North Coast Regional District
9-1-1 Feasibility Assessment

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Executive Summary

The North Coast Regional District (NCRD) is one of the last regions in British Columbia without a consistent, region-wide 9-1-1 service. As a result, many emergency calls rely on local telephone numbers, manual call transfers, and caller-supplied location information, creating avoidable delays and increasing risk to residents, visitors, and emergency responders

The single greatest public safety benefit of 9-1-1 service is the automatic delivery of caller location information, which is not consistently available within the NCRD today.

This assessment concludes that implementing a regional Next Generation 9-1-1 (NG9-1-1) service in the NCRD is feasible, practical and justified by the public safety benefits achieved. The recommended approach is to establish NG9-1-1 as an NCRD regional service delivered through a phased implementation beginning with Haida Gwaii and supported by an external NG9-1-1 Public Safety Answering Point (PSAP) service provider.

The proposed service would ultimately support 18,000+ residents across multiple municipalities, electoral areas, and Indigenous communities, in addition to seasonal visitors and tourists.

Why Change is Needed

The assessment identified several limitations in the existing emergency communications environment:

- Emergency calling methods and numbers differ significantly between communities.
- Residents and visitors are required to know different emergency numbers depending on their location and the service required.
- Emergency calls do not automatically provide caller location information to emergency call takers and dispatchers.
- Existence of emergency response boundaries, call-answering arrangements, and dispatch practices vary throughout the region.
- There is no formal regional governance structure or performance reporting framework for emergency communications.

The most significant public safety gap identified by this assessment is the limited ability to automatically provide caller location information when an emergency call is placed. In a region characterized by remote communities, islands, waterways, rugged terrain, seasonal visitors, and limited transportation access, accurate location information is critical to ensuring timely emergency response.

Stakeholder engagement also revealed that many participants were unaware that 9-1-1 service is not consistently available in the NCRD outside of Prince Rupert and Port Edward, which currently has a

Basic 9-1-1 service without location delivery. This finding highlights the extent to which existing emergency communications limitations are not widely understood and reinforces the need for modernization and public education.

Key Findings

This assessment found that:

- NG9-1-1 technology should be used to implement a consistent region-wide emergency calling service.
- NG9-1-1 service can be implemented using existing telecommunications and emergency communications infrastructure as communities become ready to implement it.
- Universal 9-1-1 dialling and automatic delivery of caller location information are the greatest public safety benefit of implementing NG9-1-1.
- Addressing & GIS mapping data, governance, and funding are the primary implementation dependencies.
- Fire dispatch could be included in regional service for certain areas.
- A standalone Public Safety Answering Point (PSAP) serving the NCRD alone is not economically viable under current funding conditions.
- Contracting service to an established NG9-1-1 service provider (PSAP) is the preferred service delivery model.
- Haida Gwaii represents the most practical and achievable first phase of implementation.

Recommended Approach

The assessment recommends that the NCRD establish NG9-1-1 as a sub-regional service and implement it through a phased approach.

Key elements of the recommended model include:

1. Establish NG9-1-1 primary call answer service as an NCRD sub-regional service.
2. Contract emergency call-answering services to an existing NG9-1-1 compliant PSAP.
3. Develop addressing and GIS data required for future NG9-1-1 call routing.
4. Harmonize fire dispatch arrangements as communities transition to the sub-regional service.
5. Implement communities in phases based on operational readiness and participation.

Importantly, this assessment does not recommend attempting a single region-wide implementation at one time. Communities throughout the NCRD vary considerably in governance arrangements,

operational capacity, addressing and GIS capability, funding, resources, and readiness to participate. A phased implementation approach provides flexibility while maintaining a long-term vision of consistent emergency access across the region.

Recommended Implementation Phases

Phase 1 – Haida Gwaii

Haida Gwaii is recommended as the first implementation phase because it combines the largest population currently lacking 9-1-1 service with existing inter-community collaboration, relatively mature GIS data, and consistent fire dispatch arrangements for four (4) of the seven (7) fire departments.

Phase 2 – Prince Rupert and Port Edward

Phase 2 would expand the regional service to include Prince Rupert and Port Edward following or as part of the transition of the current Prince Rupert Basic 9-1-1 service to NG9-1-1.

Phase 3 – Mainland Coastal Communities

Phase 3 would extend service to Indigenous communities and coastal mainland electoral areas currently relying on a variety of local emergency communications arrangements.

Phases 2 and 3 are not assumed to be sequential and could be implemented in parallel.

Costs and Funding Considerations

While implementation costs for an outsourced (contracted) region-wide NG9-1-1 service are estimated at approximately $406,000 with annual operating costs of approximately $103,000, these costs are modest relative to the public safety benefits achieved and substantially lower than the costs of establishing and operating a standalone NCRD PSAP.

Implementation costs are driven primarily by governance activities, GIS mapping and addressing improvements, service-provider contracting & onboarding, public education, operational change management and project management.

The table below summarizes the implementation and operating costs for outsourced NG9-1-1 primary call answer and basic fire dispatch service. Phase 1 is assumed to be implemented first so costs shown under Phases 2 and 3 include the areas, agencies and population in Phase 1. As the service expands, per capita implementation and operating costs significantly reduce.

Table ES-1. Summary of Costs for 3 Service Phases

	Phase 1 Haida Gwaii	Phase 2 Haida Gwaii + Prince Rupert	Phase 3 Haida Gwaii + Coastal	All NCRD
NG9-1-1 Primary Call Answer				
Initial Implementation Cost	$256,045	$316,379	$345,772	$406,106
Annual Operating Cost	$39,831	$94,889	$48,346	$103,403
Basic Fire Dispatch				
Initial Implementation Cost	$56,650	$56,650	$92,950	$92,950
Annual Operating Cost	$29,733	$29,733	$48,609	$48,609

Costs for fire dispatch for Prince Rupert and Port Edward are not included in the table above. Addressing and GIS enhancements for Prince Rupert are also not included.

Conversely, establishing and operating a dedicated NCRD PSAP would require significant capital investment and annual operating expenditures that are not justified by the region's population and call volume. For this reason, an outsourced (contracted) service model is recommended.

Potential funding sources include:

- Service taxation within participating local government areas.
- Service agreements with participating Indigenous Governments and communities.
- Existing UBCM NG9-1-1 grants and future provincial funding opportunities.
- Call answer levies and other future funding mechanisms that may emerge through provincial NG9-1-1 governance and funding initiatives.

Risks of Maintaining the Current Approach

Should the NCRD choose not to proceed with implementation of NG9-1-1, several risks will remain:

- Continued inconsistency in emergency calling practices between communities.
- Ongoing reliance on multiple emergency numbers and local calling arrangements.
- Continued absence of automatic caller location information.
- Reduced opportunities for regional coordination and interoperability.
- Limited access to evolving NG9-1-1 capabilities and future public safety technologies.
- Increasing disparity as emergency communications systems across Canada continue to modernize.

Key Decisions for the NCRD

The NCRD and its partner communities should determine:

- Whether to establish NG9-1-1 as a regional service.
- Which communities will participate in each phase.
- How implementation and operating costs will be allocated.
- Whether fire dispatch will be incorporated into the regional service.
- Which PSAP provider will deliver NG9-1-1 call-answer and fire dispatch services.

Conclusion

The assessment concludes that the question facing the NCRD and its communities is not whether region-wide NG9-1-1 service is feasible. The analysis demonstrates that it is. The key decision is whether the NCRD wishes to proceed with a phased implementation strategy that closes existing public safety gaps and aligns emergency communications with modern provincial and national standards.

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1. Introduction

1.1. 9-1-1 Call Service Feasibility Study

MX Webb Consulting has prepared this 9-1-1 Feasibility Study to assess the potential for introducing 9-1-1 emergency calling services across the North Coast Regional District (NCRD). The study is intended to support informed decision-making by providing a clear understanding of the requirements for establishing 9-1-1 services in the region, the benefits it would bring to residents and visitors, and a practical roadmap for implementation.

The primary deliverable of this work is this report, documenting the operational, technical, financial, and governance considerations associated with implementing a future 9-1-1 service. This includes an overview of how a 9-1-1 system functions, including how calls are received, how caller locations are determined, how calls are routed to the appropriate emergency service (police, fire, or ambulance), and the infrastructure and service models required to support reliable service delivery.

The study also addresses the added complexity introduced by the Canadian Radio-television and Telecommunications Commission (CRTC) mandate to transition to Next Generation 9-1-1 (NG9-1-1). Under this mandate, all telecommunications providers in Canada must support NG9-1-1 voice services, and all 9-1-1 call centres (Public Safety Answering Points, or PSAPs) must be capable of receiving NG9-1-1 traffic.

The feasibility assessment provides a framework for implementing a regional NG9-1-1 service within the NCRD that supports a practical and achievable path forward. Recognizing the geographic diversity of the region, varying levels of operational readiness, existing emergency communications arrangements, and differing governance responsibilities, this report recommends a phased implementation roadmap rather than a single region-wide deployment. The roadmap provides a practical path forward that allows participating communities to implement NG9-1-1 services in manageable stages, building on existing capabilities while supporting future expansion across the region.

Regardless of the implementation phase, the NCRD will need to address the foundational requirements necessary to support standardized NG9-1-1 service delivery. This includes enhancing addressing and GIS data, establishing appropriate governance and service agreements, and meeting other technical and operational requirements needed to achieve full NG9-1-1 compliance. By progressing through the recommended roadmap, the NCRD can make informed investment decisions, reduce implementation risk, and incrementally improve emergency communications while ultimately providing residents and visitors with consistent, resilient, and reliable access to NG9-1-1 services across the region.

1.2. Stakeholder Engagement Overview

Stakeholder engagement was a foundational component of this feasibility assessment. The study relied on the knowledge and experience of local governments, Indigenous communities, emergency service agencies and operational personnel to understand how emergency calls are currently initiated, received, transferred and responded to throughout the NCRD.

Recognizing the diversity of the region and the varied governance structures within participating communities, the consulting team adopted a collaborative engagement approach designed to gather operational perspectives from across the NCRD. Rather than relying solely on documented procedures, the engagement focused on understanding how emergency communications function in practice, identifying local challenges and validating opportunities for future improvement.

The consulting team worked with local governments and community representatives to identify and engage those individuals best positioned to describe existing emergency communications and response practices. Depending on each community's structure, this included personnel from fire departments, RCMP, BC Emergency Health Services (BCEHS), emergency management and search and rescue teams.

Although participation varied based on local governance structures, operational availability and preferred engagement processes, every effort was made to engage those with the most relevant operational knowledge while respecting each community's established protocols. This collaborative approach ensured the study's findings and recommendations reflect the operational realities and unique circumstances of communities throughout the NCRD

1.2.1. Goals of the Outreach

The outreach process was designed to gather broad and meaningful input from across the region. The goals of this engagement included:

- Capturing local knowledge of how emergency calls are initiated, routed, and managed today in each NCRD community.
- Identifying service gaps, risks, and opportunities from the perspective of every agency that responds to 9-1-1–type events (police, fire departments, ambulance, search and rescue (SAR) teams).
- Identifying technical and operational requirements for a future 9-1-1 service including addressing, GIS readiness, call-routing, and operational backup needs.
- Building collective awareness among all stakeholders so that recommendations reflect a shared understanding and have broad support within the respective communities.

1.2.2. Methodology and Approach

To meet the goals of the outreach, the consultant team conducted surveys and interviews with representatives from various stakeholders throughout the NCRD. These engagement activities enabled the team to gather reliable data, validate findings with source agencies, and build a shared

understanding of local emergency response current state and future needs. The specific tools, instruments, and engagement principles that supported this process are discussed below.

Tools & Data-Collection Methods

Several methods were used to gather accurate and consistent information from all agencies involved in emergency response across the NCRD. These tools were selected to align with the agency's role and function, ensuring relevant and reliable data collection. The tools and data collection consisted of the following:

- Role-specific surveys involving streamlined sets of questions delivered online to police, fire, ambulance and SAR personnel.
- Long-form questionnaires to capture emergency response capabilities, emergency calling and responder dispatch processes, status of addressing and GIS data, and existing GIS resources.
- Virtual and telephone-based interviews to capture responses to the long-form questionnaires.
- GIS & addressing assessments – where available, GIS datasets were obtained, followed by a preliminary assessment using provincial NG9-1-1 standards and guidance to evaluate community readiness for NG9-1-1 implementation.

The table below summarizes the outreach and data collection work undertaken and processes used.

Table 1. Stakeholder Engagement Summary

Step	Activity	Key Outputs	Timing
Pre-Work	Worked with NCRD staff to create a list of current emergency responder organizations, response areas, & contact details.	Comprehensive contact list	April 2026
Stakeholder Outreach	Notification emails to the contact list, providing links to online survey and interview request portal.	Initial introduction of work and consulting team.	April-May 2026
Short Form Survey	Response agencies complete short form survey	High level response agency information	May 2026
Interview	Meetings with key stakeholders to discuss detailed questionnaire.	Detailed response information.	May-July 2026
GIS & Addressing Assessments	For the agencies that could provide GIS data, assessed the current data to determine community readiness for transition.	Estimate of effort to create NG9-1-1 compliant GIS data.	May – July 2026

2. Overview of Emergency Calling & 9-1-1 Services

'9-1-1' is an emergency telecommunications service that ensures that calls to request emergency services are delivered to a Primary Public Safety Answering Point (PSAP) where a qualified emergency call taker can determine whether the call requires police, fire/rescue or ambulance service and transfer it to the Secondary PSAP that dispatches that emergency service.

At the Secondary PSAP level, call takers have specialized, agency and service-specific training and use a variety of computer systems to record, notify and dispatch first responders to the caller's location at the appropriate priority level.

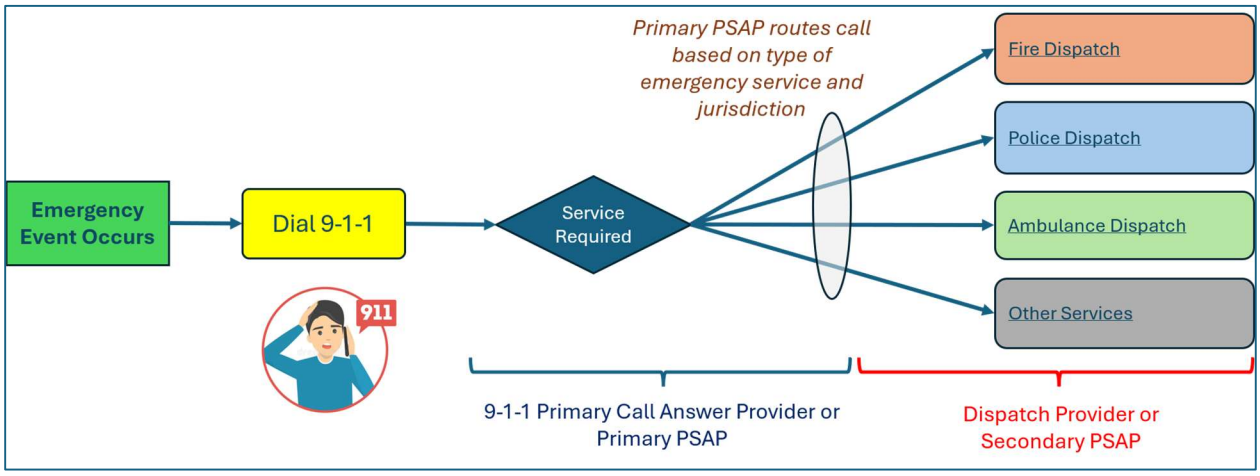


Figure 1. General 9-1-1 Call Handling Process

9-1-1 calling is a streamlined process that forms the backbone of emergency response, balancing speed, accuracy, and interoperability to save lives and protect communities. It relies on a complex set of capabilities to ensure efficiency and accuracy, including interconnection of telephone services to 9-1-1 call routing networks, delivery of location information, establishment of PSAPs to process 9-1-1 calls and the necessary governance and funding to operate and maintain the service.

In areas without established 9-1-1 service, other methods are generally used to enable the public to access emergency services. Some areas have implemented simplified versions of 9-1-1 in which some of these capabilities are missing or have significant limitations.

The different types of emergency calling services deployed in Canada are discussed and compared in the sections below, including the status of service deployment in the NCRD today.

Additional background information on 9-1-1 services is provided in Appendices A and B.

2.1. 10 Digit Dialling

In areas without formal 9-1-1 service, the public may contact emergency services directly using 10-digit local, regional or province-wide telephone numbers (800-XXX-XXXX or 250-XXX-XXXX) for police, fire, ambulance and other rescue services. In some communities, emergency calls are answered at local police detachments, fire halls, community offices, volunteer phone trees, or radio-based systems. Communication can rely on satellite phones or VHF radio communications in locations where telephone service is not available.

This type of emergency calling service applies to most of the NCRD, excluding Prince Rupert, Port Edward and the immediate surrounding area. Numbers to be dialled for each emergency service and community are discussed in section 3 below.

Without a common emergency number and other attributes of 9-1-1 service, emergency response times may be delayed. Callers must know and correctly dial separate numbers for each service. No location information and limited caller information are provided, with access to emergency services often limited by coverage and availability of telecommunications services.

2.2. 9-1-1 Default Routing

Some telephone service providers enable callers to contact emergency services by dialing 9-1-1 in areas without formal 9-1-1 service. These calls are routed to operator services for the telephone service provider or to a third-party call answer centre, not directly to a PSAP. An operator will manually attempt to connect the caller with the appropriate Primary or Secondary PSAP.

This is referred to as 9-1-1 Default Routing and in Canada, most of these calls are answered by Northern 9-1-1[1].

9-1-1 default routing is supported by nomadic Voice over Internet Protocol (VoIP) telephone services as the CRTC requires providers of these services to provide 9-1-1 service to their customers[2].

Wi-Fi Calling, also known as Voice over Wi-Fi (VoWi-Fi), is a service that enables smartphones to make voice calls and send text (SMS) messages using a Wi-Fi network outside the coverage area of the cellular network. Wi-Fi Calling services currently support 9-1-1 Default Routing only.

The 9-1-1 default routing arrangement introduces additional call transfer and duplicated requests for the caller's location and incident details as the call progresses from the operator to a Primary or Secondary PSAP, where it becomes an emergency event and is dispatched. This routing method also lacks the automation and location verification capabilities that are standard in Enhanced 9-1-1 (E9-

[1] See https://northern911.com/public-safety/911-default-routing/.

[2] Telecom Decision CRTC 2005-21

1-1) and NG9-1-1 systems, which increases the probability of transcription errors and failed dispatches.

VoIP and cellular Wi-Fi Calling services generally require users to register a physical address with their provider so that emergency calls can be routed correctly. If this location data is not registered or kept up to date, the call answer provider may not be able to easily identify the caller's location.

2.3. Basic 9-1-1

Basic 9-1-1 (B9-1-1) service is provided in certain regions of Canada where upgrades to Enhanced or Next Generation 9-1-1 have not yet occurred. This includes the City of Prince Rupert, the District of Port Edward and a large area of northern BC served by NorthwesTel. Prince Rupert Fire provides B9-1-1 service to Prince Rupert and the immediate surrounding area.

When a caller dials 9-1-1, the call is routed to a designated PSAP independent of caller location. While the system may deliver calling number in some situations, the system does not transmit the caller's location information to the call taker, who must rely entirely on the caller to explain where they are and what kind of help is needed.

2.4. Enhanced 9-1-1

Enhanced 9-1-1 is the most common type of emergency calling service in Canada today. It is available in nearly all urban areas and many rural communities across most provinces and territories. However, E9-1-1 service is not available in the NCRD.

When a caller dials 9-1-1, the PSAP receives the caller's telephone number and location information. For landline calls, the civic address and subscriber name is delivered with the originating call. For cellular wireless calls, the location is estimated based on nearby cell towers or triangulation. The location data for wireless calls is often approximate and may not be sufficient for rapid response, particularly in dense urban or remote rural areas.

When location information is received, it can be used by emergency dispatchers to accurately deploy emergency services to the location of the caller. In cases where the caller remains connected and new location coordinates are required this technology supports requests to update the location information.

The E9-1-1 system primarily supports voice (telephone) calling and cannot support the transmission of images, video, or other multimedia content. It also lacks the flexibility and interoperability of newer, IP-based systems.

Text with 9-1-1 (T9-1-1) is available in most parts of Canada with E9-1-1 service, provided the local PSAP supports it. It is specifically designed for people who are Deaf, Hard of Hearing, or Speech-Impaired (DHHSI) and must be arranged in advance through registration with a participating mobile service provider.

A registered user first places a standard voice call to 9-1-1. Once the PSAP receives the call, the operator is notified that it is a T9-1-1 user, and a two-way text conversation is initiated with the caller using SMS.

2.5. Next Generation 9-1-1

NG9-1-1 is currently being rolled out across Canada, as mandated by the CRTC [1]. Some regions have already implemented NG9-1-1 voice services, while others are preparing for full implementation by the national deadline of March 2027 [2]. More information on NG9-1-1 is available in Appendix B.

NG9-1-1 uses Internet Protocol-based (IP) technology to support more flexible and resilient emergency calling. It allows PSAPs to receive not only voice calls but also Real-Time Text (RTT), and in future, multimedia content such as photos, videos, and sensor data. It also enables more accurate call routing and location identification using GPS and device-based location services.

NG9-1-1 supports enhanced call transfer, which enables a 9-1-1 call and all associated data such as caller location, call history, text messages, photos, and video to be seamlessly transferred from one PSAP to another to ensure that critical situational awareness is preserved and passed along.

The full benefits of NG9-1-1 are not yet available nationwide, and implementation varies across jurisdictions.

This report only considers and addresses the potential for implementation of NG9-1-1 service in the NCRD, with the implementation of NG9-1-1 being harmonized with provincial and national standards as they are established. Implementation of legacy 9-1-1 services will not be considered as telecommunication providers will be discontinuing support in 2027.

Recommendation 1: In considering the implementation of a regional 9-1-1 service, the NCRD and its communities should only pursue the implementation of NG9-1-1 primary call answer service, as opposed to other forms of 9-1-1 service.

2.6. Comparison of Emergency Calling Services

A summary of the different types of emergency calling and 9-1-1 services and the current deployment status in the NCRD is provided in the table below:

Table 2. Comparison of Emergency Calling Services

Service Type	Numbers Dialled	Media Types	Call Routing	Caller Information Delivery	Deployment in NCRD
10 Digit Dialling	10 digits, varies by location & service	• Voice Only	• Fixed	• Location – No • Caller # - Yes	All communities except Prince Rupert & Port Edward
9-1-1 Default Routing	'9-1-1'	• Voice Only	• Via operator	• Location – No • Caller # - Yes	All communities
Basic 9-1-1 (B9-1-1)	'9-1-1'	• Voice Only	• Fixed	• Location – No • Caller # - Yes	Prince Rupert & Port Edward
Enhanced 9-1-1 (E9-1-1)	'9-1-1'	• Voice Only • Text (SMS) for DHHSI	• Civic location based	• Location – Yes • Caller # - Yes	Not deployed
Next Gen 9-1-1 (NG9-1-1)	'9-1-1'	• Voice & text (RTT) • Image, data & video in future	• Geodetic (GPS) location based	• Location – Yes • Caller # - Yes • Additional information in future	Not deployed

3. Current State of Emergency Calling in the NCRD

3.1. Overview of the NCRD

The NCRD includes mainland and island communities, incorporated municipalities, unincorporated electoral areas, and Indigenous communities spread across a large and geographically diverse region. The region's governance arrangements, strong reliance on volunteer emergency responders, geographic isolation, exposure to severe weather, transportation constraints, connectivity limitations and varied emergency access methods create a unique emergency communications environment. Understanding these characteristics is essential when implementing consistent access to NG9-1-1 services across the NCRD.

Table 3 summarizes the communities within the NCRD by community type and approximate population.

Table 3. NCRD Communities & Population

Community	Population[3] (Approx.)	Governance Type	Electoral Area
Daajing Giids	964	Municipality	Area D
Dodge Cove	40	Unincorporated	Area A
Gitga'at (Hartley Bay)	143	First Nation	Area C
Gitxaala (Kitkatla)	448	First Nation	Area C
Lax Kw'alaams	627	First Nation	Area A
Masset	838	Municipality	Area D
Metlakatla	88	First Nation	Area A
Old Massett	545	First Nation	Area D
Oona River	15	Unincorporated	Area C
Port Clements	340	Municipality	Area D
Port Edward	470	Municipality	Area C
Prince Rupert	12,300	Municipality	Area C
Sandspit	310	Unincorporated	Area E
Skidegate	700	First Nation	Area D

[3] Population figures presented in Table 3 are based on the available information from Statistics Canada (2021 Census), Indigenous Services Canada (June 2026), and North Coast Regional District publications. Minor variations between sources may occur due to differences in reporting methodologies, geographic boundaries, and publication dates.

Community	Population[3] (Approx.)	Governance Type	Electoral Area
Tlell	180	Unincorporated	Area D
Tow Hill	359	Unincorporated	Area D
TOTAL	**18,367**		

3.1.1. Characteristics of the NCRD

The NCRD possesses several characteristics that distinguish it from other regional districts in British Columbia. These characteristics influence emergency response operations, emergency communications, and the practical implementation of NG9-1-1 services.

Geographic Isolation

The NCRD spans a vast and geographically diverse area that includes mainland communities, the archipelago of Haida Gwaii and numerous remote coastal settlements, many of which are accessible only by air or water. Covering approximately 20,000 km^2, the regional district has a population of approximately 18,367 residents dispersed across widely separated communities.

Incorporated municipalities contain most of the region's population, with over two-thirds living in Prince Rupert. Unincorporated areas within four electoral areas encompass most of the land base yet support only a small proportion of the total population. This dispersed settlement pattern, combined with rugged terrain, extensive coastlines, severe weather, and long travel distances, presents ongoing challenges for emergency response and service delivery.

Climate and Infrastructure Vulnerability

The region's remoteness, steep terrain, and exposure to severe weather events make it especially vulnerable to floods, landslides, washouts, and other natural hazards that can sever transportation routes and disrupt essential services. The island communities of Haida Gwaii also depend on subsea telecommunications infrastructure connecting them to the mainland.

As discussed further in Appendix A, infrastructure investments have significantly improved connectivity, but service outages and disruptions regularly occur, reinforcing the importance of resilient and redundant emergency communications systems. Together, these factors heighten the need for local resilience, redundancy, and emergency planning strategies beyond those typically required in more accessible regions of British Columbia.

Diverse Governance and Community Structures

The NCRD includes incorporated municipalities, unincorporated electoral areas, and Indigenous communities, each operating under different governance arrangements and administrative structures. Communities vary considerably in population, available resources, local priorities, and technical capacity.

This diversity requires governance implementation approaches that recognize local decision-making while supporting regional coordination. Successful implementation of NG9-1-1 will depend on continued collaboration between local governments, Indigenous Governments, emergency service providers, and regional partners.

The All-Islands Protocol Table (AIPT) is a collaborative governance forum based on Haida Gwaii. It was established following a series of protocol agreements signed between the Council of the Haida Nation (CHN) and the islands' local governments between 2004 and 2008. AIPT would be well positioned to facilitate discussions among participating governments regarding 9-1-1 service governance on Haida Gwaii, identify shared objectives and concerns, and help build consensus around implementation.

Strength in Skilled Volunteerism

Most fire protection, search and rescue and other emergency support functions throughout the region are provided by volunteer organizations. These agencies play a critical role in protecting their communities but often operate with limited staffing, resources, and administrative capacity, requiring practical implementation approaches that recognize local realities. Preserving and strengthening this community-based volunteer model must remain a foundational consideration in any future emergency services planning.

Tourism and Seasonal Population

The NCRD supports a growing tourism industry that attracts visitors to Haida Gwaii, remote wilderness areas, internationally recognized fishing lodges, and eco-tourism destinations. Many visitors are unfamiliar with local emergency access arrangements and reasonably expect emergency assistance to be available by dialing 9-1-1. This seasonal increase in population reinforces the importance of providing consistent and intuitive access to emergency services regardless of a caller's familiarity with the region.

Partnerships/Regional Collaboration

Communities and emergency responders throughout the NCRD rely on strong working relationships, mutual support, and practical day-to-day collaboration. These relationships often extend across municipal, electoral area, Indigenous, and agency boundaries, reflecting the realities of serving a geographically dispersed region with limited local resources.

Emergency response may involve shared personnel, equipment, communications support, transportation assistance, and coordination between neighbouring communities and service providers. In many cases, these operational relationships function regardless of formal governance structures and are essential to maintaining service continuity, supporting isolated communities, and responding effectively when local capacity is limited.

