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### Manchester Snow Emergency Analysis: Who is Being Towed from Where and Why

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## Manchester Snow Emergency Analysis: Who is Being Towed from Where and Why

Capstone

Mike Pelletier

UNH Manchester

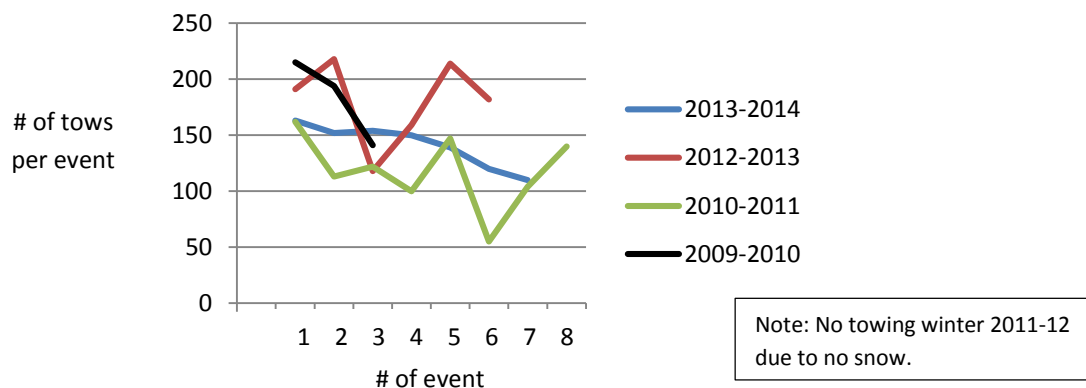
### Abstract

This Capstone paper analyzes the City of Manchester, New Hampshire's policy and community impacts when their Towing Snow Emergency procedures are implemented. While the public expects their city streets and sidewalks to be cleared of snow during and following snow storms, the process to do so in the city streets requires vehicles to be re-located from parking on the street. This process requires privately owned vehicles to be ticketed or towed during the worst of weather during the winter. Although the city administration has attempted to avoid having to tow vehicles as the report shows, there is still a historical and current number of vehicles towed during each declared Snow Emergency which is comparatively high to other New Hampshire cities and towns. This Capstone project discovers 'who' is being towed from 'where' and the various reasons 'why' they do not know about declared Snow Emergencies. The paper makes a 'recommendation' based on four 'conclusions' given at the end of the paper from the study. The paper's recommendation is that the Mayor and Board of Aldermen appoint a special study committee to develop mitigating procedures and policies to reduce the number of vehicles towed and the subsequent negative impact on the community.

In order to keep the City of Manchester, NH's streets free of snow and ice during and after adverse weather events, the city's Department of Public Works (DPW) will declare a Snow Emergency and require that vehicles be towed from certain parts of the city. There are 411 miles of roads and 137 miles of sidewalks in the city.<sup>1</sup> The DPW's Snow Emergency declaration allows the Manchester Police Department to activate their third party contractual agreement with the city's towing companies and direct vehicles to be towed to a centralized impound lot. This action allows the highway equipment and personnel access to the city streets to clear them of snow and ice which then allows for the safe passage of people who live, work, visit and play in the city. Without the clearing of snow and ice, the accumulation can lead to an unsafe situation where the free flow of personnel and goods are prevented. Public safety is a prominent concern to clear the snow. While the ideal situation would be for no vehicles to have to be ticketed or towed, there are a large number of vehicles towed during Snow Emergencies, especially when compared to other cities in New Hampshire which this report will demonstrate.

While this report will detail the communication efforts the city has made in an attempt to alert vehicle owners of Snow Emergencies, that effort might not be reaching their intended audience. The number of vehicles towed does not decrease year to year and only shows a minor decrease throughout the winter months of the winter season as seen in Figure 1 below.<sup>2</sup>

**Figure 1: Historical Number of Vehicles Towed in Manchester**



The main effort in this study is to find out the demographics of the owners of vehicles being towed and also to answer the question as to ‘why the current outreach by the city is not being heard’ by some. Unfortunately, the current procedures used by the City of Manchester do not record personal data regarding the owners of the vehicles being towed. That data is further limited in that this is a cash only transaction between the city and the vehicle owners. In order to accomplish the discovery of the answers to these questions, preliminary meetings and dialogue were held with the stakeholders of this aspect of the City of Manchester. Based on those discussions, one could theorize modifications to the communication effort to mitigate the number of people being negatively impacted by Snow Emergency towing which the city is impacting on a number much larger than any other New Hampshire city, even with a per capita analysis.

The organizations which are involved in the Snow Emergency towing are as follows: Manchester Department of Public Works, Manchester Police Department, Mayor and Board of Aldermen, third party contracted towing companies, owners of towed vehicles, businesses affected by towing, citizens affected by towing operations. Each of these entities’ part in this process and will be briefly reviewed for a better understanding of this process in the following paragraphs of the report, but it is important to note the magnitude of this decision.

The Manchester Department of Public Works (DPW) Highway Division is described to be “Responsible for the operation and maintenance of the City's streets, solid waste program, sanitary sewer system and the stormwater drainage system.”<sup>3</sup> It has the ultimate responsibility to keep the city streets and sidewalks safe and able to be navigated in the event of a snow or ice storm event. Their management determines when a Snow Emergency needs to be declared, or not, in the advent of adverse weather. This process is detailed later in this report. The DPW has

the task of determining on when to tow or not while considering the subsequent chain of events which occur based on its decision.

The Manchester Police Department (MPD) is called into action based on the DPW's decision to declare a Snow Emergency. When activated, the MPD executes its policy calling up the contracted towing companies, putting extra police officers on the details and starting its communication process with the city and region to alert every one of the towing.<sup>4</sup> The amount of coordination required by these actions takes personnel off of their ordinary duties so they can concentrate on this tasking. The MPD must ensure public safety which this action ensures.

The Mayor and Board of Aldermen are the political representation of the people of the City of Manchester. As the report's aldermanic sponsors informed me, they are informed of the Snow Emergency and prepare to handle constituent calls, complaints and requests. The constituents are the individuals and local businesses, community and other events scheduled for that night. The Mayor and Board of Aldermen must keep in mind constituents being affected whether they are individuals or businesses. They expect efficient execution of this process.

In order to tow for any reason in the city, a tow company must sign onto a towing agreement in order to be licensed to tow vehicles in the city limits. The city has five private companies who have signed on for 2015. These companies are of various sizes and capabilities but have all agreed to the rules, safety regulations and training that the city requires in order to run the operation. Of the original eight towing companies that applied to tow in the city, three were rejected due to inspection issues. One of the clauses in the contract is that they must take part in and support the towing operations during a Snow Emergency. A preliminary phone survey was conducted of those companies of which five replied and one abstained from answering. They were asked why people are getting towed in such large numbers and their view

of the towing procedures. The general consensus of those answering were that people can't find a place to park off the streets, and they don't understand the concept of the Snow Emergency and how it will affect them. Surprisingly, two of the five stated they did not want to take part in the towing process since it was not profitable based on the amount of time and resources they had to devote to the process. The problem they mentioned was that they needed to complete complex coordination of their drivers and equipment to be available from 10pm to 6am. And, since they must participate to be licensed in the city annually, the drivers must be confirmed to participate and obligated to show up. If a towing company does not deliver the directed number of vehicles and drivers then they are in violation of the city contract and could be terminated from doing business in the city. The number of vehicles towed to 'break even' in their finances is not a guaranteed number so they take a risk of losing money. See Annex A for details.

The owners and family members of the vehicles towed are a key stakeholder in this process. These are the people who live, work, visit, get educated and play in the city where they have now had their vehicle towed to the east side of Manchester to an outdoor impound lot. They must go through the inconvenience in recovering their vehicles which includes: realizing they have been towed, finding out where their vehicle is located and what it will cost to get it back, finding a ride to the bank to obtain the \$110 cash needed if they don't have it on hand, finding a ride to the impound lot and then paying the fee. It is estimated this unscheduled process can take approximately 45 to 75 minutes for the hundreds that are towed every year.

Businesses in the area of the towed vehicles are also affected by the Snow Emergency process. Since the towing starts at 10pm, any business that relies on customers past that time will have their customers who depend on parking on the street not show up or leave early. While this report did not investigate the effects of towing on the businesses in Manchester, it could be a

study left for others to investigate. One business that is negatively affected is that of landlords who rent in areas of the city where there is no off street parking. These businesses will have their renters or customers negatively affected by being towed and thus potentially decrease the value of their product which is rental units. There was anger witnessed by some of the towed renters that their landlords are not informing them and sometimes ‘misinforming’ them about this topic.

On the other concern of business is what if the streets and sidewalks are not cleared of snow and ice properly in the event the DPW could not access them due to the vehicles being left on the street. What would happen is that workers, suppliers and customers cannot access the business during their normal working hours if there is too much weather related snow and ice accumulated and not removed. It is essential that the stakeholders for business in the city be allowed access to these establishments else there will be a negative effect upon all involved.

