	4	N
TENTH ST	0.04	0.08	4	N
THIRTEENTH ST	0.07	0.14	4	N

TOTAL 12.41 24.82

Ice Storm Event Timeline

- **1/10/14, 12:00 PM - Prestorm Meeting with PW Supervisory Staff. Storm forecast was for some initial freezing rain with temperatures rising to above freezing during the morning hours with highs in the upper 40's. Plan of action discussed. All sand/salt trucks were pre-loaded that afternoon.**
- **1/10/14, 11:00 PM - Staff member was kept on at PW Facility in order to allow for quick response time when storm started.**
- **1/11/14, 3:30 AM– Supervisor checked in with staff member, no precipitation. Weather radar checked, storm was starting in Massachusetts.**
- **4:30 AM - Rain started, Staff member begins calling in crew. Rain froze immediately to pavement, roads became slippery immediately. Supervisor realized on his way in to work we would need more trucks than the initial 12 and began calling in additional staff.**
- **4:45 AM - First accident called into Com Center.**

Ice Storm Event Timeline

- **4:46 AM - Com Center advises PW of accident, PW informs Com of 30 minute ETA for employee arrival at PW.**
- **4:48 AM - Engine 2 has difficulty when responding to accident.**
- **5:15 AM - Crew arrives at PW Facility.**
- **5:26 AM - First truck hits the road.**
- **6:30 AM – 10 trucks are on the road.**
- **8:00 AM – 8 more trucks are on the road.**
- **8:30 AM – APD puts out traffic advisory asking public to stay off the roads due to dangerous road conditions caused by freezing rain.**
- **8:30 AM – Truck #8 slides off road on Broad Street, car attempts to pass and an accident occurs. Truck #8 unavailable for 2 ½ hours due to accident.**



Ice Storm Event Timeline

- **8:48 AM - Truck #16 stuck on Holbrook Road, Truck #24 responds to pull him out. Trucks back on line at 11:29 am.**
- **9:15 AM – 2 more 1-tons dispatched to assist with sanding.**
- **10:00 AM – All 23 sand capable units on the road.**
- **10:36 AM - Truck #33 stuck on South Main Street was able to hand sand and got himself out at 11:00 am.**
- **11:30 AM - 1 ton sanders staged at Fire stations to escort Fire trucks on any emergency calls.**
- **12:10 PM - Truck #38 responded to Bellflower Drive to sand for Fire truck.**

Ice Storm Event Timeline

- **1:50 PM Operations Manager reroutes 1 tons from fire stations back to their regular duties.**
- **3:00 PM partial crew change over due to shift change.**
- **After 3:00 PM staffing restrictions reduced our ability to combat flooding issues.**
- **Until 2:00 PM the following day (1-12-14), crews worked continuously to salt and sand streets as well as eradicate flooding hazards throughout the City.**

- PW sanders were dispatched to the following locations for accident or stuck vehicles, which in most cases drew them away from their regular routes

