

*Function:*  
Public Works

*Department:*  
Public Works

*Activity:*  
**Snow and Ice Control**

#### **GENERAL INFORMATION**

This activity accounts for the cost of snow and ice removal from the streets of Muscatine as well as the spreading of salt and sand. The City has designated certain streets as snow emergency routes for priority snow removal prior to cleaning residential streets with low density traffic. In addition, the City has specific salt and sand routes for secondary consideration. The City continues to utilize the salt dome which was a joint City/County project. The City also has a separate salt facility that was completed in 2005.

#### **CURRENT TRENDS AND ISSUES**

The 2012/2013 revised estimate is under the original budget by \$16,900 primarily due to actual salt costs being \$20,000 less than budgeted.

The 2013/2014 budget is \$9,500 (2.6%) more than the 2012/2013 budget primarily due to a \$9,000 increase in capital outlay purchases. The budget again includes funding for one barge load of salt instead of the two barge loads budgeted most years. With the mild 2011/2012 winter and relatively mild beginning of the 2012/2013 winter, one barge load is expected to be sufficient to replenish the City's inventory for 2013/2014.

The budget for 2000/2001 first included funding for an outside contractor to provide snow removal services in the downtown area. The actual cost of this service during the unusually snowy winter of 2000/2001 was \$41,503. A history of the contracted downtown snow removal costs and the number of snow events each year is as follows:

|           | <u>Cost</u> | <u>Snow Events</u> |
|-----------|-------------|--------------------|
| 2000/2001 | \$41,503    | 24                 |
| 2001/2002 | 17,250      | 10                 |
| 2002/2003 | 10,560      | 12                 |
| 2003/2004 | 27,976      | 13                 |
| 2004/2005 | 9,200       | 9                  |
| 2005/2006 | 14,038      | 9                  |
| 2006/2007 | 17,615      | 9                  |
| 2007/2008 | 55,805      | 23                 |
| 2008/2009 | 60,225      | 25                 |
| 2009/2010 | 37,870      | 21                 |
| 2010/2011 | 64,670      | 15                 |
| 2011/2012 | 12,120      | 12                 |

The 2012/2013 revised estimate and 2013/2014 budget each include \$40,000 for contracted snow removal in the downtown area.

### **GOAL STATEMENT**

To provide a safe street system during the winter months through efficient and effective snow and ice removal and control procedures.

### **PERFORMANCE MEASURES**

|                   | <b>Actual<br/>2009/2010</b> | <b>Actual<br/>2010/2011</b> | <b>Actual<br/>2011/2012</b> | <b>Estimated<br/>2012/2013</b> | <b>Estimated<br/>2013/2014</b> |
|-------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------|--------------------------------|
| Number of Storms  | 21                          | 15                          | 12                          | 15                             | 15                             |
| Tons of Salt Used | 1,581                       | 1,100                       | 963.5                       | 1,100                          | 1,100                          |
| Tons of Sand Used | 630                         | 450                         | 100                         | 450                            | 450                            |
| Tons of Cinders   | N/A                         | N/A                         | 31.5                        | 450                            | 450                            |

### **RECENT ACCOMPLISHMENTS**

Winter started late in 2011-2012 with the first storm on December 6, 2011. One inch of snow fell and temperatures were around 29 degrees. A salt run at 7:00 a.m. took care of this storm. There were only two storms during that December with a total of 2.5 inches of snow. January 12, 2012 was the largest storm of the winter with five inches of snow. January had five storms with a total of 9 inches of snow and one storm with freezing drizzle. Two storms in February totaled 4.5 inches and March only had 2 storms totaling 2.5 inches of snow. There were a total of 12 storms and 18.5 inches of snow. City crews used a total of 963.5 tons of salt, 31.5 tons of cinders, and 100 tons of sand.

### **OBJECTIVES TO BE ACCOMPLISHED IN 2013/2014**

- \* To continue evaluating the snow routes using GIS technology.
- \* To continue updating salt boxes to stainless steel in order to reduce maintenance costs.
- \* To evaluate impacts of the new Snow Emergency Ordinance.
- \* To improve the department's documentation of crew operations during each snow occurrence.

