

Conducting a full-scale emergency management exercise during COVID-19: A case study of Puyallup Chill Out 2021

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ABSTRACT

The COVID-19 public health emergency severely limited the ability of emergency managers to conduct emergency exercises, particularly at the functional or full-scale level. Throughout the COVID-19 pandemic response, other emergencies continued, and local emergency management was called to respond, ensuring that local guidelines and COVID-19 restrictions were observed. This paper describes how the pandemic impacted on the City of Puyallup's emergency management training and exercise programme and how the City adapted to conduct a full-scale exercise in the autumn of 2021. Multiple delays, planning partners overwhelmed by COVID-19, and emergencies that occurred prior to the exercise were all addressed and included in the exercise scenario. The City of Puyallup and its planning partners built in contingencies in the run-up to the exercise, all the way through to the day of exercise play. Providing a safe, realistic and timely opportunity for the City of Puyallup and partners to conduct the exercise has resulted in a far-reaching after-action report and improvement plan to guide the preparedness and planning efforts of the City and its partners.

Keywords: COVID-19, full-scale exercise, emergency management, planning, shelter, extreme weather



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INTRODUCTION

The City of Puyallup lies in the Puget Sound region of Washington State, 10 miles east of the City of Tacoma and 35 miles south of the City of Seattle. It has a population of just over 40,000 and is home to the Washington State Fair, the largest event in the State of Washington and in the Pacific Northwest. The City of Puyallup Emergency Management Division, in addition to being responsible for all aspects of emergency management for the city, is the lead agency for the East Pierce Interlocal Coalition for Emergency Management (EPIC-EM) — a coalition of the cities and towns of Bonney Lake, Buckley, Carbonado, Orting, Puyallup, Sumner and Wilkeson, formed in February 2021 to collaborate and maximise limited resources for emergency management preparedness, planning, training and exercise. Each jurisdiction maintains responsibility for its own emergency management response, but the collective response efforts are closely coordinated.

THE CITY OF PUYALLUP EMERGENCY MANAGEMENT DIVISION

Over the last five years, the City has conducted multiple mass care, sheltering and lahar (volcanic) full-scale exercises. The Emergency Management Division utilises the emergency management planning cycle to ensure that the City maintains a constant state of readiness. The City Emergency Management Division has a multi-year plan that addresses all phases of emergency management including prevention, mitigation, preparedness, response and recovery. Within the multi-year plan is a training and exercise timeline that provides an emergency planning revision process, training and exercise timeline to support the planning revision process. The most recent iteration of the City

of Puyallup's All-Hazard Mitigation Plan identifies four major natural hazards with the potential to significantly affect the region. These hazards were chosen based on multiple criteria including high frequency and potential impact. The hazards include earthquakes, floods, winter/severe storms and volcanic eruptions/lahar. Additionally, certain man-made hazards such as fire, hazardous materials (hazmat) and terrorism are accounted for in the plan and addressed in the mitigation strategies.

The City's Emergency Operations Center (EOC) has a team roster of 65, including City staff, liaisons from the Puyallup School District, Central Pierce Fire and Rescue, MultiCare Good Samaritan Hospital and the Washington State Fair. The EOC team participates in quarterly team training, at least one annual functional or full-scale exercise and other individual team member training. The training and exercises build on the City's response efforts and after-action reports (lessons learned) from emergency response activations and emergency exercises. The Emergency Management Division consists of one full-time emergency manager and three part-time positions. Two of the three part-time positions were added when the EPIC-EM coalition was formed, to provide additional planning and coordination support. The Emergency Management Division relies on the many partnerships and collaborations required to ensure a robust, comprehensive programme.

Due to the frequency of flooding and severe weather along with the unique hazards from volcanic Mount Rainier, the City has multiple hazard-specific response plans. These specific response plans are annexed to the City's Comprehensive Emergency Management Plan and are frequently used for training, exercise and response. The last few activations of the City's EOC include a multi-jurisdiction,

multi-discipline full-scale lahar evacuation exercise that included the physical evacuation and shelter-in-place procedures of over 20,000 students and staff in the East Pierce County region. Other full-scale EOC activations include a large three-alarm fire that required the evacuation of thousands of residents and businesses, the COVID-19 public health emergency response, and local flooding and severe winter weather.

