
Subject: Next Generation 911 (NG 911) Update

Report to: Corporate Services Committee

Report date: Wednesday, January 13, 2021

Recommendations

1. That the following report pertaining to the implementation of Next Generation 911 (NG911) in Niagara **BE RECEIVED** for information;
2. That staff **BE DIRECTED** to continue the planning for the implementation of NG911 in coordination with partner agencies, Boards and Councils; and
3. That staff **BE DIRECTED** to develop a recommended model of a consolidated emergency dispatch service for Niagara.

Key Facts

- The Niagara Region is responsible for the provision of 911 services for all local area municipalities (LAM)
- This service is provided under a Service Performance Agreement with the Niagara Regional Police Services to act as the Primary Public Safety Answering Point (PPSAP)
- 911 technology is governed federally by the Canadian Radio-television and Telecommunications Commission (CRTC)
- 911 infrastructure in Ontario is provided by Bell Canada
- New technology known as Next Generation 911 (NG911) is being implemented nationally through the CRTC
- All provinces, municipalities and their PSAP providers are required to meet the NG911 standards no later than March 31, 2024 at which time the legacy systems will be disconnected
- Emergency services dispatch (police, fire, EMS) for Niagara involves five different agencies
- Successful coordination between the five agencies and LAM's will result in the most efficient implementation of NG911 in Niagara
- Staff will bring forward an additional report once decisions on governance and coordination of efforts are made, which will outline the recommendations, implementation plan and financial implications for all stakeholders.

Financial Considerations

The initial stage of the project will include engaging a Technological Infrastructure consultant to assist in developing and recommending the appropriate equipment required to meet NG911 standards for both the active and backup systems. The cost of the consulting engagement is estimated at \$100,000 and is anticipated to be funded from the NRPS – Communications Back Up Centre capital project (20001462) which was included in the NRPS 2021 capital budget.

The preliminary estimated cost for the overall transition to NG911, including; consulting, capital equipment and maintenance fees is \$2M.

After the recommendations from the consultant are considered and a decision is made on governance, staff will be in a better place to understand total financial implications and will bring forward a report to Council in consultation with the Police Services Board, at that time. The report will include financial implications for the Region, NRPS and LAM's in relation to procurement of the required capital equipment, further consultant fees, project management and other resources as identified and required for successful NG911 implementation within 2023.

The Niagara Region will be responsible for the administration of the new system in collaboration with the Niagara Regional Police Services as the contracted service provider.

Analysis

911 services originated in Canada in 1974 as a means for the public to access emergency services, traditionally through the responding agencies of police, ambulance and fire. Municipalities are required to ensure that access to 911 services are available to their communities and as such the Niagara Region is responsible for the provision of 911 services for all local area municipalities in Niagara. While the service may be provided through various models of direct, private or contracted services, 911 in Niagara is provided under a Service Performance Agreement with the NRPS to act as the Primary Public Safety Answering Point (PPSAP). As the PPSAP, the NRPS are the first point of contact for people calling 911. The first question that is asked to people calling 911 is if their emergency is for police, fire or ambulance. Based on the initial information provided, the caller is then transferred to a Secondary PSAP (SPSAP) as the most appropriate agency required for the response (Fig.1).

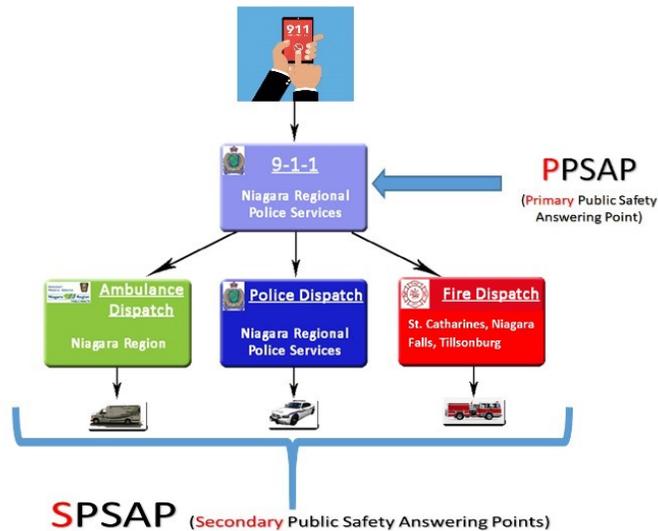


Figure 1 illustrates the flow of a 911 call from the Primary PSAP to Secondary PSAP's.

In Canada, 911 technology is governed by the Canadian Radio-television and Telecommunications Commission (CRTC) and in Ontario the 911 infrastructure is provided provincially by Bell Canada. Current 911 technology is voice analogue-based with minimal data and limits the amount and type of information shared across the 911 infrastructure. New technology known as Next Generation 911 (NG911) is being implemented nationally through the CRTC. The introduction of NG911 technology will greatly improve 911 services in a growingly wireless mobile society as it is based on an Emergency Services IP Network (ESInet) operating on an Internet Protocol (IP) platform to serve as a national IP-enabled emergency network. This platform enhances emergency number services to create a faster, more resilient system that allows voice, photos, videos and text messages to flow seamlessly from the public to, and across, the 911 network.