These characteristics make the NCRD a unique governance and service delivery environment, requiring tailored, community-driven approaches that combine regional planning, local operational flexibility, and strong partnerships with Indigenous Governments.

3.1.2. Emergency Response in the NCRD

Emergency response within the NCRD is provided through a combination of police, fire, ambulance, and other emergency service organizations operating across municipalities, electoral areas, and Indigenous communities.

Table 4 lists the primary emergency response agencies serving each community within the region.

Table 4. Police, Fire and Emergency Medical Response in the NCRD

Community	Police	Fire	Emergency Medical[4]
Daajing Giids	RCMP – Daajing Giids Detachment	Daajing Giids Fire Department	BCEHS Station 687 – Daajing Giids
Dodge Cove	RCMP – Prince Rupert Coastal Section	None	BCEHS Station 684 – Prince Rupert[5]
Gitga'at (Hartley Bay)	RCMP – Prince Rupert Coastal Section	Gitga'at Emergency Response Team	Gitga'at Emergency Response Team
Gitxaała (Kitkatla)	RCMP – Prince Rupert Coastal Section	Gitxaała Volunteer Fire Department	Gitxaała Volunteer Fire Department
Lax Kw'alaams	RCMP – Prince Rupert Coastal Section	Lax Kw'alaams Fire Department	Lax Kw'alaams Fire Department
Masset	RCMP – Masset Detachment	Masset Volunteer Fire Department	BCEHS Station 690 – Masset
Metlakatla	RCMP – Prince Rupert Detachment	Metlakatla Volunteer Fire Department	Metlakatla Volunteer Fire Department
Old Massett	RCMP – Masset Detachment	Old Massett Fire & Medical	BCEHS Station 690 – Masset
Oona River	RCMP – Prince Rupert Detachment	None	BCEHS Station 684 – Prince Rupert

[4] Emergency Medical Services: This column identifies the primary BCEHS station or other organization providing emergency medical response where known. It is not intended to indicate the availability of ambulance services, responder certification, staffing levels or the level of emergency medical service provided, which may vary by community.

[5] There are no local BCEHS resources on Digby Island (Dodge Cove) or Porcher Island (Oona River) but BCEHS will respond by air ambulance or marine vessel if the situation requires it.

Community	Police	Fire	Emergency Medical[4]
Port Clements	RCMP – Masset Detachment	Port Clements Volunteer Fire Department	BCEHS Station 651 – Port Clements
Port Edward	RCMP – Prince Rupert Detachment	Port Edward Fire Department	BCEHS Station 684 – Prince Rupert
Prince Rupert	RCMP – Prince Rupert Detachment	Prince Rupert Fire Rescue	BCEHS Station 684 – Prince Rupert
Sandspit	RCMP – Daajing Giids Detachment	Sandspit Volunteer Fire Department	BCEHS Station 681 – Sandspit
Skidegate	RCMP – Daajing Giids Detachment	Skidegate Fire Department	BCEHS Station 687 – Daajing Giids
Tlell	RCMP – Daajing Giids Detachment	Tlell Volunteer Fire Department	BCEHS Station 687 – Daajing Giids
Tow Hill	RCMP – Masset Detachment	None (informal response provided by Masset VFD)	BCEHS Station 690 – Masset

3.2. Connectivity for Emergency Calling in the NCRD

Historically, telecommunications services available to residents and businesses in the NCRD have been limited and unreliable due to the remoteness of the region, difficulty of access to regional and national telecommunication network backbones and the low density of population.

In recent years, initiatives such as the Connected Coast project and the emergence of Low Earth Orbit (LEO) satellite services have significantly increased the service options available, particularly for broadband services such as internet, video streaming and real-time video conferencing.

Various methods, services and types of connectivity currently support 10 digit and '9-1-1' emergency calling within the NCRD today, including landline telephones, wireless, radio, broadband and satellite services.

Appendix A discusses the types of connectivity that can be used for emergency calling in the NCRD and the service providers that provide those services. The ability for the various networks and service providers to support and process 9-1-1 calls made in the NCRD is also described.

It is important to note that although most of the NCRD (outside of Prince Rupert and Port Edward) does not have formal 9-1-1 service, dialling '9-1-1' with most services will result in the call being processed, but with significant limitations that can impact effective emergency response. These limitations are discussed in more detail in Appendix A and summarized in section 3.2.1.

It should also be noted that resilience of telecommunications connectivity in the NCRD is of concern to many stakeholders due to lack of facility redundancy which has led to the regular service

degradation and outages. This issue has not been analyzed as part of this work although some information on planned enhancements to connectivity is provided in Appendix A.

3.2.1. 9-1-1 Service by Type of Connectivity

The table below summarizes the current ability of each type of connectivity in the NCRD to support 9-1-1 calling. As will be discussed below, methods of contacting emergency services other than dialling 9-1-1 are predominantly used in the NCRD today.

Table 5. 9-1-1 Service in NCRD by Location and Service Provider

Telecommunications Service Provider	Service	Type of 9-1-1 Service Prince Rupert & Port Edward	Call Answer Provider Prince Rupert & Port Edward	Type of 9-1-1 Service Rest of NCRD	Call Answer Provider Rest of NCRD
TELUS	Fixed Landline	N/A	N/A	9-1-1 Default Routing	TELUS Operator Services
TELUS	Cellular	Basic 9-1-1	Prince Rupert Fire	9-1-1 Default Routing	TELUS Operator Services
CityWest	Fixed Landline	Basic 9-1-1	Prince Rupert Fire	No 9-1-1	N/A
Rogers	Cellular	Basic 9-1-1	Prince Rupert Fire	9-1-1 Default Routing	Northern 9-1-1
Other Wireless Service Providers	Cellular	Basic 9-1-1	Prince Rupert Fire	9-1-1 Default Routing	Third Party Call Centre
Mascon (Haida Gwaii)	VoIP	N/A	N/A	9-1-1 Default Routing	Northern 9-1-1
Any Broadband Provider *	VoIP	9-1-1 Default Routing	Northern 9-1-1	9-1-1 Default Routing	Northern 9-1-1
Any Broadband Provider *	WiFi Calling	9-1-1 Default Routing	Northern 9-1-1	9-1-1 Default Routing	Northern 9-1-1
All Wireless Service Providers	Apple Emergency SOS Satellite	Text Messaging	Northern 9-1-1	Text Messaging	Northern 9-1-1
Rogers	Text to 9-1-1 Satellite	Text Messaging	Northern 9-1-1	Text Message	Northern 9-1-1

***** Any Broadband Provider' includes all fibre, cable, wireless and satellite broadband internet access services, e.g. CityWest, Connected Coast, Starlink, etc.

3.3. Contacting Emergency Services in the NCRD

Contacting emergency service in the NCRD requires awareness of local emergency telephone numbers, community specific response procedures and the limitations associated with the use of '9-1-1' as discussed above. After calls are answered, each emergency calling method relies on the caller's ability to provide accurate location information before an emergency response can be initiated.

Callers must be aware of the following to successfully access emergency services:

- Whether to dial 9-1-1 or a 10-digit number based on the location of the emergency.
- The civic address, common name and/or precise geographic description (latitude/longitude) of the event.
- A call-back number for emergency services to use if the initial call is disconnected.

The risks faced by callers include:

- Delays contacting emergency service dispatch if the required number is not known.
- Calls disconnected due to multiple transfer legs to find proper call answer service.
- Emergency crews sent to the wrong location as no caller location information is transmitted along with the initial call.
- Telecommunication providers (i.e. Rogers, Bell, TELUS) unable to access and track the location of cell phone due to the legality of providing cell phone locations when a caller has not placed a 9-1-1 call.
- Fire calls left unanswered due to the reliance on volunteer personnel to act as call takers and dispatchers.

3.3.1. Emergency Medical Service Calls

BC Emergency Health Services (BCEHS) answers emergency medical calls for all communities within the NCRD, excluding some mainland Indigenous communities without local BCEHS resources. In these communities, medical emergencies are reported directly to local health clinic resources or fire departments.

Table 6. Emergency Medical Service Calling Methods - Current State

Emergency Service	Emergency Calling Methods
Emergency Medical	Prince Rupert / Port Edward – 911 calling down streamed to BCEHS by 9-1-1 Operators at the Prince Rupert Primary PSAP.
	Mainland Indigenous communities – 10-digit number for the local health clinic or fire department.
	All other communities – Toll free provincial 800 number for BCEHS or 10-digit local number to reach local resources (community dependent).

3.3.2. Police Emergency Calls

The RCMP North District Operational Communications Center (ND OCC) in Prince George dispatches police emergency calls for all communities in the NCRD.

Table 7. Police Service Calling Methods - Current State

Emergency Service	Emergency Calling Methods
Police	Prince Rupert / Port Edward – Basic 911 calling down streamed to ND OCC by 9-1-1 Operators at the Prince Rupert Primary PSAP.
	Mainland Communities outside of Prince Rupert / Port Edward – 9-1-1 calling to telephone operator services and then transferred to the ND OCC.
	Haida Gwaii Communities – 10-digit local number to local detachment. Calls are answered locally during business hours and forwarded to ND OCC after hours and during weekends.

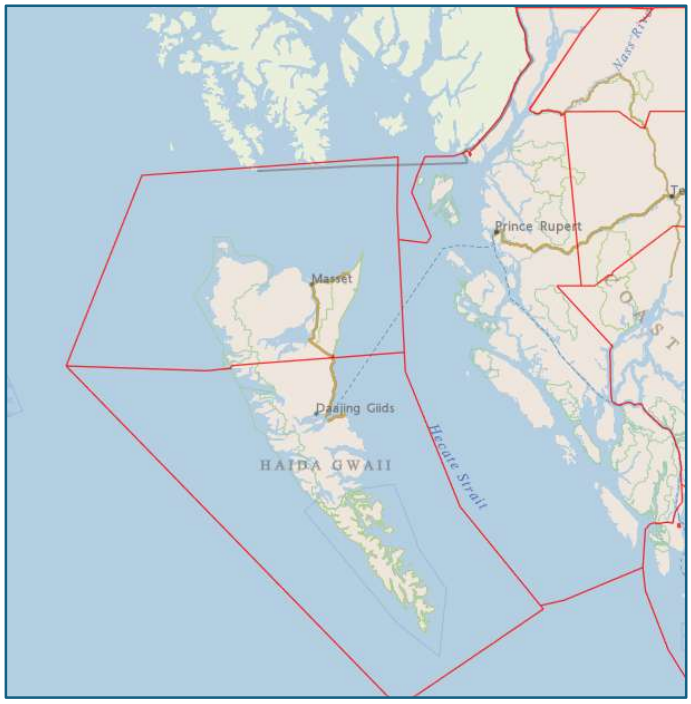


Figure 2. RCMP Detachment Boundaries in the NCRD

The RCMP Coastal Section in Prince Rupert has been encouraging the use of '9-1-1' to reach police services in mainland coastal communities[6]. 9-1-1 calls of this type are initially answered by telecom service provider operator services as discussed in section 3.2.1 and then transferred to North District OCC for dispatch.

3.3.3. Fire/Rescue Emergency Calls

Where available, emergency fire/rescue services within the NCRD are provided by volunteer fire departments serving individual communities. In addition to providing emergency response within their own jurisdictions, some volunteer fire departments may also respond to incidents outside their primary response areas when requested. In some cases, fire department service boundaries are not clearly established, defined or known.

Each fire department is currently responsible for its own emergency call answering and dispatch arrangements.

[6] The use of '9-1-1' is reinforced by information published on the RCMP's website https://rcmp.ca/en/bc/contact and https://rcmp.ca/en/bc/prince-rupert.

Table 8. Fire Service Calling Methods – Current State

Emergency Service	Emergency Calling Methods
Fire/Rescue	Prince Rupert / Port Edward – 911 call answered and dispatched by 9-1-1/Fire Dispatchers at the Prince Rupert Primary PSAP.
	Mainland / Coastal Indigenous Communities – Phone call to local health clinic or fire department or call via VHF radio to community members.
	Daajing Giids, Masset, Port Clements, Skidegate – 10-digit call answered by Northern 9-1-1. Northern 9-1-1 then contacts local dispatcher who dispatches local firefighters using telephone callout.
	Sandspit – 10-digit call answered by Replay Message Center. Replay then contact local dispatcher who dispatches local firefighters using phone tree.
	Tlell / Lawn Hill - 10-digit emergency call to local residence. Local resident answers call and alerts fire fighters.

As noted above, '9-1-1' can be dialled from a variety of telecom services with certain limitations. It has not been confirmed whether 9-1-1 dialed calls that use Default Routing (TELUS TOPS or Northern 9-1-1) can be directly transferred to the applicable fire department given the multiplicity of telephone numbers.

3.3.4. Search and Rescue Calls

Marine emergency response is coordinated through a partnership between the Joint Rescue Coordination Centre (JRCC) in Victoria, the Canadian Coast Guard (CCG), Royal Canadian Marine Search and Rescue (RCMSAR) and the Coastal Nations Coast Guard Auxiliary (CN-CGA)[7]. When a marine emergency is reported, these agencies work closely together to initiate and manage the response.

Marine emergencies are typically reported through two primary methods:

- Telephone calls made via toll-free emergency calling to JRCC Victoria (1-800-567-5111).
- VHF radio channel 6 or 16 and *16 telephone calls that connect to the nearest Canadian Coast Guard Marine Communications and Traffic Services (MCTS) centre.

[7] RCM-SAR stations are in Prince Rupert, Lax Kw'alaams, Hartley Bay and Masset (https://rcmsar.com/where-we-are/. CN-CGA stations are in Kitkatla and Old Masset (https://www.cn-cga.ca/).

In most cases, 9-1-1 calls that involve marine incidents are transferred to the JRCC from the agency answering the calls. Once transferred, the JRCC serves as the central coordination point for initiating the appropriate response.

Ground Search and Rescue (GSAR) response is typically requested and coordinated through the RCMP and in some cases, BCEHS. GSAR teams are located in Prince Rupert and Haida Gwaii (Archipelago SAR) and are usually tasked by Emergency Management and Climate Readiness (EMCR) through its Emergency Coordination Centre (1-800-663-3456).

3.3.5. Summary of Emergency Calling Numbers

In the absence of a consistent 9-1-1 service, residents and visitors must rely on a range of 10-digit phone numbers to request emergency assistance. These numbers vary by agency and community and may include direct lines for police, fire departments, ambulance services, Search and Rescue (SAR), and other emergency support organizations. The following table provides a list of key contact numbers organized by service and location within the region.

Table 9. Emergency Contact Numbers in the NCRD

Community	Police	BCEHS or Health Service	Fire	Marine[8]
Daajing Giids	250-559-4421	800-461-9911	250-559-4488	*16 (cellular) Channel 16 (VHF)
Dodge Cove	9-1-1 (Default Routing)	800-461-9911	No fire service	*16 (cellular) Channel 16 (VHF)
Gitga'at (Hartley Bay)	9-1-1 (Default Routing)	888-691-6958 250-841-2556	888-691-6958 778-645-4911	*16 (cellular) Channel 6/16 (VHF)
Gitxaala (Kitkatla)	9-1-1 (Default Routing)	250-848-2254 VHF radio	250-848-2254 VHF radio	*16 (cellular) Channel 16 (VHF)
Lax Kw'alaams	9-1-1 (Default Routing)	250-625-3331	250-625-3233	*16 (cellular) Channel 16 (VHF)
Masset	250-626-3991	800-461-9911	250-626-5511	*16 (cellular) Channel 16 (VHF)

[8] The public can contact JRCC Victoria directly at 1-800-567-5111 or *16 on cell phones.

Community	Police	BCEHS or Health Service	Fire	Marine[8]
Metlakatla	9-1-1 (Default Routing)	800-461-9911	250-600-2950	*16 (cellular) Channel 16 (VHF)
Old Massett	250-626-3991	800-461-9911	250-626-5222	*16 (cellular) Channel 16 (VHF)
Oona River	9-1-1 (Default Routing)	800-461-9911	No fire service	*16 (cellular) Channel 16 (VHF)
Port Clements	250-626-3991	800-461-9911	250-557-4355	*16 (cellular) Channel 16 (VHF)
Port Edward	9-1-1 (Basic)	9-1-1 (Basic)	9-1-1 (Basic)	*16 (cellular) Channel 16 (VHF)
Prince Rupert	9-1-1 (Basic)	9-1-1 (Basic)	9-1-1 (Basic)	*16 (cellular) Channel 16 (VHF)
Sandspit	250-559-4421	800-461-9911	250-637-2222	*16 (cellular) Channel 16 (VHF)
Skidegate	250-559-4421	800-461-9911	250-559-8300	*16 (cellular) / Channel 16 (VHF)
Tlell	250-559-4421	800-461-9911	250-557-4348	*16 (cellular) / Channel 16 (VHF)
Tow Hill	250-626-3991	800-461-9911	250-626-5511[9]	*16 (cellular) / Channel 16 (VHF)

3.4. Emergency Call and Event Volumes

The NCRD or most communities do not currently collect data that measures the performance of emergency response service providers or emergency call/event volumes. However, some emergency response agencies, in particular BCEHS, RCMP and Prince Rupert Fire, do collect and regularly report on their event volumes.

[9] Masset or Old Massett Fire may respond on a mutual aid basis to fire calls in unincorporated areas of Electoral Area D.

Outreach to emergency response agencies in the NCRD has included requests for historical emergency event and call volumes, primarily for the purpose of estimating future 9-1-1 call volumes. This outreach has provided the following event and call volume information by agency or service type:

- RCMP – 2025 police file volumes by NCRD community or detachment.
- BCEHS – 2021-2026 call volume for Prince Rupert and the four stations on Haida Gwaii.
- Prince Rupert Fire – 2025 9-1-1 call volumes and disposition by downstream agency.
- Fire departments (excluding Prince Rupert and Port Edward) – anecdotal information on call/event volumes.

The information provided, along with provincial and national average call rates, particularly for rural and volunteer fire departments have been used to develop a baseline 9-1-1 call volume estimate.

The table below provides a summary of estimated 9-1-1 call volumes for police, fire, and ambulance services within the NCRD to be used to develop costs for a 9-1-1 service (2025 baseline). However, calls for service also originate via sources other than 9-1-1 for most agencies so this does not provide a complete picture of demand for emergency response.

Table 10. Projected 9-1-1 Call Demand by Emergency Service and Community in the NCRD

Community	Police	BCEHS & Other Medical	Fire/Rescue	Total
Daajing Giids	137	132	24	293
Dodge Cove	1	5 *	0 *	6
Gitga'at (Hartley Bay)	24	19 *	3	46
Gitxaala (Kitkatla)	28	61 *	11	100
Lax Kw'alaams	118	86 *	15	219
Masset	171	115	20	306
Metlakatla	13	12 *	2	27
Old Massett	111	74	13	198
Oona River	1	2 *	0 *	3
Port Clements	52	46	8	106
Port Edward	49	22 **	13	84
Prince Rupert	2323	2338 **	192	4,853
Sandspit	38	42	7	87
Skidegate	77	96	17	190
Tlell	11	24	4	39
Tow Hill	73	49	8 *	120
Estimated 9-1-1 Calls (2025)	**3,154**	**3,074**	**329**	**6,687**
% By Service	**48%**	**47%**	**5%**	
Forecast 9-1-1 Calls (2026) - 3% increase	**3,249**	**3,166**	**339**	**6,754**
Forecast 9-1-1 Calls (2027) - 3% increase	**3,346**	**3,261**	**349**	**6,956**

Notes on Table 10:

* Denotes a fire/rescue or emergency medical call forecast for a community that does not have an established fire service or local BCEHS station. It is assumed that 9-1-1 calls could originate from these communities and in some cases, would result in a mutual aid response from a neighbouring fire service.

** Call volumes for Prince Rupert and Port Edward have been provided by Prince Rupert Fire. It is believed that RCMP and BCEHS call volumes shown for Port Edward are lower than actual because the majority of 9-1-1 calls come from cellphones and the community of origin is not readily available at the PSAP.

It is assumed that call volumes would increase 3% annually from 2025 to 2028, although there is significant uncertainty in the numbers as historical data reflects inconsistent increases. The assumptions behind these estimated call volumes are provided in Appendix E.

3.5. Funding and Governance of Emergency Calling

This section discusses the current emergency communication-related financial costs for emergency services managed by the NCRD and discusses existing governance arrangements.

3.5.1. Funding

Existing emergency communications costs funded by agencies and jurisdictions in the NCRD are as follows:

- BCEHS and the RCMP fund their emergency call handling and dispatch-related expenses through existing provincial budgets.
- The City of Prince Rupert has an existing budget for the provision of its 9-1-1 and fire dispatch service which is funded through landline telephone call answer levies and property tax levies.
- Fire departments using Northern 9-1-1 pay approximately $250/month for Basic fire dispatch service plus expenses for radios and smartphone messaging applications used for notification and dispatch.
- Tlell, Old Massett and Sandspit Volunteer Fire Departments also incur expenses for radio licences, emergency call answer/dispatch service and smartphone messaging applications used for notification and dispatch.

The existing budgets and expenditures for these services have not been identified or estimated.

3.5.2. Governance

In BC, 9-1-1 service is typically provided at a regional district level and enacted through a service establishment bylaw. In some areas this is done at a municipal level. There is no province-wide 9-1-1 governance structure in BC.

As no 9-1-1 service has been established, there is no governing structure or agreement for emergency communications services in the NCRD. However, the City of Prince Rupert has established Basic 9-1-1 service for the City through bylaw[10].

Additionally, certain mutual aid agreements are in place to enable improved coordination among fire departments, particularly those on Haida Gwaii and Prince Rupert/Port Edward.

3.6. Summary of Current Gaps

The table below highlights the current state gaps that impact emergency response in the NCRD. However, not all identified gaps exist in all locations. The significant impacts that are outlined should be reviewed to determine what aspects of emergency call answer and dispatch in the NCRD need to be upgraded to ensure a high standard of public safety throughout each electoral area.

[10] 9-1-1 Dispatch Service Establishment No. 3183, 2004.

Table 11. Summary of Key Gaps and Findings

Gap	Impact
General lack of knowledge of the various available response agencies, boundaries and response capabilities that are available when coordinating multi-agency response to a major event.	Varying first responder attendance at incident scenes.
	Incorrect operational capabilities brought to scene.
Emergency response boundaries are not well understood**.** Particularly in rural and remote communities, residents often do not know which agency serves the location of the incident, resulting in emergency calls being transferred while the appropriate responder is identified.	Increased call transfers and longer call processing times.
	Delays in dispatching the appropriate emergency responders.
	Increased potential for dispatch errors where service boundaries, addresses or road names are unclear.
Lack of consistent address points and commonly used street names in local GIS data.	Difficulty when addressing or trying to validate street names when creating emergency calls.
	Increased risk of mis-routing emergency responders when dispatching.
Volunteer fire departments answer and self-dispatch to emergency events.	Varying levels of call answer depending on volunteer availability.
	Can delay fire response due to need for firefighters to send out additional notifications before attending incident scenes.
	Inconsistent external agency notifications performed to ensure that agencies such as BC Hydro, EMCR or FortisBC, are advised of incident and whether they are required to attend the scene.
Lack of caller location information included in emergency calls.	Information not available for call takers to use when checking the consistency of the address provided by the caller. This is particularly difficult when a caller does not know their location and the call taker must guess based on potentially inaccurate information.

Gap	Impact
Varying emergency response numbers used throughout the region. Depending on where the emergency occurs, callers must know whether to dial 9-1-1 or a local 10-digit emergency number.	Creates confusion for residents and visitors during emergency situations.
	Increases the likelihood of delayed or misdirected emergency calls.
	Places responsibility on callers to understand how to access emergency services rather than providing a simple, consistent point of access.
Inconsistent delivery of caller phone numbers associated with emergency calls.	No information for call takers to use to call-back or geo-locate a phone if the call is cut-off or silent during the initial call. Most dramatic impact can be if caller is in remote location and cannot make another call or is being restrained in some manner (i.e. domestic incident) and not able to freely talk on the phone.
Patient privacy and confidentiality are at risk when sensitive information is communicated over VHF voice radio rather than secure systems.	Personal and medical information may be overheard by unauthorized listeners.
	Increases the risk of privacy and confidentiality breaches.
	Does not align with modern NG9-1-1 information-sharing practices.
	May increase organizational exposure to privacy compliance risks.

3.7. Potential Near-Term Enhancements

As a result of the current state review and gaps identified, several opportunities have been identified that could immediately enhance service delivery across the region prior to implementation of NG9-1-1 service. While some recommendations are intended to address existing operational gaps and improve coordination among emergency response partners, others lay the groundwork for a longer-term transition toward a more consolidated and integrated emergency response model.

The following recommendations are based on observed challenges and input from local stakeholders. They are intended to strengthen current practices, reduce risk, and improve outcomes for residents and responders alike whether through more consistent dispatch protocols, clearer addressing, or better mutual aid coordination.

Table 12. Near Term Improvement Recommendations (Non-GIS)

Identified Issue	Recommendation	Steps	Rationale & Benefits
Lack of awareness of agencies and agency capabilities for attendance at emergency scenes requiring multiple agency attendance.	Fire departments should consider formalizing multi-agency dispatch procedures so that standard protocols and notifications are followed.	Establish response capabilities for all existing emergency response agencies including both traditional 9-1-1 agencies (RCMP, BCEHS, fire/rescue) as well as other response agencies.	Ensure fulsome understanding of response capabilities to ensure appropriate activations for each emergency.
		Establish protocols for deployment of response agencies, including marine and ground SAR teams.	Ensure proper authorizations are obtained prior to deployment
			Ensure all relevant resources are dispatched to scene
Lack of shared situational awareness among fire departments on Haida Gwaii.	Fire departments on Haida Gwaii should adopt a common dispatch provider and third-party alerting application to increase situational awareness and interoperability.	All departments adopt a common third-party alerting application.	Ensure that fire agencies are consistently notified of incidents in other jurisdictions, thereby improving situational awareness and reducing response delays in cases where mutual aid is required or a large-scale event that may stretch across multiple response areas.
		All departments adopt a common dispatch service provider.	
		Enable notifications between different accounts for specific event types as agreed by all departments.	
Lack of formal mutual aid agreements among fire departments on Haida Gwaii.	Fire departments on Haida Gwaii should establish formal mutual aid agreements (where missing) with neighbouring departments where there is an expectation of providing or receiving personnel, equipment, or firefighting resources during emergency incidents.	Work with appropriate governing body to draft mutual aid agreements with all relevant fire departments.	Ensures prompt response and simplified dispatch procedures between participating agencies.
		Establish agreement review cycle to ensure agreements are accurate and reflect current response capabilities.	Ensures clarity regarding financial, legal, and liability responsibilities.

4. Addressing and Mapping

4.1. NG9-1-1 Addressing and GIS Mapping Requirements

The NCRD and the communities within will need to enhance GIS mapping and addressing data sets, formats and processes to enable the transition to NG9-1-1. These requirements are based on standards defined by the National Emergency Number Association (NENA) and specified in the TELUS NG9-1-1 LGA agreements (see Appendix D). The obligations apply even if the region decides to contract 9-1-1 call answer and fire dispatch to a 3rd party service provider/PSAP.

Once GIS data has been prepared, it should be provided to GeoBC, who have been designated as the provincial aggregator for NG9-1-1 geo-spatial data[11]. In this capacity, GeoBC will be working closely with local governments to assist with making their GIS datasets compliant to ensure that geospatial data is available for accurate call routing.

The NCRD and its communities will need to undertake specific activities to create and update GIS datasets in preparation for the implementation of Geodetic Call Routing by NG9-1-1 network providers[12]:

- Road centerline with address attributes, as updates to the provincial Digital Road Atlas (DRA);
- Street name alias;
- Site Structure Address Points (SSAP) in NENA Civic Location Data Exchange Format (CLDXF-CA) format [10];
- Jurisdictional boundaries (regional district, municipality and Indigenous Governments);
- PSAP boundaries; and
- Service boundaries (Police, Fire and Ambulance).

Some of this data will be created and managed centrally by GeoBC, including the DRA and jurisdictional, PSAP and service boundaries.

More information on requirements is available in Appendix B. It should be noted that the timing for implementation of Geodetic Call Routing across Canada has not been finalized. NG9-1-1 can be implemented prior to the availability of fully compliant GIS and addressing data from local authorities, with certain limitations to 9-1-1 capability resulting.

