



Rodney Conley  
*Data Analyst*

**MEMORANDUM**

**TO:** Kevin Murphy, City Manager  
**FROM:** Rodney Conley, LowellSTAT Director  
**DATE:** May 15, 2015  
**SUBJECT:** LowellSTAT Report on Street's Department

Mr. Manager,

Attached please find an analysis of the DPW Streets Division, particularly focusing on Snow & Ice. Overall, I found several areas in which the City has improved its snow performance from previous years. I have attached the PowerPoint presentation from our LowellSTAT meeting last week which walks through some of these points.

The second slide examines some of the department's expenditure accounts as well as year-to-date account balances as of mid-April. It should be noted that these historical numbers include reimbursements that were received via FEMA/MEMA. While examining the financials, we discovered a discrepancy in the Salt & Sand account. It was determined that approximately \$200,000 was charged to Miscellaneous Charges instead of Salt & Sand. This will be corrected in the coming days. Thus, the FY15 Salt & Sand account actually stands at roughly \$890,000 expended. Also, the Misc. Charges account will drop to roughly \$380,000.

The next slides focus on E-Gov Snow Removal and Pothole requests. This data displays an increase in the number of residents using the E-Gov system. In total, there have been 843 Pothole requests entered into the system since January 2015, whereas there were 771 requests for the same period last year. 91% of the 2015 requests were entered by employees, which is a result of the proactive work done by the Streets crew as they travel the city. The average time to complete the request has also dropped dramatically in 2015. DPW has made significant progress this year in closing tickets out in a timely fashion. It is worth noting that one factor in the Streets crew's ability to repair more potholes this season is the introduction of an asphalt hot box. This tool allows pothole crews to obtain 3 tons of asphalt at a time as opposed to the usual 1 ton. This tool also holds the product at the correct temperature so it is not wasted and can even maintain the product overnight. This addition has saved the City substantial time and labor dollars.

As for Snow removal, the number of requests has increased significantly in 2015 as well. Between January-March, there were 100 requests as compared to 49 during the same period last year. Citizens have also requested snow removal by contacting the Manager's Office and Neighborhood Services via phone or email. Slides six and seven compare the location and category of a sampling of these requests. Of the 80 requests, 36 were located in Centralville with the next highest neighborhood being the Highlands at 15. As for the request type, almost half (39) were requests for "Snow Removal". Many of these were street corners that needed to be cleared for visibility purposes.

Finally, slides eight, nine and ten take a closer look at the data collected by the Cirrus Salt Monitoring system. During the winter season this year, the City used only 123.1 tons of salt per inch of snow. This is the lowest average since the Cirrus system was implemented. This is in part due to the massive amount of snowfall, in which salt wasn't used as frequently. However when comparing FY15 to previous years, it is evident that the system is having a tremendous effect on reducing the City's salt usage.

