THREAT AND HAZARD IDENTIFICATION AND RISK ASSESSMENT (THIRA)

2019 Report

Seattle

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THIRA Overview

The THIRA is a three-step risk assessment completed every three years. It helps answer the following questions:

- What threats and hazards can affect our community?
- If they occurred, what impacts would those threats and hazards have on our community?
- Based on those impacts, what capabilities should our community have?

The THIRA helps communities understand their risks and determine the level of capability they need in order to address those risks. The outputs from this process lay the foundation for determining a community's capability gaps during the SPR process.

The THIRA follows a three-step process, as described in *Comprehensive Preparedness* Guide *201, Third Edition*:

1. **Identify Threats and Hazards.** Based on a combination of experience, forecasting, subject matter expertise, and other available resources, develop a list of threats and hazards that could affect the community. When deciding what threats or hazards to include in the THIRA, communities consider only those that challenge the community's ability to deliver at least one core capability more than any other incident; the THIRA is not intended to include less challenging threats and hazards.
2. **Give Threats and Hazards Context.** Describe the threats and hazards identified in Step 1, showing how they may affect the community and create challenges in performing the core capabilities. Identify the impacts a threat or hazard may have on a community.
3. **Establish Capability Targets.** Using the impacts described in Step 2, determine the level of capability that the community plans to achieve over time in order to manage the threats and hazards it faces. Using standardized language, create capability targets for each of the core capabilities based on this desired level of capability by identifying impacts, objectives, and timeframe metrics. A core capability is comprised of several functional areas in which a community may have a gap. Each required standardized target addresses one or more functional areas.

Report Overview

This report contains two sections:

- **THIRA Steps 1 and 2: Threats, Hazards, and Context**
  - Identified threats and hazards
  - Context descriptions
  - Standardized impacts
  - Non-standardized impacts
- **THIRA Step 3: Capability Targets**
  - Standardized capability targets
  - Maximum requirements

THIRA Step 1 and 2: Threats, Hazards, and Context

Threat/Hazard: Complex Coordinated Terrorist Attack

Category: Human Caused

Type: Other (Describe below)

Bombs, active shooter, hostage, white powder

Terrorism: Yes

Context Description:

The radicalization of Pacific Northwest extremist groups has recently been promoted by other national terrorism movements which have called for violent resistance to destroy human life and disable critical infrastructure. Radicalization starts to build in the Winter of 2018. Over the next six months there is an increase in expression of on-line animosity towards the U.S. Government which calls for action on June 24th. In recent weeks there has been an increase via social media of on-line extremist groups indicating an intense animosity and a belief of injustice by the U.S. Government. These local online indicators show lone actors, inspired by extremist ideology, have been able to circumvent security measures to take up small arms, make vehicle borne and rudimentary standalone improvised explosive devices (IEDs) with the stated intent to attack the Region. In addition, there are calls for “Leaderless Resistance” making it difficult to locate, mitigate, or prevent their stated intent. Within the Seattle Region, there is increasing concern about a number of these groups starting to influence public opinion, which may lead to violent actions. The on-line information promotes and warns of the need for longer and ongoing acts of violence to achieve superiority over current government authority. On July 3rd, there are several online attacks which are a precursor to the July 4th physical attacks on an iconic building, multiple active shooter events, vehicle borne violence and IEDs, and unattended small items across the City of Seattle and surrounding areas.

Scenario details on July 4:
Time Stamp: 1400
1. On 4th of July an extremist group holds a rally in downtown Seattle with a dozen people. The rally is contained on the sidewalk in South Lake Union. Reports are received of a small rental truck parked illegally on the street near the Seattle rally; one report identified the truck as appearing to be ‘loaded too heavy’….’springs have slight curve’….’very little clearance between axle and rubber bumpers attached to the frame’.
2. Public service offices in Pierce County, Seattle and Everett receive telephone calls from a spoofed phone number declaring ‘war’ and threatening violence:
a. ‘we also have several (deterrents) in place including car bombs in parking lots and on side streets’. The message stated “we” want to watch as these bombs ‘level everything in (a) 400 yard radius.’
3. Reports received from Tacoma and Everett regarding food truck incidents. Police report that a food truck located in Old Town Tacoma has exploded into flames; initial reports indicated two large propane tanks placed between two food trucks exploded injuring at least 40 people. In Everett, a food truck approached the Boeing plant at the truck entrance gate and was denied entrance for lack of permit. The security officer at the gate reported two large propane tanks were bolted onto the truck rear which seemed unusual given that other food trucks entering Boeing plant used only small propane tanks. The truck departed and was noted heading South.
Time Stamp: 1500
4. Supporters have hijacked websites, media forums with hate videos, vitriol, and propaganda

statements identifying ‘war’.
5. A two-person team (man and woman) ascends into the Space Needle posing as tourists; at the viewing level/viewing promenade, the team opens fire on tourists and rigs the elevator/stairwell with explosives.
Time Stamp: 1515
6. Eight calls are received identifying suspicious parked ‘rideshare’ vehicles near ferry terminals and homeless encampments.
7. Four downtown hotels and retail towers are reporting incidents of shootings. Callers describe situations varying from a single shooter to an apparent team of shooters. Police are attempting to discern the scope of shootings, locations and types of weapons being used; however, communication is sporadic, chaotic and overwhelming emergency call centers.
Time Stamp: 1600
8. An apparent team of shooters have shot and killed pedestrians before retreating into one of the hotels and taking hostages.
9. Security officers at a Seattle pier facility report a F-150 truck crashed through a crowded pedestrian ferry terminal gate, injuring a couple dozen people standing in line. Gunshots and small explosions have occurred.
10. A security check finds an unattended backpack at Bellevue Family 4th; a cursory check of the backpack revealed several clear, sealed plastic bags containing a gray mash-like substance along with several baby-food type jars filled with the mash. One plastic bag was found to be opened and contained a small amount of white powder.
Time Stamp: 1700
11. A crowded Metro bus (route 566) explodes while heading south on 405 in north Renton.