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[11] See: https://nrs.objectstore.gov.bc.ca/itqlyp/NGhub_img/documents/GeoBC_Aggregator_Appointment_BC_May_2025.pdf

[12] GeoBC hosts the NG9-1-1 GeoHub which provides information and resources to support this work. See https://ng911gisdata.gov.bc.ca/.

4.2. Existing Addressing and Mapping Capabilities

This section provides a high-level overview of how currently available GIS data compares with the information required for 9-1-1 implementation. Sources for this assessment include information provided by the NCRD, Integrated Cadastral Information (ICI) Society and GIS contractors working for specific communities, in addition to service boundary information provided by representatives from the RCMP and BCEHS.

The current state of GIS and addressing data varies between NCRD communities and electoral areas. Some general observations are as follows:

- Electoral Areas A and C have little authoritative addressing data available.
- Electoral Area A has no bylaw to support the systematic assignment and maintenance of civic addresses.
- Electoral Area C has an outdated addressing bylaw that is being redeveloped.
- Significant addressing initiatives have been undertaken in Electoral Areas D and E that have resulted in substantial improvements to address and road network data. While these areas are more mature, additional work is still required to fully support future NG9-1-1 implementation.
- Incorporated municipalities are at varying stages of GIS maturity with some communities maintaining comprehensive GIS datasets that will require assessment and conversion to meet NG9-1-1 standards, while others have limited or no authoritative GIS data available.

A summary of the state of development of address, road and response boundaries for each jurisdiction is provided in Table 13 below:

Table 13. Summary of Addressing and GIS Readiness

Jurisdiction or Community	Address Points	Road Network	Fire Service Boundaries	Comments
Electoral Area A	Unavailable	Unavailable	Unavailable	• No addressing bylaw. No known regional addressing initiative. • Extensive GIS data development required.
Electoral Area C	Unavailable	Unavailable	Unavailable	• House numbering bylaw exists for Oona River[13]. • Extensive GIS data development required.
Electoral Area D	Developed	Developed	Unavailable	• NCRD GIS initiatives have substantially improved road and address data. • Formal establishment of fire service boundaries and conversion to NENA addressing format is required.
Electoral Area E	Developed	Developed	Unavailable	• NCRD GIS initiatives have substantially improved road and address data. • Formal establishment of fire service boundaries and conversion to NENA addressing format is required.
Village of Daajing Giids	Established	Established	Unavailable	• Datasets are established and maintained by village administration. • Maintenance is challenging due to lack of GIS software licenses. • Submissions to provincially managed databases are infrequent. • Formal establishment of fire service boundaries and conversion to NENA addressing format is required.
Village of Port Clements	Established	Established	Unavailable	• Datasets are established and maintained by village administration. • No addressing bylaw or process for data management and maintenance. • Submissions to provincially managed databases are infrequent. • Formal establishment of fire service boundaries and conversion to NENA addressing format is required.
Village of Masset	Established	Established	Unavailable	• Datasets are derived from historical parcel and infrastructure mapping. • No formal maintenance program such that all address data will require review and validation. • Formal establishment of fire service boundaries and conversion to NENA addressing format is required.

[13] https://www.ncrdbc.com/sites/default/files/uploads/bylaws/oona_river_house_numbering_bylaw_354-1998.pdf

Jurisdiction or Community	Address Points	Road Network	Fire Service Boundaries	Comments
Old Massett	Established	Established	Unavailable	• GIS tools/licensing and capabilities exist within Old Massett Village Council. • A variety of GIS data sets are maintained.
Skidegate	Established	Established	Unavailable	• Datasets are established and maintained by a third-party GIS provider. • Issues with data quality exist, especially as relates to assigned addresses compared to street address range. • Formal establishment of fire service boundaries and conversion to NENA addressing format is required.
City of Prince Rupert	Complete	Complete	Complete	• Mature GIS program. Geospatial assessment underway to support NG9-1-1 readiness. • Formal establishment of fire service boundaries and plan for conversion to NENA addressing format is complete.
District of Port Edward	Developed	Developed	Unavailable	• Managed by District staff supplemented with third party GIS support. Address and street data is in place. • Formal establishment of fire service boundaries and conversion to NENA addressing format is required.
Gitga'at (Hartley Bay)	Established	Established	Unknown	• Established civic addressing dataset and mapping. • Significant GIS data development work is required.
Gitxaala (Kitkatla)	Unavailable	Established	Unavailable	• No formal civic addressing dataset. • Extensive GIS data development work is required.
Lax Kw'alaams	Unavailable	Established	Unavailable	• No formal civic addressing dataset. • Extensive GIS data development required.
Metlakatla	Established	Established	Unavailable	• Established civic addressing dataset and mapping. • Extensive GIS data development work is required.

Table 13 legend:

- Complete - Data is substantially complete with an established process for ongoing maintenance and plan for conversion to NENA standard.
- Developed - Data is substantially complete with an established process for ongoing maintenance. A plan for conversion to NENA standard is not established.
- Established – The existing dataset is established with known deficiencies. A path for ongoing maintenance is not established. A plan for conversion to NENA standard is not established.
- Unavailable – Insufficient information was available to assess the current state.

In addition to availability of consistent address and street network data, the availability of street and address number signage is a key requirement for optimizing emergency response. However, the state of street signage, including consistency of address number signage, has not been assessed for each community as part of this project.

4.3. Addressing and Mapping Enhancements

4.3.1. Short Term Enhancements

The NCRD and communities could undertake GIS (addressing and mapping) work in the near term that would have a beneficial impact on public safety in the region. This work should involve discussions with and support from provincial GIS agencies (Integrated Cadastral Information (ICI) Society and GeoBC) as well as current contractors.

Recommendation 2: The NCRD and communities should pursue a set of short-term GIS enhancements that will benefit the current state, prior to implementation of NG9-1-1 service.

Recommended short term GIS enhancements:

- Review the provincial DRA to ensure all existing roads are included. Create missing road centreline data.
- Define response boundaries and service areas for all Fire Departments.
- Ensure all sites and structures and access points are properly assigned and attributed to the road network where available.
- Share all existing GIS datasets with GeoBC through the GeoBCInfo@gov.bc.ca email.
- Review English translation or pronunciation driven spelling for street names such that all can be entered into existing emergency systems used by police, fire and ambulance.
- Work with GeoBC to determine how to segment areas of the road centerline where site addressing cannot be sequentially assigned.

4.3.2. Long Term Enhancements

Additional enhancements to addressing and mapping data and capabilities will need to be made by each community prior to the national transition to NG9-1-1 Geodetic Call Routing discussed in Appendix B. Note that the timing for this transition across Canada is not currently defined.

The following general steps should be followed by each community or undertaken as a collaborative effort by multiple communities, particularly those on Haida Gwaii:

1. NG9-1-1 Readiness Assessment

- Assess current level of readiness for NG9-1-1 implementation, recognizing that each community is at a different stage of preparedness.

2. Achieve NG9-1-1 Readiness

- Transform existing mapping and addressing data into an authoritative GIS dataset that meets NG9-1-1 standards, leveraging the provincial organizations, programs, funding opportunities, technical guidance and tools available to assist local governments throughout the implementation process.

3. Operational Readiness

- Integrate authoritative community GIS data into the NG9-1-1 environment through GeoBC, including validation, testing and implementation.

4. Data Stewardship, Information Sharing and Long-Term Sustainment

- Establish ongoing governance, data maintenance and quality assurance processes to ensure mapping and addressing data remains accurate, current and compliant with NG9-1-1 requirements over time and is shared with provincial partners and emergency communications agencies.

Each jurisdiction will need to follow one or both of the following work streams that lead to single NENA CLDXF-CA compliant regional dataset with common quality and format standards (positional accuracy, unique site identifiers, direct CLDXF-CA attribution):

Stream 1 – Review, Gap Assessment & CLDXF Transition

- Applies where an address point layer already exists, in whole or in part, or is identified through local outreach.
- This stream primarily involves improvements to data quality and data schema-migration.

Stream 2 – New Address Data Creation

- Applies where no usable address point layer exists for the jurisdiction.
- Rather than building interim data and converting it later, this stream authors directly in CLDXF-compliant form.

The one-time and ongoing costs for each community to undertake this work have been estimated and included in the cost estimates provided in section 5.5 and Appendix E. Communities have been grouped according to the applicable stream and cost factors per unit of population have been applied to determine the effort to create or improve required data sets. Travel and field survey costs have been included.

Recommendation 3: The NCRD and communities should make the necessary preparations, including budget and resource provisions, to generate NG9-1-1 compliant GIS mapping and addressing data prior to the national transition to NG9-1-1 Geodetic Call Routing.

If the NCRD implements NG9-1-1 prior to the implementation of NG9-1-1 Geodetic Call Routing, it will also be required to generate and update addressing data in the legacy MSAG format.

Recommendation 4: The NCRD and communities will need to generate addressing data for all areas requiring 9-1-1 service in MSAG format if it implements NG9-1-1 prior to implementation of Geodetic Call Routing.

Due to the limited capabilities existing within the communities on Haida Gwaii, significant benefits and efficiencies would be obtained by those communities working together to implement GIS data improvements via a common service provider.

Recommendation 5: The communities on Haida Gwaii should collaborate on achieving NG9-1-1 addressing and mapping compliance and identify a community or organization that can take on the role of coordinating and supporting all communities in this work.

5. Transition Roadmap and Considerations

The NCRD is a geographically large, sparsely populated and diverse region comprising multiple communities, service models, emergency response agencies, and varying levels of operational capability. As such, a regional 9-1-1 service must reflect local conditions, existing operational practices, governance responsibilities and community readiness.

For these reasons, 9-1-1 implementation is best approached as a phased program rather than a single undertaking. This approach requires an implementation roadmap that enables incremental progress, addresses immediate service gaps and risks, establishes the required foundational capabilities and provides a clear path toward a coordinated, resilient and sustainable regional 9-1-1 service.

The roadmap begins by considering the governance responsibilities the NCRD wishes to assume for regional 9-1-1 and, if desired, regional fire dispatch services. Subject to those decisions, the study describes a phased implementation strategy that initially focuses on Haida Gwaii, followed by expansion to the larger mainland municipalities and smaller coastal communities to establish a NCRD-wide regional 9-1-1 service.

Throughout this process, the NCRD will need to evaluate service providers, determine implementation timing and consider future enhancements as the provincial NG9-1-1 environment continues to mature.

Recommendation 6: The NCRD should adopt a phased implementation roadmap for a regional 9-1-1 service, enabling communities to transition to 9-1-1 services over time as they are ready, while progressively expanding toward consistent, region-wide service delivery.

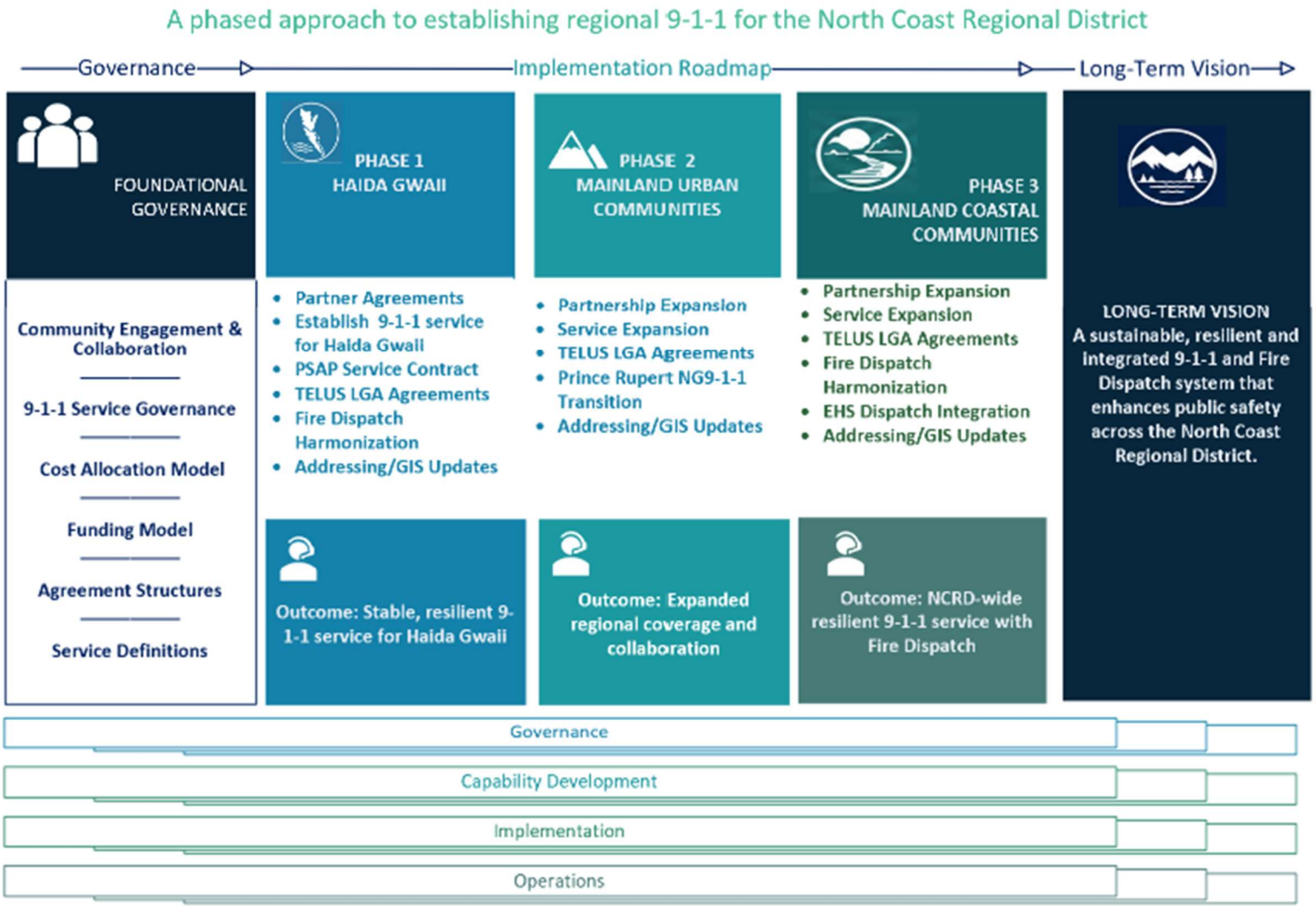


Figure 3. NG9-1-1 Implementation Roadmap

The following sections describe the recommended governance framework, service requirements, phased implementation and supporting activities.

5.1. 9-1-1 Foundational Governance

To establish 9-1-1 service, the NCRD and its community partners will need to address several fundamental questions that will determine the required governance model:

- What is the service?
- Which areas and communities participate?
- What role does each participant play?
- How are decisions about the service made?
- How is the service managed?

A fundamental governance question is whether the NCRD takes the lead on establishing and implementing a 9-1-1 regional service, as is the typical model across BC at present.

This approach is recommended for the following reasons:

- 9-1-1 has maximum benefit and value when implemented consistently across a broad geographic area.
- NCRD has the ability to establish and manage a new extended regional service, including levying service-specific costs to municipalities through property tax assessments.
- NCRD has the ability to establish service agreements with Indigenous Governments.

Recommendation 7: 9-1-1 primary call answer service should be established by the NCRD as a regional extended service and implemented region-wide to fully realize the desired benefits.

The implementation of 9-1-1 service will then require several decisions to be made and multiple agreements to be executed, along with formal establishment of 9-1-1 as an extended service to be provided by the NCRD.

5.1.1. Service Establishment Bylaw

In most parts of BC, regional districts have created an emergency telephone or 9-1-1 service as an extended regional service and enacted it through a service establishment bylaw[14]. These bylaws

[14] See Thompson Nicola Regional District Emergency Telephone System Bylaw 1757 for an example https://tnrd.civicweb.net/filepro/documents/67634/?expanded=211856&preview=206007

typically define the participation in the service, its boundaries (geographical extent) and the method by which the service is to be funded.

As noted above, the City of Prince Rupert has established Basic 9-1-1 service through bylaw.

In some regional districts, the 9-1-1 service just includes primary 9-1-1 call answer and processing, while in some jurisdictions, it includes the funding and provision of regional fire dispatch services.

The NCRD and its stakeholders will need determine the scope of a regional service and whether it just covers primary call answer or also includes fire dispatch for any of the municipal, Indigenous and NCRD-administered departments in the NCRD. This is further discussed in section 5.3 below.

5.1.2. TELUS Local Government Authority Agreements

Implementation of NG9-1-1 in the NCRD will require a Local Government Authority (LGA) agreement to be executed between TELUS and the NCRD, assuming it is the local governing authority for the service and contracts with a Primary PSAP to provide 9-1-1 call answer service. This agreement will be similar to the LGA agreement that TELUS is executing with all local governments in BC and Alberta that are transitioning from E9-1-1 to NG9-1-1.

A template of the TELUS NG9-1-1 LGA is provided in Appendix D.

Because the LGA imposes significant operational and technical obligations on the signatory, including GIS mapping and addressing obligations, additional agreements will be needed. The NCRD would execute the LGA on behalf of the unincorporated areas and the municipalities participating in the regional service, while establishing agreements with participating municipalities to cover the GIS mapping and addressing requirements.

Participating Indigenous Governments would need to execute simplified agreements that only cover the GIS mapping and addressing obligations for those communities. A template of the simplified agreement, which TELUS refers to as an Indigenous Governing Body (IGB) agreement, is provided in Appendix D.

5.1.3. Agreements with Indigenous Governments

If the NCRD assumes responsibility for the primary 9-1-1 call answer service region-wide, it may need to execute Municipal Type Service Agreements[15] (MTSA) with one or more Indigenous Governments to provide service in those communities. These agreements would address the following requirements:

- Cost allocation and recovery

[15] See: https://www.nautsamawt.org/municipal-type-service-agreements

- Operational and administrative responsibilities

As discussed above, GIS mapping and addressing obligations for Indigenous communities could be covered by simplified LGA agreements executed by Indigenous Governments with TELUS. Alternatively, the NCRD could include GIS mapping and addressing in the service agreement as is done in some regions of BC.

Similar considerations would apply to a regional fire dispatch service if the NCRD takes the lead in establishing and administering the service on behalf of one or more Indigenous Governments.

The following diagram illustrates the alternative agreement structures that could be considered for provision of primary call answer and fire dispatch service in Indigenous communities:

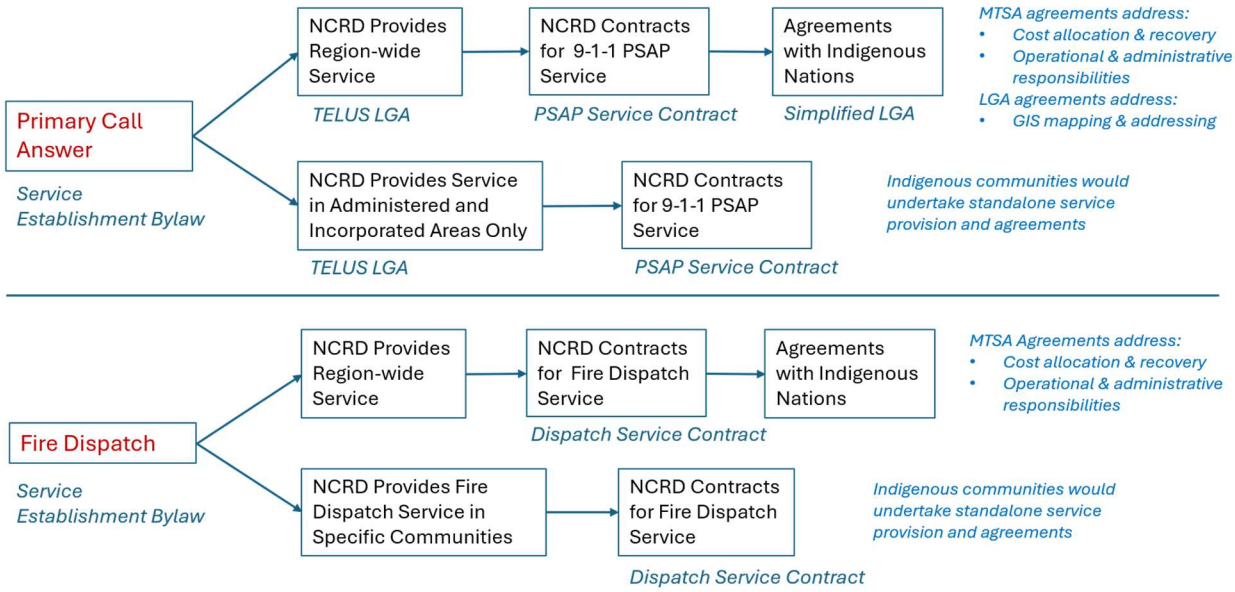


Figure 4. Service Agreements Alternatives

The structure to be selected will depend on the willingness and desires of individual communities to opt-in or opt-out of either service, based on their requirements for the service, ability to address addressing and mapping requirements and ability to fund the service.

Recommendation 8: Further engagement with Indigenous Governments and fire departments should be undertaken to determine interest in participating in a regional 9-1-1 primary call answer and fire dispatch service and the preferred form and scope of service agreements.

5.1.4. Agreements with PSAP Service Providers

Based on the alternatives described above, several PSAP service provider agreements may need to be established, including:

- Agreement(s) between the NCRD and 9-1-1 primary call answer and fire dispatch service providers.
- Agreements between Indigenous Governments and 9-1-1 call answer and fire dispatch service providers if they choose to not participate in a regional service and wish to contract directly for the service.

Section 5.4 discusses the alternatives for PSAP service providers and considerations for selection. As the City of Prince Rupert currently operates both 9-1-1 primary call answer and fire dispatch service, it should be considered and evaluated as a service provider for the NCRD. However, the Prince Rupert PSAP is not currently NG9-1-1 compliant and the timeline for achieving this compliance has not been determined.

Recommendation 9: The NCRD and the City of Prince Rupert should discuss the potential for the Prince Rupert PSAP to provide 9-1-1 and fire dispatch service for the rest of the NCRD as soon as possible.

As with the NCRD, there is currently no 9-1-1 service established in the Central Coast Regional District (CCRD). The CCRD has recently taken steps to establish 9-1-1 service[16]. Requirements for 9-1-1 and fire dispatch services are similar in the NCRD and CCRD. If the two regions were to partner, there would be benefits related to sharing costs and resources associated with the administration and technical support of a common service. The economics of operating a shared PSAP in the NCRD could be improved, particularly if the urban area including Prince Rupert and Port Edward is included.

Recommendation 10: The NCRD should undertake discussions with the CCRD to explore collaboration on the establishment of 9-1-1 and fire dispatch service and selection of service providers.

Several of the existing PSAPs discussed in section 5.4 operate as partnerships among multiple regional districts, i.e. Regional District of Fraser Fort George (RDFFG) and North Island 9-1-1. These

[16] Bylaw: https://ccrd-bc.community-ca.diligentoneplatform.com/Portal/MeetingInformation.aspx?Org=Cal&Id=143 and meeting minutes: https://ccrd-bc.community-ca.diligentoneplatform.com/document/556b1976-05bb-48ed-a663-e07cbf6b965f/

existing arrangements could be extended to include the provision of service to the NCRD if the technical requirements can be met. As a local government, the NCRD can directly negotiate with another local government for the provision of services on a shared basis.

5.1.5. Provincial 9-1-1 Governance

The Province of BC, Ministry of Public Safety Solicitor General have considered establishment of province-wide governance, funding and service standards for 9-1-1 on several occasions going back to 2012 and earlier.

The Province recently undertook an Independent Review of E-Comm, with one of the stated goals of that review being "to develop recommendations on future 9-1-1 service delivery models and regulatory frameworks governing 9-1-1, including call taking and dispatch".

This review was completed in 2025 and the report is available on the Province's website[17]. The report identifies four (4) future service delivery model options for primary PSAP services in BC and "assesses them against the Province's objectives to identify the best path forward for the emergency communications sector". These objectives include:

- System capacity
- Financial sustainability
- Provincial consistency
- Futureproofing

It recommends a future state described as:

- *"Manage" the sector as it aligns closest with the Province's objectives. In this model there is shared responsibility between all levels of government, increasing oversight and accountability, improving financial stability, and reinforcing the resilience of the sector through collaboration and integration between service providers.*

As of July 2026, no action in response to the report has been publicly announced by the Province.

Two of the objectives defined by the Province are particularly relevant to the NCRD and its communities as they consider establishing 9-1-1 service:

- Financial sustainability, given the NCRD has a small population, limited financial resources and large geography to serve.
- Provincial consistency, given the NCRD has significant gaps in its emergency calling capabilities that are inconsistent with the rest of the province.

[17] https://news.gov.bc.ca/files/ECommServiceDeliveryReport.pdf

For this reason, the NCRD and its communities have a significant interest in the future outcome of this initiative.

Recommendation 11: The NCRD and its communities should engage with the UBCM and the Province of BC to encourage the development of a province-wide 9-1-1 governance and funding support program, driven by the needs of currently un-served or under-served areas.

5.2. NG9-1-1 Primary Call Answer Service

As noted above, 9-1-1 primary call answer service should be implemented as a region-wide service to realize the desired benefits of a common emergency calling number (9-1-1) and ensure sufficient economies of scale and maximize economic viability of the service. This will also ensure that the process for delivery of emergency calls to BCEHS and RCMP is consistent with other areas in BC.

The NCRD should only consider establishing NG9-1-1 primary call answer service as described in section 2.5 above. The service would be provided by a Primary PSAP using the TELUS NG9-1-1 network.

Through the NG9-1-1 network, NCRD 9-1-1 calls would follow standards prescribed by NENA and the CRTC, including the following:

- Adherence to established procedures for the processing of calls and use of supporting technologies to enhance public safety (NENA-STA-020) [3].
- Adherence to service levels for call answer and transfer (NENA-STA-019) [4] of police, fire and emergency medical (ambulance) calls.
- Enhanced caller location availability and accuracy achieved through use of handset-based location capabilities.
- Availability of 9-1-1 Real-time Text (RTT) service.
- Availability of the Emergency Incident Data Object (EIDO) to facilitate seamless transmission of data between PSAPs and delivery to first responders.

Once primary 9-1-1 call answer service is fully implemented, police, fire and ambulance emergency calls made by NCRD residents would reach Secondary PSAPs with the same speed and with the same detailed caller information as emergency calls placed in most other regions of British Columbia.

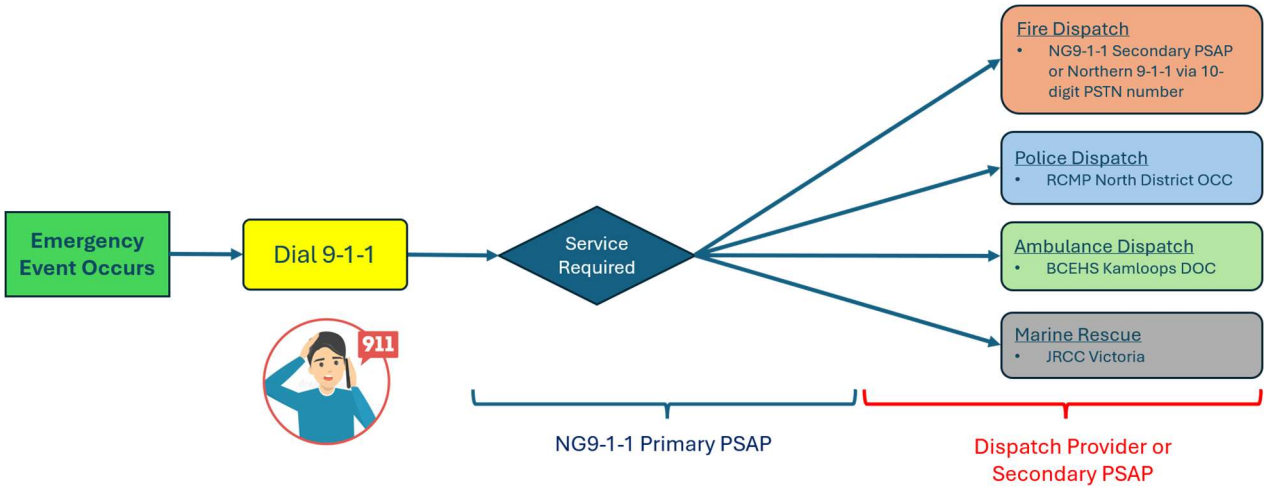


Figure 5. NG9-1-1 Primary Call Answer Service in the NCRD

Ideally, 9-1-1 calls to fire/rescue services would deliver the same information as calls received by police and ambulance. This will require a fire dispatch centre to be NG9-1-1 compliant and fully integrated into the TELUS NG9-1-1 network for fire call answering and dispatch.

