



MILE HIGH CHALLENGE WORKSHOP

AFTER ACTION REPORT

LONG'S PEAK CONFERENCE ROOM
FEMA REGION VIII
FEDERAL CENTER
LAKEWOOD, COLORADO
DECEMBER 14-15, 2011

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14. ABSTRACT The Mile High Challenge Workshop was a discussion-based workshop designed to provide an environment for participants to: (1) review the draft of the Denver UASI All-Hazards Regional Recovery Framework, known as the Regional Recovery Framework from this point forward, and (2) examine the use of an All-Hazards Incident Management Teams (IMTs) to support recovery planning and operations. Members of the Jefferson County All-Hazards IMT were the primary participants. The purpose of the Mile High Challenge Workshop was to: (1) Enhance the awareness and understanding of the challenges and impacts of a radiological incident and the National Disaster Recovery Framework (NDRF); (2) Explore the organizational approach to the use of the Regional Recovery Framework to a catastrophic radiological incident; and (3) Explore how an All-Hazards Type III IMT could support the initiation of recovery in the Denver Metro Area.					
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1.0 Executive Summary

The following After Action Report (AAR) was developed following the Mile High Challenge (MHC) workshop, which occurred on December 14-15, 2011 in Lakewood, Colorado. The AAR incorporates information from recorder notes, including questions, comments, recommendations, and includes information from the feedback form. The AAR was distributed to the planning team for review and comment prior to final release.

The MHC event was hosted at Long's Peak Conference room FEMA Region VIII Federal Center in Lakewood, Colorado. This was a discussion-based workshop designed to provide an environment for participants to 1) to review the draft of the Denver UASI and State of Colorado All-Hazards Regional Recovery Framework, known as the "Regional Recovery Framework" from this point forward, and 2) to examine the use of an All-Hazards IMTs to support recovery planning and operations. Members of the Jefferson County All-Hazards IMT were the primary participants. Active participation in discussions during the academic sessions (day 1) and free form discussion (day 2) was encouraged. Subject Matter Experts (SMEs) from various local, state, and federal agencies and organizations, including Denver and Aurora Offices of Emergency Management, Tri-County Public Health, Colorado Public Health, Public Works, Regional Public Information Officers, Hospital Staff, Colorado Department of Public Health and Environment, Colorado Division of Emergency Management (DEM), Department of Energy (DOE), Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA) and Department of Defense (DoD)/Civil Support Team (CST), Environmental Protection Agency (EPA), Health and Human Services (HHS)/Center for Disease Control (CDC), Lawrence Livermore National Laboratories (LLNL), Pacific Northwest Laboratory (PNNL), and Sandia National Laboratory (SNL) supported workshop discussions and provided expert feedback in the context of the presented scenario.

The content of this After Action Report represents the best efforts of the participants based on the information available at the time of publication, but is not intended to convey formal guidance or policy of the federal government or other participating agencies. The views and opinions expressed herein do not necessarily state or reflect those of their respective organizations or the US Government.

Many of the gaps identified extend beyond the Regional Recovery Framework and encompass the Denver area as a whole. Some of these gaps may not apply specifically to the Regional Recovery Framework and should be evaluated as a Denver UASI Gap for Recovery. The gaps are listed in [Section 8.0 – Conclusions and Recommendations.](#), [Table 1.0](#) and [Table 2.0](#).

2.0 Background

The Departments of Defense and Homeland Security, in close coordination with the Denver Urban Area Security Initiative (UASI) and the State of Colorado, have partnered to establish the Wide Area Recovery and Resiliency Program (WARRP). The purpose of this collaborative program is to study, develop and demonstrate frameworks, operational capabilities and interagency coordination, enabling a timely return to functionality and re-establishment of socio-economic order and basic services through execution of recovery and resiliency

activities, as applicable. This program explores a coordinated systems approach to the recovery and resiliency of wide urban areas, including meeting public health requirements and restoring all types of critical infrastructure, key resources (both civilian and military) and high traffic areas (transit/transportation facilities) following a chemical, biological or radiological (CBR) incident.

The Denver UASI and State of Colorado All-Hazards Regional Recovery Framework with CBR annexes is built around a set of 11 Recovery Support Functions (RSFs) defined by the Denver UASI, and is intended to align with the National Disaster Recovery Framework (NDRF). The Technical Reports focus on key planning factors that align with relevant core capabilities defined under the National Preparedness Goal. The Regional Recovery Framework and related CBR products will be provided to the State of Colorado, the Denver UASI and/or FEMA when completed, with the intent of supporting informed and consistent recovery planning and preparedness for wide urban areas across the Denver UASI, State of Colorado, FEMA regions, and the Nation.

3.0 Goal & Objectives

Goal:

Conduct a workshop to examine solutions to shorten the time to initiate recovery following a catastrophic radiological incident.

Overall Workshop Objectives:

- Enhance the awareness and understanding of the challenges and impacts of a radiological incident and the National Disaster Recovery Framework (NDRF).
- Explore the organizational approach to the use of the Regional Recovery Framework to a catastrophic radiological incident.
- Explore how an All-Hazards Type III Incident Management Team (IMT) could support the initiation of recovery in the Denver Metro Area.

Day 1 Objectives:

- Enhance awareness on the following topics: Radiological Impacts, the Regional Recovery Framework, Federal Recovery Efforts in a Radiological Incident, Department of Defense (DOD) Support in a Radiological Incident, the NDRF, and Type III IMT support.

Day 2 Objectives:

- Enact the Regional Recovery Framework to determine who and how it will be “operationalized”. This term was used to mean, “put into use/action.” The intent is to use the output from the exercise to feed into the content and organization of the framework. The following feedback was requested from the IMT:
 - Have appropriate lead and support agencies been identified in each respective Recovery Support Function (RSF)? How will the IMT organize itself to execute each RSF?
 - How will the IMT establish and adjust priorities regarding the implementation of the RSFs as the recovery process proceeds? Key RSFs for developing a recovery strategy have been identified as:

- ❖ Public Health and Medical Services
- ❖ Identify, Stabilize, and Maintain Infrastructure and Property
- ❖ Public Messaging
- ❖ Debris Management
- ❖ Prioritization of Clean-up
- ❖ Post Disaster Housing

4.0 Scope/Format

Scope

This was a discussion-based workshop designed to provide an environment for participants to “operationalize” the Regional Recovery Framework and to examine the use of an all-hazards Type III IMT to support recovery planning and operations.

Format

The workshop combined academic sessions (day 1) with free form discussion (day 2). The general format of the workshop was as follows:

- Day 1, December 14, 2011: Academic Sessions provided an overview of scenario, agent, and other factors to prepare participants for Day 2.
- Day 2, December 15, 2011: Free Form Discussion: Participation in this session occurred by invitation.

Targeted Audience

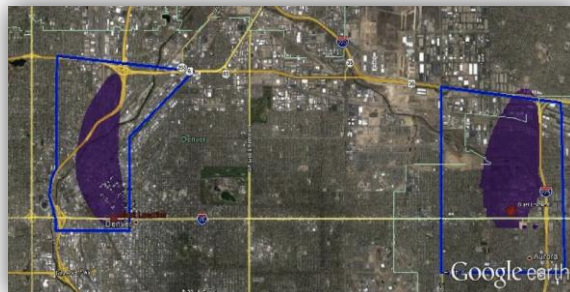
The targeted audience of this event was state and local planners and emergency managers, regional planning coordinators, military planning coordinators, and subject matter experts.

5.0 Scenario Overview

General

The overview of the radiological scenario was designed to provide workshop participants with relevant background and event information to stimulate discussions on various aspects of recovery planning. The information was presented in discrete time jumps over a course of several weeks and months, and highlighted the short-, intermediate-, and long-term phases of recovery.

The scenario was based on National Planning Scenario (NPS) #11: Radiological Attack – Radiological Dispersal Devices, and involved back to back explosions in the greater Denver metropolitan area. The first



explosion is the result of terrorists who detonate a large truck bomb (~3/4 the detonation size of the OK city bomb) containing a significant source of 137-Cesium (¹³⁷Cs) outside the U.S. Mint in the downtown business district of Denver. The second identical explosion occurs at the Anschutz Medical Campus, in Aurora. This bomb collapsed a significant section of a campus building resulting in hundreds of injuries.

The FBI was identified as the lead federal law-enforcement agency for this incident, in coordination with the Colorado Department of Public Safety for the State. For Denver, the Denver Fire Department was identified as the local lead for victim rescue, with support of Denver Health Paramedic Division on emergency medical actions. Public health actions were expected to be co-managed at the local level by Denver Public Health and Denver Environmental Health.

An Emergency phase was briefed to set the stage; the primary focus was the blast victims and the mass casualty situation. Many of the victims were contaminated with radioactive material; however, the levels are low enough that medical stabilization takes priority over decontamination. *Although the areas that require action in the emergency phase were fairly limited, the predicted areas for intermediate phase activities were much more extensive.* The relocation areas in Denver and Aurora were defined as 3 miles downwind to accommodate a maximum annual dose exposure of 2 rem (first year) / 0.5 rem (subsequent years). These boundaries led to the relocation of 8,000 people in Denver, and 4,000 in Aurora.