Standardized Impact Estimates

Impact Category	Estimate
(#) jurisdictions affected	5
(#) partner organizations involved in incident management	205
(#) damaged natural and cultural resources and historic properties registered in the jurisdiction	1

Impact Category	Estimate
(#) people requiring screening	500
(#) people with access and functional needs (requiring screening)	250
(#) personnel	315
(#) priority intelligence stakeholder agencies/entities	5

Non-Standardized Impact Entries

Impact Name
2,500 publicly managed and/or regulated critical infrastructure facilities

Source Identification

Source Name	Sources Used to Develop Context Description and Calculate Impacts (Optional)
• Real-world events	Sources include: - Washington State Fusion Center (WSFC)

Source Name	Sources Used to Develop Context Description and Calculate Impacts (Optional)
• Subject-matter experts (SMEs) • Fusion Center products and assessments	- Threat and Hazard Identification Workshop May 2, 2019 in Tacoma - Seattle Protection and Prevention Workshop July 24, 2019 The Seattle UASI Terrorism Scenario was written by the Washington State Fusion Center (WSFC) for consideration in 2019 THIRA/SPR planning. The WSFC assesses the following scenario to be the most catastrophic and most credible scenario based on the current threat environment and has compiled supporting documentation throughout the planning process. It is recommended that the scenario be reviewed yearly to ensure that it continues to reflect the “current threat environment.”

Threat/Hazard: Earthquake

Category: Natural **Type:** Earthquake **Terrorism:** No

Context Description:

A magnitude 7.2 earthquake occurs on the Seattle fault at 2:00 PM during a weekday in the last week of September. The epicenter is the City of Bellevue and the hypocenter is 15 km deep. School is in session and 3 cruise ships are in port. There are 55 hospitals in the region with a total bed capacity of 8,627 beds. After the earthquake, only 3,518 hospital beds (41%) are available for use. After one week, 57% of the beds may be back in service. By 30 day, 76% may be operational.

Standardized Impact Estimates

Impact Category	Estimate
(#) jurisdictions affected	68
(#) partner organizations involved in incident management	205
(#) people affected	3439809
(#) people with access and functional needs (affected)	1719905
(#) people with limited English proficiency affected	275185
(#) customers (without water service)	536500
(#) customers (without wastewater service)	536500
(#) customers (without communication service)	1394900
(#) customers (without power service)	225790
(#) people requiring evacuation	229365
(#) people with access and functional needs (requiring evacuation)	114682
(#) miles of road affected	3700
(#) hazmat release sites	1141
(#) fatalities	1675
(#) structure fires	26
(#) people requiring shelter	27014
(#) people with access and functional needs (requiring accessible shelter)	13507
(#) people requiring food and water	1587633
(#) people with access and functional needs (requiring food and water)	793816
(#) animals requiring shelter, food, and water	13861
(#) people requiring temporary, non-congregate housing	36751
(#) people with access and functional needs (requiring accessible, temporary, non-congregate housing)	18375
(#) people requiring rescue	22937
(#) people requiring medical care	24901
(#) businesses closed due to the incident	20653
(#) affected healthcare facilities and social service organizations	1312
(#) people requiring long-term housing	5253
(#) people with access and functional needs (requiring accessible long-term housing)	2627

Impact Category	Estimate
(#) damaged natural and cultural resources and historic properties	694

Impact Category	Estimate
registered in the jurisdiction	
(#) households	48820

Non-Standardized Impact Entries

Impact Name
1,261 people will be displaced from fires and burn about 174 (millions of dollars) of building value 12,963 leaks and 6,273 breaks to potable water utility system pipelines 15,729 buildings will be damaged beyond repair 205,564 buildings will be at least moderately damaged 26 ignitions that will burn .12 sq. mi. of the region's total area 48,820 displaced households as a result of earthquake 53 bridges with complete damage 53.357.51 (millions of dollars) in economic loss which includes building and lifeline related losses 6,511 leaks and 3,151 breaks to waste water utility system pipelines 9.948 million tons of debris generated. 397,920 truckloads (@25 tons/truck) to remove debris. 32% of the total material is brick/wood and the remainder is reinforced concrete/steel

Source Identification

Source Name	Sources Used to Develop Context Description and Calculate Impacts (Optional)
• Real-world events • Response plans • Hazard mitigation plans (including Hazard Identification and Risk Assessment) • Other plans • Subject-matter experts (SMEs) • Modeling or tools • Exercises • After-Action Reports	After conducting calculations for each standardized impact, the EM Subcommittee further vetted the information by subject matter experts when conducting the capabilities assessments for the core capabilities. Additional sources included: August 23, 2019. HAZUS Report for a Seattle Fault 7.2 M EQ. Retrieved from https://www.piercecountywa.gov/6081/Risk-Committee FEMA Region X Power Grid Risk Profile: A Risk Analysis Profile from the Region X Threat and Hazard Analysis Report March 2019, American Society of Civil Engineers Seattle, Tacoma-Olympia, and Inland Empire Sections: 2019 Report Card for Washington's Infrastructure, Threats and Hazards Identification Workshop May 1-2, 2019 https://www.co.pierce.wa.us/6367/Risk-Assessment-Past-Events Seattle Hazard Identification and Vulnerability Assessment (SHIVA), City of Seattle Earthquake Annex, Pierce County Hazard Identification and Risk Assessment, Snohomish County Hazard Mitigation Plan, King County Hazard Mitigation Plan, Pierce County Hazard Mitigation Plan, Water Supply Forum resiliency assessment project https://www.watersupplyforum.org/home/resiliency.html , Northwest Healthcare Response Network Hazard Vulnerability Analysis, Northwest Healthcare Response Network Earthquake Preparedness Info and Resources https://nwhrn.org/earthquake-preparedness-info-and-resources/

Source Name	Sources Used to Develop Context Description and Calculate Impacts (Optional)
• County/Municipal THIRAs • Other reports (government, academic, non-profit) • Prior year THIRAs • Other existing threat and hazard assessments • Capability Assessments (such as the SPR) • Resource Inventory • Other	, Washington Tracking Network Washington State Department of Health: Data and Statistical Reports https://www.doh.wa.gov/DataandStatisticalReports, Mass Care Workshop 7/18/19, Recovery Workshop 8/29/19, 2019 Point-in-Time Count (PIT), Regional Emergency Transportation Coordination Workshop 6/19/19: Regional Alliance for Resilient and Equitable Transportation (RARET) Workgroup, 2016 Mosier Rail Incident State Agency Response After Action Report 11/10/16, City of Seattle THIRA 2019, Pierce County THIRA 2012, City of Lakewood THIRA 2012, academic studies including Negar Elhami Khorasani, Maria E.M. Garlock, (2017) "Overview of fire following earthquake: historical events and community responses", International Journal of Disaster Resilience in the Built Environment, Vol. 8 Issue: 02, pp. 158-174, https://doi.org/10.1108/IJDRBE-02-2015-0005, Amir Sarreshtehdari, Negar Elhami Khorasani & Maxwell Coar (2019): A streamlined approach for evaluating post-earthquake performance of an electric network, Sustainable and Resilient Infrastructure, DOI: 10.1080/23789689.2018.1542211, Maxwell Coar, Maria Garlock & Negar Elhami Khorasani (2019): Effects of water network dependency on the electric network for post-earthquake fire suppression, Sustainable and Resilient Infrastructure https://doi.org/10.1080/23789689.2018.1563408, Maria Garlock, Thomas Gernay & Negar Elhami Khorasani (2017): Data-driven probabilistic post-earthquake fire ignition model for a community, https://doi.org/10.1016/j.firesaf.2017.09.005, Washington State Department of Transportation Regional Resiliency Assessment Program results for a Cascadia Subduction Zone earthquake https://wsdot.maps.arcgis.com/home/gallery.html?view=grid&sortOrder=asc&sortField=title Boden, Frank. (2018). LA Fire Department: Pyramid of Life.