**Kevin Murphy, City Manager**

**Rodney Conley, Data Analyst**

**LOWELL** **STAT**



**SnowSTAT**

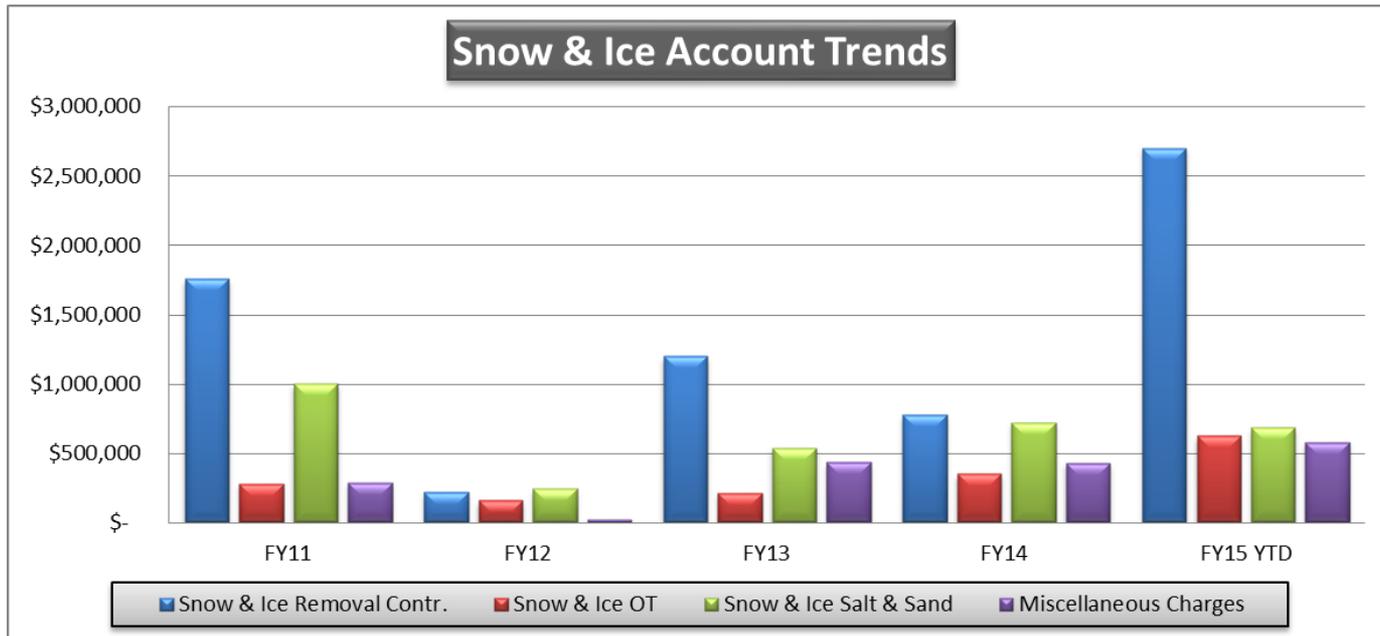
**April 21, 2015**



## LowellSTAT – SnowSTAT

April 21, 2015

SNOW & ICE EXPENDITURES						
Account	FY11	FY12	FY13	FY14	FY15 YTD	FY15 ENC.
Snow & Ice Removal Contr.	\$ 1,756,546	\$ 216,713	\$ 1,197,928	\$ 773,705	\$ 2,699,245	\$ 682,757
Snow & Ice OT	\$ 279,700	\$ 158,099	\$ 214,508	\$ 349,620	\$ 623,654	\$ -
Snow & Ice Salt & Sand	\$ 998,263	\$ 244,983	\$ 540,356	\$ 720,720	\$ 684,096	\$ 25,199
Miscellaneous Charges	\$ 287,617	\$ 22,377	\$ 432,871	\$ 429,365	\$ 579,116	\$ 136,877
<b>Snow &amp; Ice Total</b>	<b>\$ 3,322,126</b>	<b>\$ 642,172</b>	<b>\$ 2,385,662</b>	<b>\$ 2,273,411</b>	<b>\$ 4,586,110</b>	<b>\$ 844,833</b>

