MASS DECONTAMINATION OPERATIONAL SYSTEM DESCRIPTION

Hazardous Materials Subcommittee

ICS-MD-161-1

January 12, 2023

This document contains information relative to the Incident Command System (ICS) component of the National Incident Management System (NIMS). This is the same Incident Command System developed by FIRESCOPE.

Additional information and documentation can be obtained from the following source:

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23300 Castle Street, Riverside CA 92518
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INTRODUCTION

The Mass Decontamination (Decon) organization module is designed to provide mass decon in the all-hazard environment. This Operational System Description (OSD) was developed with the intent to provide a clear description of the roles, duties, and equipment pertinent to the position of the Mass Decontamination Unit. The typed Mass Decon Cache is an all-hazard resource that can be requested for a preposition should Mass Decon be a concern or called upon in the event of actual need. The purpose of this cache is to provide a mission ready package of equipment that is capable of thoroughly decontaminating persons or equipment at a large scale. This package could be called upon due to exposure of a hazardous material, Weapon of Mass Destruction, or after exposure in an all-hazard setting e.g.: mudslides, flood events etc.

Initial Mass Decon operations will be directed by the first arriving public safety officer in alignment with their level of equipment, training, and ability. Under no circumstances should decontamination be delayed while mass decon equipment is being assembled. Gross decon using traditional methods of water delivery continues to be an important step in effective patient care. Decontamination after an exposure to a substance is not a new concept. Hazardous Materials Teams have been performing this function to remove product from themselves after entry since the fire service entered the Hazmat arena. Decontamination of mass numbers of civilians has become a concern since 9/11. Concerns of Terrorist attacks, failures of chemical facilities, and pesticide over sprays have occurred. In these instances, and others, large numbers of civilians and rescuers have required a thorough decontamination process. Considering such need, FIRESCOPE has developed this OSD and recommends minimum staffing levels of the typed decon caches. It is not intended to exclude the potential need to augment staffing levels based on the complexity of the assignment and or duration.

Additional resources may include local Hazardous Materials Teams, local law enforcement, regional stakeholders, county health departments, mass transit representatives, and others as needed. This mass decon unit fills a gap in the response capability of agencies by offering enhanced decon tools and equipment. This cache of equipment will allow agencies to provide warm water decon, effective runoff containment, and modesty for all persons involved in mass decon.

Mass Decon resources may need to be adjoined with other disciplines. Most specifically Mass Decon units shall be paired with the appropriate Hazardous Materials Response team when hazardous chemicals are involved in the mass exposure or contamination event. Mass Decon units shall be aware of what they are decontaminating. The

technical reference for the agent or agents involved will be performed by the Hazardous Materials Group.

Mass Decon companies are typed based solely on the scale at which they can perform the mass decon function. All three typing levels have the same abilities and tools in different quantities.

FIRESCOPE, which has a broad representation from the California Fire Service created this OSD.

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This document reflects the standards established by FIRESCOPE. A description of Mass Decontamination and how it fits within the Operations Section can be found at ICS 420-1 Field Operations Guide in Chapter 17.