THIRA Step 3: Capability Targets

Planning

Functional Area(s) – Evaluating and Updating Plans, Operational Planning, Whole Community Involvement and Coordination

Capability Target

Within every [5] [year(s)], update all emergency operations plans that define the roles and responsibilities of [205] partner organizations involved in incident management across [68] jurisdictions affected, and the sequence and scope of tasks needed to prevent, protect, mitigate, respond to, and recover from events.

Additional context necessary to understanding the capability target (Optional)

Each of the Seattle UASI jurisdictions Comprehensive Emergency Management Plans (CEMPs) define the roles and responsibilities of partner organizations involved in incident management and are reapproved by the State on a five-year cycle.

This target was vetted by planners and operations managers within the five emergency management organizations in the UASI.

Maximum Requirement (Optional)

Within every ___ ___, update all emergency operations plans that define the roles and responsibilities of ___ partner organizations involved in incident management across ___ jurisdictions affected, and the sequence and scope of tasks needed to prevent, protect, mitigate, respond to, and recover from events.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	Most widespread impact that challenges our response and recovery concept of operations with a wide net of diverse partners and stakeholders.

Public Information and Warning

Functional Area(s) – Delivering Actionable Guidance, Alerts and Warnings, Culturally and Linguistically Appropriate Messaging, Inclusiveness of the Entire Public

Capability Target

Within [24] [hour(s)] notice of an incident, deliver reliable and actionable information to [3439809] people affected, including [1719905] people with access and functional needs (affected) and [275185] people with limited English proficiency affected.

Additional context necessary to understanding the capability target (Optional)

The language for the target above is confusing to stakeholders and very hurricane driven. For an earthquake scenario the National Weather Service, and local and State EM organizations will be using EAS, WEA, and every alternate pathway.

In an earthquake scenario the priority is sending out information on damages, continuing threats and hazards, and continuing services. The most critical population to reach is those without communication service. Its important to keep in mind that people will need time to get to safety (i.e. highrise evacuation, etc.) and check on their family so they may not be in a position to receive those messages at first.

This was vetted by Emergency Management Alert and Warning Coordinators, Operations Managers, and Public Information Officers. This target was further vetted at the Public Information and Warning Capability Assessment Workshop by Public Information Officers from agencies external to emergency management (i.e. law enforcement, fire, etc).

Maximum Requirement (Optional)

Within [0] ___ notice of an incident, deliver reliable and actionable information to [0] people affected, including [0] people with access and functional needs (affected) and [0] people with limited English proficiency affected.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	Damage to communication infrastructure will impede our ability to disseminate critical messages while at the same time presenting our maximum target audience for messaging. Emergency Operations/Coordination Centers will need to fall back on alternate communication methods and will be disseminating critical messages by every means possible.

Operational Coordination

Functional Area(s) – Command, Control, and Coordination, National Incident Management System/Incident Command System Compliance, Stakeholder Engagement

Capability Target

Within [4] [hour(s)] of a potential or actual incident, establish and maintain a unified and coordinated operational structure and process across [68] jurisdictions affected and with [205] partner organizations involved in incident management. Maintain for [2] [month(s)].

Additional context necessary to understanding the capability target (Optional)

Emergency Management Organizations reevaluated the previous THIRA target "Within 12 hours, local jurisdictions will be able to provide multi-agency coordination through the activation of emergency operations centers."

Maximum Requirement (Optional)

Within [4] [hour(s)] of a potential or actual incident, establish and maintain a unified and coordinated operational structure and process across [68] jurisdictions affected and with [205] partner organizations involved in incident management. Maintain for [6] [month(s)].

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	Damage to infrastructure, complexity of incident, and secondary and tertiary hazards (i.e. cascading effects such as landslides, fire, hazmat incidents, water shortages, etc.) are all considered. The maintenance of coordination at this scale will not remain the same for the duration. Impact to transportation routes will impact response times for personnel.

Forensics and Attribution

Functional Area(s) – Attribution Assessments, Crime Scene Preservation and Exploitation, Evidence Collection, Forensic Analysis, Terrorist Investigations

Capability Target

Within [10] [minute(s)] of a suspected terrorist attack, conduct outreach to the fusion center and Joint Terrorism Task Force (JTTF) in the community and identify [10] personnel assigned to support follow up information sharing, intelligence analysis, and/or investigative actions associated with the collection, examination, and analysis of evidence, as well as the identification of perpetrators.

Additional context necessary to understanding the capability target (Optional)

10 personnel represents a primary and an alternate for 5 primary jurisdictions: impacted local, impacted county, state, federal, and tribal.

Maximum Requirement (Optional)

Within [1] [day(s)] of a suspected terrorist attack, conduct outreach to the fusion center and Joint Terrorism Task Force (JTTF) in the community and identify [150] personnel assigned to support follow up information sharing, intelligence analysis, and/or investigative actions associated with the collection, examination, and analysis of evidence, as well as the identification of perpetrators.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Complex Coordinated Terrorist Attack	Special events and large public crowds will impede crime scene preservation and investigation.

Intelligence and Information Sharing

Functional Area(s) – Analysis of Intelligence and Information, Developing Reports and Products, Disseminating Intelligence and Information, Exploiting and Processing Information, Feedback and Evaluation, Gathering Intelligence

Capability Target

During steady state, and in conjunction with the fusion center and/or Joint Terrorism Task Force (JTTF), every [2] [year(s)], review ability to effectively execute the intelligence cycle, including the planning, direction, collection, exploitation, processing, analysis, production, dissemination, evaluation, and feedback of available information, and identify the [150] personnel assigned to support execution of the intelligence cycle.

