STÓ:LŌ TERRITORY

SPILLS PREPAREDNESS WORKSHOP & TABLE TOP EXERCISE

WORKSHOP REPORT

January 13 & 14, 2020

9am - 4pm (both days)

Seabird Island Band Gym
2895 Chowat Rd, Agassiz, BC

First Nations' Emergency Services Society of British Columbia

Innomergence Solutions

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Introduction & Acknowledgements

The Stó:lō are “the river people” and have inhabited the lands of the lower Fraser River surrounding tributaries since time immemorial. As such, the Stó:lō are custodians of their title lands and the rivers that pass through it. Indeed, the river is the livelihood and lifeblood of the Stó:lō and they are committed to its protection, health and stewardship to ensure its viability for generations to come.

On January 13 & 14, 2020 a multi-agency workshop was held at the Seabird Island Band Office for the purpose of empowering communities and other participating agencies with knowledge regarding the Trans Mountain Pipeline, which transits the Stó:lō traditional territory.

The intent of the workshop was to ensure a common understanding of response plans and protocols, availability and deployment of resources, stakeholder roles and responsibilities and to ensure that the knowledge and interests of the Stó:lō people are actively incorporated into mitigation, planning & preparedness, response and recovery strategies for pipeline incidents and other hazards impacting or threatening Stó:lō title lands. This workshop also introduced concepts of strategic emergency management.

The workshop was made possible through a grant from the Indigenous Advisory and Monitoring Committee (IAMC), and the organizational efforts of the First Nations Emergency Services Society (FNESS) and Stó:lō Tribal Council who contracted Innomergence Solutions Ltd to facilitate the two-day event.

Figure 1: *Trans Mountain Pipeline*

Participating Communities & Agencies

The workshop coincided with adverse winter weather and road closures, which resulted in reduced participation. Despite this, a total of 42 people representing multiple organizations attended, most for both days. Attendees and affiliations can be found in *Appendix 1*.

Workshop Agenda

The workshop spanned 2 days and Day 1 covered mandate overviews from several key agencies and a review of how emergency management practices are generally conducted within BC.

Day 2 included a review of previous day, and 2 oil spill scenarios specifically chosen based on community concerns and sensitivities. In each scenario, the Trans Mountain team presented what their Emergency Response Plans identified for response, resources required, values at risk, and tactics they would likely use in those locations.

The workshop agenda can be found in *Appendix 2*.

Agency Mandate Overviews

The following agencies presented on their mandates:

- Trans Mountain Corporation
- Indigenous Advisory & Monitoring Committee
- Canada Energy Regulator
- Department of Fisheries & Oceans
- Indigenous Services Canada
- Emergency Management BC

A summary of their overviews can be found in *Appendix 3*.

Scenarios for Discussion

The two spill scenarios chosen:

1. Coquihalla River at Hope where a spill entered the waterway just above the confluence of the Fraser
2. Popkum wetlands where species at risk had been identified

See *Appendix 4* for more details on each of the scenarios.

Summary of General Observations

The following observations were made by the facilitators and based on comments from the participants.

The following observations were made by the facilitators and based on comments from the participants.

1. Stó:lō communities can work towards a collaborative and comprehensive emergency program model. There is interest in this approach expressed by Stó:lō leadership and an opportunity to consider this in the context of other communities, municipal and regional district governments, and other supporting agencies.
2. Standardizing emergency management practices across the communities and collaborating agencies will make it more effective for mutual aid and resource sharing in times of need. Activities such as shared training, exercises and EOC business practices would facilitate this.
3. Using local Knowledge Holders in a formal advisory and supportive role would ensure the communities interests were represented in the earliest stages of response planning and operations. They could be identified in the organization structures for EOC's and at site level Incident Command and Geographic Response Plans.
4. The Trans Mountain Geographic Response Plans (GRP) contain detailed planning & pre-organization of information related to response tactics, values at risk and impacts, and resource requirements for specific areas along the pipeline. They represent a model that could be applied to an all-hazards approach to planning. They are a live document, subject to change upon regular review and changes in business practices, and the communities can be involved in that process.
5. A regional and community level analysis can be conducted to identify needs and to form the basis of a 3-to-5 year training strategy. During times of need, trained support resources can be in demand so working to a common training standard across communities and other agencies and making specialized training available as appropriate will yield benefits both in terms of increasing capacity and sharing resources.
6. Enhanced community engagement by stakeholder agencies will only serve to reinforce the "Stronger Together" approach to emergency management. Currently there have been some challenges identified that can likely be mitigated or resolved by the stakeholder agencies by getting out and engaging with the communities and their representatives on a regular basis.
7. Better information sharing and situational awareness among the responding and supporting agencies can result in quicker decision making and engagement of resources. In the interest of public safety, there is an opportunity to expedite initial situational awareness to the communities by establishing information sharing protocols and methods for public reporting and notification of incidents.
8. First Nations Emergency Services Society (FNESS) has been identified by Stó:lō as having a key and critical role to play in the strategic development and implementation of a regional emergency program. With suitable funding and support, FNESS can provide services towards this.
9. There are some specific considerations identified by the attendees for Trans Mountain that can generally be captured under the notion of getting to understand the communities, and their needs, interests, and capabilities better. It includes better information sharing, quicker engagement in decision making through the involvement of community Knowledge Holders , more engagement with the communities, better science around potential impacts, and a better understanding of the plans at the community level.
10. There are some specific considerations for the communities & Tribal Council around the development of a collaborative regional emergency program model that includes external agencies. Currency of community contact information and the ability to have a community contact 24/7 will also expedite the information sharing and engagement processes, particularly through the development and coordination of community emergency managers and emergency program coordinators.

For more details on the observations, see *Appendix 5*.

Participant Feedback, Questions & Concerns

Some key comments, questions and concerns raised by the participants were captured in brief form and can be found in *Appendix 6*. In some cases, they informed the observations and recommendations.

Next Steps

There has been a desire voiced to pursue a collaborative based regional emergency management model. Stó:lō communities can hold an internal conversation to identify their preferred end-state and work towards a needs analysis that will transition in to a strategic plan that will guide the development of training plans, community emergency response & recovery plans, and the business practices at each community in line with Sendai Framework for Disaster Risk Reduction, and other standards such as ISO 31000. To the extent necessary, engage the IAMC, the Emergency Planning Secretariat, FNESS, ISC, EMBC and the consulting community for appropriate levels of financial support and services.

