

# Exercise Fracture on 5<sup>th</sup> After-Action Report



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## QUALITY ASSURANCE AND VERSION TRACKING

### Authorization

Title		Exercise Fracture on 5th After Action Report		
Document Number		2.0		
Ver.	Developed By	Reviewed By	Approved By	Date
1.0	S. Dowker [Signature on file]	V. Howard [Signature on file]	I. Becking [Signature on file]	16 Nov 2022
2.0	S. Dowker [Signature on file]	I. Becking [Signature on file]	I. Becking [Signature on file]	21 Dec 2022
3.0	S. Dowker [Signature on file]	I. Becking [Signature on file]	I. Becking [Signature on file]	11 Jan 2023

### Release Tracking

Ver.	Action	By	Date
1.0	Release of draft to client	I. Becking	16 Nov 2022
2.0	Release of draft to client	I. Becking	21 Dec 2022
3.0	Release of final to client	I. Becking	11 Jan 2023

## EXECUTIVE SUMMARY

On Tuesday September 27<sup>th</sup> 2022, the Comox Valley Emergency Program (CVEP) ran a regional exercise for staff and volunteers from across the Comox Valley. Original scoping of this exercise aimed to develop a Functional Exercise, however through the planning process it was determined that a true Full-Scale Exercise was the best fit for the Region based on the objectives and activities that the CVEP was looking to accomplish.

The exercise immersed participants in the response to a simulated earthquake in the Forbidden Plateau region requiring a coordinated regional response using a Comox Valley EOC, which was 770 Harmston that service as the Comox Valley Regional District's & City of Courtenay Level 2-3 Emergency Operations Centre (EOC). Over the course of 8 hours, two (2) shifts, EOC personnel worked together to deal with scenario injects describing widespread damage impacting several critical infrastructure sectors including transportation, communications, natural gas transmission lines, and electrical power. A team of exercise facilitation staff supported the delivery of the exercise across 4 physical exercise site locations. Their detailed observations informed the development of findings and recommendations for consideration for the CVEP's continued evolution. Data was collected using participant surveys, facilitator observations and hotwash / debrief feedback sessions was collated and analyzed. The project team identified a total of 18 findings across five (5) categories including:

- Emergency Operations Centre (x9)
- Technology & IT (x2)
- Reception Centre (x2)
- Exercise Design (x3)
- General (x2)

The exercise provided cross government and multi-agency personnel (staff & volunteers) with an extremely valuable opportunity to apply their emergency management knowledge within the context of a simulated emergency, leveraging the CV EOC facilities, technologies, and processes. While the exercise identified a few operational areas for improvement, it validated that the training provided by the CVEP over the previous two years has been successful in increasing awareness of the critical role that the EOC plays during emergencies. The exercise also highlighted several key takeaways for CVEP staff including:

- The need to build and maintain relationships and regional capacity in preparation for new legislation that will further define how communities across British Columbia (BC) prepare for, respond to, and recover from emergencies;
- The critical nature of the integration of the Declaration on the Rights of Indigenous Peoples Act into emergency management and emergency operations centre policy and practice alongside First Nation and Indigenous partners;
- The importance of reflecting the four phases of Sendai Framework in the Comox Valley Emergency Program; and

- The importance of fostering cross-sector awareness and collaboration between staff and volunteers that support disaster risk reduction and climate change adaptation programs and initiatives.

By working to implement the recommendations within this report (some of which have been pre-emptively actioned as outlined within the report), the CVEP can continue to increase the ability of staff/volunteers to mobilize regional resources to support response activities to assist with saving lives, property and the environment from undue harm.

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# **1. INTRODUCTION**

## **1.1 Acknowledgements**

The Comox Valley Regional District (CVRD) respectfully acknowledges the land on which it operates is on the unceded traditional territory of the K'ómoks First Nation, the traditional keepers of this land.

## **1.2 Background**

Emergency programs across British Columbia use municipal and regional staff with varying skillsets and experiences to support emergency response. In addition to employed staff, several volunteer groups operate across the province supporting EM programs such as Emergency Support Services, Volunteer Search and Rescue teams (both ground and marine), Amateur Radio Groups and in some areas Neighbourhood Emergency Preparedness Programs. A critical component of an emergency program is the conduct of emergency exercises that bring staff/volunteers together to work through simulated emergencies within assigned role(s) in the Emergency Operations Centre (EOC) and/or at site(s). Calian was engaged to work with the Comox Valley Emergency Program (CVEP) to design, develop, and deliver a functional exercise that provided staff/volunteers from agencies across the Comox Valley to exercise as a single entity. The exercise was developed with a regional scope and simulated impacts that would be associated with a magnitude 7.9 earthquake. The scenario was developed to cause impacts in all jurisdictions and across industries (ie. Telecommunications, water/wastewater infrastructure, roads, local government, private businesses, etc.), resulting in what could be extensive impacts on daily life in the Comox Valley.

Due to the onset of the Covid-19 pandemic early in the planning process, it was determined that the delivery of the exercise would be delayed until a full, in-person activity could be run. The exercise was successfully conducted on Tuesday September 27<sup>th</sup>, 2022 with participation of staff/volunteers from across the Region. The exercise engaged all participants and provided an immersive environment to work within their assigned roles/functions to support emergency response.

## **1.3 Document Purpose and Scope**

The purpose of this document is to present and discuss findings resulting from various data collection tools during the exercise. In addition, a series of recommendations are provided that will support the CVEP in planning for ongoing development of their regional emergency program.

## **2. EXERCISE DESIGN**

### **2.1 Exercise Objectives**

#### **2.1.1 Tier 1 Objectives**

The following objectives were established at the onset of the planning process for this exercise and identify what the exercise aimed to achieve across all organizations and participants:

1. Operate a fully staffed EOC through 2 x 4hr operational periods during the response phase of an earthquake emergency based on Emergency Operations Centre (EOC) operational guidelines within the CV regional EOC Plan;
2. Conduct a full shift-change within the EOC and conduct all hand-over procedures for each Incident Command System (ICS) position according to CV regional EOC guidelines;
3. Use existing procedures and technology to effectively coordinate emergency response activities across multiple municipal and regional organizations; and
4. Implement current operating procedures to conduct field activities including:
  - Practicing the processes for residential evacuation;
  - Set up and operation of a community reception centre;
  - Determining Critical Infrastructure damage assessment processes and tools;
  - Practicing back-up communication methods & process due to a delayed collapse of communication infrastructure; and
  - Practicing public communications messaging including public communications via social media and traditional media outlets.

#### **2.1.2 Tier 2 Objectives**

Tier 2 objectives were established for individual participant groups within the exercise. While these objectives were unique to specific participant groups, they were designed to help achieve overall objectives for the exercise.

##### **2.1.2.1 EOC**

1. Practice Connect Rocket regional EOC team notification;
2. Practice activation, building EOC management team & functions, operating and sustaining a Level 3 'regional' EOC;
3. Practice EOC business cycle;
4. Develop Action Plan priorities;
5. Develop Situation Report for EMBC (EMBC will be simulated);
6. Perform processes required to support Evacuation team with community neighbourhood Evacuation Alert/Order, State of Local Emergency (SoLE);



7. Support activated Reception Centre;
8. Learn processes/ methods in handling EOC communications;
9. Support rapid damage assessment of regional critical infrastructure
10. Practice a public media information release; and
11. Develop an information briefing for the Policy Group.

#### **2.1.2.2 Public Communications**

1. Manage incoming and outgoing communications during the exercise; and
2. Conduct social media monitoring & respond to inquiries from the simulated public.

#### **2.1.2.3 Reception Centre**

1. Activate, operate, and deactivate a live Reception Centre in response to an earthquake in the community;
2. Explore how communications between the Reception Centre and the EOC will occur in a limited communications environment; and
3. Acquaint ESS volunteers with electronic evacuee registration systems.

#### **2.1.2.4 Critical Infrastructure Damage Assessment**

1. Discuss critical infrastructure assessment procedures through tabletop exercise by notionally conducting data collection for a simulated earthquake scenario in the field;
2. Discuss communication linkages with the EOC specific to sharing damage assessment results with Planning staff; and
3. Discuss how various technology and tools can support with conducting rapid damage assessment following major emergencies.

#### **2.1.2.5 Emergency Radio Communications**

1. Train all radio operators in the plan, which radios are to be used to fulfill which parts of the plan and how to manage message and paperwork flow under duress;
2. Exercise the procedures for emergency radio communications and highlight the management of expectations in a real event; and
3. Accustom all agencies to the use of the new frequency and to normalize that use.

## **2.2 Pre-Exercise Training**

The exercise design experience and the delays resulting from the Covid-19 pandemic provided a valuable opportunity for the CVEP to develop and deliver additional emergency management training to regional audiences. This included Emergency Operations Centre (EOC) Staff/volunteers, EOC Management Staff and the Regional EOC Policy Group as well as several in-house training sessions developed directly with Exercise Activity Leads for their teams such as; Emergency Support Services, Emergency Radio Communications and Ground Search and Rescue. A summary

of training sessions that were run for staff/volunteers in preparation for the exercise are outlined in Table 1 below. This list of training highlights the emergency management training provided to staff/volunteers across the Comox Valley Regional District, however it does not represent additional training conducted internally on various tools, programs, and processes in place within various volunteer and CV organizations.