Description of Radiological Agent

¹³⁷Cs is a radioactive isotope of cesium, with a half-life of 30.17 years. It is highly water soluble and chemically reactive with a wide variety of materials, including common building materials such as concrete and stone. This makes the cleanup of ¹³⁷Cs difficult. People may ingest ¹³⁷Cs with food and water, or may inhale it as dust. If ¹³⁷Cs enters the body, it is distributed fairly uniformly throughout the body's soft tissues, resulting in exposure of those tissues. Exposure may also be external (that is, exposure to gamma radiation from outside the body). If exposures to ¹³⁷Cs are very high, serious burns, and even death, can result. People may become internally contaminated (inside their bodies) with radioactive materials by accidentally ingesting (eating or drinking) or inhaling (breathing) them, or through direct contact (open wounds). The sooner these materials are removed from the body, the fewer and less severe the health effects of the contamination will be.

Economic Impact

Over 3000 commercial and industrial buildings were in the area of potential clean-up and nearly 500 businesses would have been expected to be closed as a result. Many of them are critical to the Denver and Aurora area. Furthermore, postal and shipping services e.g., rail transport and trucking, came to halt due to concerns regarding spread of contaminated goods and products. This led to a significant decline in the regional distribution of energy resources, manufacturing materials, and agricultural products. For these reasons, the cities and State's tax revenue would have been severely impacted. Restoring the local economy was a high priority for obvious reasons.

Note: The complete scenario is not included in this AAR. Please contact Kelli Thompson at kelli.thompson@cubic.com for more information regarding the scenario.

6.0 Academic Sessions (Day 1)

Welcome/Introductions

Ms. Robin Finnegan, FEMA Region VIII Administrator welcomed participants and expressed that “in today’s response environment, we must have frameworks in place that provide innovative and creative guidance for response & recovery. Additionally, it’s imperative that we include the private sector, non-governmental, and faith-based organizations in our planning efforts.”

Mr. Chris Russell, DHS S&T Directorate and WARRP Program Manager, also welcomed participants and thanked them for their respective organizations’ contribution to WARRP and the goal of reducing time and resources required to recover following incidents of national significance, including catastrophic Chemical, Biological, or Radiological (CBR) incidents. Mr. Russell agreed that we must continue to adhere to the “Whole of Community” approach and ensure we are inclusive in our planning efforts.

Note: [See Annex A: Workshop Agenda](#), for specific academic topics and presenters. It should be mentioned that a presentation was given to provide an overview of the National Disaster Recovery Framework (NDRF). It was pointed out that the NDRF will be operationally dependent on the annexes being developed by WARRP; however, regional plans such as the Regional Recovery Framework that is being developed are expected to have more regional information than the NDRF. Following the academic sessions, Mr. Tim McSherry, Jefferson County IMT, reviewed Day 1 highlights and discussed Day 2 expectations. He pointed out the need to *focus on operational sustainment as a key focus area for discussion on Day 2*. The IMT would be activated for up to 2-3 weeks. In this scenario, the IMT is viewed as an advisory team that is able to take initial actions that will help initial response and recovery operations with the understanding that additional resources and staffing will be required for intermediate and long-term recovery operations.

7.0 Free Form Discussion (Day 2)

Workshop Set-Up

Activities on Day 2 began with Steve Stein, PNNL, moderating the discussion and reviewing objectives and format (see page 4), followed by Brooke Buddemeier, LLNL reviewing the scenario and assumptions. Garry Brieze, local WARRP program integrator, provided an in-brief to the Jefferson County IMT (two weeks post event). This scenario assumed the creation of multi-jurisdictional Recovery Task Force (RTF) due to catastrophic nature of the incident and limited resources. Incident objectives (based on the 6 Key Regional Recovery Framework RSFs) were passed directly to the RTF.

Scenario Assumptions included:

- *Discussion begins two-weeks into incident (Intermediate Phase – days - weeks)*
- *A high military presence*
- *Morgue and DMAT teams on site*
- *Children’s hospital has been evacuated*
- *Mandatory relocation of approximately 12,000 individuals, with estimated self-relocation of an additional 100,000*
- *The President has committed to paying for operations for first year.*

IMT works with Regional Recovery Framework

The IMT members who participated in this review are identified in the below table.

Name	Role	Work History
Mike Frary	Incident Commander	US Forest Service – Ret.
Tim McSherry	Deputy Incident Commander	Jefferson County Sheriff's Office/EM
Bill Easterling	Operations Section Chief	Jefferson County Sheriff's Office
Mike Rubenstein	Planning/Operations Section Chief	Jefferson County Sheriff's Office
Dean Clark	Planning Section Chief	National Park Service – Ret.
Bill Wallis	Situation Unit Leader	Bureau of Land Management – Ret.
Colleen Gadd	Logistics Section Chief	Jefferson County Open Space
Bill Benerman	Operations – Public Health Branch Director	Denver Department of Environmental Health
Daniel Hatlestad	Public Information Officer & Safety Officer	Marketing Director – Private Corporation
Victoria Lytle	Liaison Officer Trainee	American Red Cross
Andrew Parker	Liaison Officer	Bureau of Land Management – Ret.
Christine Billings	Operations – Assistant Public Health Branch Director	Jefferson County Public Health
Carol Small	Deputy Logistics Chief	Jefferson County Sheriff's Office/EM

Recovery IMT Initial Actions:

1. Identify key agency representatives to serve as the RTF (prioritize clean-up and other activities)
 - Accomplished in workshop by setting up a table with city, county, state, federal emergency managers & public/environmental health
2. Delegation of Authority – Establish Objectives
 - Typically get a delegation of authority from the governor with clearly defined objectives; in this case, since scenario is multi-jurisdictional, large-scale event with a group of multiple representatives from city/county/state/fed, a single POC within the RTF would meet regularly with IMT and liaison with UC
 - IMT worked with RTF to immediately start working on prioritized set of incident objectives; 3 of 5 members will be expected at all future UC meetings/briefs

The RTF, appointed by elected local and state leaders, *notionally* maintains authority and serves a key decision-making group. Note: the Recovery IMT served as an advisor to the RTF for the initial recovery organization. The IMT identified the following individuals to make up the RTF.

Potential Recovery Task Force (RTF)	
Greg Palmer	Arapahoe County Sheriff's Office
Richard Newman	Adams County
Michelle Askenazi	Tri-County Health
Fran Santanaga	Douglas County
Bob Wold	State CDEM
Yonette Hintzen-Schmidt	CDPHE
Charles Smedly	Denver Public Health
Matt Chapman	Aurora OEM
Scott Field	Denver OEM

Unified Command Objectives Meeting

The group proceeded to conduct a Unified Command Objectives Meeting. This meeting produced a list of Prioritized Incident Objectives. These are based on the Regional Recovery Framework RSFs to develop a recovery strategy. These objectives may change and/or be renegotiated in the Incident Management planning cycle based on several factors [e.g., assistance, resources, etc.]. The objectives identified are:

- ❖ Ensure safety of responders and public
- ❖ Assess and stabilize/maintain essential services and CIKR (much discussion about need for public messaging to be #2 priority)
- ❖ Provide unified public messaging and information management
- ❖ Conduct damage assessment/debris management and prioritize clean-up operations (assessment must come first to help with prioritization – preferred having this as one objective)
- ❖ Identify post disaster housing options (will be driven by damage assessment)

Note: it was pointed out that NGOs and faith-based groups have a huge role to play and they would be constantly informed of recovery efforts. It was recommended they have a clear voice within the response and recovery structures. Figure 1.0 represents discussion regarding where NGO's role and how the process works. (NGO's were added to diagram due to their similar structure to that of the private sector. It was also pointed out that understanding composition of the structure above the IMT is critical).

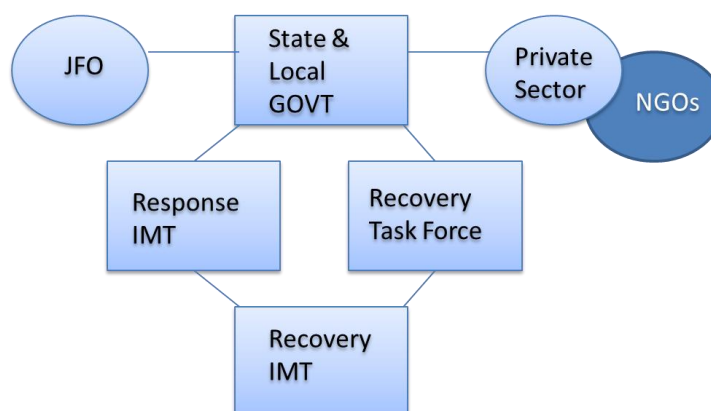


Figure 1.0 – Recovery Structure

Operational Coordination/Command Structures

A very lengthy discussion transpired on Incident Command System structures, roles, and responsibilities. A summary of the discussion is listed below.

- **Building a structure “above” the IMT will be critical for recovery operations. (See Figure 1.0)**

Recommendation: Ensure the Multi-Agency Coordination (MAC) Working Group meeting addresses this issue and a final product is a clear structure for the Regional Recovery Framework.

Considerations: 1.) The IMT depends on regional leadership to notify them of who important contacts are because the assumption must be made that the IMT is not from the area impacted; 2.) Farm & Agriculture, the Private Sector, and NGO/Volunteer Organizations are essential stakeholders and should be included in the MAC or RTF; 3.) Disaster Assistance Centers will be used for one-to-one support for community and should be considered as well when working on overall structure (e.g., to ensure cohesive integration of activities such as volunteer coordination, public messaging, and addressing public health issues); 4.) The IMT (logistics) will need guidance from the MACG about procurement and directing cost; 5.) Normally the IMT has a link to the EOC and policy group but will need to figure out how to connect local and state elected officials; 6.) Presumption is that the IMT would come in to be an advisory group to jumpstart recovery and would not be a long term presence.