A general approach to this could look something like:

- solicit interest from leadership in all Stó:lō communities who want to participate to identify
    - the greatest risks to their communities
    - what their preferred end-state would look like, both in terms of community resilience and a collaborative model between the communities; consider the role of external agencies as well
    - existing capacity, challenges and barriers to achieving that end-state
- solicit interest from neighboring jurisdictions and partner agencies for their participation in a collaborative model and resource sharing
- identify an emergency program model, such as Regional Action Plan identified in Sendai Framework, and a strategic plan to develop the capacity for it including
    - the steps to develop it and a timeline
    - what it will take to keep it operationally viable in terms of staffing, equipment, facilities, business practices, and cost
    - the nature of collaboration through agreements with other communities, local governments, critical infrastructure organizations, and support agencies and necessary models of communications
- identify an accountable project champion and lead
- seek out funding to implement the plan and program; consider leveraging funding from multiple sources
- have Stó:lō communities, local governments and agencies collaborate with Trans Mountain Corporation, Indigenous Advisory Monitoring Committee, Emergency Planning Secretariat, First Nation Emergency Services Society and Emergency Management BC to conduct full scale exercise over two days in this calendar year.

Appendix 1: Participating Communities & Agencies

- Stó:lō Tribal Council
- Seabird Island Band
- Shxwhá:y Village
- Chawathil First Nation
- Kwantlen First Nation
- Skwah First Nation
- Cheam First Nation
- Lillooet Tribal Council
- Nuxalt Nation
- First Nations Emergency Services Society (FNESS)
- Indigenous Advisory & Monitoring Committee (IAMC)
- Trans Mountain Pipeline
- Canada Energy Regulator (CER)
- Indigenous Services Canada (ISC)
- Department of Fisheries & Oceans (DFO)
- Royal Canadian Mounted Police (RCMP)
- Emergency management BC (EMBC)
- Province of BC Ministry of Environment & Climate Change (MOE)
- Chilliwack Fire Department
- District of Hope Fire Department
- Kent Harrison Fire Department
- Innomergence Solutions

Appendix 2: Workshop Agenda

Day 1: Monday, January 13, 2020

Time	Topic	Presenter
09:35	Welcome & Protocols	Tyrone McNeil - Stó:lō Council Tribal Chief Clem Seymour - Seabird Island Chief
09:50	Facilitator Introductions & Agenda	Dianne Gardner (FNESS) Steve Newton & Mike Andrews (Facilitators)
10:05	Indigenous Advisory & Monitoring Committee Overview	Kyle Robertson
10:15	Trans Mountain Pipeline Response Plan Overview	Kelly Malinoski
11:05-11:30	BREAK	
11:30	Canadian Energy Regulator	Kent Lien
12:00	Department of Fisheries & Oceans	William Brewis
12:00-13:00	LUNCH	
13:00	Emergency Management BC	Craig Bland
13:30	Indigenous Services Canada	Duncan Stephen
13:50	Emergency Management in BC Review	Mike Andrews
14:20-14:45	BREAK	
14:45	Strategic Support/EOC Management	Mike Andrews
15:20	Emergency Information Management	Mike Andrews
15:40	Day 1 Summary & Closing Remarks	Steve Newton

Day 2: Tuesday, January 14, 2020

Time	Topic	Presenter
09:18	Welcome & Protocols	Tyrone McNeil - Stó:lō Council Tribal Chief
09:22	Day 1 Review	Steve Newton
09:30	Scenario 1: Coquihalla River	Ken McLernon
10:45-11:00	BREAK	
11:00	Learnings from Scenario 1	Steve Newton
12:55-13:30	LUNCH	
13:30	Scenario 3: Wetlands	Grant Stecyk
13:30	Scenario 3: Wetlands Learnings	Steve Newton
14:30-15:00	BREAK	
15:00	Day 2 Review, opportunities	Steve Newton
15:45	Day 2 Summary & Closing Remarks	Steve Newton, Tyrone McNeil

Appendix 3: Agency Mandate Overviews

Indigenous Advisory & Monitoring Committee (IAMC)

Presenter: Kyle Robertson

The Indigenous Advisory and Monitoring Committee (IAMC) was established to address common issues and priorities raised by Indigenous communities potentially impacted by the Trans Mountain Expansion Project (TMX). The IAMC will monitor the pipeline construction project, the existing Trans Mountain Pipeline and related marine shipping over the lifecycle of the expanded pipeline system.

The Government of Canada allocated a total of $64.7 million over five years to this initiative. Fully $42 million of this funding is available for the committee to monitor the Project and address the priorities related to protection of Indigenous and environmental interests, socio-economic outcomes and safety of the 117 potentially impacted Indigenous communities. Included in the broader mandate of the IAMC is support for planning, training and exercises for pipeline incidents that can be leveraged to develop capacity and business practices around all hazards.

The goal of the committee is to "form the basis of a new relationship between Indigenous communities, the government and the Canada Energy Regulator (CER) in respect of the TMX project and existing pipeline," according to the IAMC's website. The IAMC will focus on Indigenous issues and priorities for communities ranging from Edmonton to southwestern Vancouver Island.

Trans Mountain Pipeline Emergency Program (TM)

Presenter: Kelly Malinoski

Trans Mountain is headquartered in Calgary, Alberta with regional offices along the pipeline system in Alberta and BC. Trans Mountain operates Canada's only pipeline system transporting oil products to the West Coast. Trans Mountain delivers approximately 300,000 barrels of petroleum products each day through 1,150 kilometres of pipeline in Alberta and British Columbia, and 111 kilometres of pipeline in Washington state.

The Trans Mountain Pipeline transports crude oil, semi-refined and refined products in a series in the same pipeline. This process is known as "batching". Think of it as a "batch train," with one product following another product through the pipeline during a specific time period. It's like a series of rail cars carrying different products moving in a sequence along the 1,150-kilometre pipeline at about walking speed. To transport this same product by truck it would take approximately 1,400 trucks leaving Edmonton every minute 24/7 for the west coast.