**Table 1: Pre-Exercise Training Sessions**

<b>Training Date</b>	<b>Topic</b>	<b>Audience</b>	<b>Duration</b>
<b>21 June 2021</b>	Business Cycle Training	EOC Management Staff	4 Hours
<b>03 November 2021</b>	Regional Policy Group Tabletop Exercise	Elected Officials	3.5 Hours
<b>14 April 2022</b>	Info Officer Training	Public Information Officers	2 Hours
<b>18 &amp; 20 May 2022</b>	Better Impact Volunteer Software	ESS Volunteers	6 Hours
<b>15 June 2022</b>	Elected Officials Training	Elected Officials	2 Hours
<b>22 June 2022</b>	Information Officers Training	Public Information Officers	2 Hours
<b>23 June 2022</b>	EOC Management Staff Training	EOC Management Team Staff	6 Hours
<b>24 &amp; 27 May 2022</b>	EMBC ERA 2.0 Demonstration	ESS Volunteers /Staff	4 Hours
<b>1 &amp; 9 June 2022</b>	ERA 2.0 Onboarding	ESS Volunteers /Staff	6 Hours
<b>25 August 2022</b>	Ham Radio to email communications	Public Information Officers/ERCT Radio members	2 Hours
<b>06 September 2022</b>	Reception Centre TTX	ESS Volunteers /Staff	2 Hours
<b>13 September 2022</b>	Reception Centre Dry-Run	ESS Volunteers /Staff	2 Hours
<b>14 September 2022</b>	EOC General Staff Training	EOC Staff	6 Hours
<b>22 September 2022</b>	Social Media Simulation Tool Training	Public Information Officers	3 Hours
<b>27 September 2022</b>	Exercise Fracture on 5 <sup>th</sup>	All staff/volunteers	8 Hours

## 2.3 Exercise Scenario

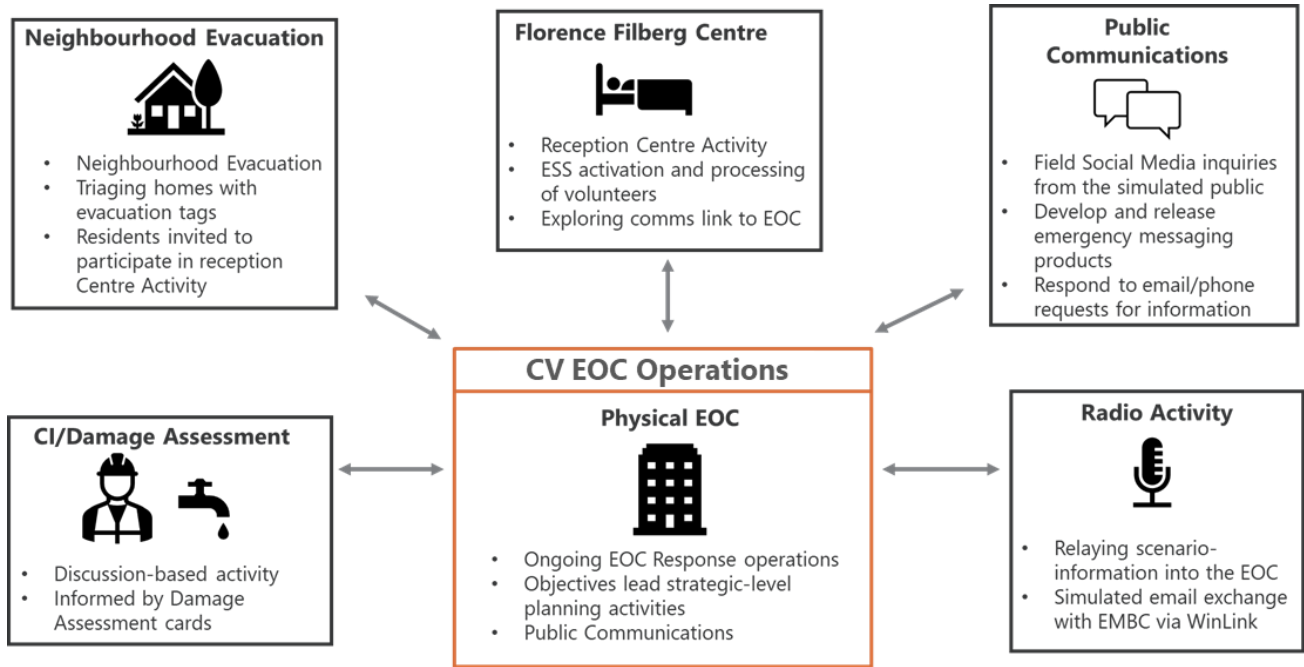
The scenario used to guide the exercise centred around a significant earthquake resulting in broad impacts across the Comox Valley which affected critical infrastructure and regional services. Table 2 provides the detailed scenario that was presented to staff/volunteers at the start of the exercise to initiate play in each exercise location.

**Table 2: Exercise Scenario**

Phase	Description
<p><b>Start-State (Key Event #1) 08:30</b></p>	<p>“On October 20<sup>th</sup>, 2022 at approximately 07:45 a magnitude 7.3 earthquake occurred in the Forbidden Plateau area of central Vancouver Island. The violent shaking from the earthquake lasted for approximately two minutes and fifteen seconds causing extensive damage across the Comox Valley. Reports of damaged infrastructure are quickly overwhelming the Comox Valley Corporate Office and 9-1-1 dispatch. These calls are identifying extensive power outages, structural damage of roads and transportation infrastructure in the region, localized gas leaks, and impacts to the local cellular network.</p> <p>Where cell service and internet are still available, residents from across the region, as well as across BC are taking to social media in search of information, to share their experiences, and to attempt to reconnect with family and friends. Several of these posts are identifying a lack of communication from friends and family within the Comox Valley.</p> <p>There have so far been no confirmed reports of fatalities, and the number of injured is currently unknown, however local Emergency departments are overwhelmed with patients while trying to deal with moderate damage to the hospital facilities sustained during the earthquake.</p> <p>It is currently 8:30 in the morning and you have just arrived in the EOC to begin supporting the response to this emergency. The EOC facilities have been inspected and have been cleared for use. It is assumed as an exercise artificiality that your immediate family is safe, and that you were able to travel to the EOC facilities.”</p>
<p><b>Key Event #2 (10:00)</b></p>	<p>“During the active response to the earthquake, a magnitude 6.8 after-shock occurred. This secondary quake has amplified the damage to already compromised infrastructure across the Region.</p> <p>The after-shock has strained communications infrastructure to its breaking point. Critical towers at Royston Rd. and the Island Highway, as well as on Mt. Washington have suffered significant damage resulting in reduced cellular communications across the Comox Valley. Local Fire Departments, police and BC Ambulance are all at capacity responding to the overwhelming call volumes.</p> <p>The EOC is and continues to receive updates regarding the extent of earthquake impacts across the region from CVRD staff, from public inquiries (where communications are still available) and from first responders in the field.”</p>

## 2.4 Exercise Activities

Figure 1 below provides an overview of the primary exercise. Each of the key exercise activities were guided by objectives specific to play in that portion of the exercise and supported participants in increasing their role-specific knowledge and capabilities.



**Figure 1: Fracture on 5th Exercise Activities**

## **3. EVALUATION METHODOLOGY**

### **3.1 General**

Three primary sources of information were used to evaluate the exercise. Paper-based data collection surveys were provided to participants before and after their participation. These were used to identify whether there was any measurable increase in knowledge and understanding of their roles, and the procedures in place for supporting emergency response in their exercise location. The second primary source of data used to develop this report was the observations of facilitation staff. Observations made during the exercise were captured and used to inform the findings and recommendations developed later in this report. The third source for evaluation data was participant feedback collected during the hotwash / debrief immediately after the exercise. These qualitative comments were captured by the facilitation team during the hotwash / debrief and were used as supporting observations for findings drawn from the surveys and facilitator observations.

### **3.2 Data Collection**

#### **3.2.1 Pre and Post Exercise Survey**

The intent of the pre and post-exercise surveys were to identify whether participants had a marked increase in their knowledge and understanding of the plans, forms, and their roles and responsibilities during an emergency. These were distributed in hard copy by facilitators and were prioritized as both a pre- and post-exercise data collection opportunity.

#### **3.2.2 Facilitator observations**

Facilitation staff maintained a list of key observations made during the exercise at their assigned location. These observations were made based on their subject matter expertise and were evaluated based on their knowledge and understanding of the CV EOC Emergency Plan, ESS guidelines and other operational procedures as relevant. These have been incorporated into the overall findings.

#### **3.2.3 Activity Hotwash / Debrief**

Immediately following deactivation/demobilization at each exercise location a was completed with all participants. The intent of this session was to identify participant's key takeaways and thoughts of the exercise. To ensure for consistent data collection, the following topics were explored at each location, understanding that the nature of participant experiences would vary between exercise activities:

1. What went well within your role during the exercise?

2. What can be improved (specific to your role or participation) in future exercises/response activities?
3. Did the exercise provide a valuable learning opportunity?
4. What type of activities or scenarios would be useful to explore in future training activities?

## 4. FINDINGS AND RECOMMENDATIONS

### 4.1 Presentation of Results

Findings from the exercise contain three key components including a statement describing the finding (F), supporting observations that substantiate the finding, and one or more recommendation(s) to address the finding. Participant feedback surveys (pre and post-exercise) as well as qualitative participant feedback and facilitation staff observations have been used to substantiate findings and provide context regarding how they were identified.