ICS MODULAR DEVELOPMENT

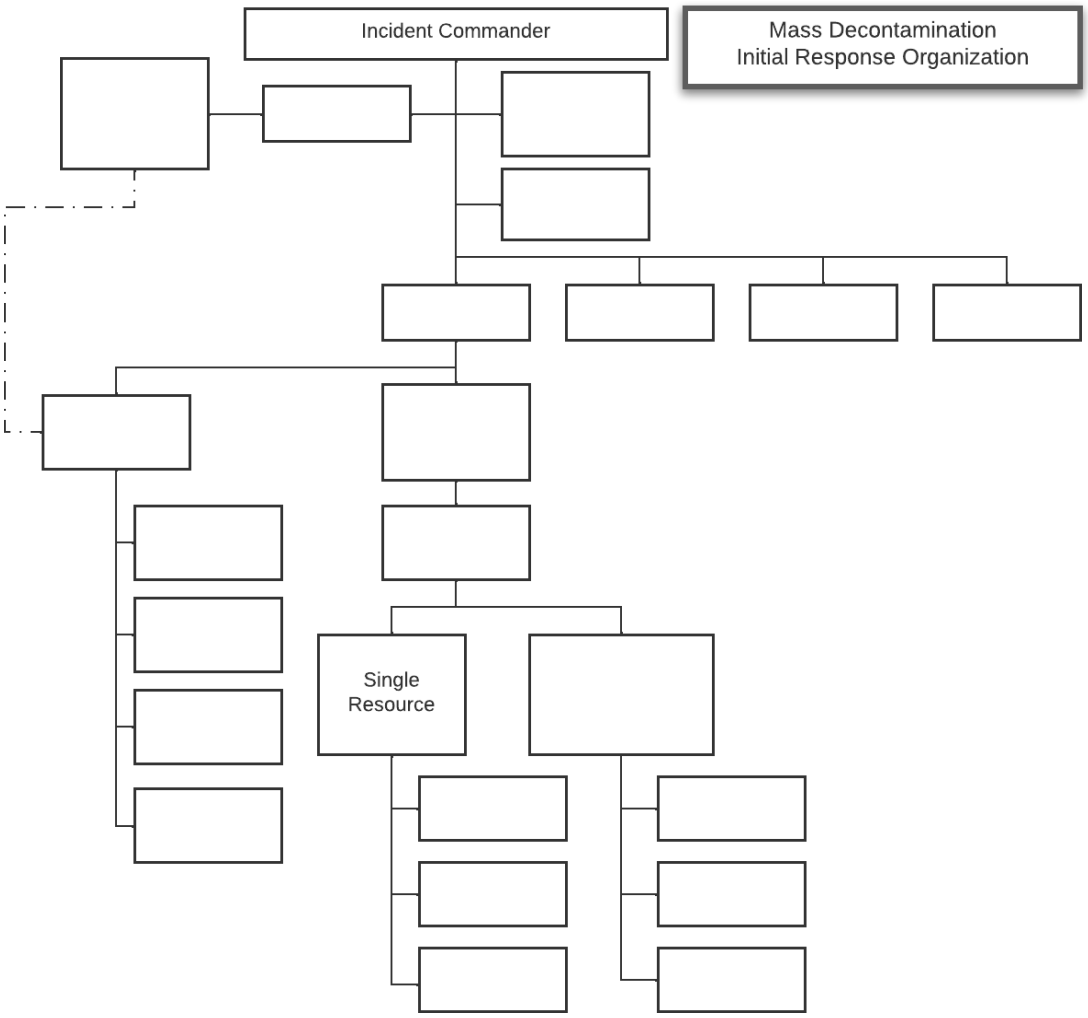
The Mass Decontamination organizational module is designed as an organizational structure that will provide necessary supervision and control for the essential functions required at virtually all Mass Decontamination incidents. This is based on the premise that controlling the tactical operations of companies and movement of personnel and equipment will provide a greater degree of safety and also reduce the probability of spreading of contaminants. The Hazardous Materials Group Supervisor or the Hazardous Materials Branch Director (if activated) will direct primary functions, and all resources that have a direct involvement with the mass decontamination will be supervised by one the functional leaders or the Hazardous Materials Group Supervisor. This function can be established as a Mass Decon Group or Mass Decon Branch. Under those circumstances the Mass Decon Group Supervisor or Mass Decon Branch Director will report to Operations Section or directly to the Incident Commander.

Initial Response Organization: The Incident Commander manages all initial response resources as well as all Command and General Staff responsibilities. The Single Resource will prioritize the need for mass decon based on situational awareness and current incident objectives. In this case traditional gross decon using water delivery of low pressure high volume streams is recommended.

Reinforced Response Organization: In addition to the initial response, the responsible agencies have met and established Unified Command. They have established a Hazardous Materials Group to manage all activities around the Control Zones and have coordinated with Law Enforcement to isolate and contain the operational area. Mass Decontamination has been established to handle a large number of contaminated victims. The Unified Command has established a Planning Section, a Staging Area, and a Safety Officer. The Hazardous Materials Group is advising the Mass Decon Unit Leader in the appropriate PPE and associated hazards of chemicals involved in the incident. Note that the Handler position can fulfill a variety of roles and may transition between specific roles throughout the incident.