This concept can also be related to the last stakeholder group and that is the citizens of the city. The citizens need to have safe access to the streets and sidewalks of the city in order to go about their business and daily tasks. If these are not cleared of snow and ice, like the businesses, they would have their lives negatively impacted. According to the International Institute of NH, one sub-group of citizens is those who are new to the city from another country and have never experienced harsh winter weather or even minor snowfall.

Decision Making Process: When the potential for adverse weather takes place, a determination is made by the Manchester Department of Public Works regarding actions needed. The analysis and decision making process is difficult with negative potential effects if the wrong decision is made. The city subscribes to a weather service which helps update current trends and forecasts. When that service indicates adverse winter weather, the DPW management starts to closely follow all media and weather reports from multiple sources. If the various predictions for



the snow event indicate at least two to four inches of snow accumulation then ‘subject matter experts’ from the DPW are gathered to decide and prepare. They need to decide if there will be a Snow Emergency or not, and if so, then if it will be only a ticketing or a towing scenario. By only enforced ticketing procedures, the DPW can avoid the administration of the complex task of executing eight hours of towing and 14 more hours of maintaining the impound lot afterwards. The ticketing /towing event message is sent to the public from the department using information technology computers in a manner (Figure 2) that helps the public understand that all vehicles must be moved from the streets to help the DPW conduct snow clearing operations.

One of the issues the DPW faces is that they have a chance of deciding on the Snow Emergency wrong in two ways: one by not initiating it but then having too much snow and the other by calling one and not having enough snow fall. That is, the odds are stacked against the City since they must try to guess on the snowfall in advance which is very difficult. If they decide that there is not enough information which forecast significant snowfall then they would need to decide by that afternoon not to call for towing. The goal of the DPW is to make that decision no later than 2pm that day but can be altered based upon the situation. Any decisions after that timeframe would possibly need the towing to be pushed to the next night for implementation since the towing ban only occurs between 10pm and 6am per the DPW policy. And, if it did indeed snow above expectations and there is no towing, then parts of the city would have impeded travel the entire next day as the snow would not have been moved. Unfortunately, as Annex D shows, the message does not always get out to those who subscribe to the city email alert system until too late.

If the DPW decides to have a Snow Emergency and then the forecast turns out wrong with less snow or no snow, then they may have just had many vehicles ticketed or towed without

a public safety issue due to weather. But, if it does snow and the towing/ticketing is implemented, then they got it just right. Summarizing, the DPW has two out of three chances to decide incorrectly which can be summarized as not great odds for any organization and could be deemed unfair to have the blame placed upon them or other city entities.

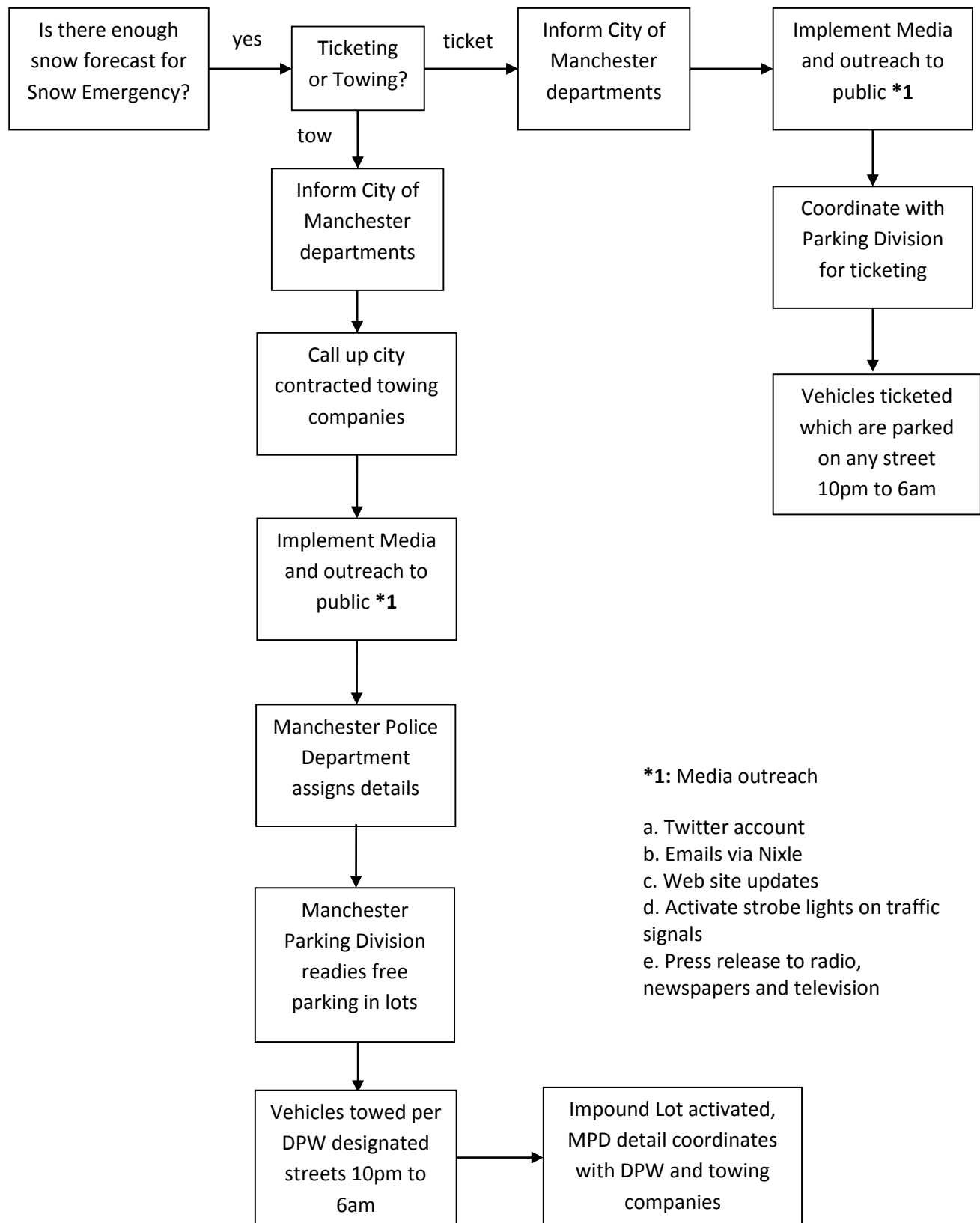
Once a Snow Emergency is declared a set of actions and events are put in progress. The DPW is the kickoff point for this execution and the tasks are shown on the attached flowchart (Figure 2) below on page 11. The two initial divergent paths are if the DPW decides the event will be ticketing only or towing only since the practice is not to both ticket and tow although they could legally do both procedures. While this project only examined the towing operation it will briefly review the ticketing option.

If there is enough doubt that a substantial amount of snow will fall during the time frame directly proceeding 10pm and throughout the time period to 6am the next morning, then the DPW can decide to only ticket vehicles. This is done to avoid the potential expenditure of time, money and resources that a full towing operation takes. While this report does not concentrate on the ticketing aspect of a Snow Emergency, it can be noted that the tickets are given out by Parking Enforcement Officers and the penalty is \$75. The vehicles are not moved from the city streets by towing but rather by the desire of a deterrence effect by the press release's threat and issuing of parking tickets and owners remembering it for the next storm emergency.

The towing operation involves several detailed tasks which need to be carried out simultaneously given the number of personnel involved from various departments, towing companies and the public. All city departments need to be made aware of the towing decision in order for them to have the situational awareness of that action. This is completed by internal emails to the directorate's management teams.

The contracted towing companies in the City of Manchester must participate in the towing operations.<sup>5</sup> They are contacted by the MPD so they can start to prepare their vehicles and drivers for the night's activities. This means that many of their previously created work and personal schedules are disrupted. It has been noted by several of the companies that the task is sometimes not worth the profit which they will make, if any, on the towing given the complexity of their preparing to comply with the operation. The topic of money and profit is reviewed later in this paper in Annex A. The impound lot has a centralized administration and payment mobile office which is staffed by several personnel from the towing companies. They are paid by the conglomerate of towing companies on contract. The towing administration handles all the cash transaction for the operation. Note that there are no options for payment other than hard currency. A record is kept of which company towed how many vehicles for payment distribution after the operation has ended. Here are pictures of the administrative trailer and impound lot:



**Flowchart of Manchester DPW Decision Making Process for Declaration of Snow Emergency****Figure 2**

A public relations media ‘blitz’ is implemented as soon as the decision has been made for a towing emergency. This is to enable the public to have as much warning as possible in order for them to remove their vehicles from the streets or alter their business plans. This communication capability is processed by the DPW and MPD by use of the following media:

- a. City of Manchester Twitter account
- b. Emails and cell phone texts via Nixle to subscribers
- c. City of Manchester Web site updates
- d. Activation strobe lights (Osborn Lights) on traffic signals
- e. Press release to radio, newspapers and television

If all goes correctly, it is possible to have up to eight hours of alerts going out before the 10pm towing start time. Reference Annex D to see delays in city email alerts being sent.