Pre and post-exercise surveys provided to participants at the EOC and the reception were well received. Overall, the pre-exercise survey had 52 responses (26 at the EOC, 26 at the reception centre), with the post-exercise survey seeing 52 responses (35 at the EOC, 17 at the reception centre). This response rate was able to provide meaningful data for analysis and provided valuable insight into participants experiences within the exercise.

The findings arising from the exercise are presented in the following categories:

- Emergency Operations Centre (x9)
- Reception Centre (x2)
- Technology & IT (x2)
- Exercise Design (x2)
- General (x2)

### 4.2 Emergency Operations Centre

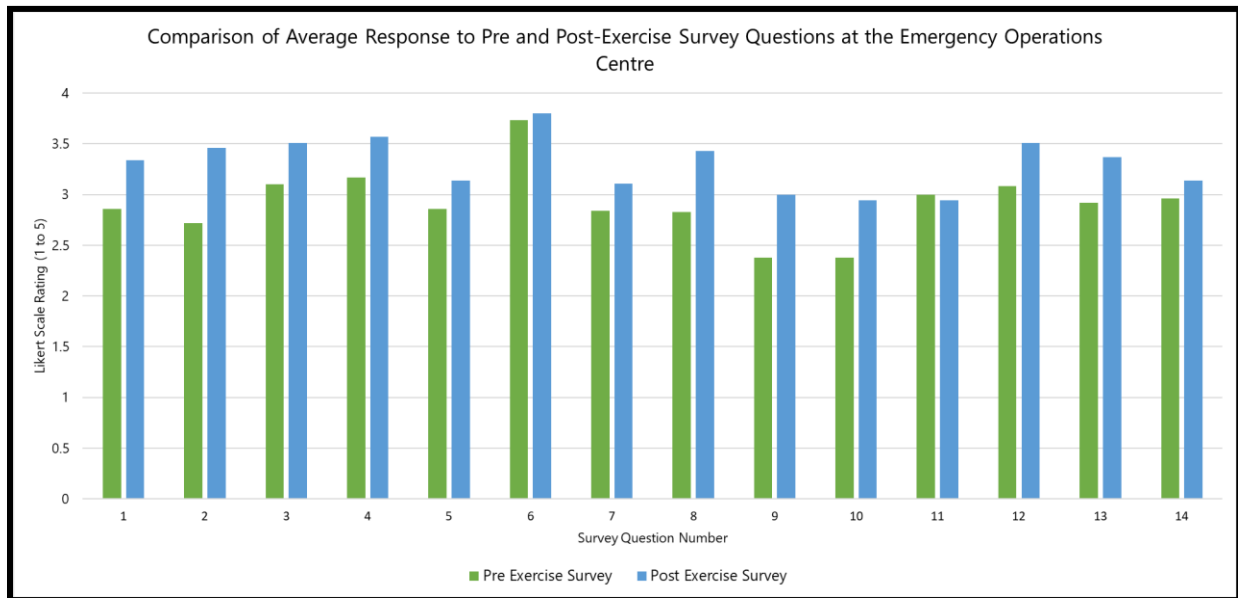
The findings in this section explore all aspects of play within and involving the EOC. This includes participant play within the EOC and the plans/procedures used to guide emergency response activities, and coordination of offsite activities. The recommendations that have been developed for this portion of the exercise aim to provide a higher level of structure for staff/volunteers within the EOC and to identify where staff will benefit from ongoing training opportunities to better understand the expectations of EOC leadership during emergencies. Findings related to technology and IT within the EOC are discussed in a separate category.



### **Finding #1**

**The exercise was successful in increasing participants' knowledge & understanding of how EOC's activate and operate to coordinate the response to an earthquake within the Comox Valley.**

**Supporting Observation** – Of all questions presented in the surveys, participants largest increase in knowledge/awareness was noted as being specific to question three (3) in the survey that assessed how their individual role fit into broader emergency response structures. The average answer increased by 0.74 points from 2.72 before the exercise to 3.46 after the exercise. Figure 2 below provides a visual overview of participant responses to questions in the pre- and post-exercise survey.



**Figure 2: Average Responses in Pre-Exercise and Post-Exercise Surveys at the EOC**

**Recommendation** – Continuous training and annual exercise participation for regional EOC and related activity support staff and volunteers should be supported. The training and exercises should be designed to support participant and program growth by increasing the complexity and scope of emergency response activities through the integration of disaster risk reduction and climate adaptation strategies.

**“One of my takeaways was the depth of experience, and role coverage, that we have with so many local governments participating in and conducting the training is amazing. It is reassuring to know that we have such a strong roster in the event of an emergency.”**

**- Jordan Wall, CAO, Town of Comox**



## **Finding #2**

**There is still uncertainty amongst some staff regarding expected lines of communication within the CV EOC during emergencies.**

**Supporting Observation** – Comparison of pre and post-exercise survey responses to question 11 indicate that participants experienced a decrease in their level of knowledge/awareness with respect to communication processes that will be used during regional emergencies. Further investigation into qualitative comments provided within the post-exercise survey identified several instances where participants noted difficulties with accessing and gaining situational awareness during the exercise, described confusion regarding communications flow within the EOC, and described difficulties in developing situational awareness following the shift-change process.

It is noted that the decrease could also be attributed in part to constraints in the exercise caused by artificial inject delivery methods (i.e. through email) versus through existing communication channels from the field to the EOC (i.e. police/fire radio, cellphones, etc.). While there may have been multiple factors that led to this result, it outlines that overall, participants' understanding of the communications processes could be increased.

**Recommendation** – Future CVEP training sessions should include objectives specific to communications within the EOC, as well as communications from the EOC to incident locations. Future exercises should include objectives that seek to establish and maintain shared situational awareness.

**Recommendation** – It is recommended that the CVEP develop a common operating capacity (using GIS web-viewers or similar platforms) that can support with developing and maintaining situational awareness for all staff (i.e. all incident locations) during emergencies. This common database should provide information such as evacuation alert/order boundaries, key incident locations, road closures, major incidents, and other information as is available.

## **Finding #3**

**There were unclear trigger points for declaring a State of Local Emergency (SoLE) within the Comox Valley in the early stages of the exercise.**

**Supporting Observation** –Exercise facilitation staff observed that the SoLE was not declared in the timeframe expected based on the scenario-related information that was available to participants in the early stages of the exercise. The injects were developed to drive the EOC to declare a SoLE based on situational information coming into the EOC from the field, specifically around Leighton and 3<sup>rd</sup> street where the evacuation activity was taking place.

**Recommendation** - It is recommended that the CVEP develop a flow chart outlining key decisions needed during a major event that includes direction as to when and how to declare a SoLE. Clearly defining the trigger points for making this type of declaration will support EOC management staff with directing EOC staff to seek out specific information and initiate the SoLE process in an expedited fashion.

#### **Finding #4**

**EOC Staff did not assign or delegate responsibility for monitoring their EOC email when leaving their workstation for meetings, rest breaks or other purposes.**

**Supporting Observation** – Facilitation staff observed multiple instances where EOC staff did not delegate responsibility for monitoring email accounts when leaving their workspace during the exercise for briefings, meetings, or other purposes. This resulted in important emails (from other EOC staff, and exercise-related injects) sitting idle in inboxes, resulting in delayed key actions across functions within the EOC.

**Recommendation** - A mechanism that prescribes how EOC staff are expected to maintain situational awareness over their EOC email address is required within the EOC. This will support staff with delegating authority for monitoring email accounts within the EOC when key meetings and briefings are being conducted and will ensure that no critical information is missed within an activated CV EOC. The CVEP may consider adding language to position descriptions to this effect or develop other work instructions for EOC staff.

#### **Finding #5**

**The role and responsibility of the GIS function within the EOC was unclear.**

**Supporting Observation** – Both Facilitation staff and Participants identified that the GIS resource within the EOC was not used to its full capacity during the exercise. This finding stemmed from a contradicting understanding of the role that GIS was to play amongst participants and undefined processes for displaying situational awareness materials on display screens within the EOC. The following were common comments heard from GIS representatives:

- Wifi connection was not good;
- There was limited access to their community-level data;
- They were asked to stand off to the side of Operations where they could not be in direct communications with the Planning Group; and
- They were not tasked with creating specific mapping products and did not know what would support staff as a visual display.

**Supporting Observation** – It was also identified that the physical location of the GIS technician was not conducive to effective mapping and display of situational awareness materials. The GIS technician, who normally reports to the situation unit of the Planning Section, was located to the side of the EOC in proximity to where the Operations Section was located. This made for inefficient management of the GIS function and reduced the efficiency of information exchange for the purposes of developing and displaying situational awareness materials.

**Recommendation** – It is recommended that the CVEP reassesses where the GIS function resides within the EOC and ensure that the physical EOC layout enables GIS staff to have proximity to required IT connections and staff to effectively carry out their role. As GIS traditionally reports into the Situation Unit of the Planning Section, it is recommended that the EOC layout is updated to enable proximity of these functions.