- **Situation Unit (SITU) would be expected to be very robust and a critical element.**

Recommendation: Pre-identify list of agencies/organizations and SMEs that will be needed to work within Technical Specialist Units, specifically, the situation unit.

Considerations: Key areas for SME support include, but are not limited to: Radiological SME, GIS Mapping, EPA/HAZMAT, Engineering, Water, Natural and Cultural Resources, Behavioral Health, Human Services (populations at risk), Housing, and Economic Development.

- **Liaison activities will require a comprehensive plan.**

Recommendation: Ensure Liaison issues are considered for operational coordination.

Considerations: 1.) Assisting and cooperating agencies should assign their own liaison officers that can reach back to other potentially effected jurisdictions; 2.) Liaison staff should located near, but not in the UC and coordinate with local, state, and federal agencies and community stakeholders to ensure RSFs are properly addressed and aligned with incident objectives. 3.) Criminal investigation and actions would be considered throughout the process; 4.) Responder safety issues and public health issues would be expected to be managed by OPS and Safety Officer; however, there would be liaison officers coordinating with respective agencies and stakeholders and the JIC for public messaging.

Liaison responsibilities:

- Generate governmental phone book/contact list (get information to/from agencies quickly, used by IMT to assist with planning)
- Maintain liaison with agencies not directly involved to support awareness and understanding of recovery planning activities
- Work with assisting and cooperating agencies
- Explain objectives and priorities of the UC with a diverse array of stakeholders (note: it was explained that reconciling objectives and priorities is a function of the Joint Recovery Task Force and/or Policy Group not the liaison or UC. This should be clear in the Delegation of Authority.)
- Champion efforts to get politicians to engage in strategic public messaging
- Interface with private sector and NGOs/volunteer organizations

- **Review of Operations Section for Recovery IMT.**

Recommendation: Consider Operations Section structure changes for operational coordination.

Considerations: Review notional Operations configuration for Recovery based on directives from command structures group (Figure 2.0). It would be expected at this point that operations would be coordinating activities through Branches assigned to impacted areas and have unique functions for each area. Branch Directors (BDs) would coordinate activities based on incident objectives. BDs will use different groups based on needs for his/her area. Operations are envisioned with two different Field OPS assigned to BDs for each impacted area. Within each branch they can pull resources from the functional areas noted (Security, Performance, Mitigation, Construction – see table below) and coordinate closely with SMEs and Intel to gather information. Intelligence components would be required for public health and environment, damage assessment, and criminal investigation. The Criminal Investigation Division (CID) will also be operational. NOTE: In this discussion, there was internal IMT disagreement on this structure.

Security	Performance	Mitigation	Construction
Internal	Compliance	Water	Demolition
External	Inspection	Waste	Recovery
Perimeter	Cleaning	Barrier	Storage
Credentialing		Reclamation	Transportation

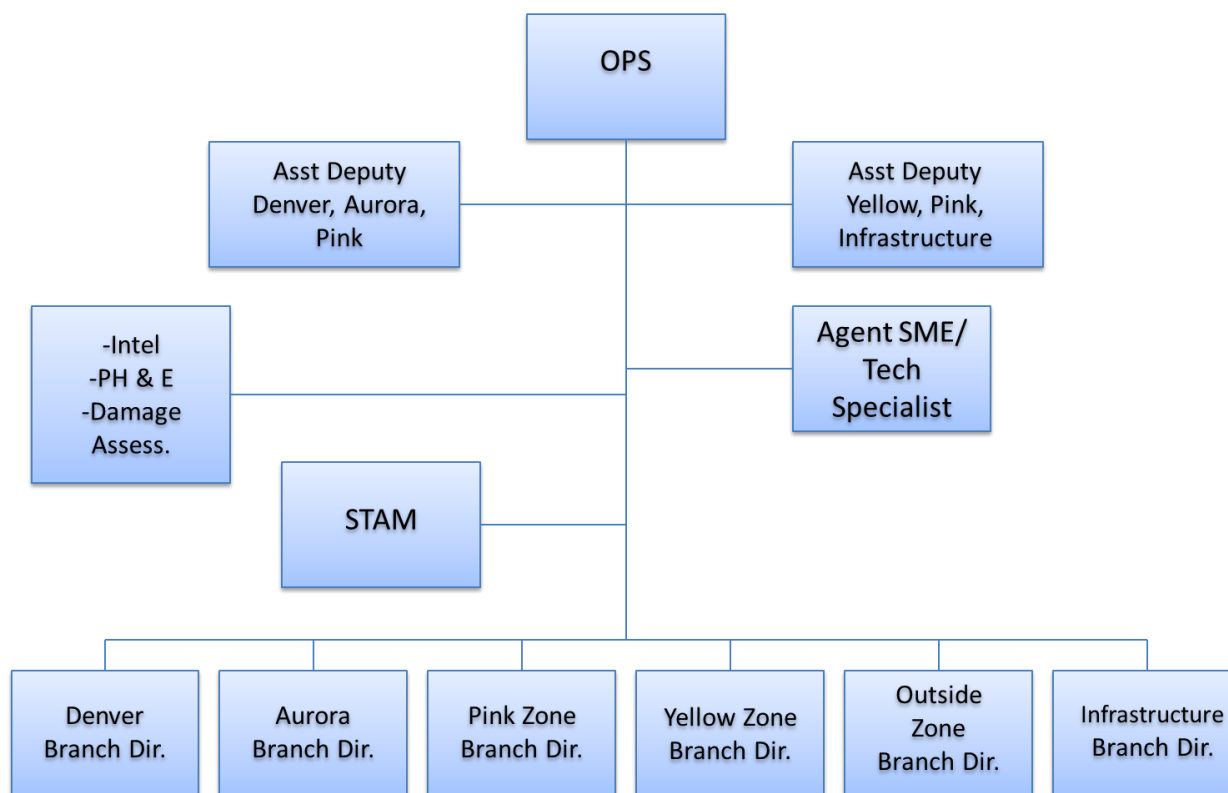


Figure 2.0 – Recovery Operations Structure

- **Review of Logistics Section for Recovery IMT.**

Recommendation: Consider logistic matters for operational coordination.

Considerations: 1.) The IMT will utilize the [Emergency Management Assistance Compact \(EMAC\)](#), a national Governors' interstate mutual aid group, which facilitates the sharing of resources, personnel and equipment across state lines during times of disaster and emergency; 2.) The central focal point for ordering resources are County and state EOCs (purchasing authorities); 3.) Some key focus areas would be intermediate and long-term housing, contract requirements, land-use agreements, IGAs, contractors for recovery, security at sites, etc. Logistics will need to ensure support for transportation and track and inventory resources; 4.) It was pointed out that there are laws in place that require going through local channels for purchasing (concern was expressed from audience regarding barriers to obtaining resources with local ordering process); 5.) When the IMT goes to a location, it ties in with local purchasing, finance authority/entity; and 6.) An EOC liaison should be used to ensure coordination between UC and the EOC. [Note: Original focus on the Logistics/EOC cell was to translate response construct to recovery, primarily focusing on logistics for the recovery teams. This approach/construct changed significantly once they considered the Regional Recovery Framework].

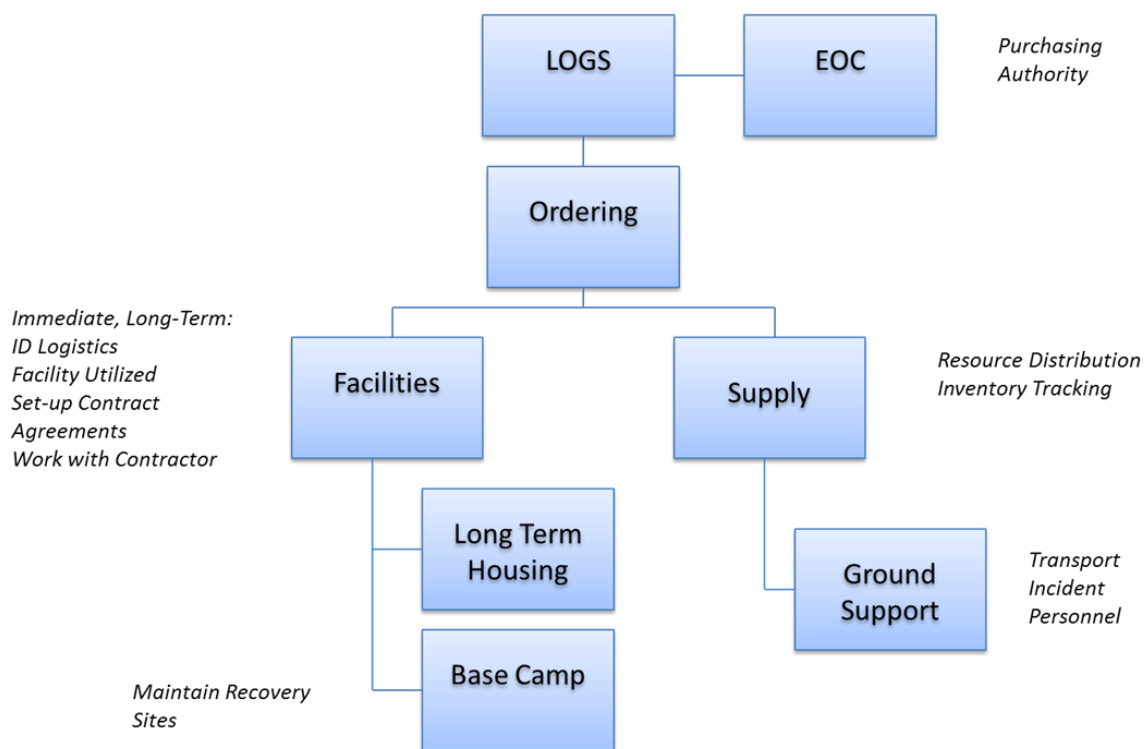


Figure 3.0 – Recovery Logistics Structure

- **Finance cost tracking will be major challenge.**

Recommendation: Ensure cost tracking issues are considered for operational coordination.