The Manchester Police Department is consulted during the decision process on if a Snow Emergency is called and if it will be a towing scenario. The towing process involves the police setting up a special detail of personnel to prepare for, work and then conclude the operation. The police assign one officer to the impound lot, up to four officers to accompany the DPW in determining who gets towed and one officer to coordinate the activities overall. In order to help pay for this additional expense to the city, \$25 of the \$110 towing fee is allocated to the city’s treasury. The balance of the fee goes to the towing companies as listed in Annex A.

During the operation, the officers who accompany the DPW snow clearing crews on the streets will receive information from the DPW crews for the general area where vehicles need to be towed. They then call the officer at the impound lot of the number of vehicles and location. The impound lot officer dispatches the tow trucks with the location until that area is cleared. I learned from my interviews with the MPD during the project, the officers on the street sometimes attempt to notify the neighborhoods being affected at that time by using their emergency lights and sirens on their police vehicles so owners inside houses can move their cars.

Sometimes they even knock on doors to alert the residents of the pending towing. Once the vehicles are removed, the DPW crew then clears that area of the street. If there are any issues or problems, the officer coordinating the event is notified to help resolve the problem. A 'drop charge' of \$25 (cash) can be charged if the owner is able to notify the towing operation that they will move their vehicle before it is carted away. This policy is not written but only implemented if the police judge that 'work' has been done trying to get the vehicle attached to tow truck. Once the drop charge is paid, the vehicle is then sometimes ticketed with a \$75 illegal parking ticket. The end result is the vehicle is moved but at a possible cost of \$100 to the owner.

The Manchester Parking Division is responsible for having the designated parking garages opened for free parking. The Victory Parking Garage is open from 10pm to 6am and the Pearl Street Parking Lot (surface parking lot) is open from 5:30pm to 8am. The media relations campaign notes that these two garages are open for free during these times. However, there are no special signs or signals put up at the garages which indicate this policy but there is a regular sign that states this. These free parking locations are in the inner city just east of Elm Street.

The final part of the operation is to account for the money collected, time and resources used by the city and vehicles that have been abandoned by the owners. As stated earlier in this document, the impound lot administration personnel add up how many vehicles were towed by each company and that money is paid to the company representatives. The rate is \$85 per vehicle towed of the \$110 fee since \$25 per vehicle is given to the city for their costs. The cost of a police officer detail is about \$56 per hour. Four officers are needed from 10pm to 6am and then one officer only from 6am until 8pm that night for owner pickup. If there were any additional resources used by the various city departments that were involved or affected by the weather, then that would be reported up their chain of command for analysis. Sometimes, the owners of

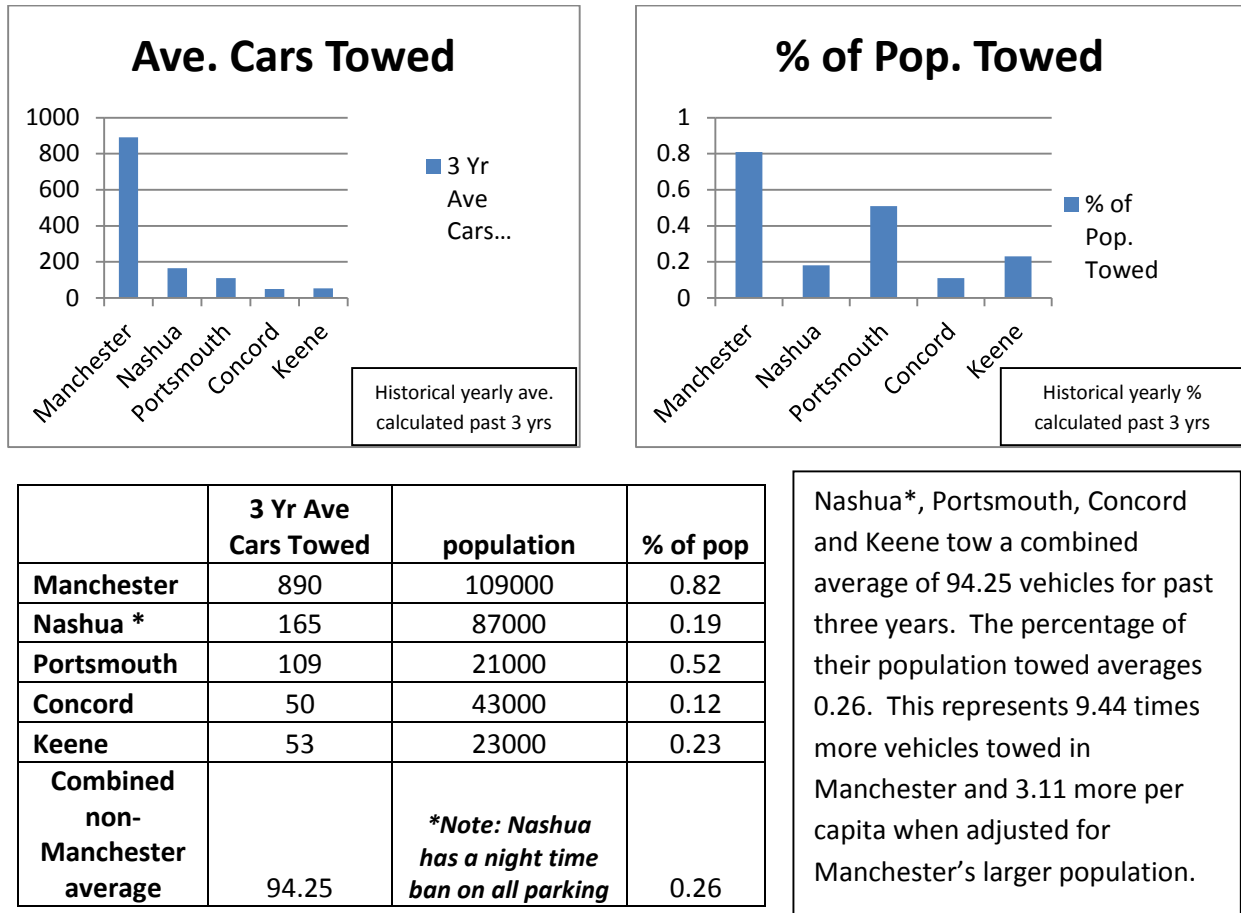
towed vehicles do not claim them and they remain at the impound lot. There are several reasons for this abandonment ranging from the owner does not have the money to pay \$110 cash or the vehicle is stolen. In these cases, the company that towed that vehicle now needs to take possession of it and start the legal process of charging storage fees and trying to find its owner. If the vehicle is from out of state, then the burden upon the towing company is compounded based on the strong consumer protections given to owners from such states as Massachusetts. In that case, the towing company can find itself spending time, money and resources which detract from any profit they made from participation in the Snow Emergency towing operation. See Annex A for a diagram of the monetary transactions.

A three year historical comparison (listed below this paragraph in Figure 3) was completed between Manchester and the other large cities in New Hampshire on how they handle Snow Emergency street clearing and towing. What was discovered was that Manchester not only towed over nine (9) times as many vehicles of any other NH city by volume but that also they tow a much higher percentage compared to their population. Part of the explanation of the difference in the relatively high number and high percentage of vehicles towed in Manchester can be seen in Annex C attached. Annex C shows the detailed comparison of the major cities in NH as to their processes, collection data and other information which can be used for a better understanding how the cities operate in snow emergencies.

The comparison to other NH cities is only used as a way to attempt to measure the proportionality of towing. There are reasons why the other cities do not tow as many vehicles as Manchester to include; population density, procedures used to clear vehicles from streets, banning overnight parking throughout the winter months and other items which are reviewed in Annex C. The NH city comparison shows Manchester towing significantly more vehicles than

other NH cities. However, this comparison may not truly represent a problem given the various policies each city has, their population density and other factors that Manchester uniquely faces.

**Figure 3: Three Year Historical Towing Data State Cities**



An important analysis for the disparity of the number of vehicles towed by city is also the population density. While Annex C lists some of the differences in the towing procedures in the various NH cities, population density is important to consider. According to the Zip Atlas database:<sup>6</sup> For a comparison of cities in Massachusetts and Maine, see Annex K.