**Finding #6**

**Briefings during the exercise were long and at times focused on tactical-level issues.**

EOC MANAGEMENT TEAM BRIEFING AGENDA			
Event:		Date:	Time:
Operational Period:	PEP Task #:	Chaired By:	
Agenda Items		Responsible Function	
1.	Status Reports (Use EOC 401A)	All Functions	
2.	Old Business (Follow-up from last Briefing)	EOC Director	
3.	Resource Priorities	All Functions	
4.	Probabilities and Predictions	Planning Section Chief	
5.	Public Information and Media	Information Officer	
6.	Priorities and Objectives	EOC Director	
7.	Attachments	Planning Section Chief	
8.	New/Other Business	All Functions	
Decisions/Outcomes/Tasks		Responsible Function	Estimated Completion Time
a)			
b)			
c)			
d)			
e)			
f)			
g)			
h)			
i)			
Briefing Notes/Minutes			
Recorder (Notes taken by):		Approved By (EOC Director):	
<b>Distribution:</b> <input type="checkbox"/> EOC Director <input type="checkbox"/> Risk Management Officer <input type="checkbox"/> Liaison Officer <input type="checkbox"/> Information Officer		<input type="checkbox"/> Operation Section Chief <input type="checkbox"/> Planning Section Chief <input type="checkbox"/> Logistics Section Chief <input type="checkbox"/> Finance/Administration Section Chief <input type="checkbox"/> Other _____	
EOC 401 August 2006			
EMERGENCY OPERATIONS CENTRE - Operational Guidelines 4-13			

**Supporting Observation** – Facilitation Staff observed each of the EOC Management Leadership Team Briefings that were conducted during the exercise. The overall impression from these observations identified that the EOC Management leadership team briefings were extended and discussed tactical-level information. While briefings did provide value for leadership personnel, there is an opportunity for these meetings to be shorter and have a consistent format.

**Recommendation** - EOC Directors and Function Section Leaders require training on how the CV EOC Management team leadership briefings are to be conducted and the preparation that is required. The EOC 401 form from BCEMS provides a consistent structure for scheduling these meetings and provides a location for key outcomes to be captured however still allows for the EOC Director(s) to customize the agenda to suit

their management styles. A recommended frequency for these meetings is once per operational cycle within the EOC with each ICS Function Section Lead having approximately 2 minutes to update on current activities and forecast future resource and support requirements.

### **Finding #7**

#### **Workspaces in the EOC grew increasingly cluttered as the exercise progressed**

**Supporting Observation** – The control team observed an increasing level of clutter amongst workspaces within the EOC during the exercise.

**Recommendation** – It is recommended that future training exercises include records management as a formal focus for participants both for the overall EOC and for each functional group. In addition, EOC staff should receive training on the importance of keeping clean workspaces during EOC activations.

**Recommendation** – Folios or other document storage solutions are required for each table within the EOC to ensure that all documents (notes, forms, etc.) can be filed and maintained for documentation purposes. EOC staff must be made aware of the importance of documentation and proper document handling within the EOC during all training activities.



**Action Taken!** *The CVEP is currently formalizing procedures that will increase document filing capabilities within the CV EOC and simplify the process of filing and storing documentation developed within the EOC during exercises and real-world activations.*

### **Finding #8**

#### **EOC staff indicated a desire for additional training on forms that must be filled out in the EOC and how they support the overall EOC response.**

**Supporting Observation** – Several post-exercise surveys contained comments speaking to the desire for additional training on the forms and documents that are used within the EOC. While some of these comments were general in nature asking simply for additional training on forms, others indicated specific areas where additional clarity or opportunities to exercise are desired including:

- Who is responsible for their completion;
- Where information can be found to support their development;



- When they should be developed within the context of the EOC business cycle;
- Where they should be sent following their completion; and
- How they inform future activities within the EOC.

**Recommendation** - EOC personnel require additional hands-on training opportunities on the Incident Command System (ICS) forms that will be used within the EOC, specifically who is responsible for completing each, where they are stored, and how they each support the overall EOC planning process.



**Action Taken!** *The CVEP is working to implement lunch and learn training activities to provide CVRD EOC staff with additional opportunities to increase their knowledge and understanding of EOC forms, processes and structures.*

### 4.3 Reception Centre

The findings contained in this section relate to exercise activities at the Reception Centre that was activated and operated by Emergency Support Services (ESS) volunteers during the exercise. This activity involved on-the-ground activation by ESS volunteers, St Johns Ambulance, and other community partners who would activate to support real-world emergencies. The findings and recommendations outlined in this section speak to the dedication of ESS volunteers in the region and in neighboring jurisdictions in supporting local governments. The findings in this section were developed based on participant feedback surveys, facilitator observations and the result of a hotwash / debriefing session with volunteers immediately following the end of the exercise.

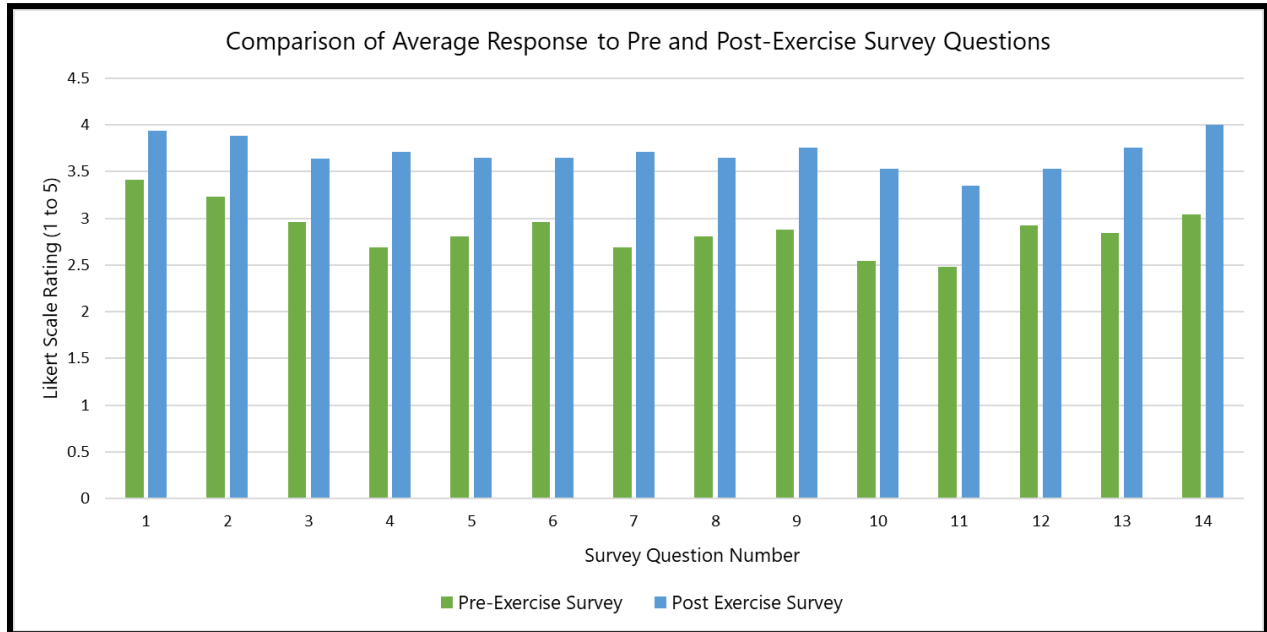


#### **Finding #9**

**The exercise was successful in increasing participants knowledge & understanding of how a Reception Centre would activate and operate in response to an earthquake within the Comox Valley.**

**Supporting Observation** – Analysis of the data from pre and post-exercise surveys identified a measured increase in participants self-assessed knowledge and understanding within their roles and of the emergency response process a whole. Participants noted an average growth across the 14 survey questions of 0.82 points between the pre-exercise and post-exercise survey results. The area seeing the greatest increase between pre and post survey results were Question 4 and

Question 7 which asked participants to identify their level of knowledge/understanding about the Comox Valley Emergency Program and the plans and procedures that will be used in their respective exercise location. A growth of 1.02 points was seen between the pre and post survey responses for these questions.



**Figure 3: Participants Responses to Pre and Post Exercise Survey at the Reception Centre**

**Recommendation** - ESS volunteers across the Comox Valley should continue to be provided with training and exercise opportunities that integrate all aspects of ESS response and to supportive a seamless transition to recovery. While it is not practical to conduct a live Reception Centre activation to the extent provided in this exercise, CVEP staff are encouraged work with ESS volunteers to train and familiarize themselves with the spaces that may be used as Reception Centres and/or Group Lodging during emergencies.

**Finding #10**

**The ERA tool is helpful and supports the registration and referrals process, however additional ESS staff require training on the tool, it’s intended use and its limitations.**

**Supporting Observation** –Multiple qualitative comments provided in the post-exercise surveys from the Reception Centre identified issues with the ERA tool. These included the login process (i.e. remembering passwords), minor issues relating to the input of information, and more broadly the delay in processing simulated evacuees that was caused by having to troubleshoot the ERA tool and associated technology.

**Recommendation** - The CVEP should consider expanding ERA training opportunities to additional ESS volunteers, local government representatives, and recreation staff and provide an ERA quick reference guide at each workstation. This will ensure that there are sufficient volunteers available who know how to use the tool and will provide them with helpful information if they

**“As the ESS Reception Manager, I learned that my position wasn’t necessarily to solve the problems of the general staff, though collectively, we did solve issues. I felt that my position was to ensure the work environment was a safe one, so staff were enabled to make decisions– as per BCEMS 1<sup>st</sup> response goal: "provide for the safety and health of all responders."  
- Sergio Tomasi, Reception Centre Manager, CV Emergency Support Services Volunteer**

have questions during an activation.