Then, within [2] [hour(s)] of the identification or notification of a credible threat, identify/analyze local context of the threat for the respective area of responsibility, and facilitate the sharing of threat information with [5] priority intelligence stakeholder agencies/entities in accordance with the intelligence cycle, and all dissemination protocols.

Additional context necessary to understanding the capability target (Optional)

Maximum Requirement (Optional)

During steady state, and in conjunction with the fusion center and/or Joint Terrorism Task Force (JTTF), every ___ ___, review ability to effectively execute the intelligence cycle, including the planning, direction, collection, exploitation, processing, analysis, production, dissemination, evaluation, and feedback of available information, and identify the ___ personnel assigned to support execution of the intelligence cycle.

Then, within ___ ___ of the identification or notification of a credible threat, identify/analyze local context of the threat for the respective area of responsibility, and facilitate the sharing of threat information with ___ priority intelligence stakeholder agencies/entities in accordance with the intelligence cycle, and all dissemination protocols.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Complex Coordinated Terrorist Attack	This scenario would require rapidly sharing information on an evolving incident

Interdiction and Disruption

Functional Area(s) – Interdicting Cargo, Conveyances, and Persons

Capability Target

Within [15] [minute(s)] of the identification or notification of a credible threat, conduct outreach to the fusion center and Joint Terrorism Task Force (JTTF) in the community and identify [165] personnel assigned to support follow up interdiction and disruption activities that may be undertaken against identified suspects and/or contraband.

Additional context necessary to understanding the capability target (Optional)

Maximum Requirement (Optional)

Within ___ ___ of the identification or notification of a credible threat, conduct outreach to the fusion center and Joint Terrorism Task Force (JTTF) in the community and identify ___ personnel assigned to support follow up interdiction and disruption activities that may be undertaken against identified suspects and/or contraband.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Complex Coordinated Terrorist Attack	

Screening, Search, and Detection

Functional Area(s) – Screening, Wide-Area Search

Capability Target

Within [30] [minute(s)] of notice of a credible threat, conduct screening, search, and detection operations for [500] people requiring screening, including [125] people with access and functional needs (requiring screening).

Additional context necessary to understanding the capability target (Optional)

The scenario takes place at widely attended public events, so identifying which 500 people need screening will be a challenge.

Maximum Requirement (Optional)

Within ___ ___ of notice of a credible threat, conduct screening, search, and detection operations for ___ people requiring screening, including ___ people with access and functional needs (requiring screening).

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Complex Coordinated Terrorist Attack	

Access Control and Identity Verification

Functional Area(s) – Verifying Identity

Capability Target

Within [45] [minute(s)] of an event, be prepared to accept credentials from [15] partner organizations involved in incident management.

Additional context necessary to understanding the capability target (Optional)

Secondary target: w/in 2 hrs of event accept credentials from 45 partner organizations.

Maximum Requirement (Optional)

Within ___ ___ of an event, be prepared to accept credentials from ___ partner organizations involved in incident management.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context

Cybersecurity

Functional Area(s) – Guidelines, Regulations, and Standards, Sharing Threat Information

Capability Target

Every [1] [year(s)], appropriate authorities review and update cyber incident plans/annexes based on evolving threats covering [2,500] publicly managed and/or regulated critical infrastructure facilities.

Additional context necessary to understanding the capability target (Optional)

Critical infrastructure plans are often sector specific, the plans covering 2,500 critical facilities does not mean 2,500 individual plans.

Maximum Requirement (Optional)

Every ___ ___, appropriate authorities review and update cyber incident plans/annexes based on evolving threats covering ___ publicly managed and/or regulated critical infrastructure facilities.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context

Physical Protective Measures

Functional Area(s) – Physical Security Measures, Site-Specific and Process-Specific Risk Assessments

Capability Target

Within [1] [year(s)] of completing a risk and vulnerability assessment, appropriate authorities review and update physical security plans covering [2500] publicly managed and/or regulated critical infrastructure facilities to incorporate new information from the assessment.

Additional context necessary to understanding the capability target (Optional)

Maximum Requirement (Optional)

Within ___ ___ of completing a risk and vulnerability assessment, appropriate authorities review and update physical security plans covering ___ publicly managed and/or regulated critical infrastructure facilities to incorporate new information from the assessment.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Complex Coordinated Terrorist Attack	

Risk Management for Protection Programs and Activities

Functional Area(s) – Data Collection, Risk Assessment

Capability Target

Every [2] [year(s)], appropriate authorities conduct a review of relevant physical and cyber threats and hazards, vulnerabilities, and strategies for risk management covering [2500] publicly managed and/or regulated critical infrastructure facilities.

Additional context necessary to understanding the capability target (Optional)

Maximum Requirement (Optional)

Every ___ ___, appropriate authorities conduct a review of relevant physical and cyber threats and hazards, vulnerabilities, and strategies for risk management covering ___ publicly managed and/or regulated critical infrastructure facilities.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context

Supply Chain Integrity and Security

Functional Area(s) – Analysis of Supply Chain Dependencies

Capability Target

Every [1] [year(s)], engage [205] partner organizations involved in incident management to promote awareness of threats, dependencies, vulnerabilities, and strategies to support restoration of private sector supply chains.

Additional context necessary to understanding the capability target (Optional)

Maximum Requirement (Optional)

Every ___ ___, engage ___ partner organizations involved in incident management to promote awareness of threats, dependencies, vulnerabilities, and strategies to support restoration of private sector supply chains.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Complex Coordinated Terrorist Attack	

Community Resilience

Functional Area(s) – Communication and Outreach, Education and Skill Building, Partnership Building

Capability Target

Every [1] [year(s)], conduct [600] outreach events or activities to increase awareness of locally significant threats and hazards to help the residents be more prepared to prevent, protect against, mitigate, respond to, and recover from those events.

Additional context necessary to understanding the capability target (Optional)

Maximum Requirement (Optional)

Every ___ ___, conduct ___ outreach events or activities to increase awareness of locally significant threats and hazards to help the residents be more prepared to prevent, protect against, mitigate, respond to, and recover from those events.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context

Functional Area(s) – Understanding the Community, Broadening the Use of Insurance

Capability Target

Within [20] [year(s)], [712400] households are covered by risk-appropriate insurance, including homeowners, flood, windstorm, and seismic.