See Annex L for an analysis on towing per population density: "Population Density Towing Rate"

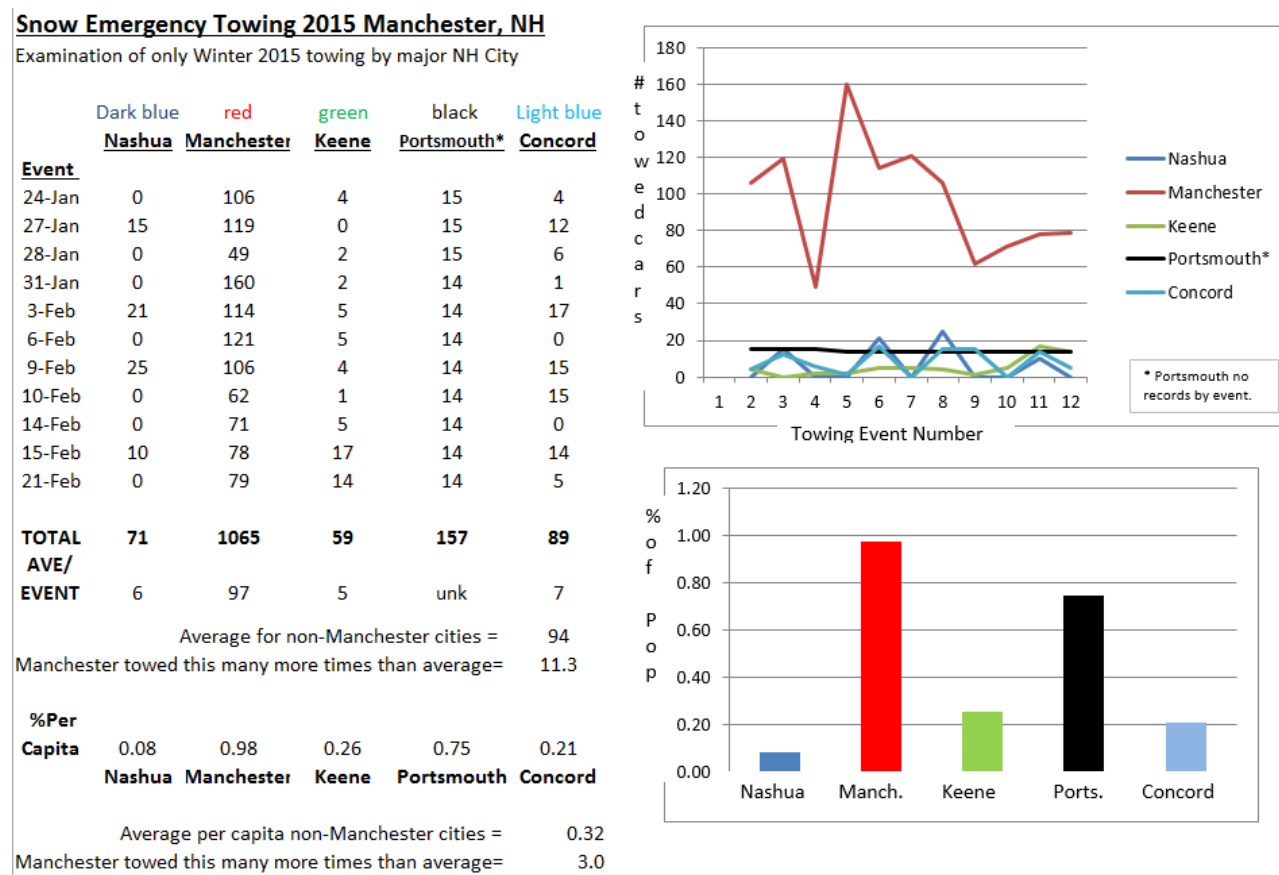
City	Population/Sq. Mile
Manchester	3073
Nashua	2770
Portsmouth	902
Concord	384
Keene	331



This population density data shows the unique circumstance that Manchester finds itself in. It is possible that this data will make comparisons with other NH cities potentially unfair. However, the historical data generated supports the final recommendation of the paper.

The winter of 2015 offers an up to date data set for analysis. Luckily for this report, there were 11 towing emergencies declared in Manchester. The data is summarized here in Figure 4:

**Figure 4: Winter 2015 Analysis**



The data from the 2015 winter shows that Manchester towed 1065 of vehicles which is 11.3 times more than the combined total average of the four other cities. If one looks at the percentage towed of the population, Manchester towed 3.0 times as many vehicles as the

combined average of the other cities examined. One can also note that Manchester's average vehicles towed per event dropped from a historical 156 to 97 this winter. See Annex C, Question 4 and 6 for the historical average towed per event. These ratios match up with the historical data. For a further comparison of cities in Massachusetts and Maine to Manchester, NH, see Annex K.

The survey conducted at the impound lot was an attempt to find out the 'who' and 'why' owners had their vehicles towed. Given the environment at the time of the survey, it was made short to get to the point quickly. The survey was completed outside of the impound lot administration office (an old trailer) which was outside on a cold, open and snow covered area. The people coming to obtain their vehicles were upset and surprised at what had just happened to them so the survey had to be completed in a compassionate manner to avoid any problems. The surveyor was clearly identified as a UNH student to avoid any connection with the city towing operation or police. Several of the towed owners had recently acquired distaste for the towing operators and police which in some cases were raised to the level of outright anger. Reference the attached survey (Annex B). It was printed in English and Spanish for the actual conduct of the survey. The questions were given verbally and could be answered back verbally or if the respondent liked, they could write their response on the clipboard provided. In cases where the respondent was in too much of a hurry to answer, the survey at least attempted to get an answer to if they knew about the Snow Emergency before they were towed and their status of being a resident, visitor, worker, or patron of the social offering in the city. In some cases some of the data could be obtain by simple observation of the owner as they discussed the issue with the towing administrators. Annex E shows the statistical calculation the survey. The survey was not a random sample but targeted at those who were at the impound lot retrieving their vehicles. The key findings relate to the age, race, income level and time in the city as a resident. These

findings are critical to any further study committee which may review the towing issue in the future.

The survey was completed on the following dates with the respective results that are tabulated in Annex B: 24, 27, and 31 January. 3, 9, and 10 February. After these six events, enough data was collected so the last three (number 9, 10 and 11) were not surveyed. Note the 3rd and 6<sup>th</sup> events were not surveyed due to a schedule conflict. See Annex F for a detailed explanation. The survey was conducted at the impound lot located at Derryfield Park located on the eastern edge of Manchester. The impound lot is approximately 2 football fields in area in an open and paved parking lot that is usually used for patrons at the Derryfield Park and also used as a Park & Ride lot since it is so close to Route 93. There is a small mobile trailer which is heated and enclosed for the administration of the towing operation. It is used by the police and tow company personnel. The owners who are towed approach the trailer window and stand outside while the paperwork is completed inside the trailer.

The owners who approach the trailer to retrieve their vehicle are mystified at the process being used. As they wait outside in the severe elements (which are characterized by subfreezing temperatures, snowing and unpleasantly dangerous windy conditions) the owners prove their ownership of the vehicles and then pay \$110 cash. They received a small receipt which is their document to allow the police to let them out of the impound lot after the owner has found it and brushed it off. In several events, the vehicles were ‘snowed in’ and without a shovel, the owners had to use their hands to clear a path in front of their vehicles to remove them from the lot. In several cases I observed, the owners did not have the cash on them and needed to find an ATM to secure the money. In two other anecdotal cases, the owners explained to me they did not have any money at all and had to seek financial help from family or friends to obtain their vehicle.

The question of ‘where’ all vehicles are being towed from was answered by the log sheet produced by the MPD. See Annex G for the map. Officers on the towing detail record a general location of where all vehicles are towed from in the city. An analysis of that indicated that there was one single location where 15% to 20% of the vehicles came from and then ten locations where approximately 5% of the vehicles were towed. These locations were placed on the map and then the flashing warning strobe ‘Osborne’ (named after Alderman Osborne of Ward 5 who proposed them and unexpectedly died during the creation of this report- See Annex I) light locations added along with the locations of the impound lot and free parking garages. This map was completed hard copy in order to enable the ‘audience’ for it to better understand and interface with it. The audience is the Mayor and Board of Aldermen, MPD, DPW and media (press) to access.

This Capstone project discovered ‘who’ is being towed from ‘where’ and ‘why’ they do not know about declared Snow Emergencies. Based on this project, the following four Conclusions were created and one Recommendation put forth to the City of Manchester’s governing body:

**Conclusions (4):**

1. The administration of the towing procedures by the City of Manchester (DPW, MPD, towing companies and related entities) is executed by competent personnel with the essential mission of keeping the city streets and sidewalks clear of snow and ice. They work with procedures, policy and precedent in an efficient manner to ensure public safety. Their aim is not to tow vehicles for the sake of towing but only to make areas clear for the DPW personnel and snow clearing equipment according to their management.

2. The citizens having their vehicles towed are typically unaware of the towing policies (62%) and where/when to move their vehicles in order not to be towed. The citizens are educated as the survey shows that almost half have at least a high school degree plus additionally 38% more have some college credit. They do not want to be towed based on their reactions surveyed at the impound lot.