The CRTC has mandated that all provinces, municipalities and their PPSAP providers are required to meet the NG911 standards no later than **March 31, 2024** at which time the legacy systems will be disconnected. In Niagara, this will require significant technological changes to local emergency dispatch services.

Currently in Niagara, five separate emergency service dispatch centres exist. These include:

Niagara Regional Police Services

While the NRPS provides contracted services as the PPSAP for Niagara, its' primary responsibility is for the deployment and dispatch of 911 responses of police related matters in all of Niagara, including providing notifications to the Niagara Parks Police and Ontario Provincial Police.

St. Catharines Fire Services

SCFS is responsible for the deployment and dispatch of 911 responses of fire related matters for the City of St. Catharines as well as nine other Niagara municipalities under contracted services for fire dispatch. The two LAM fire services that are not dispatched by SCFS are Fort Erie and Niagara Falls.

Tillsonburg Fire Service

While not an emergency service dispatch that is located in Niagara, Tillsonburg Fire Services is responsible for the deployment and dispatch of 911 responses of fire related matters solely for the Town of Fort Erie.

Niagara Falls Fire Service

NFFS is responsible for the deployment and dispatching of 911 responses of fire matters solely for the City of Niagara Falls.

Niagara Emergency Medical Services

NEMS is responsible for the deployment and dispatching of 911 responses of EMS matters in all of Niagara. This service is provided within a Performance Agreement between the Niagara Region and the Province of Ontario and is administered through budgets and infrastructure provided by the Province.

NG911 Planning

The transition from the current 911 analogue system to the new ESInet NG911 system requires significant effort with mandatory deadlines. An NG911 Steering Committee made up of agency representatives and stakeholders has been meeting for the past 18 months to best understand and prepare to advance this work. Planning for this project include two primary areas of focus; technological infrastructure and dispatch consolidation.

Technological Infrastructure

The roadmap to implement NG911 across Niagara is complex. Considerations must be made for the platform (NG911 interface) that is to be used, information security, interoperability, GIS compliance and operating procedures. To inform the Steering

Committee in decision making and the formation of recommendations for necessary approvals, an industry consultant is being procured to assist the working group. A Request For Proposal (2020-RFP-207) has been issued by the Region's Procurement team to select the appropriate company to provide this service. The cost associated with the work of the consultant is anticipated to be funded from the Communications Back Up Centre Capital project (20001462) upon approval of the 2021 Capital Budget.

Dispatch Consolidation

One of the more multifaceted and time sensitive aspects of the transition to NG911 relates to the current fragmented model for dispatch services in Niagara. As previously highlighted, four separate dispatch centres operate in the region and one additional dispatch service is provided from an agency outside the Niagara region. Each of the four local dispatch centres require a back-up centre to relocate to should the primary site be compromised. Consideration must now be given if this is the appropriate time to transition the current dispatch facility model into a consolidated model.

In 2011, the Niagara Region undertook a comprehensive review of the region's emergency dispatch services for consideration of a consolidated model. The consultant firm IBI was contracted to perform this study and CSD 7-2014 provided a summary of their report. Specifically, IBI recommended that:

- An operationally integrated "Public Safety Communications" model is the one that IBI Group favours.(p81)
- It may take a number of years to transition to this model.(p82)

Following the submission of the IBI report, investigation continued to gauge interest in the local area municipalities and emergency services to actively work towards consolidation. In the interim, the leadership of NRPS, NEMS, SCFS and NFFS agreed to continue working collaboratively on a cooperative model of seeking opportunities to advance dispatch services in efficiencies and effectiveness.

With the current requirement to implement a new 911 infrastructure in Niagara, the leaders of the emergency services noted above are unanimous that this is the right time to move to a consolidated model of regional emergency dispatch. For clarity, the definition of the term "consolidation" may include:

- Integration of Technology - all agencies (9-1-1 PSAP, police, fire and ideally EMS operate with shared (common) CAD and radio systems and a common IT

resource. They may also share telephone (911 Call Logger) and AVL/GPS systems but would have separate Resource Management Systems.

Currently the NRPS hosts a P25 radio system that integrates with several municipal fire services including St. Catharines, Niagara Falls, West Lincoln, Pelham and most recently Grimsby. One additional municipal fire service is to be on-boarded to the P25 system early 2021.

- Physical Co-Location - some or all agencies are housed in the same building and may even be co-located in the same communications center within the building. Back-up centres can also be shared and provide multi-use functionality such as training and emergency operations centres (EOC).