Additional context necessary to understanding the capability target (Optional)

As of March 1, 2019 HUD's Comprehensive Housing Market Analysis for the Seattle-Bellevue-Everett metropolitan area estimated 1.21 million households with an average annual increase of 17,500 households. Of these households approximately 58.7% or 712,400 households are currently owned and not rented. Taking into consideration the constant growth of our region and the timeframe of our selected goal the current number of owned households was selected until more data can be collected.

Maximum Requirement (Optional)

Within ___ ___, ___ households are covered by risk-appropriate insurance, including homeowners, flood, windstorm, and seismic.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context

Long-Term Vulnerability Reduction

Functional Area(s) – Adopting Vulnerability Reduction Standards and Building Codes, Incorporating Mitigation Measures into Construction and Development

Capability Target

Every [5] [year(s)], [68] jurisdictions review their building codes, and, if necessary, enact or update risk-appropriate, disaster resilient building codes.

Additional context necessary to understanding the capability target (Optional)

On April 4, 2019 FEMA Region 10 had their monthly preparedness call and John Shelling their mitigation program manager provided some thoughts on his interpretation of the targets for all mitigation core capabilities. Notes were sent as a follow-up. In working with the WA State Hazard Mitigation Program staff and local planners the timeframe of five years was reaffirmed as part of the hazard mitigation planning process.

Maximum Requirement (Optional)

Every ___ ___, ___ jurisdictions review their building codes, and, if necessary, enact or update risk-appropriate, disaster resilient building codes.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	Earthquake insurance is expensive and many homeowners can not afford.

Risk and Disaster Resilience Assessment

Functional Area(s) – Modeling and Analysis, Obtaining and Sharing Data

Capability Target

Every [5] [year(s)], after identifying threats and hazards of concern, model the impacts of [1864] threat and hazard scenarios to incorporate into planning efforts.

Additional context necessary to understanding the capability target (Optional)

This target takes into consideration modeling done for hazard mitigation plans, risk assessment products, and contractor efforts that support other planning efforts. Determining the number of scenarios was a little difficult as Pierce and Snohomish Counties produce static hazard analysis maps for jurisdictions while King County has an interactive map program where local jurisdictions can go in and produce as many scenarios as they choose. Many of the scenarios in the static maps are not necessarily different scenarios but rather different ways of looking at the same scenario. The estimated totals were City of Bellevue (10), City of Seattle (54), and the Counties of King (500), Pierce (700), and Snohomish (600). Since King County has made the maps available to their local jurisdictions we multiplied the number of hazards available in the tool and multiplied that by the number of jurisdictions participating in the hazard mitigation plans.

Maximum Requirement (Optional)

Every ___ ___, after identifying threats and hazards of concern, model the impacts of ___ threat and hazard scenarios to incorporate into planning efforts.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context

Critical Transportation

Functional Area(s) – Debris Removal, Establishing Access

Capability Target

Within [30] [day(s)] of an incident, clear [3700] miles of road affected, to enable access for public, private, and non-profit emergency responders.

Additional context necessary to understanding the capability target (Optional)

In the Critical Transportation Workshop in October of 2018, SME's agreed that snow routes already identify critical routes but until further planning is conducted (around CPOD's, shelters, etc.) we won't know how many miles need to be made accessible.

County Department of Transportation rationale: after a short discussion with roads staff, 61-80 miles in 72 hours could be accomplished. This is based on the opinion that one snow plow can plow 30 miles in a shift assuming first time through. Also considering that clearing lifeline roads will promote traffic convergence and require additional staff to control traffic flow and prioritize emergency services.

Previous THIRA submission targets for context:

During the first 72 hours of the incident, establish physical access through appropriate transportation corridors and deliver required resources in an effort to save lives meet the needs of disaster survivors and initiate restoration and recovery activities.

Maximum Requirement (Optional)

Within [0] [week(s)] of an incident, clear [0] miles of road affected, to enable access for public, private, and non-profit emergency responders.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Functional Area(s) – Evacuation

Capability Target

Within [24] [hour(s)] notice of an incident, complete the evacuation of [41584] people requiring evacuation, including [20792] people with access and functional needs (requiring evacuation).

Additional context necessary to understanding the capability target (Optional)

The overall potential impact for evacuation is 187,008 including 93,504 individuals with access and functional needs. At the 2018 October 24 Capabilities Assessment Workshop focusing on Critical Transportation, Fire Management and Suppression, and Operational Coordination, subject matter experts expressed the difficulty of assessing our overall current capability when there are so many factors to consider. A few examples included: our region is at an influx with record high attrition rates in law enforcement; public works and departments of transportation have been doing evacuation planning for volcanic incidents whereas an earthquake scenario is much more complex and needs more representation from local and County to assess current abilities. With these significant gaps the subject matter experts came to the consensus to base our critical target on hospital evacuation which is what the 32,096 is based on. The target time frame is based on previous THIRA submission.
In future years, the region will expand this capability to also include non-medical evacuation (e.g. getting stranded visitors/commuters home)
IMPACT METHODOLOGY
Hospital evacuations
Total # of hospital beds – hospital beds available = hospital beds unavailable (number of patients in need of evacuation). (8,627 total beds - 3518 available = 5,109 unavailable. Those beds that are now unavailable will need to be evacuated or transported elsewhere. Data by county: King County 4,174 patients need evacuation, Pierce 830 patients need evacuation, Snohomish 194 patients need evacuation. Total of 5,198 patients need evacuation. For this analysis a value of 8 was multiplied by the number of patients needing evacuation to include considerations such as hospital staff, patients' family members, people in the ER, and walking wounded (people heading towards the hospital to receive treatment). The value of 8 was selected purely for planning purposes and was not determined by the Northwest Healthcare Response Network or any of the hospitals due to time constraints to collect and analyze data on such a large scale. 5,198 x 8 = 41,584 people need evacuation. People needing evacuation in King 33,392, Pierce 6,640, and Snohomish 1,552.

Using the LA Fire Department's Pyramid of Life by Frank Borden we can estimate the number of people needing rescue and by default the remaining amount will need evacuation. The Urban Search and Rescue Program Manager said to add the values produced from the 30%, 15% and 5% or top three tiers of the pyramid.

30% of 458,732 people working in buildings that are moderately, extensively or completely damaged = 137,620 people need rescue
15% of 458,732 people = 68,810 people need rescue
5% of 458,732 people = 22,937 people need rescue
Total 229,367 people need rescue

458,732 total people working in buildings that are moderately, extensively or completely damaged – 229,367 people need rescue = 229,365 people need evacuation from buildings.

