



Ministry of Municipal Affairs & Housing



Association of Municipalities of Ontario

ONTARIO CENTRE FOR MUNICIPAL BEST PRACTICES

393 University Ave., Suite 1701, Toronto, Ontario M5G 1E6

BEST PRACTICE SUMMARY REPORT

RO - WC – 04 - 01

Roads – Winter Control – Winter patrol responsibilities integrated with other activities

Practice Identification: Roads Winter Control – Winter patrol responsibilities
integrated with other activities

Case Study Municipality: City of North Bay

Key Word: Operational Procedures

Municipal Benefits

- **Improved response time to slippery conditions**
- **Reduced winter costs by avoiding spreader overtime call-out costs and separate winter patrol costs, since the patrol function is conducted by the scheduled 24/7 spreader unit**
- **Improved response times as a result of trained transit drivers reporting problem road conditions**

1. Description of Practice

The City of North Bay is a single-tier municipality located on the north shore of Lake Nipissing, home to 53,654 people (in 2001). North Bay delivers winter control services across a mixed road system (primary/secondary/local) of 737 lane-kilometres; only 31 lane-kilometres are unpaved. During a winter event, clearing the primary roads and bus routes is top priority and these roads are plowed to a bare pavement standard. Secondary and local roads are maintained to a snow-packed condition. Deployment of city-owned equipment includes 5 sanders and up to 10 combination units. Initial system-

wide plowing/sanding/salting passes are completed in 10 to 12 hours. North Bay's unit costs for winter control were among the lowest of similar municipalities.

North Bay experiences severe winter conditions, receiving more than 315 cm of snowfall in 2001. This climate, together with the pressure to meet the transportation needs of the city, give rise to certain opportunities. One sander unit operates on a continuous basis (24/7) for the entire winter season. This sander travels the entire road system, operating on 3 regular-time shifts. The operators assigned to this sander perform the winter patrol function. They are trained to observe the road and roadside conditions, to use their judgment to address road conditions requiring sanding, and to communicate with their supervisor all other conditions that may require immediate attention. The operators are equipped with cellular phones and one of two winter patrol supervisors is available at all times, either on duty or on call after-hours. If called by the sander operator, the supervisor then assumes responsibility for orders to mobilize additional manpower and equipment.

North Bay also promotes inter-functional cooperation by encouraging their public transit drivers to communicate roadway or roadside concerns. The transit drivers are requested to call dispatch to report icy conditions, snow drifts, snow bank sightline issues and any other conditions that may be hazardous to motorists and pedestrians. The transit drivers approach this opportunity with resolve, providing helpful information about road conditions that enable Public Works to respond in a more timely fashion.

2. Evaluation of the Practice

Efficiency:

In North Bay, the climate is severe enough that operating a sander 24/7 is a cost-effective practice. This practice enables North Bay to be constantly aware of and responsive to the road conditions throughout the winter. It provides the opportunity for the sander operators, who are already traveling the road system, to perform the winter patrol function and reduce duplication of effort. Operators who work the 3 shifts of the roving sander are trained in the type of observations they need to make as they travel their routes. If the City were providing winter patrol in addition to the sander operators, the additional cost would be two winter patrol personnel per winter season, approximately \$50,000 per year. This would be an additional 4% cost beyond North Bay's actual 2001 winter control expenditures.

Effectiveness:

By empowering the transit drivers to report weather-related road conditions, North Bay has effectively enhanced their responsiveness to winter conditions by taking advantage of other service-providers travelling the road system. Feedback from these users of the road system helps both the transit system and the Public Works Department to meet the needs of the public, thereby increasing their effectiveness as service providers.

Statutory Compliance:

Winter patrol is a critical winter control function. It provides the assurance that the road system is observed on a continual basis during the winter season, so that any potentially hazardous conditions encountered can be addressed. It also carries with it the responsibility to ensure that minimum maintenance standards are met, providing a

defence in the event of a roadway accident. Winter patrollers are trained to perform this function and to document their observations. North Bay also protects itself from liability by having the supervisor on-call, available to visit the area of concern if necessary and to make judgment calls as appropriate.

3. Replication of the Practice

This practice is particularly relevant for jurisdictions with heavy snowfall and/or a high number of winter responses. It is practical for North Bay to use their sander operators to observe the roadways because the 24/7 deployment of a sander is justified throughout the winter season. This practice may not be cost-effective for municipalities with different weather conditions; other municipalities would need to evaluate their weather circumstances on a case-by-case basis to determine the merit of this practice.

Other municipalities may, however, have different opportunities to improve responsiveness and effectiveness by utilizing municipal personnel, instead of a single-function road patroller, in a similar fashion to North Bay.

Many municipalities have public transit systems operating on their road systems, and could encourage transit drivers to call dispatch if they encounter roadway issues that warrant investigation by the roads staff. In doing so, the roads management should meet with transit drivers as a group to explain the expectations, so that dispatch is not overwhelmed with unnecessary calls.

4. Contact

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Note: See RO – WC – 04 – Methodology Report, for a description of the practice identification methodology, using 2001 MPMP data.