Multi Division/Multi Group Response Organization: The Unified Command has activated most Command and General Staff positions and has established a Mass Decontamination Group. The Mass Decontamination Unit Leader has set up lanes to handle both ambulatory and non-ambulatory patients. The Planning Section is actively tracking the resources assigned to the expanding incident.

Multi Branch Response Organization: The Unified Command has activated all Command and General Staff Positions. Multiple Branches have been established and the Mass Decon Branch has established the necessary Mass Decon Groups.



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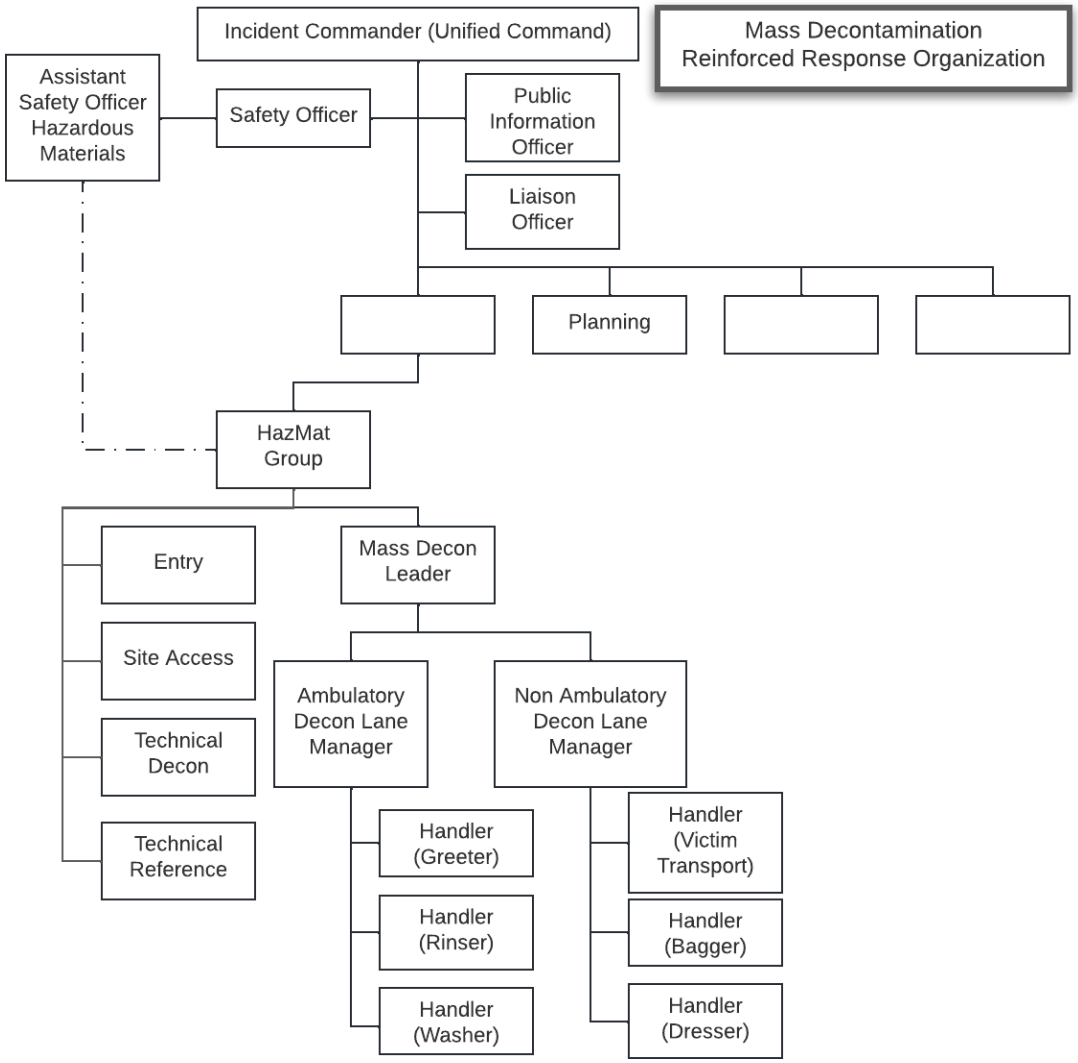