However, the existing fire dispatch providers (e.g. Northern 9-1-1) can be utilized prior to achieving NG9-1-1 compliance with the limitation that fire/rescue calls would be transferred via 10-digit numbers through the Public Switched Telephone Network (PSTN) and would not deliver caller location and related information to the Fire dispatch provider.

Table 14. NCRD Primary NG9-1-1 Call Answer Service Characteristics

Feature	Description
9-1-1 emergency calls	3-Digit 9-1-1 calling to NG9-1-1 Primary PSAP.
Ambulance Dispatch	9-1-1 transfer from Primary PSAP to shared call answer queue at BCEHS Secondary PSAPs in Kamloops, Vancouver, and Victoria.
Police Dispatch	9-1-1 transfer from Primary PSAP to RCMP North District OCC.
Fire Dispatch	9-1-1 transfer from Primary PSAP to NG9-1-1 Secondary PSAP or PSTN 10-digit transfer to non-9-1-1 call answer service provider such as Northern 9-1-1.
Caller and Location Information	Automatic location and number information for caller provided to Primary and Secondary PSAP call takers. Increased location accuracy and additional data when national NG9-1-1 enhancements are implemented.
Key Benefits	Single 3-digit emergency number for all NCRD communities. Professional and trained emergency call answer at Primary PSAP level. NENA compliant system and PSAPs offer quickest call answer and triage for NCRD residents and visitors. Formal protocol can be implemented for cases where emergency calls are not answered, mis-dialled, hang-ups, etc.

9-1-1 primary call answer service should be established in three general phases. These phases vary in terms of the geographic scope and coverage of the service, recognizing that different areas and communities may be at differing states of capability and readiness to support a 9-1-1 call answer service, particularly related to addressing/GIS capabilities and desire to implement the service.

Haida Gwaii is recommended as the first phase, and subsequent phases can be implemented in parallel. Both phase 2 and phase 3 have different dependencies that do not exist in phase 1 and it is not possible to assess which is more likely to occur sooner.

Table 15. 9-1-1 Primary Call Answer Service Phases

Phase	Geographic Area/Communities	Key Dependencies
1 – Haida Gwaii Only	Sandspit, Daajing Giids, Skidegate, Tlell, Port Clements, Masset, Old Massett, Tow Hill	• Collaborative governance model • Addressing and mapping • Fire dispatch harmonization • Formalization of fire mutual aid agreements
2 – Add Prince Rupert/Port Edward	Prince Rupert, Port Edward	• Expansion of governance model • Transition of Prince Rupert B9-1-1 PSAP to NG9-1-1
3 – Add Mainland Coastal Communities	Lax Kw'alaams, Metlakatla, Dodge Cove, Oona River, Gitxaala (Kitkatla), Gitga'at (Hartley Bay)	• Addressing and mapping • Emergency medical service agreements • Fire dispatch harmonization and protocol where no fire service exists

5.2.1. Phase 1 – 9-1-1 for Haida Gwaii Only

Phase 1 involves the establishment of 9-1-1 service on Haida Gwaii only. This is viewed as the preferred first step due to:

1. The relatively high population along with the lack of existing 9-1-1 service.
2. The high degree of collaboration and coordination among emergency response agencies.
3. The relatively high level of addressing and GIS capability.
4. The existence of a single fire dispatch provider serving 4 out of the 7 departments.

The following requirements and dependencies will need to be addressed:

- A collaborative governance model that considers and respects the role of all participating jurisdictions and communities, including cost allocation, will need to be established:
    - The NCRD, responsible for unincorporated areas
    - The Villages of Daajing Giids, Port Clements and Masset, as incorporated municipalities
    - The Skidegate Band Council and Old Massett Village Council

- Each of these jurisdictions will be responsible for providing addressing and related GIS/mapping data for their areas as defined in section 4.
- Harmonization of fire dispatch service to ensure operational compatibility with NG9-1-1 primary call answer service.
- Formalization of mutual aid and related agreements for the provision of fire service in unincorporated areas outside of existing fire protection areas will be needed.

The existing fire dispatch service provided by Northern 9-1-1 for Daajing Giids, Port Clements, Masset and Skidegate can be maintained. However, a consistent fire dispatch service for Tlell, Sandspit and Old Massett should be established.

Recommendation 12: Haida Gwaii should be pursued as the first phase of 9-1-1 service implementation.

5.2.2. Phase 2 – Addition of Prince Rupert & Port Edward

Phase 2, which could occur concurrently with phase 3, would have the NCRD taking over responsibility for 9-1-1 service for the City of Prince Rupert and Port Edward and including it in the regional 9-1-1 service offering. It is assumed that the City of Prince Rupert would continue to be responsible for the fire dispatch service for Prince Rupert and Port Edward.

This phase has the benefit of significantly increasing the population served by the regional 9-1-1 service and reducing the cost for implementation and operation of the service as a function of population or tax base.

However, this phase is dependent on the transition of 9-1-1 service for Prince Rupert and Port Edward to NG9-1-1. As a B9-1-1 PSAP, Prince Rupert is not currently subject to the national NG9-1-1 transition mandate of March 2027, so the timing of this transition is unknown but is likely to be in 2028 or later.

5.2.3. Phase 3 – Addition of Mainland Coastal Communities

Phase 3 involves the addition of the unincorporated areas and Indigenous communities within Electoral Areas A & C – primarily isolated communities on the mainland and coastal islands without local BCEHS resources.

In addition to the dependencies discussed above under phase 1, the following additional requirements and dependencies will need to be addressed:

- The governance model will need to be reviewed in consideration of additional jurisdictions and communities and the associated cost allocation.

- Involvement of BCEHS in the notification and dispatching of medical first responders in communities without local BCEHS resources will need to be defined and the required agreements established.
- 9-1-1 call handling protocol for fire/rescue events in communities without established fire service and dispatch centres will need to be defined and agreed with the 9-1-1 service provider.

Several of the Indigenous communities within this phase have volunteer fire departments without a formal dispatch service today. These communities will need to determine if and how their fire service would be integrated into the 9-1-1 call answer service and those requirements will need to be considered in selecting a service provider.

In addition, some of the volunteer fire departments provide emergency medical services in collaboration with the First Nations Health Authority (FNHA) health clinics in those communities. As part of implementing NG9-1-1, the role of BCEHS in providing emergency medical dispatch in response to a 9-1-1 call and the requirements to be placed on the fire departments as medical first responders will need to be reviewed. The following principles are expected to apply:

- Overall framework would be consistent with the First Responder program as defined in the BCEHS First Responder program.[18]
- Responder certification requirements (Advanced First Aid, Emergency Medical Assistant (EMA), Emergency Medical Responder (EMR)) would apply.
- A First Responder agreement, which includes indemnity and liability aspects, would need to be executed between BCEHS and the first responder agency or associated Nation.

Recommendation 13: The Indigenous Governments/communities in phase 3 should initiate discussions with BCEHS regarding establishing a medical first responder agreement as part of implementing 9-1-1 service.

This phase assumes each Indigenous community would decide whether and when to participate in the regional service and so may involve several discrete transition steps.

5.3. Fire Dispatch Service

Establishment of a regional 9-1-1 call answer service will require the harmonization of fire dispatch service, including defining the call handling protocol for jurisdictions without established fire departments and/or fire dispatch services.

[18] See https://www.bcehs.ca/our-services/programs-services/first-responders

Two different types of fire dispatch service – Basic and Enhanced – will be discussed below. Depending on the method of fire dispatching to be implemented, improvements to radio dispatch infrastructure may need to be considered.

In addition, there is a choice to be made as to what role the NCRD should play in fire dispatch service, including whether the service would be included in the regional 9-1-1 service definition. There are benefits if included but the NCRD's responsibilities would increase.

It is assumed for the purposes of this study and the associated cost analysis that fire dispatch for Prince Rupert and Port Edward would continue to be operated on a standalone basis by the City of Prince Rupert and would not be incorporated into the regional fire dispatch service.

Stakeholder feedback has identified that individual communities may want the ability to "opt-in" to a regional fire dispatch service but should not be mandated to participate. However, communities not participating in a regional fire dispatch service may experience limitations in the overall effectiveness of 9-1-1 service.

5.3.1. Basic Fire Dispatch

Basic fire dispatch involves notification of fire/rescue responders in response to a call from the public. Notification can be via multiple methods as chosen by the department, including telephone call-out, SMS/text messaging or activation via a specialized responder notification application such as IamResponding[19].

Basic fire dispatch does not involve ongoing incident support being provided by a dispatcher to the fire crew. Additional support while on-site and requests for services such as utility shutoff, mutual aid, etc., can be requested by the fire response team by calling dispatch by telephone.

For the purposes of this report, the definition of Basic fire dispatch includes the routing of fire calls from the Primary PSAP external of the NG9-1-1 network using 10-digit dialing via regular telephone networks (PSTN).

[19] See www.iamresponding.com.

Table 16. Basic Fire Dispatch Summary

Feature	Description
9-1-1 Call Delivery	Calls for fire/rescue response transferred through the PSTN via 10-digit dialing.
Fire/Rescue Dispatch	Responder notification and dispatch only via telephone and/or smartphone or application-based messaging services.
Caller and Location Info	No location information provided to Primary and Secondary PSAP. No support for RTT and future NG9-1-1 multimedia services.
Key Benefits	Centralized fire dispatch service provides consistent and reliable fire dispatch service that is not dependent on local volunteer resources.

The fire dispatch service currently provided by Northern 9-1-1 to four (4) departments on Haida Gwaii is considered Basic fire dispatch. If 9-1-1 service were implemented, Northern 9-1-1 would receive 9-1-1 calls transferred from the Primary PSAP and then activate the fire dispatch/call-out procedure as it currently does.

Northern 9-1-1 is not currently integrated with the TELUS NG9-1-1 network but plans to complete such integration in 2027. When this occurs, some of the limitations of Basic fire dispatch could be eliminated.

Standard Northern 9-1-1 costs for Basic fire dispatch have been used in the cost estimates provided in section 5.5.2.

The benefits from having all fire departments on Haida Gwaii using the same dispatch service are:

- Consistency of 9-1-1 call handling and dispatch procedures across all departments.
- Improved response time, coordination and interoperability in mutual aid situations.

Recommendation 14: As part of the first phase of establishing 9-1-1 service, a consistent fire dispatch service for Tlell, Sandspit and Old Massett should be established.

5.3.2. Enhanced Fire Dispatch

Enhanced fire dispatch enables a fully realized NG9-1-1 service model – all emergency calls (police, ambulance, and fire) would be handled by a NG9-1-1-connected Primary and Secondary PSAPs.

Enhanced fire dispatch also provides additional support to responding fire crews. The implementation of direct radio connections between the fire dispatch provider (Secondary PSAP) and responding crews provides immediate communications support during incidents. Notification

and dispatch of Fire personnel would use radio paging, smartphone or mobile data device messaging services, with telephone-based notification as a backup capability only.

Enhanced fire dispatch increases real-time situational awareness in the dispatch centre, provides responder location tracking and provides the potential for multimedia inputs in the future (e.g., text, video or photo messages from callers). It requires significant technical and governance readiness but delivers the highest level of emergency calling and dispatch service.

Table 17. Enhanced Fire Dispatch Summary

Feature	Description
9-1-1 Call Delivery	Calls for fire/rescue response transferred through the NG9-1-1 network with full caller information delivery, including location. Full support for RTT and future NG9-1-1 multimedia services.
Fire/Rescue Dispatch	Dispatched through NG9-1-1-connected PSAP. Enhanced fire dispatch via radio paging and/or smartphone or mobile data messaging services. Real-time radio-based support during fire/rescue incidents.
Caller and Location Info	NG9-1-1 information delivered to dispatch centre.
Key Benefits	All benefits provided in Basic Fire Dispatch are maintained. End-to-end information flow and consistency across all services.
Costs	Requires investment in radio infrastructure and dispatch connectivity. Higher operating cost.

Prince Rupert Fire currently operates a fire dispatch centre that provides certain aspects of Enhanced fire dispatch service. It has direct radio connections to Fire apparatus and crews, but it has not implemented NG9-1-1 capability.

The service provided by most fire dispatch centres in BC is Enhanced fire dispatch and some will be reluctant to provide a Basic fire dispatch service, without radio connections to the department.

Recommendation 15: Once a decision to implement 9-1-1 service has been made, further consultation with fire departments and dispatch service providers should be undertaken to assess costs and interest in implementing Enhanced fire dispatch service.

5.3.3. Including Fire Dispatch in Regional Service

Fire dispatch could be included in the regional 9-1-1 service, as is the case in some other regional districts in BC. There are benefits from including it, but the NCRD's responsibilities would increase.

Increased NCRD Responsibilities

- Assume responsibility for managing service contracts on behalf of all fire departments, with costs rolled into the regional 9-1-1 service.
- Ensure dispatch service is standardized, including development of common standard operating procedures (SoPs).
- Ensure mutual aid agreements are established, and fire response boundaries are clearly defined.

Benefits

- Fire departments would move away from individual service provider agreements, which could reduce the agency's effort and provide some cost efficiencies.
- Fire dispatch could be more easily established where it does not exist.
- Existing fire dispatch service on Haida Gwaii could be harmonized by extending the existing service provided by Northern 9-1-1, which would improve mutual aid and interoperability and streamline responder training.

Because all fire departments in the coastal mainland communities are governed and funded locally and the 9-1-1 service for those communities would not be funded through municipal or regional district property taxes, fire dispatch for those communities should be provided on an "opt-in" basis and not automatically included the regional 9-1-1 service.

Similarly, fire dispatch service for Prince Rupert and Port Edward is existing and currently funded directly by those municipalities. Including them in the regional fire service should only be considered once the City of Prince Rupert has determined its plans for the future of the PSAP.

Recommendation 16: To fully realize the benefits of implementing 9-1-1 service for Haida Gwaii, the NCRD should include Basic fire dispatch in the regional service provided on Haida Gwaii.

5.4. PSAP Service Provider Alternatives

The role of PSAP service providers in handling 9-1-1 emergency calls within the NCRD is illustrated in Figure 5 above.

The following criteria should be considered in selecting a Primary and Secondary PSAP:

- Organizational governance model and cost allocation structure of the PSAP.

- Familiarity with providing service in similar geographic and demographic environments.
- Implementation timelines and logistics, including level of support provided for service implementation.

The following additional criteria should be considered in selecting a fire dispatch service provider:

- The ability of the Primary PSAP to support the method of call transfer and delivery if not NG9-1-1 based.
- The ability to support the required notification and dispatch processes.
- The ability to offer enhanced fire dispatch service as a future upgrade.

Potential alternative NG9-1-1 PSAP service providers are discussed in the sections below.

Recommendation 17: Once the service requirements are defined and a decision made to move forward, the NCRD should evaluate potential Primary and Secondary PSAP service providers, including PSAPs in BC and other specialized service providers to determine and assess costs, timelines, governance models and service offerings.

5.4.1. Standalone PSAP in the NCRD

Operating a PSAP in the NCRD under the control of the NCRD and its communities would provide several benefits:

- Provide local control.
- Provide jobs in the region.
- Enable service to be tailored to the needs of the region and its communities.
- Create infrastructure and capability that could provider broader benefits to emergency management functions in the region.

However, building and operating an NG9-1-1 PSAP is an expensive and complex undertaking and is not likely to be economically viable at the scale of the NCRD and its communities alone. In addition to the technical and operational requirements, by its nature the facility must operate 24X7 and should ideally be constructed to post-disaster requirements, like a hospital, firehall or police station. The suite of technologies required for NG9-1-1 compliance and the requirement for minimum staffing as defined by industry standards create additional economic hurdles that will be difficult to overcome.

As discussed in section 5.1.4 above, the City of Prince Rupert currently operates a B9-1-1 primary PSAP and fire dispatch centre in Prince Rupert. The City has not established firm plans for the future of its PSAP, including the timing for NG9-1-1 transition. The potential for the Prince Rupert PSAP to take on 9-1-1 service for the rest of the NCRD could influence the City's planning. It would be beneficial for the NCRD and the City of Prince Rupert to discuss such an arrangement as soon as possible.

Recommendation 9: The NCRD and the City of Prince Rupert should discuss the potential for the Prince Rupert PSAP to provide 9-1-1 and fire dispatch service for the rest of the NCRD as soon as possible (see also 5.1.4).

As discussed in section 5.1.4 above, establishing a PSAP in the NCRD could also be done collaboratively or jointly with other jurisdictions such as the Central Coast RD, which is like the NCRD in that it does not currently have 9-1-1 service over most of its territory but is proceeding with the process of establishing such a service.

Recommendation 10: The NCRD should undertake discussions with the CCRD to explore collaboration on the establishment of 9-1-1 and fire dispatch service and selection of service providers (see also 5.1.4).

High-level estimates of capital and operating costs for a standalone PSAP are provided in section 5.5.

5.4.2. Outsourcing to Other PSAPs in BC

To provide 9-1-1 and fire dispatch service, the NCRD and its communities could contract with existing Primary and Secondary PSAPs in BC.

Primary PSAPs

The table below lists the Primary PSAPs currently providing 9-1-1 service in BC and the type of service provided as of July 2026.

Table 18. Primary PSAPs Providing 9-1-1 Service in BC

Primary PSAP	Jurisdictions Served & Service Provided
City of Nelson Police	City of Nelson (E9-1-1 → NG9-1-1)
City of Prince Rupert Fire	City of Prince Rupert (Basic 9-1-1)
E-Comm 9-1-1 – Lower Mainland and Vancouver Island	All other regional districts (E9-1-1 → NG9-1-1)
Grand Prairie Fire, Alberta	Northern Rockies Regional Municipality (Basic 9-1-1)

CFB Esquimalt Fire also provides 9-1-1 service that is limited to the naval base and is not considered a candidate to provide service in the NCRD.

It should also be noted that the Regional District of Fraser Fort George (RDFFG) has announced[20] it will end its 9-1-1 service agreement with E-Comm and commence providing its own 9-1-1 service in 2027. This will change the Primary PSAP for the following regional districts:

- Regional District of Fraser Fort George
- Cariboo Regional District
- Regional District of Kitimat-Stikine
- Regional District of Bulkley-Nechako

All Primary PSAPs listed above could potentially provide 9-1-1 Primary PSAP services to the NCRD.

E-Comm and RDFFG are transitioning to NG9-1-1 in 2026 or 2027 and have stated they will not take on any new jurisdictions for a year or more after the transition is completed.

Secondary PSAPs

A list of the Secondary PSAPs providing fire dispatch service BC as of July 2026 and the emergency service(s) and jurisdictions they serve is provided in Appendix C.

As discussed above, dispatch service for ambulance and police for the NCRD is currently provided by BCEHS in Kamloops and North District RCMP OCC in Prince George. These agencies will continue to provide the applicable dispatch service once a primary 9-1-1 call answer service is implemented in the NCRD, although some operational or technical changes may be required as part of the transition.

Therefore, the NCRD will primarily be concerned with identifying a fire dispatch provider, of which there are approximately 8 currently operating in BC.

Because many of the PSAPs listed above are part of a local government, the NCRD can directly negotiate a service contract without undertaking a competitive procurement process, although it should engage with multiple providers to select a service provider that best meets its requirements.

5.4.3. Specialized Emergency Communications Providers

As previously discussed, fire departments on Haida Gwaii are currently using specialized service providers to answer calls for fire/rescue services and notify or dispatch responders. Northern 9-1-1 is currently providing this service for Daajing Giids, Skidegate, Port Clements and Masset. Old Massett and Sandspit are using the Replay Message Service in Prince George (part of Four Star Communications)

[20] See https://pgdailynews.ca/index.php/2025/01/23/fraser-fort-george-9-1-1-to-take-over-answering-calls-in-four-northern-regional-districts/

Northern 9-1-1 is based in Sudbury, Ontario and is one of the largest 9-1-1 service providers in Canada. It provides tailored emergency communications services to rural and remote areas of Canada, including notification dispatch services for very small volunteer fire departments. It also answers 9-1-1 and emergency calls originating from a variety of telecommunications services as the designated default call answer provider for VoIP, WiFi Calling and emergency satellite services (see section 2.1.2 above).

In eastern Canada, Northern 9-1-1 can receive NG9-1-1 calls through the Bell NG9-1-1 network. It is also in the process of becoming interconnected to the TELUS NG9-1-1 network and anticipates being able to provide NG9-1-1 Primary PSAP service in BC in early 2027. As noted in section 5.3.1, this development will enable it to become a NG9-1-1 Secondary PSAP for fire dispatch service. This will remove some of the limitations associated with the Basic fire dispatch service it currently provides.

5.5. Cost Estimates and Cost Allocation

Cost estimates, including one-time implementation and transition costs, and ongoing operating costs, have been developed for the three 9-1-1 service phases discussed in section 5.1 for Basic fire dispatch. These cost estimates have been developed from several sources, including indicative cost estimates provided by potential PSAP service providers, and the consultant's experience.

5.5.1. 9-1-1 Primary Call Answer – Outsourced PSAP

Estimated costs for NG9-1-1 primary call answer service for each phase based on an outsourced PSAP model are provided in Table 19 below.

Table 19. 9-1-1 Primary Call Answer Cost Estimates

Cost Item	Phase 1 Haida Gwaii	Phase 2 Haida Gwaii + Prince Rupert	Phase 3 Haida Gwaii + Coastal	All NCRD
One-Time Implementation Cost				
Implementation & Contracting	$90,000	$130,000	$110,000	$150,000
Addressing / Mapping (1)	$109,769	$124,618	$171,338	$186,187
PSAP Service Provider	$8,000	$8,000	$8,000	$8,000
Public Education	$25,000	$25,000	$25,000	$25,000
Contingency	$23,277	$28,762	$31,434	$36,919
TOTAL	**$256,045**	**$316,379**	**$345,772**	**$406,106**
Annual Operating Cost				
Addressing / Mapping	$7,720	$8,403	$11,451	$12,133
PSAP Service Provider	$23,490	$72,860	$27,500	$76,870
Public Education	$5,000	$5,000	$5,000	$5,000
Contingency	$3,621	$8,626	$4,395	$9,400
TOTAL	**$39,831**	**$94,889**	**$48,346**	**$103,403**
Comparative Metrics				
Population	4,236	17,006	5,597	18,367
9-1-1 Call Volume	1,349	6,286	1,750	6,687
Implementation Cost/Pop (2)	$34.53	$11.28	$31.17	$11.97
Operating Cost/Pop (2)	$9.05	$5.41	$8.10	$5.30

Notes on Table 19:

1. Addressing/mapping costs exclude the City of Prince Rupert.
2. Comparative metrics exclude Indigenous communities.

Phase 1 is assumed to be implemented first so costs shown under Phases 2 and 3 include the areas, agencies and population in Phase 1. As Phases 2 and 3 could be implemented in parallel, Phase 3 costs do not include Phase 2 costs. Aggregate costs for all phases are shown under "All NCRD".

Detailed cost workups and cost allocations among the participating communities are provided in Appendix E. The following costs have been estimated:

Implementation Costs

- Contracting and Implementation – legal, project management, operational change management and training expenses.
- Addressing and Mapping – work to update addressing and mapping data sets in all communities (except Prince Rupert) to minimum NG9-1-1 requirements.
- PSAP Service Provider – PSAP costs to set up 9-1-1 service.
- Public Education – development and execution of a public education program for all communities.
- Contingency of 10% has been added to all implementation costs.

Ongoing Operating Costs

- Addressing and Mapping – maintenance of GIS data sets.
- PSAP Service Provider – ongoing costs estimated at $10 per call per year.
- Public Education – regular updating of public education program.
- Contingency of 10% has been added to all operating costs.

Cost Allocation

The following assumptions have been made in allocating costs among the participating communities:

1. Costs related to NCRD unincorporated areas and incorporated municipalities are presented in aggregate:
    - The NCRD would recover regional service costs through property tax levies.
2. Implementation and operating costs for Indigenous communities are broken out separately (6 communities):
    - Service agreements would be established between the NCRD and the Indigenous communities that wish to participate and each would each pay an allocated share of the service costs.

- Funding support from Indigenous Services Canada (ISC) is expected to be available to offset some or all of these costs.

3. The cost allocation to each community is based on population:
    - 9-1-1 call volume could be used, however, historical 9-1-1 call volumes are only available for Prince Rupert and Port Edward.
4. Each community or municipality (including the NCRD) will be responsible for its addressing and GIS mapping upgrade costs and ongoing maintenance of those data sets:
    - A methodology to estimate the costs for addressing and mapping upgrades in compliance with NG9-1-1 requirements has been developed.
    - The NCRD would take responsibility for addressing and mapping in the unincorporated areas only.

5.5.2. Fire Dispatch – Outsourced PSAP

Estimated costs for Fire dispatch service for Basic fire dispatch for phases 1 & 3 based on an outsourced PSAP model are provided in Table 20 below.

Cost estimates assume fire dispatch is included in the regional 9-1-1 service for Haida Gwaii (phase 1). Estimated costs are also provided for the mainland coastal communities (phase 3). Fire dispatch for Prince Rupert and Port Edward (phase 2) is not included in cost estimates as that service is existing and funded by those municipalities.

Table 20. Fire Dispatch Costs

Cost Item	Phase 1 Haida Gwaii	Phase 1 & 3 Haida Gwaii + Coastal
One-Time Implementation Cost		
Implementation & Contracting	$37,500	$62,500
Fire Dispatch Service	$14,000	$22,000
Contingency	$5,150	$8,450
TOTAL	**$56,650**	**$92,950**
Annual Operating Cost		
Technology	$8,400	$13,200
Fire Dispatch Service	$18,630	$30,990
Contingency	$2,703	$4,419
TOTAL	**$29,733**	**$48,609**

Cost workups and cost allocation among the participating communities are provided in Appendix E. The following costs have been estimated:

Implementation Costs

- Contracting and Implementation – legal, project management, operational change management and training expenses.
- PSAP Service Provider – PSAP costs to set up fire dispatch service with one account per fire department assumed.
- Contingency of 10% has been added to all implementation costs

Ongoing Operating Costs

- Basic Fire Dispatch Service – standard costs from Northern 9-1-1 are estimated per department ($250/month minimum charge for population < 1000, $0.25 per resident above 1000).
- Technology – cost of notification and messaging apps for responders.
- Contingency of 10% has been added to all operating costs.

Cost Allocation

The following assumptions have been made in estimating Basic fire dispatch costs for the participating communities:

1. Fire dispatch costs are broken out by fire department, with NCRD costs for Tlell and Sandspit shown in aggregate[21].
2. Phase 1 - Masset, Daajing Giids, Skidegate and Port Clements would maintain their existing fire dispatch service as 9-1-1 service is introduced.
3. Phase 1 – the same service will be established for Tlell, Sandspit and Old Massett.
4. Phase 2 - dispatch costs for Prince Rupert and Port Edward are not included.
5. Phase 3 – The same service will be established for Lax Kw'alaams, Metlakatla, Gitxaala (Kitkatla) and Gitga'at (Hartley Bay).

Enhanced Fire Dispatch Costs

The costs to upgrade each volunteer fire department to "enhanced" fire dispatch service, including radio-based incident support, are as follows:

- $15-20K per department for equipment to provide dispatch radio connections.
- Approximately $5K per department for the dispatch provider to configure the agency in their dispatch systems.
- Estimated $130/year per annual dispatch service fee:

[21] If costs per department are required, the aggregate cost should be split 50-50.

- With the minimum cost of Basic fire dispatch at $3,000/year, a department would need to be at 24 events per year for Enhanced fire dispatch to cost more than Basic fire dispatch.
- None of the Haida Gwaii or coastal mainland fire departments are at this level, so Basic fire dispatch costs represents the worst case for operating costs.

5.5.3. Standalone PSAP in the NCRD

The costs associated with the NCRD establishing and operating its own PSAP (Primary and Secondary) will be significant. The costs are estimated as:

<u>One-time Implementation Costs</u>

- One-time service implementation costs based on Basic fire dispatch - $500,000.
- PSAP facility costs – in the range of $500,000 to $1,500,000 or higher, based on retrofitting an existing facility to support 24X7 uninterrupted operation.
- PSAP technology costs – in the range of $1,500,000 to $2,500,000 to ensure NG9-1-1 compliance.
- Operational startup costs, including recruitment and training of staff – in the range of $500,000 - $1,000,000.
- Total implementation costs in the range of $3-5M.

<u>Ongoing Operating Costs</u>

- Staffing costs, based on 1 call taker/dispatcher on shift 24X7 (not compliant with NFPA requirements) – minimum of $750,000 per year.
- Staffing costs would nearly double if the NFPA 1225 [15] requirement of a minimum of 2 on shift 24X7 is to be met.