Pownal @ Harmon's Corner Rd

Minot @ Hatch

222 N River Rd

7th @ Cook

Broad @ 7th

Broad @ 4th

575 S Main St

S Main @ Vickery

Vickery

Beaver Rd

Blanchard Rd

6th @ Roak

Mary Carroll

29 Carrier Ct

Penley Corner by Fox Ridge

Western Prom

Northern @ N River Rd

Hotel @ Beech Hill

Hotel @ Kittyhawk

Johnson Rd

Lewiston Junction @ West

Hardscrabble

Holbrook @ Bailey

Broad @ Hackett

Martindale @ Beech Hill

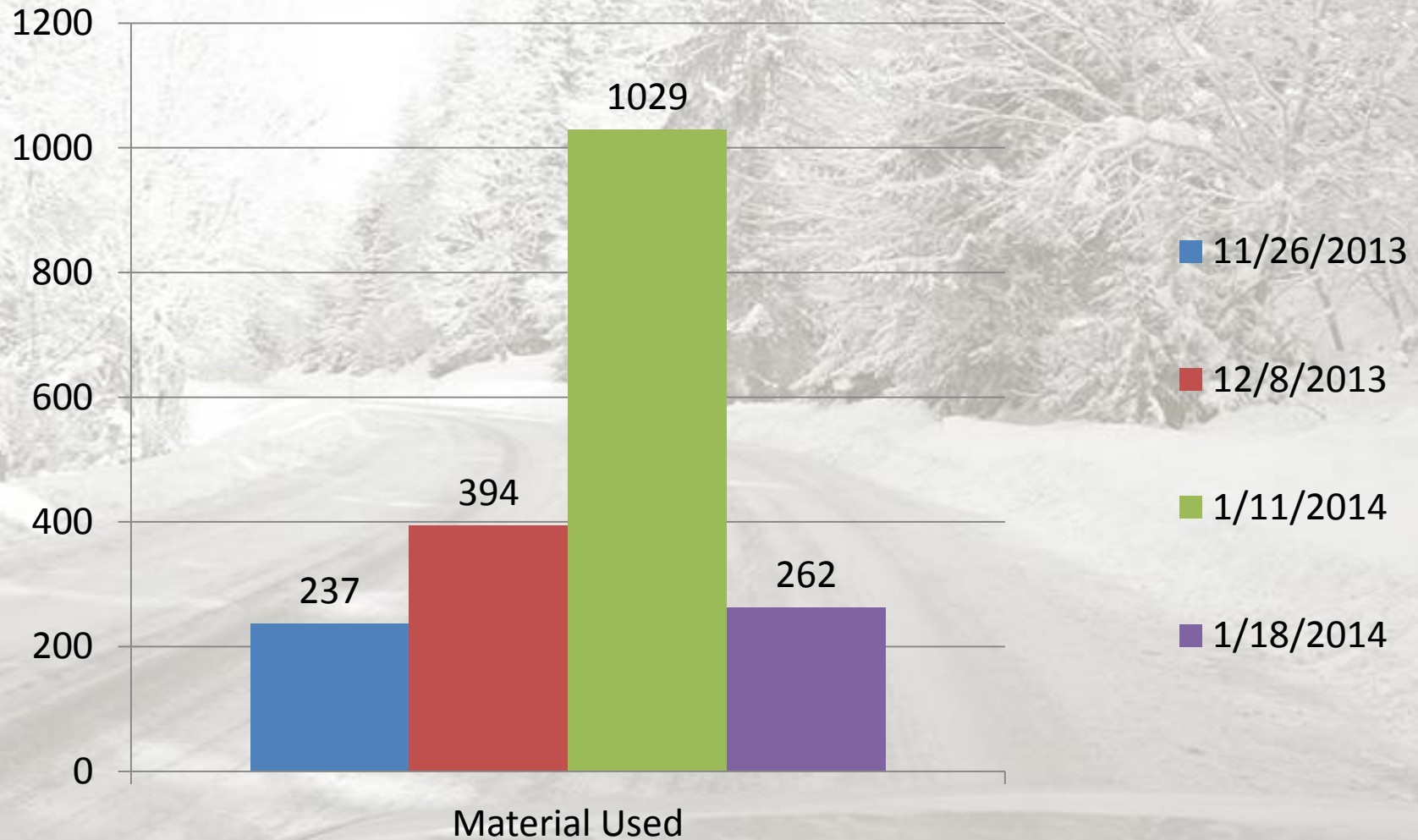
Colby St

274 Mill St

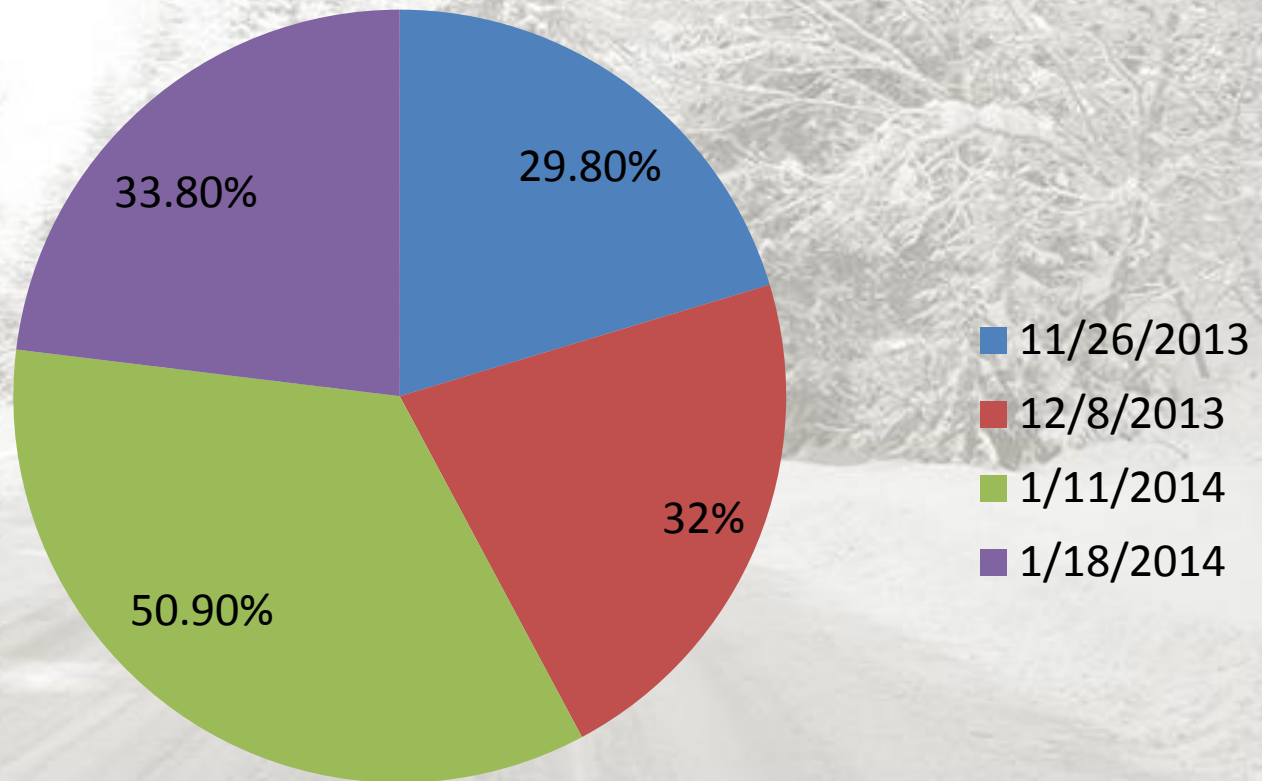
January, 11, 2014 – ICING EVENT

Storm Costs		Salt (tons)	Calcium (gals)	Sand (cyds)	Regular Hours	Overtime Hours	Miles	Fuel (gals)
Storm #	12							
WO #	Qty	159.0	1,272.0	870.00	0.00	629.50	3,703.00	1,058.0
14-01-112	Cost				\$			
	t	\$ 8,072.43	\$ 1,590.00	\$ 5,611.50	-	\$ 13,945.39		\$ 3,332.70
1/11/14 to 1/12/14						Total Cost		\$ 32,552.02