## 4.4 Technology & IT

### **Finding #11**

**The EOC facility has limited cellular and radio reception.**

**Supporting Observation** – Several EOC participants as well as the facilitation team identified that there is very limited cellular reception within the EOC. Participants supporting the radio component of the exercise also identified the lack of reception in the EOC as a barrier to effective communications. At times, exercise participants were forced to step out of the EOC facility to take radio or cellular calls relating to the exercise. In the event of an actual emergency, it would be imperative that seamless communications could occur (assuming that primary communication networks are active) within the EOC.

**Recommendation** – The CVEP is encouraged to explore solutions for increasing cellular and radio reception within the EOC itself. This may be through the use of a signal repeater or other hardware that may be required. Engagement with the Amateur Radio Group would be beneficial in identifying appropriate solutions that meet the needs of both cellular users and radio users.

### **Finding #12**

**Display screens within the EOC facility were not used to their full capacity during the exercise.**

**Supporting Observation** –Facilitation staff observed that display screens within the EOC were not used to their full capability during the exercise. Many of the screens within the EOC displayed

static information that was not immediately useful for staff, and screens that did use dynamic information (i.e. maps) were not updated as frequently as they could have been. Screens that displayed important ICS forms and EOC documentation were at times hard to read and did not have an immediate benefit to most staff within the EOC.



**Recommendation** - The CVEP should engage with EOC staff to determine what type of visual information would be helpful to them in their role and develop guidelines for the type of information that should be displayed as well as which screen is best suited from a human factors standpoint to display this information. This will ensure that there is improved situation awareness in the EOC amongst all staff.

### **Finding #13**

**File sharing and storage solutions within the EOC were difficult for participants to use and navigate during the exercise.**

**Supporting Observation** – Participants noted during the exercise that the Sync system used for file storage and file sharing was, at times, difficult to navigate. It was noted that issues stemmed from the design of the file tree for EOC folders as well as by the program itself as it was sometimes slow to load and save files.

**Recommendation** – It is recommended that the CVEP conduct an analysis of how the files are currently structured and identify opportunities for streamlining the folder tree. Additionally, CVEP personnel should explore whether there are other programs that can be leveraged for file-sharing within the CV EOC and determine whether these may provide a simplified solution.



**Action Taken!** – *The CVEP is currently undertaking a review of the Sync file sharing system to determine if there are other tools that may better support EOC staff. Additionally, this review will consider whether additional training on the Sync system and a modified file tree may better support the user experience.*



## 4.5 Exercise Design

### **Finding #14**

**The length of operational periods within the exercise did not provide an effective learning environment for EOC participants.**

**Supporting Observation** – Qualitative feedback on post-exercise surveys identified the impact that short operational cycles had on the workflow within the EOC. The short operational periods did not allow EOC staff to grow comfortable in their role and work through the business cycle in an appropriate level of detail. There was consensus amongst staff that the condensed operational periods resulted in multiple EOC forms being completed at the same time, whereas normal business cycle processes would have had them completed at the start and the end of the operational cycle. This overlap confused participants and impacted their ability to conduct other key tasks required by their role.



**Recommendation** - Future exercises need to be designed in a way that allows for fewer operational periods. This will allow operational periods to be played out over a longer timeframe (minimum of 2 hours) so that staff can immerse themselves in the process versus feeling rushed to complete EOC forms.

### **Finding #15**

**Most exercise participants indicated that they would like to see future exercises focus on wildfire and flooding scenarios.**

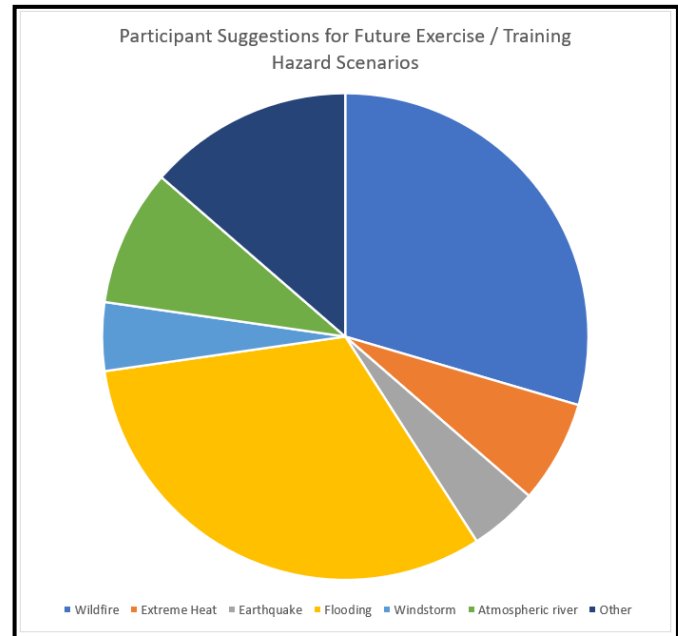
**Supporting Observation** – Post-exercise surveys asked participants to identify what type of emergency scenarios they would like to see in future exercises. Participants overwhelmingly identified both wildfire and floods. Other scenarios that were identified include:

- Extreme heat;
- Earthquake;
- Windstorm; and
- Atmospheric river.

**Recommendation** - Based on the prevalence of both wildfires and flooding in the Comox Valley, it is recommended that the CVEP continue to include scenarios speaking specifically to these events in future training exercises. As staff skills and capabilities grow with these two familiar scenarios, the CVEP can consider introducing more complex scenarios that explore new, or multiple emergency scenarios.



**Action Taken!** – *The CVEP is currently budgeting for increased opportunities for staff training and is exploring the implementation of a multi-year training and exercise program for staff.*



**Figure 4: Future Training Scenarios as Identified in Post-Exercise Surveys**

### **Finding #16**

**The shift change process used within the exercise was conducted in an informal manner and resulted in difficulties for second-shift staff in getting started in the exercise.**

**Supporting Observation** –Participant feedback captured during hotwash/debrief discussions and qualitative feedback provided on post-exercise surveys identified the impact that an informal shift change had on their ability to get up to speed on exercise activities conducted to that point in the activity. While this was a result of the exercise design (i.e. a “group” shift change versus a phased approach that would be seen during a real activation), it had a larger impact than expected on the flow of exercise activities. Specifically, feedback identified the following factors that impacted their ability to hit the ground running in the second operational period:

- An increased volume level in the EOC due to staff from both shifts in the facility at the same time;
- An increased level of activity within the EOC with food and refreshments being served during this time;
- An informal shift-change process without documented handover procedures; and
- Varying levels of documentation maintained by the first shift.

**Recommendation** - The CVEP should develop a reference sheet that prescribes how the shift-change process should be conducted within the EOC. This sheet should provide the following information for staff:

- Current objectives;
- Outstanding tasks;
- What outstanding items require follow-up / resolution;
- Key points of contact & contact information;
- Important activities conducted in the previous shift; and
- Other information as is considered pertinent for the shift-change process.

**Recommendation** – Future training activities should explore how a shift change is conducted. It is recommended that this is conducted as an isolated activity and should not be used to initiate play for a formal second shift, rather, train staff on the preparation process and conduct as a plenary activity.

**“This exercise was a valuable opportunity for our regional partners to come together and gain some practical emergency operations experience that simply can’t be replicated in a textbook or over Zoom”**  
 - Chief MacDonald, Courtenay Fire Department

**Finding #17**

**Participants physical location within the EOC created difficulties for some EOC participants to discern who was actively involved in exercise play and who was an observer of the exercise.**

**Supporting Observation** – During the exercise, some participants within the operations section were seated in a different section of the EOC. This created confusion amongst EOC participants looking to coordinate / engage with these staff within the context of the exercise. Facilitation staff also noted that the location of these operational resources within the EOC reduced the organic conversations and coordination that is critical within the EOC to support with information exchange within the Operations Section.

**Recommendation** – Prior to future training and exercises, the CVEP is encouraged to provide an introduction of all exercise attendees that includes the roles of observers vs players in order support clarity across all participants. This may also be completed through review of a participant brochure or other participant prep document prior to commencing exercise play. Additionally, the CVEP should consider having a seating chart to ensure that key exercise participants are co-located.

## 4.6 General

### **Finding #18**

**The exercise supported participants with feeling more confident and ready to activate during emergencies. It provided an enjoyable learning experience and left participants excited for future training and exercise opportunities.**

**Supporting Observation** –Qualitative feedback provided by participants in both post-exercise surveys as well as the debrief discussions indicated that most participants enjoyed their experience and look forward to future training opportunities. It was identified that exercises are a valuable opportunity to bring multiple groups together and train in a single activity.

Some of the comments of note in the post exercise surveys are provided below:

- Great job Howie and team!
- Very effective, I got a good idea of what an EOC might be like.
- I feel more prepared to work for my community.
- Very impressed! Coordinating this exercise would take a lot of work. It was well done and very informative.
- Great exercise – thank you. Tons of learning.
- Good exercise! These should happen more often to build skills and “muscle” memory.