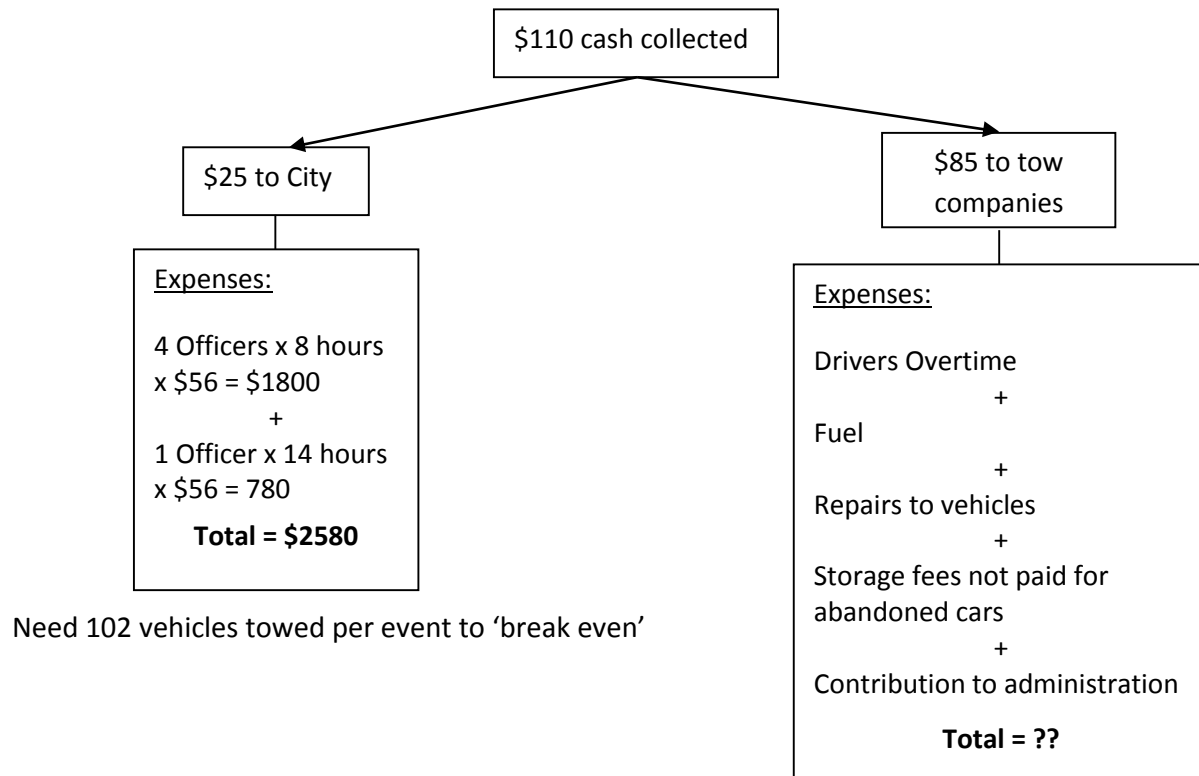
3. The intent of the city is not to overburden the public with towing and the owners don't want to be towed but for some reason the City of Manchester tows more vehicles by a historical factor of nine (9x) compared to average of other cities (Concord, Portsmouth, Keene and Nashua) in our state and more than three times (actual 3.1x) as many per capita (which equalizes for population of Manchester and the four NH cities). There is a discrepancy in the number of vehicles being towed by such a number that concern should be given to what is happening.

4. Among the survey participants, young citizens, newly arrived residents, lower income citizens and minorities were towed at a higher rate than others. Minorities were towed two and a half times (x2.5) by percentage as their representative citywide percentages (14% of the city is minority yet 36% of those towed are minorities- see Annex F, Item #3, which established that there is no targeting of minority owned vehicles). Young citizens under the age of 30 account for 57% of those towed. Those earning under \$25,000 have an economic hardship and account for 34% of those towed. Those new residents who have lived in the city less than two years account for 57% of those towed. The survey (Annex B and E) gives an analysis of the data collected during the survey at the impound lot. This voluntary survey was able to obtain data on the demographics of who was being towed and offered insight to some of the reasons why they didn't know to move their vehicles.

Recommendation:

It is suggested that the Mayor and Board of Aldermen appoint a special study committee staffed by all the stakeholders (public and private) involved and affected by the Snow Emergency towing in order to develop mitigating procedures and policies to reduce the number of vehicles towed and address the negative impact on the community.

## ANNEX A: MONEY TRAIL



Historical average of 890 vehicles towed per year:

\$97,900 cash collected:

\$22,250 to City of Manchester

\$75,650 to tow companies

ANNEX B: Copy of Survey Used with Findings as Percentage of Replies. *(See Annex J for graphs)*

**UNH MANCHESTER RESEARCH: VERBAL SURVEY OF THOSE TOWED DURING SNOW  
EMERGENCY**

By Michael Pelletier, Student in the UNH Masters of Public Administration Program

**GOAL:** to find out 'who' and 'why' people get towed during a Manchester Snow Emergency. This is a student assignment to help me become familiar with government operations.

*The Originator of this survey is solely responsible for its contents. **Your response to the survey is voluntary.** If you are asked in the survey to reveal your identity or the identity of the organization on whose behalf you are responding and do not wish to do so, please do not respond to the survey.*

**Why** did you get towed: **837 towed** in first 8 events as of 10 FEB. **Surveyed 133 or 15%** (See Annex E for an analysis of the survey). **6 of 133 refused to answer the survey.**

1. Are you aware of the city's Snow Emergency towing policy? **Yes 38%/No 62%**
2. 'Why' do you think you were towed: no idea 33, forgot 4 (not done by percentage)
3. Do you access email daily? **Y 84%/N 16%**. Cell phone/ mobile device for texts? **Y 89%/N 11%**

**Who** are you (demographics only):

1. Approximate Age: a. under 30= **57%** b. 30-45=**31%** c. 45-60=**10%** d. 60+=**2%**
2. Sex: M=**64%**/ F=**36%**
3. Ethnic Status: a. White/Caucasian **64%** b. African-American **11%** c. Latino**11%** d. Asian **7%** e. other **7%** [From the 2010 U.S. Census for Manchester, NH: 86% [White](#), 4% [African American](#), [Hispanic](#) or [Latino](#), 0.3% [Native American](#), 3.7% [Asian](#), 0.1% [Pacific Islander](#), 3% from [some other race](#), and 2.7% from two+ races] \*(see Annex F, item #3 for a discussion on this information)
3. Household Income: a. less than \$25k **34%** b. \$25-50k **54%** c. \$50-75k **9%** d. \$75k+ **3%**
4. English Proficiency level: a. none **2%** b. low **9%** c. moderate **11%** d. fluent **78%**
5. Do you live in Manchester, if so how long? a. less than 1 year **34%** b. 1-2 years **23%** c. 3-10 years **18%** d. 10 + years **25%**
6. Education level: a. some high school **13%** b. high school graduate/GED **49%** c. college **38%**
7. When towed, were you a: a. resident **80%** b. visitor **20%** c. worker **0** d. at bar/social event **0**



8. What street or area were you towed from: See map of all vehicles towed Annex G.

9. What would have helped you avoid being towed today or will help in the future?

Comments from towed owners:

1. Use sirens on police cars to alert people
2. Put up more flashing lights
3. Put paper notices on people's car at start of winter
4. Allow 'lifted' cars to be put back down if owner approaches. Happened several times.
5. Offer shuttle to garage, advertise free parking at garage
6. Have landlords inform tenants
7. Allow credit cards and checks (several issues noted with cash only)
8. Put up signs on the roads which will be towed like other cities/towns do
9. Have colleges warn students about the policy
10. More TV, radio and newspaper warnings. Didn't hear them on local radio
11. Give warnings to all cars on the road the first snow storm. Make them detailed.
12. Tell people during face to face registrations and registration mailings
13. Put out notice in city bills a notice
14. Revise the 'Drop' policy to reduce number of vehicles towed
15. Don't tow if street is not going to be plowed that day

OBSERVATIONS MP:

- A. 57% of towed are under the age of 30.
- B. The elderly (60+ age) are not impacted by towing (2%).
- C. Minorities are towed more than their representative percentage: only 14% of the city is minority but 36% towed are minorities. Maybe 'adverse impact' but NO direct targeting.
- D. Language fluency did not appear to be an issue (2-11%).
- E. 57% of the towed have lived in city less than 2 years.
- F. Household income is under \$25k for 34% of towed owners resulting in economic hardship. For family of four earning under \$50k, the same can be said = 54% possible
- G. Businesses and their patrons do not appear to be affected

## ANNEX C:

**Snow Emergency Towing NH City Comparison**

\* For a comparison of cities in Massachusetts and Maine, see Annex K.

This sheet compares the five largest cities in NH on their response to snow emergencies and keeping their roads clear for snow removal. The questions asked are:

1. How do you determine if a parking snow emergency will take place?
2. Do you ticket/tow, ticket only or tow only?
3. How do towed people pay to get their vehicles back?
4. Do you have a list of how many cars were ticketed/towed for the past 3 years?
5. What is the status of your program- improvements/issues?
6. Are vehicles prohibited from the streets all winter long?

The cities surveyed are:

- A. Manchester
- B. Nashua
- C. Portsmouth
- D. Concord
- E. Keene

Question 1: How do you determine if a parking snow emergency will take place?

- A. Manchester: Department of Public Works based upon projected snow totals
- B. Nashua: Department of Public Works based upon projected snow totals
- C. Portsmouth: PUBLIC WORKS ANTICIPATES A POSSIBLE SNOW of over 2"
- D. Concord: by the General Services Department based on snow plowing needs
- E. Keene: Does not have a traditional "snow emergency", we have a city wide winter ban in effect Nov 1 thru Apr 30, 1:00am to 6:00am

Question 2. Do you ticket/tow, ticket only or tow only?

- A. Manchester: one or the other, not both: \$110 tow, \$75 ticket
- B. Nashua: \$295 ticket which includes tow charge
- C. Portsmouth: ticket \$25 and tow is \$140
- D. Concord: \$100 ticket and \$125 tow charge
- E. Keene: \$15 ticket and if towed another estimated \$125 (determined by tow company)

## ANNEX C: (con't)

Question 3. How do owners pay to get their towed vehicles back?