This approach is not viewed as economically viable based on property tax-based funding mechanisms given the small population, small call volume and high fixed costs. The only way a standalone PSAP could be made financially viable is if external funding sources such as a Call Answer Levy (discussed in section 5.6 below) or other external funding or subsidies were available.

<u>Recommendation 18</u>: Unless external funding sources or subsidies were available, the NCRD should not consider establishing a standalone PSAP but should plan to contract with a third-party call answer and dispatch service provider (PSAP).

5.6. Funding Sources and Methods

Several methods for funding 9-1-1 service are available and discussed in this section.

5.6.1. Regional District Service Levy

To support the development of a sustainable and equitable funding model for 9-1-1 and fire dispatch service, consideration must be given to cost allocation methods that reflect the varying roles and capacities of participating entities within the NCRD.

At present, the NCRD funds fire services for the departments it directly operates through local property tax revenue. Other communities within the region maintain and fund their fire services independently, using governance and funding models suited to their specific circumstances.

The most common 9-1-1 service funding model in BC involves a regional district extended service levy applied to property taxes based on assessed property values. This funding mechanism can be applied to incorporated municipalities and the unincorporated areas of Electoral Areas A, C, D & E. Because properties in Indigenous communities do not generally pay local property taxes, this funding mechanism is not suitable for services provided to those communities.

To address this, the NCRD should consider a hybrid cost-sharing framework that encourages wider participation in the regional service. This likely involves providing 9-1-1 and fire dispatch on a fee-for-service basis, with Indigenous communities being able to opt-in or opt-out as they wish. As discussed in section 5.5, costs can be allocated to these communities based on population or another metric such as the number of dwellings.

Cost-sharing arrangements with Indigenous Governments should be part of a blended cost sharing framework, reflecting each community's governance structure and service readiness.

Recommendation 19: Collaborative discussions with all potential participating agencies, including Indigenous Governments, should be undertaken early in the planning process to develop regionally acceptable cost-sharing principles that promote consistent service availability.

5.6.2. Call Answer Levy

One mechanism to support 9-1-1 service funding is a Call Answer Levy (CAL), which places a monthly fee on telephone services to help recover the costs of emergency call answering. The levy is currently available only on regulated TELUS and CityWest landline services, with the telephone company receiving a fee for administering and collecting the CAL through subscriber bills.

This approach provides a dedicated funding stream tied directly to the use of telecommunications services. However, it provides very limited funding due to the declining number of landline subscribers, especially in rural and remote areas where mobile phone usage is more common.

The City of Prince Rupert collects a CAL on CityWest landlines as specified in the 9-1-1 service bylaw[22].

There is currently no mechanism in BC to apply a Call Answer Levy to wireless services, which further restricts the sustainability and equity of 9-1-1 funding when compared to other provinces. The UBCM has passed various resolutions requesting provincial action to enable a Wireless Call Answer Levy, including a resolution passed at its 2023 convention entitled "911 Emergency Communications Service Delivery".[23]

The Province of BC is expected to review and consider this recommendation as part of addressing the 9-1-1 service review discussed in section 5.1.5. As noted above, the NCRD should consider increasing its engagement with the UBCM and the Province of BC aimed at development of a province-wide 9-1-1 governance and funding program.

5.6.3. UBCM NG9-1-1 Grants and ISC Funding

The UBCM has provided one-time funding to incorporated municipalities and PSAPs in BC to support their NG9-1-1 transition. More information is available on the UBCM website[24]. Details of the initial 2023 funding program are provided in the Program Guide [5], which was updated in February 2025.

As part of the 2023 funding program, the NCRD and each incorporated municipality were allocated $45K in funding to support local community preparedness. Across the NCRD, this equates to a total allocated funding of $270K, although it is unknown how much of that funding has already been spent.

Eligible expenses are listed in the program guide and include addressing and mapping related costs and public education. Recurring operating expenses are not eligible under the UBCM NG9-1-1 grant programs.

Application-based grant programs were conducted in 2025 and 2026, and both have now closed. These programs provided the ability for local authorities and Indigenous Governments to apply for up to $45K in additional funding per community for local community preparedness. It is unknown whether additional UBCM NG9-1-1 grant funding will become available or under what conditions.

The potential exists for Indigenous Governments to also receive funding from Indigenous Services Canada (ISC) if they participate in municipal-type services provided by other local governments.

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[22] "The cost of providing the service established under Section 1 shall be funded by a call answer levy on any telephone system (land line or wireless) from all participants in the service and by property taxation on participants from within the City of Prince Rupert."

[23] See https://www.ubcm.ca/convention-resolutions/resolutions/resolutions-database/911-emergency-communications-service

[24] See https://www.ubcm.ca/lgps/next-generation-911

5.6.4. Other Funding Sources

To support the establishment and long-term sustainability of 9-1-1 services in the NCRD, alternative funding sources may be needed. In addition to pursuing NG9-1-1 focused provincial and federal grants, additional grant programs may be available to offset both one-time implementation costs and ongoing operational expenses.

The NCRD could also explore one-time investment opportunities or identify sector-specific contributions from regional industries such as tourism or the Prince Rupert Port Authority.

Action by the Province of BC to establish a provincial 9-1-1 governance and funding model could result in the availability of further application-based grants targeted at the implementation, enhancement and/or operation of 9-1-1 services in un-served or under-served areas. A similar application-based funding mechanism is in place in Alberta [7].

5.7. Project Management and Coordination

The phased roadmap presented in this report identifies the major activities required to establish a regional NG9-1-1 service within the NCRD. While the implementation phases describe *when* communities may transition to the service, the activities below describe *how* the implementation program should be managed. Although presented sequentially, many of these activities will occur concurrently throughout the implementation program.

Governance

The implementation program should begin with confirmation of the participating communities and establishment of the governance structure that will oversee delivery of the roadmap. This includes confirming project sponsorship, establishing a steering committee and technical working groups, defining decision-making processes, and continuing engagement with participating municipalities, Indigenous Governments, emergency service providers and provincial partners.

Key activities include:

- Establishing project governance and decision-making structures.
- Confirming participating communities and implementation scope.
- Forming technical and operational working groups.
- Continuing engagement with municipalities, Indigenous Governments, emergency service providers and provincial partners.

Capability Development

Prior to implementation, the capabilities required to support NG9-1-1 service should be developed and validated. This includes completing addressing and GIS improvements, developing operating procedures, confirming emergency response boundaries, establishing service agreements,

implementing technical integrations, and providing training for emergency responders and operational personnel.

Key activities include:

- Completing addressing and GIS improvements.
- Developing operational procedures and response protocols.
- Confirming emergency response boundaries.
- Establishing service agreements.
- Service Administrative Processes.
- Completing technical integration, testing and training.

Implementation

Once the required capabilities have been established, each implementation phase can transition to operational service. Activities during this stage include system testing, operational validation, service cutover, public education, and coordinated transition of participating communities while maintaining existing emergency calling arrangements until the new service is fully operational.

Key activities include:

- System and operational testing.
- Service cutover and transition planning.
- Public education and stakeholder communications.
- Validation of operational readiness.
- Transition of participating communities.

Operations

Following implementation, the NCRD should monitor service performance, evaluate lessons learned, and continue engagement with participating agencies to support continuous improvement. As additional communities become operationally and technically ready, subsequent implementation phases can proceed using the same governance and implementation framework.

Key activities include:

- Monitoring service performance.
- Reviewing lessons learned.
- Updating operational procedures as required.
- Continuing stakeholder engagement.
- Billing and administrative duties.

Recommendation 20: Once a decision is made to implement 9-1-1 service, the NCRD should establish a formal NG9-1-1 implementation program to oversee the recommended phased roadmap. The implementation program should be supported by dedicated project

governance, technical and operational working groups, ongoing engagement with participating municipalities, Indigenous Governments and emergency service providers, and an implementation plan for each phase to ensure communities transition when they are operationally and technically ready.

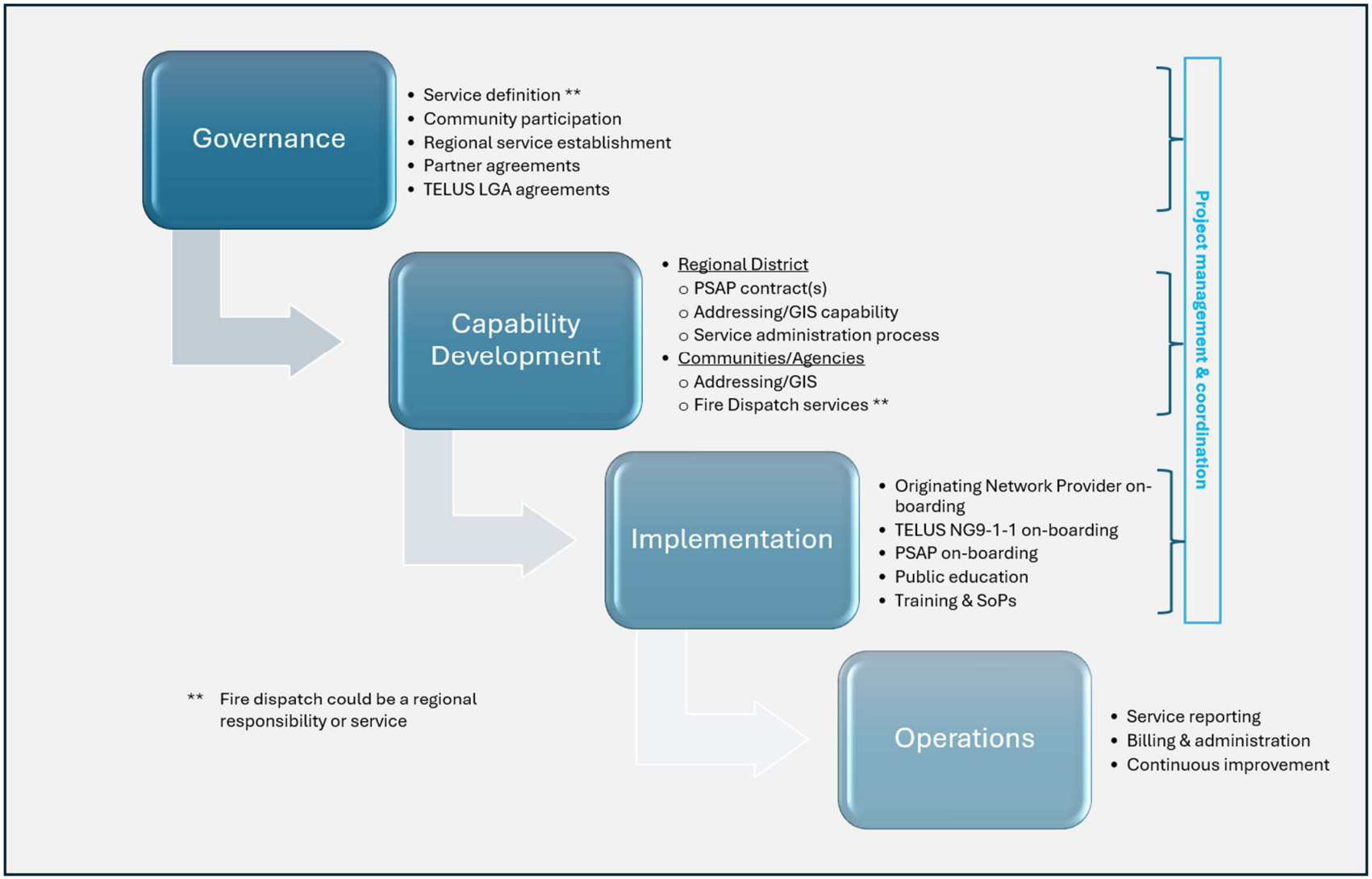


Figure 6. 9-1-1 Service Implementation Process Per Phase

5.7.1. Timeline Summary

Figure 7 below provides a high-level representation of the proposed implementation program, illustrating the major workstreams associated with each phase and their general sequencing. Many activities can occur concurrently, and later phases may proceed in parallel where dependencies permit. The timeline is intended to illustrate the relationship between implementation activities and should not be interpreted as a detailed project schedule.

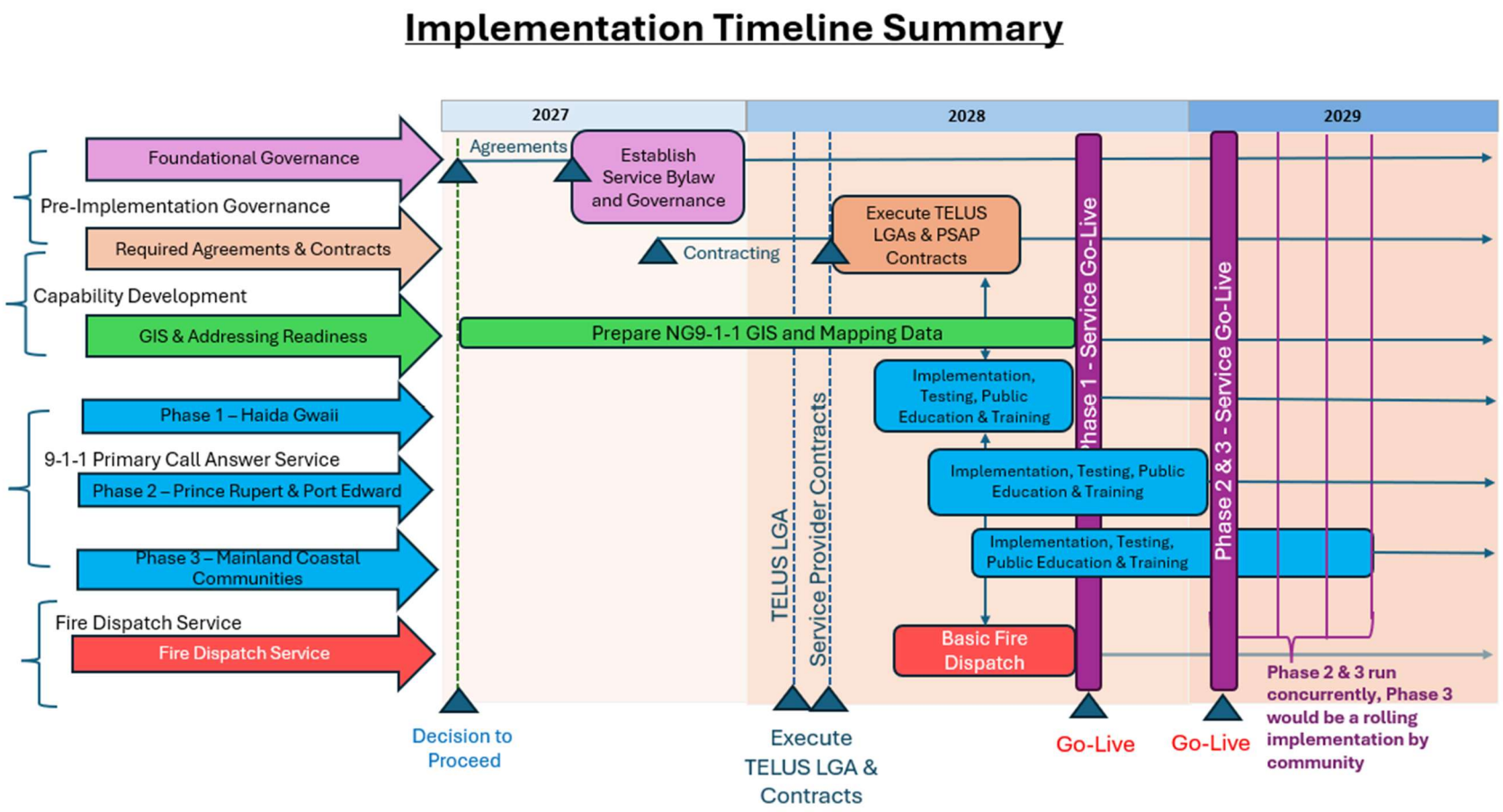


Figure 7. Implementation Timeline Summary

6. Conclusions and Recommendations

6.1. NG9-1-1 Primary Call Answer Service

This feasibility assessment concludes that establishing a regional Next Generation 9-1-1 primary call answer service within the NCRD is achievable, practical and justified. While emergency communications services currently exist throughout the region, they have developed independently and vary considerably between communities. As a result, residents and visitors do not have consistent methods to access emergency services, and the service available depends largely on where an emergency occurs. These inconsistencies create avoidable public safety risks and place additional burdens on callers, responders, and emergency communications personnel.

Implementing NG9-1-1 Service

NG9-1-1 represents a significant modernization of emergency communications within the NCRD. More importantly, it provides a practical means of addressing longstanding service gaps that cannot be resolved through incremental improvements to existing emergency calling arrangements.

This study has demonstrated that NG9-1-1 can be implemented using existing telecommunications infrastructure, established service providers, and proven governance models currently used elsewhere in British Columbia. The recommended approach is for the NCRD to establish NG9-1-1 as a regional service and contract primary call-answer services to an existing NG9-1-1-compliant Public Safety Answering Point (PSAP). This approach provides access to professional emergency call-taking services while avoiding the substantial capital and ongoing operating costs associated with establishing a standalone PSAP within the region.

A phased implementation strategy is the most practical approach. It recognizes the varying levels of governance readiness, addressing and GIS mapping maturity, operational capability and funding capacity that exist across participating communities while providing a clear path toward a common long-term vision of region-wide emergency access. Haida Gwaii is the logical first phase due to its population, level of regional collaboration, existing addressing initiatives, and relative readiness for implementation.

Benefits of NG9-1-1 Service for the Region

The greatest public safety benefit of NG9-1-1 is the automatic delivery of caller location information. Today, emergency responders throughout most of the NCRD rely heavily on callers to accurately describe their location. In remote, coastal and wilderness environments, this can be difficult or impossible, particularly when callers are distressed, unfamiliar with the area, injured, or unable to communicate effectively. NG9-1-1 significantly improves the ability of emergency responders to locate and assist people in need.

Additional benefits include:

- A single, universally recognized emergency number available throughout participating communities.
- Consistent and professionally managed emergency call-answer service.
- Reduced dependence on local knowledge of emergency numbers and agency responsibilities.
- Improved interoperability between police, fire, ambulance, and other emergency service providers.
- Enhanced support for visitors, tourists and transient populations who reasonably expect access to 9-1-1 service.
- Access to future NG9-1-1 capabilities, including Real-Time Text (RTT), improved location services, and enhanced data sharing between emergency communications agencies.
- Greater regional coordination, governance consistency, and service performance oversight.

Over time, implementation of NG9-1-1 will also create opportunities to standardize emergency communications practices, strengthen mutual aid arrangements, improve situational awareness during major incidents and support broader regional emergency management objectives.

Risks of Maintaining the Current State

Maintaining the current approach would perpetuate significant gaps in emergency calling and service consistency. Residents and visitors would continue to rely on a patchwork of emergency numbers, local call-answer arrangements and varying dispatch practices that differ between communities. The absence of consistent caller location information would remain one of the most significant limitations affecting emergency response throughout much of the region.

Continued reliance on existing arrangements also increases the risk that the NCRD will fall further behind emerging emergency communications standards and practices. While communities elsewhere in British Columbia continue transitioning to NG9-1-1 service, residents of the NCRD would remain disadvantaged by fragmented emergency calling, limited interoperability, and reduced access to evolving public safety technologies.

The question facing the NCRD is therefore not whether NG9-1-1 is technically feasible or operationally achievable. The assessment demonstrates that it is. The fundamental decision is whether the NCRD and its partner communities wish to proceed with a phased implementation strategy that provides equitable emergency access, improves public safety outcomes, and aligns the region with modern emergency communications standards

6.2. Fire Dispatch Service Type and Governance

This study has identified the need for expansion of fire dispatch capabilities as part of the implementation of 9-1-1 service in the NCRD.

Fire dispatch service can be implemented on an opt-in/opt-out basis by individual communities or fire departments. However, the value of 9-1-1 is maximized when the public can access all emergency services in a particular jurisdiction through 9-1-1. Interoperability and coordination between fire departments is also significantly improved when all agencies in geographic proximity to each other participate in the same service.

The key questions related to fire dispatch service are:

- What type of fire dispatch service should be implemented in a particular community?
- What role should the NCRD play in the establishment and operation of fire dispatch service?
- How should the service be delivered and by whom?

Type of Fire Dispatch Service

Section 5.3 discussed the potential for two types of fire dispatch service, which are summarized in the table below.

Table 21. Fire Dispatch Service Comparison

Criteria	Basic Fire Dispatch	Enhanced Fire Dispatch
Harmonized Fire Dispatch Service	Yes	Yes
Call Delivery via NG9-1-1	No, but could be a later enhancement.	Yes.
Location Delivery	No, but could be a later enhancement.	Yes.
Caller and Supplemental Info Delivery	No, but could be a later enhancement.	Yes,
Responder Notification	One-way via telephone, SMS message or notification app.	Adds radio-based voice paging and notification.
Field Support During Fire Event	Minimal. Contact via telephone if required.	Real-time radio-based support and situational awareness.
Costs	Minimum ongoing cost ($250/month) up to 1000 residents.	Requires radio infrastructure and fire dispatch connection. Ongoing cost depends on event volume.
Risks	Limitations in fire crew ability to contact dispatch.	Complex implementation may be challenging for small fire departments.

As noted in section 5.3 above, the fire departments on Haida Gwaii that have implemented fire dispatch through Northern 9-1-1 are satisfied with the service and believe it provides significant improvement relative to previous arrangements. However, maximum operational benefit would be obtained if all departments had the same dispatch service provided by the same dispatch centre.

While implementing Enhanced fire dispatch brings additional costs, it also provides additional value to the fire departments. The set of dispatch service providers willing or able to provide service to the NCRD departments will be larger as this type of service is more prevalent across BC.

Role of the Regional District in Fire Dispatch

The benefits of having a region-wide entity overseeing the fire dispatch service are as follows:

- Ensure dispatch service is standardized, including development of common standard operating procedures (SoPs) and training.

- Ensure mutual aid agreements are established, and fire response boundaries are clearly defined.
- Fire departments would move away from individual service provider agreements, which could reduce the agency's effort and provide some cost efficiencies.
- Fire dispatch could be more easily established where it does not exist.

This is most straightforward and beneficial on Haida Gwaii because of the existing dispatch service arrangements and the roles of the NCRD and municipalities in administering five (5) of the seven (7) departments.

Further engagement with the communities and fire departments in phase 2 and 3 will be needed to assess the merits of including them in a regional fire dispatch service. As noted in section 5.3.3 above, Basic fire dispatch costs have been estimated for the coastal mainland communities but excluded for Prince Rupert and Port Edward as that service is existing.

Fire Dispatch Service Delivery

Section 5.4 discusses three alternatives for PSAP service providers:

- Standalone PSAP in the NCRD
- Outsourcing to other PSAPs in BC
- Specialized emergency service providers

A standalone PSAP is expected to be cost prohibitive unless significant external funding or subsidization is available. However, this approach would provide the opportunity to maintain and modernize the PSAP operated by Prince Rupert Fire.

The other two alternatives will require the NCRD to conduct outreach to potential service providers to determine service offerings, costs, and implementation timelines. The timelines under which another fire dispatch centre could provide service to the NCRD are expected to be longer than with a specialized service provider such as Northern 9-1-1.

6.3. Recommendations

Table 27 below provides a summary of the recommendations and required actions as discussed above. This is organized into the following categories:

- B – Business and/or Strategic
- G – Governance and Funding
- P – Implementation Program and Project Management
- O – Operational
- M – GIS, Mapping and Addressing

The following additional information is provided:

- Cross reference to the section of the report where the recommendation is introduced and/or discussed.
- Cross reference to the applicable phase or phases as discussed in section 5.
- Indication of the timing for initiating the work that applies to each recommendation. Where a recommendation is dependent on an earlier recommendation or not known, the timing is denoted as TBD.

Some of the recommendations apply to the NCRD directly, while others are more generally applicable to other stakeholders (Indigenous Governments, emergency response agencies) in the NCRD. GIS mapping and addressing requirements generally apply to multiple entities unless otherwise specified.

Table 22. Summary of Recommendations

#	Section	Type	Recommendation	Phase	Timing
		B	Business and/or Strategic Recommendations		
1	2.5	B	In considering the implementation of a regional 9-1-1 service, the NCRD and its communities should only pursue the implementation of NG9-1-1 primary call answer service as opposed to other forms of 9-1-1 service.	All	< 1 year
6	5.0	B	The NCRD should adopt a phased implementation roadmap for a regional 9-1-1 service, enabling communities to transition to 9-1-1 services over time as they are ready, while progressively expanding toward consistent, region-wide service delivery.	All	< 1 year
9	5.1.4 5.4.1	B	The NCRD and the City of Prince Rupert should discuss the potential for the Prince Rupert PSAP to provide 9-1-1 and fire dispatch service for the rest of the NCRD as soon as possible.	All	< 1 year
10	5.1.4 5.4.1	B	The NCRD should undertake discussions with the CCRD to explore collaboration on the establishment of 9-1-1 and fire dispatch service and selection of service providers.	All	< 1 year
12	5.2.1	B	Haida Gwaii should be pursued as the first phase of 9-1-1 service implementation.	1	1 – 2 years
14	5.3.1	B	As part of the first phase of establishing 9-1-1 service, a consistent fire dispatch service for Tlell, Sandspit and Old Massett should be established.	1	1 – 2 years
15	5.3.2	B	Once a decision to implement 9-1-1 service has been made, further consultation with fire departments and dispatch service providers should be undertaken to assess costs and interest in implementing Enhanced fire dispatch service.	All	1 – 2 years
18	5.5.3	B	Unless external funding sources or subsidies were available, the NCRD should not consider establishing a standalone PSAP but should plan to contract with a third-party call answer and dispatch service provider (PSAP).	All	< 1 year
		G	Governance and Funding Recommendations		

#	Section	Type	Recommendation	Phase	Timing
7	5.1	G	9-1-1 primary call answer service should be established by the NCRD as a regional extended service and implemented region-wide to fully realize the desired benefits.	All	1 – 2 years
8	5.1.3	G	Further engagement with and Indigenous Governments and fire departments should be undertaken to confirm interest in participating in a regional 9-1-1 primary call answer and fire dispatch service and the preferred form and scope of service agreements.	All	< 1 year
11	5.1.5	G	The NCRD and its communities should engage with the UBCM and the Province of BC to encourage the development of a province-wide 9-1-1 governance and funding support program, driven by the needs of currently un-served or under-served areas.	All	< 1 year
16	5.3.3	G	To fully realize the benefits of implementing 9-1-1 service for Haida Gwaii, the NCRD should include Basic fire dispatch in the regional service provided on Haida Gwaii.	1	1 – 2 years
19	5.6.1	G	Collaborative discussions with all potential participating agencies, including Indigenous Governments, should be undertaken early in the planning process to develop regionally acceptable cost-sharing principles that promote consistent service availability.	All	< 1 year
		P	Programmatic Recommendations		
17	5.4	P	Once the service requirements are defined and a decision made to move forward, the NCRD should evaluate potential Primary and Secondary PSAP service providers, including PSAPs in BC and other specialized service providers to determine and assess costs, timelines, governance models and service offerings.	All	1 – 2 years
20	3.7	P	Once a decision is made to implement 9-1-1 service, the NCRD should establish a formal NG9-1-1 implementation program to oversee the recommended phased roadmap. The implementation program should be supported by	All	1 – 2 years

#	Section	Type	Recommendation	Phase	Timing
			dedicated project governance, technical and operational working groups, ongoing engagement with participating municipalities, Indigenous Governments and emergency service providers, and an implementation plan for each phase to ensure communities transition when they are operationally and technically ready.		
		M	GIS, Mapping and Addressing Recommendations		
2	4.3.1	M	The NCRD and communities should pursue a set of short-term GIS enhancements that will benefit the current state, prior to implementation of NG9-1-1 service.	0	< 1 year
2	4.3.1	M	Review the provincial DRA to ensure all existing roads are included. Create missing road centreline data.	0	< 1 year
2	4.3.1	M	Define response boundaries and service areas for all Fire Departments.	0	< 1 year
2	4.3.1	M	Ensure all sites and structures and access points are properly assigned and attributed to the road network where available.	0	< 1 year
2	4.3.1	M	Share all existing GIS datasets with GeoBC through the GeoBCInfo@gov.bc.ca email.	0	< 1 year
2	4.3.1	M	Review English translation or pronunciation driven spelling for street names such that can be entered into existing emergency systems used by police, fire, and ambulance.	0	< 1 year
2	4.3.1	M	Work with GeoBC to determine how to segment areas of the road centerline where site addressing cannot be sequentially assigned.	0	< 1 year
3	4.3.2	M	The NCRD and communities should make the necessary preparations, including budget and resource provisions, to generate NG9-1-1 compliant GIS mapping and addressing data prior to the national transition to NG9-1-1 Geodetic Call Routing.	All	2-3 years