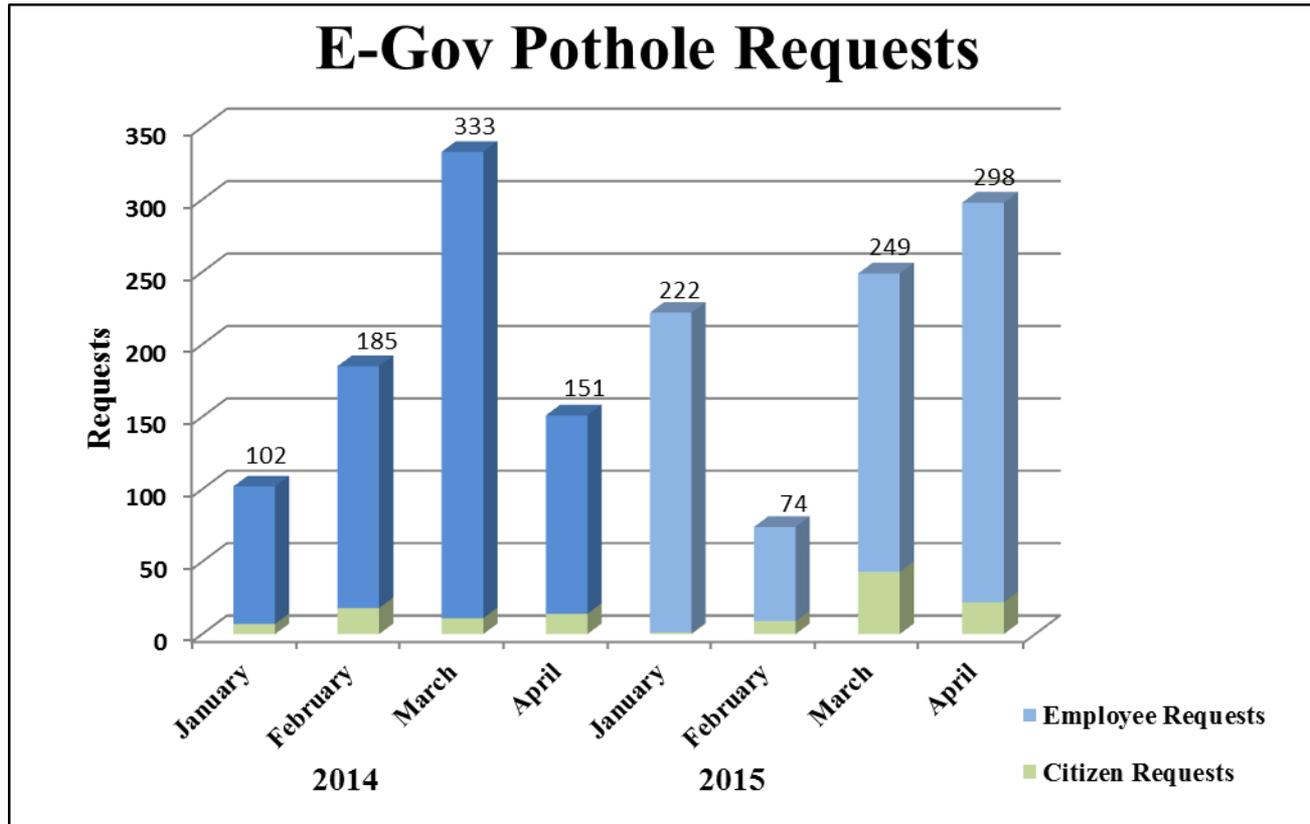


**\* Approximately \$200K is currently mischarged to Misc. Charges instead of Salt & Sand.**



## LowellSTAT – SnowSTAT April 21, 2015

E-Gov Pothole Report									
Data 4/16/15	2014				2015				
	January	February	March	April	January	February	March	April	
<i>Pothole Issues Received</i>	102	185	333	151	222	74	249	298	
<i>Pothole Issues Resolved</i>	102	184	333	151	222	71	244	292	
<i>Pothole Issues Still Open</i>	0	1	0	0	0	3	5	6	
<i>Resolution Rate (Turn Around)</i>	100.0%	99.5%	100.0%	100.0%	100.0%	95.9%	98.0%	98.0%	
Response Time									
<i>Average Days to First Action</i>	32.47	195.3	13.65	32.42	1.18	36.61	3.53	1.93	
<i>Average Days to Resolution</i>	38.59	207.39	19.6	37.82	1.18	36.63	4.07	1.93	
<b>Average Days Open</b>	<b>38.13</b>	<b>206.11</b>	<b>18.94</b>	<b>37.42</b>	<b>1.18</b>	<b>38.61</b>	<b>4</b>	<b>1.93</b>	
Egov Usage Information									
<i>Citizen Requests</i>	7	18	11	14	1	9	43	22	
<i>Citizen Percentage</i>	6.9%	9.7%	3.3%	9.3%	0.5%	12.2%	17.3%	7.4%	
<i>Employee Requests</i>	95	167	322	137	221	65	206	276	
<i>Employee Percentage</i>	93.1%	90.3%	96.7%	90.7%	99.5%	87.8%	82.7%	92.6%	
				2014 (Jan. - Apr.)					2015 (Jan. - Apr.)
<i>Citizen Percentage</i>				6.49%				8.90%	
<i>Employee Percentage</i>				93.51%				91.10%	
<i>Average Days to First Action</i>				68.46				10.8125	
<b>Average Days Open</b>				<b>75.15</b>				<b>11.43</b>	