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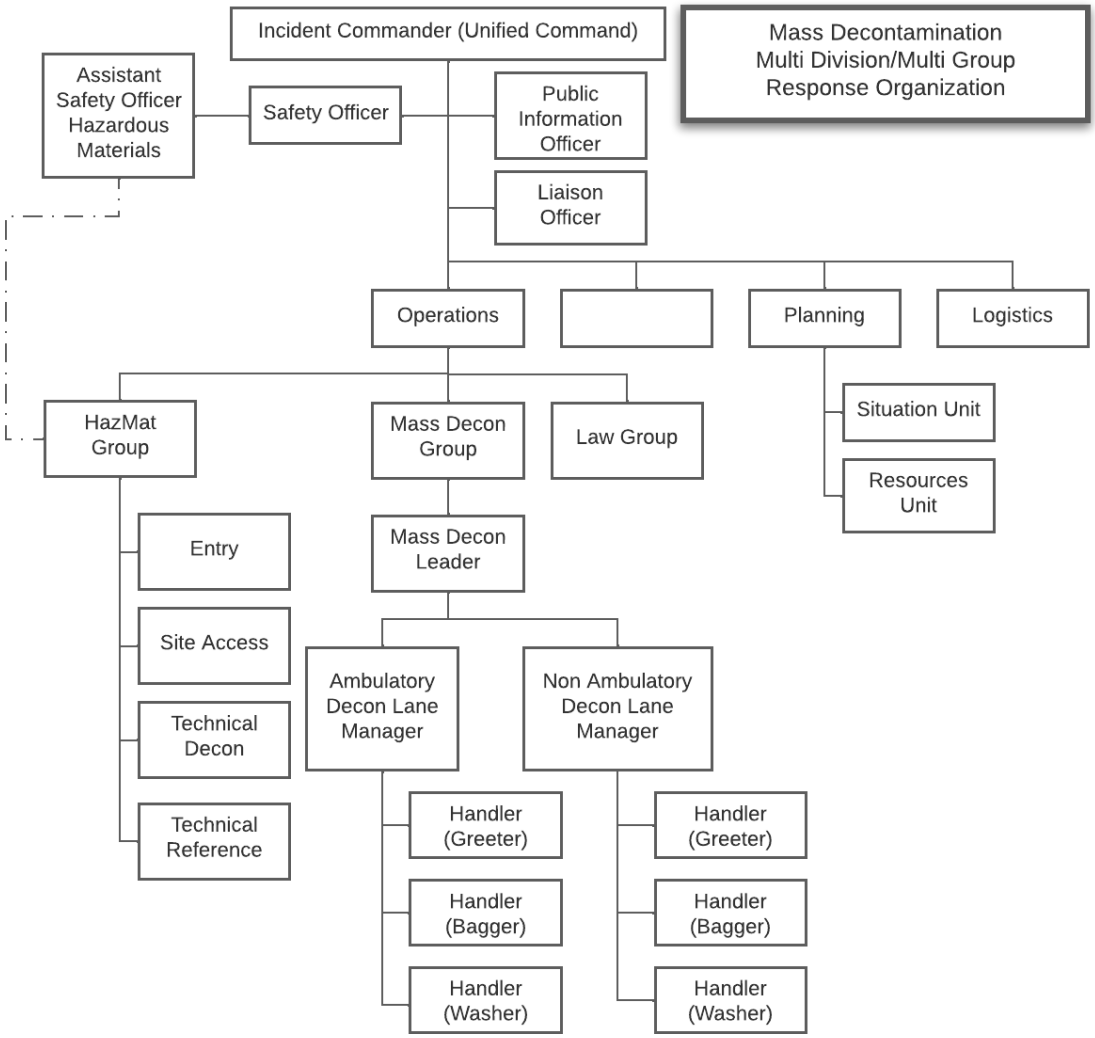