The Trans Mountain Expansion Project will provide increased capacity to support Canadian crude oil production growth and ensure access to global energy markets. The expansion involves installing approximately 980 kilometres of new pipeline, new and modified facilities including pump stations and terminals, and a new dock complex at the Westridge Marine Terminal in Burnaby, British Columbia.

The most critical and responsible emergency management strategy is to prevent a spill from occurring. However, if there's a spill, Trans Mountain is prepared to respond quickly with detailed emergency procedures and trained professionals. Once a spill location is confirmed, Trans Mountain can identify the product within one minute and have trained staff on-site to provide situational awareness within one hour.

Trans Mountain uses a planning standard to ensure rapid response. The planning standard establishes the desired response outcomes and forms the basis for the emergency response plans, procedures and processes.

The planning standard:

- Outlines the hazard assessment process, which includes a hazard listing (spill, fire, explosion)
- Outlines the Worst-Case Discharge Calculation method
- Specifies the quantity and location of response equipment and personnel needed to respond within maximum target response times
- Defines maximum target response times to be used for response planning to warrant a prompt, safe and effective response to an emergency

In the event of an incident, Trans Mountain uses the Incident Command System (ICS) to manage their response. This system allows for seamless coordinated action with government agencies and Indigenous communities. If the public is potentially affected by an incident Trans Mountain works with the local municipality and/or Indigenous Community to ensure appropriate emergency communications are delivered and public protection measures are undertaken based on the associated hazards of the incident.

Public notification during an emergency may occur through door to door visits, telephone, electronic notification, social media, broadcast media and community signage. Notification of Indigenous communities will occur through the Liaison Office. Trans Mountain maintains a database of Indigenous community contacts and will contact affected communities as soon as possible. Those that are closest or directly impacted are notified first with those that are upstream or far away from the incident site later in the notification process.

Trans Mountain has a number of Emergency Response Plans that are location specific. Geographic Response Planning enables a timely and more effective response to mitigate potential impacts to the environment by providing pre-identified control points, response tactics and other geographically specific information. All Response Plans and GRP's are available on Trans Mountain's website for public viewing and use (https://www.transmountain.com/emergency-response-plans).

In addition to comprehensive ERP's and GRP's emergency response equipment, such as spill drums with absorbent material to assist in immediate cleanup of any local spill, is available at all facilities. Other emergency resources, such as river boats and response trailers, are placed at strategic locations along the Trans Mountain Pipeline and can be mobilized on a moment's notice. These response trailers have been spaced to ensure a full response can be deployed within 2 hours of every point along the pipeline route.

Trans Mountain conducts 20-30 exercises per year throughout the pipeline system and invitations are sent to all communities with identified traditional territory in the region to attend to observe, participate or both. Communities are strongly encouraged to attend these events when invited to better understand what a spill response could look like and better understand how to become involved in the response.

In addition to Trans Mountain Emergency Response Plans, the emergency management department has created additional resources on pipeline safety and emergency response which can be found on the website (https://www.transmountain.com/community-awareness-and-education). A specific Emergency Response Guideline for Indigenous Communities has been developed for inclusion in community Emergency Response Plans. By understanding the measures outlined in this supplement, community members will be able to enhance community resiliency while supporting pipeline safety and awareness.

Canada Energy Regulator (CER)

Presenter: Kent Lien

On June 21, 2020 Parliament passed Bill C-69, which replaces the National Energy Board Act with the Canadian Energy Regulator (CER) Act. It came into force on August 28, 2020. While the CER Act introduces some changes, it also incorporates many practices the NEB was already following. The CER Act is intended to ensure greater Indigenous participation in recognition of Indigenous rights and confirmation of the Government's duty to consult, including a requirement to assess impacts on these rights and consider Indigenous knowledge in decision making.

The CER is a federal crown corporation that regulates 75,000 km of pipeline in Canada and considers, among other things, requests from companies to construct and operate:

- pipelines that run between provinces or into the United States; and
- some international and inter-provincial power lines.

When CER considers whether a project should be approved, it acts in a quasi-judicial role, which means that it operates in many ways like a court and independently from government. CER often holds public hearings to help it decide whether particular projects can be built. If the CER decides that a project can be built, it may also set conditions the company must meet in order to build and operate the project. Generally, the conditions can pertain to any part of the project and may address a variety of environmental and socio-economic concerns.

The CER sits on the IAMC and both work jointly to support the Indigenous Monitoring Program (IMP). While this program has a broader mandate around monitoring all activities related to the pipeline and its expansion, those community members who work in the IMP also participate in activities related to emergency management and response planning, including training and exercises.

The regulation addresses all four phases of emergency management; mitigation planning & preparedness, response and recovery and evaluates and regulates emergency management plans and programs relating to the companies that it regulates. Reportable incidents are reported to the Transportation Safety Board (TSB) and CER can be called 24/7. The regulation dictates that the polluter is responsible for cleanup, coordination and recovery and CER will participate in the unified command during significant spill incidents and may also integrate with an incident management team at site.

During a major spill event, where there is CER legislation involved, they will attend the site and participate in a Unified Command through the local Incident Command Post established by the spiller. The primary role of the CER is to ensure that the spiller complies with its legislated and planned responsibilities for response, clean up and site rehabilitation and recovery. The CER works with communities, and other federal and provincial agencies towards the best outcome.

Department of Fisheries & Oceans Canada (DFO)

Presenter: William Brewis

The Department of Fisheries and Oceans (DFO) is the federal lead for safeguarding waters and managing Canada's fisheries, oceans and freshwater resources. DFO supports economic growth in the marine and fisheries sectors, and innovation in areas such as aquaculture and biotechnology. DFO helps to ensure healthy and sustainable aquatic ecosystems through habitat protection and sound science.

DFO engages in research into the behavior of product and environmental research with Natural Resources Canada and they have been engaged in consultation along the pipeline.

In spill incidents, Environment Canada is the federal lead agency and the DFO provides scientific and technical subject matter expertise as a support agency. The DFO may provide for temporary authorizations for emergency work in fish habitats or for other necessary authorities to support necessary emergency mitigation, response and recovery measures.