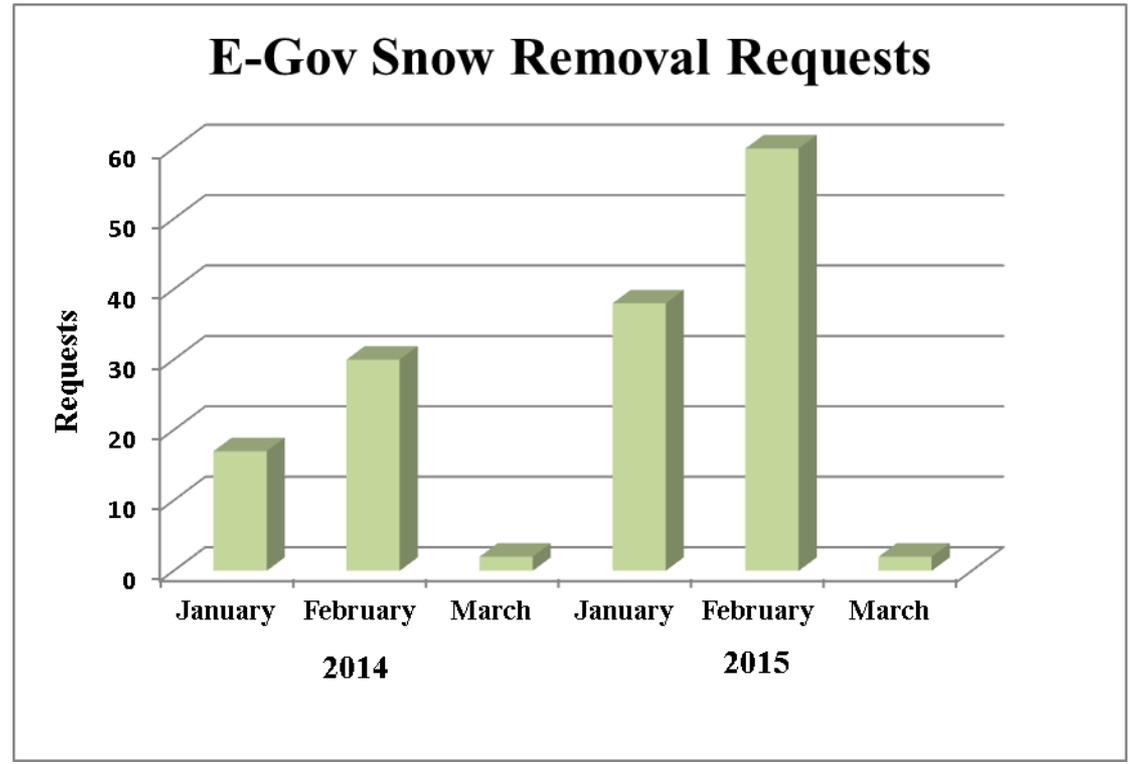




## LowellSTAT – SnowSTAT April 21, 2015

### E-Gov Snow Removal Report

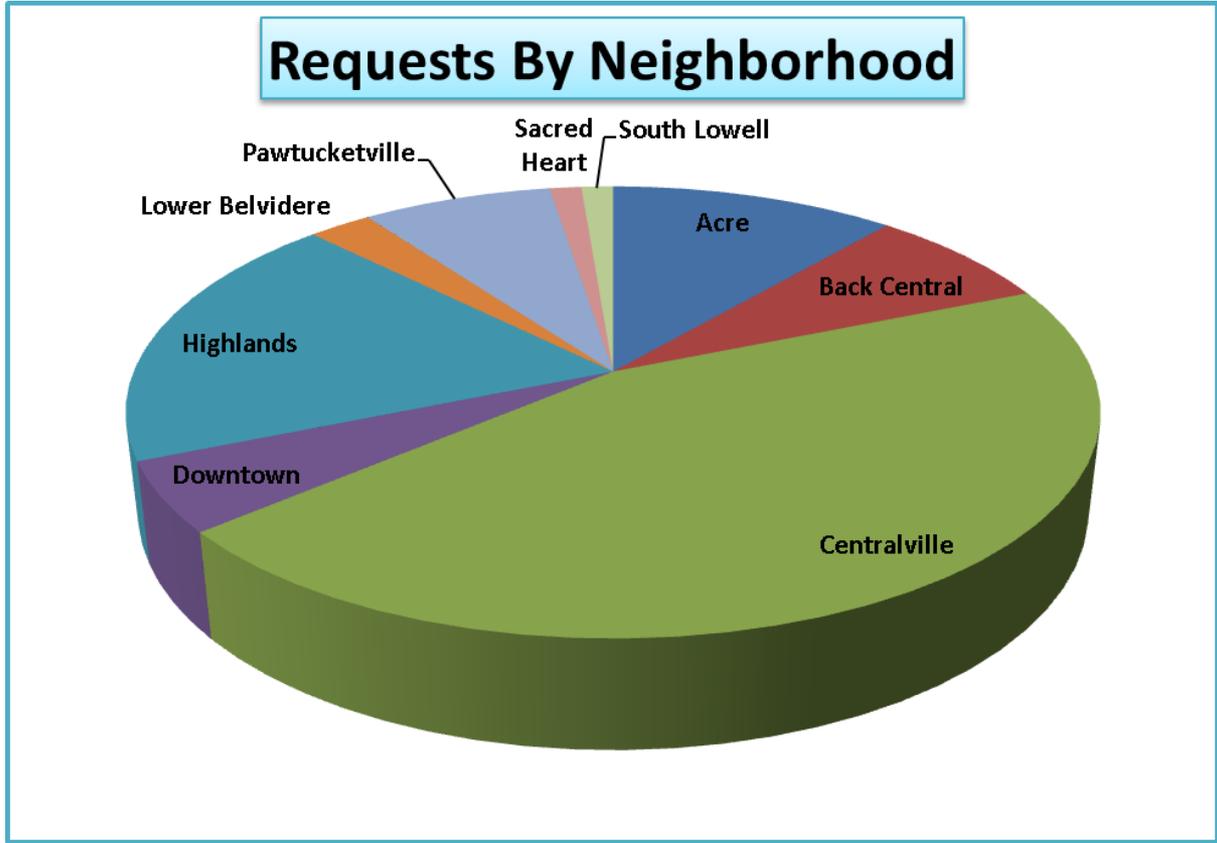
Data 4/17/15	2014			2015		
	January	February	March	January	February	March
<i>Snow Removal Requests Received</i>	17	30	2	38	60	2
<i>Snow Removal Issues Resolved</i>	17	30	1	37	55	2
<b>Average Days Open</b>	<b>136.5</b>	<b>57.65</b>	<b>4</b>	<b>41.35</b>	<b>32.18</b>	<b>8.5</b>