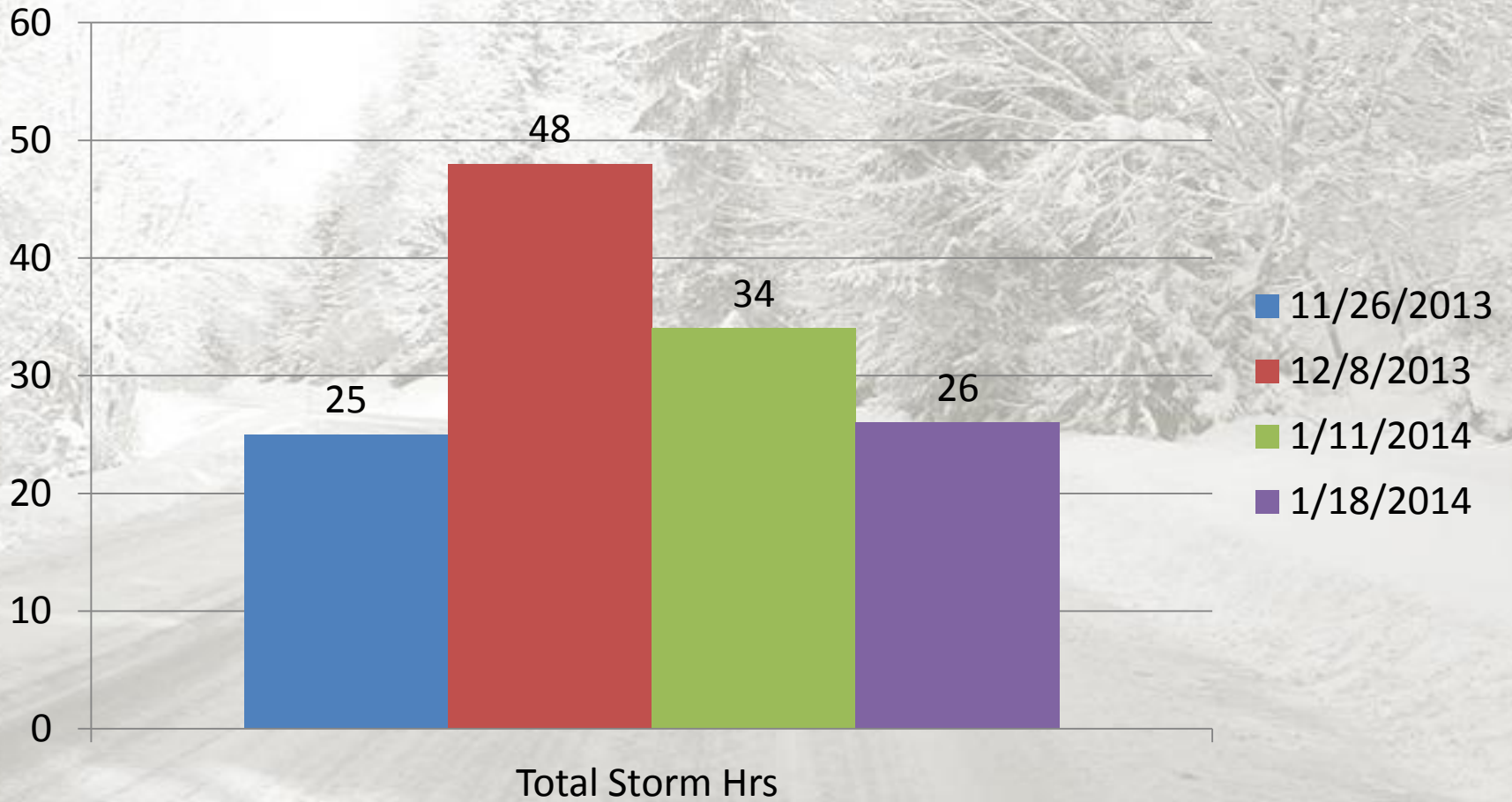
Combined Salt and Sand Usage



Percentage of time spreaders were in operation

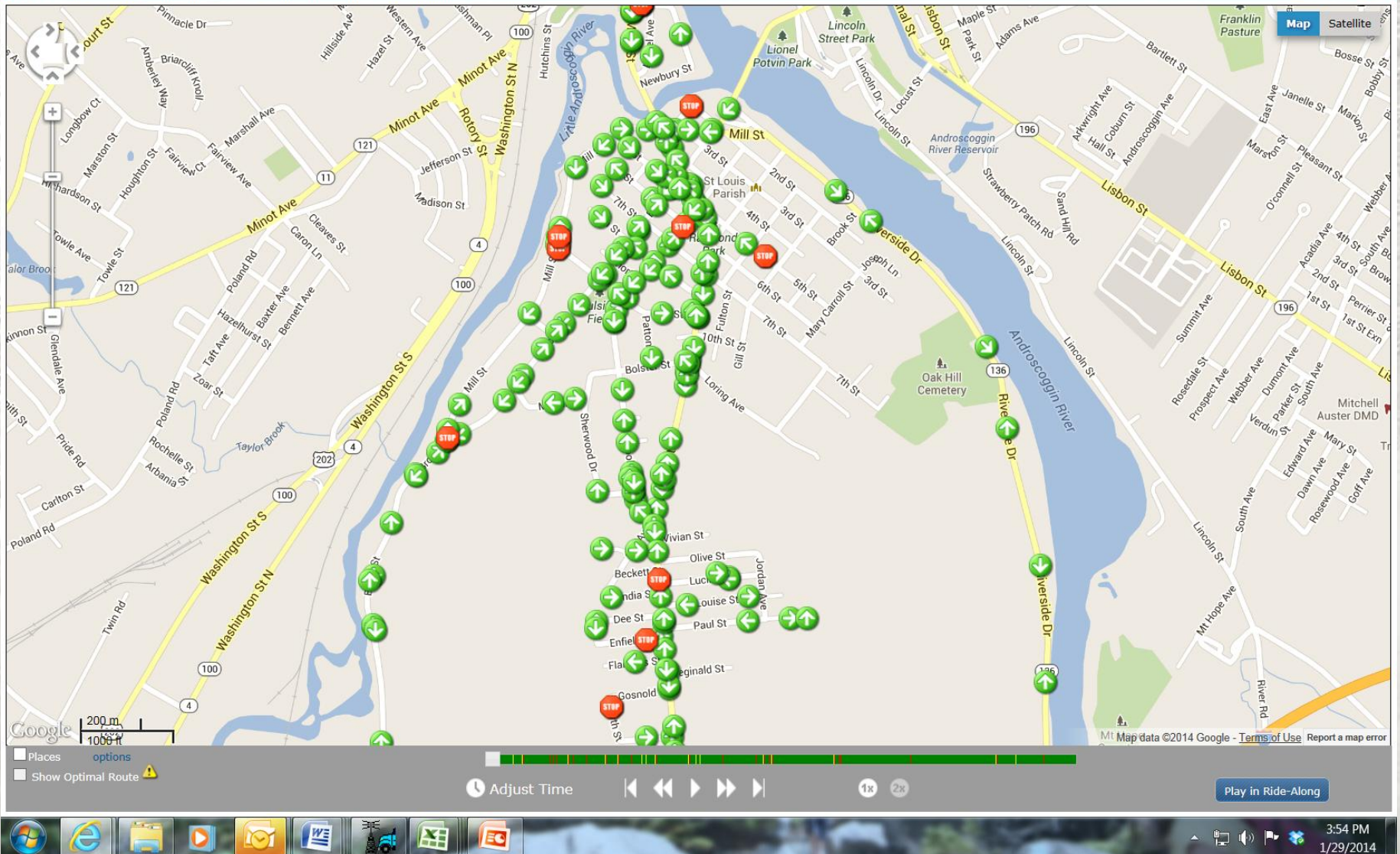


Storm Duration in Hours

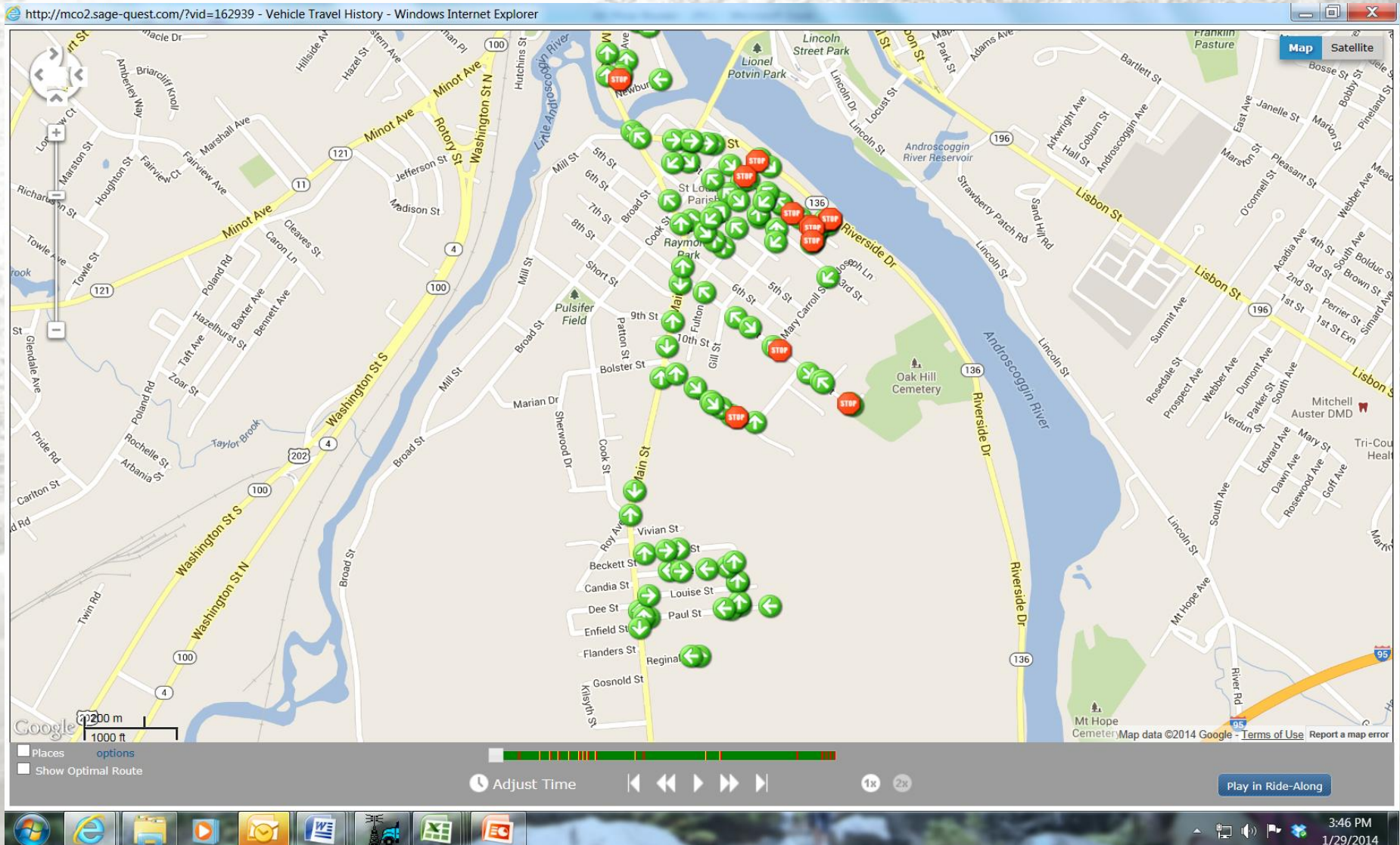


TRUCK # 8 – 1/11/14, 5:30 AM to 1/12/14, 5:30 AM

http://mco2.sage-quest.com/?vid=162941 - Vehicle Travel History - Windows Internet Explorer



TRUCK # 31 – 1/11/14, 5:30 AM to 1/12/14, 5:30 AM



The screenshot shows a Google Map interface with a vehicle travel history overlay. The map is centered on a city grid with streets like Washington St N, Broad St, and Main St. Green arrows indicate the vehicle's path, while red 'STOP' markers indicate where the vehicle stopped. The Androscoggin River is visible on the right side of the map. The map is viewed from a street-level perspective. The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating 4:00 PM on 1/29/2014.