Evacuation formula: 1,261 (population displaced by fire) + 41,584 (people need to be evacuated from hospitals) + 11,752 (people need to be evacuated from residences) + 458,732 (evacuated from businesses) = 283,962

Source(s): HAZUS Report for a Seattle Fault 7.2 M EQ published August 23, 2019. Retrieved from https://www.piercecountywa.gov/6081/Risk-Committee

Data USA (July 2018). Employment data. Retrieved from https://datausa.io/profile/geo/snohomish-county-wa/?compare=king-county-wa

Census Reporter (2016). Seattle-Taco

Maximum Requirement (Optional)

Within [0] [hour(s)] notice of an incident, complete the evacuation of [0] people requiring evacuation, including [0] people with access and functional needs (requiring evacuation).

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	For the first round of assessment, partners and stakeholders participating in our October capabilities assessment workshop agreed that the scope of evacuation for an earthquake scenario is very complex and difficult to evaluate. The consensus was to focus on hospital evacuations and to work with EMS partners and the Regional Alliance for Resilient and Equitable Transportation (R.A.R.E.T.) to assess this capability.

Environmental Response/Health and Safety

Functional Area(s) – Decontamination

Capability Target

Within ___ ___ of a hazmat incident, complete decontamination procedures for ___ exposed individuals (hazmat-related incidents).

Additional context necessary to understanding the capability target (Optional)

Maximum Requirement (Optional)

Within ___ ___ of a hazmat incident, complete decontamination procedures for ___ exposed individuals (hazmat-related incidents).

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context

Functional Area(s) – Hazardous Material Clean-Up

Capability Target

Within [2] [week(s)] of an incident, assess, contain, and begin cleaning up hazardous material releases from [200] hazmat release sites.

Additional context necessary to understanding the capability target (Optional)

200 represents the top tier priority sites with subsequent sites requiring years of mitigation efforts.

Maximum Requirement (Optional)

Within ___ ___ of an incident, assess, contain, and begin cleaning up hazardous material releases from ___ hazmat release sites.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Fatality Management Services

Functional Area(s) – Body Recovery, Mortuary Services, Victim Identification

Capability Target

Within [8] [week(s)] of an incident, complete the recovery, identification, and mortuary services, including temporary storage services, for [1760] fatalities.

Additional context necessary to understanding the capability target (Optional)

Due to too many factors that impact completion of these activities, participants took in the recommendation from FEMA to adjust the time frame from days to weeks.

Maximum Requirement (Optional)

Within ___ ___ of an incident, complete the recovery, identification, and mortuary services, including temporary storage services, for ___ fatalities.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Fire Management and Suppression

Functional Area(s) – Structural Firefighting

Capability Target

Within [96] [hour(s)] of an incident, conduct fire fighting operations to suppress and extinguish [40] structure fires.

Additional context necessary to understanding the capability target (Optional)

Fire suppression will be complicated by widespread impacts to water infrastructure. NFPA 1710 standard for initial fire response is dependent on the occupancy type, and ranges from a minimum of 15 to 43 personnel. Some fire standards suspended in incident like this, reduce response operations for catastrophic situations. Taking into consideration mutual aid agreements, the region may be able to designate 20% of daytime workforce. The UASI Fire/EMS/HAZMAT Subcommittee estimated 19 structure fires in 96 hours as our current capability taking into consideration the use of defensive tactics and containment practices. Therefore the set goal is 26 structure fires.

The Seattle UASI Fire/EMS/Hazmat Subcommittee also had this discussion and agrees with the State submission "The FEMA Standard Capability Target of X number of structure fires suppressed in X number of days requires a planning assumption that all ignited structures will remain actively burning until action is taken. Physics aside, in order to derive meaningful information, it would first be necessary to identify the many variables that would be assessed in quantifying the capability. How many resources are needed per occupancy type and how much time is needed at each structure to achieve full suppression? How many residential, commercial, multi-family dwellings are involved?

In 2017, the Washington Fire Service deployed 50 Type 1 engines to Northern California under EMAC. Using simple math, these 50 engines, assuming each could suppress one structure fire per day, could suppress the 3100 fires listed in the Cascadia EQ scenario in 62 days. Anecdotally, I would argue that a Type 1 engine is capable of extinguishing several residential structure fires in any given day. To further complicate matters, these 50 engines are but a small fraction of the Type 1 engines operated by fire department's around the state. Not knowing how many Type 1 engines are available on any given day, it is impossible to estimate the number of structure fires that could be extinguished in one day."

Maximum Requirement (Optional)

Within [1] [week(s)] of an incident, conduct fire fighting operations to suppress and extinguish [40] structure fires.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Logistics and Supply Chain Management

Functional Area(s) – Resource Management, Resource Delivery

Capability Target

Within [96] [hour(s)] of an incident, identify and mobilize life-sustaining commodities, resources, and services to [359600] people requiring shelter and [1681016] people requiring food and water. Maintain distribution system for [1] [year(s)].

Additional context necessary to understanding the capability target (Optional)

Local logs staff referred to the State for assessing this core capability. Members from the EM Subcommittee met with the State on November 29 in 2018. Overall factors taken into consideration includes:
governmental mutual aid,
state essential services contracts timeframe for a Cascadia Subduction Zone 9.0M EQ is 30 days,
current learnings from the Logistics and Supply Chain Technical Assistance work group on the food chain,
American Red Cross feedback from the Mass Care Workshop in October; and
the critical target for critical transportation: establishing access is 72 hours.

Maximum Requirement (Optional)

Within ___ ___ of an incident, identify and mobilize life-sustaining commodities, resources, and services to ___ people requiring shelter and ___ people requiring food and water. Maintain distribution system for ___ ___.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Mass Care Services

Functional Area(s) – Relocation Assistance

Capability Target

Within [90] [day(s)] of an incident, move [138446] people requiring temporary, non-congregate housing, including [30597] people with access and functional needs (requiring accessible, temporary, non-congregate housing), from congregate care to temporary housing.

Additional context necessary to understanding the capability target (Optional)

The 90 days takes into consideration FEMA's 2017 Hurricanes After Action Report and SME consensus at Mass Care Workshop on October 25, 2018 approved applying Puerto Rico's Island concept to our scenario.