#	Section	Type	Recommendation	Phase	Timing
4	4.3.2	M	The NCRD and communities will need to generate addressing data for all areas requiring 9-1-1 service in MSAG format if it implements NG9-1-1 prior to implementation of Geodetic Call Routing.	All	1-2 years
5	4.3.2	M	The communities on Haida Gwaii should collaborate on achieving NG9-1-1 addressing and mapping compliance and identify a community or organization that can take on the role of coordinating and supporting all communities in this work.	1	1-2 years

7. Appendices

- Glossary
- References
- Appendix A – Additional Background on 9-1-1 Services
- Appendix B – Next Generation 9-1-1 Services
- Appendix C – Secondary Fire PSAPs in BC
- Appendix D – TELUS NG9-1-1 LGA and IGB Agreements
- Appendix E – Detailed Cost Estimates and Allocations
- Appendix F – Implementation Dependences

Glossary

Term	Common Name/AKA	Description
ALI	Automatic Location Identification	ALI is the automatic display at the PSAP of the caller's telephone number, the address/location of the telephone, and supplementary emergency services information of the location from which a call originates.
ANI	Automatic Number Identification	ANI is the telephone number associated with the call origination, originally associated with the access line of the caller.
B9-1-1	Basic 9-1-1	B9-1-1 is an emergency telephone system which automatically connects 9-1-1 callers to a designated answering point. Call routing is determined by originating telephone service provider only. Basic 9-1-1 may or may not support ANI and/or ALI.
BCEHS	British Columbia Emergency Health Services	BCEHS is the provincial organization that provides emergency health services and ambulance services in British Columbia. BCEHS is part of the Provincial Health Services Authority. BCEHS runs three Secondary PSAPs which answer calls transferred from all the Primary PSAPs in BC. BCEHS is the sole dispatcher of ambulances in the province. The PSAP operators for BCEHS have been trained specifically for calls that are of a medical nature.
CAL	Call Answer Levy	CAL is a monthly fee charged on phone lines to fund 9-1-1 services. It can apply to landline and cellular phone lines.
CRTC	Canadian Radio-Telecommunications Commission	The CRTC regulates and supervises Canadian broadcasting and telecommunications services. The CRTC's mandate is to promote Canadian culture and ensure that Canadians have access to quality communication services.
CAD	Computer Aided Dispatch	CAD is a computer-based system which aids PSAP Telecommunicators by automating selected dispatching and record keeping activities.
E9-1-1	Enhanced 9-1-1	E9-1-1 is a telephone system which includes network switching, database(s) and PSAP elements capable of providing automatic location identification data, selective routing, selective transfer, fixed transfer, and a call back number for 9-1-1 calls.
E-Comm	E-Comm 9-1-1	E-Comm 9-1-1 is both a Primary and Secondary PSAP. As a Primary PSAP, E-Comm 9-1-1 answers 9-1-1 calls if the

		caller is in Metro Vancouver and other regional districts and communities spanning from Vancouver Island to the Alberta border and US border to north of Prince George. As a Secondary PSAP, E-Comm provides emergency dispatch services for 33 Police agencies and 40 Fire departments in BC.
ECC	Emergency Communication Centre	ECC is a facility designated to receive and process requests for emergency assistance, which may include 9-1-1 calls, determine the appropriate emergency response based on available resources, and coordinate the emergency response according to a specific operational policy. ECC can be used interchangeably with PSAP.
EIDO	Emergency Incident Data Object	EIDO is a JSON-based (JavaScript Object Notation) object that is used to share emergency incident information between and among authorized entities and systems. NENA has adopted the JSON-based EIDO (Emergency Incident Data Object) for sharing incident information among authorized NG9-1-1 entities and systems.
ESInet	Emergency Services IP Network	ESInet is a managed IP network that is used for emergency services communications, and which can be shared by all public safety agencies. It provides the IP transport infrastructure upon which independent application platforms and core services can be deployed, including, but not restricted to, those necessary for providing NG9-1-1 services. ESInets may be constructed from a mix of dedicated and shared facilities. ESInets may be interconnected at local, regional, state, federal, national, and international levels to form an IP-based internetwork (network of networks). The term ESInet designates the network, not the services that ride on the network.
ESRD	Emergency Services Routing Digit	ESRD is a 10-digit North American Numbering Plan number that uniquely identifies a base station, cell site, or sector that is used to route wireless emergency calls through the network. The ESRD may also be used by the PSAP to retrieve the associated ALI data.
ESZ	Emergency Service Zone	An ESZ (Emergency Service Zone) is a geographic area with a defined police, fire and ambulance response.
	Fire Dispatch	Refers to a service provider that collects fire event details on behalf of fire departments in the NCRD and initiates the notification of fire response resources.

	Geodetic Call Routing	In NG9-1-1, calls will be routed based on the callers' latitude and longitude coordinates. This information will be more accurate to a caller's true location, which will assist PSAPs in responding quickly to emergencies.
GIS	Geographic Information Systems	GIS is a system for capturing, storing, displaying, analyzing, and managing data and associated attributes which are spatially referenced. Related Terms: GIS Attribute - Tabular information about features contained in GIS data. GIS Data Layer - A spatial dataset containing a common feature type. GIS Data Provider - A person or group who is responsible for maintaining authoritative GIS data for a given service area. GIS Feature - Representation of a real-world object in a GIS as a single geometric object
IETF	Internet Engineering Task Force	The IETF develops and approves technical standards for the Internet and Internet or IP-based services.
ILEC	Incumbent Local Exchange Carrier	ILEC is a telephone company that had the initial telephone company franchise in an area. Related Terms: A CLEC (Competitive Local Exchange Carrier) A local exchange carrier that competes with other established carriers and provides exchange access services.
InterCAD		InterCAD is a system that allows essential information provided by 9-1-1 callers to be shared immediately between BCEHS and the Fire Service.
IoT	Internet of Things	IOT devices are capable of communication using Internet protocols.
IP	Internet Protocol	IP is the method by which data is sent from one computer to another on the Internet or other networks.
JRCC	Joint Rescue Coordination Centre	JRCC is a centre that coordinates search and rescue (SAR) operations. JRCCs are staffed by personnel from multiple agencies, including the military, civilian services, and the Coast Guard.
MSAG	Master Street Address Guide	The MSAG is a standardized database that lists all valid street names, address ranges, and emergency service zones (ESZs) in a 9-1-1 service area. It ensures proper routing of 9-1-1 calls to the correct Primary and Secondary **PSAP.** In the future the MSAG may continue to be used to

		validate location data sent in the PIDF-LO (Presence Information Data Format – Location Object) format.
NENA	National Emergency Number Association	NENA is a nonprofit organization founded in 1982 with the mission to advance and modernize the 9-1-1 emergency communication system. It serves as “The 9-1-1 Association”, dedicated to improving emergency response.
NFPA	National Fire Protection Association	NFPA is a nonprofit organization that develops and publishes fire safety codes and standards. The NFPA's mission is to prevent injuries, deaths, and economic losses caused by fire, electricity, and related hazards.
NGCS	Next Generation Core Services	NGCS is the set of services needed to process a 9-1-1 call on an ESInet. The term NG9-1-1 Core Services includes the services and not the network on which they operate. See ESInet (Emergency Services IP Network).
NG9-1-1	Next Generation 9-1-1	NG9-1-1 is an IP-based system comprised of hardware, software, data, and operational policies and procedures that: (A) provides standardized interfaces from emergency call and message services to support emergency communications; (B) processes all types of emergency calls, including voice, data, and multimedia information; (C) acquires and integrates additional emergency call data useful to call routing and handling; (D) delivers the emergency calls, messages, and data to the appropriate public safety answering point and other appropriate emergency entities; (E) supports data or video communications needs for coordinated incident response and management.
NCRD	North Coast Regional District	NCRD is one of 27 Regional Districts in British Columbia and serves an area of 20,028 square kilometers including Haida Gwaii and communities along the North Coast from Port Simpson to Hartley Bay. It is run by a ten-member board representing the Regional District's various communities.
ONP	Originating Network Provider	ONP is a telecommunications company that operates the network where a 9-1-1 call originates. ONPs can provide wireline, wireless, or voice over Internet Protocol (VoIP) services. Related Terms: Originating Service Provider

		A telecommunications service provider (TSP) that operates the network where a 9-1-1 call originates. This network can be wireline, wireless, or voice over Internet Protocol (VoIP).
PIDF-LO	Presence Information Data Format – Location Object	PIDF-LO is specified in IETF RFC 3863. It provides a common presence data format for presence protocols and defines a new media type. A presence protocol is a protocol for providing a presence service over the Internet or any IP network. It also contains location information.
	Primary Call Answer	Refers to the initial point of answer for any emergency call made using a designated emergency number, including 9-1-1.
PSAP	Public Safety Answering Point	PSAP is a physical or virtual entity where 9-1-1 calls are delivered by the 9-1-1 Service Provider. Related Terms (see below): • Primary PSAP • Secondary PSAP • Alternate PSAP
	Primary PSAP	A PSAP to which 9-1-1 calls are routed directly from the 9-1-1 network.
	Secondary PSAP	A PSAP to which 9-1-1 calls are transferred from a Primary PSAP.
	NG9-1-1 PSAP	A PSAP capable of processing calls and accessing data services as defined in NENA's i3 specification, NENA-STA-010, and also referred to as an "i3 PSAP."
PSTN	Public Switched Telephone Network	The public switched telephone network is the aggregate of telephone networks that are operated by national, regional, or local telephony operators. It provides infrastructure and services for public telephone services, primarily supporting voice communications.
RTT	Real Time Text	RTT is a text messaging service that transmits one character at a time. Technology that allows consumers to send and receive IETF RFC 4103 text characters, as they are typed, as well as audio simultaneously.
RoIP	Radio over IP	RoIP refers to a technology that enables two-way radio communication to be transmitted over an IP network, essentially allowing radio signals to be sent digitally via the internet instead of traditional radio waves, providing greater reach and flexibility compared to traditional radio systems; it is essentially the application of Voice over IP (VoIP) on digital two-way radio networks.

RCMP	Royal Canadian Mounted Police	RCMP are the federal and national police service of Canada. They provide federal law enforcement and local policing on a contract basis to hundreds of municipalities and Indigenous Governments communities.
SOG/SOP	Standard Operating Guideline or Procedure	SOG or SOP is a written directive that provides a guideline or procedure for carrying out an activity.
TELUS		TELUS is a Canadian national telecommunications company that provides the 9-1-1 network that enables E9-1-1 service to most of BC. TELUS will also provide NG9-1-1 network services in BC under CRTC directive.
TOPS	TELUS Operator Services	A traditional operator-assisted calling service offered by TELUS. 9-1-1 dialed calls in the NCRD route to TOPS and are then subsequently transferred to the appropriate PSAP or emergency response agency, if known.
T9-1-1	Text with 9-1-1	T9-1-1 is a service available to members of the deaf, deafened, hard of hearing or speech impaired (DHHSI) community in Canada. During an emergency, T9-1-1 provides 9-1-1 call centres with the ability to converse via text messaging.
UBCM	Union of BC Municipalities	UBCM assists with policy making by providing a forum for local governments of BC to take a united position.
VHF	Very High Frequency	VHF is a range of radio waves (30 MHz to 300 MHz) used primarily for voice communications. VHF radio waves are used in many applications, including marine communication, two-way land mobile radio, and terrestrial radio broadcasts.
VoWiFi	Voice over WiFi or Wi-Fi Calling	A telecommunications feature that allows users to make and receive voice calls and text messages using a smartphone over a Wi-Fi network instead of a cellular network connection. It is typically used in areas with weak or no cellular coverage but where internet service is available. To function correctly, Wi-Fi Calling must be supported by both the user's device and mobile carrier. For 9-1-1 calls, Wi-Fi Calling relies on the location information registered with the carrier, as Wi-Fi networks do not inherently provide accurate caller location data.
VoIP	Voice Over Internet Protocol	VoIP is a method of placing voice calls using an internet connection instead of a traditional phone line or cellular network. It works by converting voice signals into digital data packets and transmitting them over the internet.

		VoIP calls can be made using computers, smartphones, tablets, or specialized VoIP phones. Common platforms include Skype, WhatsApp, Zoom, Microsoft Teams, and Google Voice. VoIP calling typically requires the user to: • Install a specific app or program • Create an account with a VoIP service provider • Be connected to the internet (via Wi-Fi, fibre, DSL, or mobile data) VoIP services often operate independently of your mobile carrier. Calls and messages may not use your regular phone number unless the service offers number integration or porting.

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[16] NFPA1720 National Fire Protection Association, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments (2020).

Appendix A – Additional Background on 9-1-1 Services

Availability of 9-1-1 Service in the NCRD by Service Provider

TELUS – Landline and Cellular

TELUS, as the Incumbent Local Exchange Carrier (ILEC) for most of BC, has provided traditional landline (wired) telephone service in the NCRD (mainland, coastal islands and Haida Gwaii) for many years. TELUS also provides wireless (cellular) coverage in the vicinity of Prince Rupert, Port Edward and the Highway 16 corridor to the east and provides limited wireless coverage on Haida Gwaii, primarily in the populated areas of Graham Island along the Highway 16 corridor and in the vicinity of Sandspit on Moresby Island.

Use of traditional landline telephone service has been declining significantly as cellular telephone service has become available in recent years.

All TELUS services in the NCRD rely on a linear fibre optic facility along Highway 16 between Prince Rupert and Prince George, which is backed up by a microwave radio connection that can support critical services if the fibre route fails. To deliver services to Haida Gwaii and isolated coastal communities in the NCRD, TELUS uses CityWest fibre (part of the Connected Coast initiative) with microwave radio backup for critical services should fibre facilities fail.

Despite the microwave backup, concerns exist regarding the redundancy and reliability of the CityWest fibre across Hecate Strait due to frequency failures during severe weather or infrastructure outages. Fibre facility failure significantly reduces bandwidth available to internet and other broadband service users. To address these concerns, TELUS is considering future use of a planned new undersea fibre facility recently announced by the Province of BC and Gwaii Tel[25].

Dialling 9-1-1 from TELUS services in the NCRD

TELUS provides the existing province-wide E9-1-1 service as directed and regulated by the CRTC. TELUS has segmented its service area in BC into a series of Emergency Service Zones (ESZ), which define the routing of 9-1-1 calls to PSAPs. ESZ 06911, which includes all of the NCRD, is currently classified as “unserved” from the perspective of the TELUS E9-1-1 service.

However, Basic 9-1-1 (B9-1-1) service is available in Prince Rupert, Port Edward and the immediate vicinity. This means that 9-1-1 calls made on the TELUS cellular network in that area will route via CityWest to the Prince Rupert PSAP as discussed below.

Outside this B9-1-1 area, when a 9-1-1 the originates from a TELUS landline or cellular phone, the call will be connected directly to TELUS Operator Services (also known as TOPS) who will use either

[25] https://news.gov.bc.ca/releases/2026CITZ0003-000262

subscriber records (for landlines) or subscriber-entered emergency address (for cellular) to route the call to the correct PSAP.

This 9-1-1 calling arrangement has the same limitations described in section 2.2 for 9-1-1 Default Routing. Default routing of 9-1-1 dialed calls in the NCRD to TOPS does not constitute "true" 9-1-1 service, as TOPS does not receive caller location and may not be able to quickly or correctly route the call to the appropriate PSAP or emergency response agency**.**

Other Cellular Service Providers

All national wireless service providers (TELUS, Rogers, Freedom and Bell) provide cellular services in at least some parts of the NCRD. Other than TELUS, most are limited to providing service in the immediate vicinity of Prince Rupert, Port Edward and the Highway 16 corridor to the east. Non-TELUS customers will roam onto TELUS infrastructure when outside of their home network coverage.

Dialling 9-1-1 from other cellular services in the NCRD

Cellular networks currently provide limited 9-1-1 emergency calling capabilities in the NCRD. For Prince Rupert, Port Edward and the surrounding area, all 9-1-1 dialled calls are routed via the CityWest network to the Prince Rupert PSAP.

9-1-1 calls from cellular phones outside of Prince Rupert's 9-1-1 service area are routed to operator services for the originating service provider. An operator will manually attempt to connect the caller with operator services for the ILEC (TELUS) who will then try to connect the caller to the appropriate Primary or Secondary PSAP. This 9-1-1 Default Routing arrangement introduces additional call transfers delays and other risks as noted in section 2.1.2 above.

CityWest Telephony Services

CityWest provides landline telephone service on an Incumbent Local Exchange Carrier (ILEC) basis in the City of Prince Rupert. CityWest also provides Competitive Local Exchange Carrier (CLEC) telephone and broadband services in Port Edward and Metlakatla - communities in which TELUS is the ILEC.

Dialling 9-1-1 from CityWest services in the NCRD

All landline and wireless 9-1-1 calls from Prince Rupert and the immediate surrounding areas are routed by CityWest to the Prince Rupert PSAP as B9-1-1 calls.

CityWest is expanding broadband access across the NCRD through the Connected Coast project, installing subsea fibre to landing sites along the coast and working with communities and local co-operatives to extend service. While the project aims to deliver a full suite of services—including internet, television, and telephony, CityWest representatives have confirmed that in areas outside of Prince Rupert, Port Edward and Metlakatla where telephony services are currently available, 9-1-1 is not functional. Instead of connecting to emergency services, callers hear a recorded message stating that 9-1-1 service is unavailable.

CityWest, as a Competitive Local Exchange Carrier (CLEC) in various parts of BC, is already interconnected to the TELUS NG9-1-1 network. However, this interconnection currently does not yet extend to providing live 9-1-1 services in NCRD communities other than the B9-1-1 service provided Prince Rupert and the immediate surrounding areas.

VoIP and Wi-Fi Calling Services

9-1-1 calls from VoIP and Wi-Fi Calling services will route to Northern 9-1-1 as the designated default 9-1-1 call answer provider in Canada. These services require a broadband internet connection and provide the equivalent of Basic 9-1-1 service that does not automatically deliver caller location.

Mascon is a partner and subsidiary of TELUS that provides internet and broadband services in small communities in BC, including Daajing Giids, Masset, Old Masset, Tow Hill, Skidegate, Sandspit, Tlell, Lawn Hill and Port Clements. In these communities they provide a VoIP service that will deliver 9-1-1 calls to Northern 9-1-1[26].

Low Earth Orbit Broadband Satellite Services

LEO satellite usage for broadband internet access is increasing rapidly across the NCRD, particularly in remote and isolated communities.

Starlink is a satellite internet service operated by SpaceX that provides broadband connectivity in areas where traditional cable, fiber, or cellular networks are unavailable or unreliable. provides offers High-speed internet access for homes, farms, businesses, schools, and community facilities located beyond the reach of conventional broadband networks and mobile plans that support connectivity for RVs, remote work sites, emergency response, and travel in areas with limited communications coverage.

Starlink is being used by many residents, visitors and first responders in the NCRD to support cellular Wi-Fi calling, as discussed above, and other internet-based messaging and communications services including VoIP telephone service.

Satellite Direct-to-Mobile Services

With satellite direct-to-cell services expanding in Canada, mobile users in remote communities are gaining greater access to voice, text, and data without relying solely on traditional cellular infrastructure. These developments will enhance coverage, reliability, and emergency communication accessibility in many hard-to-reach coastal and rural areas.

Rogers Text to 9-1-1 Satellite Service

[26] https://mascon.ca/netcall-emergency-911-limitations-may-exist/

In July 2025, Rogers launched a new Text to 9-1-1 over Satellite service[27]. This service allows Rogers Satellite customers to communicate with an emergency service operator by using text messages services (SMS) from their device.

Rogers has partnered with Northern 9-1-1 to receive all Canadian 9-1-1 SMS messages. Northern 9-1-1 call takers will then connect with local emergency centres (using voice) to request emergency services. The user location will be triggered at the time of the initial 9-1-1 SMS and will be provided by the Northern 9-1-1 call taker upon engaging the local emergency centre.

This initiative reflects a growing trend of expanding access to advanced communications technologies, enhancing connectivity and emergency service accessibility for rural and remote communities across Canada.

Apple Emergency SOS Satellite Service

Apple Emergency SOS via Satellite[28] is a safety feature available on iPhone 14 and later models that allows users to contact emergency services when they are outside both cellular and Wi-Fi coverage. Instead of relying on a mobile network, the iPhone connects directly to a satellite to send critical emergency information.

Apple uses a relay center that receives the satellite message and then contacts the appropriate PSAP on behalf of the caller. In Canada, this relay function is provided by Northern 9-1-1.

Connected Coast Initiative

The Connected Coast is a subsea fibre-optic backbone project launched in 2018 as part of the provincial and federal Connecting British Columbia and Connect to Innovate programs. Jointly led by CityWest and the Strathcona Regional District, the project is implementing over 3,400 km of coastal subsea cable, stretching from Prince Rupert through Haida Gwaii, around Vancouver Island, and south toward Vancouver, reaching 139 coastal communities. Progress on infrastructure deployment can be tracked through a live build status map.[29]

For the North Coast Regional District, a reliable fibre backbone can support delivery of many broadband services that support emergency communications telehealth, distance education and economic development. However, some communities may lack last-mile connectivity requiring engagement with CityWest or local ISPs to bring service directly to homes and businesses. Without this, communities remain underserved despite proximity to the backbone infrastructure.

[27] https://www.rogers.com/mobility/satellite and https://www.rogers.com/support/mobility/satellite-faq#what-devices-are-compatible-for-rogers-satellite
[28] https://support.apple.com/en-us/101573
[29] https://connectedcoast.ca/map/

New Haida Gwaii Fiber Facility

The GwaiiTel Haida Gwaii subsea fibre-optic project will deliver a dedicated, high-capacity connection between Haida Gwaii and the mainland northern coast, creating a more reliable network for the region's digital infrastructure. The new fibre route will strengthen essential online services that communities rely on every day, including emergency response and public safety. The new facility was recently announced by the Council of the Haida Nation, GwaiiTel, the Northern Development Initiative Trust (NDIT) and the Province of BC[30].

9-1-1 Caller Location Delivery

In emergency response, location is critical. A caller's ability to communicate what and where is the emergency can be compromised by stress, injury, or unconsciousness. When accurate location information is available, emergency services can rapidly deploy the appropriate police, fire, or medical units minimizing delays during time-sensitive incidents. For this reason, the automatic delivery of caller location has become one of the most pivotal components in the success of modern 9-1-1 systems.

With the Enhanced 9-1-1 (E9-1-1) service currently implemented across most of BC, landline and wireless 9-1-1 calls take different paths before reaching a Primary PSAP. 9-1-1 calls from traditional landlines transit the Public Switched Telephone Network (PSTN) until they arrive at a 9-1-1 selective router, which uses caller location information to ensure the call is sent to the appropriate Primary PSAP based on jurisdictional and service boundaries. Wireless 9-1-1 calls are connected directly to the 9-1-1 selective router and routed appropriately based on an estimate of the caller location.

Each E9-1-1 call that is routed to a PSAP is accompanied by two important pieces of information. Automatic Number Identification (ANI) provides information about phone number, civic address, type of service and name of the caller or business (for landlines). Automatic Location Identification (ALI) contains detailed information about the caller location with different information being provided depending on whether the call originates from a landline or wireless source.

Accurate and timely location information serves as the foundation for several critical operational functions:

- Rapid Deployment of Resources - Knowing the caller's precise location enables emergency responders to optimize travel time. Geographic information supports efficient routing decisions by factoring in distance, traffic conditions, environmental hazards, and road access, which helps reduce overall response times.
- Support for Non-Verbal or Disconnected Calls - When callers are unable to speak, or if the call is dropped, location data allows responders to be dispatched based on available

[30] BC Gov News

location information. This is critical for cases involving medical distress, language barriers, or unsafe environments.

Standardized civic addressing provides a consistent and verifiable reference for identifying locations. This is especially critical in regions where GPS signals may be unreliable or where formal address structures are incomplete or inconsistent.

There are four primary ways that caller location is automatically determined:

- Landline Phones – These have a static, pre-registered civic address. The location is known with high accuracy, which makes routing and dispatching relatively straightforward.
- Cellular Wireless Phones – These rely on a combination of GPS, Wi-Fi access points, and cell tower triangulation to estimate a caller's location. While generally effective, accuracy can vary significantly, particularly in areas where steep mountainous terrain, dense forests, and limited cell infrastructure can interfere with signal strength and location precision.
- VoIP Calls – Depend on the location that the user has manually registered with their provider. If not kept up to date, this can lead to routing errors or delayed response times.
- Cellular Over Wi-Fi – In areas with poor or no cellular coverage and available broadband, many users enable the Wi-Fi Calling feature. Wi-Fi Calling can successfully connect a user to 9-1-1 services; however, it introduces additional complexity to location determination. Depending on the device and service provider, the call may appear to originate from the location of the Wi-Fi router, from a previously registered address, or in some cases, from a default network location. For 9-1-1 calls made over Wi-Fi to be effective, it is crucial that users keep their emergency address information up to date with their carrier and that emergency systems can interpret the various location signals associated with Wi-Fi-assisted calling.

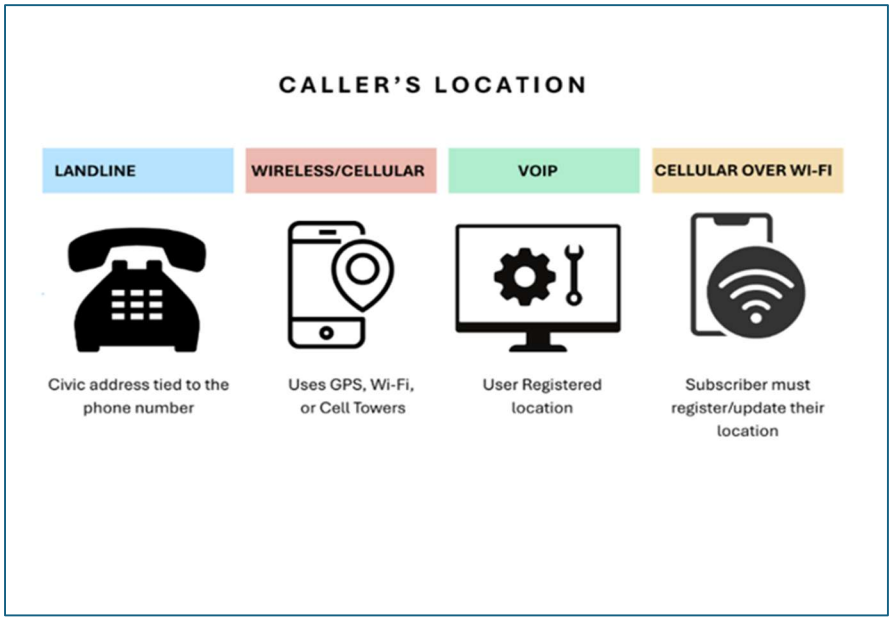


Figure 8. Primary Methods of Determining Caller Location

In a managed 9-1-1 environment, accurate and automated location information supports a range of operational and strategic functions. Location data integrates with Computer-Aided Dispatch (CAD) systems, enabling a range of critical functions that extend beyond the initial emergency response.

- Efficient Resource Allocation – The location information delivered with the call will determine the appropriate response agency based on geographic response boundaries. It also enables dispatch of the closest available emergency unit within that boundary, enabling routing decisions that account for local road conditions, hazards, or closures.
- Improved Caller Support - Dispatchers can better assist callers when familiar with the local geography, layout, or known landmarks. This is particularly important in areas with inconsistent or non-standardized addressing.
- Real-Time Response - Local information supports real-time tracking of incidents and emergency units, while also ensuring that accurate logs are maintained throughout the duration of a call.
- Post-Incident Review - Post-incident data supports detailed review, helping agencies assess response times, identify gaps, and improve procedures. Over time, this contributes to trend analysis, service planning, and continuous improvement.

Ultimately, caller location acts as the anchor point of emergency response. Without accurate location data, even the most capable responders and sophisticated dispatch systems cannot deliver help where it is needed.