The City conducts various exercises to develop, evaluate and, most importantly, improve upon response plans and procedures. Under the careful guidance of the City's Emergency Manager, and in accordance with the principles of the Homeland Security Exercise and Evaluation Program (HSEEP), the City is able to improve its real-world incident response. Engaging stakeholders within the community in these exercises and training sessions ensures that the City applies local, real-world elements and components throughout the planning process.

BACKGROUND

The City of Puyallup's Emergency Management Division conducted the Puyallup Chill Out 2021 exercise on Tuesday, 12th October, 2021. This full-scale exercise was a sheltering and mass care exercise, based on an extremely cold weather event. The exercise, initially scheduled to be conducted in October 2020, was postponed due to social distancing requirements during the COVID-19 public health emergency. The exercise was initially designed to build on a full-scale mass care and shelter exercise that the City conducted in the autumn of 2018, based on a comprehensive after-action report and improvement plan. The Puyallup Chill Out 2021 exercise was conducted with COVID-19 contingency planning measures in place and the exercise scenario

included the current COVID-19 considerations. The impacts of COVID-19 were woven throughout the exercise and the exercise planning team emphasised the importance of conducting the exercise in person, with efforts made to mitigate the potential impacts of COVID-19 on all exercise participants. Emergencies and disasters do not stop because of pandemics like COVID-19 and emergency managers must continue to prepare for and respond to emergencies and disasters. The Puyallup Chill Out 2021 exercise planning team proceeded with their process to demonstrate that a full-scale exercise could be conducted, with current COVID-19 considerations, safely.

In March 2020, the City of Puyallup declared a state of emergency in response to the COVID-19 public health emergency. The City's EOC was activated and members of the EOC team were assigned to support response efforts. One of these early efforts included the mobilisation of a temporary emergency location (TEL) site for people experiencing homelessness to be able to quarantine safely during Governor Jay Inslee's 'Stay Home, Stay Healthy' order. The TEL was active from April 2020 through July 2020, at its peak providing temporary shelter for 45 people. The EOC used the Puyallup Community Shelter Plan for the mobilisation of the TEL site. In addition to supporting the TEL site through the City EOC, City staff also provided the staffing for the TEL site for the duration of the mobilisation. Although most of the staff at the TEL site had participated in a previous full-scale emergency shelter exercise — the Puyallup River Crest Crescendo, conducted on 7th November, 2018 — very few genuinely believed they would ever find themselves working at a shelter site. In fact, throughout the City's response to the COVID-19 public health emergency, staff continued to express their disbelief at

the emergency situation and the length of time that City staff and resources had to be committed to the response.

Although the state of emergency was rescinded at the end of October 2022, the impact of the City's COVID-19 public health emergency response on service delivery continues to manifest. The City's Emergency Management Division has benefitted from leadership and community support for preparedness and planning efforts. Pre-COVID-19, there was strong support for the Emergency Management Division; during and post-COVID-19 this support was renewed and emphasised. The City of Puyallup Emergency Management Division decided to not cancel the Puyallup Chill Out 2021 full-scale exercise but to postpone it for one year in the hope that people would be able to participate in person in multiple locations.

THE PLANNING PROCESS

The planning process for Puyallup Chill Out 2021 began in the autumn of 2019. The initial plan for the exercise involved multiple locations for exercise play, ambitious exercise objectives and many stakeholders.

Members of the Puyallup Chill Out 2021 exercise planning team included representatives from the following organisations:

- City of Puyallup Emergency Management;
- City of Puyallup Police Department;
- Puyallup Nazarene Church (City of Puyallup shelter location);
- City of Olympia Emergency Management;
- Central Pierce Fire and Rescue;
- West Pierce Fire and Rescue.
- Pierce County Department of Emergency Management;
- Pierce County Human Services;

- Tacoma-Pierce County Health Department;
- Joint-Base Lewis McChord Emergency Management;
- MultiCare Good Samaritan Hospital; and
- American Red Cross.

