

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.

CURRENT TRENDS AND ISSUES

The 2003/2004 revised estimate is over the budgeted amount by \$4,400. This is due to increased costs for unloading this year's salt purchase.

The 2004/2005 budget is \$45,900 (24.4%) more than the 2003/2004 budget due to the increased capital outlay allocation for the salt shed cover.

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. In 2001/2002 the amount was \$17,250 and in 2002/2003 \$10,560. The allocations for contracted snow removal in the downtown area have been budgeted at \$10,000 in both the 2003/2004 revised estimate and 2004/2005 budget.

GOAL STATEMENT

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

PERFORMANCE MEASURES

| | Actual 2000/2001 | Actual 2001/2002 | Actual 2002/2003 | Estimated 2003/2004 | Estimated 2004/2005 |
|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------|--------------------------------|
| Number of Storms | 24 | 10 | 12 | 18 | 20 |
| Tons of Salt Used | 1,888 | 978 | 970 | 1,200 | 1,600 |
| Tons of Sand/Cinders Used | 221 | 0 | 0 | 0 | 0 |
| Tons of Sand Used | 570 | 0 | 500 | 200 | 200 |
| Tons of Salt/Sand Combination Used | 1,131 | 216 | 523 | 400 | 300 |

RECENT ACCOMPLISHMENTS

The 2002/2003 winter was mild by Iowa standards. The first snow event started November 24, 2002 with a two-inch snowfall. There were 12 snow events during the winter. The first major storm occurred February 14, 2003 (Valentine's Day) with a five-inch snowfall with winds from the northeast at 15 to 30 miles per hour. Crews worked all night on emergency routes then all the next day on secondary streets, finishing up the third day on alleys. This division tried something new this year, GeoMelt, a product from GPC. This product was used with liquid calcium chloride for a pre-wet on salt at the spinner. When the temperature was below 26 degrees, the liquid was too thick to spray through the nozzles. The crew then shifted their focus to treating the salt with the recommended amount of GeoMelt with good results. The amount of salt used was reduced from 230 pounds per two-lane mile to 200 pounds per two-lane mile and it is expected that it can be reduced more when the right mixture for a pre-wet is determined. The winter storms ended April 6, 2003 with a two-inch snowfall with strong winds that kept the crew busy all night. During the 12 snow events 970 tons of salt was used, 500 tons of sand and 4,500 gallons of GeoMelt. Between snow events, city crews kept busy cutting brush and sandblasting equipment.

OBJECTIVES TO BE ACCOMPLISHED IN 2004/2005

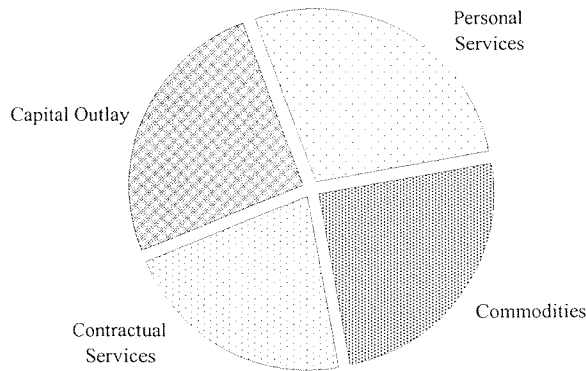
- * To re-address a de-icer program using salt brine from the Iowa Department of Transportation garage in Muscatine.
- * To experiment with carbon snowplow blades to try and reduce the number of blades used during the snowfall season.
- * To work with GPC on the use of their GeoMelt product as a pre-wet with liquid calcium chloride. This should help reduce the amount of rock salt used on city streets and the corrosion of equipment.
- * To build a cover for salt storage in the lower lot.