Trans Mountain's geographic response plans allow the DFO to identify spawning areas and other relevant risks in support of mitigation strategies to deflect from sensitive areas during response.

Following an event, the spiller maintains habitat and environmental monitoring based on DFO set parameters; DFO continues long-term monitoring of impacts to species and environment when there has been a known event.

Indigenous Services Canada (ISC)

Indigenous Services Canada | Services aux Autochtones Canada

Presenter: Duncan Stephen

In April 2017, Indigenous Services Canada signed an agreement with the Province of BC, and its EMBC organization to provide emergency management support to the First Nations communities. This support aligns with EMBC's legislated abilities under the provincial Emergency Program Act and its various regulations and is consistent with what is provided to municipal and regional district governments. It allows for eligible costs to respond to and recovery from emergency events to be recovered through EMB

Where some costs are deemed not eligible under EMBC's policies, the Bands can turn to ISC to seek solutions. When considering the eligibility of recoverable costs for response and recovery, it is recommended that the Band contact EMBC first about their Expense Authorization Form (EAF) process. These EAF's are essential an approval and confirmation from EMBC that those eligible costs identified will be recoverable.

When an emergency event happens, a State of Local Emergency (SOLE) may be declared by the Chief and Council. The SOLE is not required for, nor does it guarantee, access to funding in support of a response or recovery. EMBC will approve and reimburse eligible costs identified through the EAF process without a SOLE. ISC may also reimburse those costs that are not eligible through EMBC.

ISC is funding some regional Emergency Program Coordinator (EPC) positions full-time over the next 2 or 3 years. The primary intent of these positions is to work with the communities to help build their resilience to, and capacity for, emergency and disaster events. Each individual community will not be funded for a position. Please contact Duncan Stephen at ISC for more information.

There are some funding sources to be aware of to help develop your emergency planning and programs. The ISC Emergency Assistance Program (EMAP) supports community resilience, preparedness, and capacity development through funding activities related to the 4 pillars of emergency management:

- Mitigation
- Preparedness
- Response
- Recovery

Information about intake deadlines and application processes can be found on the INAC EMAP website: https://www.sac-isc.gc.ca/eng/1534954090122/1535120506707

First Nations communities are eligible to apply to the Union of BC Municipalities (UBCM) and its Community Emergency Preparedness Fund. UBCM supports regional level activities where several communities can apply and then combine the funding for greater effect. This also includes municipal and regional district governments. Current funding opportunities that have intakes at various times of the year include activities related to:

- Flood mitigation planning
- Community wildfire protection planning and fuel treatment projects
- EOC development, training, equipment and supplies
- Emergency Support Services (ESS) program development, training, equipment and supplies
- Community evacuation and route planning

Information about intake deadlines and application processes can be found on the UBCM Community Emergency Preparedness Fund website.

Emergency Management BC (EMBC)

Presenter: Craig Bland

Emergency Management BC (EMBC) is the Province of BC's lead coordinating agency for all emergency management activities, including planning, training and exercising in collaboration with local governments, First Nations, federal agencies, industry, non-government organizations and volunteers.

The Emergency Program Act (EPA) provides the legislative framework for the management of disasters and emergencies in BC. The BC government is modernizing the EPA, with a new version scheduled for release in spring 2021 to support more effective management of emergencies in the province. While this provincial legislation won't have any authority on First Nations reserves, it will enable and guide how support can be provided by the Province. It will incorporate international best practices, including the United Nations (UN) Sendai Framework for Disaster Risk Reduction (Sendai Framework); the UN Declaration on the Rights of Indigenous Peoples; and the draft principles that guide the province's relationship with Indigenous Peoples.

Effective April 2017, EMBC and Indigenous Services Canada (ISC) entered into a 10-year bi-lateral agreement with the federal government to enhance emergency management support for First Nation communities. With the Agreement in place, EMBC will provide First Nations communities with the full range of emergency management services that local authorities receive including: preparedness, mitigation/prevention, response and recovery including goals and strategies, focused on enhancing First Nations' capacity to address hazards and strengthening disaster resilience.

EMBC operates its headquarters, the Provincial Emergency Co-ordination Centre (PECC), and its 24/7 Emergency Call Centre (ECC) in Victoria. Six regional offices are located in Terrace, Prince George, Kamloops, Nelson, and Surrey, with the Vancouver Island regional office co-located at the headquarters facility in Victoria. Each regional office houses a Provincial Regional Emergency Operations Centre (PREOC) that can activate to provide support to local communities.

EMBC introduced and complies with the British Columbia Emergency Management System (BCEMS) which is based on the Incident Command System which establishes the standards and guiding principles for all levels of the emergency response management system used in BC.

EMBC also co-ordinates the delivery of Disaster Financial Assistance (DFA) to support individuals and communities recovering from a DFA-designated emergency events. EMBC's Operations and Recovery Transition Section also co-ordinates support to and from the Public Safety Lifeline Volunteers (PSLVs) who provide an array of critical, front-line emergency services including Air and Ground Search and Rescue, Road Rescue, Emergency Support Services, Provincial Emergency Radio Communications.

The agreement between EMBC and ISC eliminates the need for an ISC duty officer. Communities can now engage provincial support 24/7 by calling 1-800-663-3456. In the event of a major spill, EMBC would provide direct support to local impacted communities within the constraints of its legislation and policies. This can include reimbursement of all eligible costs associated with activation of the community EOC in response to the event, provision of subject matter expertise, coordination of information sharing across all support agencies for better situational awareness. EMBC maintains staff 24/7 who can approve cost eligibility and provision of support.

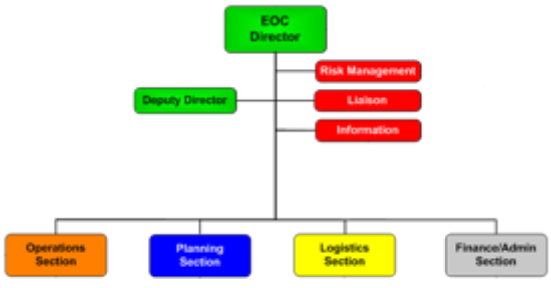
Emergency Management Orientation

Innoemergence Solutions

Presenter: Mike Andrews

The facilitation team presented an overview of the structure and operational processes that take place in an emergency operations centre (EOC).