The exercise kick-off meeting was held on 27th January, 2020. The exercise planning team reviewed the after-action report/improvement plan from the Puyallup River Crest Crescendo — the full-scale exercise conducted on 7th November, 2018. The exercise planning team agreed to monthly planning meetings and scheduled the dates and times for multiple master scenario events list (MSEL) planning meetings, a midterm planning meeting, a final planning meeting, an exercise planning team immediate after-action meeting, and an exercise planning team after-action meeting and exercise debrief meeting. Best practices, as captured in the Puyallup River Crest Crescendo after-action report and improvement plan, included starting the exercise planning process early and including access and functional needs partners from the beginning of the planning phase. Other best practices were to include subject matter experts from different City departments in the planning process, as well as to work with subject matter experts from Pierce County Human Services. The Pierce County Department of Emergency Management supports a Functional Assessment Service Team (FAST), the purpose of which is to train and deploy people who have a background in working with or caring for people with a disability or access and functional needs. FAST can be requested by local jurisdictions in Pierce County when they are opening an emergency shelter. The FAST Coordinator was a member of the Puyallup Chill Out 2021 exercise planning team.

In March 2020, due to the activation of the City Emergency Operations in response to the COVID-19 public health emergency, the monthly meetings for March and April 2020 were cancelled. Planning updates were sent to the exercise planning team via e-mail. The exercise planning team regrouped, via Zoom, on 27th July, 2020. At the meeting, the exercise planning team agreed to postpone the exercise until 12th October, 2021. The exercise planning team remained optimistic that postponing the exercise for one year would allow exercise participants to participate in person. The exercise planning team also discussed conducting training virtually to prepare exercise participants for their roles in the full-scale exercise.

The exercise planning team met virtually through the end of 2020 and early 2021. The availability of the COVID-19 vaccine brought hope for in-person meetings, training and exercises. Many of the exercise planning team members were involved in their own agency responses to the COVID-19 public health emergency yet remained committed to the importance of conducting Puyallup Chill Out 2021 on 12th October, 2021. The COVID-19 response significantly influenced the planning process for the exercise. The exercise planning team knew that COVID-19 was still going to have impacts on all the partners involved in the exercise and agreed that the inclusion of these impacts as part of the exercise scenario would add to the realism of the exercise. Not only did the exercise planning team include COVID-19 in the scenario and MSEL injects, but the exercise planning team also conducted pre-exercise briefings for participants and stakeholders to ensure real-world mitigation efforts were in place and observed throughout the exercise.

The City of Puyallup Geographic Information System Coordinator began

working on an emergency response ‘dashboard’ for internal and external use in the winter of 2021. The dashboard was designed so it could be quickly updated and accessed by the public in emergency situations. The dashboard was first used during the Puyallup Cold Storage Fire response on 21st August, 2021, when the City EOC team used it to share real-time evacuation information and updates with the public, and it received over 40,000 unique visitors.

The dashboard was included in the Puyallup Chill Out 2021 scenario and various injects were designed to ensure the EOC team kept it up to date throughout the exercise. The design, build, use and release of the dashboard result were, in part, informed by previous exercises conducted by the City of Puyallup that identified the need for a common operating picture.

The Puyallup Chill Out 2021 exercise planning team took advantage of every real-world experience and advancement of the City’s Emergency Management Division (for example: the East Pierce Lahar Evacuation Rapid Action Procedures for First Responders’ Plan) to enhance the exercise.

EXERCISE OBJECTIVES

The exercise objectives changed throughout the planning process. When the exercise planning team first met in January 2020, the team identified seven objectives. The original objectives included the activation of multiple shelter locations, multiple points of distribution locations, and the movement of patients from shelter sites to the local hospital emergency department. The core capabilities to be addressed included:

- Planning;
- Mass care services;
- Logistics and supply chain management;

- Operational communication; and
- Public health and medical services.

