

Case Study

Snowplow Management Proves Return On Investment

Saginaw, Michigan



BENEFITS

- The county road network is cleared in a third the time as prior to CompassCom, with two fewer senior managers overseeing the work
- Since instituting CompassCom, the department has come in consistently under budget and has not had to lay off any employees
- Leveraged the city's existing investment in Esri ArcGIS mapping
- Improved materials-usage efficiency through both driver training and designating amounts based on studying when and where it is deposited for the most effect
- Proves accountability for the entire department, increasing public support and goodwill

Saginaw, Michigan, located about 90 miles north of Detroit in the Great Lakes Bay region, consistently ranks as one of the top 100 snowiest communities in the United States. The Roads Commission, which maintains roadways for the city and county, fields around 50 vehicles, including snowplows, tractors and graders, for snow removal in the winter months. The city roads department uses CompassCom AVL as an integral piece in the management of snow removal, and has seen consistent improvement in the program every year since implementation in 2007.

Immediate Benefit: Management Salary Savings

Like most counties municipalities in the country, Saginaw was facing shrinking budgets and rising personnel costs when the roads commission began looking at Automatic Vehicle Location (AVL) in 2006. Prior to implementation of the program, the county was divided into six districts. A senior manager oversaw the roads of each district, including snow removal. Two of those managers were about to retire, and the roads department concluded that they needed to consolidate the districts into four from six, and save the cost of replacing those senior managers. But they still needed to ensure the roads were being taken care of.

“We are absolutely seeing Return on Investment for this program, financially and otherwise,” said Brian J. Wendling, Managing Director of the Saginaw County Road Commission.

The commission determined that AVL was the answer and brought CompassCom on in a pilot program beginning in 2007. They realized immediate ROI in the cost savings of the salaries of two senior managers, and also discovered other savings that they hadn't even anticipated at the beginning.

Ongoing Return On Investment

“We are modifying the routes and working more efficiently all the time,” said Brian J. Wendling, Managing Director of the Saginaw County Road Commission. “We are now able to gather the salt-spreader data right on the fly, and this has been really helpful. We know exactly what our spreaders are doing, and we can compare the new to the old style of spreaders. This helps us better use the equipment that we have, and get it to the right place at the right time.”

Every year, the Road Commission gets ready for snow season through a process that shows improvement each year, using data from the past year. They consider their budget for chemicals, salt and liquids; their vehicles and the equipment installed on them – including the AVL hardware – and analyze the routes used in the previous year and how those routes should be altered based on this year's staff and assets. “Each year,

FEATURE HIGHLIGHTS

- **Reporting**
 - Mileage and speed reports to improve driver performance and efficiency of vehicles
 - Salt-Spreader information available immediately for better materials management during snowstorms and smarter budgeting through the season
- **Replays**
 - Immediate response to complaints by seeing exactly where every vehicle was, and when; hours ago or anytime in the past
 - Verify when every route was plowed and what materials were distributed, where
- **Public Portal**
 - Citizens can locate maintenance vehicles and snowplows through the County Road Commission website

PUBLIC PORTAL

When major snow storms or other events that require maintenance vehicles occur, the citizens only care about one thing - When will the vehicle get to my block? Using CompassTrac, the City of Saginaw made this easy. Citizens access the Road Commission's web site (<http://www.scrs-mi.org/AVLLN.php>) and check the status of the snowplow or maintenance vehicle. The map automatically updates every 60 seconds. Now the citizens can see the status of work crews or plow progress during snowstorms.

we've brought on more capabilities with CompassCom, and we've seen the benefits," Wendling said. CompassCom has improved the Road Commission's command and control by providing data on vehicle position, speed, heading, status, de-icing material usage, plow-up /plow-down, and much more.

The data is used for driver training as well as efficiency in vehicle management, Wendling said. For instance, the department realized that it needed to specifically tell drivers to not start depositing de-icer until they were on their assigned routes, when they discovered that all the trucks would spread de-icer from the moment they left the garage, thus wasting a lot of material by being redundant until they had reached their individual routes. "It seems like a common-sense thing, but it added up to a lot of money for materials that we save now, and we would never have thought of it without this program," Wendling said. "Now we curb over-application and only put down what we need to."

Another area they discovered driver training was crucial was in verifying that drivers not only knew their routes but that they were reminded to turn off their spreaders at the right time.

The real-time monitoring of drivers has led to a safer fleet, too. "We know at a glance that a truck is out there, it's moving, it's operating. If that stops, we can find out why, right away. That's an important benefit."

A happy extra for ROI was that liability and damage claims are down. "We get calls on damage to property, fences, residential complaints, folks claiming vehicles are going too fast when plowing - with CompassCom, we can verify speeds, answer resident questions, and we have the ability to reasonably dispute claims that a snowplow has ever been down a certain road. I can run a replay to show down to the second when the snowplow went down a certain road."

AVL Proves Its Worth

"We are absolutely seeing ROI, immediately and ongoing," said Wendling. "The most obvious is that our four foreman directly responsible for snow removal are hooked into CompassCom all the time via wireless modem. In the middle of a snow event, they know exactly how much has been done, what's left for the remainder of the day, and what we need to pick up. They each have a larger geographical area than foremen had in the past, but they manage it all better, using computers and real-time tracking."

"When we first put the system into place, we received some criticism, and some scoffing that we were not using our budget in the smartest way. That is long gone. In fact, we are expanding the program every year, into more departments. Everyone wants it, now."

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