

**City of Auburn**  
**Snow and Ice Removal Operations**

**Thursday November 13, 2014**

# SNOW REMOVAL POLICY

- Can be found on city website  
[www.auburnny.gov](http://www.auburnny.gov)
- Three work shifts December through March
- Criteria to begin snow and ice removal
- Safety of plow operators and general public
- Possible suspension of operations
- Plow to minimize traffic and pedestrian obstructions

# SNOW REMOVAL POLICY

- Technique: center cuts and then curb cuts
- Four passes for smaller roads, six to eight passes for the larger, four lane roads
- Snow removal from downtown, commercial areas and areas that can create a hazardous condition
- Removal operations dependent upon weather, staffing and budget constraints

# SNOW REMOVAL POLICY

- Plowing priorities for streets designated as Priority 1, 2 and 3
- Operations may be suspended if the safety of the staff or equipment is compromised
- Salt use is closely monitored because of its cost and also to minimize its effect on the environment
- Sidewalk plow used to clear snow from city owned bridges, parks, parking lots, buildings, etc.

# SNOW REMOVAL POLICY

- Damage does occur: mailboxes, curbing, lawn, driveway approaches, etc.
- From our plowing operations, snow does get deposited at the bottom of private driveways
- At times, it can be significant
- City does not clear private driveways

# SNOW REMOVAL POLICY

- We will get as close to the mailbox as possible
- Up to occupant to clear the mailbox so the USPS can deliver the mail
- Alternate side parking in effect
- Concerns and complaints can be reported at 315.253.9554 or [www.auburnny.gov](http://www.auburnny.gov), click on the 'Contact Us' tab at the lower left

# SNOW REMOVAL BUDGET

• A5142.150	Overtime	\$30,000
• A5142.250	Other Equipment	\$16,000
• A5142.412	Operating Supplies	\$190,000
• A5142.440	Services	\$2,000
• A5142.481	Fuel	\$25,000
• A5142.482	Veh. Maint./Repair	\$4,500
• A5142.801	Retirement/General	\$5,436
• A5142.811	Social Security/Med	\$2,295
• A5142.821	Workers' Comp	<u>\$1,800</u>
TOTAL		\$277,031

# PLOW ROUTES

- City divided into 15 individual plow routes
- Includes main routes, 10 large truck routes, 3 pickup truck routes and city parking lots and sidewalks

# THE ROUTES (Large Plows)

<u>Route</u>	<u># of Streets</u>
1	25
2	20
3	19
4	25
5	26
6	27
7	27
8	26
9	20
10	23



# THE ROUTES (Pickup)

<u>Route</u>	<u># of Streets</u>
PU 1	25
PU 2	26
PU 3	26
Parking Lots	16



# THE ROUTES (Main Routes)

- Includes:
  - East and West Genesee Street
  - Vets Memorial Highway
  - Arterial East and West
  - North Street
  - South Street
  - State Street
  - Loop Road
  - Lincoln street Hill
  - Osborne Street Hill
  - William Street
  - South Green Street
  - Clark Street (Arterial to Loop)
  - Seminary Avenue

