

Government of the Northwest Territories

The Implementation of 9-1-1 in the Northwest Territories
January 2015 Report Addendum

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1. Background

In January 2015, the Government of the Northwest Territories (GNWT) released a report identifying options for implementation of 9-1-1 in the Northwest Territories (NWT)¹. The report confirms the NWT is well positioned to move forward with Basic 9-1-1, which is the most cost effective and timely option available for implementation. An arrangement with an existing NWT emergency service (dispatch) provider is the most viable option at this time, should the current fiscal environment allow for this approach.

Municipal and Community Affairs (MACA) presented the report to the Standing Committee on Economic Development and Infrastructure (SCEDI) on May 27, 2015, and committed to working with the City of Yellowknife to validate costs and planning assumptions. The scope of the January 2015 report excluded detailed analysis involving existing NWT emergency service providers, pending review of available options and consensus concerning future direction.

Subsequently, four dispatch centre options were examined, including the City of Yellowknife Fire Division, the Town of Inuvik Fire Department, the Town of Hay River Fire Department, and a cell service provider - Ice Wireless. Inuvik and Hay River confirmed they are not ready to operate a 9-1-1 dispatch centre for the NWT, although future consideration may be given to regional service delivery. NWT Ice Wireless was deemed non-viable due to several concerns including out of country and/or territory emergency answering operators and expensive interconnectivity charges.

2. Methodology

In spring 2015, Pomax Consulting Inc., MACA and the City of Yellowknife commenced a detailed analysis involving the establishment of a 9-1-1 dispatch facility at the Yellowknife Fire Division. Initially, the idea was to pursue a conceptual fee-for-service arrangement; however, it became apparent that a cost-recovery scheme would be most suitable. The analysis involved identification and validation of all key cost items that would form the basis of an arrangement. Key staff from the Yellowknife Fire Division and City administration informed the analysis, and the results were reviewed and validated by Pomax in consultation with MACA and City officials. Although figures remain subject to further scrutiny should implementation progress, consensus was reached concerning the overall appropriateness of the analysis.

¹ <http://www.maca.gov.nt.ca/wp-content/uploads/2015/05/9-1-1-Implementation-Report.pdf>

3. Findings

Staffing and Training

In 2015, the City of Yellowknife opened a new dispatch centre to receive municipal first response calls. The centre is staffed with five employees involving one dispatcher per shift and a supervisor during week days. This staffing approach does not meet industry standards² for a 9-1-1 dispatch centre, which requires 12 employees (at a minimum) involving two dispatchers per shift (excluding supervisor).

Based on industry standards and anticipated call volumes, the revised estimate includes 6.6 additional positions and an expanded dispatch centre. Working with the City of Yellowknife, the GNWT would closely monitor work flow and call volumes during implementation to ensure maximum utilization of resources. Should circumstances permit; consideration will be given to resource sharing with the City, which will present opportunities for future program cost reductions.

Dispatch Centre

The existing dispatch centre commissioned in 2015 has sufficient room for two established dispatch positions (one dispatch and one supervisor). Further analysis identifies additional space in the fire hall that can be renovated into a 600 sq. ft. dispatch area to accommodate three positions (2 dispatchers + 1 supervisor during the day, 2 dispatchers in the evening). The proposed renovation is sufficient for a self-contained three position dispatch with provision for washroom and kitchen facilities so the staff can remain in the secure dispatch area at all times.

Furniture and Equipment

Extra costs were identified for an additional dispatch workstation, another Computer Aided Dispatch (CAD) computer and license, and additional updates to the recording equipment.

Project Coordination and Program Management

The January 2015 report did not adequately consider ongoing program management requirements necessary to ensure 9-1-1 meets the needs of residents on a continuing basis. In all other jurisdictions in Canada, dedicated resources are identified for activities involving service provider agreements; policy development; standards and guidelines; reporting; public communications; and working with partners to develop the system. The January 2015 report included project coordination for only set-up and initial launch and presumed existing resources would serve to manage ongoing activity. Although the complexity of a territorial 9-1-1 system should be far less than most jurisdictions, there remains considerable need for dedicated program support to help ensure efficiency and operational effectiveness, particularly early on.

² [NENA Call Answering Standard / Model Recommendation](#)

4. Comparative Summary

The following provides a comparative summary and explanation of revised cost estimates between the January 2015 report and follow-up work with the City of Yellowknife. This information has been compiled by Pomax Consulting (January 2015 Report) in cooperation with the City of Yellowknife and MACA.

Set-up: 9-1-1 Dispatch Centre, Training, Communications, Project Coordination (Approx. 9 months³)			
Description	January 2015 Estimate	Revised Cost Estimate	Explanation
Minor Capital Upgrade and Equipment	\$100,000	\$365,000	Renovations for Yellowknife Fire Division (\$270K), furniture, and computer equipment. Revised estimate reflects larger facility and equipment for additional operators ⁴ .
Staff Training and Systems Testing	\$95,667 ⁵	\$41,100	Revised estimate reflects lower training cost (\$30,984) and recruitment costs for new staff (\$10,113).
Temporary Staff Supervisor	\$50,000	\$0.00	Not required – duties to be fulfilled by existing staff.
Project Management and Preparatory Communications	\$132,500	\$210,000	Additional three months project coordination (\$37.5K) required prior to set-up plus contract subject matter expertise (\$40K).
Total	\$378,167	\$ 616,100	

³ Legislation and community dial plans to be developed within existing resources prior to commencement of setup.