## SAMPLE OF SNOW PLOWING/REMOVAL REQUESTS

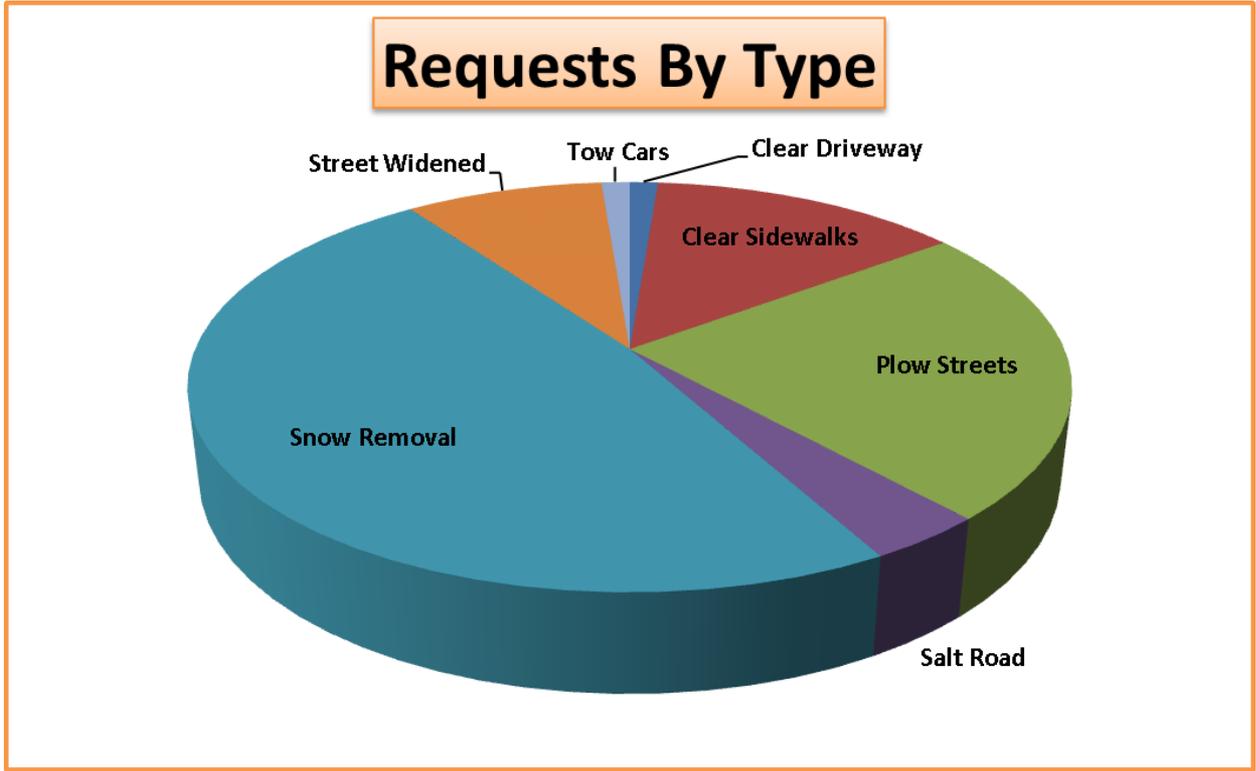
Neighborhood	Requests
Acre	9
Back Central	6
Centralville	36
Downtown	4
Highlands	15
Lower Belvidere	2
Pawtucketville	6
Sacred Heart	1
South Lowell	1
<b>Total</b>	<b>80</b>





### SAMPLE OF SNOW PLOWING/REMOVAL REQUESTS

Request Type	Requests
Clear Driveway	1
Clear Sidewalks	11
Plow Streets	19
Salt Road	3
Snow Removal	39
Street Widened	7
Tow Cars	1
<b>Total</b>	<b>81</b>