Maximum Requirement (Optional)

Within ___ ___ of an incident, move ___ people requiring temporary, non-congregate housing, including ___ people with access and functional needs (requiring accessible, temporary, non-congregate housing), from congregate care to temporary housing.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Functional Area(s) – Sheltering, Ensuring Access, Feeding, Hydration, Pets, Resource Distribution

Capability Target

Within [2] [day(s)] of an incident, provide emergency sheltering, food, and water for [432491] people requiring shelter and [1956976] people requiring food and water, including [87419] people with access and functional needs (requiring accessible shelter) and [587092] people with access and functional needs (requiring food and water), and [61364] animals requiring shelter, food, and water. Maintain for [8] [week(s)].

Additional context necessary to understanding the capability target (Optional)

Previous THIRA target submission time frame for open the first shelters was 72 hours. During Mass Care Capability Assessment Workshop on July 18, 2019, it was determined that 96 hours might better reflect current planning and capability. In order to meet the goal of sheltering within 48 hours, the region would have to rely extensively on community- or privately-run shelters.

Another consideration is Community Points of Distribution (CPODs). One of the issues we have been dealing with is mobility. More and more people can't drive or have chosen not to have a car. For example in Seattle 20% of residents don't have cars. So the challenges of getting to CPODs is more than clearing roads. The car-less and mobility challenged part of the community is likely to be a growing number. In addition to this, the public needs to be self-sustained with food, water, meds, etc. for up to two weeks but we know that a large portion of our population can't do a day or two. See percent of people in poverty using https://www.policymap.com/maps

Maximum Requirement (Optional)

Within ___ ___ of an incident, provide emergency sheltering, food, and water for ___ people requiring shelter and ___ people requiring food and water, including ___ people with access and functional needs (requiring accessible shelter) and ___ people with access and functional needs (requiring food and water), and ___ animals requiring shelter, food, and water. Maintain for ___ ___.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Mass Search and Rescue Operations

Functional Area(s) – Rescue Operations, Search Operations, Community-Based Search and Rescue Support

Capability Target

Within [72] [hour(s)] of an incident, conduct search and rescue operations for [105017] people requiring rescue.

Additional context necessary to understanding the capability target (Optional)

Our UASI has an advantage in comparison to other region's where our local SME's are also members of the WA State Urban Search and Rescue Task Force 1 and are highly skilled. Even with this advantage the equipment will be in the warehouse at Tacoma, Pierce County when the earthquake occurs. For that reason we focused our first round of the assessment on our day to day local SAR Coordinators within Sheriff's Departments.

This year we were able to include fire and identified the need for resource typing to quantify our capabilities. General considerations: building codes used CA standard which are built to survive not for resilience. Void spaces will still be an issue.

Maximum Requirement (Optional)

Within ___ ___ of an incident, conduct search and rescue operations for ___ people requiring rescue.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

On-Scene Security, Protection, and Law Enforcement

Functional Area(s) – Law Enforcement, Protecting Response Personnel, Securing Disaster Areas

Capability Target

Within [24] [hour(s)] of an incident, provide security and law enforcement services to protect emergency responders and [3867046] people affected.

Additional context necessary to understanding the capability target (Optional)

In future years, we would like to break this target down into functional activities (e.g. how many intersections require traffic control, how many sites will require law enforcement support for commandeering, incarcerated population care, etc.) in order to make this more meaningful.

Maximum Requirement (Optional)

Within ___ ___ of an incident, provide security and law enforcement services to protect emergency responders and ___ people affected.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Operational Communications

Functional Area(s) – Interoperable Communications Between Responders

Capability Target

Within [24] [hour(s)] of an incident, establish interoperable communications across [68] jurisdictions affected and with [205] partner organizations involved in incident management. Maintain for [10] [day(s)].

Additional context necessary to understanding the capability target (Optional)

In alignment with National Emergency Communications Plan (NECP) Goal 2, establish interoperable voice communications between responders within 1 hour. Establish data communications within 24 hours.

Maximum Requirement (Optional)

Within ___ ___ of an incident, establish interoperable communications across ___ jurisdictions affected and with ___ partner organizations involved in incident management. Maintain for ___ ___.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Public Health, Healthcare, and Emergency Medical Services

Functional Area(s) – Triage and Initial Stabilization, Emergency Medical Services, Definitive Care

Capability Target

Within [48] [hour(s)] of an incident, complete triage, begin definitive medical treatment, and transfer to an appropriate facility [27901] people requiring medical care.

Additional context necessary to understanding the capability target (Optional)

Transportation impacts relating the ability to navigate to and from impacted areas by EMS agencies. Citizens will be seeking care at non-standard governmental facilities and agencies such as fire departments, physicians' offices, etc. Availability of drivers willing and able to respond will be 2/3 of workforce based on Hurricane Katrina statistic. Individuals with access and functional needs with equipment will impact the number of people transported per vehicle.

Maximum Requirement (Optional)

Within ___ ___ of an incident, complete triage, begin definitive medical treatment, and transfer to an appropriate facility ___ people requiring medical care.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Situational Assessment

Functional Area(s) – Delivering Situation Reports, Stakeholder Engagement

Capability Target

Within [1] [hour(s)] of incident, and on a [2] [hour(s)] cycle thereafter, provide notification to leadership and [205] partner organizations involved in incident management of the current and projected situation. Maintain for [24] [hour(s)].

Additional context necessary to understanding the capability target (Optional)

A thorough assessment by each of the county EM's was conducted and the target timeframe was established and vetted by EM Operations Managers.

Maximum Requirement (Optional)

Within [0] [hour(s)] of incident, and on a [0] [month(s)] cycle thereafter, provide notification to leadership and [0] partner organizations involved in incident management of the current and projected situation. Maintain for [0] [hour(s)].

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Infrastructure Systems

Functional Area(s) – Communications Systems

Capability Target

Within [8] [month(s)] of an incident, restore service to [1394900] customers (without communication service).

Additional context necessary to understanding the capability target (Optional)

Although we received little participation from cellular providers, AT&T did confirm the timeframe is reasonable using Hurricanes as a basis. The number of customers used the Hazus report data for power and water restoration and then multiplied the value by 2.6 for the average number of people per household.

Maximum Requirement (Optional)

Within ___ ___ of an incident, restore service to ___ customers (without communication service).

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Functional Area(s) – Power Restoration

Capability Target

Within [6] [month(s)] of an incident, restore service to [225790] customers (without power service).