- A. Manchester: Cash **only**
- B. Nashua: Cash or Credit Card
- C. Portsmouth: Cash and credit cards
- D. Concord: All forms of payment accepted
- E. Keene: Cash and Check

Question 4. Do you have a list of how many cars were ticketed/towed for the past 3 years?

- A. Manchester: Average towed 156 per event, 890 per year
- B. Nashua: Average 165 cars per year
- C. Portsmouth, total of 109 in 2013-14
- D. Concord: estimated a total of 50 per snow season\*
- E. Keene: average 33 per event, 53 per year ave. last 3

Question 5. What is the status of your program- improvements/issues?

- A. Manchester: concerned that with all commo efforts still large # cars towed
- B. Nashua: After modifications past few years at this point it seems to be effective and fair
- C. Portsmouth: they have a commo system much like Manchester
- D. Concord: We are always looking at more ways to reach citizens. Knock on doors, use sirens and even look up their phone numbers to call the vehicle owners.
- E. Keene: concept of having a snow emergency instead of a winter ban has been considered

Question 6. Are vehicles prohibited from the streets all winter long?

- A. Manchester: odd/even parking
- B. **Nashua: yes- year long overnite ban**
- C. Portsmouth: no prohibitions on overnite parking
- D. Concord: no prohibitions on overnite parking\*
- E. Keene: no parking on the streets at all 1 NOV to 30 APR 1-6am

\* Concord used to have total parking ban before December 2012

## ANNEX D:

The City of Manchester sends out email alerts to those who sign up for electronic notification of declared Snow Emergencies. The goal is to send out information to the public as soon as possible but **no later than 2pm**. The following list includes both ‘towing only’ and ‘ticketing only’ events. Also, not all of the events are listed since the author did not sign up for them until late January 2015.

The following were recorded ‘send’ time of these emails for the following dates:

Date:	Time of Email Sent:
1 March	<b>8:43</b> pm * ( <i>non-towing event but 175 tickets were given out</i> )
21 Feb	<b>3:07</b> pm *
20 Feb	<b>5:27</b> pm *
19 Feb	1:49 pm
9 Feb	1:19 pm
8 Feb	12:37 pm
5 Feb	<b>4:14</b> pm *
2 Feb	12:03 pm
26 Jan	<b>4:16</b> pm *

\* = after 2pm

This issue has been acknowledged by the DPW and immediate actions taken to correct the delay once it was discovered.

## ANNEX E: Survey Data and Methods

The survey was not random but specifically targeted to those individuals who traveled to the impound lot to retrieve their towed vehicles. While vehicles were towed into the impound lot from 11pm (it sometimes took at least an hour for the towing operations to proceed with the resulting vehicles being brought into the lot) until 6am. The survey took place starting at 6am and lasted 2-4 hours depending on the weather conditions. Due to the extreme cold, wind and snow, the surveyor could not withstand the elements for extended periods of time.

Owners were asked if they would be willing to take part in the survey. They were told that it was optional, voluntary and completely anonymous. Therefore, the results are not generalizable.

Of the 133 owners approached during six of the eight first towing snow emergencies, 127 were able to respond in a manner which enabled collection of survey data. With a total of 837 vehicles towed during these first eight events, 15% were surveyed.

The survey could have been improved if there was a structure that owners could have been approached such as a tent or better yet, a physical structure. This would have allowed for a more thorough survey. It is also possible that the towing procedure could incorporate a survey into it thus obtaining a higher percentage of responses of higher quality. The city could implement that technique if it is interested in verifying the results of this report.

## ANNEX F: Survey Statistical Analysis Special Notes

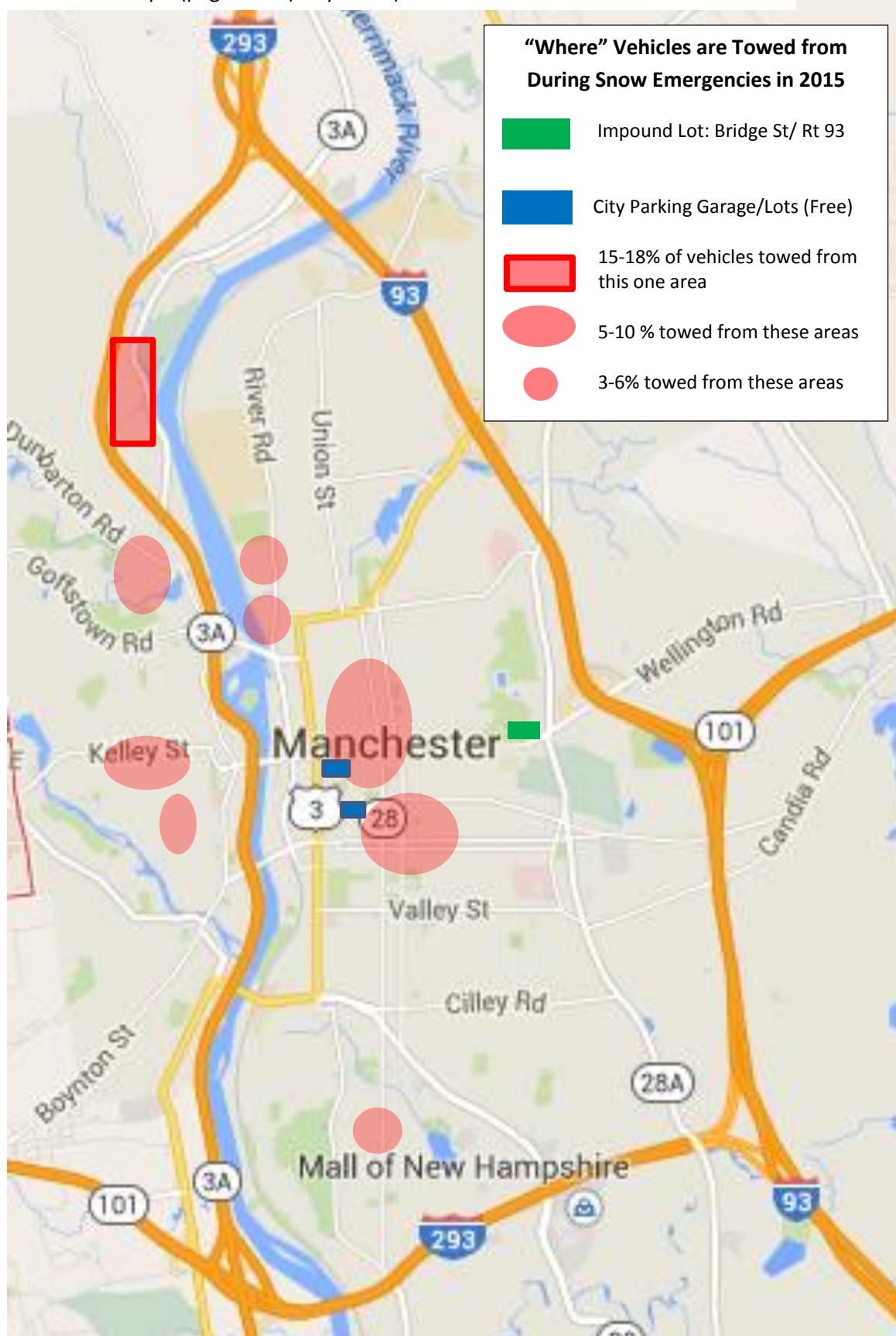
1. There were 11 towing Snow Emergency declarations in Manchester in the winter of 2015 from 24 Jan 2015 to 21 Feb 2015. The survey only covered the first 8 events due to scheduling difficulties of the surveyor. Of those first 8 events, the 28 Jan 2015 and 6 Feb 2015 were not surveyed. This created a population of 837 towed vehicles from which the survey statistical calculations were made with surveying of 127 owners.

2. With regards to the Race/Ethnic Status question in the survey, if one takes out the ‘visitor’ category from the reference since they do not live in the city, approximately 34% of those surveyed were minorities. The report uses the total of minorities towed since it is possible that the ‘visitors’ were visiting for an extended period of time with other city resident minorities.\* The overall survey was not able to investigate that topic deeply enough and a more thorough analysis is needed on the topic of how minorities are impacted by Snow Emergency towing.

\* Basis for this is the Analysis:Race and Americans’ Social Networks, accessed 24 March 2015, 2013 American Values Survey. <http://publicreligion.org/research/2014/08/analysis-social-network/>

3. **Minority/Race/Ethnicity**: At no time did the report find any specific targeting of vehicles owned by minorities. The vehicles are towed due to their location on the streets and not due to the race or ethnicity of the owners. At the time of the towing event, no one knows who owns the vehicles let alone the race of the owner.