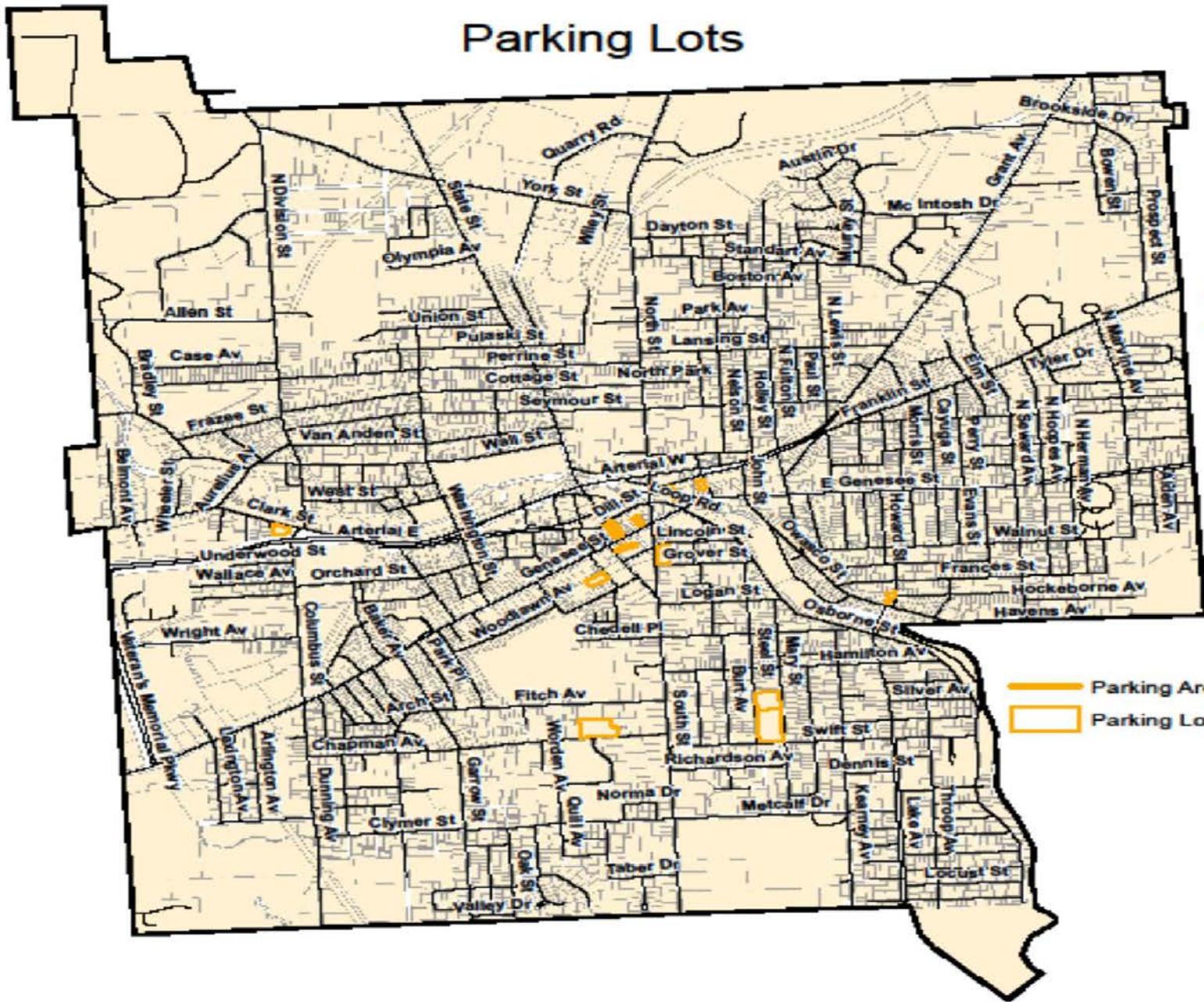


## **THE ROUTES (SIDEWALKS)**

- Includes all sidewalks in front of city buildings, playgrounds, bridges, parking lots, highways
- Sidewalk machine purchased in 2011



# Parking Lots



To Soule Cemetery

- Yellow Rectangle: Parking Areas
- Yellow Square: Parking Lots





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# STAFFING

- To fully staff each snow event and to cover all routes, including mains, streets, pickup routes, parking lots and sidewalks simultaneously, we need 15 plow drivers and 15 operating plows at all times.
- Utilize all departments for plowing: streets, parks, recreation, sewer, water, central garage, urban forestry, landfill

# STAFFING LEVELS

- 1 foreman (CDL)
- 5 laborers (pick up routes, no CDL)
- 11 MEOs (large plow routes, CDL)
- 3 utility maintenance workers (CDL)
- 4 HEOs (load salt) (CDL)
- 1 tree trimmer (CDL)
- 4 miscellaneous (3 CDL)

Above includes all at DPW garage

# SHIFT STATUS

- During the months of December, January, February and March two drivers will work second shift (3:00pm-11:00pm) and one driver and one laborer and one HEO will work third shift (11:00pm-7:00am). Third shift will operate from 11:00pm Sunday evening until 7:00am Friday morning. In addition, a foreman will work third shift and will direct staffing levels and initiate staff call-ins during overnight snow events.

