

# **Development of an Unplanned Road Closure Protocol for the New Brunswick Provincial Highway System**

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Paper prepared for presentation  
at the Road Safety Management in Temporary Situations Session  
of the 2016 Conference of the  
Transportation Association of Canada  
Toronto, Ontario

## **ABSTRACT**

A formalized road closure protocol is an important operational directive used by provincial departments of transportation to address closures to traffic for severe weather conditions and other unplanned events. It ensures coordinated and effective action by the response agencies to control a required highway closure and ensure a safe, successful outcome.

Recent winter events demonstrate the need for highway closure protocols. Major bridge damage or destruction, fire, flooding, earthquakes, landslides, snow avalanche, hazardous material spills or cargo and/or vehicle cleanup are also examples of events where emergency highway closing protocols can be applied. In response, the New Brunswick Department of Transportation and Infrastructure (NB DTI) undertook a study to develop a provincial highway closure protocol for unplanned events. This paper presents findings from this study that involved a review of NB DTI's current practices, stakeholder consultations, a jurisdictional scan and preparation of a protocol and procedures document.

Both the stakeholder consultations and jurisdictional scan were particularly important. The consultations identified needs, current challenges and potential solutions with those stakeholders impacted by unplanned road closures. The jurisdictional scan focused on current practices, policies, and procedures used by other provincial departments of transportation across Canada, including those with multiple highway maintenance

service providers. The scan captured current practices with respect to the scope protocol/procedures, approval process, closure actions, re-opening processes, stakeholder roles and formalized documentation. These findings will be of interest to many organizations, especially with the advent of social media to communicate information to road users. The study culminated in the preparation of a provincial protocol and procedures for unplanned highway closures, in consultation with NBDTI. The protocol included defining NBDTI and stakeholder agency roles and the processes/procedures for making the decision to close a highway, implementing the closure, communicating the closure and reopening the highway.

## **INTRODUCTION**

A formalized road closure protocol is an important operational directive that is used by provincial departments of transportation to address closures to traffic for severe weather conditions and other unplanned significant events. It ensures coordinated and effective action by the response agencies to control a required highway closure and ensure a safe, successful outcome.

The New Brunswick Department of Transportation and Infrastructure (NBDTI) completed a project in early 2016 to develop an unplanned highway closure protocol and procedures to ensure a safe outcome. Key findings from the project are presented including recommendations for improving the consistency of unplanned road closures for road users in New Brunswick. This paper identifies several issues with the unplanned closure of rural highways in Canada and examples of practices that highway operators may want to consider in their jurisdictions.

## **BACKGROUND**

Recent events in New Brunswick such as two motorists being stranded on Route 15 in a snowstorm<sup>1</sup> and frequent closures of the Trans-Canada Highway (TCH) between New Brunswick and Nova Scotia<sup>2</sup> prompted the study to develop a more formalized road closure protocol and procedure. Opus International Consultants Limited (Opus) was engaged to complete the protocol and procedure that were to consider the following goals:

- Clearly defined criteria to identify when an unplanned road closure is necessary;
- Documented closure procedures checklist incorporating all response agencies;

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<sup>1</sup> CBC News Website, <http://www.cbc.ca/news/canada/new-brunswick/new-brunswick-men-stranded-in-vehicle-rescued-late-sunday-night-1.2958535>, accessed 27 April 2016

<sup>2</sup> CBC News Website, <http://www.cbc.ca/news/canada/nova-scotia/whiteout-conditions-close-trans-canada-highway-between-n-s-n-b-1.2587593>, accessed 27 April 2016

- Includes both severe winter conditions and other unscheduled emergency events;
- Applicable to both Department and contracted maintenance service providers;
- Focused on the arterial highway network; and
- Principles and protocols that can be adapted for other highway / road classes.

The project resulted in the delivery of a protocol and procedures document for unplanned highway closures due to events such as collisions, unsafe road conditions due to weather, or infrastructure failures. It does not apply to highways managed by other governments (e.g. municipalities or Parks Canada), ferry services, interprovincial bridges, or international bridges.