The importance of strategic support to emergency site operations was addressed with emphasis on the importance of jurisdictional oversight, information management and public relations, efficient resource management, proactive contingency planning, documentation management and financial considerations, including eligibilities to cost recover under Emergency Management BC.



Appendix 4: Spill Scenarios

Three spill scenarios were developed for workshop review and consideration and two were presented and discussed. These were:

Trans Mountain Scenario 1: Coquihalla River

Presenter: Ken McLernon

It is May1 and spring freshet is underway; water levels are forecast to keep rising

First thing in the morning, a local resident out for a walk reports a bunch of fluid coming from the pipeline but can't estimate how much is on the ground or has gone into the river.

Initial priorities:

- identify response control points per the geographic response plan
- establish ICS/unified command dispatch Trans Mountain rep on call to
- investigate (Assessors operators live in the area)
- if report coincides with alarms and pressure changes, they will shut down (also deviation between stations is an indicator)
- target of 10 minutes to shut down
- if the assessor is uncertain with site visit, they will continue to investigate the area identify the product and if public is at risk; safety is the first priority
- a companywide alert is issued using the internal TAS alerting system and an incident management team is formed to mobilize resources
- for this incident, the nearest resources are in a rapid response trailer and boat at Hope

When spills occur, the priority is to Identify the product as soon as possible to help to understand the product dynamics and response requirements. For scenario one, a response priority would be to try to restrict and contain the product at the Coquihalla River and prevent entry into the Fraser River.

A workshop scenario estimate was for a maximum of 1421 L^3 to discharge before shut-off for this scenario. Other variables and unknowns relate to the products and how they behave in certain conditions.

Geographic Response Plans (GRP):

The geographic response plan (GRP) is based on in-depth site assessments and have engaged local knowledge. GRP data includes shoreline composition, access points, strategies, communications capabilities, nearby resources, local wildlife, known risk factors, known values at risk, and other considerations. On the back of the data sheet is a strategy to manage control points for containment and product recovery. Control points establish based on response times; GRP's are a starting point; it may be necessary to make adjustments due to a series of unforeseen variables.

GRPs are updated on a rotational basis by visits to one of their 5 regions annually. TM districts of interest to the Stó:lō Nation are Sumas down to the coast and Sumas north to the old tollbooth area. These visits are planned to take place in other seasons than the last so as to account for variables in river conditions, weather and other factors.

TM has had mixed success on local engagement for GRP assessments. When Seabird Island was engaged, Chief Tyler McNeil participated in the assessment and his local knowledge and expertise influenced a change of a GRP control point. Some aspects of site assessments are not included in publicly available GRPs but is retained internally; such as archeological and other culturally sensitive information. TM plans are shared with communities prior to publishing.

TM Command & Control:

Each site control point is considered a different job site with its own Site Supervisor. Locations in communities along the pipeline have been pre-identified to establish Incident Command Posts. The command post coordinates the various response and recovery activities at the spill site and links up to the TM emergency operations centre (EOC) in Calgary.

A "virtual" joint information centre (JIC) would be coordinated through the Information and Liaison Officers at the TM Incident Command Post with the intention of linking together all stakeholder agency Information Officers in order to consolidate public messaging. TM often uses pre-scripted public statements to standardize messaging.

Stakeholder integration occurs at all sites and levels of response. It is common for a multi-agency unified command to be set up, which can include the impacted community. The Unified Command jointly determines best courses of action and considers the input of all impacted communities and supporting agencies.

A volunteer engagement plan can be put in place as necessary and for their personal safety, it is important that the spill site be assessed before any volunteers can be formally integrated into the response organization structure. Volunteers can be used in a number of capacities and can receive "just-in-time" training for those who have no previous training. The plan also identifies how to engage existing structured organizations and groups as organized units.

Once initial activities have a been completed, there is an incident action plan established for each operational period. The operational period can vary in length depending on the complexity of the response and the numbers of agencies involved. The end of emergency phase is decision by unified command with input from all stakeholder agencies. The incident then becomes an ongoing project with adjustments to the organizational structure based on this transition and established project roles and responsibilities.

Additional Discussion from this Scenario:

- There is potential to expand concepts used in TM GRPs to multi-hazards and linked to local response plans. The GRPs can be used for any product, not just for spills relating to TMs infrastructure
- Pre-staged Trans Mountain resources may be available to support non-TM incidents and there is no Spiller plan. TM can be contacted by the 24-hour number to request assistance

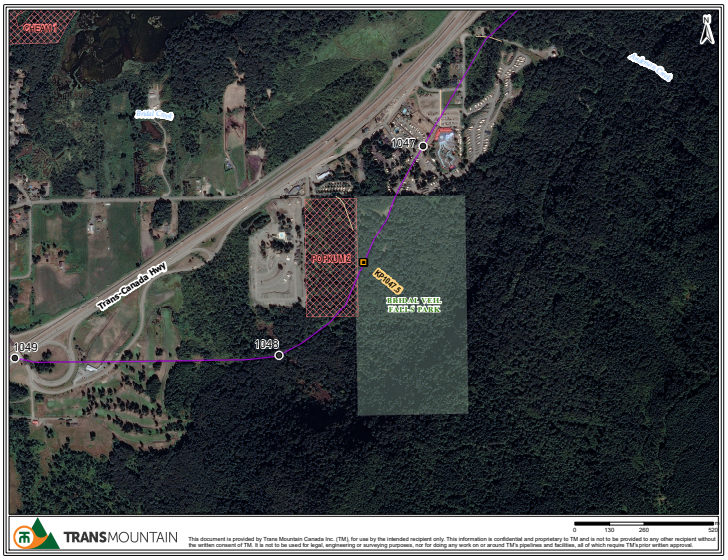
  Trans Mountain emergency line 1-866-514-6700

- There is concern about communicating incident information early in the event cycle, with emphasis on those people who may be on the river or otherwise in remote locations or out of cellular contact. Some kind of incident notification alerting should be locally available.
- Variable complications were raised, including the complexities of addressing assessment and cleanup when there is debris in the river such as trees