Considerations: 1.) There would be one Finance Section within UC that would be in charge of entire region's activities with representatives from each impacted jurisdiction; 2.) An Incident Business Advisor (IBA) would be required and would interface directly with the FSC; 3.) The Finance Section would be tracking funds, compensation claims, etc. and would require a Cost Unit, Procurement Unit, and Legal Unit (due to complexity); 4.) Will require funding SMEs to ensure steps are not missed so proper costing occurs; 5.) Viewed as "one large arm within the UC" reaching up to state EOC, but each jurisdiction would have to track its own costs; 6.) Because the IMT is not local, they would have to

work through contracts out of the local region; specifically, the IMT would need to find funding to pay for its resources and personnel.

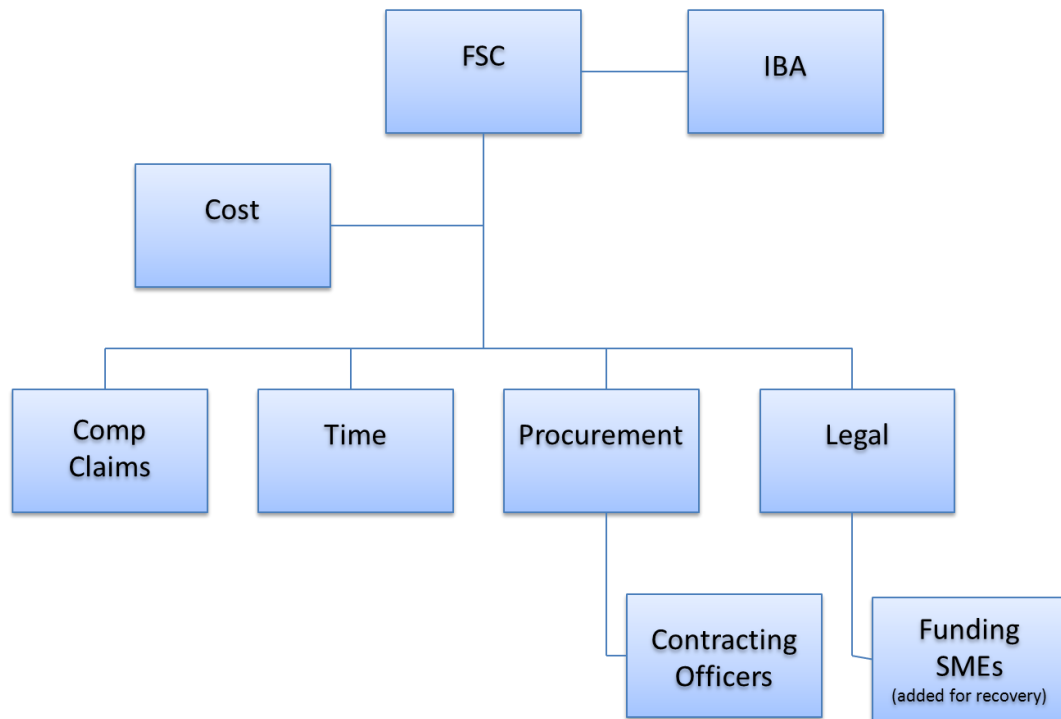


Figure 4.0 – Recovery Finance Structure

- **Funding for Operations and Rebuilding (e.g., local funding sources, planning or attaining advance of activities, and who is responsible for funding activities) is unclear.**

Recommendation: Ensure funding issues are considered for operational coordination.

Considerations: 1.) Ensure message is sent to citizens to start applying for federal assistance from FEMA (the State would work on a reimbursement assumption for those jurisdictions impacted and would request federal assistance via the Stafford Act; a big challenge for recovery is the need for “up-front money” where typically response is based on reimbursement); 2.) The State’s RTF would be managing overall activities within state EOC and would be looking for funding opportunities from outside federal agencies; 3.) Based on FEMA NDRF briefing on Day 1, funding also needs to be worked out at the federal level as the transition to the NDRF places agencies other than FEMA as lead for various recovery support functions.

- **Technical support and resources for strong Safety staff should be expected (environmental and public health, DOE, national labs, etc.).**

Recommendation: Provide the RTF with well-qualified personnel in technical areas specifically including safety.

Considerations: 1.) This type of incident will require an organizational structure that can sustain long-term safety activities; a robust remediation and recovery team training program will be required; 2.) First order of business is to meet with existing safety structure and identify any immediate needs, as well as support or technical experts required for safety issues, then build organization structure for safety unit that can be sustained for a long period of time; 3.) Regarding statutory authority on PPE; should expect a combination of federal and state authorities but needs to be defined in plan along with who is communicating levels on dosage level and safety.

- **Response JIC will evolve into Recovery JIC.**

Recommendation: Consider developing a process for JIC transition from response to recovery.

Considerations: 1.) JIC should be centrally located but away from UC (possibly located in same building as State EOC) with other agency PIOs operating as well outside the JIC. 2.) Focus of public messaging will come from four areas: a.) Social Media Center; b.) Remote media centers; c.) Education Center; and d.) Colorado Recovers Information Center. Location of JIC will be dependent on activities; work should be seen and should have good access and exposure to media outlets. 3.) Media Center should be set up for traditional and non-traditional media, including Social Media (SM); 4.) Consistency in messaging and public safety messaging is critical (e.g., conveying shelter-in-place or evacuation activities); 5.) Messaging about contamination, radiation protection, food questions and set-up of surveillance system levels is most important. Agricultural industry concerns, water, soil contamination, etc. are big issues (many in the agricultural community not able to sustain on reimbursement promises so need to better understand what up-front funding is available); 6.) Remote information centers will be used for long distance evacuation activities and public/family accountability. (keeping people attached to affected areas is important); 7.) 24/7 SM posting, monitoring, and responding will be required (keeping public messaging timely and consistent is critical); 8.) SM is great resource for information gathering (where people are located, evolving concerns/issues) but will require a large staff (during Katrina, nearly 300 agencies were interfaced with daily, public messaging effort must rely on well-qualified liaison staff located near, but not in UC). Should establish a call center that interfaces with SM staff; 9.) VIP media center will manage VIPs and international media. 10.) Remote media centers will be used for managing community recovery plan and getting people back in area and economy up and running – gathering community input into rebuilding effort will be important. 11.) Its very important to control poor messaging; training program for PIOs for remote centers would be required (minimum 200 PIOs). Should have general FAQs pre-identified and part of the Regional Recovery Framework. Canned FAQs that can be reworded as needed and adjust those as needed for public messaging via social media. Can rely more heavily on SMEs the deeper the questions got; it was pointed out that there are a number of public messaging sources already available and ready to go. The more technical the event becomes, the more important it is to tailor your vernacular, part of the strategy for consistent messaging should be avoiding the use of acronyms and using an agreed upon list of terms developed by authorities and SMEs.

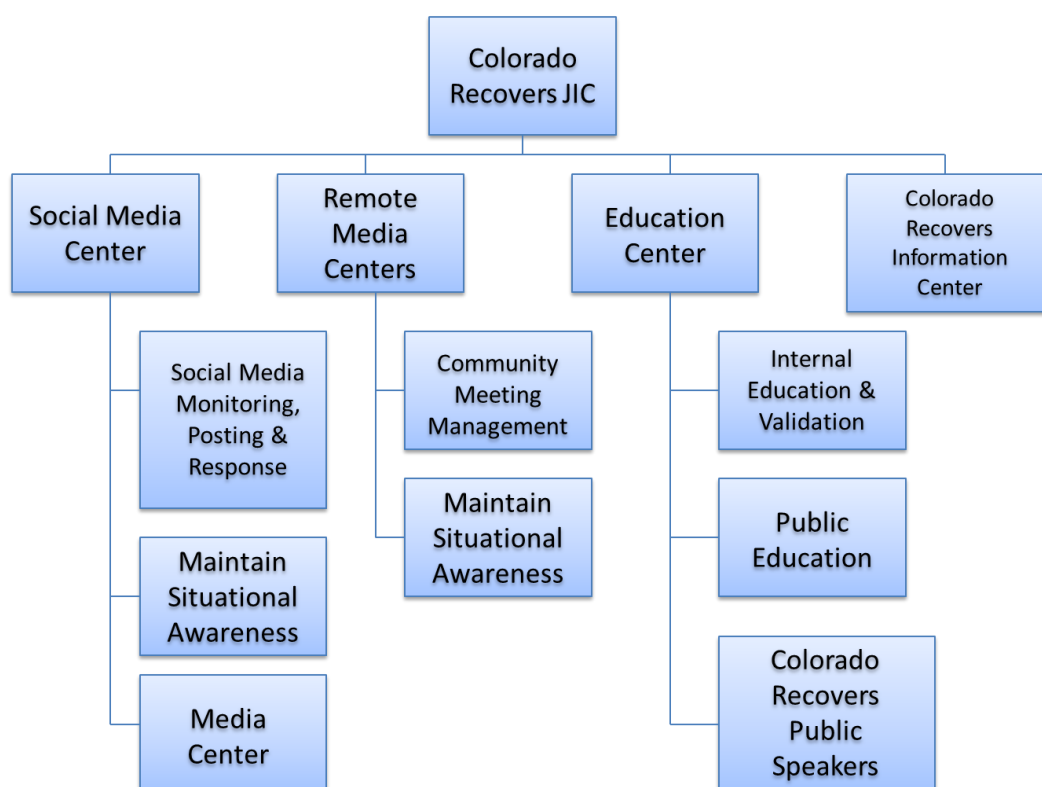


Figure 5.0 – Recovery Joint Information Structure

Recovery Support Functions (RSF's)

The “Recovery Support Functions” (RSF's) originate from FEMA's National Disaster Recovery Framework. An analysis of national level planning documents to the local Regional Recovery Framework is provided in [Annex C: National Core Capabilities](#). The Denver UASI identified key focal areas and developed local RSF's that this region finds of most importance to focus on for the development of the Regional Recovery Framework. In the context of this exercise, six RSF's were discussed: 1.) Public Health and Medical Services, 2.) Identify, Stabilize, and Maintain Infrastructure and Property, 3.) Public Messaging, 4.) Debris Management, 5.) Prioritization of Clean-up, and 6.) Post Disaster Housing.