## **STUDY APPROACH**

The study was completed in four steps:

1. **Review of existing practices by NBDTI** including closure tools, legislation, relevant documents, and consultations with NBDTI staff. Four workshops were held with NBDTI staff and its P3 operators to confirm current practices, and discuss past issues, constraints, and outcomes.
2. **Consultations with stakeholders** impacted by unplanned road closures to identify needs, current challenges, and potential solutions.
3. **A jurisdictional scan** to identify current practices, policies, and procedures used by other selected departments of transportation in Canada. This included jurisdictions that have multiple highway maintenance service providers similar to New Brunswick. The scan focused on both severe winter maintenance and other unplanned events such as major bridge damage or destruction, fire, flooding, earthquakes, landslides, snow avalanche, hazardous material spills or cargo and/or vehicle cleanup.
4. **Protocol and procedures were developed** to incorporate NBDTI's existing practices to the fullest extent possible, address issues raised by NBDTI staff and stakeholders, and include leading practices identified in other jurisdictions. A report on supporting information was delivered in addition to the protocol and procedures document.

The remaining sections describe key issues identified from the stakeholder consultations, practices by other jurisdictions, and recommendations for New Brunswick based on leading practices by other departments of transportation. The last section of the paper highlights issues that may be relevant to other jurisdictions and how they can be addressed based on the results of this study.

## STAKEHOLDER CONSULTATIONS

Current challenges and potential solutions related to unplanned road closures were identified through consultations with stakeholders. The consultations focused on the following considerations:

- a) Decision Making Role;
- b) Actions to Close the Road;
- c) Communicating the Closure;
- d) Agency's Role in Protocol; and
- e) Potential Improvements.

Consultations were held with the following stakeholder groups:

- Atlantic Provinces Trucking Association (APTA);
- P3 Operators (Gateway Operations Limited; MRDC Operations Corporation; and Brun-Way Highway Operations Inc.)
- Confederation Bridge (Strait Crossing Bridge Limited);
- NB Emergency Measures Organization (NBEMO);
- NB Emergency Medical Services (EMS) / Ambulance NB;
- NB Provincial Mobile Communications Centre (PMCC);
- NB Public Safety Commercial Vehicle Enforcement Branch (CVE);
- NB Transportation and Infrastructure (NBDTI);
- NB911 Bureau (Branch) NB Public Safety; and
- RCMP – J Division (New Brunswick Headquarters).

Key observations and findings from the stakeholder consultations that are likely applicable to most highway jurisdictions are presented in Table 1.

**Table 1: Stakeholder Consultation Observations**

<b>Decision Making Roles</b>
<ul style="list-style-type: none"><li>• First responders, including RCMP, may stop traffic if it is not safe to travel on the road or if they need to respond to an incident or complete an investigation. However they do not have the authority to close a road. First responders will report situations requiring a road closure to the provincial communications centre.</li><li>• P3 operators do not have the authority to close the roads, only to issue no travel advisories and to stop plowing. They do have documented processes for deciding when to stop plowing.</li><li>• Confederation Bridge Operator has the authority to close the bridge.</li><li>• EMO has the authority to specify which roads will be opened first to ensure coordination of emergency services, e.g. to reconnect power, provide heating fuel, or first responder services.</li></ul>

## Closing and Reopening the Road

- First responders will use their vehicles to block a road if required until the highway operator can provide barricades and signage. Commercial Vehicle Enforcement (CVE) and RCMP staff have been called upon to man barricades in emergency situations. RCMP do not have the resources to provide this service.
- It is impossible to erect barricades or block a road with snow to close an entire highway during a widespread event such as a snow or rain storm. Need to rely on communications. However, infrastructure could be installed to close specific sections of a highway prone to low visibility, high winds, etc such as the TCH between New Brunswick and Nova Scotia. Even if barriers have been erected to close a road, it is virtually impossible to prevent vehicles from going around them.
- Stranded vehicles that block a road are an issue because plows can no longer clear the road and tow trucks either cannot, or will not, go out in a storm to move the vehicle. Confederation Bridge operator tries to close the bridge in high winds before an incident occurs blocking the bridge.
- If conditions are too bad for tow trucks to remove stranded vehicles, then EMO can coordinate resources to respond and remove people in danger. Stakeholders generally agree that vehicles should be left until conditions improve. CVE has assisted with sweeping for stranded vehicles.
- CVE organized an orderly departure of trucks after a long closure of the TCH between New Brunswick and Nova Scotia last year.