FRONT DISCHARGE SANDER



REAR DISCHARGE V-BODY SANDER



TAILGATE TYPE SANDER



01/28/2014

REAR DISCHARGE 1 TON SANDER



FY14 WINTER STORM SUMMARY REPORT

Account	FY 14 Approved	FY 14 YTD	FY 14 Projection
OT - Winter Maintenance	\$ 161,604	\$ 167,911	\$ 238,000
Other Sup – Calcium Chloride	\$ 47,385	\$ 31,400	\$ 50,000
Other Sup – Road Salt	\$ 233,325	\$ 202,347	\$ 273,000
Other Sup - Gravel	\$ 75,773	\$ 57,569	\$ 75,773
MV Sup – Plow/Grader Blades	\$ 33,656	\$ 19,474	\$ 33,656
PS – Snow Removal	\$ 10,200	\$ 2,500	\$ 10,200





Storm Costs		Salt (tons)	Calcium (gals)	Sand/Salt Mix (cyds)	Regular Hours	Overtime Hours	Miles	Fuel (gals)
# of Storms	Qty	3,017.6	22,802.8	6,000.0	2,557.3	5,911.8	52,161.7	14,903.3
15	Cost	\$177,525.41	\$28,503.50	\$36,900.00	\$49,934.54	\$ 128,469.85		\$ 49,031.97
Total Costs								\$ 470,365.27