⁴ Further analysis of work flow and industry standards confirms a need for 6.6 additional operators.

⁵ Original estimate included four months of training and systems testing prior to implementation. Training and systems testing to be delivered in-house by the City of Yellowknife.

Post- Implementation			
Description	January 2015 Estimate	Revised Cost Estimate	Explanation
Fee-For-Service Arrangement	\$287,000	\$0.00	Original estimate was a fee for service based on number of 9-1-1 calls. Revised approach is cost recovery.
Cost Recovery Arrangement	\$87,200 ⁶	\$671,800	Cost recovery includes 6.6 additional persons (\$642,244) and estimated O & M costs (\$29,520).
Public Communications and Program Management	\$147,500	\$197,500	Next Generation 9-1-1 development budget removed (\$100k) – to be revisited later. Ongoing GNWT program management added (\$150K).
Total	\$521,700	\$869,300	

Cost Summary			
Description	January 2015 Estimate	Revised Estimate	Explanation
Set-Up Expenses	\$378,167	\$616,100	One-time cost.
Operating Expenses	\$521,700	\$869,300	Ongoing.
Legislated User Fee	(\$450,000)	(\$603,100)	Adjusted monthly user fee to \$0.90.
Annual Budget Requirement	\$71,700	\$266,200	

⁶ Original estimate included replacement staff recruitment (\$7,200), quality assurance (\$30,000) and program management (\$50,000). Recruitment costs now included in revised estimate; quality assurance and program management function handled internally with existing dispatch supervisor.

Cost Recovery

As indicated in the January 2015 report, costs may be covered through a cost recovery levy. The January 2015 report identifies a cost recovery fee totaling \$450,000 as shown in the following table:

Preliminary annual Northwest Territories cost recovery fee

Fee	Amount	Subscribers	Monthly	Annual
Landline	\$0.67	23,245	\$15,574	\$186,890
Wireless	\$0.67	32,594	\$21,838	\$262,056
Total Cost Recovery Fee (Rounded)				\$450,000

Based on the projected 55,839 phones, an increase of the fee from \$0.67 to \$0.90 per line per month will recover a large portion of the operating costs after implementation. Estimates show, however, full cost recovery would require a monthly fee of approximately \$1.15, which is noticeably higher than the rest of Canada⁷. Such is likely attributable to the low volume of phone subscribers in the north. In the Yukon, fees are absorbed through the territories' policing contract with the RCMP who provides dispatch services in the Whitehorse area for the time being. Elsewhere; however, the RCMP normally provide 9-1-1 service on a 100 percent cost recovery basis as incremental service fee on any dispatch service that is provided. The RCMP has indicated they are unable to act as the 9-1-1 dispatcher in the NWT.

Table 1 – Revised cost recovery fee

Fee	Amount	Subscribers	Monthly	Annual
Landline	\$0.90	23,245	\$20,920	\$251,046
Wireless	\$0.90	32,594	\$29,334	\$352,015
Total Cost Recovery Fee (Rounded)				\$603,100

Increasing the cost recovery fee would mean the annual recoverable amount would total approximately \$603,000 to help off-set costs to administer the system. Combined with an estimated NWTel tariff (\$0.47 for landlines, \$0.27 for Cellular), the minimum monthly phone bill 9-1-1 fee would be \$1.37 per landline (home and business subscribers), and \$1.17 per wireless subscriber. The tariffed amounts will include a \$0.07 cent charge on each bill for Northwestel to collect these fees through their billing system.

⁷ Newfoundland and Labrador fee - \$.75, Prince Edward Island fee - \$. 70, and Saskatchewan fee - \$.62

These cost recovery calculations are specific to a Basic 9-1-1 service with a Fee for Service Public Safety Answering Point contract arrangement. They do not include any one-time or ongoing funding from communities or the GNWT that may be required to support the 9-1-1 provision model or facility options determined to be in the best interest of the NWT.

5. Conclusion

Upon further analysis, the City of Yellowknife remains a viable option as a dispatch centre location for a territorial basic 9-1-1 system, although costs are higher than anticipated for staffing, dispatch centre renovations, equipment, and project coordination and ongoing program management. This brings into question the viability of creating a territorial stand-alone dispatch facility, which was identified in the January 2015 report, but not examined in detail due to the costs associated with building a new facility or renovating an existing facility to required standards. The Yellowknife option also presents cost savings via economies of scale when combining 9-1-1 with an existing first responder operation (e.g. supervision, existing “hardened”⁸ facility, existing communications infrastructure, etc.).

As in most jurisdictions across Canada, the true test of the public’s appetite for 9-1-1 is the passage of legislation establishing a call answer levy, which as this analysis shows, would serve to recover a large portion of the expenses to operate a system in the NWT. It is possible that there would be initial concern raised by the public about a call answer levy and these concerns typically are based around paying the fee on multiple devices or phone lines. However, this is the reality in jurisdictions that have implemented a call answer levy and a user pay scenario is the most common across Canada.

Should the GNWT wish to proceed with basic 9-1-1, the logical first steps should involve a discussion concerning proposed legislation and a suitable start-up and operating appropriation. This would then be followed by establishment of an appropriate governance model and key activities identified in the January 2015 report.

⁸ Able to withstand a variety of adverse conditions and remain operational.