# LABOR COSTS

- Most of the trucks are equipped with salt spreaders
- To attain 100% coverage (15 people), the approximate labor cost per hour is:
  - Straight Time             $\$395 + \text{benefits} = \$533.25/\text{hour}$
  - Overtime                  $\$592 + \text{benefits} = \$799.20/\text{hour}$

# MATERIAL COSTS

- Salt barn at DPW holds 3,000 tons of salt by design
- Working capacity of 2,500 tons
- Salt is \$42.68 per ton for 2014-2015
- Salt loaded with loader, bucket holds 3 tons
- 3 buckets fill 6 wheel dump truck (\$384 cargo)
- 6.5 buckets fill 10 wheel dump truck (\$832 cargo)



NO PUBLIC  
ACCESS  
BEYOND  
THIS  
POINT



# MATERIAL COSTS

- Wintertime fuel costs approximately \$4.00/gallon (diesel mixed with kerosene)
- Fully loaded plow trucks average approximately 3 miles per gallon
- 1 road mile equals 4 road miles of plowing (2 plow cuts each direction)
- Each individual plow route contains approximately 10 miles of roadway (40 miles of plowing)

# MATERIAL COSTS

- A truck will consume approximately 20 gallons of fuel per route
- Including travel time and salt loading (each route will use 3 salt loads to complete) the routes average 3.5 to 4 hours to complete
- On average, to complete 15 routes on straight time (4 hours of plowing):

Labor	\$2,133
Salt	\$11,520
Fuel	\$1,200
Total	\$14,853 (\$3,713.25/hour)

# MATERIAL COSTS

- On average, to complete 15 routes on overtime (4 hours of plowing):

Labor	\$3,197
Salt	\$11,520
Fuel	\$1,200
Total	\$15,917 (\$3,979.25/hour)
- Assuming a snow event will require two passes per route (8 hours of plowing), our labor budget contains enough overtime (\$30,000) for approximately 2.5 overtime events

## SALT USAGE

- 2009-2010      5,277 tons      \$200,537.92
- 2010-2011      5,315 tons      \$201,965.94
- 2011-2012      2,582 tons      \$ 98,116.00
- 2012-2013      2,913 tons      \$109,779.06
- 2013-2014      4,770 tons      \$171,708.93
- 2014-2015      ?      \$42.68/ton

# PLOW EQUIPMENT

- 3, 1 ton pickups (2 with spreaders)2010 (awaiting delivery of 2, 2015 trucks with spreaders)
- 10, 6-wheel dump trucks
  - (1)2000
  - (1)2001
  - (1)2002
  - (2)2006
  - (2)2011
  - \*(2)2015 (awaiting delivery)
- 3, 10-wheel dump trucks (2001, 2014)
- 2, front loaders (2008, 2009)





JCB

Littéch

426R

S4



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135







104

86

64

62

104

135

69

57

NAPA

NAPA

NAPA

NAPA

**CITY OF AUBURN DPW SNOW EVENT SUMMARY**

**DATE:** \_\_\_\_\_

**DAY:** \_\_\_\_\_

**EVENT TYPE:** \_\_\_\_\_

**TIME:** \_\_\_\_\_

**STORM PARTICULARS:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NUMBER OF PLOW DRIVERS CALLED:** \_\_\_\_\_

**NUMBER OF PLOW DRIVERS RESPONDING:** \_\_\_\_\_

**EQUIPMENT STATUS:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DURATION OF EVENT AND WORK SHIFTS:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOTES:** \_\_\_\_\_

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\_\_\_\_\_  
\_\_\_\_\_