Performance Metrics for Emergency Calling and Response

In most areas within BC where TELUS provides Enhanced 9-1-1 (E9-1-1) service, it provides response metrics, including call volumes and speed of call answer at both Primary and Secondary answering points. The current monthly reporting made available by TELUS includes the following metrics:

- Total calls answered
- Total calls answered <= 15 seconds
- Total calls answered <= 40 seconds
- Total calls answered > 40 seconds

The purpose of monthly reporting on these metrics is to help local government understand if PSAP performance is meeting rigorous call answer standards set out by NENA or in Service Level Agreements (SLAs) signed between local government and the 9-1-1 PSAP providers[31]. Without access to call metrics such as these it is difficult for governing bodies to ensure that residents are receiving

[31] North Island 9-1-1 Corporation / E-Comm 9-1-1 Call Answer Service Contract https://www.ni911.ca/sites/1/files/docs/ni911_192_20140725_ecomm_emergency_communications_call_answer_service.pdf

timely access to emergency services and that emergency responders are reaching incidents in a timely manner.

Another area where call metric measurement is of vital importance is to help identify when local emergency services may have been overwhelmed due to peak demand during extreme events (i.e. flooding or wildfires). Metrics showing the extent of call volumes during mass calling events can help local government account for PSAP call answer when creating emergency plans for disaster events.

NENA Standard for 9-1-1 Call Handling

The NENA Standard for 9-1-1 Call Processing (NENA-STA-020.1.2020 [3]) defines the performance metrics applicable to 9-1-1 calls handled by Primary and Secondary PSAPs. These are summarized in the figure below.

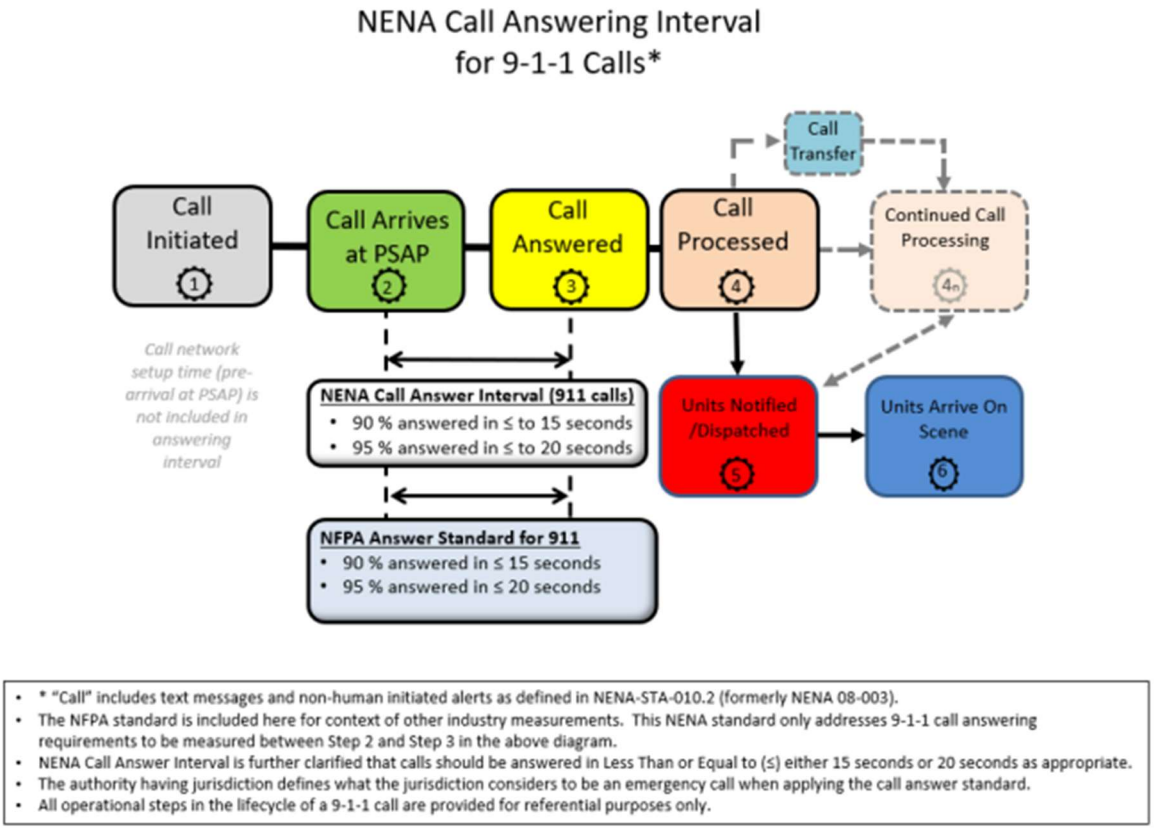


Figure 9. 9-1-1 Call Process and Performance Targets

NFPA Standards for Emergency Services Communications and Operations

The National Fire Protection Association (NFPA) develops and publishes standards for fire safety and fire protection services. The two standards that are most relevant to 9-1-1 PSAPs and should service as guidance for the establishment of 9-1-1 service by the NCRD are:

- NFPA 1225 – Standard for Emergency Services Communications (2022) [15].
- NFPA 1720 - Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments (2020) [16].

NFPA 1225 is a combination of earlier standards NFPA 1061 and 1221. It should also be noted that the NFPA requirements for 9-1-1 call handling in NFPA 1225 are harmonized with the standards published by the National Emergency Number Association (NENA) – specifically NENA-STA-020.1-2020 [3].

NFPA 1225

Although there are no mandated service levels for 9-1-1 and fire emergency call taking currently in place at the local/municipal, regional or provincial level in BC, the applicable industry guidance or best practice is NFPA 1225 section 15.4.1 which states *that "Ninety percent of events received on emergency lines shall be answered within 15 seconds..."*.

In addition, ECC staffing level should comply with NFPA 1225 section 15.3.1 which states "There shall be a minimum of two qualified telecommunicators on duty and present in the communications centre at all times".

In establishing a PSAP, the NCRD should target compliance with this standard and ensure sufficient staffing levels are in place and appropriate training implemented. Achieving an appropriate level of staffing will also reduce operational vulnerability due to attrition, illness or other unforeseen events.

Operational standards should target compliance with the following:

- 90 percent of calls on emergency lines will be answered within 15 seconds
- 95 percent of calls on emergency lines will be answered within 20 seconds
- 90 percent of call transfers will be completed within 30 seconds

NFPA 1720 – 2022

Compliance with this standard requires achievement of the following service levels:

- Alarm Call Answer
    - 95 percent of alarm calls answered in less than 15 seconds
    - 99 percent of alarm calls answered in less 40 seconds
- Alarm Call Processing
    - 95 percent of alarm calls processed for dispatch within 64 seconds
    - 99 percent of alarm calls processed for dispatch within 106 seconds

Appropriate staffing will allow for dedicated call answer resources that can improve adherence to the call answer time limits. A comprehensive training program will also reduce call processing and dispatch times and enable the PSAP to achieve the following response objectives:

- Turnout
    - Within 80 seconds of notification for fire and special operations response
    - Within 60 seconds of notification for EMS response
- Apparatus Response (First-in)
    - 90 percent within 240 seconds (first-in)
    - 90 percent within 360 seconds (second-in)
- Apparatus Response (full alarm)
    - 90 percent within 480 seconds (low/medium hazard)
    - 90 percent withing 610 seconds (high hazard)

Appendix B - Next Generation 9-1-1 Services

What is NG9-1-1?

NG9-1-1 stands for Next Generation 9-1-1, a modernization initiative for emergency communication networks and systems in the United States and Canada. Similar initiatives are underway in other countries, such as NG-112 in Europe. NG9-1-1 replaces legacy E9-1-1 infrastructure with a more advanced IP-based service and systems.

The key features and benefits of NG9-1-1 are as follows:

- Improved location Information and accuracy:
    - Uses GPS and other technologies to provide more precise caller location, especially from mobile devices, for every 9-1-1 call.
    - Will provide additional information about caller's location, including the ability to receive the location within a building or structure (e.g. floor, room) or at a non-traditional location such as a distance marker.
    - Location information can be automatically populated into downstream dispatch systems, reducing data entry time, time-to-dispatch and improved ability to locate emergencies.
- Multimedia communications:
    - Supports not just voice calls, but also text messages (Real-time Text or RTT) and in the future, images, videos, and real-time data.
    - Enables better communication for 9-1-1 callers through RTT in situations where verbal communication is not available, including persons with disabilities.
- Enhanced caller information and data sharing
    - Ability to share critical information with first responders (e.g., medical records, crash data, building layouts) enroute to an emergency.
    - Provides faster and more accurate situational awareness to support timely dispatch and on-scene operations.
    - Enables seamless information sharing between different emergency services and jurisdictions.
- Faster call routing:
    - Routes calls based on geographic location rather than cell tower location, reducing misdirecting 9-1-1 calls and improving response times.
    - End to end digital telephony reduces time for call answer and transfer shorten the response time.
- Improved resilience and redundancy:
    - IP-based systems are more resilient to outages and can reroute calls if one centre is overloaded or offline.
    - Calls can be seamlessly routed to a selected call answering point outside of the local region.

NG9-1-1 supports enhanced data call transfer, which enables a 9-1-1 call and all associated data such as caller location, call history, text messages, photos, and video to be seamlessly transferred

from one PSAP to another to ensure that critical situational awareness is preserved and passed along.

NG9-1-1 is currently being rolled out across Canada, as mandated by the Canadian Radio-television and Telecommunications Commission (CRTC) [1]. Some regions have already adopted NG9-1-1 services, while others are preparing for full implementation by the national deadline of March 2027.

The full benefits of NG9-1-1 are not yet available nationwide, and implementation varies across jurisdictions. Legacy systems and infrastructure must be updated to support IP-based operations. Until text and multimedia services are fully integrated, many users will still experience limitations based on their region and device compatibility.

NG9-1-1 Technology

The NG9-1-1 technology architecture includes a set of technical services (applications, databases and data management) and an IP-based network to enable members of the public to dial 9-1-1 to reach emergency services.

NG9-1-1 uses a Session Initiation Protocol (SIP) (Internet Protocol-based) to support more flexible and resilient emergency communications. It allows PSAPs to receive not only voice calls but also real-time text (RTT), and in future phases, multimedia content such as photos, videos, and sensor data. It also enables more accurate location sharing using GPS and device-based location services.

An overview of the NG9-1-1 technology architecture is shown the diagram below.

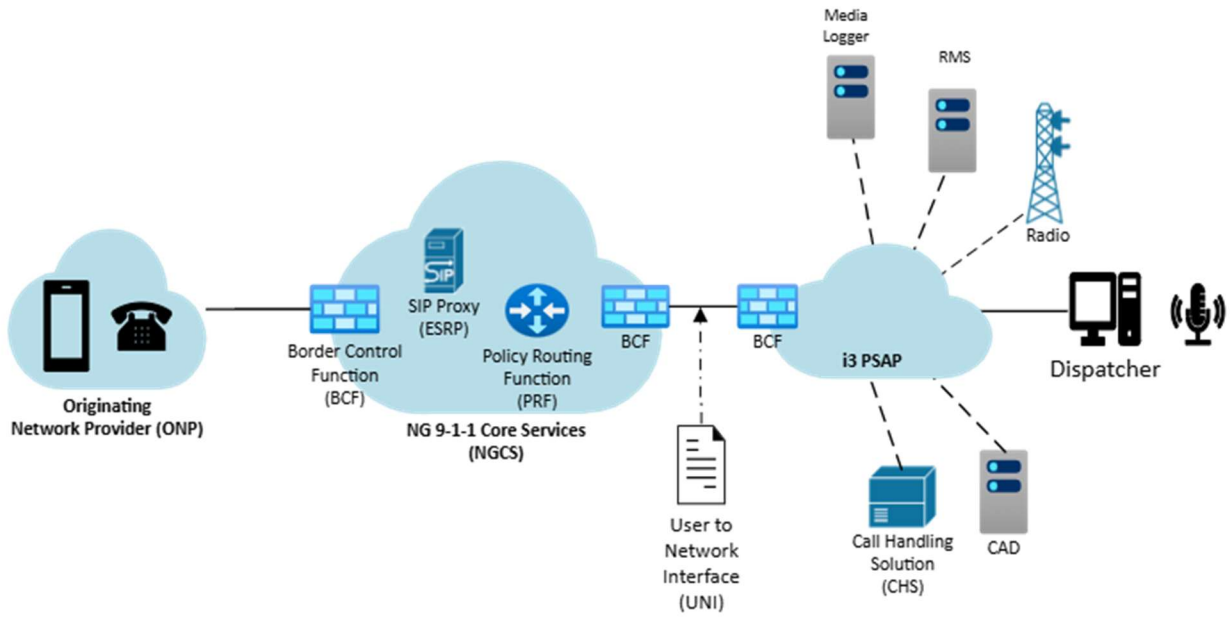


Figure B-1. General NG9-1-1 Architecture

Figure B-1 shows three distinct Internet Protocol (IP) networks, based on the NENA i3 standards[32], each of which is owned and operated by different organizations:

- Originating Network Provider (ONP) – these are the telecommunications services providers such as Rogers and TELUS that provide telephone services to end users, including wireless and landline services.
- NG9-1-1 Core Services (NGCS), which provide call routing and manage the processing and delivery of call-related information.
- NG9-1-1 PSAP networks and systems, referred to as i3 PSAPs.

NG9-1-1 Core Services are implemented in a network known as the Emergency Services IP Network (ESInet). The ESInet replaces legacy 9-1-1 telephony networks that primarily process voice calls and carry related information.

The ESInet and NGCS are the responsibility of a NG9-1-1 network service provider. TELUS is mandated by the CRTC to provide the ESInet and NGCS service in all areas of British Columbia, including areas where CityWest is the incumbent landline telephone service provider (i.e. Prince Rupert), which means all of BC except for the areas in the northern part of the province served by NorthwesTel.

[32] NENA i3 Standard for NG9-1-1 https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-sta-010.3b-2021_i3_stan.pdf.

Connectivity requirements between a PSAP and the NGCS is specified in a User to Network Interface (UNI) document which is provided by the NGCS provider.

NG9-1-1 Geodetic Call Routing

Canada is planning to move emergency call routing from the traditional civic-address/MSAG-based model used in Enhanced 9-1-1 (E9-1-1) to a geodetic (coordinate-based) routing model as part of the broader NG9-1-1 transition. The objective is to route 9-1-1 calls using the caller's geographic coordinates (latitude/longitude, and eventually elevation) and authoritative GIS data rather than relying primarily on street-address lookups.

Today's E9-1-1 networks use selective routers and Master Street Address Guide (MSAG) databases to determine which PSAP should receive a call. Under NG9-1-1, calls will be routed using live GIS data and geospatial processing. The caller's location coordinates will be compared against PSAP service boundaries and other GIS layers to identify the appropriate destination.

National GIS Data Model

A standardized Canadian NG9-1-1 GIS data model [11] has been adopted to support location validation and geospatial call routing. Local governments, provinces, territories, PSAPs, and telecommunications providers are expected to maintain and share authoritative GIS datasets that support emergency services.

Standardized Canadian Addressing Framework

A major component of the implementation is the development of a common Canadian civic location standard, known as CLDXF-CA (Canadian Civic Location Data Exchange Format) [10]. This standard enables consistent exchange of location information across jurisdictions and is based on the PIDF-LO (Presence Information Data Format – Location Object) framework used in NG9-1-1 systems.

NG9-1-1 Core Services and ESInet Infrastructure

Geodetic routing depends on NG9-1-1 Emergency Services IP Networks (ESInets) and NG9-1-1 Core Services, including:

- Emergency Call Routing Functions (ECRF)
- Location Validation Functions (LVF)
- GIS databases and spatial interfaces

These systems use GIS layers and caller location data to determine call routing dynamically.

Point-in-Polygon Routing

The expected routing methodology is essentially a GIS "point-in-polygon" process. The caller's device location is represented as a geographic point, which is spatially matched against PSAP and emergency service boundaries to determine the correct routing destination.

Expected Benefits

The planned approach is intended to:

- Improve routing accuracy, especially for wireless callers.
- Support callers in areas without formal civic addresses.
- Enable more precise location determination using coordinates rather than address translation.
- Support future capabilities such as vertical (z-axis) location information for multi-storey buildings.
- Improve resiliency and flexibility when PSAP boundaries or responsibilities change.

Implementation Status

The CRTC's Emergency Services Working Group (ESWG) has been developing standards, GIS models, migration strategies, proof-of-concept testing and implementation guidance for Geodetic Call Routing through its TIF-95 [13] task group. However, the timing of national rollout has not been established. While NG9-1-1 services are already being deployed, full Geodetic Call Routing remains a later phase of the transition that depends on GIS data readiness and nationwide standards implementation.

Recent discussion in ESWG is suggesting that implementation of Geodetic Call Routing could be as late as 2029. Geodetic routing of wireless calls will likely occur much earlier than fixed landline calls, with the legacy MSAG call routing method applying to landline calls in the interim.

NG9-1-1 Regulatory Policy (CRTC)

In 2017, the CRTC directed that all telecommunications providers in Canada migrate to NG9-1-1 services to provide improved emergency services as telecommunications networks in Canada migrate to Internet Protocol (IP) technology. This was defined in Telecom Regulatory Policy CRTC 2017-182 [1].

Although it does not have direct authority over PSAPs, the CRTC has also directed all 9-1-1 network providers (i.e. TELUS) to decommission Enhanced 9-1-1 (E9-1-1) network components that will not form part of their NG9-1-1 networks by March 31, 2027 [4]. This compels E9-1-1 PSAPs to migrate to the NG9-1-1 network prior to this date.

This mandate and deadline also apply to Originating Network Providers (ONPs), who are the telecommunications service providers providing telephony services in Canada and are regulated by the CRTC.

The ONPs providing telephone services in the NCRD are discussed in section 3.2 above. All these ONPs are currently interconnected to the TELUS NG9-1-1 core network (NGCS) and so are already technically able to process NG9-1-1 calls originating on their networks.

As of July 2026, 94 PSAPs across Canada have migrated to NG9-1-1 and approximately 140 PSAPs are still in various stages of their migration. The CRTC Emergency Services Working has developed an NG9-1-1 Migration Dashboard[33] to provide the current state of NG9-1-1 transitions across Canada.

The national mandate and deadline for NG9-1-1 implementation does not currently apply to any geographic area which does not currently have E9-1-1 service established and so does not apply to the NCRD.

NG9-1-1 Transition Phases and Timing

Transitioning to an NG9-1-1 network is crucial step towards new 9-1-1 features and services becoming available, including:

- Improved delivery of caller location information
- Real-Time Text (RTT) messaging services
- Sending personal medical information, including accessibility needs, which could greatly aid emergency responders.
- Automatically sharing CAD event details between PSAPs
- Sending photos of accident damage or a fleeing suspect,
- Streaming video from an emergency incident

The initial NG9-1-1 roll-out associated with the March 2027 deadline is commonly referred to as **Day 1**. It is intended to build, test, validate and implement the technology infrastructure, end to end, from Originating Network Providers to the NG9-1-1 network provider to the PSAPs, without significant changes to the voice-oriented 9-1-1 service and capabilities currently provided.

Day 1 9-1-1 services include voice calls and a new method of delivering caller location information, using a mechanism known as Presence Information Data Format – Location Object (PIDF-LO). The ability for a PSAP to answer NG9-1-1 voice calls and receive PIDF-LO data requires an IP-based Call Handling Solution that interfaces to the NG9-1-1 network and translates the PIDF-LO data to the legacy Automatic Number Identifier / Automatic Location Identifier (ANI/ALI) for CAD and media recording systems to consume. Alternatively, if NG9-1-1 capable, a CAD and recording system can consume the PIDF-LO data directly from the network.

Day 2 NG9-1-1 services are expected to be introduced after all PSAPs have migrated to the NG9-1-1 network via a coordinated national approach. The planned and anticipated services in this category include RTT, Geodetic Call Routing, telematics (alarm companies, automatic crash notifications), and Emergency Incident Data Object (EIDO) as a mechanism to share CAD event details.

[33] https://www.arcgis.com/apps/dashboards/a7f0275972bb4d11a6a363ff335b4c24

The development of standards, testing/validation processes and national roll-out plans for future NG9-1-1 services is expected to continue many years into the future. Future services include modalities such as, photo's, video, Internet of Things (IoT), Z coordinates and more.

Requirements for Implementing NG9-1-1

Specific requirements will have to be met to implement NG9-1-1 services in the NCRD. Some requirements, such as the NENA and NFPA call handling requirements discussed in Appendix A, reflect industry best practices and are voluntary. The requirements defined in the TELUS Local Government Authority Agreement (LGA) in Appendix D are mandatory and regulated requirements that must be met for TELUS to provide NG9-1-1 services in any geographic area.

TELUS LGA & IGB Agreement Requirements

In 2021, the CRTC approved TELUS' NG9-1-1 tariff, which regulates the provision of NG9-1-1 service to local governments in BC. This tariff includes a template for a NG9-1-1 Local Government Authority (LGA) agreement which will define the technical, security, operational and mapping/addressing (GIS) obligations that the NCRD and TELUS would each be responsible for once NG9-1-1 service is established.

To enable NG9-1-1 access in a serving area, TELUS (and other NG9-1-1 Network Providers in Canada) require the Local Government Authority (LGA) to meet operational and technical obligations defined in the NG9-1-1 LGA agreement. The standard template for the TELUS NG9-1-1 LGA agreement is provided in Appendix D and key requirements are further discussed below.

The NCRD will be required to execute a NG9-1-1 LGA agreement for NG9-1-1 service, regardless of whether it establishes its own PSAP or contracts the service to another to another PSAP. If the NCRD contracts the service, it will need to ensure all LGA obligations related to PSAP technology and operations are included in the service agreement it executes with that service provider.

In addition, Indigenous Governments may need to execute a different agreement with TELUS, known as an Indigenous Governing Body (IGB) agreement. This agreement is a stripped-down version of the LGA agreement that primarily addresses addressing and mapping obligations for NG9-1-1 service.

The following operational requirements are included in the NG9-1-1 LGA agreement that will need to be executed by the NCRD as part of establishing NG9-1-1 services.

- Designate Primary PSAPs, Secondary PSAPs and Back-up PSAPs to answer and dispatch 9-1-1 calls in the Serving Area.
- Ensure that all PSAPs provide, operate and manage the personnel and the equipment to receive and process all emergency calls, sessions, and events directed to the PSAP.
- Ensure that a Business Continuity Plan is put in place and tested annually.
- Provide TELUS ninety (90) days' written notice of an intended change of a PSAP in their serving area.

- Determining in conjunction with TELUS, the Serving Area and Emergency Service Zones served by the PSAP.
- Ensuring all PSAPs in the serving area have and maintain current contact information and make it available as per the NENA standard.
- Ensuring the Primary PSAP accepts specific planned test calls from the public.
- The LGA recognizes that TELUS NG9-1-1 Service allows for many new functionalities regarding types of data that can be transmitted over the NG9-1-1 network. It is expected that the CRTC will mandate the implementation of such new functionalities. The availability of these functionalities may require the LGA to upgrade software and or hardware at the PSAP.
- The LGA shall implement guidelines and procedures with respect to the retention and destruction of personal information related to NG9-1-1 services prior to the provision of those services.

Addressing and GIS Mapping Data Requirements

The NCRD and the communities within will be required to make changes and enhancements to GIS mapping and addressing data formats and processes to enable implementation of NG9-1-1. These requirements and obligations apply even if the region decides to contract 9-1-1 call answer and fire dispatch to a 3rd party service provider/PSAP.

Once the GIS data has been prepared, it will need to be provided to the provincial GIS manager, GeoBC, who have recently been designated as the provincial aggregator for NG9-1-1 geo-spatial data. In this capacity, GeoBC will be working more closely with local governments to assist with making their GIS datasets are compliant to ensure that geospatial data is available for accurate call routing.

The NCRD and its communities will need to undertake specific activities to create and update GIS datasets in preparation for the implementation of Geodetic Call Routing by NG9-1-1 Network Providers implement as discussed above:

- Road Centerline
    - Use the local GIS datasets to update the current version of the Provincial Digital Road Atlas (DRA).
    - Use tools supplied by GeoBC to compare current local dataset against current DRA.
    - Ensure the DRA is accurate per the local knowledge provided by GIS staff.
    - Establish Quality Control processes to ensure ongoing updates. Monthly DRA updates as sent out by GeoBC should be utilized.
    - Establish ongoing collaborative meetings between GIS service providers and GeoBC to ensure end products are accurate.
- Street Name Alias
    - Use existing local alias list to update the Street Name Alias table in the DRA.
- Site Structure Address Points
    - Use rooftop centerline data points in most situations.
    - Modify address points only when required due to significant variance between structure address point and property access point such as large rural properties.

    - Run data through ESRI validation tool to confirm data schema is accurate.
- Jurisdictional Boundaries (regional district, municipality and Indigenous Governments)
    - Use currently available boundaries.
- Public Safety Answering Point (PSAP) Boundaries
    - Formal agreement will be required to determine how PSAP boundaries should be drawn for Police, Fire and Ambulance.
- Service Boundaries (Police, Fire and Ambulance)
    - Police and Ambulance Boundaries are aligned to road centerline and currently in production so no modifications are required.
    - Fire Service Boundaries will need to be drawn for areas where they do not exist today.

The following GIS requirements are included the NG9-1-1 LGA agreements that need to be executed by the NCRD and local communities as part of establishing NG9-1-1 services:

- GIS data shall be compliant with the NENA NG9-1-1 Canadian Civic Location Data Exchange Format (CLDXF-CA) Standard, NENA-STA-029.1-2025[34].
- Upon implementation of geodetic (GIS-based) routing functionality within the NG9-1-1 network, the LGA must provide NG9-1-1 related GIS and addressing data directly to TELUS in a secure and encrypted manner without transmitting through any shared open platform.
- The LGA shall correct all errors with submitted geographic data as reported by TELUS as soon as possible after the notification is sent to the LGA, with a target of 72 hours to ensure that all telephone carriers operating within the LGA territory have access to accurate validation information.

PSAP Technical Requirements for NG9-1-1

This section discusses requirements for the technology systems used by NCRD's PSAPs because of the transition to NG9-1-1.

The following technical requirements are expected to be included the NG9-1-1 LGA agreement that will need to be executed by the NCRD as part of establishing NG9-1-1 services. Additional details can be found in Appendix D.

- Ensure all PSAPs in the Serving Area have secure 9-1-1 data and systems, including physical security, network security, cybersecurity, and all other considerations with the PSAP domains.

[34] This standard defines the detailed data elements needed for address data exchange and formally registers the Canadian profile of the Internet Engineering Task Force (IETF) Presence Information Data Format-Location Object (PIDF-LO) civic location data. See https://www.nena.org/news/700331/NENA-Canadian-Civic-Location-Data-Exchange-Format-CLDXF-CA-Standard-Now-Available.htm

- Design and operate the PSAP's WAN/LAN to ensure appropriate levels of resiliency, capacity, management, quality of service and security.
- Utilize the PCA service provided by the NG9-1-1 network provider, as defined in the UNI Interconnection Design Specifications, as a mandatory condition of interconnection with the NG9-1-1 network until a nation-wide PSAP Credentialing Agency is established.
- Comply with the UNI and any other bulletins or technical documents communicated by TELUS to all LGA's and PSAPs from time to time.

The technology components, and potential interfaces between them, that will need to be implemented by an NG9-1-1 PSAP or PSAPs serving the NCRD are shown in the figure below.