Trans Mountain Scenario 2: Wetlands

Presenter: Grant Stecyk

First thing in the morning, a local resident notices a heavy smell of something rotten eggs, but he isn't sure. When he goes for a walk into the forest, he notices fluid spilling from the pipeline. He calls it in to 911 with a location but he doesn't know how much has been spilled or how long it has been spilling for. He also reports that some squirrels and birds appear to be covered in an oily substance



Initial priorities:

- identify response control points per the geographic response plan establish ICS/unified command
- dispatch Trans Mountain rep on call to investigate (Assessors operators live in the area)
- If report coincides with alarms and pressure changes, they will shut down generally 10 minutes to shut down
- if the assessor is uncertain with site visit, they will continue to investigate the area identify the product and any threats to public safety as a first priority
- a company wide alert is issued using the internal TAS alerting system and an incident management team is formed to mobilize resources
- for this incident, the nearest resources are in a rapid response trailer and boat at Hope

As with scenario #1, the priority is to identify the product as soon as possible to determine the product dynamics and response requirements. With the initial report of wildlife impacts, a high priority for this scenario is to identify species of concern.

This scenario has a subsurface culvert which allows as an easy access and control point and allows more proactive response. The potential migration route of product for this scenario would likely follow Bridal Creek, through the wetland and down to the Fraser River. Once it hits the wetland, the product flow would be slower.

A workshop scenario estimate was for a maximum leak at this location of 350 m^3 to discharge before the flow was shut-off. Other variables and unknowns relate to the products and how they behave in certain conditions.

TM Command & Control:

The command and control considerations addressed in scenario #1 also apply to this scenario with an emphasis to "go big fast" and scale back as required. The presenter expanded on convergent volunteer concepts in that everyone can have a role and that manpower is always limited on big responses.

Volunteers may be "buddied" with trained responders or as local Knowledge Keepers in support of the planning function; untrained personnel may be able to help with feeding or other general logistics support. Trained personnel may be more directly engaged if it aligns with their expertise or routine job function.

Wetlands Scenario Variables:

There are 24 listed species in this wetlands area; three of which are red-listed or categorized as "threatened". When actions are required in sensitive areas, all response activities focus on minimizing impacts. For high consequences areas such as wetlands, GRPs include wildlife and archaeological protection measures and contact information for required specialized resources. Strategies and considerations may include:

- using existing infrastructure and trails, were possible
- establish a "corduroy trail" using logs or pallets; locals may know sources
- most resources in wetlands are managed by hand or helicopter
- environmental monitoring is expedited over regular response for wetlands
- expedited environmental permits are possible as MOE etc. are engaged
- use of drones
- multiple techniques to corral product (blower, boom, hand)
- strategies try to leave vegetation in place versus removing; emergent vegetation (protruding above the water or just below) can be trimmed giving it a "haircut". This is more effective than removal as it leaves the roots so vegetation grows back fast
- use of deflector booms, establishing buffers with caution not to create a conduit for product to migrate; most products do not initially sink
- containment measures which can also restrict wildlife entry into impact areas, including fencing, amphibian barriers, etc.
- heavy equipment use in wetlands is a last resort and, when used, it is verified as being mechanically sound and includes additional measures for equipment decontamination

Additional Discussion from this Scenario:

- Mechanism of spill can dictate an ice response (products migrate if they enter under the ice as opposed to a top of ice)
- Machine decontamination would be used as necessary; skimmers pick up multiple products
- Migratory birds can complicate operations by flying in despite barriers; use of noisemakers to deter is an option
- Absorbing blooms only absorb along the edge and are not very effective
- Hard containment booms (6” x 6” boom and skirt) do not absorb the only deflect and are preferred

As with scenario #1, once initial activities have a been completed, there is an action plan established for ongoing operations. The end of emergency phase is decision by unified command with input from all stakeholder agencies. The incident then becomes an ongoing project with adjustments to the organizational structure based on this transition and established project roles and responsibilities including long-term monitoring.

Appendix 5: Facilitator Observations & Recommendations

Work Towards a Collaborative Emergency Program Model

Emergency management practices can often appear to be a confusing maze of uncoordinated support and conflicting mandates, particularly to those who are not engaged in it on a daily basis. Band staff and community members who have little or no training may be expected to participate in an EOC activation or some other response or recovery activity on a moment's notice. This is complicated by the many supporting agencies that may be involved, such as EMBC, ISC, provincial and federal government agencies or ministries, local regional districts or municipalities, various regulatory agencies, private sector organizations, critical infrastructure and utilities owners, non-government organizations, and other communities and groups like the Emergency Management Secretariat and FNESS. Some considerations:

- establish an organization that provides coordination and collaboration across the communities and with other agencies for all emergency management activities in the Stó:lō Nation
- establish capacity and a standardized approach to mitigation, planning, preparedness, response and recovery that can be shared across communities
- the Stó:lō Nation communities could seek opportunities to work cooperatively as one entity to build capacity and resilience for spills management, mitigation and preparedness
- a "Stronger Together" approach with an initial focus on spills can establish a foundation for an all-hazard emergency management structure. Initial funding and support from IAMC, ISC, EMBC and other potential sources could be leveraged with this strategic goal in mind
- expansion of the IAMC mandate and/or the Coast Salish Emergency Planning Secretariat could enable pursuit of the "Stronger Together" approach; FNESS can also play a role
- a shared EOC facility with other communities, local governments and Trans Mountain that can be activated for all-hazards; it could also be used as a meeting and/or training facility or other uses

Standardizing Emergency Management Activities

At times during a busy season or event, capacity in local communities to activate and operate an EOC can be a challenge. Having access to resources from other communities is often necessary and having imported personnel works best if they share a common understanding of the business practices. The Province of BC has adopted the use of ICS as the foundation for emergency and disaster response and support activities. All Provincial government agencies are required to use it, and First Nations communities, local governments, non-government organizations and the private sector have been encouraged to adopt it. Most use a common form of it as their organizational structure in response. The Province of Alberta also uses ICS in its emergency activities. Trans Mountain as adopted ICS for its spill response planning and operations. While each organization may interpret and apply ICS a little bit different for their needs, the general approach is standardized across many agencies across Canada. Consider:

- as part of a larger strategic approach to Emergency Program development, provide ICS training to community members and Band staff who may have a direct operational role in a response or recovery activity; conduct regular exercises in the communities that test activation of the local EOC's under ICS models

- applying ICS principles with First Nations traditional interests and practices in mind i.e. the role of Knowledge Keeper formalized in the Policy Group and/or in the EOC, and/or in the Incident Command Post structure
- common and shared training across communities and agencies
- standardized processes, tools and reporting across communities
- simplified business practices by having check lists developed that are unique to each community and its EOC
- pre-arranged agreements that identify the financial elements of resource sharing and mutual aid between communities and municipal and regional district governments
- having dedicated mobile EOC kits so that EOC's can be established at primary EOC locations or temporarily in alternate locations

Use Local Knowledge Keepers in a Formal Advisory Role

There is clearly an interest voiced by the communities to engage local knowledge in all stages of response planning, and operational activities. There is an opportunity to do this within the context of the traditional practice of Knowledge Keeping. Consider:

- pre-identifying the Knowledge Keepers and their relevant knowledge as subject matter experts in each community; pre-organize their contact information and a protocol for early engagement into an ICS structure at the community EOC and site command levels
- encourage ICS training for them and participation in TM exercises on a regular basis to help develop them into emergency management knowledge keepers
- where they are not paid staff already, consider some sort of financial honorarium or stipend model to respect their expertise and time; when activating support under an EMBC task number, be aware that they may or may not recognize honorariums and stipends as an eligible cost. They will, however, recognize consulting and the use of subject matter experts. A conversation may be required with senior EMBC leadership to formally recognize the costs associated with engaging Knowledge Keepers

Planning & Pre-Organization

A lot of detailed work has gone into developing the Trans Mountain geographic response plans (GRP). They contain information on site-specific response activities, values and risk and impacts, and resource requirements. There were challenges identified around community engagement in planning and plan maintenance, and ongoing currency contact information. Consider:

- adapting the TM GRP model over to an all hazards multi-agency approach that is developed with the communities and is specific to their local needs; caution that the focus of the plans should stay operational like the GRP's and not get into the minute level of details that many plans can have; when this happens, they become more of a reference document and have less operational value when they're needed.

An internal regular maintenance program for the GRP's is in place at TM, and they are a live document, subject to change as new knowledge or practices come available; consider an annual review process with the communities and stakeholder agencies in a single location where standing agenda items can include:

- updating community and agency contact information
- updating community resources and subject matter expertise availability
- clarification of agency roles and responsibilities
- a review of inter-agency information sharing protocols
- a training component related to the community EOC's and their involvement in site level field operations
- an exercise that has a live field component that includes activation of an incident command post and community EOC

Funding for this could be joint between TM, IAMC, ISC and EMBC. Also consider other sources of training for things like shoreline and wildlife clean up, both of which can require a lot of local support.

Needs Analysis & Training Strategy

Both site level and EOC level activities can require a large number of trained personnel, and span a broad range of technical abilities, knowledge and subject matter expertise. During busy seasonal events (flood, wildfire etc.) and/or a large disaster event, there can be shortages of trained personnel so assistance from other communities and organizations will likely be required. Using the ICS model as a foundation is a good start as it allows all organizations and agencies to readily understand the structure and activities, and where they fit in to the overall response and recovery scheme, but there are also specialized skills required. For example, the key positions at an EOC (Director, Risk Management & Safety, Information, Ops, Plans, Logistics, Finance etc.) or the field response teams all provide critically important functions that are unique to their role. Specialized training is required. Consider:

- concurrent with the development of a nation-level emergency program or strategy, conduct a training needs and gap analysis with the communities
- based on that analysis, creating a strategic training plan (3 – 5 years) across the communities that addresses short-term operational needs and longer-term capacity development with an ongoing maintenance and re-currency component
- training to a common provincial standard so that personnel in their trained roles are interchangeable and deployable to other communities and events to support
- local resource sharing agreements with municipal and regional district governments that include a commitment to regular inter-agency training and exercising
- make training available for community EOC support
- making training available to community members in Shoreline Cleanup Assessment Techniques (SCAT); this would also enhance the local response involvement and capacity
- develop a community based regional Emergency Support Services (ESS) program that is based in First Nations traditional care practices so that reception centres and ESS can be provided to the displaced community members
- where appropriate and practical, seek opportunities to develop a train-the-trainer approach; this will help a pool of subject matter experts from the communities who can develop emergency plans, and conduct training and exercises

Enhanced Community Engagement by Stakeholders

Several of the stakeholder agencies, including Trans Mountain, identified challenges around community engagement. Invitations to workshops, training, and exercising are regularly sent, but it is not clear that they are sent to the right people in the communities and/or that they are being distributed internally to the appropriate audience. A root cause can be found in the maintenance of current community contact lists. Also, for a variety of reasons, many of the Stó:lō communities don't fully understand the various mandates, response plans and business practices of the responsible and supporting organizations. Consider:

- confirming with each community who their primary emergency program contact is on a quarterly basis and ensuring the stakeholder agencies are updated
- some regular frequency of face-to-face meetings with those contacts to reconfirm roles & responsibilities, new changes to business practices, and engage them around review and revision of response plans; suggest quarterly or twice a year might work
- there may be an opportunity to engage the communities and their local knowledge in field validation of the identified control points
- conducting regular after-action reviews (AAR) of exercises and operational events with the impacted communities who activated their EOC's; supporting agencies would participate
- community education sessions on the GRP, similar to the structure with some of the content from the Spill Response Workshop conducted Jan 11 & 12, 2020; this can also include community safety training around initial approach to spilled products, and how to assess the spills for TM confirmation
- overview of the GRP's & response process
- a scenario that walks through the operational response activities at site
- recognize the First Nations definition and interpretation of "Nation" and its traditional application; incorporate that into community engagement, planning and response activities

Better Information Sharing and Situational Awareness

When an incident or major event occurs, TM's response plans identify a protocol for contacting internal departments, response resources, impacted communities, and external agencies. While inter-agency information sharing is always a challenge, despite the best planned procedures, and the communities have voiced concerns over not being advised early enough in the process. Trans Mountain knows within about one minute after a spill location is confirmed what product is in that exact section of the pipeline, but it often takes much long than that for the communities to be informed. Consider:

