



REPORT N° PRO2020-008

Date	20/05/2020
Submitted by	Brian Wilson
Subject	Fire Department Radio System
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1) **NATURE/GOAL :**

To obtain Council approval to pay for replacement of aged system components in the Fire Department's radio system to ensure the effectiveness of the system used for the health and safety of Clarence-Rockland Firefighters.

2) **DIRECTIVE/PREVIOUS POLICY :**

During the regular meeting of June 18, 2018, the Mayor announced that Clarence-Rockland would be entering into a Fire Radios Service Contract with the United Counties of Prescott & Russell.

3) **DEPARTMENT'S RECOMMENDATION :**

THAT Council authorize the Fire Chief to spend money from the capital budget radio project, not to exceed the approved budget of \$200,000, to replace worn or aged system components to ensure adequate reliability in the fire department radio system.

QUE le conseil autorise le chef des pompiers à dépenser de l'argent provenant du projet de radio du budget capital, sans dépasser le budget approuvé de 200 000 \$ pour ce projet, afin de remplacer les composants usés ou désuets du système afin d'assurer une fiabilité adéquate du système radio du service d'incendie.

4) **BACKGROUND :**

The Clarence-Rockland Fire Department currently holds Industry Canada licenses for several radio frequencies for use by the Fire Department. With these, the Department has a radio repeater installed at the Bouvier Water Tower, along with two "voter" sites which work to relay radio messages from either Rockland or Bourget to the main repeater.

This system has been in use by the Fire Department for many years, and in 2016 it was recognized that components of the radio system were becoming so aged that servicing, technical support, and parts were becoming difficult to obtain, and in the 2017 capital budget \$200,000 was approved by Council to replace the radio equipment to ensure a reliable, effective radio system was in place for use by the Clarence-Rockland Fire Department.

In 2017, the United Counties of Prescott & Russell began a county-wide radio project, as virtually every fire department in the county was experiencing radio issues, partially due to aging equipment, and partially leftover from amalgamation of departments in the late 1990s and early 2000s.

The Fire Chief participated in a joint committee starting in 2017 to discuss a potential county-wide radio system for the various fire departments, and then due to some concerns with shared frequencies and potential for issues arising from a shared system, the City stepped away from the UCPR radio network project to instead work on a stand-alone radio network to best meet the needs of our department and community.

In 2017-18, UCPR engaged a "radio engineer" to assist UCPR in developing specifications for a replacement radio system to meet the needs of the various fire departments. In 2018-19, an RFP went out, and was subsequently awarded to Turris Communications, which was shortly thereafter acquired by Bearcom.

In 2019, the CAO of UCPR approached the Mayor of Clarence-Rockland to again ask C-R to come on-board with the UCPR radio project, along with all of the other UCPR lower-tier municipalities. As part of this arrangement, UCPR agreed to sell the Paramedic Base on Landry to the City.

In December 2019 the Clarence-Rockland Fire Department became the first department in UCPR to go live on the new UCPR radio system. Since we went live, the department has been experiencing significant problems with the radio system, such as:

- Firefighters transmitting on a radio, but the message not coming through to any receiving radios
- Firefighters in an assigned group, one or two receive a radio message but not all radios receive the message
- Being unable to key the radio to transmit and receiving an error beep (aka "bonk") indicating the system is unavailable
- Unintelligible audio (digitized voices)
- Hard to understand audio quality (described as sounding like a tin can)

UCPR and Bearcom have been advised, and have been making minor adjustments to try and resolve these issues to no avail. Since January/February 2020, the remaining departments in UCPR came onboard the new radio network, and have also begun experiencing similar problems.

5) **DISCUSSION :**

On Wednesday, May 13, 2020, Bearcom updated the firmware on the radio network under the guidance and support of the equipment manufacturer in an effort to improve the radio issues noted above. During this work, the Clarence-Rockland Fire Department migrated our

radios back to our old repeater system to ensure we had uninterrupted radio coverage for our members.

Upon completion of the upgrades, Bearcom notified the Department that work had been completed and the system tested and was working. The Department undertook a small-scale testing of the radios and radio network on the apron in front of the Rockland Fire Station. The same issues noted above were present, and seemed to be even more prevalent than previously experienced.

As a result, Chief Wilson made the decision to keep all CRFD radios on the old repeater system to ensure a functional system is in place, as radio communications with firefighters in a dangerous environment is critical for the life-safety of our members.

Given the aging equipment in use for our old radio system, it is imperative that improvements be made to the repeater site, and both 'voter' sites, in order to ensure a functional, robust, and easily maintained radio network exists and can be relied upon by our firefighters. Currently the Department is still able to make use of the new end-user radios (portables and mobile radios) provided through the UCPR contract, however the network components need to be updated to ensure this reliability.

In the event that the UCPR network issues are eventually resolved, it is the Department's intention to maintain the 'old' radio network as a backup system, and to use for training, and emergency management purposes. Given this prolonged usefulness, it is recommended that the necessary improvements to the radio system be undertaken as soon as feasible, to meet these needs and the immediate reliability required until the UCPR network can be resolved.

6) **CONSULTATION:**

The Director of Protective Services has been in regular contact and consultation with the CAO of UCPR, along with the County Fire Chiefs throughout this process and continues to be in contact with them.

7) **RECOMMENDATIONS OR COMMENTS FROM COMMITTEE/ OTHER DEPARTMENTS :**

None.

8) **FINANCIAL IMPACT (expenses/material/etc.):**

The money previously approved by Council for the radio project has been maintained as a WIP, exactly for this reason in the eventuality that the UCPR network would not meet our needs. As such, the funding is already in place and therefore there is no anticipated financial impact. The total budget of \$200,000 was approved in 2017.

9) **LEGAL IMPLICATIONS :**

None.

10) **RISK MANAGEMENT :**

None.

11) **STRATEGIC IMPLICATIONS :**
None.

12) **SUPPORTING DOCUMENTS:**
None.