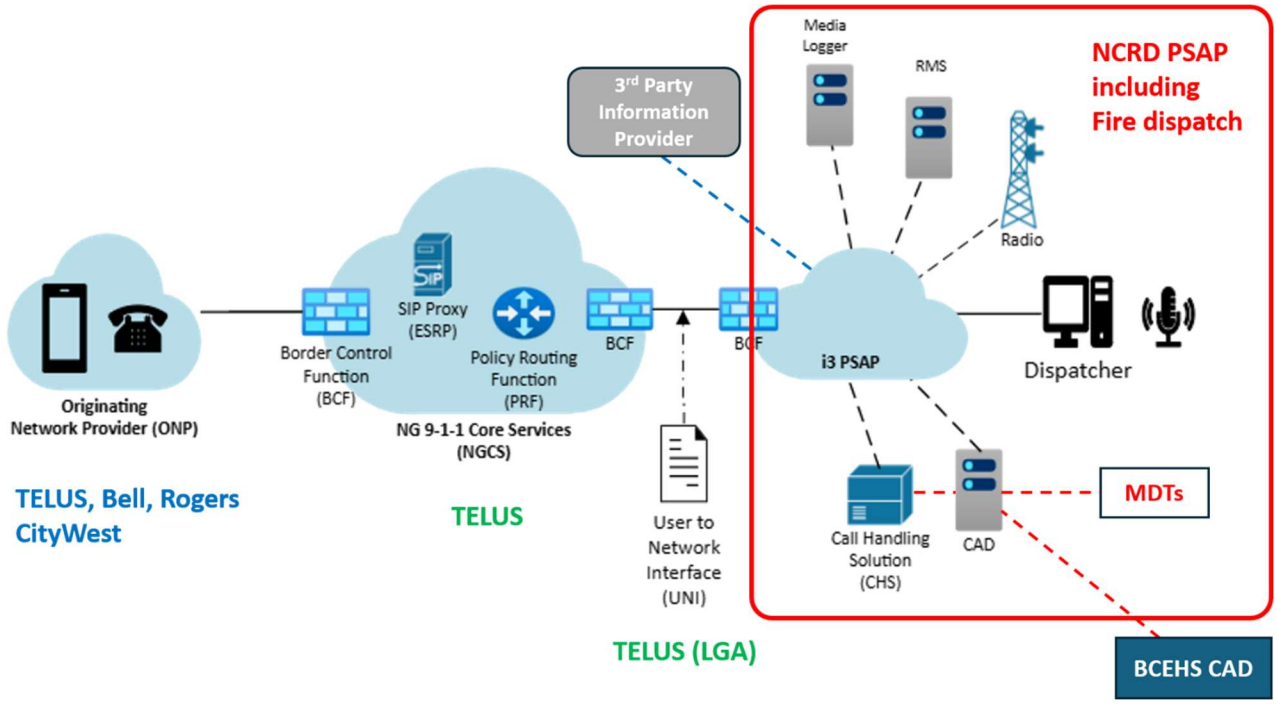


Figure B-2. NCRD NG9-1-1 Solution Components

The figure above shows several interconnected systems within an NG9-1-1 (also referred to as i3-compliant) PSAP. These systems provide the following capabilities:

- Voice and data communications with the 9-1-1 caller and emergency response personnel.
- Systems to support the collection, retention and distribution of 9-1-1 event related information.
- Systems to support 9-1-1 dispatchers in efficiently selecting and dispatching emergency resources.

Appendix C – Secondary Fire PSAPs in BC

Table C-1. Secondary Fire PSAPs in BC

Primary PSAP	Secondary PSAP	Jurisdiction
E-Comm 9-1-1	Burnaby Fire	City of Burnaby
	North Island 9-1-1 (Campbell River Fire)	Various Fire jurisdictions from mid-island portion of Nanaimo Regional District to northern tip of Vancouver Island. Also provide services for Peace River Regional District through contract.
	E-Comm 9-1-1 Lower Mainland Fire	Vancouver, FVRD, RDNO, SCRD, SLRD and other cities in Metro Vancouver
	Kamloops Fire	Kamloops Fire and various Fire jurisdictions in TNRD
	Kelowna Fire	Various Fire jurisdictions in southeastern BC
	Regional District of Fraser Fort George (Prince George Fire)	Various Fire jurisdictions in northern and southeastern BC
	Saanich Fire	Saanich, Oak Bay, Central Saanich and various CRD jurisdictions
	Surrey Fire	Various fire departments in Metro Vancouver such as City of Surrey, Langley, Maple Ridge, North Vancouver, Pitt Meadows and West Vancouver. Various Fire jurisdictions in southeastern BC and Vancouver Island, including Colwood, Esquimalt, Langford, Nanaimo, North Saanich, Sidney, Victoria and View Royal.
Prince Rupert Fire	Prince Rupert Fire (B9-1-1)	Prince Rupert Fire and District of Port Edward Fire
Grand Prairie AB Fire	Grand Prairie AB (B9-1-1)	Northern Rockies RM Fire Rescue

Appendix D – TELUS NG9-1-1 LGA & IGB Agreements

Appendix D-1 – TELUS LGA Template

Appendix D-2 – TELUS IGB Template

Appendix E – Detailed Cost Estimates and Allocation

This section provides estimated implementation and operating costs for NG9-1-1 primary call answer service and basic fire dispatch for the three implementation phases proposed in section 5.2.

Phase 1 – Haida Gwaii Only – Basic Fire Dispatch

The table below shows to estimated costs for phase 1:

NG9-1-1 Primary Call Answer & Basic Fire Dispatch				
Category	Implementation Cost			Annual Cost
Primary Call Answer				
Implementation & Contracting	$	90,000	$	-
Mapping / Addressing	$	109,769	$	7,720
Primary Call Answer Service	$	8,000	$	23,490
Public Education	$	25,000	$	5,000
Contingency	$	23,277	$	3,621
TOTAL Call Answer	**$**	**256,045**	**$**	**39,831**
Fire Dispatch - Basic				
Implementation & Contracting	$	37,500	$	-
Technology	$	-	$	8,400
Fire Dispatch Service	$	14,000	$	18,630
Contingency	$	5,150	$	2,703
TOTAL Fire Dispatch	**$**	**56,650**	**$**	**29,733**
TOTAL Phase 1	**$**	**312,695**	**$**	**69,564**
9-1-1 Implementation Cost/POP	**$**	**34.53**	**Excluding**	
9-1-1 Annual Cost/POP	**$**	**9.05**	**First Nations**	

Phase 1 Notes:

- Costs for NG9-1-1 primary call answer assume it is provided region-wide through a single agreement with a NG9-1-1 PSAP.
- The annual service fees for NG9-1-1 primary call answer have been estimated at a rate of $10/call/year.
- Basic fire dispatch is assumed to be included in the regional service for Haida Gwaii.
- Basic fire dispatch costs assume Northern 9-1-1 service rates with one account per jurisdiction and costs for notification apps.

The table below shows a potential allocation of costs between jurisdiction for phase 1 based on the following assumptions:

- Costs are allocated to communities and jurisdictions based on population.
- Each community is responsible for its addressing and GIS mapping related costs.
- Costs for Old Massett and Skidegate are recovered through a service agreement with the NCRD.

Basic fire dispatch costs are already being incurred by Daajing Giids, Masset, Port Clements and Skidegate by virtue of their existing service agreements with Northern 9-1-1 and so the costs shown may not be net-new costs for those communities.

	NCRD	Daajing Giids	Masset	Port Clements	Old Massett	Skidegate	TOTAL
Estimated Population	849	964	838	340	545	700	4236
% Population/Share	20.0%	22.8%	19.8%	8.0%	12.9%	16.5%	100%
Estimated 9-1-1 Calls	256	293	306	106	198	190	1349
% 9-1-1 Calls	19%	22%	23%	8%	15%	14%	100%
#Depts. Basic Fire Dispatch	2	1	1	1	1	1	7

Phase 1	**NCRD**	**Daajing Giids**	**Masset**	**Port Clements**	**Old Massett**	**Skidegate**	**TOTAL**
Primary Call Answer							
Implementation	$ 103,285	$ -	$ -	$ -	$ 18,820	$ 24,172	$ 146,277
Community Specific GIS Costs	$ 21,517	$ 17,113	$ 18,908	$ 12,308	$ 18,683	$ 21,240	$ 109,769
Less: UBCM NG9-1-1 Funding	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less: ISC Funding					$ -	$ -	$ -
Net Implementation Cost	$ 124,802	$ 17,113	$ 18,908	$ 12,308	$ 37,502	$ 45,412	$ 256,045
Fire Dispatch							
Implementation	$ 16,186	$ 8,093	$ 8,093	$ 8,093	$ 8,093	$ 8,093	$ 56,650
Less: ISC Funding					$ -	$ -	$ -
Net Implementation Cost	$ 16,186	$ 8,093	$ 8,093	$ 8,093	$ 8,093	$ 8,093	$ 56,650
Primary Call Answer							
Ongoing Annual	$ 27,075	$ -	$ -	$ -	$ 5,599	$ 7,157	$ 39,831
Fire Dispatch							
Ongoing Annual	$ 6,138	$ 4,719	$ 4,719	$ 4,719	$ 4,719	$ 4,719	$ 29,733
Phase 1 Total							
Total Implementation Cost	$ 140,988	$ 25,206	$ 27,001	$ 20,401	$ 45,595	$ 53,505	$ 312,695
Net Implementation Cost	$ 140,988	$ 25,206	$ 27,001	$ 20,401	$ 45,595	$ 53,505	$ 312,695
Ongoing Annual Total	$ 33,213	$ 4,719	$ 4,719	$ 4,719	$ 10,318	$ 11,876	$ 69,564

Phase 2 - Addition of Prince Rupert & Port Edward

The table below shows total estimated costs for the addition of phase 2 (includes phase 1 costs):

NG9-1-1 Primary Call Answer & Basic Fire Dispatch				
Category	Implementation Cost		Annual Cost	
Primary Call Answer				
Implementation & Contracting	$	130,000	$	-
Mapping / Addressing	$	124,618	$	8,403
Primary Call Answer Service	$	8,000	$	72,860
Public Education	$	25,000	$	5,000
Contingency	$	28,762	$	8,626
TOTAL Call Answer	**$**	**316,379**	**$**	**94,889**
Fire Dispatch - Basic				
Implementation & Contracting	$	37,500	$	-
Technology	$	-	$	8,400
Fire Dispatch Service	$	14,000	$	18,630
Contingency	$	5,150	$	2,703
TOTAL Fire Dispatch	**$**	**56,650**	**$**	**29,733**
TOTAL Phase 2	**$**	**373,029**	**$**	**124,622**
9-1-1 Implementation Cost/POP	**$**	**11.28**	**Excluding**	
9-1-1 Annual Cost/POP	**$**	**5.41**	**First Nations**	

Phase 2 Notes:

- Phase 2 includes the communities in Phase 1 (Haida Gwaii) plus Prince Rupert and Port Edward.
- Costs for NG9-1-1 primary call answer assume it is provided region-wide through a single agreement with a NG9-1-1 PSAP.
- The annual service fees for 9-1-1 primary call answer have been estimated at a rate of $10/call/year.
- Basic fire dispatch is assumed to be included in the regional service for Haida Gwaii.
- Fire dispatch costs for Prince Rupert and Port Edward are not included as this service is existing and funded by the City.

The table below shows a potential allocation of costs between jurisdiction for phase 2 based on the following assumptions:

- Costs are allocated to communities and jurisdictions based on population.
- Each community is responsible for its addressing and GIS mapping related costs. Addressing and GIS mapping costs for Prince Rupert are not shown.
- Costs for Old Massett and Skidegate are recovered through a service agreement with the NCRD.

	NCRD	Daajing Giids	Masset	Port Clements	Port Edward	Prince Rupert	Old Massett	Skidegate	TOTAL
Estimated Population	849	964	838	340	470	12,300	545	700	17,006
% Population/Share	5.0%	5.7%	4.9%	2.0%	2.8%	72.3%	3.2%	4.1%	100%
Estimated 9-1-1 Calls	256	293	306	106	84	4,853	198	190	6,286
% 9-1-1 Calls	4%	5%	5%	2%	1%	77%	3%	3%	100%
#Depts. Basic Fire Dispatch	2	1	1	1	-	-	1	1	7
Phase 2	**NCRD**	**Daajing Giids**	**Masset**	**Port Clements**	**Port Edward**	**Prince Rupert**	**Old Massett**	**Skidegate**	**TOTAL**
Call Answer Service									
Implementation	$ 177,723	$ -	$ -	$ -	$ -	$ -	$ 6,145	$ 7,893	$ 191,762
Community Specific GIS Costs	$ 21,517	$ 17,113	$ 18,908	$ 12,308	$ 14,849		$ 18,683	$ 21,240	$ 124,618
Less: UBCM NG9-1-1 Funding	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less: ISC Funding							$ -	$ -	$ -
Net Implementation Cost	$ 199,240	$ 17,113	$ 18,908	$ 12,308	$ 14,849	$ -	$ 24,828	$ 29,133	$ 316,379
Fire Dispatch									
Implementation	$ 16,186	$ 8,093	$ 8,093	$ 8,093			$ 8,093	$ 8,093	$ 56,650
Less: ISC Funding							$ -	$ -	$ -
Net Implementation Cost	$ 16,186	$ 8,093	$ 8,093	$ 8,093			$ 8,093	$ 8,093	$ 56,650
Call Answer Service									
Ongoing Annual	$ 85,239	$ -	$ -	$ -	$ -	$ -	$ 4,239	$ 5,411	$ 94,889
Fire Dispatch									
Ongoing Annual	$ 6,138	**$ 4,719**	**$ 4,719**	**$ 4,719**			**$ 4,719**	**$ 4,719**	$ 29,733
Phase 2 Total									
Total Implementation Cost	$ 215,426	$ 25,206	$ 27,001	$ 20,401	$ 14,849	$ -	$ 32,921	$ 37,226	$ 373,029
Net Implementation Cost	$ 215,426	$ 25,206	$ 27,001	$ 20,401	$ 14,849	$ -	$ 32,921	$ 37,226	$ 373,029
Ongoing Annual Total	$ 91,377	$ 4,719	$ 4,719	$ 4,719	$ -	$ -	$ 8,958	$ 10,130	$ 124,622

Phase 3 - Addition of Mainland Coastal Communities

The table below shows total estimated costs for addition of phase 3 (includes phase 1 costs):

NG9-1-1 Primary Call Answer & Basic Fire Dispatch				
Category	Implementation Cost			Annual Cost
Primary Call Answer				
Implementation & Contracting	$	110,000		$ -
Mapping / Addressing	$	171,338		$ 11,451
Primary Call Answer Service	$	8,000		$ 27,500
Public Education	$	25,000		$ 5,000
Contingency	$	31,434		$ 4,395
TOTAL Call Answer	**$**	**345,772**		**$ 48,346**
Fire Dispatch - Basic				
Implementation & Contracting	$	62,500		$ -
Technology	$	-		$ 13,200
Fire Dispatch Service	$	22,000		$ 30,990
Contingency	$	8,450		$ 4,419
TOTAL Fire Dispatch	**$**	**92,950**		**$ 48,609**
TOTAL Phase 3	**$**	**438,722**		**$ 96,955**
9-1-1 Implementation Cost/POP	**$**	**31.17**		**Excluding**
9-1-1 Annual Cost/POP	**$**	**8.10**		**First Nations**

Phase 3 Notes:

- Phase 3 includes the communities in Phase 1 (Haida Gwaii) plus Metlakatla, Lax Kw'alaams, Kitkatla, Hartley Bay and unincorporated areas of electoral areas A & C.
- Costs for NG9-1-1 primary call answer assume it is provided region-wide through a single agreement with a NG9-1-1 PSAP.
- The annual service fees for 9-1-1 primary call answer have been estimated at a rate of $10/call/year.
- Basic fire dispatch is assumed to be included in the regional service for Haida Gwaii and the mainland coastal communities.

The table below shows a potential allocation of costs between jurisdiction for phase 3 based on the following assumptions:

- Costs are allocated to communities and jurisdictions based on population.
- Each community is responsible for its addressing and GIS mapping related costs.
- Costs for all Indigenous communities are recovered through a service agreement with the NCRD.

	NCRD	Daajing Giids	Masset	Port Clements	Old Massett	Skidegate	Lax Kw'alaams	Metlakatla	Kitkatla	Hartley Bay	TOTAL
Estimated Population	904	964	838	340	545	700	627	88	448	143	5,597
% Population/Share	16.2%	17.2%	15.0%	6.1%	9.7%	12.5%	11.2%	1.6%	8.0%	2.6%	100%
Estimated 9-1-1 Calls	265	293	306	106	198	190	219	27	100	46	1,750
% 9-1-1 Calls	15%	17%	17%	6%	11%	11%	13%	2%	6%	3%	100%
#Depts. Basic Fire Dispatch	2	1	1	1	1	1	1	1	1	1	11

Phase 3	**NCRD**	**Daajing Giids**	**Masset**	**Port Clements**	**Old Massett**	**Skidegate**	**Lax Kw'alaams**	**Metlakatla**	**Kitkatla**	**Hartley Bay**	**TOTAL**
Call Answer Service											
Implementation	$ 94,930	$ -	$ -	$ -	$ 16,985	$ 21,816	$ 19,541	$ 2,743	$ 13,962	$ 4,457	$ 174,434
Community Specific GIS Costs	$ 27,512	$ 17,113	$ 18,908	$ 12,308	$ 18,683	$ 21,240	$ 21,576	$ 6,848	$ 18,622	$ 8,530	$ 171,338
Less: UBCM NG9-1-1 Funding	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less: ISC Funding					$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Implementation Cost	$ 122,443	$ 17,113	$ 18,908	$ 12,308	$ 35,668	$ 43,056	$ 41,116	$ 9,590	$ 32,584	$ 12,986	$ 345,772
Fire Dispatch											
Implementation	$ 16,900	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 92,950
Less: ISC Funding					$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Implementation Cost	$ 16,900	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 92,950
Call Answer Service											
Ongoing Annual	$ 24,675	$ -	$ -	$ -	$ 5,060	$ 6,465	$ 5,824	$ 752	$ 4,201	$ 1,367	$ 48,346
Fire Dispatch											
Ongoing Annual	$ 6,138	**$ 4,719**	**$ 4,719**	**$ 4,719**	**$ 4,719**	**$ 4,719**	$ 4,719	$ 4,719	$ 4,719	$ 4,719	$ 48,609
Phase 3 Total											
Total Implementation Cost	$ 139,343	$ 25,563	$ 27,358	$ 20,758	$ 44,118	$ 51,506	$ 49,566	$ 18,040	$ 41,034	$ 21,436	$ 438,722
Net Implementation Cost	$ 139,343	$ 25,563	$ 27,358	$ 20,758	$ 44,118	$ 51,506	$ 49,566	$ 18,040	$ 41,034	$ 21,436	$ 438,722
Ongoing Annual Total	$ 30,813	$ 4,719	$ 4,719	$ 4,719	$ 9,779	$ 11,184	$ 10,543	$ 5,471	$ 8,920	$ 6,086	$ 96,955

All NCRD

The table below shows total estimated costs for all communities and jurisdictions in the NCRD:

NG9-1-1 Primary Call Answer & Basic Fire Dispatch				
Category	Implementation Cost			Annual Cost
Primary Call Answer				
Implementation & Contracting	$	150,000	$	-
Mapping / Addressing	$	186,187	$	12,133
Primary Call Answer Service	$	8,000	$	76,870
Public Education	$	25,000	$	5,000
Contingency	$	36,919	$	9,400
TOTAL Call Answer	**$**	**406,106**	**$**	**103,403**
Fire Dispatch - Basic				
Implementation & Contracting	$	62,500	$	-
Technology	$	-	$	13,200
Fire Dispatch Service	$	22,000	$	30,990
Contingency	$	8,450	$	4,419
TOTAL Fire Dispatch	**$**	**92,950**	**$**	**48,609**
TOTAL All NCRD	**$**	**499,056**	**$**	**152,012**
9-1-1 Implementation Cost/POP	**$**	**11.97**	**Excluding**	
9-1-1 Annual Cost/POP	**$**	**5.30**	**First Nations**	

All NCRD Notes:

- Phase 3 includes the communities in Phase 1 (Haida Gwaii) plus Prince Rupert, Port Edward, Metlakatla, Lax Kw'alaams, Kitkatla, Hartley Bay and unincorporated areas of electoral areas A & C.
- Costs for NG9-1-1 primary call answer assume it is provided region-wide through a single agreement with a NG9-1-1 PSAP.
- The annual service fees for 9-1-1 primary call answer have been estimated at a rate of $10/call/year.
- Basic fire dispatch is assumed to be included in the regional service for Haida Gwaii and the mainland coastal communities.
- Fire dispatch costs for Prince Rupert and Port Edward are not included as this service is existing and funded by the City.

The table below shows a potential allocation of costs between jurisdiction for all of the NCRD based on the following assumptions:

- Costs are allocated to communities and jurisdictions based on population.
- Each community is responsible for its addressing and GIS mapping related costs. Addressing and GIS mapping costs for Prince Rupert are not shown.
- Costs for all Indigenous communities are recovered through a service agreement with the NCRD.

	NCRD	Daajing Giids	Masset	Port Clements	Port Edward	Prince Rupert	Old Massett	Skidegate	Lax Kw'alaams	Metlakatla	Kitkatla	Hartley Bay	TOTAL
Estimated Population	904	964	838	340	470	12,300	545	700	627	88	448	143	18,367
% Population/Share	4.9%	5.2%	4.6%	1.9%	2.6%	67.0%	3.0%	3.8%	3.4%	0.5%	2.4%	0.8%	100%
Estimated 9-1-1 Calls	265	293	306	106	84	4,853	198	190	219	27	100	46	6,687
% 9-1-1 Calls	4%	4%	5%	2%	1%	73%	3%	3%	3%	0%	1%	1%	100%
#Depts. Basic Fire Dispatch	2	1	1	1	-	-	1	1	1	1	1	1	11

All NCRD	**NCRD**	**Daajing Giids**	**Masset**	**Port Clements**	**Port Edward**	**Prince Rupert**	**Old Massett**	**Skidegate**	**Lax Kw'alaams**	**Metlakatla**	**Kitkatla**	**Hartley Bay**	**TOTAL**
Call Answer Service													
Implementation	$ 189,374	$ -	$ -	$ -	$ -	$ -	$ 6,526	$ 8,382	$ 7,507	$ 1,054	$ 5,364	$ 1,712	$ 219,919
Community Specific GIS Costs	$ 27,512	$ 17,113	$ 18,908	$ 12,308	$ 14,849		$ 18,683	$ 21,240	$ 21,576	$ 6,848	$ 18,622	$ 8,530	$ 186,187
Less: UBCM NG9-1-1 Funding	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less: ISC Funding							$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Implementation Cost	$ 216,886	$ 17,113	$ 18,908	$ 12,308	$ 14,849	$ -	$ 25,208	$ 29,622	$ 29,083	$ 7,901	$ 23,986	$ 10,242	$ 406,106
Fire Dispatch													
Implementation	$ 16,900	$ 8,450	$ 8,450	$ 8,450			$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 92,950
Less: ISC Funding							$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Implementation Cost	$ 16,900	$ 8,450	$ 8,450	$ 8,450			$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 8,450	$ 92,950
Call Answer Service													
Ongoing Annual	$ 83,872	$ -	$ -	$ -	$ -	$ -	$ 4,176	$ 5,329	$ 4,807	$ 609	$ 3,475	$ 1,135	$ 103,403
Fire Dispatch													
Ongoing Annual	$ 6,138	**$ 4,719**	**$ 4,719**	**$ 4,719**			**$ 4,719**	**$ 4,719**	$ 4,719	$ 4,719	$ 4,719	$ 4,719	$ 48,609
All NCRD Total													
Total Implementation Cost	$ 233,786	$ 25,563	$ 27,358	$ 20,758	$ 14,849	$ -	$ 33,658	$ 38,072	$ 37,533	$ 16,351	$ 32,436	$ 18,692	$ 499,056
Net Implementation Cost	$ 233,786	$ 25,563	$ 27,358	$ 20,758	$ 14,849	$ -	$ 33,658	$ 38,072	$ 37,533	$ 16,351	$ 32,436	$ 18,692	$ 499,056
Ongoing Annual Total	$ 90,010	$ 4,719	$ 4,719	$ 4,719	$ -	$ -	$ 8,895	$ 10,048	$ 9,526	$ 5,328	$ 8,194	$ 5,854	$ 152,012

Basic Fire Dispatch Costs

- Standard Northern 9-1-1 costs have been used for Basic fire dispatch in Phases 1 and 3.
- The minimum rate charged for fire dispatch is $250 per month per jurisdiction or Fire department.
- Fire dispatch costs assume individual agreements between each Fire department or community and the fire dispatch service provider.
- The monthly cost increases at a rate of $0.25 per resident if a service area has a population of 1000 or more, which would not be the case for any individual community but would be the case if Basic fire dispatch service on Haida Gwaii was centralized under a single service account.

Enhanced Fire Dispatch Costs

- Primary 9-1-1 call answer costs and allocation method are the same as for Basic Fire Dispatch.
- Enhanced Fire Dispatch remains dependent on call volume for accurate costing.
- Annual service fees for fire dispatch should be estimated based on fire event volume at a rate of $130/call/year.
- Service costs should be allocated to each department based on their share of the event volume.
- Individual departments can choose to participate or not.

One-time implementation costs for fire dispatch are increased as Enhanced fire dispatch service assumes the dispatch centre is equipped with radio connections to each fire department for paging and notification purposes and for direct communication with Fire personnel during an incident:

- $15-20K per department for equipment to provide dispatch radio connections.
- Approximately $5K per department for the dispatch provider to configure the agency in their dispatch systems.

Appendix F – Implementation Dependencies

The implementation roadmap recognizes that successful delivery of a regional NG9-1-1 service depends on a combination of external factors, program-level decisions and implementation activities that must be completed before each phase proceeds. The following table summarizes the principal prerequisites and dependencies associated with the implementation program.

Category	Dependency	Description / Considerations
External Dependencies	Availability of an NG9-1-1 compliant Primary Public Safety Answering Point (PSAP).	A Primary PSAP capable of providing NG9-1-1 call answer services must be available before implementation can proceed.
	Completion of TELUS NG9-1-1 network implementation.	Includes network configuration, routing and other TELUS implementation activities required to support participating communities.
	Availability of third-party fire dispatch services.	Required where Basic or Enhanced Fire Dispatch services are to be provided under contract.
	Provincial decisions regarding NG9-1-1 governance.	Future provincial decisions may influence the implementation approach adopted by the NCRD.
	Availability of external funding opportunities.	Funding programs such as UBCM may influence implementation timing, sequencing or scope.
Program Governance and Establishment	Decision to establish the regional NG9-1-1 service.	Includes confirmation of participating communities and approval to proceed.
	Service Establishment Bylaw.	Establishes the regional service and governance framework.
	Agreement with an NG9-1-1 compliant Primary PSAP.	Required before implementation begins.
	Operational agreements with RCMP and BCEHS.	Includes agreed call transfer procedures and agency responsibilities.
	TELUS notification.	Notify TELUS to standardize processing of 9-1-1 calls currently received through TELUS Operator Services (TOPS).

Category	Dependency	Description / Considerations
Common Phase Prerequisites	Confirm participating communities.	Confirm all communities included within the implementation phase.
	Execute required agreements.	Participation Agreements, service agreements and TELUS Local Government Authority (LGA) Agreements, as applicable.
	Complete GIS mapping and addressing.	Complete GIS mapping, civic addressing and validation of NG9-1-1 data.
	Confirm emergency response boundaries.	Police, fire and BCEHS response areas.
	Develop operational documentation.	Standard Operating Procedures (SOPs), mutual aid agreements and supporting documentation.
	Confirm agency coordination procedures.	Call transfer procedures with RCMP, BCEHS and other participating agencies.
	Complete technical implementation.	Network configuration, integration, testing and system validation.
	Complete training.	Train dispatch personnel, emergency responders and participating agencies.
	Deliver public education.	Public awareness activities before service implementation.
	Operational readiness review.	Complete readiness assessment before implementation.
	Post-implementation review.	Capture lessons learned before proceeding to the next phase.
	Maintain legacy emergency calling methods.	Existing emergency numbers and call handling processes should remain available following implementation.
Phase 1 – Haida Gwaii	Harmonize fire dispatch arrangements.	Establish a consistent dispatch model across Haida Gwaii.
	Establish the implementation framework.	Develop governance, operating practices and lessons learned for subsequent phases.

Category	Dependency	Description / Considerations
Phase 2 – Prince Rupert and Port Edward	Complete Prince Rupert's NG9-1-1 transition.	Required before integration into the regional service.
	Integrate Prince Rupert and Port Edward into the regional operating model.	Supports expansion of the regional service.
Phase 3 – Mainland Coastal Communities	Confirm emergency medical response arrangements.	Establish response arrangements for communities without local BCEHS resources.
	Establish fire response protocols.	Develop dispatch or notification procedures for communities without formal fire dispatch.
Basic Fire Dispatch	Agreement with a fire dispatch provider.	Execute an agreement with a fire dispatch provider, such as Northern 9-1-1 (existing provider to 4 departments on Haida Gwaii).
Enhanced Fire Dispatch	Agreement with an NG9-1-1 compliant Secondary PSAP.	Required to provide Enhanced Fire Dispatch services.
	Radio connectivity.	Implement radio connectivity between the dispatch provider and participating fire departments.
	Additional GIS and fire response data.	Provide additional mapping and fire response information required by the dispatch provider.
	Enhanced operating procedures.	Develop expanded dispatch procedures and notification protocols.
	Enhanced training.	Train fire department personnel on enhanced dispatch operations.
	NG9-1-1 network integration.	Complete network configuration to enable routing of 9-1-1 calls to the Secondary PSAP.