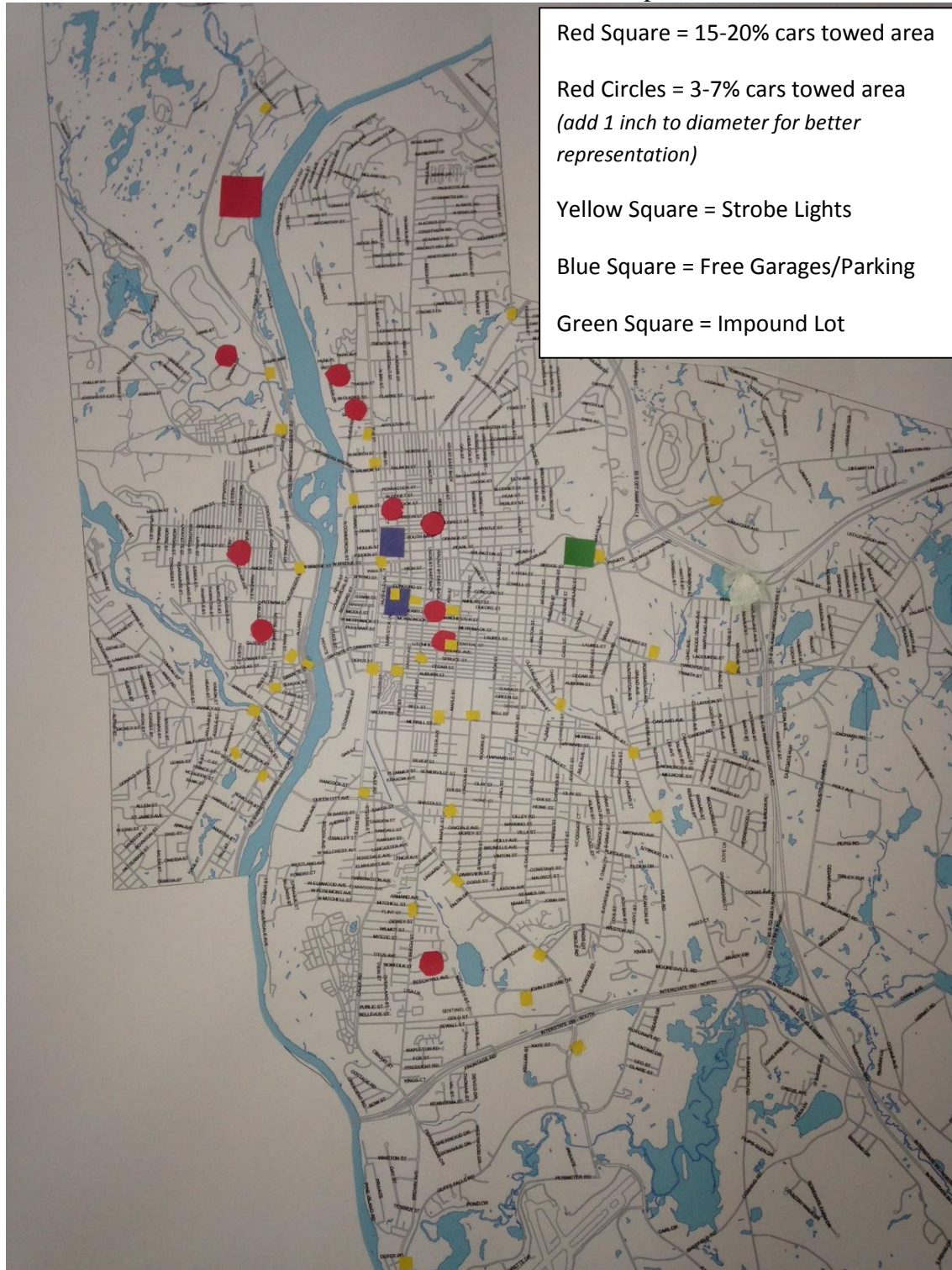
## ANNEX G: Maps (page 1 of 2) City View (based on data of all 1000+ vehicles)





## ANNEX G: Map (page 2 of 2) (based on data of all 1000+ vehicles towed)

The map used here is a hard copy attached to a poster board. It was not created electronically in order to enable more interaction with the intended audience for presentations.





## ANNEX H: Statistical Reporting on the Survey Data

The survey data was analyzed using statistical methods in order to find the p-value associated with chi-squared test. Chi-square is a statistical test used to compare observed data with data we would expect to obtain according to a specific hypothesis. The detailed analysis calculations are available upon request.

1. Education and Awareness:  $p = 0.3611$ . Not very likely a relationship
2. Age and Awareness:  $p = 0.8837$ . No significant relationship
3. Race and Awareness:  $p = 0.4718$ . Not very likely a relationship
4. Income and Awareness:  $p = 0.8996$ . No significant relationship
5. Race and Income:  $p = 0.6234$ . No significant relationship
6. Race and Age:  $p = 0.2899$ . Not very likely a relationship
7. Race and Years Resident:  $p = 0.3139$ . Not very likely a relationship
8. Income and Age:  $p = 0.0118$ . **Yes, there is a strong relationship.** Younger (under 30 years old) earn less money than older surveyed people.
9. Income and Years Resident:  $p = 0.6742$ . No significant relationship
10. Age and Years Resident;  $p = 0.0053$ . **Yes, there is a strong relationship.** Younger (under 30 years old) have lived in the city much less than other surveyed people who are older.

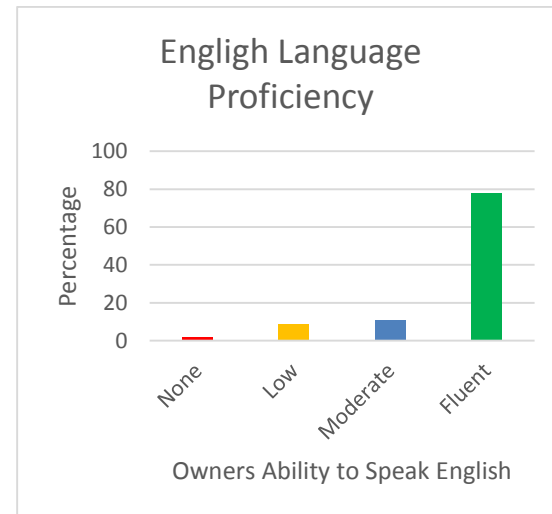
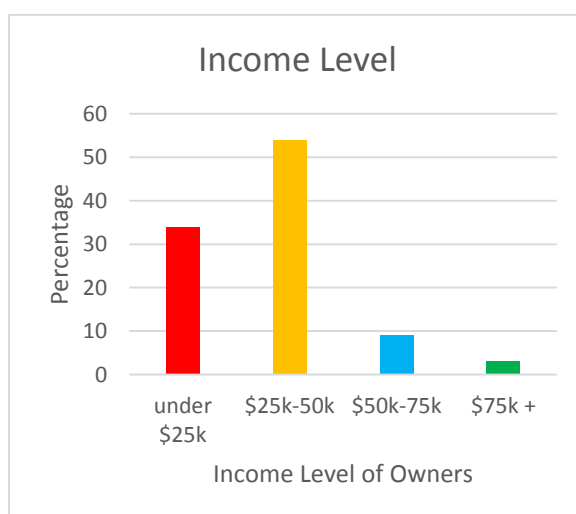
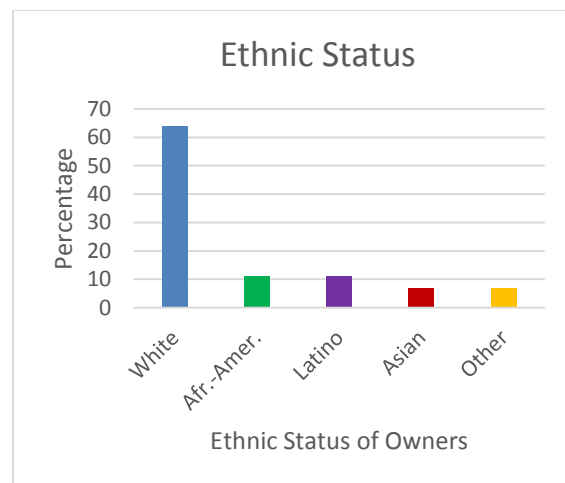
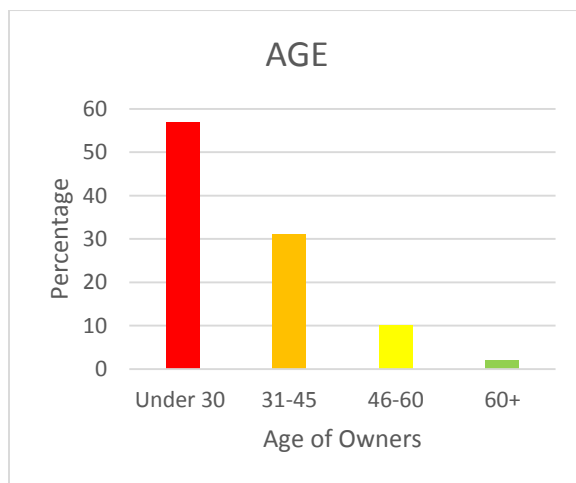
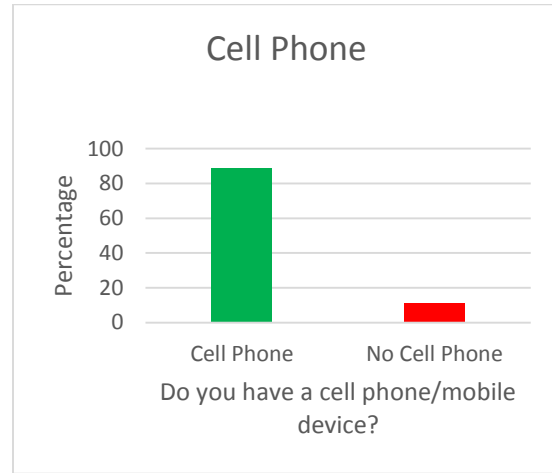
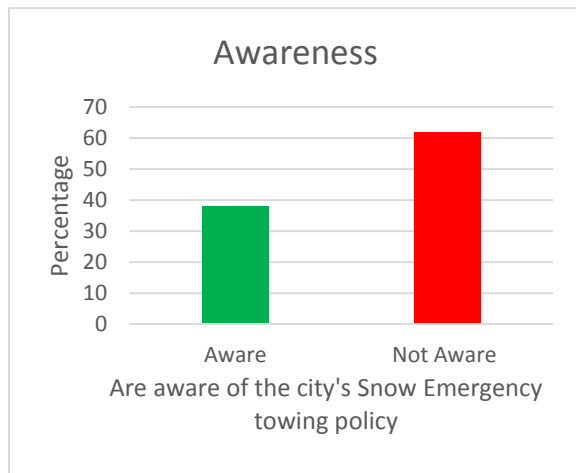
This statistical data shows that both tests which indicated a relationship between the variables evaluated involved people under the age of 30 years old. Therefore, one can state that people under 30 years old were affected more by the towing during a Snow Emergency when compared to income levels and number of years a resident than other groups of people.