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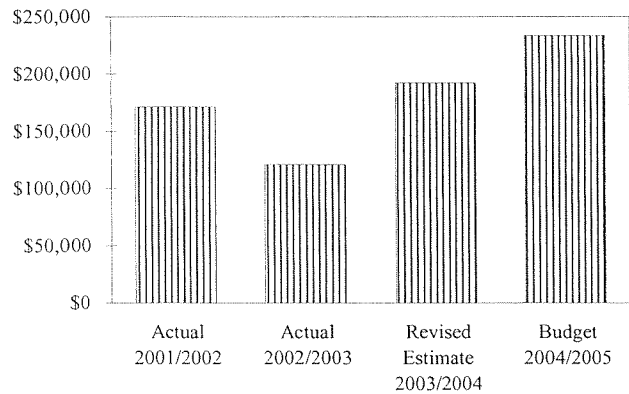
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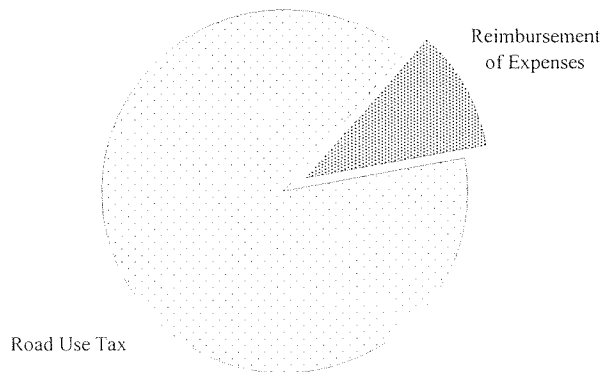
| | Actual 2001/2002 | Actual 2002/2003 | Budget 2003/2004 | Revised Estimate 2003/2004 | Budget 2004/2005 | Percent Change |
|------------------------------|---------------------|---------------------|---------------------|----------------------------------|---------------------|-------------------|
| Expenditure Summary | | | | | | |
| Personal Services | \$ 24,964 | \$ 34,920 | \$ 64,800 | \$ 64,500 | \$ 64,600 | -0.31% |
| Commodities | 82,071 | 41,652 | 58,500 | 58,500 | 58,500 | 0.00% |
| Contractual Services | 53,336 | 41,553 | 50,000 | 52,500 | 50,600 | 1.20% |
| Capital Outlay | 10,879 | 2,860 | 14,500 | 16,700 | 60,000 | 313.79% |
| Transfers | - | - | - | - | - | |
| Total Expenditures | \$ 171,250 | \$ 120,985 | \$ 187,800 | \$ 192,200 | \$ 233,700 | 24.44% |
| Funding Sources | | | | | | |
| Road Use Taxes | \$ 142,062 | \$ 102,488 | \$ 162,800 | \$ 167,200 | \$ 208,700 | 28.19% |
| Reimbursement of Expenses | 29,188 | 18,497 | 25,000 | 25,000 | 25,000 | 0.00% |
| Total Funding Sources | \$ 171,250 | \$ 120,985 | \$ 187,800 | \$ 192,200 | \$ 233,700 | 24.44% |



**Budget 2004/2005
Expenditures by Type**



Actual and Projected Expenditures



**Budget 2004/2005
Funding Sources**

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| Personnel Schedule | | | | | | |
|---------------------------|-----------------------------|-----------------------------|-----------------------------|---|-----------------------------|--|
| | Actual 2001/2002 | Actual 2002/2003 | Budget 2003/2004 | Revised Estimate 2003/2004 | Budget 2004/2005 | Budget Amount 2004/2005 |
| Full Time: | | | | | | |
| Equipment Operator III | N/A | N/A | N/A | N/A | N/A | |
| Equipment Operator II | N/A | N/A | N/A | N/A | N/A | |
| Equipment Operator I | N/A | N/A | N/A | N/A | N/A | |
| Total | N/A | N/A | N/A | N/A | N/A | \$ 30,000 |
| Employee Benefits | | | | | | 34,600 |
| Total Personal Services | | | | | | <u>\$ 64,600</u> |

| Capital Outlay | | | |
|-----------------------|-----------------|--------------------|------------------|
| Item | Quantity | Replacement | Amount |
| Salt Shed Cover | 1 | No | <u>\$ 60,000</u> |