The exercise planning team utilised the 2018 Puyallup River Crest Crescendo after-action report/improvement plan to inform the objective writing process. The exercise planning team used the following corrective actions to inform the planning process:

- *Objective 1 — corrective action 4:* ‘Providing opportunities for EOC team members to train alongside experienced EOC responders. These experienced EOC responders can provide great insight and knowledge’;
- *Objective 1 — corrective action 6:* ‘The City of Puyallup should also proceed with the development of a Common Operations Picture. This will greatly increase the availability of critical and correct response information’;
- *Objective 2 — corrective action 1:* ‘Provide additional opportunities for training and exercises on a regular basis for shelter staff and any City staff that may work in a shelter or may have a role in emergency response’;
- *Objective 2 — corrective action 3:* ‘Cross-training staff is another opportunity for all staff to gain familiarity with other role and responsibilities as well as build depth for crucial positions. An example of this is the Shelter Registration Team and Shelter Operations Team Members training together.’

Common feedback from the participants of the Puyallup River Crest Crescendo was the opportunity to participate in additional full-scale exercises. Evaluation feedback was collected from hotwashes conducted immediately after the Puyallup River Crest Crescendo, individual exercise participant feedback forms, additional debriefs conducted several weeks after

the exercise was conducted, and an electronic survey distributed to all exercise participants one week after the exercise was conducted. These multiple methods allowed the exercise evaluation team to gather both quantitative and qualitative data that provided excellent source information for the Puyallup River Crest Crescendo after-action report/improvement plan.

Including planning team members from the local hospital and fire district helped to frame the planning process accurately and ensure that the objectives for Puyallup Chill Out 2021 were actionable and specific.

At the meeting on 29th July, 2021, the exercise planning team meeting dedicated time to reviewing the exercise objectives. The health partners (public health, fire services, health system) on the exercise planning team acknowledged that COVID-19 continued to have significant impacts on their operations. This limited their ability to participate in the exercise as originally envisioned. The exercise objectives were scaled back to limit exercise play to two locations, including the Puyallup EOC and the Puyallup Nazarene Church (one of the shelter sites for the City of Puyallup Emergency Management Division). Central Pierce Fire and Rescue wanted to engage their crews in the simulated movement of people impacted by the exercise scenario. Injects were built into the MSEL to pre-stage victims outside of the two exercise play locations. The MSEL reflected the anticipated actions of the crews sent to respond and two exercise actors were briefed prior to the exercise on their roles. The following objectives were used for the Puyallup Chill Out 2021 exercise:

- *Core capability — planning:* Upon notification of an emergency situation that requires the evacuation and

sheltering of people, activate the City of Puyallup EOC. The City of Puyallup EOC Manager will utilise the ‘City of Puyallup Emergency Operations Center All EOC Positions Checklist’ and the ‘City of Puyallup Emergency Operations Center Manager Initial Action Sheets, All Incidents’;

- *Core capability — mass care services:* Upon activation, the City of Puyallup Shelter Operations Team will execute the ‘Shelter Operations Team Checklist’ within exercise parameters, 9.00 am to 2.00 pm;
- *Core capability — planning:* Upon activation, the City of Puyallup Shelter Registration Team will demonstrate the process of registering shelter residents and household pets per the ‘Registration Team Checklist’ within exercise parameters, 9.00 am to 2.00 pm;
- *Core capability — logistics and supply:* Upon activation, the City of Puyallup Logistics Team will assess logistics needs, requests (via the ICS 213) and future logistics needs of the shelter and execute duties per the ‘Logistics Team Checklist’ within exercise parameters, 9.00 am to 2.00 pm;
- *Core capability — operational communication:* Upon activation, the City of Puyallup EOC team will establish a communications plan with multiple sites and multiple agencies within exercise parameters, 9.00 am to 2.00 pm;
- *Core capability — operational coordination:* Upon the identification of any unmet needs among the shelter populations, the Pierce County Functional Assessment Service Team (FAST) will request resources external to those available in the FAST trailer and/or shelter resources, within the parameters of the exercise;
- *Core capability — operational coordination:* The FAST, upon their completion of initial assessments of shelter residents,

will identify any residents that are in need of medical assistance that will surpass the resources available at the shelter location.