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|                            | Actual<br>2010/2011 | Actual<br>2011/2012 | Budget<br>2012/2013 | Revised<br>Estimate<br>2012/2013 | Budget<br>2013/2014 | Percent<br>Change |
|----------------------------|---------------------|---------------------|---------------------|----------------------------------|---------------------|-------------------|
| <b>Expenditure Summary</b> |                     |                     |                     |                                  |                     |                   |
| Personal Services          | \$ 84,834           | \$ 31,634           | \$ 84,600           | \$ 84,600                        | \$ 85,100           | 0.59%             |
| Commodities                | 222,113             | 196,728             | 142,100             | 122,500                          | 142,100             | 0.00%             |
| Contractual Services       | 155,333             | 57,127              | 108,400             | 111,100                          | 108,400             | 0.00%             |
| Capital Outlay             | 7,599               | 40,313              | 37,000              | 37,000                           | 46,000              | 24.32%            |
| Transfers                  | —                   | —                   | —                   | —                                | —                   | —                 |
| Total Expenditures         | <u>\$ 469,879</u>   | <u>\$ 325,802</u>   | <u>\$ 372,100</u>   | <u>\$ 355,200</u>                | <u>\$ 381,600</u>   | 2.55%             |
| <b>Funding Sources</b>     |                     |                     |                     |                                  |                     |                   |
| Road Use Taxes             | \$ 359,515          | \$ 223,464          | \$ 272,100          | \$ 321,100                       | \$ 321,600          | 18.19%            |
| Reimbursement of Expenses  | <u>110,364</u>      | <u>102,338</u>      | <u>100,000</u>      | <u>34,100</u>                    | <u>60,000</u>       | -40.00%           |
| Total Funding Sources      | <u>\$ 469,879</u>   | <u>\$ 325,802</u>   | <u>\$ 372,100</u>   | <u>\$ 355,200</u>                | <u>\$ 381,600</u>   | 2.55%             |

|                             | <b>Personnel Schedule</b> |                     |                     |                                  |                     |                               |
|-----------------------------|---------------------------|---------------------|---------------------|----------------------------------|---------------------|-------------------------------|
|                             | Actual<br>2010/2011       | Actual<br>2011/2012 | Budget<br>2012/2013 | Revised<br>Estimate<br>2012/2013 | Budget<br>2013/2014 | Budget<br>Amount<br>2013/2014 |
| <b>Full Time Positions:</b> |                           |                     |                     |                                  |                     |                               |
| Equipment Operator III      | N/A                       | N/A                 | N/A                 | N/A                              | N/A                 | N/A                           |
| Equipment Operator II       | N/A                       | N/A                 | N/A                 | N/A                              | N/A                 | N/A                           |
| Equipment Operator I        | <u>N/A</u>                | <u>N/A</u>          | <u>N/A</u>          | <u>N/A</u>                       | <u>N/A</u>          | <u>N/A</u>                    |
| Total                       | N/A                       | N/A                 | N/A                 | N/A                              | N/A                 | \$ 45,000                     |
| Employee Benefits           |                           |                     |                     |                                  |                     | 40,100                        |
| Total Personal Services     |                           |                     |                     |                                  |                     | <u>\$ 85,100</u>              |

|                 | <b>Capital Outlay</b> |                 |                    |                  |
|-----------------|-----------------------|-----------------|--------------------|------------------|
| <b>Item</b>     |                       | <b>Quantity</b> | <b>Replacement</b> | <b>Amount</b>    |
| 10' Salt Boxes  |                       | 1               | Yes                | \$ 20,000        |
| 2-Way Snow Plow |                       | 1               | Yes                | 14,000           |
| 4-Way Snow Plow |                       | 1               | Yes                | 12,000           |
|                 |                       |                 |                    | <u>\$ 46,000</u> |