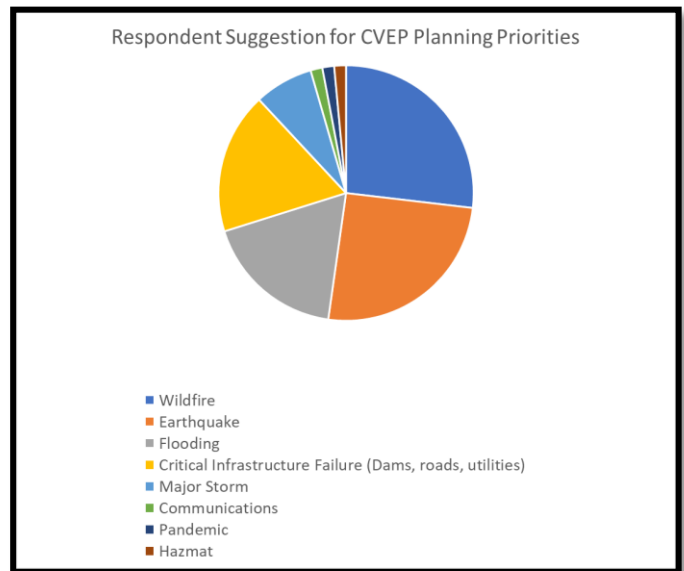
**Recommendation** – The CVEP should leverage the momentum from Exercise Fracture on 5<sup>th</sup> and engage participants across functional activities with regional approach in training and exercises that continue to increase in complexity over time. This can be accomplished through a formalized three (3) to five (5) year training and exercise program developed to culminate in another full-scale capstone exercise. An example 5-year training program is outlined in Annex C.

### **Finding #19**

**Participants listed several hazards that are viewed as being pertinent in CVEP planning activities.**

**Supporting Observation** – The post-exercise survey asked participants to find the top hazards that should be considered by the CVEP in emergency program planning activities. The following hazards were found:

- Wildfire (18)
- Earthquake (17)
- Flooding (12)
- Critical Infrastructure Failure (12)
- Major Storm (5)
- Communications (1)
- Pandemic (1)
- Hazmat Incident (1)



**Recommendation-** It is recommended that the hazards listed above are considered by the CVEP in emergency planning activities in addition to hazards shown within relevant regional assessments including but not limited to Hazard, Risk, and Vulnerability Analysis completed for each Local Government supported by the CVEP.

## 4.7 Summary of Findings & Recommendations

The following table provides a summary of the findings and recommendations discussed above.

**Table 3: Findings Summary Table**

<b>Finding No.</b>	<b>Finding Category</b>	<b>Finding</b>	<b>Recommendation</b>
<b>F-01</b>	<b>Emergency Operations Centre</b>	The exercise was successful in increasing participants' knowledge & understanding of how EOC's activate and operate to coordinate the response to an earthquake within the Comox Valley.	Continuous training and annual exercises participation for regional EOC and related activity support staff and volunteers with increasing complexity and scope of emergency response activities though the integration of disaster risk reduction and climate adaptation strategies.
<b>F-02</b>	<b>Emergency Operations Centre</b>	There is still uncertainty amongst staff regarding expected lines of communication within the CV EOC during emergencies.	Future CVEP training sessions should include objectives specific to communications within the EOC, as well as communications from the EOC to incident locations. Future exercises should include objectives that seek to establish and maintain shared situational awareness.
	<b>Emergency Operations Centre</b>		It is recommended that the CVEP develop a common operating capacity (using GIS web-viewers or similar platforms) that can support with developing and maintaining situational awareness for all staff (i.e. all incident locations) during emergencies. This common database should provide information such as evacuation alert/order boundaries, key incident locations, road closures, major incidents, and other information as is available.
<b>F-03</b>	<b>Emergency Operations Centre</b>	There were unclear trigger points for declaring a State of Local Emergency (SoLE) within the Comox Valley in the early stages of the exercise.	It is recommended that the CVEP develop a flow chart outlining key decisions needed during a major event that includes direction as to when and how to declare a SoLE. Clearly defining the trigger points for making this type of declaration will support EOC management staff with directing EOC staff to seek out specific information and initiate the SoLE process in an expedited fashion.

F-04	<b>Emergency Operations Centre</b>	EOC Staff did not assign or delegate responsibility for monitoring their EOC email when leaving their workstation for meetings, rest breaks or other purposes.	A mechanism that prescribes how EOC staff are expected to maintain situational awareness over their EOC email address is required within the EOC. This will support staff with delegating authority for monitoring email accounts within the EOC when key meetings and briefings are being conducted and will ensure that no critical information is missed within an activated CV EOC. The CVEP may consider adding language to position descriptions to this effect or develop other work instructions for EOC staff.
F-05	<b>Emergency Operations Centre</b>	The role and responsibility of the GIS function within the EOC was unclear.	It is recommended that the CVEP reassesses where the GIS function resides within the EOC and ensure that the physical EOC layout enables GIS staff to have proximity to required IT connections and staff to effectively carry out their role. As GIS traditionally reports into the Situation Unit of the Planning Section, it is recommended that the EOC layout is updated to enable proximity of these functions.
F-06	<b>Emergency Operations Centre</b>	Briefings during the exercise were long and at times focused on tactical-level issues.	EOC Directors and Function Section Leaders require training on how the CV EOC Management team leadership briefings are to be conducted and the preparation that is required. The EOC 401 form from BCEMS provides a consistent structure for scheduling these meetings and provides a location for key outcomes to be captured however still allows for the EOC Director(s) to customize the agenda to suit their management styles. A recommended frequency for these meetings is once per operational cycle within the EOC with each ICS Function Section Lead having approximately 2 minutes to update on current activities and forecast future resource and support requirements.
F-07	<b>Emergency Operations Centre</b>	Workspaces in the EOC grew increasingly cluttered as the exercise progressed	It is recommended that future training exercises include records management as a formal focus for participants both for the overall EOC and for each functional group. In addition, EOC staff should receive training on the

			<p>importance of keeping clean workspaces during EOC activations.</p> <p>Folios or other document storage solutions are required for each table within the EOC to ensure that all documents (notes, forms, etc.) can be filed and maintained for documentation purposes. EOC staff must be made aware of the importance of documentation and proper document handling within the EOC during all training activities.</p>
<b>F-08</b>	<b>Emergency Operations Centre</b>	EOC staff indicated a desire for additional training on forms that must be filled out in the EOC and how they support the overall EOC response.	EOC personnel require additional hands-on training opportunities on the Incident Command System (ICS) forms that will be used within the EOC, specifically who is responsible for completing each, where they are stored, and how they each support the overall EOC planning process.
<b>F-09</b>	<b>Reception Centre</b>	The exercise was successful in increasing participants knowledge & understanding of how a Reception Centre would activate and operate in response to an earthquake within the Comox Valley.	ESS volunteers across the Comox Valley should continue to be provided with training and exercise opportunities that integrate all aspects of ESS response and to supportive a seamless transition to recovery. While it is not practical to conduct a live Reception Centre activation to the extend provided in this exercise, CVEP staff are encouraged work with ESS volunteers to train and familiarize themselves with the spaces that may be used as Reception Centres and/or Group Lodging during emergencies.
<b>F-10</b>	<b>Reception Centre</b>	The ERA tool is helpful and supports the registration and referrals process, however additional ESS staff require training on the tool, it's intended use and its limitations.	The CVEP should consider expanding ERA training opportunities to additional ESS volunteers and provide an ERA quick reference guide at each workstation. This will ensure that there are sufficient volunteers available who know how to use the tool and will provide them with helpful information if they have questions during an activation.
<b>F-11</b>	<b>Technology &amp; IT</b>	The EOC facility has limited cellular and radio reception.	The CVEP should explore solutions for increasing cellular and radio reception within the EOC itself. This may be



			through the use of a signal repeater or other hardware that may be required. Engagement with the Amateur Radio Group would be beneficial in identifying appropriate solutions that meet the needs of both cellular users and radio users.
<b>F-12</b>	<b>Technology &amp; IT</b>	Display screens within the EOC facility were not used to their full capacity during the exercise.	The CVEP should engage with EOC staff to determine what type of visual information would be helpful to them in their role and develop guidelines for the type of information that should be displayed as well as which screen is best suited from a human factors standpoint to display this information. This will ensure that there is improved situation awareness in the EOC amongst all staff.
<b>F-13</b>	<b>Technology &amp; IT</b>	File sharing and storage solutions within the EOC were difficult for participants to use and navigate during the exercise.	It is recommended that the CVEP conduct an analysis of how the files are currently structured and identify opportunities for streamlining the folder tree. Additionally, CVEP personnel should explore whether there are other programs that can be leveraged for file-sharing within the CV EOC and determine whether these may provide a simplified solution.
<b>F-14</b>	<b>Exercise Design</b>	The length of operational periods within the exercise did not provide an effective learning environment for EOC participants.	Future exercises should ensure that operational periods are played out over a longer timeframe (minimum of 2 hours) so that staff can immerse themselves in the process versus feeling rushed to complete EOC forms.
<b>F-15</b>	<b>Exercise Design</b>	Most exercise participants indicated that they would like to see future exercises focus on wildfire and flooding scenarios.	Based on the prevalence of both Wildfires and Flooding in the Comox Valley, it is recommended that the CVEP continue to include scenarios speaking specifically to these events in future training exercises. As staff skills and capabilities grow with these two familiar scenarios, the CVEP can consider introducing more complex scenarios that explore new, or multiple emergency scenarios.