Additional context necessary to understanding the capability target (Optional)

SME's from the November 9 Infrastructure Systems Workshop considered additional impacts including: overhead line repair; underground sea transmission system would be affected; underground restoration will be biggest issue; portable substations mostly on west side of I5; PSE's transformer lines North and South of fault line will be broken; dispatchers could shut lines off or they could be tripped, more focused on substations in liquefaction areas, don't have a reclose line for underground. There was not enough representation to set the target timeframe as 6 months based on the known complicating factors, the implementation of seismic retrofits, and the previous submission target. Initial outages will be substantially higher (auto shut off) but will come online more rapidly.

Maximum Requirement (Optional)

Within ___ ___ of an incident, restore service to ___ customers (without power service).

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Functional Area(s) – Sanitation

Capability Target

Within [6] [month(s)] of an incident, restore service to [536500] customers (without wastewater service).

Additional context necessary to understanding the capability target (Optional)

Not having enough information on impacts, infrastructure partners set the target timeframe as 6 months based on the previous target being 6 months for 75% restoration to pre-disaster levels and several large utilities have implemented mitigation projects so that some pipes are retrofitted to the industry standard level for a magnitude 9.0 EQ.

Local utility has initiated a seismic study of the waste water system to better validate estimates in the future.

Maximum Requirement (Optional)

Within ___ ___ of an incident, restore service to ___ customers (without wastewater service).

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Functional Area(s) – Water Treatment and Provision

Capability Target

Within [6] [month(s)] of an incident, restore service to [536500] customers (without water service).

Additional context necessary to understanding the capability target (Optional)

Not having enough information on regional impacts, infrastructure partners set the target timeframe as 6 months based on the previous target being 6 months for 75% restoration to pre-disaster levels and several large utilities have implemented mitigation projects so that some pipes are retrofitted to survive a magnitude 9.0 EQ.

Maximum Requirement (Optional)

Within ___ ___ of an incident, restore service to ___ customers (without water service).

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	On September 5, 2019 we hosted a capabilities assessment workshop for wastewater treatment and sanitation departments. The Water Supply Forum has embarked on a project to help water utilities in King, Pierce and Snohomish counties proactively evaluate the region's existing water supply systems resiliency and plan for potential water supply disruptions. Phase 1 of this project was done in 2015-16, identifying key risks to water supply. These included risks related to earthquakes, climate change, drought, and threats to water quality that could have regional impact. Phase 2 was completed in 2018 and features more in-depth study of key topics, focusing largely on earthquake risks. See the link for findings https://www.watersupplyforum.org/home/resiliency.html

Economic Recovery

Functional Area(s) – Reopening Businesses

Capability Target

Within [18] [month(s)] of an incident, reopen [20653] businesses closed due to the incident.

Additional context necessary to understanding the capability target (Optional)

Last year we had in 6 months reopen 2808 but this year with the updated modeling we have a better estimation of businesses that will sustain moderate to complete damage. The 20,653 assumes 40% of businesses will choose to leave or will permanently close (the true impact is 34,422 for the three counties). Therefore, our planning target is lower than the maximum impact.

Maximum Requirement (Optional)

Within [18] [month(s)] of an incident, reopen [34422] businesses closed due to the incident.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Health and Social Services

Functional Area(s) – Healthcare Facilities and Coalitions, Social Services

Capability Target

Within [12] [month(s)] of an incident, restore functions at [874] affected healthcare facilities and social service organizations.

Additional context necessary to understanding the capability target (Optional)

Scenario information is response oriented and doesn't currently support recovery discussions. SME's at the Mass Care Workshop interpretation of target language. Target seems facilities based but most facilities won't open based on the Nisqually EQ in 2001 when many services relocated. Total impact is 1,312 however after Katrina one third of agencies never returned. Value changed to 874 as two thirds of impact. Basic functions scope as defined by SME's: infrastructure that is up and running, back up resources are in place, staffing capabilities, basic clinical services, infrastructure and resources.

The target is for jurisdictions with more advanced planning and right now our planning is still at the restore basic functions stage.

Maximum Requirement (Optional)

Within ___ ___ of an incident, restore functions at ___ affected healthcare facilities and social service organizations.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Housing

Functional Area(s) – Transition from Interim to Permanent/Long-Term Housing, Addressing Housing Shortages, Housing Accessibility

Capability Target

Within [2] [year(s)] of an incident, [15750] people requiring long-term housing, including [7875] people with access and functional needs (requiring accessible long-term housing), find and secure long-term housing.

Additional context necessary to understanding the capability target (Optional)

Timeframe considerations:
- After an earthquake there will not be enough technical assistance and construction workers available to rebuild.
- Long-term housing funds (Community Block Development Grant in declared disasters) will not be available for at least two years.
- Need to account for the housing and feeding of support workers in recovery.
- Permitting process for rebuilding takes time.

Maximum Requirement (Optional)

Within ___ ___ of an incident, ___ people requiring long-term housing, including ___ people with access and functional needs (requiring accessible long-term housing), find and secure long-term housing.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	

Natural and Cultural Resources

Functional Area(s) – Environmental Preservation and Restoration, Historic Preservation, Damage Assessment

Capability Target

Within [5] [year(s)] of an incident, restore [694] damaged natural and cultural resources and historic properties registered in the jurisdiction.

Additional context necessary to understanding the capability target (Optional)

Restoration will not be possible for all natural and cultural resources. Consider alternative language for capability target. It is difficult to establish a timeframe for restoration. What we can measure are the various activities that roll up and make this target. For our first round we attempted to identify the # of SME's who are qualified to conduct damage assessments on natural and cultural resources by working with the tribes and relatable County Departments (i.e. Public Works or Natural Resource and Preservation Departments). Unfortunately, we were not able to finish collecting information to represent the Seattle UASI and so we used the State timeframe as it was a relatable scenario.

The State estimated current capability is within five years restore 500 damaged... from a magnitude 9.0 Cascadia Subduction Zone (CSZ) earthquake. Taking into consideration the previous Seattle UASI THIRA impact and target submissions we know a number of historically significant buildings have been identified as unreinforced masonry construction which is highly susceptible to damage in an earthquake. A devastating blow to the jurisdictions heritage poses a high vulnerability to the people and artifacts within.

Damage is likely to environmentally sensitive areas such as shorelines, bluffs, marsh lands, and lakes due to landslide, liquefaction, hazardous material release, and release of untreated wastewater.

Maximum Requirement (Optional)

Within ___ ___ of an incident, restore ___ damaged natural and cultural resources and historic properties registered in the jurisdiction.

Which of your identified threats and hazards most challenges ability to achieve this capability target?	Additional Context
Earthquake	