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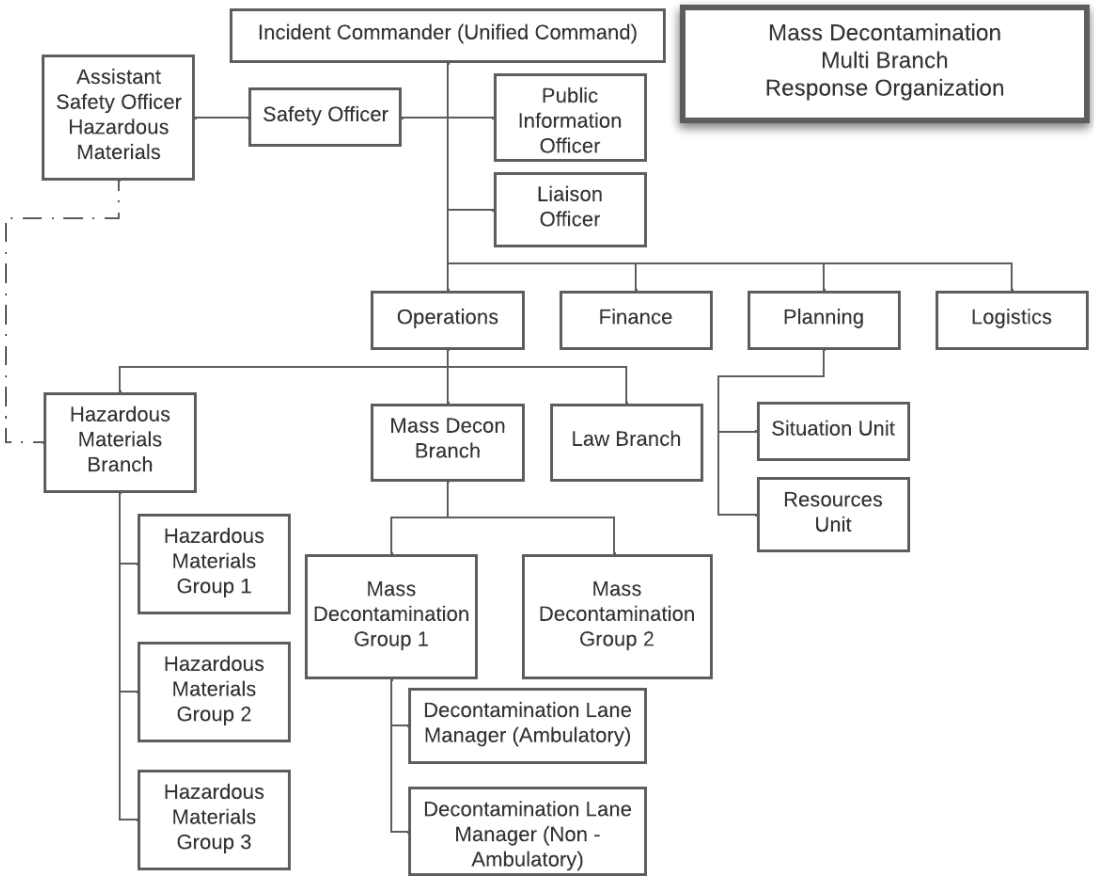

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POSITION CHECKLIST

MASS DECONTAMINATION BRANCH DIRECTOR - The Mass Decontamination Branch Director reports to the Operations Section Chief if activated, or directly to the Incident Commander. The Director is responsible for the implementation of the phases of the Incident/Event Action Plan that deal with the mass decontamination of persons and equipment. The Mass Decontamination Branch Director directs the overall operations of the Mass Decontamination Branch. This includes the accurate tracking of belongings including the weapons belonging to law enforcement partners. This Branch must work closely with the Hazardous Materials Branch or Group to ensure that the chemicals involved in the exposure or contamination are researched and effectively mitigated with the appropriate form of mass decon. The Mass Decon Branch will select the appropriate PPE based on the recommendations of the HazMat Group.