- confirming information sharing protocols with other communities and agencies that clearly identify:
    - types of information required by which agency and what is the best source
    - how to handle confidential and sensitive information
    - business practices and time requirements for sharing information
- a well-publicized, multi-jurisdictional public reporting system that allows community members to identify potential spills, report them, and send digital photos or video as able; this could expedite the confirmation and notification processes, as well as the deployment of resources

    - if this were also a broader public notification system for general non-emergency activities and messaging used by community leadership and administration, then community members could come to know this as a trusted source of information

- developing a community notification system for broadcasting critical information related to incidents and public safety; caution that there are many technology solutions on the market, but that a complete solution will also include low-tech approaches like phone calls and door knocking
- earlier notification to the communities of the spill, and any potential public safety concerns so that it can be communicated out to community members quickly; this can be particularly challenging if community members are at remote fishing or sacred sites with no cell phone coverage, and/or no phones

Role of First Nations Emergency Services Society (FNESS)

There is a strong desire by Stó:lō Tribal Council leadership to have FNESS play a more prominent role in the strategic planning moving forward. With funding support for staffing and activities, FNESS may be able to:

- Facilitate a strategic planning initiative across some of all of the Stó:lō communities
- Develop and facilitate a training gap analysis and plan development
- Identify opportunities and recommend business practices for standardization, including emergency planning, training standards, and EOC activations
- Identify models for inter-community resource sharing
- Identify models for resource sharing and deployment of trained personnel to support other communities and local governments

Specific Considerations for Trans Mountain

- Understand the definition and interpretation of “Nation” in a First Nations context, and what the implications are for engaging the communities around planning and response operations
- Inform communities of event quicker and engage them in a Unified Command model
    - target to have the community on the IMT call held within 30 minutes
    - identify a way to formally engage the community Knowledge Keepers
- Offer training to communities on Incident Command Post and site level operations; this would be for selected personnel who may have a liaison or operational role at the ICP and not the broader public audience
- Confirm your community contacts so that notification of spills, training opportunities, planning sessions etc. are going to the right people and the right audience is being engaged
- Be involved and support training and capacity development for community EOC’s and organized teams to assist in site level operations
- Become regularly engaged with the community emergency program reps so that they get to know you and understand TM business practices, thinking, and operating environment better; this will also support

  - maintaining currency on the community contact lists
  - identifying on-reserve resources that may be suitable for parts of the operations
- Much of the response plan content is technical in nature. Consider revising some of the plan content into more of a non-technical language.
  - Offer training on how to interpret the Emergency Spill Response and associated plans
  - One option may be a bit of an abbreviated guidebook or synopsis for public consumption.
- The communities voiced concerns over a need to establish better baseline data on pre-site conditions for sensitive waterways, such as fishing sites, community water intakes, and river crossings, as well as locations of cultural and environmental importance as identified by the communities. Also, more research into the impacts of the various products and share that with the communities so they have a better understanding.

Specific Considerations for the Communities & Tribal Council

- Approach ISC about one of the funded EPC positions and process to obtain one
- Develop a collaborative emergency program across the communities with dedicated emergency program contacts in each and a regional strategic training plan
- Work towards a collaborative relationship with the agencies; ideally, this involves
  - establishing mutual aid and/or resource sharing agreements with other communities and local governments; this includes common business practices
  - shared training and exercises to a common standard
- Have a community liaison attend the EMBC PREOC in Surrey and/or other area community EOC's when there is a significant multi-agency support action in place that requires EMBC support to the community
- Identify primary 24/7 emergency program contacts in each community and provide their information to the various stakeholder agencies
- consider making community emergency plans, including any agreements, a bylaw and part of the official community plan
- participate in workshops, training and exercises held by Trans Mountain, other communities and local governments, and EMBC; consider being part of any exercises to test local community response practices when possible

Appendix 6: General Participant Feedback, Questions & Concerns

These comments are from workshop attendees:

- First Nations communities are concerned about local monitoring capabilities

"Just because the plan has been distributed doesn't mean we have the capacity to review it"

- First Nations Knowledge Keepers are supporting planning and hazard, risk & vulnerability analyses and should be included in initial notifications of incidents so they can be incorporated into command and control
- Knowledge keepers have an understanding of area wildlife, river behavior, flows through spawning grounds, cultural, sacred, archeological, and other sensitive sites. This must be recognized by non-First Nations as a critical source of local knowledge and expertise to engage in crisis and as indigenous monitors of the TM system

"We need more than a website"

- First Nations want to be fully integrated into the plan within the first hour after which products may impact beyond the first control point
- How does the community know when the plan is reviewed? (Answer: plans are never closed and are always open to input, critical changes could trigger immediate updates to others or be included in the next plan update)

"We want to talk face to face it is more meaningful"

- First Nations rely on community volunteers, industry, the federal government and EMBC, and need funding mechanisms to engage in planning and response activities for spills and other emergency events
- Use IAMC to fund community engagement in plan updates
- Chief and Council are busy and should designate a primary band emergency program contact
- A roadmap for First Nations participation is required; a training matrix and resources are needed and training on equipment and protocols is required

"There is a need to establish standards"

- Recognize that First Nations are the title holders just like a farmer would hold title over their land
- Conduct studies to determine potential impacts to areas of cultural and environmental significance as deemed relevant by Stó:lō Nation leadership
- Not all communities are getting the invites to TM exercises. Not sure where the breakdown in communications is. Community reps have attended exercises, but more representation is required

"Stop thinking of us in terms of the Indian Act"

- First Nations are stronger together but the Indian Act forces bands apart despite common interests
- Bands have enacted different and inconsistent laws, codes and bylaws
- Can TM and EMBC find efficiencies with groups of bands and Nations?

- The communities want skills and competencies certification
- More species-specific research on exposure to pollution and oil is required by DFO
- Use common language with First Nations in plans, workshops and education; there is too much technical language used
- Stó:lō leadership wants FNESS as their lead for response and generally an increased role for FNESS
- The communities want to be engaged in advance reconnaissance teams and impact assessment teams when an incident occurs
- The ability for First Nations to travel to exercises is an issue due to lack of funding