Each area was reviewed in context of helping update the draft Regional Recovery Framework. Priorities and Perceived Gaps are listed in each category below. In some cases, there were general discussion items, and this information is captured as well.

Public Health and Medical Services

Discussion Points:

- Perhaps one of the priorities/objectives can be titled medical surge/ ensuring medical capability of community.
- Disaster Assistance Centers should provide one-to-one support for community with Public and mental health experts on hand to field issues.

- Messaging about contamination levels and personal protection is very important. Agricultural industry concerns, water, soil contamination, etc. are big issues. Ensure following considerations: food quality, water quality, disease control, air quality, and hazardous materials related to clean-up.
- Behavioral health will be major issue. Many of the providers are located within the affected zone; therefore, it may create problems in terms of providing services.
- Red Cross and other NGOs/ volunteer organizations will be instrumental in supporting overall effort.
- Various current public and mental health hotlines would be used to manage public concerns and issues. The use of the Poison Center was recommended by the poison control representative. Several pieces of infrastructure in area, but out of impact zone. Nurses are available through call center 24/7, remote site at Lowry Base, relationships with other poison control centers throughout the nation, also have Colorado Help Center to track questions and response and provide public messaging (24/7 infrastructure). Have redundancy, surge capacity, tracking capabilities, remote site and medically trained staff. It was recommended that the Poison Center (working from the JIC) be written into the Regional Recovery Framework as a resource.

Priorities:

- **Public Health and Medical Surge**
 - Addressing long term care, assisted living, other facilities
 - Shift operations of field hospital from acute treatment to medical maintenance and behavioral health.
- **Sustaining Medical Logistics and Supply Chain**
 - Staffing, Medical Supplies, Supply Chain, Lab Capacity, Doctors Office, Dialysis, Pharmaceutical Supply
- **Food/Agriculture and Water Safety**
 - Food Supply Chain, Dairy Animals, Disposal of animals, Consumer Products, Drinking Water/Waterways, Restaurants outside of affected areas
 - Agricultural Run-off. Need to monitor downstream agricultural areas not just public consumptions
- **Fatality Management**
 - Releasing Bodies to Families
 - Requirements (mortuary education for public needed)
 - Restrictions for burial, cremation, etc.
- **Behavioral Health**
 - Services for the public and first responders/workers
 - Surveillance
- **Population Monitoring**
 - Reverse Point of Dispensing (POD) concept (from CDC). People who are worried about contamination can visit a place for monitoring. This should attempt to address “worried well” issues.
- **Surveillance**
 - Epidemiological and RAD specific surveillance system aligned with system
 - Hospitals monitoring and inputting information to control for trends.
 - Need integrated monitoring system to monitor trends for emerging health issues.
- **Public Health and Medical Recovery Playbook**
- **Public Messaging should use “211” hotline** to inform victims of new location of medical services.
- **Clear policy/guidance for “reallocation of funds”**. There is a perceived “fund” managed by CDPHE. However, for CDPHE to use funds, they have to get permission from federal partners. Funding is

encumbered by specific requirements and difficult to obtain. Need to ensure a seamless process for funding assistance for locals. An “1135 Waiver” was mentioned; this allows medical services to waive certain requirements, changes reimbursement process and avoid other requirements.

Perceived Gaps:

- Educational pamphlet for mortuaries for disposal of contaminated bodies
- Health and medical educational system for what to look for after a disaster
 - For wide range of people from lay people to medical personnel
- Food Specific Education pamphlet covers
 - Food producers, restaurants, concerns of general public, embargo process for food, and safety of food
 - Provides a consistent message
- Lack of an organized approach to public health and medical recovery
 - Public health and medical recovery playbook (similar to Coast Guard Incident Management Handbook (IMH) process checklist – [note: check ASPR resource at: <http://www.phe.gov/Preparedness/planning/playbooks/rdd/Pages/default.aspx>]
- Shifting operations of field hospital from acute care to continued care
 - Must stagger staff and supplies

Public Messaging

Priorities:

- **Information Management** – good structure in place early on will be critical to corral and control media/messaging. Will be expected to interface with authority types to assist with controlling misinformation and correcting other agencies.
- **Unity of Effort** – need common, clear, concise controlled message across broad spectrum of response agencies.
- **Robust Liaison Program/JIC** – must ensure stakeholders at all levels are involved. Locating the JIC strategically – away from the UC to minimize UC traffic and promote economic development.
- **Strategic Messaging** (based on key areas, e.g., Behavioral/Mental Health, Worried Well, etc.) – proper blend of crisis/risk/strategic communications that is expected to address initial stress/trauma initially followed by plethora of issues. Safety concerns will need to be addressed with “intentional community messaging” (initiated in Disaster Assistance Center and carried out by local voices). Family unification will be important. Social Media (SM) is a double-edged sword: it is a tool for collecting and disseminating information, but can work against the effort to control messaging. Public Affairs Guidance (PAG) should be vetted through JIC and used across county/state lines with goal of consistency with messaging. Also important to continually interface with Public Health representatives to ensure timely and accurate public health updates with the use of FAQs and a central hotline (e.g., poison center) that has access to JIC. Addressing “worried well” issues will minimize impact on hospitals and play a key role in addressing behavioral health issues. Will want to avoid putting a strain on other systems (e.g., 911, 211, etc.) as a return to normalcy occurs.

Perceived Gaps:

- Public Messaging is “generic” in the Regional Recovery Framework. Section 3.6.9 of Regional Recovery Framework “Diversion from message” is a critical point and must be prevented. Phase II – Intermediate Phase is a key to success. Central issues for public messaging efforts will be behavioral/mental health, long-term food/water/housing/health issues,

education/schools, and restoration of the private sector (re-establishing routine within communities). No significant problems seen with Regional Recovery Framework RSF, but is viewed as general guidance.

Identity, Stabilize, and Maintain Infrastructure and Property

Priorities:

- **Transportation** – roads, rail and air
- **Utilities** – water, power and gas
- **Communication and IT**
- **Public Health and Safety** – ongoing from the immediate response phase
- **Agriculture**
- **Banking**
- **Establish a public/private partnership to identify and coordinate regional businesses**
- **Make sure RTF is pre-identified and trained; needs to be multi-jurisdictional**
- **Need to have an Economic Recovery policy group**
- **Develop a robust private sector liaison program**
- **Develop messaging about containment levels**
- **Process of communication between the different support functions because of interrelationships**
- **Should rapidly identify critical interdependencies (many CIKR are privately owned)**

Perceived Gaps:

- Insurance industry representative is not included on the organizational structure
- Scenario does not include downstream contamination of the Platte River (used as a water source). No Science and Technology currently in place to manage water contamination.
 - According to EPA (Dr. Graham), there is a maximum containment level (MCL) for Cesium that allows for some contamination in the water which can be used as targets and to educate the public.
- Multi-jurisdictional RTF is not pre-identified and trained
- Prioritization should be upfront in the Regional Recovery Framework
- Need to have an Economic Recovery policy group
- MAC composition is not clear; need to ensure NGO/Volunteer organization participation
- RSFs should be linked somehow to ensure alignment of priorities and objectives
- Need capability (tools, technology, plans) to rapidly identify and prioritize CIKR
- Regulatory exemptions for recovery is not well-defined
- Small and mid-sized private sector business continuity is a weakness
- Agricultural industry concerns, water, soil contamination, etc. are big issues. Many in the agricultural community not able to sustain on reimbursement promises. Need to better understand what initial funding is available.
- Need incentives for maintaining critical infrastructure owned by the private sector.
- Understand how terrorist codicils affect insurance policies
- Need to integrate zoning and building code officials
- In the first couple of weeks, there will be a lot of temporary systems to deal with people. These will eventually need to be replaced.

