To: Chair and Members  
Community Services Committee

From: Jim Kay  
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Date: April 18, 2006

Re: Trunked Radio System Infrastructure (HES06001/PSB 04-104(a)) (City Wide)

Council Direction:  
Not applicable with respect to Report HES06001/PSB 04-104(a).

Information:  

The Corporate Trunked Radio System (CTRS) is used by the Hamilton Police Service (HPS), Hamilton Emergency Services-Fire (HES-Fire), the Public Works Department, Transit Division and the Planning and Economic Development Department, Standards & Licensing Section within the City. The system has been designed around the specific requirements of emergency responders for coverage throughout the 1,200 sq km of the city. Equally as important, it must provide coverage inside buildings above and below grade. The system must have multiple redundancy and reliability in order to ensure continuous and uninterrupted service. Our current system, although aging, appears to be stable and continues to meet all of these requirements. Purchased in 1994 it is anticipated that the system should remain fully operational for the next five (5) years, as a result of staff acquiring spare parts and caching them in-house to ensure availability of critical components 24-7.

The system, by design, has a great depth of redundancy; most equipment problems are not visible to the end user and are corrected without any loss of service to the end user. The annual operating costs are steadily declining due to the declining leasing payments.
During the 2004 budget process, Council was informed that issues around the current CTRS were being raised, specifically regarding the life span and replacement strategy. Staff has worked to clarify the actual status of the system and its life expectancy. Over the last several months, the main corporate stakeholders have met several times with the City Manager to review the issues relating to the current system and to develop a replacement strategy process. The current lease obligations extend to 2013 and replacement of the radio system is estimated to cost $20 - 25 million. Currently there are no reserved funds designated for this project.

During this review, it became apparent that the City needed to establish a focused approach through a steering committee comprised of all the appropriate stakeholders. The Radio Communications Steering Committee has been struck and will be co-chaired by General Manager/Chief Jim Kay and Chief of Police Brian Mullan (see Appendix A to Report HES06001/PSB 04-104(a)).

This Steering Committee has subsequently created a Radio Replacement Working Group, which will report directly to the Radio Communications Steering Committee and will be responsible for a complete analysis of the radio system. HES-Fire Assistant Deputy Chief, Phil Thorburn, will head this Working Group, which will be comprised of an internal technical specialist and users. The internal technical specialist, Bill Bouwhuis, System Administrator, Trunking Radio, will lead the technical component of this analysis. Mr. Bouwhuis is the current Radio System Administrator and was instrumental in the development of Hamilton’s current system. It is anticipated that the completion of the Trunked Radio System review and a final recommendation will take approximately 18 months.

This year Mr. Bouwhuis will commence a thorough in-house review of the entire radio system, specifically:

a) Conduct a gap analysis of all the end user requirements.
b) Develop a draft capital budget.
c) Develop various options available to the City and identify possible strategies for the replacement of the current system.
d) Develop an action plan to cover the transition for all the end users between 2007 and 2011.

The replacement of the radio system is a complex and time consuming process, which will span a number of years, as the process must be seamless and ensure uninterrupted service levels of the various end users.

At the same time, it has been identified by the Steering Committee that multiple departments need to replace existing radio technology such as: automatic vehicle location systems, global positioning systems and data/voice collection requirements; all with substantial capital and operating requirements. Due to the convergence of these various related issues, the City needs to conduct an in-depth review of its current and future technology needs and, in turn, investigate all opportunities for synergies in both cost and performance.
The Province of Ontario has piloted local ambulance dispatch in Niagara Region and Ottawa. Staff believes the possibility of transferring ambulance communications to local service providers may exist. In light of this possibility, staff would prepare by investigating a fit for this new service delivery at about the same time as it is finalizing the strategy for the replacement of the CTRS.

One potential solution is to merge all of Hamilton’s communications needs into one joint and unified centre. The centre would be the communications centre for the City’s Fire, Police, Ambulance, Public Works, Transit, Animal Control and the Standards & Licensing Section. Combined 911 communications centres of this nature have been developed at several locations in the United States and in Canada. It is believed such a centre could create a seamless operation that takes advantage of economies of scale, and would allow inter-department operability in times of crisis.

Council may also recall that a similar recommendation was put forward during the pre-amalgamation process supporting the concept back in 2000. Action on that recommendation did not take place, due to the complexity of merging City centres and the fact that the Province’s Central Ambulance Communications Centre (CACC) was deemed to remain a separate entity.

As a result, a second working group has been struck to review the 2000 Implementation Committee Report and to conduct a business case analysis of that initiative. HPS Deputy Chief, Tom Marlor, is leading this Joint Dispatch Centre Working Group, which includes all corporate stakeholders.

Jim Kay
General Manager / Chief
Hamilton Emergency Services

Brian Mullan
Chief of Police
Hamilton Police Service
COMMUNITY SERVICES COMMITTEE

RADIO COMMUNICATIONS STEERING COMMITTEE

Chief Jim Kay, HES – Chief Brian Mullan, HPS
City Manager
GM, Finance & Corporate Services Department
GM, Public Works Department

RADIO REPLACEMENT WORKING GROUP
Assistant Deputy Chief, Phil Thorburn, HES
- Police Service
- EMS
- Public Works Department
- Finance & Corporate Services Department
- Transit Division
- I.T.S. Division

JOINT DISPATCH CENTRE WORKING GROUP
Deputy Chief, Tom Marlor, HPS
- Police Service
- Hamilton Fire Services
- EMS
- Public Works Department
- Transit Division
- I.T.S. Division
- Finance & Corporate Services Department