## Communications

- Ideally, there would be one source of road condition and closure information for all roads in the province (i.e. NBDTI roads, P3 roads, and municipal roads). Messages from this single source need to be accurate. For example, the NBDTI name or route number should be used rather than the local name for the road. The limits of closures should be described in terms of civic addresses or GPS coordinates, rather than on the basis of road segments.
- Stakeholders are all doing their own messaging – no central source and nobody is seen as the authority.
- Information on road closures and travel advisories should be pushed out to key stakeholders such as First Responders by e-mail. The website for the Confederation Bridge may be a good model for this where stakeholders can subscribe to a feature that sends them e-mails on warnings and advisories. A couple of thousand stakeholders have subscribed using the feature including first responders, media and EMO.
- Social media such as Twitter and Facebook is a good idea because of how quickly messages get communicated. The Confederation Bridge website has an app (as do the 511 sites for several other jurisdictions). Several stakeholders in New Brunswick follow the RCMP Twitter feed.
- Messaging regarding a road closure is not strong enough and confusing. Since P3 operators are not allowed to close a road, they use a different message than NBDTI.
- More details are required by EMO and the eight dispatchers for first responders on unplanned closures than by the general public. Information should include when an unplanned closure occurs, when the road reopens, the reason for the closure, and information on whether a first responder can still use it.
- Variable message signs informing motorists of no travel advisories and road closures at key locations allowing vehicles to choose another route or find a place to safely wait until conditions improve would be helpful. Weigh scale sites could be used more effectively for managing truck traffic during a no travel advisory or road closure.
- It may be necessary to contact NBDTI to identify a detour capable of handling traffic such as heavy vehicles.

The observations in the table were summarized into the following issues that were addressed by the protocol and procedures document;

- Who has the authority to make the decision of when to close and re-open roads;
- Decision criteria for stopping traffic in situations such as snow storms when operating conditions make travel unsafe rather than a problem with the infrastructure;
- Actions to stop traffic on long segments of highway that cannot be practically barricaded when operating conditions are not safe;
- Who is responsible for checking for stranded vehicles and rescuing occupants if required; and
- Improved accuracy, coordination, and dissemination of messages regarding road closures.

## **JURISDICTIONAL SCAN**

A review was undertaken of current practices, policies, and procedures used by other selected departments of transportation in Canada to address the issues identified by New Brunswick's stakeholders. The review included the following jurisdictions, several of which have multiple highway maintenance service providers similar to New Brunswick:

- British Columbia
- Newfoundland
- Nova Scotia
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Virginia

The scan focused on severe winter storms and other unplanned events such as major bridge damage or destruction, fire, flooding, earthquakes, landslides, snow avalanche, hazardous material spills or cargo and/or vehicle cleanup.

A questionnaire was developed as a guide to collect information from the jurisdictions (see Appendix A) that focused on the following topics:

- a) Scope of road closure protocol and procedures;
- b) Approval process for making a road closure;
- c) Road closure actions and steps;
- d) Road closure re-opening process; and
- e) Stakeholder roles.

Key findings from the jurisdictional scan are presented below in Table 2.

**Table 2: Jurisdictional Scan Observations**

<b>A. Scope Of Road Closure Protocol and Procedures</b>
<ul style="list-style-type: none"><li>• All but one agency document procedures to some extent, e.g. one agency has procedures for arterial highways only</li><li>• Most cover all incidents and weather events</li><li>• One has procedures only for snowstorms while another has procedures only for closures due to road deficiencies</li><li>• In all but one agency, the procedures apply to all roads under provincial jurisdiction</li><li>• Safety for all road users was reported as a goal by all jurisdictions surveyed. Other goals included protection of public, safety of government employees, maintaining access for emergency vehicles, and maintaining strategic links for mobility of road users.</li></ul>
<b>B. Approval Process For Making a Road Closure</b>
<ul style="list-style-type: none"><li>• Generally the decision to close a road is a consultative process between ministry staff, police, neighbouring jurisdictions and operators, and in some cases emergency services with the ministry of transportation making the final decision. Generally, highway operations staff (both public and private employees) recommend closure to district managers who then make the decision. Ontario has delegated the decision to the Ontario Provincial Police (OPP)</li><li>• In all provinces, except NL, staff has been designated to approve the closure. In most agencies, it is the District Manager / Engineer or their designate. In NL, the Ministry Executive approves.</li><li>• Half of the respondents have developed separate approval procedures depending on either the severity of the event or the function of the road being closed</li></ul>
<b>C. Road Closure Actions and Steps</b>
<ul style="list-style-type: none"><li>• Pre-alerts of potential road closures are issued by several agencies based on weather forecasts. Seven of the agencies use either a communications team, or a communications centre, to coordinate resources and messages regarding road closures.</li><li>• All jurisdictions reviewed have a 511 website, phone number, Twitter account and Facebook pages to inform road users of closures. Alberta and Quebec have mobile apps for road closure notifications and several websites allow users to subscribe to alerts using social media or e-mail.</li><li>• Several also use “mutual aid radios” linking ministry staff, police, other emergency responders, and operators from other jurisdictions to coordinate their actions. E-mail and phones are also widely used to communicate and coordinate resources.</li><li>• The devices used to close a road include signage, barriers, arrow boards, variable message boards, snow banks, properly marked vehicles, and gates. Quebec has contracted service providers to set up the devices on highways connecting to the provincial network. Saskatchewan does not use barriers in low visibility situations.</li><li>• All but two of the jurisdictions man road closures. Two of the agencies that do man closures noted that the ministry has no legal authority to stop the public from driving through.</li><li>• All but two of the jurisdictions check for stranded vehicles when a section of highway is closed. The responsibility is equally split between ministry staff and first responders. Virginia DOT monitors social media to check for stranded motorists. Stranded vehicles and travellers are handled on case-by-case basis working with police and tow trucks to ensure occupants are safe and to try and remove vehicles if possible.</li><li>• Quebec continues winter maintenance after the road is closed.</li></ul>