Average	Qty	201.2	1,520.2	400.0	170.5	394.1	3,477.4	993.6
	Cost	\$ 11,835.03	\$ 1,900.23	\$ 2,460.00	\$ 3,328.97	\$ 8,564.66		\$ 3,268.80
Total Avg. Cost								\$ 31,357.68

Plowing & Sanding Assignments 2013/2014

		1st Shift	2nd Shift	3rd Shift
		7:00 - 3:00	3:00 - 11:00	11:00 - 7:00
Vehicle	Route Name	Plow and Salt		
#1	Riverside/Court	Cohen	Cohen	Sjostrom (3rd)
#4	Poland Rd Area	Lamontagne	Therrien	Lamontagne
#6	Airport Area	Castonguay	Castonguay	Jolin
#8	New Auburn West	Richardson	Richardson	Meserve, N
#15	Main Arteries	Ratsavong	Ratsavong	Stevens, S.
#16	North Auburn Area	Golob	Gray (2nd)	Gray (2nd)
#20	Mount Auburn Area	Kolln	Kolln	Houle
#21	Park Av Area	Allen	Golob	Allen
#24	Youngs Cnr/Garfield Area	Hahn	Hahn	Clark,J.
#3	High School Area	Smith	Levesque	Smith
#35	South Auburn West	Lachance	Lachance	Meserve,F(2nd)
#36	Main Arteries	Dustin	Dustin	Spencer