COVID-19 IMPACTS

The Puyallup Chill Out 2021 exercise was initially scheduled to be conducted on 6th October, 2020. Instead of cancelling the exercise, it was delayed until 12th October, 2021. The exercise planning team continued to re-evaluate the parameters of the exercise leading up to October 2021. A few planning team members and external stakeholders suggested that the exercise be cancelled or postponed for an additional year. The City Emergency Management Division determined that the exercise could be conducted in person, limited to two sites, with mitigation efforts in place to protect all exercise participants. Exercise participants were required to sign up to participate at least three months prior to the exercise and were assigned a location. Participants were notified, via e-mail, at multiple intervals pre-exercise, that they needed to be free from COVID-19 symptoms to participate in the exercise. Knowing that there could be last-minute cancellations due to COVID-19, the exercise planning team included contingencies in the event that key participants could not participate in person. This was built in the exercise scenario with backup injects. Due to the City’s COVID-19 response, some staff participating in the exercise had recent real-world sheltering and mass care experience. The exercise planning team reassigned several City staff that were part of the planning team to act as exercise ‘mentors’ to key players who were new to their emergency response role. The City’s Parks and Recreation Manager, who was the site manager for the TEL during the City’s COVID-19 emergency response, was assigned to mentor the staff

member assigned to the role of shelter manager during Puyallup Chill Out 2021. This level of planning was unique in that it approached exercise design from a multi-year progressive approach, building on previous exercises and emergency responses. When recruiting exercise participants, the exercise director received calls from several people that wanted to participate but did not want to participate in person due to COVID-19. The exercise director made sure to let participants know that there would be future opportunities for them to participate, ideally when COVID-19 would be having less impact on the community.

EXERCISE MASTER SCENARIO EVENTS LIST

The Puyallup Chill Out 2021 MSEL had over 150 injects. Injects 1–30 were designed to be delivered (via the exercise simulation cell or a venue controller) by 9.20 am, 20 minutes after the exercise started. The final injects were delivered at the end of the exercise, at 2.00 pm. The injects were designed and coordinated to apply pressure to the exercise participants at the beginning of the exercise and then pick up in frequency as needed based on the pace of the exercise participants. There were also contingency injects available in the event of exercise participants working quickly through exercise components or veering off course. Several of the call centre injects were noted as ‘repeatable’, so if the EOC controllers observed call takers with periods of time between calls over a few minutes, they would repeat injects.

Controllers at both exercise venues had contributed to the writing and updating of the MSEL. This proved to be invaluable the day of the exercise because the controllers were in regular communication (via radio, text and cell phone) about

inject delivery, repeating injects and delivering contingency injects.

Several of the situations presented to exercise participants were resolved quickly. When this happened, the exercise controllers would confer about delivering a contingency inject or the need to bring in the exercise director. The exercise director was brought in for a few specific situations. One such situation was when the shelter participants took it upon themselves to simulate the creation of an additional shelter that would accept household pets. After consulting with the exercise director, the controllers sent an in-person inject (via a controller) notifying the exercise shelter team that their simulated additional shelter was at capacity. They were instructed to accept anyone arriving and determine a plan for accommodating additional people and household pets.

After the Puyallup Cold Storage Fire response (August 2021) the exercise planning team re-visited the Puyallup Chill Out 2021 MSEL. The team added additional call centre injects based on calls that were received during the fire response, injects with multiple situations of COVID-19 positive people (simulated) arriving at the shelter location and injects with several medical facilities and adult family homes (simulated) seeking shelter after the need to evacuate their location. These real-world experiences from the Puyallup Cold Storage Fire response brought additional realism and a sense of urgency to Puyallup Chill Out 2021.

EXERCISE CONDUCT

The Puyallup Chill Out 2021 exercise was conducted on Tuesday, 12th October, 2021. In the weeks leading up to the exercise, briefings were held with City leadership, the exercise planning team, the City EOC team, key staff from the shelter site and local health department

partners to ensure the exercise goals and COVID-19 mitigation strategies were understood and observed throughout the day of the exercise.