Debris Management

Discussion Points:

- Economic Recovery is critical and should drive incident objectives, especially CIKR and Debris Management which are closely linked to economic recovery
- Regarding waste management, work that is initially done is clean-up of transportation areas to limit spread. *As systems get in place to clean-up areas, systems also need to be in place to remediate waste.*
- Concern expressed for hazardous materials related to clean-up, storm run-off, and air pollution
- Need to understand the cost associated with all the different levels of radiation (waste treated differently based level on concentration). Some type of matrix that outlines the push and pull between time, cost and cleanup levels would be useful. Cost of destroying and rebuilding versus cleaning (cost needs to consider hard dollar clean-up, economics and emotional); debris cost should also include monitoring and security of new site
- Should provide specialized training for companies with employees who do this kind of work; and ensure the private sector capability is in place to support clean-up efforts (some discussion occurred regarding specialized ion exchange columns that can clean up water; talked about fixatives and strippable coatings)

Priorities:

- **Develop a Technical Working Group** to establish allowable levels (clean-up, residencies, worker, agriculture, water etc.).
- **Unified public messaging.** Need to quickly contact political officials and caution them on citing clean-up goals until technical group / MAC / RTF has agreed to appropriate standards.
- **Understand the cost associated with different radiation levels**
- **Clear understanding for how to define debris** (contaminated vs. non-contaminated)
- **Enforcement of mitigation and barriers** to limit the spread of contamination
- **Provide specialized training for companies**
- **Manage/control waste in inter and intrastate commerce routs** (including highways and trains)
- **Provide rapid options for housing** to get people back in permanent long-term homes
- **Managing liability for future claims** needs to be a cost considered

Perceived Gaps:

- Review personal property laws and the right to trespass decontaminate and/or condemn private property
- Consider an increase in long-term worker compensation claims
- Fire-codes, building codes and other regulations may need to be relaxed
- There is no identifiable standard for containment level at the national level and don't foresee that happening. The local group would have to establish a level before pursuing a debris management strategy. NOTE: Locals want a clean-up standard. It was explained this will be situation specific and likely goal will not happen without more S&T.
- Future litigation is not covered
- No clear understanding of cost analysis for disposal and clean-up methodologies
- No clear plan for liaison program and strategy for messaging; must message carefully regarding plans for rebuilding

- No clear guidance regarding personal property rights. Discussed the legal consideration of going in to private property and start cleaning. Is there a declaration? Consensus was laws would need to be relaxed so cleanup crews could commence.
- Regarding OSHA regulations that are applied; the level of PPE required may slow down operations
- *Suggest removing references “human remains” from debris section.* Group believes it was offensive.

Prioritization of Clean-up

Priorities:

- **Safety & Security/Public Health**
- **Restoration of CIKR**
- **Economic Stability and Community Needs**

Perceived Gaps:

- Composition of the MAC – Roles and Responsibilities need to be defined
- Need to identify a multijurisdictional RTF to will understand the scale and scope of the event – national level impact
- Determining how clean is clean is a policy level decision based on circumstances
- Business continuity capacity of small and medium sized businesses
- Need to determine resources

Post Disaster Housing

Discussion Points:

- Only 10% of displaced persons will go to a Red Cross shelter, 90% will go with friends and family. Are people continuing to pay their mortgages? Do they have to?
- Near term – individuals would request funds for damages through FEMA’s Disaster Recovery Center. Expect that full reimbursement will be provided. FEMA representative commented that many of the options/issues discussed are occurring in response already, not solely recovery functions. The JFO would be up and running and a lot of the items discussed would be covered here.
- Is there a standard that FEMA can review to see what the ratio is for Stafford Act coverage in a community to act as a gap analysis to assist in recognizing post-disaster housing issues?
- What happens when housing needs continue beyond 18 months (a FEMA limit)?
- Another resource is the State’s Disaster Housing Task Force
- Should make it a priority following an incident to identify existing housing options
- Uncertainty regarding long-term housing issues (e.g., will people move back into a “cleared” house?) Most agree many people won’t come back even if the homes are declared “safe.” Combating the stigma and perception of the region is going to be a challenge.
- Need to help people help themselves and involve the community in the planning process
- Should evaluate the ability to issue rent control policies
- Will need to identify “At Risk” populations and provide them with housing options
- Regarding insurance issues. When they become paralyzed we all become paralyzed. Also most insurance has terrorist codicils on it. How many people have that? Insurance companies are key players to keep recovery moving along. Need to include insurance representatives in the organizational structure. Would need a task force that includes the insurance industry and attorney

general. Can't really recover until the insurance industry makes decision. Some businesses (i.e. airports) may have additional insurance that supplements the ability to clean-up.

- Will need to consider individuals who self-evacuate and take up housing that is needed for others (i.e. volunteers)?
- Think about private sector opportunities to provide post disaster housing in order to incentivize housing options; consideration is there may be existing housing available because so many people have relocated.

Priorities:

- **Ensure housing solutions are in place that span intermediate and long-term recovery phases**
- **Help people help themselves;** post capabilities to post housing opportunities on a common information source, e.g., website. Include what they should do with their house or apartment
- **Engage the community in the planning process** (e.g., have a Housing Action Plan in place)

Housing Action Plan:

- Provide mechanism for affected population to register with FEMA
- Activate the State-led Housing Task Force; to provide the following activities:
 - Identify existing housing opportunities i.e., available apartment rentals
 - Identify rental assistance resources e.g. Financial assistance
 - Provide housing policy recommendations to local jurisdictions e.g. rent control policies
 - Coordinate with unmet needs and groups
 - Engage with public messaging to increase awareness of resources
 - Identify at-risk populations and prioritize their housing needs
 - Task force includes the following organizations:
 - Insurance, HUD, FEMA, USDA Rural Development, Colorado Housing Authority, and Denver Community Development
- Setup a housing recovery center (FEMA/state), where information on housing is provided. One stop shop for resources and information e.g., how to get a disaster loan and obtain rental resources.
- Establish entity/assign responsibility for addressing recovery workforce housing needs e.g., tent cities, college dormitories
- Provide mechanism for engaging community and enabling them to provide input e.g., conduct public meetings and forums

Longer term actions:

- Identifying funds sources (public/private) to develop housing
- Campaigns to introduce government legislation to provide financial support for housing development e.g., grants, appropriations, other
- Developing incentives to convince population to stay or repopulate the area

Perceived Gaps:

- The group effectively utilized the framework in developing their Housing Action Plan. Specifically, the group walked through the list of considerations and confirmed each consideration was addressed by an organization or group such as the State task force or Recovery center. They were able to develop a housing action plan with high confidence.
- NGOs can really aid in the section. They really need to be added because they can play a major role in relieving the burden from the recovery team

8.0 Conclusion

Although the areas that require action in the Short-Term Recovery Phase were fairly robust, expected actions and capabilities for the Intermediate Phase and Long-Term activities were even more extensive. Critical is the speed that Recovery is begun; Recovery Planning must begin in the first few hours of the incident response. As the Joint Recovery Task Force and /or Recovery Support Functions identify prioritized objectives; they must be integrated with any continuing response incident management plans.

Utilizing a Type III IMT following a catastrophic incident appears to serve as a significant advantage for the rapid initiation of recovery operations during the earliest phases of response. The IMT demonstrated a good grasp of potential issues and could be expected to greatly assist with initial stabilization of the situation given clear situational awareness and a unified, multijurisdictional command and control Structure. IMT members provided valuable feedback for the effort underway to complete writing the Regional Recovery Framework; particularly in regards to recommendations for improving the RSFs. In terms of priority, first responder and Public Health and Medical (including public safety and security) was considered first and foremost, followed by Public Messaging/Information Management and Identifying, Stabilizing and Maintaining Critical Infrastructure and Property. Debris Management, Prioritization of Clean-up, and Post Disaster Housing were also discussed and considered priorities; underpinning all of these is the need to restore the local economy.

It is crucial that each jurisdiction's Recovery Plan(s) identify the key members of the Joint Recovery Task Force. These members extend beyond members of response organizations; i.e., Elected Official, Community Development Representative, Legal Representative, Jurisdictional spokesperson that community identifies as trusted, Waste Management Representative, Water Representative, Wastewater Representative, Private Sector Representative, Health Representative, Emergency Management Representative, Subject Matter Experts. Further, representatives in region with actual recovery experience should be identified and trained to form a Recovery Assistance Team, providing expertise to impacted jurisdictions.

For summary of lessons learned see Table 1.0 - Operational Considerations and Command Structures: Key Discussion Items and Recommendations; and Table 2.0. Recovery Support Functions: Priorities, Perceived Gaps on the following pages.

Table 1.0 - Operational Considerations and Command Structures: Key Discussion Items and Recommendations

Category	Discussion Item	Recommendations
Command Structure	Building a structure “above” the IMT will be critical for recovery options	Further discuss a Multi-Agency Coordination (MAC) Structure during the MAC Working Group Meeting 23FEB2012. Goal should be to develop and include a MAC structure in the Regional Recovery Framework and define protocols between the MAC and IMT in the recovery process.
	Situation Unit (SITU) would be expected to be very robust and a critical element	- Pre-identify a list of agencies / organizations and SMEs that will work within Technical Specialist Units during recovery. - Emphasize coordination within the Situation Unit
	Liaison activities will require a comprehensive plan	Ensure liaison roles and responsibilities are considered for operations coordination planning
	Recovery IMT: Operations Section	Consider the recommended changes to the IMT Operations Section structure for recovery operations coordination
	Recovery IMT: Logistics Section	Consider logistic matters for recovery operations coordination
Operational Considerations	Finance cost tracking will be a major challenge	Consider cost tracking issues for recovery operations coordination
	Funding for Operations and Rebuilding is unclear (e.g., funding sources, advanced planning, responsibilities)	Consider funding issues for recovery operations coordination
	Technical support and resources for a strong Safety staff should be expected (e.g., environmental and public health, DOE, national labs)	Provide the RTF with well-qualified personnel in technical areas, specifically safety
	Response JIC will evolve into Recovery JIC	Develop a process for JIC transition from response to recovery and ensure integration of recovery messaging early in the incident