## ANNEX I: Emergency Strobe Lights

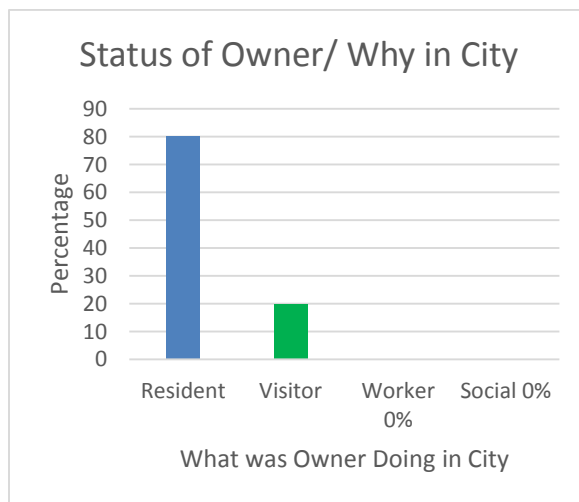
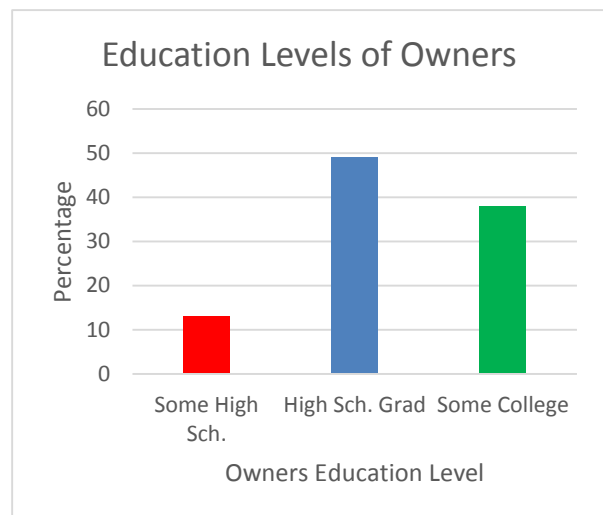
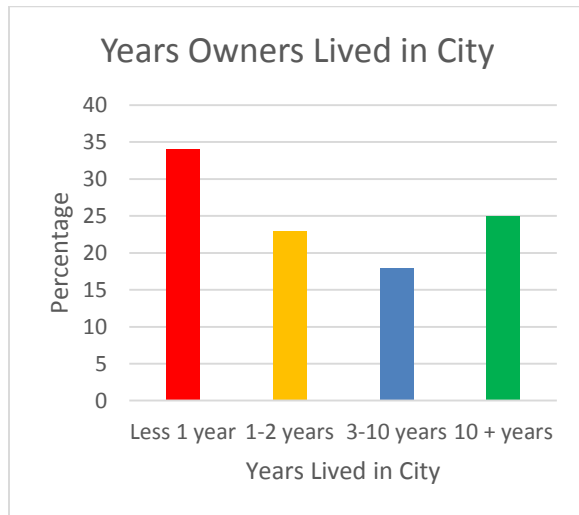
Named ‘Osborne’ Lights after former Manchester Ward 5 Alderman Osborne who proposed these lights several years ago and unfortunately died during the project completion.



## ANNEX J: Graphs of Survey Data from 127 Owners Interviewed detailed in Annex B (1 of 2)



ANNEX J: Continued (2 of 2)



## Annex K: Comparison to Cities Outside of New Hampshire

While this study centered on comparison only to other NH cities, here is a comparison to some other New England cities of similar characteristics as Manchester.

<u>City</u>	<u>Winter 2015 Towing #</u>	<u>Towed Per Capita</u>	<u>Population Density</u>	<u>Population</u>	<u>Manchester's</u>	
					<u>Times X Volume more</u>	<u>Times X Per Capita more</u>
Springfield, MA	406	0.26	4768	153,700	2.6	3.7
Lowell, MA	514	0.47	7842	108,800	2.1	2.1
Worcester, MA	1568	0.86	4835	182,000	0.68	1.1
Portland, ME	519	0.78	3106	66,318	2.1	1.3
Lynn, MA	783	0.85	8414	91590	1.4	1.1
Manchester, NH	1065	0.98	3073	109,000		

### Population Density Towing Rate

By taking the population density of a city and dividing the number of vehicles towed into it, a number is generated between 1 and 50 in our sampling. The lower the number, the more vehicles are towed per the population density.

City	Winter 2015 Towing #	Population Density	Density Tow #	0-4	5-9	10-14	15-19	20-25	25+
Springfield, MA	406	4768	12						
Lowell, MA	514	7842	15						
Worcester, MA	1568	4835	3						
Portland, ME	519	3106	6						
Lynn, MA	783	8414	11						
Manchester, NH	1065	3073	3						
Nashua	71	2770	39						
Portsmouth	157	902	6						
Concord	89	384	4						
Keene	59	331	6						

Red = towed high number of vehicles per population density  
 Yellow = towed moderate number of vehicles per population density  
 Green = towed low number of vehicles per population density

### ANNES M: MPA Courses Affecting Capstone Study

The Capstone relied and used many of the lessons learned from the courses taken at the UNH MPA Program. Here is an outline of the how some of those courses influenced the project. The impetus for researching this specific topic of towing during a Snow Emergency in Manchester was actually inspired while listening to my fellow MPA students in the winters of 2012 to 2014. Some students would talk about this subject during the snowy winters in Manchester. The key is that it was the people (students and professors) in the program that encouraged me to continue with this Capstone study and provided feedback. I had several students and professors review my preliminary information and offered great feedback.

In Foundations and Theories of Public Administration we learned that governments need to be fair and transparent while following a specific set of structural arrangements. I searched for the policies, regulations, procedures and precedent used by the City of Manchester in conducting their towing operations to ensure that was occurring.

When viewing how the city used private tow companies to conduct the operation, Third Party Governance instruction taught me what to look for. And, I was guided by that class in how to approach talking to the towing companies (offering that their responses would be anonymous and not attributed to them individually) would give me the information I needed.

In working with my sponsors and city employees (the subject matter experts), I used the Art of Negotiations in order to discuss through the initial project ideas and then find ways of obtaining access to the information I needed. Further on into the project as the results were developed, I implemented some of the techniques found in Conflict Management to help avoid and diffuse problems.

Introduction to Statistical Analysis gave me the knowledge that there was a way to evaluate my survey data and better define what type of survey I actually conducted. It was this analysis that helped show relationships between different aspects of the people who were surveyed.

**Footnotes**

1. Winter Operations. City of Manchester.

<http://www.manchesternh.gov/Departments/Highway/Winter-Operations>. Accessed 13 March 2015.

2. Data supplied by City of Manchester, DPW. 1 November 2014.

3. Department of Public Works. City of Manchester.

<http://www.manchesternh.gov/Departments/Public-Works>. Accessed 13 March 2015.

4. City of Manchester Police Department 2014-2016 Towing Agreement

5. Ibid.

6. Zip Atlas Database. Accessed 7 April 2015. <http://zipatlas.com/us/nh/city-comparison/population-density.htm>

**Figures**

Figure 1: Historical Number of Vehicles Towed in Manchester

Figure 2: Flowchart of Manchester DPW Decision Making Process for Declaration of Snow Emergency

Figure 3: Three Year Historical Towing Data State Cities

Figure 4: Winter 2015 Analysis