#### **D. Road Closure Re-Opening Process**

- Roads are typically reopened using a consultative process similar to the one used to close the road. In most of the jurisdictions, the ministry of transportation approves the reopening except for Ontario where the OPP makes the decision. If the road is closed by the police to manage an incident, then they reopen it. In one agency, approval is not required.
- Alberta does not reopen until the road is brought back to a reasonable standard and BC uses a staged reopening to clear queues.
- Generally road users are informed of the re-opening using the same process as road closures.

#### **E. Stakeholder Roles**

- P3 operators only had a role in two jurisdictions. They can recommend a road closure but do not have the authority to approve the closure, i.e. they are consulted similar to the ministries' own operations staff.
- The police are consulted by most jurisdictions regarding closures and re-openings and are kept updated until the event is over. The police may close the road if it is related to an incident such as a collision.
- Police agencies communicate road closures as well.
- Other stakeholders included municipalities, tow truck companies contracted to move vehicles in snow storms, and provincial emergency management agencies

The results of the jurisdictional scan relevant to the issues identified by New Brunswick's stakeholders are highlighted below.

#### **Decision-Making and Approval Process**

The decision-making process for closing a highway was relatively consistent amongst the jurisdictions surveyed. It is typically consultative between department of transportation staff, police, neighbouring jurisdictions and operators, with final approval, in most jurisdictions, by department of transportation staff with authority designated by the Minister. Ontario has delegated the decision to close roads to the Ontario Provincial Police.

#### **Closing Long Highway Segments**

Traffic control practices for wide spread events such as snow storms and other low visibility situations, vary between jurisdictions. For example, accesses to major highways in Quebec are quickly closed by contracted service providers once the decision to close the highway has been made. In Nova Scotia, the Department has closed highways during severe storms without using traffic control, i.e. by issuing a statement. It is not clear in several jurisdictions if traffic can be legally stopped during an event such as a snowstorm.

#### **Communications**

Several agencies including BCMoT and the Confederation Bridge take a proactive approach to communicating road closures by issuing pre-alerts based on weather



forecasts. Once a decision is made to close a road, messages are disseminated by 511 websites, phone numbers, Twitter accounts and Facebook. Several websites allow users to subscribe to alerts that are pushed out using social media or e-mail. A communications centre or team are used to coordinate resources and messages regarding road closures.

### **Stranded Vehicles**

As noted in the background section of this paper, a vehicle stranded on a provincial highway during a major storm was one of the driving factors for the study. Roadway segments are checked for stranded vehicles before they are closed in all but two of the jurisdictions surveyed. Responsibility for checking is divided between the roadway operator and first responders.