Table 2.0 - Recovery Support Functions: Priorities, Perceived Gaps

RSF	Priorities	Perceived Gaps
Public Health and Medical Services	• Public Health and Medical Surge • Sustaining Medical Logistics and Supply Chain • Food, Agriculture and Water Safety • Fatality Management • Behavioral Health • Population Monitoring • Surveillance • Recovery Playbook • Policy / guidance for “reallocation of funds”	Education Materials • Mortuary disposal practices • Health and medical information for medical community and public • Food safety for industry and consumers Organized approach for recovery operations • Recovery playbook (being discussed in WARRP Public Health Working Group – POCs: Charles Smedly and John Gibbons) • Field hospital transition from acute to continued care
Public Messaging	• Public Messaging should use “211” hotline • Information Management • Unity of Effort • Robust Liaison Program / JIC • Strategic Messaging	Discussion in Regional Recovery Framework • Public Messaging is “generic” in the Regional Recovery Framework • Highlight “Diversion from Message” section • Highlight importance during Intermediate Phase • Central issues: behavioral/mental health; long-term food/water/housing/health issues; education/schools
Identify, Stabilize, and Maintain Infrastructure and Property	• Transportation • Utilities • Communication and IT • Public Health and Safety • Agriculture • Banking • Public/private partnership • Pre-identified, trained, multi-jurisdiction RTF • Economic Recovery policy group • Private sector liaison program • Messaging about containment levels • Communications process across support functions • Rapid identification of critical interdependencies	Organization and Coordination • Insurance Industry Representative • Economic Policy Group • Pre-identified and trained RTF • NGO/Volunteer representation • Integrate zoning and building code officials • Link RSFs to ensure alignment of priorities and goals Incentives / Funding • Agricultural community cannot sustain on reimbursement • Private sector incentives for maintaining critical infrastructure • Policy / Guidelines • Well-defined regulatory exemptions for recovery • Small and mid-sized private sector business continuity

		• Understand effects of terrorist codicils (i.e., amendments') on insurance policies • Replacement of temporary systems for dealing with people Science and Technology • Water source decontamination • Rapid identification and prioritization of CIKR
Debris Management	• Technical Working Group • Unified public messaging • Costs associated with different radiation levels • Debris definitions (contaminated vs. non-contaminated) • Enforcement of mitigation and barriers • Specialized training • Management of Inter- and intrastate commerce routes • Rapid options for housing • Liability for future claims	Planning • Liaison program plans • Messaging strategy for rebuilding plans • Cost analysis for disposal and clean-up methodologies Policies, Regulations, Laws, and Rights • Personal Property: Ability to trespass, decontaminate and/or condemn private property • Long-term worker compensation claims • Relaxed fire codes, building codes, and other regulations • Protection against unwarranted litigation/clear guidance to avoid it • OSHA regulations, PPE requirements hinder cleanup operations • Provide federal standards (vs. federal recommendations to locals) for containment levels prior to local debris management strategy
Prioritization of Clean-up	• Safety and Security / Public Health • Restoration of CIKR • Economic Stability and Community Needs	Organization and Coordination • MAC composition, with defined roles and responsibilities • Pre-identified multi-jurisdictional RTF Planning • Resource determination • Business continuity capacity of small and medium-size businesses Policies • Situation-specific "How clean is clean" policy decision

**Post Disaster
Housing**

- Housing Action Plan: Solutions for intermediate and long-term recovery phases
- Help people help themselves
- Community engagement in planning process
- Include NGO in organizational structure to help relieve burden from recovery team

Annex A – Agenda

December 14, 2011

0730 - 0830	Registration
0830 – 0900	Welcome: Introductions, Review of Workshop Objectives, Agenda Speakers: Ms. Robin Finnegan, Federal Emergency Management Agency Region VIII Mr. Chris Russell, Department of Homeland Security Mr. Garry Briese, Wide Area Recovery & Resiliency Program
0900 - 0930	Topic: Radiological Impacts Speakers: Mr. Steve Morreale, Department of Energy & Mr. Brooke Buddemeier, Lawrence Livermore National Laboratory
0930 – 1000	Topic: Real World Lessons Learned- Debris Management Speaker: Mr. Richard Graham, Environmental Protection Agency Region 8
1000 – 1030	Topic: Real World Lessons Learned-Japan Speaker: Mr. Steve Morreale, Department of Energy
1030 – 1045	Break
1045 – 1115	Topic: Framework Orientation Speaker: Pat Williams, Mayor's Office of Emergency Management & Homeland Security
1115 – 1145	Topic: Federal Recovery Efforts Speaker: Mr. George Betz, Federal Emergency Management Agency Region VIII
1145 – 1245	Lunch
1245 – 1315	Topic: DOD Support Speaker: Major Choy & Major Moore Northern Command

1315 – 1345	Topic: The National Disaster Recovery Framework Speaker: Mr. Martin McNeese, Federal Emergency Management Agency Region VIII
1345 – 1400	Break
1400– 1445	Topic: Incident Management Team (IMT) Overview Speaker: Mr. Tim McSherry, Jefferson County IMT
1445– 1500	Day 1 Wrap-up

December 15, 2011

0900 - 0930	Workshop Objectives, Workshop Format, Introductions, Scenario, Assumptions Speakers: Mr. Steve Stein, Pacific Northwest National Labs Mr. Brooke Buddemeier, Lawrence Livermore National Laboratory
0930 – 1115	IMT works with All Hazards Recovery Framework Mr. Tim McSherry, Jefferson County IMT
1115 – 1130	Workshop Status Brief: <i>Report out on Issues, Observations, & Challenges</i>
1130 – 1230	Lunch
1230 – 1430	IMT works with All Hazards Recovery Framework
1430 – 1530	Hotwash
1530 – 1600	Way Ahead Discussion: <i>Key Objectives, Framework, Expansion of IMT Scope</i>

Annex B – Workshop Participants

Last Name	First Name	Organization
Alexander	Dan	FEMA
Askenazi	Michele	Tri-County Health Department
Bakersky	Peter	FEMA RVIII
Benerman	Bill	Denver Department of Environmental Health
Betz	George	FEMA Region 8
Billings	Christine	Jefferson County Public Health
Bluhm	Carolyn	Denver OEMHS
Briese	Garry	WARRP
Bronstein, MD, FACMT	Alvin	Rocky Mountain Poison & Drug Center
Buddemeier	Brooke	LLNL
Campbell	Chris	LLNL
Chandler	Meghan	Thornton 911
Chapman	Matt	Aurora Fire Department
Chard	Michael	Boulder OEM
Chase	Charles	Denver Fire Department
Choy	Eric	HQ USNORTHCOM J35
Ciazza	Lisa	Aurora Fire Department
Clark	L. Dean	NPS- Retired
Cloyd	Wade	Denver International Airport
Craig	Charles	North Central Region
Deal	Tim	FEMA
DiPaolo	Elizabeth	WARRP
Easterling	Bill	Jefferson County IMT
Englund	Garth	Douglas County
Field	Scott	Denver Office of Emergency Management and Homeland Security
Franco	David	Sandia National Laboratories
Frary	Michael	Jefferson County IMT
Gafkjen	Jeff	FEMA
Gerber	Brian	University of Colorado Denver, Buechner Institute for Governance
GIBBONS	JOHN	HHS/ASPR
Ginley	William	US Army ECBC
Godd-Doe	Colleen	Jefferson County IMT
Graham	Richard	EPA Region 8
Graver	Jim	HUD
Grove	Glenn	Adams and Jefferson County Hazardous Response Authority
Groves	Katey	Cubic Applications, Inc.
Gunderson	Jonathan	CDPHE - OEPR

Last Name	First Name	Organization
Hackbarth	Hunter	Aurora FD
Hard	Dave	Colorado Division of Emergency Management
Hardy	Doug	SPAWAR Systems
Hatlestad	Daniel	Jefferson County IMT
Hilko	Mary	Rocky Mountain Poison & Drug Center
Hlavacek	Brian	Tri-County Health Department
Holmes	Lanney	FEMA
Huntsinger	David	City of Denver Public Works
Johnson	Melinda	Denver MMRS
Kallam	Hans	Colorado Emergency Preparedness Partnership (CEPP)
Laubhan	Zane	Gilpin County/Gilpin Ambulance Authority
Leach	Merrie	Boulder OEM
Lee	Steve	Denver International Airport
Long	Keith	Fairmont Fire Department
Lynch	Rose	City of Englewood
Lytle	Victoria	Jefferson County IMT
Mahlik	Scott	UC-Denver School of Public affairs / FEMA
Martinez	Rebecca	City of Brighton
McDermott	Heather	Adams County OEM
McNeese	Martin	FEMA
McSherry	Tim	Jefferson County IMT
Midgley	Mike	Cubic Applications, Inc.
Moore	Lyle	CDPHE
Moore	Ronnie	USNORTHCOM
Morreale	Steve	DOE/National Nuclear Security Administration
Mower	John	Cubic Applications, Inc.
Newman	Richard	Adams County OEM
Normandie	Kristin	HQ NORTHCOM J35
O'Keefe	Paul	Aurora Police Department
Ordonez	Michael	FEMA RVIII
Palmer	Greg	Arapahoe County Sheriff's Office
Parker	Andrew	Jefferson County IMT
Pearson	Brooke	Cubic Applications, Inc.
Rogers	Scott	West Metro Fire Rescue
Roome	Beth	CDPHE - OEPR
Rubenstein	Mike	Jefferson County IMT
Rushing	Derek	University of Colorado Hospital
Russell	Chris	DHS S&T
Sandusky	Jessica	Pacific Northwest National Laboratory
Santagata	Fran	Douglas County OEM