The week prior to the exercise, all participants were notified, via e-mail, what their exercise role would be and reminded to check themselves for COVID-19 symptoms and notify the exercise director accordingly should they need to drop out, so as to maximise the time available for reassigning participants. This communication was subsequently reiterated to participants the day prior to the exercise.

This level of planning proved to be effective inasmuch as there were no unexpected absences.

The morning of the exercise, when participants arrived at their exercise location, they were required to sign in and indicate whether they had any signs or symptoms of COVID-19. Rapid tests were also available to anyone who wanted one. All participants were required to wear facemasks for the duration of the exercise, except during lunchtime. During lunch, participants were asked to take the box lunches that had been provided and spread out, in order to maintain social distancing protocols. Hand sanitiser, disinfectant wipes, extra masks and space to allow for social distancing were all available during the conduct of the exercise.

Exercise participants expressed enthusiasm when they reported to their assigned exercise locations. For many of them, the Puyallup Chill Out 2021 exercise was the first time, in nearly a year and a half, that they were seeing colleagues and emergency management partners in person.

EXERCISE DOCUMENTS

The following are the documents and/or forms, handouts or materials that were used during the planning phase, conduct of and evaluation of the Puyallup Chill

Out 2021 full-scale exercise. Those based on HSEEP templates are marked with an asterisk:

- Concept and Objectives Initial Planning Meeting (Design and Development), 27th January, 2020*;
- Initial Planning Meeting Presentation (Design and Development), 24th February, 2020*;
- Puyallup Chill Out 2021 Exercise Planning Meeting Schedule;
- Puyallup Chill Out 2021 Exercise Planning Team Meeting notes and summaries;
- City of Puyallup Shelter Operations Training Presentation, September 2021;
- Puyallup Chill Out 2021 Actor Profiles for Players;
- Puyallup Chill Out 2021 Player Briefing (Conduct)*;
- Puyallup Chill Out 2021 Actor Briefing;
- ICS Form 201 Incident Briefing for Shelter Exercise EOC Participants;
- Puyallup Chill Out 2021 Exercise Trifold for all Participants;
- Puyallup Chill Out 2021 Exercise Plan*;
- Puyallup Chill Out 2021 Controller and Evaluation Briefing;
- Puyallup Chill Out 2021 Controller and Evaluator Handbook (Design and Development)*;
- Puyallup Chill Out 2021 Master Task List (Design and Development)*;
- Puyallup Chill Out 2021 Master Scenario Event List (Design and Development)*;
- Puyallup Chill Out 2021 Simulation Cell Assignments;
- Puyallup Chill Out 2021 Final Planning Meeting Agenda/Presentation (Design and Development)*;
- Exercise Evaluation Guides for Objectives 1–7 (Evaluation)*;
- Puyallup Chill Out 2021 Exercise EOC Phone Numbers;
- Puyallup Chill Out 2021 Exercise

- Sign-in Sheet (with COVID-19 statements);
- Puyallup Chill Out 2021 Exercise Participants Roles and Responsibilities;
- Puyallup Chill Out 2021 Participant Feedback Form;
- Puyallup Chill Out 2021 After-Action Report/Improvement Plan (Evaluation)*;
- Puyallup Chill Out 2021 Radio and Communications Exercise Use.

The exercise director ensured that all documents and resources were prepared in a timely manner and distributed to the appropriate people in advance of exercise dates and milestones.

DELAY, MODIFICATIONS AND REAL-WORLD IMPACTS

The importance of a dedicated, multi-agency, multi-discipline exercise planning team was crucial to the execution and success of the exercise. The commitment from planning team members to see Puyallup Chill Out 2021 through execution was shared throughout the planning process. The year-long delay, multiple emergency responses and ongoing impacts of COVID-19 on first responders and the healthcare system all affected the availability of exercise planning team members and exercise resources. Members of the exercise planning team contributed as they were available, meaning that meetings were scheduled, rescheduled and held virtually as much as possible. Flexibility was required of everyone involved to prepare for the exercise. Members of the exercise planning team also contributed to the scenario with their real-world experiences and situations. Members of the exercise planning team also used Puyallup Chill Out 2021 as a mechanism to test several scenarios that their agency or discipline was interested in.