F-16	<b>Exercise Design</b>	The shift change process used within the exercise was conducted in an informal manner and resulted in difficulties for second-shift staff in getting started in the exercise.	<p>The CVEP should develop a reference sheet that prescribes how the shift-change process should be conducted within the EOC. This sheet should provide the following information for staff:</p> <ul style="list-style-type: none"> <li>• Current objectives;</li> <li>• Outstanding tasks;</li> <li>• What outstanding items require follow-up / resolution;</li> <li>• Key points of contact &amp; contact information;</li> <li>• Important activities conducted in the previous shift; and</li> <li>• Other information as is considered pertinent for the shift-change process.</li> </ul> <p>Future training activities should explore how a shift change is conducted. It is recommended that this is conducted as an isolated activity and should not be used to initiate play for a formal second shift, rather, train staff on the preparation process and conduct as a plenary activity.</p>
F-17	<b>Exercise Design</b>	Participants physical location within the EOC created difficulties for some EOC participants to discern who was actively involved in exercise play and who was an observer of the exercise.	Prior to future training and exercises, the CVEP is encouraged to provide an introduction of all exercise attendees that includes the roles of observers vs players in order support clarity across all participants. This may also be completed through review of a participant brochure or other participant prep document prior to commencing exercise play. Additionally, the CVEP should consider having a seating chart to ensure that key exercise participants are co-located.
F-18	<b>General</b>	The exercise supported participants with feeling more confident and ready to activate during emergencies. It provided an enjoyable learning experience and left participants excited for future training and exercise opportunities.	The CVEP should leverage the momentum from Exercise Fracture on 5th and engage participants across functional activities with regional approach in training and exercises that continue to increase in complexity over time. This can be accomplished through a formalized three (3) to five (5) year training and exercise program developed to

			culminate in another full-scale capstone exercise. An example 5-year training program is outlined in Annex C.
<b>F-19</b>	<b>General</b>	Participants listed several hazards that are viewed as being pertinent in CVEP planning activities.	CVEP staff should consider the hazards listed above in emergency planning activities in addition to hazards shown within relevant regional assessments including but not limited to Hazard, Risk, and Vulnerability Analysis completed for each Local Government supported by the CVEP.

## 5. CONCLUSION

Exercise Fracture on 5<sup>th</sup> provided a valuable opportunity for staff across the Comox Valley to collaborate and contribute to the response to a simulated earthquake emergency in the Valley. Large emergencies in the Comox Valley will require a comprehensive, coordinated response. No individual community within the Comox Valley has the capacity to respond to these large emergencies on their own. This regional approach to emergency management allows for joint planning, enables joint resource requests and resources sharing (i.e. EOC staffing), (if and as required) and enables consistent public messages to go out to all residents within the Comox Valley.

The findings and recommendations stemming from the exercise are an acknowledgement that there is always room for growth and for the CVEP delivery to evolve and provides a foundation on which to build a roadmap for future CVEP planning priorities. The broader planning process used to design this exercise also highlighted the agile nature of the CVEP and its primary staff in responding and adjusting based on operational realities. Updates in provincial legislation, the Covid-19 pandemic, and staffing changes within various CVEP partners all contributed to a complex planning environment and each variable was handled promptly and professionally.

## ANNEX A. EXERCISE SCHEDULE

Time	Operational Period	EOC	Public Information	Reception Centre	Radio	CI	Neighbourhood Evacuation
0800	Background information loaded (GCC notification, social media) 0815 Connect Rocket Test message to participants						
0830	<b>Ops Period 1</b>	Analysis of Current situation (damage)	Media Monitoring	ESS Receiving information from EOC	Damage report from Strathcona RD		<ul style="list-style-type: none"> <li>• Preparation for Evacuation</li> <li>• ICP in location</li> <li>• Receive Evac Order from EOC</li> </ul>
0900		Communication with VIR PREOC	Interaction with EOC and IC regarding Public Messaging	Assessment of Filberg Centre			
0930		SOLE	Drafting Public Messaging				
1000		Evacuation Order	Social Media Monitoring	Activating Reception Centre	Confirmation of ESS from Campbell River		
1030	<b>Ops Period 2</b>	Communication to and from Evacuation ICP	Public Safety Messaging re: CI damage			TTX with damage to specific CI provided. Completion of Survey123 inputs	Evacuation of 3 <sup>rd</sup> Street Leighton Neighbourhood
1100		Receipt of Survey 123 Data from CI	PREOC Guidance on media messaging	Request ESS Mutual Aid Donations Management responses	Nanaimo Radio Message outlining damage		
1130		Monitoring Damage Reports	Supporting Evacuation				

Time	Operational Period	EOC	Public Information	Reception Centre	Radio	CI	Neighbourhood Evacuation
1200		Communication with Reception Centre	Media requests	Processing evacuees as required for neighbourhood evacuation	Radio message on arrival time of ESS volunteers from Campbell River		
1230	<b>Ops Period 3</b>	Shift Handover	Media Monitoring	Damage to Hotel inject			Post Evacuation removal of tape and clean up Hotwash / debrief in location
1300		Working with CI TTX to understand extent of damage to CI	Potential do not use or boil messaging as a result of damaged water infrastructure	Intermittent Power outages in area			
1330		Address queries from EMBC (confirmation of damage on Inland Island and North Island Highways)	Continued Media monitoring		Radio Message from EOC to PREOC summarizing damage	TTX – further damage and discussions about longer term impacts and repair timelines	
1400		PREOC requesting updated damage report and ESS impact assessment	Media availability requests	Interaction with EOC re: PREOC request			
1430		<b>Ops Period 4</b>	Preparing update for PREOC	PREOC media lines shared	Hotwash / debrief with RC Team		

Time	Operational Period	EOC	Public Information	Reception Centre	Radio	CI	Neighbourhood Evacuation
					assistance		
1500		Continued damage reports	Residents demanding information on infrastructure				
1530		Additional Damage information from Police					
1600		Structure fire report					
1630	<b>ENDEX - Hotwash / debrief in location</b>						

## **ANNEX B. EVALUATION DOCUMENTATION**

### **PRE-EXERCISE SURVEY**

#### **Introduction**

Thank you for participating in Exercise Fracture on 5th functional exercise. This is a valuable opportunity for stakeholders across the Comox Valley to activate various plans and procedures in response to a simulated emergency. This exercise will be an exploratory activity. The exercise and subsequent surveys are not a test of staff, rather, an opportunity to familiarize participants with their functions, roles and responsibilities in emergency response to a regional emergency.

The evaluation for this exercise has been developed as a two-part evaluation and is intended to identify how knowledge and understanding of the emergency management process changes as a result of participating in exercise activities. The first evaluation component (this survey) will provide baseline-level information for planning staff. The second part of the evaluation will be a survey with similar questions aimed at identifying changes in knowledge and understanding across various focus areas.

Please select your answers as accurately as possible. This is not an individual assessment or evaluation, and individual responses will not be used or shared. Only aggregate data will be used to provide general trends to the exercise planners.

#### **#1 - General Emergency Management Awareness**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

- |    |   |   |   |   |   |   |
|----|---|---|---|---|---|---|
| 1. | Please indicate your level of knowledge/understanding about Emergency Management.   | 1 | 2 | 3 | 4 | 5 |
| 2. | Please indicate your level of knowledge/understanding about Emergency Response as it relates to your expected role during an emergency (i.e. CV Emergency Operations Centre personnel, ESS volunteer, Radio Volunteer, Ground Search and Rescue). | 1 | 2 | 3 | 4 | 5 |
| 3. | Please indicate your level of knowledge/understanding of how your assigned role fits into the broader Comox Valley emergency response process.  | 1 | 2 | 3 | 4 | 5 |

#### **#2 – Knowledge of the Comox Valley Emergency Program**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

- |    |   |   |   |   |   |   |
|----|---|---|---|---|---|---|
| 4. | Please indicate your level of knowledge/understanding of the Comox Valley Emergency Program.  | 1 | 2 | 3 | 4 | 5 |
| 5. | Please indicate your level of knowledge/understanding about the Incident Command System (ICS) structures that the Comox Valley Emergency Operations Centre will use during emergencies. | 1 | 2 | 3 | 4 | 5 |



- |    |  |   |   |   |   |   |
|----|--|---|---|---|---|---|
| 6. | Please indicate your level of knowledge/understanding of the hazards that can impact the Comox Valley. | 1 | 2 | 3 | 4 | 5 |
|----|--|---|---|---|---|---|

**#3 – Knowledge of Comox Valley Emergency Program Plans and Procedures**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

- |     |  |   |   |   |   |   |
|-----|--|---|---|---|---|---|
| 7.  | Please indicate your level of knowledge/understanding about the plans and procedures that will be used in your area of exercise play.                    | 1 | 2 | 3 | 4 | 5 |
| 8.  | Please indicate your level of knowledge/understanding of how emergency operations are activated and operated to support emergencies in the Comox Valley. | 1 | 2 | 3 | 4 | 5 |
| 9.  | Please indicate your level of knowledge/understanding about the various forms and documentation that will be used in your exercise location.             | 1 | 2 | 3 | 4 | 5 |
| 10. | Please indicate your level of knowledge/understanding about how ICS structures expand and contract during emergencies within the Comox Valley EOC.       | 1 | 2 | 3 | 4 | 5 |
| 11. | Please indicate your level of knowledge/understanding of the communications processes that will be used by the Comox Valley during regional emergencies. | 1 | 2 | 3 | 4 | 5 |

**#4 – Knowledge of Individual Role Within the Emergency Response Structure**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

- |     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| 12. | Please indicate your level of knowledge/understanding of your overall role within the Comox Valley emergency response structure.  | 1 | 2 | 3 | 4 | 5 |
| 13. | Please indicate your level of knowledge/understanding of the tasks assigned to your particular role/function within the exercise (i.e. within the CV EOC, Reception Centre, Radio room, etc.) | 1 | 2 | 3 | 4 | 5 |
| 14. | Please indicate your level of knowledge/understanding of how you will be notified and engaged in emergency response activities.   | 1 | 2 | 3 | 4 | 5 |

# POST-EXERCISE SURVEY

## **Introduction**

Thank you for participating in Exercise Fracture on 5th full-scale exercise. This exercise has been a valuable opportunity for stakeholders across the Comox Valley to activate various plans and procedures in response to a simulated emergency. The exercise and subsequent surveys are not a test of staff/volunteers, rather, an opportunity to familiarize participants with their roles and responsibilities in emergency response to a regional emergency.