Currently NRPS Communications Centre serves as the back up for St. Catharines Fire and Niagara Falls Fire Communications Centres. NEMS back-up centre is located in Hamilton as provided by the Province. With the future closure of the current NRPS District 1 facility located at 68 Church St, the current site of the NRPS/PPSAP back-up centre, the future location for a permanent NRPS dispatch backup is a matter of current discussion between the Region and the NRPS with decisions forthcoming.

Dispatch consolidation may not include:

- Integration of Operations – while each agency may be physically co-located, each continues to operate under its own (autonomous) governance structure and mandate, with their respective staff, support resources, programs and procedures.

Meetings with the emergency service leaders involving the Region and LAM CAO's were held in 2020 to have preliminary discussions on opportunities for dispatch consolidation and the sharing of a common NG911 system rather than each service procuring its own. While the continuation of these discussions became somewhat delayed as a result of COVID-19, consensus was reached amongst all LAM CAO's to prioritize the opportunity for dispatch consolidation. Further to this, general agreement exists with both SCFS and NFFS that fire dispatch services should be combined to a single regional service.

Despite the IBI report being completed in 2012, the general assessments and recommendations hold value today. The emergency service leaders are currently reviewing this document to determine if the recommendations that were made by IBI provide the necessary information to design a consolidated dispatch model for Councils and Boards to consider. It is anticipated that an update to this review will be provided before the end of Q1 2021. One key outstanding issue however is the confirmed location of the NRPS back-up communications centre.

NRPS Back-up Communications

The original approved location of the NRPS/PPSAP back-up communications centre was to be located with the new NRPS District 1 facility currently nearing completion. Report CSD 04-2017 identified a preferred direction to develop a multi-user communication centre that would house primary or backup communications capacity for a variety of emergency-based users. The decision was made to not locate the back-up centre with the new District 1 facility but rather enter into discussions with appropriate parties to determine the best option for this type of communications centre.

One such opportunity was identified with the proposed construction of the Niagara EMS Hub. This new facility, proposed to house the EMS headquarters including the Niagara EMS dispatch centre, was identified as a feasible location to host the NRPS/PPSAP back-up centre. The co-location of dispatch services was to provide efficiencies in cost and operations and would be the start of dispatch consolidation. Unfortunately, the EMS Hub project has been deferred over several years, which now places pressures specific to timelines to implement NG911.

With the deadline of March 31, 2024, the NRPS back-up communications centre must be fully operational and NG-911 compliant no later than March 31, 2023. This requirement is to facilitate the necessary upgrades to the primary NRPS communications centre and for the training of dispatch staff to the new NG911 system.

Next Steps

1. The issuance of a contract for the Technological Infrastructure consultant will inform the NG911 Steering Committee of the recommended courses of action. A requisite of this work will be a determination of the degree of consolidation of the current dispatch services as well as the facilities plan for locating infrastructure.

2. The NG911 Steering Committee has created a working group to review the recommendations of the IBI report and bring forth to the Steering Committee a consolidation model for consideration, including preferred host locations.
3. No later than end of Q3 2021 recommendations specific to advancing a consolidated dispatch model including facilities, operations and governance will be provided to the Councils and Boards for consideration.

Alternatives Reviewed

With respect to the requirement to transition to NG911 as per the federal and provincial mandate, there are no alternatives to avoid this. Alternatives to the concepts introduced in this report do exist as to how this system may be implemented.

Status Quo

The option exists to leave the existing model of separate dispatch centres and separate technologies for each agency to procure and implement their own NG-911 solution. This is not recommended due to the costs associated with each service purchasing their own systems and the lack of integration and coordination of systems and services.

Contracted Service

As noted, the NRPS are the providers of 911 PPSAP services under contract with the Niagara Region. NG911 PPSAP services can be procured from other municipal agencies as well as private, for-profit companies. This is not recommended, as there is considerable community risk to contract this service to third party providers and would not offer economical advantages. This solution is not popular within Ontario.

Relationship to Council Strategic Priorities

The NG911 project and dispatch consolidation supports Council Strategic Priorities of fostering Healthy and Vibrant Communities through the delivery of quality, affordable and accessible emergency services. In addition, this model contributes to a Sustainable and Engaging Government with a high quality, efficient, fiscally sustainable and coordinated core delivery of emergency dispatch services that is possible only through enhanced communication, partnerships and collaborations across agencies and governments.

Other Pertinent Reports

- CSD 07-2014 Public Safety Dispatch Review
- PHD 02-2015 Emergency Services Dispatch Update
- Memorandum C8253 Supplementary to PHD 02-2015
- PHD-08 2015 Consolidated Emergency Services Dispatch
- CSD-04 2017 NRPS 1 District Project Update

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This report was prepared in consultation with the Chiefs of Niagara Regional Police Services, St.Catharines Fire Services and Niagara Falls Fire Services