Plow & Sand

#14	Taylor Pond Area	Anketell	Anketell	Lothrop
#10	Center St East	Lane	Lane	McDonald
#12	Manley Rd Area	Poussard	Poussard	Jackson (3rd)
#7	Gamage Av Area	Cameron	Cameron	Reynolds
#25	South Auburn East	Antone	Lawlor	Antone
#11	Center St West	Seamon	Seamon	Larson
#28	Danville Jct Area	Meserve, N	Kennedy (3rd)	Kennedy (3rd)
#13	New Auburn East	Knox	Knox	Hart
#33	Parking Lots New Auburn	Merchant	Prosper	Merchant
#38	Parking Lots Central Fire	Lothrop	Robertson (3rd)	Robertson (3rd)
#39	Parking Lots Auburn Hall	Wilkinson	Wilkinson	Cook

Loader

#53	Load Trucks	Lawlor	Nemethy (2nd)	Nemethy (2nd)
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Sidewalk Plows

#56	Sidewalks	Sjostrom (3rd)		Sjostrom (3rd)
#57	Sidewalks	Larson		Larson
#63	Sidewalks	Reynolds		Reynolds
#64	Sidewalks	Prosper	Prosper	Merchant

Backup Vehicles

#31 Plow Truck

#19 Plow Truck

Mechanics/Welders

Robbins	Meserve,F	Clark,R
Stevens, S.	Cook	Gibbert
Clark,R		
Gibbert		
Clark,J		

Calls Reporting Icy Roads:

- Fairmount St
- Old Danville Rd
- Lake/Sherman
- Church St
- Sterling @ Heath Ln
- Hatch Rd
- East Bates St
- Court St @ High St
- Vine St
- Gammon Ave
- Sheridan St
- Hillside St
- Cushman Place
- Laurel St
- Third St
- Sherman Ave
- Reginald St
- Sunderland Dr
- Firehouse Grill/Rolly's Parking lots
- Jordan School Rd
- Harmon's Corner Rd @Tourmaline Dr
- Dunn St
- Smith St
- Turkey Ln
- Brook St
- Silva St
- Davis Ave
- Vista Dr
- Bradman St
- Hutchins St
- Paul St
- Mill St
- Dunn @ 2nd and 3rd
- Highland Ave
- Heritage Dr
- Lucille St
- Hillcrest St
- Woodlawn Ave
- Hector St
- Orchard St
- Broad @ 2nd, 4th St Hill
- Academy St
- Princeton St
- Bretton Ave
- South Witham Rd
- Townsend Brook Rd
- Linden St
- Third St @ Mary Carroll
- Cornell St
- Nottingham Rd
- Penley Corner Rd @ South Witham Rd
- Hersey Hill Rd
- Sixth St to Pulsifer
- Burns St
- Seventh St
- Field Av
- Dolores St

Truck #	Route Name	Priority
1	Riverside/Court	1
3	High School Area	2, 3, 4
4	Poland Rd Area	2, 3, 4
6	Airport Area	2, 3, 4
8	New Auburn West	2, 3, 4
16	North Auburn Area	2, 3, 4
20	Mount Auburn Area	1, 2
21	Park Av Area	2, 3, 4
24	Youngs Cnr/Garfield Area	2, 3, 4
35	South Auburn West	2, 3, 4
15 & 36	Main Arteries	1
7	Gamage Av Area	2, 3, 4
10	Center St East	4
11	Center St West	2, 4
12	Manley Rd Area	3, 4
13	New Auburn East	2, 3, 4
14	Taylor Pond Area	3, 4
19	South Auburn East	3, 4
28	Danville Jct Area	2, 3, 4
33	Parking Lots New Auburn	
38	Parking Lots Central Fire	
39	Parking Lots Auburn Hall	

Average Lane Miles 24.80

Total Plowed Lane Miles 471.16