Please select your answers as accurately as possible based on your experience in exercise activities. This is not an individual assessment or evaluation, and individual responses will not be used or shared. Only aggregate data will be used to provide general trends to the exercise planners.

## **#1 - General Emergency Management Awareness**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

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|----|---|---|---|---|---|---|
| 1. | Please indicate your level of knowledge/understanding about Emergency Management.   | 1 | 2 | 3 | 4 | 5 |
| 2. | Please indicate your level of knowledge/understanding about Emergency Response as it relates to your expected role during an emergency (i.e. CV Emergency Operations Centre Staff, ESS volunteer, Radio Volunteer, etc.). | 1 | 2 | 3 | 4 | 5 |
| 3. | Please indicate your level of knowledge/understanding of how your assigned role fits into the broader Comox Valley emergency response process.  | 1 | 2 | 3 | 4 | 5 |

## **#2 – Knowledge of the Comox Valley Emergency Program**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

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|----|---|---|---|---|---|---|
| 4. | Please indicate your level of knowledge/understanding of the Comox Valley Emergency Program.  | 1 | 2 | 3 | 4 | 5 |
| 5. | Please indicate your level of knowledge/understanding about the Incident Command System (ICS) structures that the Comox Valley Emergency Operations Centre will use during emergencies. | 1 | 2 | 3 | 4 | 5 |
| 6. | Please indicate your level of knowledge/understanding of the hazards that can impact the Comox Valley.  | 1 | 2 | 3 | 4 | 5 |

## **#3 – Knowledge of Comox Valley Emergency Program Plans and Procedures**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

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|-----|--|---|---|---|---|---|
| 7.  | Please indicate your level of knowledge/understanding about the plans and procedures that will be used in your area of exercise play.  | 1 | 2 | 3 | 4 | 5 |
| 8.  | Please indicate your level of knowledge/understanding of how emergency operations are activated and operated to support emergencies in the Comox Valley.                     | 1 | 2 | 3 | 4 | 5 |
| 9.  | Please indicate your level of knowledge/understanding about the various forms and documentation that will be used in your exercise location.                                 | 1 | 2 | 3 | 4 | 5 |
| 10. | Please indicate your level of knowledge/understanding about how Incident Command System (ICS) structures expand and contract during emergencies within the Comox Valley EOC. | 1 | 2 | 3 | 4 | 5 |
| 11. | Please indicate your level of knowledge/understanding of the communications processes that will be used by the Comox Valley during regional emergencies.                     | 1 | 2 | 3 | 4 | 5 |

**#4 – Knowledge of Individual Role Within the Emergency Response Structure**

\*A score of 1 indicates no knowledge/understanding and 5 indicates significant knowledge/understanding

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|-----|---|---|---|---|---|---|
| 12. | Please indicate your level of knowledge/understanding of your overall role within the Comox Valley emergency response structure.  | 1 | 2 | 3 | 4 | 5 |
| 13. | Please indicate your level of knowledge/understanding of the tasks assigned to your particular role within the exercise (i.e. within the CV EOC, Reception Centre, Radio room, etc.). | 1 | 2 | 3 | 4 | 5 |
| 14. | Please indicate your level of knowledge/understanding of how you will be notified and engaged in emergency response activities.   | 1 | 2 | 3 | 4 | 5 |

**#5 - Post-Exercise Reflection**

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|-----|--|---|---|---|---|---|
| 15. | Please indicate how effective you feel pre-exercise training sessions were for preparing you for participation in the exercise (1 being very ineffective, and 5 being very effective).     | 1 | 2 | 3 | 4 | 5 |
| 16. | Please list the top three hazards that you believe the Comox Valley should consider in emergency planning activities (1 being the highest risk, three being the lowest risk of the three). |   |   |   |   |   |

1.

2.

3.

17. If you participated in the EOC portion of the exercise, please indicate how effective you feel the layout of the facility was in supporting emergency response activities (1 being not very effective, 5 being very effective). 1 2 3 4 5

18. If you participated in the EOC portion of the exercise, please indicate how effective you feel the technology available in the facility was in supporting emergency response activities (1 being not very effective, 5 being very effective). 1 2 3 4 5

19. Please list two (2) training topics that you feel should be included in future training sessions and/or exercises.

1. 2.

20. Please list two scenarios that should be used to guide future mock emergency exercises (e.g. Heatwave, wildfire, atmospheric river)

1. 2.

21. Please elaborate on your overall impressions of the exercise and list any areas for improvement from an exercise design and delivery standpoints that you may have observed.

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**#6 – General Feedback**

Please provide any additional feedback you have regarding this activity.

## ANNEX C. EXAMPLE ONLY-5 YEAR TRAINING PLAN

Year	Training Opportunity	Exercise Type	Description
2023	<ul style="list-style-type: none"> <li>• Stovepipe style training with each ICS functional group exploring the role and responsibilities during EOC activation</li> <li>• Tabletop Exercise focused on:               <ul style="list-style-type: none"> <li>○ Familiarizing staff with key EOC forms and their intended use:</li> <li>○ Familiarizing staff with expected communications within the EOC and between the EOC and external agencies</li> <li>○ Practicing the preparation of a shift-handover briefing for their individual function</li> </ul> </li> </ul>	<p><b>Workshop (i.e. lunch and learn, lecture-based training)</b></p> <p><b>TTX</b></p>	<p>A series of workshops should be completed for EOC staff that are function-specific and explore the roles and responsibilities and operational functions of each group.</p> <p>A tabletop exercise should be conducted following each of the training sessions that brings all EOC functions together under a common scenario to discuss how the EOC would operate to support an incident.</p>
2024	<ul style="list-style-type: none"> <li>• Workshop for EOC leadership staff &amp; Function Leads to review/confirm best practices for conducting and leading briefings</li> <li>• Workshop for general EOC staff to:               <ul style="list-style-type: none"> <li>○ Discuss shift change procedures in detail</li> <li>○ Discuss key EOC forms to be used during emergencies, their development process, and their lifecycle within the EOC</li> <li>○ Review/confirm best practices for conducting and leading briefings</li> </ul> </li> <li>• Tabletop Exercise focused on:               <ul style="list-style-type: none"> <li>○ Discussing how Radio will be integrated into EOC operations for communications redundancy</li> <li>○ Explore how to develop a ConOps for backup comms via radio in the EOC</li> </ul> </li> </ul>	<p><b>Workshop (i.e. lunch and learn, lecture-based training)</b></p> <p><b>TTX</b></p>	<ul style="list-style-type: none"> <li>• Workshops should be completed to educate EOC leadership staff about how to conduct and participate in effective briefings to ensure consistency in knowledge/understanding of this process amongst staff (both primary and alternate for key roles)</li> <li>• Workshops should be completed for general EOC staff focusing specifically on the forms that are used within the EOC. This should explore when they are developed, how they are developed, who is responsible for their development, how they support overall planning within the EOC</li> <li>• A TTX should be conducted to engage radio volunteers in exploratory discussions on how Radio can be leveraged in communication outages within the Comox Valley.</li> </ul>

<p><b>2025</b></p>	<ul style="list-style-type: none"> <li>• Activate the EOC and establish a formal business cycle;</li> <li>• Conduct two (2) business cycles over a half day Functional Exercise</li> <li>• Review/confirm best practices for conducting and leading briefings</li> </ul>	<p><b>Functional Exercise</b></p>	<ul style="list-style-type: none"> <li>• Half day functional exercise focused on two (2) operational cycles each two (2) hours in length</li> <li>• Over a half day, discuss and practice the EOC activation and operational processes</li> <li>• Review and formalize a format for leadership briefings.</li> </ul>
<p><b>2026</b></p>	<ul style="list-style-type: none"> <li>• Activate and operate the EOC with a focus on recovery planning activities</li> <li>• Explore how the EOC will transition from the response phase to the recovery phase of an emergency.</li> <li>• Explore both short-term and long-term recovery considerations</li> </ul>	<p><b>Functional Exercise</b></p>	<ul style="list-style-type: none"> <li>• Run a one-day functional exercise with full EOC activation.</li> <li>• Exercise should explore various aspects of recovery operations including how ICS structures will be modified during this phase, and the key activities to be considered during this phase of emergencies.</li> </ul>
<p><b>2027</b></p>	<ul style="list-style-type: none"> <li>• Activation of recovery procedures to validate Long-term Recovery process</li> <li>• Test communications including Social Media monitoring and inter-agency integration</li> <li>• Coordinate with 3<sup>rd</sup> party agencies/ authorities</li> </ul>	<p><b>Full-Scale Exercise</b></p>	<ul style="list-style-type: none"> <li>• Run a one (1) day Full-Scale Exercise focusing on response in the morning with the discussion/decision to activate recovery activities to address "long-term" restoration activities. The afternoon should focus on recovery activities in "compressed time" (i.e., 6-12 months in 4-6 hours).</li> </ul>