## **RECOMMENDATIONS FOR NEW BRUNSWICK**

Based on the findings from the stakeholder engagements and jurisdictional scan, several short and longer term recommendations were identified for NBDTI as described in Table 3. The recommendations were based on the following specific examples of best practice from the jurisdictional scan:

- Level of detail in Quebec's protocol including the one-page contact sheet;
- British Columbia's messaging protocol;
- Proactive, staged advisories used by British Columbia;
- Features on DriveBC and Quebec 511 websites, particularly the number of communications channels for issuing alerts (i.e. mobile apps, Twitter, RSS feeds, e-mail subscriptions);
- Road advisory severity levels used by British Columbia, Quebec and Nova Scotia in reporting travel advisories on their websites (i.e. emphasizing significant events) and in the case of British Columbia, for triggering subscriber notifications; and
- The checklist format for NSTIR's Copequid Pass Closure Procedure for specific systemic locations.

**Table 3: Recommendations for New Brunswick**

<b>Short Term Recommendations</b>
<ul style="list-style-type: none"><li>• Get clarification / legal opinion on whether a highway can be closed by issuing a notification on NB511 without placing signs or barricades on the highway. The procedures and protocol document has been written assuming that signs are required as a minimum, and that only travel advisories can be issued in the case of events that affect entire corridors that cannot be practically barricaded or signed, e.g. snowstorms.</li><li>• Develop and implement a protocol that:<ul style="list-style-type: none"><li>○ Clearly states who has the authority to close roads and the roles of other NBDTI staff and other stakeholders. It is recommended that the District Engineers (or a designate) be given the authority which is consistent with practice by other provincial agencies; and</li><li>○ Contains procedures for making the decision to close a highway; implementing the closure; communicating the closure to all stakeholders; and re-opening the highway.</li></ul></li><li>• Identify areas frequently closed and develop site specific highway closure protocols for these areas (e.g. Route 2 in Tantramar Marsh, Route 1 at Spruce Lake). The protocol should consider establishing contracts with local tow truck operators to be on standby to remove vehicles during road closures.</li><li>• Improve communications by:<ul style="list-style-type: none"><li>○ Establishing an e-mail distribution list for key stakeholders such as the eight first responder dispatch centres, EMO, neighbouring jurisdictions, Atlantic Provinces Trucking Agency and send road closure alerts;</li><li>○ Issuing proactive travel alerts similar to BCMoT, that provide the travelling public advance notice on any anticipated/forecasted weather, visibility, surface, or road condition that is significant or unusual;</li><li>○ Establishing a message protocol similar to BC MoT to improve consistency, accuracy, and clarity of road closure alerts. Consider using a term other than "advisory" for road closures to convey a stronger message and response;</li><li>○ Revising the NB511 website to include Twitter feeds, RSS feeds, and an e-mail subscriber service to get road closure alerts and updates; and</li><li>○ Creating a small team to input information provided by field crews to NB511 rather than having field staff enter the information.</li></ul></li></ul>
<b>Long Term Recommendations</b>
<ul style="list-style-type: none"><li>• Amend the Highway Act and the New Brunswick Highway Corporation Act to allow designation of highway closure approval;</li><li>• Assess the need for establishing contracts with local tow truck operators to remove vehicles from closed roads;</li><li>• Develop and implement a plan to install variable message signs at key locations throughout the provincial highway network; and</li><li>• Improve communications by creating a central communications team or operations control centre for all provincial highways.</li></ul>

## **IMPLICATIONS FOR OTHER JURISDICTIONS**

There were several aspects of road closure practices that varied amongst the jurisdictions reviewed for this study that could result in inconsistencies for drivers as they travel between jurisdictions. They can be divided into two main categories – communications and traffic control practices.

Communications regarding road closures are not consistent between jurisdictions. While all jurisdictions reviewed had 511 websites, the format of the webpages, the information available, and the ability to subscribe to other communication channels for road closure information such as e-mail, twitter, and facebook varied. In New Brunswick, the limited number of communications channels, and the information available on the website, were identified as issues by New Brunswick stakeholders. It was recommended in the study that New Brunswick adopt several practices used in British Columbia and Quebec including increasing the number of communications channels to include social media such as Twitter, RSS feeds, and an e-mail subscriber feature, issuing proactive travel alerts, and establishing a message protocol similar to British Columbia's.