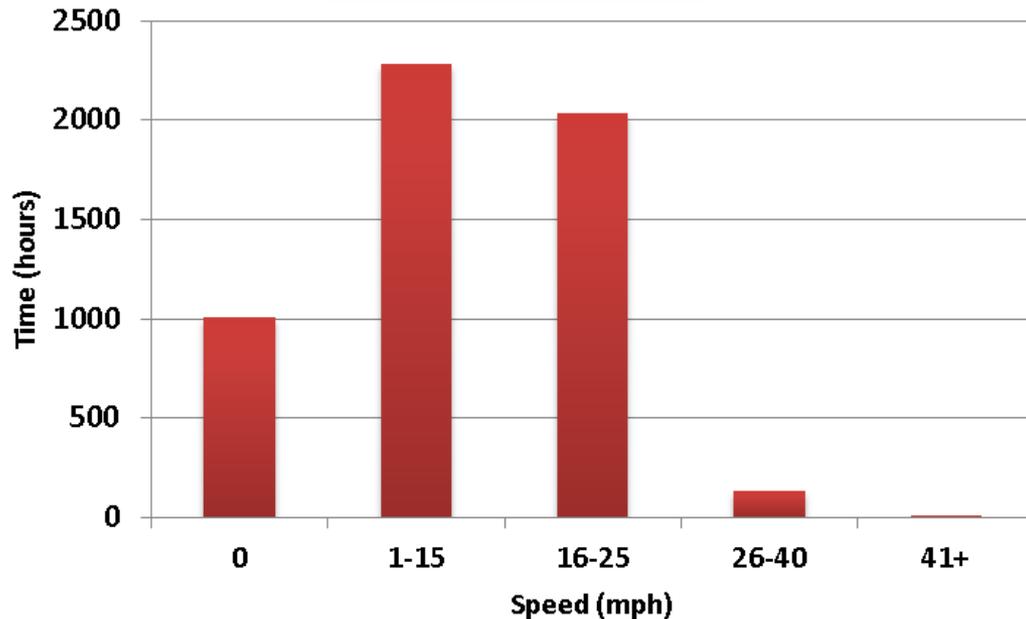
### SALT MONITORING SYSTEM

	TONS OF SALT	INCHES OF SNOW	TONS PER INCH
<b>FY12</b>	<b>6,571.3</b>	<b>23.9</b>	<b>274.9</b>
<b>FY13</b>	<b>10,713.1</b>	<b>72.1</b>	<b>148.6</b>
<b>FY14</b>	<b>14,165.1</b>	<b>74.6</b>	<b>189.9</b>
<b>FY15</b>	<b>14,036.2</b>	<b>114.0</b>	<b>123.1</b>



## SALT MONITORING SYSTEM

### Vehicle Speed



Speed	Time (HRS)	Percentage
0	1004	18%
1-15	2278	42%
16-25	2030	37%
26-40	133	2%
41+	5	0%

**\*Total Distance: 61,213.7 miles**

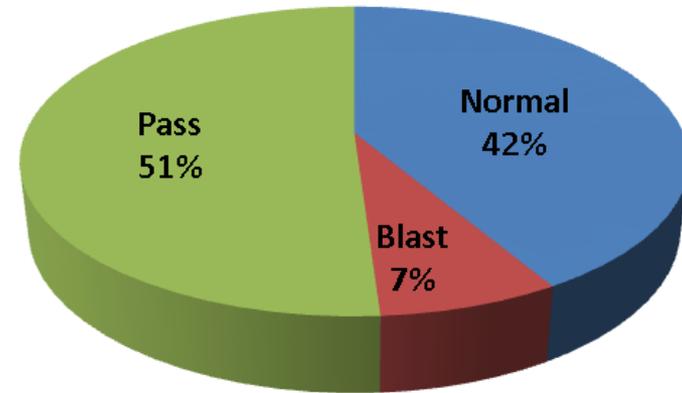


### SALT MONITORING SYSTEM

Mode	Time (HRS)	Percentage
Normal	2364	42%
Blast	422	7%
Pass	2904	51%

**Blast Percentage Based on Time Dispensing: 15.1%**

#### Dispensing Mode



Material Name	Pounds	Pounds Per Lane Mile
Salt	18,889,991	498
Hills Mode	802,985	429
Test	56,376	950