Last Name	First Name	Organization
Small	Carol	Jefferson County Emergency Management
Smedly	Charles	Denver Public Health
Socha	Marie	SHRR Consulting
Sorensen	Marcia	Douglas County Government - CPSD, Engineering Division
Stein	Steve	Pacific Northwest National Laboratory
Stein	Steve	PNNL
Steinhour	LeeAnn	Cubic/WARRP
Sullivan	George	American Red Cross
Sullivan	Suzanne	University of Colorado Hospital
Suter	Stephen	University of Colorado Hospital
Thomas	Jane	Clear Creek County Office of Emergency Management
Thompson	Kelli	Cubic Applications, Inc.
Tolbert	Bill	COVAD
Tucker	Mark	Sandia National Laboratories
Vogt	Jim	Idaho Springs PD / NWIMT
Walker	Thomas	Aurora Fire Department
Wallis	Bill	Jefferson County IMT
Wheat	Cari	ARC
White	Sarah	University of Colorado Hospital
Williams	Pat	Denver OEM
Wold	Bob	Colorado Division of Emergency Management

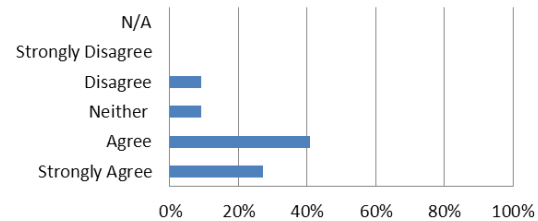
Annex C – National Core Capabilities Diagram

Key Response Planning Factors	Denver UASI RSFs	National Preparedness Goal Recovery Core Capabilities	National Recovery Framework RSFs
Planning Operational Coordination Public Information and Warning Public and Private Services and Resources	Prioritization of Clean-up Public Messaging Volunteer and Donation Management	Planning Operational Coordination Public Information and Warning	Community Planning and Capacity Building
Environmental Response/Health and Safety Health and Social Services Public Health and Medical Services	Debris Management Fatality Management Public Health and Medical Public Safety	Health and Social Services	Health, Social, and Community Services
Restore and Revitalize Infrastructure Systems	Maintain Infrastructure and Property	Infrastructure Systems	Infrastructure Systems
Economic Recovery	Economic Development	Economic Recovery	Economic Development
Housing	Post Disaster Housing	Housing	Housing
Natural and Cultural Resources	Natural and Cultural Resources	Natural and Cultural Resources	Natural and Cultural Resources

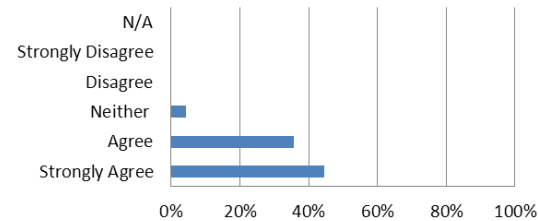
Annex D – Participant Feedback

Below are the results of participant feedback:

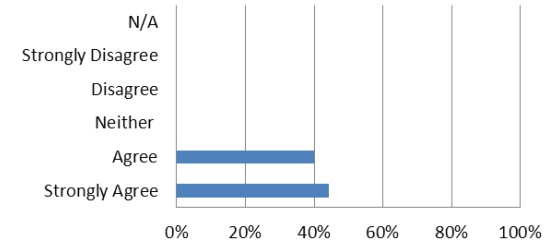
Examined Solutions to Reduce Time & Resources to Recover



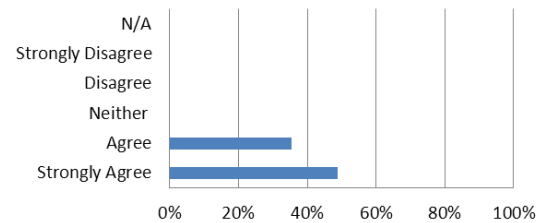
Examined the use of an All-Hazards IMT to Support Initiation of Recovery Operations



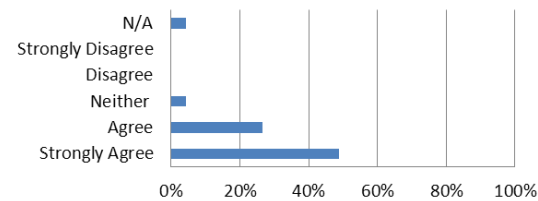
Enabled Participants to Identify Relevant Issues



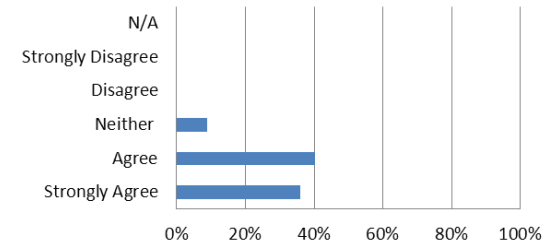
Enhanced Awareness & Understanding of Impacts from Radiological Incident



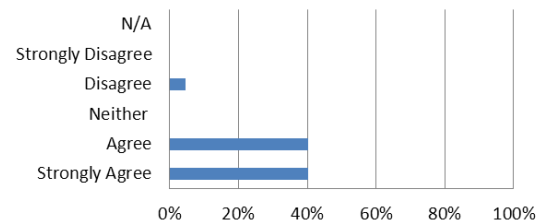
Increased Awareness of Radiological Impacts, Regional Recovery Framework, Federal Efforts, DoD Support, NDRF & IMT



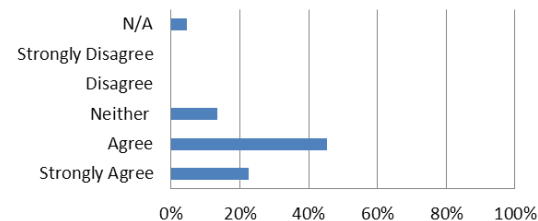
The Workshop was Effectively Executed



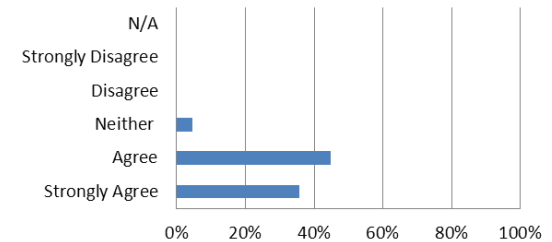
Explored an Organizational Approach of Regional Recovery Framework



Effectively Explored the Operationalization of Regional Recovery Framework



The Facilities Contributed to Success



Annex E –Key Points of Contact

Planning Team

- Aurora OEM: Matt Chapman
- Denver OEM: Matt Mueller
- FEMA 8: Lanney Holmes
- Jefferson County OEM/IMT: Tim McSherry
- State OEM: Dave Hard
- Regional Framework (PNNL): Steve Stein / Jessica Sandusky
- WARRP Integrators (Cubic): Mike Midgley, John Mower, Katey Groves, Brooke Pearson, Kelli Thompson, Stacey Tyler
- WARRP Local Integrators (Cubic): Gary Brieze, LeeAnn Steinhour
- WARRP PM: Chris Russell
- WARRP Systems Analysis: Dave Franco (SNL)

Key Points of Contact: The following personnel are key points of contact for this workshop:

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Annex F – Acronyms

After Action Report (AAR)
Branch Director (BD)
Chemical, Biological, Radiological (CBR)
Centers for Disease Control (CDC)
Colorado Division of Emergency Management (CDEM)
Colorado Department of Public Health (CDPHE)
Colorado Emergency Preparedness Partnership (CEPP)
Community Emergency Response Team (CERT)
Criminal Investigation Division (CID)
Critical Infrastructure and Key Resources (CIKR)
Colorado Housing and Finance Authority (COFA)
Common Operating Plan (COP)
Continuity of Operations Plan (COOP)
Civil Support Team (CST)
Department of Homeland Security (DHS)
Department of Defense (DoD)
Department of Energy (DOE)
Defense Threat Reduction Agency (DTRA)
Emergency Management Assistance Compact (EMAC)
Emergency Management (EM)
Emergency Operations Center (EOC)
Frequently Asked Question (FAQ)
Federal Bureau of Investigations (FBI)
Federal Emergency Management Agency (FEMA)
Finance Section Chief (FSC)
Government (GOVT)
Hazardous Materials (HAZMAT)
Health and Human Services (HHS)
Housing and Urban Development (HUD)
Incident Action Plan (IAP)
Insurance and Brokers Association (IBA)
Incident Commander (IC)
Interagency Biological Restoration Demonstration (IBRD)
Inter-Governmental Agreement (IGA)
Incident Management Handbook (IMH)
Incident Management Team (IMT)
Joint Field Office (JFO)
Joint Information Center (JIC)
Joint Information System (JIS)
Joint Recovery Task Force (JTRF)
Lawrence Livermore National Laboratories (LLNL)
Logistics Section Chief (LSC)
Multi-Agency Coordination (MAC)
Maximum Containment Level (MCL)
National Disaster Recovery Framework (NDRF)

Non-Governmental Organization (NGO)
Office of Emergency Management (OEM)
Operations (OPS)
Public Affairs Guidance (PAG)
Public Information Officer (PIO)
Program Manager (PM)
Pacific Northwest National Laboratory (PNNL)
Point of Contact (POC)
Point of Dispensing (POD)
Personal Protective Equipment (PPE)
Planning Section Chief (PSC)
Recovery Support Function (RSF)
Recovery Task Force (RTF)
Situation Unit (SITU)
Social Media (SM)
Subject Matter Expert (SME)
Sandia National Laboratory (SNL)
Science and Technology (S&T)
Urban Area Security Initiative (UASI)
Unified Command (UC)
U.S. Department of Agriculture (USDA)
Wide Area Recovery & Resiliency Program (WARRP)