While traffic control practices between jurisdictions appear to be fairly consistent for localized events such as a culvert or bridge failure, traffic control for wide spread events such as snow storms, or other low visibility situations, were not consistent. For example, major highways in Quebec are quickly closed by contractors retained to block the access points once the decision to close the highway has been made. In Nova Scotia, the Department has closed highways during severe storms without using traffic control, i.e. by issuing a notification through the 511 service. Stakeholders in New Brunswick agreed that it was not possible to stop traffic at all access points to long segments of highway when operating conditions were not safe. In fact, it is not clear in several jurisdictions if traffic can even be legally stopped during an event such as a snowstorm. Several recommendations were made to address this issue in New Brunswick. One was to identify segments prone to poor operating conditions during the winter and install traffic control devices such as gates and variable message signs at these locations. The other was to seek clarification on whether a highway can be closed by issuing a notification through NB511 without placing traffic control devices.

The study also identified issues from the operator's perspective including a growing awareness and management of risk by stakeholders. One of the key drivers of the New Brunswick study was a new policy by the New Brunswick Headquarters of the RCMP stating that they were not responsible for closing roads in situations such as snow storms. Another example identified by stakeholders was a reluctance by tow truck operators to remove vehicles during periods of low visibility. This then limits the ability of operators to clear the roadway. The responsibility for stranded vehicles was not clear

in New Brunswick either. Should it be the Department of Transportation and Infrastructure or the Emergency Measures Organization who takes the risk to remove the vehicle, or should the driver be expected to stay in the vehicle and accept the risk of travelling on a road that had been closed? The recommendation for the New Brunswick protocol and procedures document was for NBDTI to sweep for stranded vehicles before closing a road, assess the need for establishing contracts with local tow truck operators with suitable equipment for removing vehicles, and for EMO to have the responsibility for removing occupants from vehicles that may be in danger.

Based on the results of this study, there may be merit in developing more consistent protocols and practices for road closures across Canada.

## Appendix A

### NBDTI Road Closure Study – Jurisdiction Questionnaire

<b>AGENCY</b>	
<b>DATE</b>	
<b>CONTACT NAME AND POSITION</b>	
<b>CONTACT E-MAIL AND PHONE</b>	

#### A. SCOPE OF ROAD CLOSURE PROTOCOL AND PROCEDURES

1. Are your protocols and procedures documented?
2. What type of situations or events are they used for? (e.g. snowstorms, forest fires, flooding, road washouts, limited visibility, poor surface conditions, obstructions, etc.)
3. Are they used for all roads in the province? If not, which ones?
4. What are the goals and guiding principles of the protocol? (e.g. Safety of government employees, maintaining access for emergency vehicles, decreasing risk to road users, etc.)

#### B. APPROVAL PROCESS for MAKING A ROAD CLOSURE

5. How are decisions to close roads made?
6. What information is used to help plan in advance the need for a possible road closure (e.g. RWIS, winter index, forecasts, etc.)?
7. What communications occur to make the decision to close the road?
  - Within your organization
  - With other transportation service providers (e.g. municipalities, P3 operators, etc.)
  - With emergency service providers (e.g. police, EMO)
8. Who approves road closures?
9. Who chooses the closure points and how are they selected?
10. Is the process the same for every situation? If not, how does it vary?

#### C. ROAD CLOSURE ACTIONS AND STEPS

11. What communications occur to action the road closure?
  - Within your organization
  - With emergency service providers (e.g. police, EMO, Red Cross, 911)
  - With other transportation service providers (e.g. municipalities, P3 operators, etc.)
12. What devices are used to close the road and who sets them up?
13. Are the closures manned and by who?

14. Is the closed section checked for stranded vehicles and who does the sweep?

15. How are stranded vehicles and travellers handled (e.g. comfort stations)?

16. How and when are road users informed regarding closures including:

- Industrial and commercial operators (trucking companies, tow trucks, couriers, etc.)
- Emergency service providers (police, EMO, 911, commercial vehicle enforcement)
- Stranded drivers
- Diverted traffic
- General public
- Other transportation service providers (e.g. municipalities, P3 operators, etc.)

17. Do the steps vary depending on the situation? If yes, how?

**D. ROAD CLOSURE RE-OPENING PROCESS**

18. How are decisions to reopen the roads made?

19. Who approves the reopening of the road?

20. How and when are road users informed regarding the reopening?

21. Do the communications change depending on the situation? If yes, how?

**E. STAKEHOLDER ROLES**

22. What is the role of P3 operators in the approval, road closure actions, and communications?

23. What is the role of the police in the approval, road closure actions, and communications?

24. Are there any other stakeholders that we did not discuss?

**F. DOCUMENTATION**

25. Do you have any documents such as guides, checklists, flowcharts that you can share?

**G. OTHER COMMENTS**