Two months prior to the exercise, on 21st August, 2021, there was a significant fire at a cold storage facility in the City of Puyallup. Thousands of residents, businesses, healthcare facilities, etc. within a one-mile radius were evacuated. An evacuation location was set up and the City's EOC was activated. Lessons learned from this response¹ were immediately incorporated into the Puyallup Chill Out 2021 scenario and additional injects were added to the MSEL to reflect the complex response considerations during the fire response.

The City's EOC call centre was activated as part of the response to the fire. Many of the calls that were received and handled during the fire response were used to script simulated calls from the Puyallup Chill Out 2021 simulation cell into the City's call centre during the exercise. Using the real-world calls and situations from impacted people elevated the participation of the exercise participants. During the exercise briefing on the morning of 12th October, 2021, all exercise participants were told that they would be presented with scenarios and situations based on what was encountered during the Puyallup Cold Storage Fire response. After the Puyallup Cold Storage Fire response in August 2021, multiple EOC team members commented that the incident demonstrated the need for a shelter exercise.

EXERCISE AFTER-ACTION REPORT/IMPROVEMENT PLAN

The Puyallup Chill Out 2021 after-action report and improvement plan (AAR/IP) incorporated feedback and information gathered from post-exercise hot-washes, a participant evaluation form collected at the conclusion of the exercise on 12th October, 2021, multiple debriefs in the weeks following the exercise, and an online survey distributed to all exercise participants a week after the exercise. A combination of

qualitative and quantitative data informed the AAR/IP and provided opportunities for immediate and longer-term corrective actions. In the short term, changes and edits were made to the Puyallup Community Shelter Plan, to reflect feedback from exercise participants. Recordings of the preparatory training that exercise participants had conducted via Zoom, prior to the exercise, was added to the City of Puyallup's website. These links were shared with exercise participants and stakeholders that were interested in re-watching that training and/or sharing it with other stakeholders. Longer-term corrective actions, as identified in the Puyallup Chill Out 2021 AAR/IP include the following:

- *Capability 3, logistics and supply chain management — corrective action 1:* 'The City of Puyallup will provide training on the ICS 213 form. Additionally, the City of Puyallup will provide training on ICS forms that are used in emergency response and how the forms are used throughout the planning process for Incident Action Planning as well';
- *Capability 4, operational communication — corrective action 1:* 'The City of Puyallup EOC has dedicated radio channels and 35 portable radios. These are distributed for emergency management trainings, exercises and response activities. City of Puyallup EOC team members should be regularly trained on the use of these radios, radio etiquette and what and why to transmit information via radio. The City of Puyallup Emergency Management Division should develop Standard Operations Procedures (SOPs) for radio use and develop checklists/guides for radio use.'

The City of Puyallup Emergency Management Division is currently working to integrate the Puyallup Chill Out 2021 AAR/IP into the City's multi-year work plan and training and exercise timeline.

CONCLUSION

An active training and exercise plan is critical for local jurisdictions to continue to grow and enhance their emergency management capabilities. Jurisdiction leadership must be aware of the support required to invest in comprehensive training and exercise, and understand the time required. A well-planned, well-executed, appropriate and applicable full-scale exercise requires a dedicated and diverse (multi-agency, multi-jurisdiction) exercise planning team. A one-year planning timeline is an appropriate approach for a full-scale exercise. Ensuring flexibility and the inclusion of lessons learned from real-world responses increases the engagement of exercise participants and improves exercise outcomes from a core capability perspective. Members of the exercise planning team that have been part of a plan writing process (applicable for exercises testing a plan) are helpful for exercise planning given their intimate knowledge of the plan being tested and the process that went into the plan.

REFERENCE

- (1) East Pierce Interlocal Coalition for Emergency Management (2022) 'The Puyallup Cold Storage Fire Emergency Response, August 21, 2021', available at: <https://storymaps.arcgis.com/stories/15d894b07ea64e19b7ba3b6dad6a638> (accessed 21st February, 2023).