a. Check in and obtain a briefing from the Operations Section Chief or Incident Commander.
b. Ensure coordination of activities with Hazardous Materials Branch Director or Hazardous Materials Group Supervisor.
c. Ensure the development of Control Zones and Access Control Points, and the placement of appropriate control lines. Control Zones shall be based on verified meter readings or technical reference models.
d. Ensure that mass decontamination components of the Site Safety and Control Plan (ICS Form 208) are implemented.
e. Conduct safety briefings with the Mass Decontamination Group Supervisors assigned to the Mass Decon Branch.
f. Coordinate with the Assistant Safety Officer(s) to ensure safe operational procedures are followed.
g. Participate, when requested, in the development of the Incident Action Plan.
h. Ensure that the proper Personal Protective Equipment is selected and used. Selection of PPE shall be based on the recommendations of the technical reference of the Haz Mat Group/Branch.
i. Ensure that the appropriate agencies are notified through the Incident Commander.
j. Coordinate with the handling of weapons, contraband, evidence, or other unusual articles with Law Enforcement.
k. Ensure procedures for proper handling of personal effects.
l. Ensure provisions for modesty for all victims (Families, Male and Female Lanes, etc.) have been put in place.
m. Ensure proper setup, demobilization of Contamination Reduction Zone, and proper disposal of any contaminants.

n. Coordinate with the Medical Group Supervisor (if activated).
o. Ensure effectiveness of the decontamination process as determined by technical reference.
p. Maintain Unit/Activity Log (ICS Form 214) if required.

MASS DECONTAMINATION GROUP SUPERVISOR - The Mass Decontamination Group Supervisor reports to the Operations Section Chief, the Hazardous Materials Branch Director or the Mass Decontamination Branch Director (if activated). The Mass Decontamination Group Supervisor is responsible for the implementation of the phases of the Incident/Event Action Plan dealing with the Mass Decontamination Group operations. The Mass Decontamination Group Supervisor is responsible for the assignment of resources within the Mass Decontamination Group, reporting on the progress of control operations, and the status of resources within the Mass Decontamination Group. The Mass Decontamination Group Supervisor directs the overall operations of the Mass Decontamination Group.

a. Check in and obtain briefing from the Operations Section Chief or Branch Director (if activated).
b. Ensure coordination of activities with Hazardous Materials Group Supervisor.
c. Ensure the development of Control Zones and Access Control Points and the placement of appropriate control lines. Control Zones shall be based on verified meter readings or technical reference models.
d. Ensure that mass decontamination components of the Site Safety and Control Plan (ICS Form 208) are implemented.
e. Conduct safety meetings with the Mass Decontamination Group.
f. Coordinate with the Assistant Safety Officer(s) to ensure safe operational procedures are followed.
g. Participate, when requested, in the development of the Incident Action Plan.
h. Ensure that the proper Personal Protective Equipment is selected and used. Selection of PPE shall be based on the recommendations of the technical reference of the HazMat Group/Branch.
i. Ensure that the appropriate agencies are notified through the Incident Commander.
j. Coordinate with the handling of weapons, contraband, evidence, or other unusual articles with Law Enforcement.
k. Ensure procedures for proper handling of personal effects.
l. Ensure provisions for modesty for all victims (Families, Male and Female Lanes, etc.) have been put in place.
m. Ensure proper setup, demobilization of Contamination Reduction Zone, and proper disposal of any contaminants.
n. Coordinate with the Medical Group Supervisor (if activated).

o. Ensure effectiveness of the decontamination process as determined by technical reference.
p. Maintain Unit/Activity Log (ICS Form 214) if required.

MASS DECONTAMINATION UNIT LEADER - The Mass Decontamination Unit Leader reports to the Hazardous Materials Group Supervisor or Mass Decontamination Group Supervisor (if activated). The Mass Decontamination Unit Leader is responsible for the operations of the mass decontamination element, providing decontamination as required by the Incident/Event Action Plan.

a. Check in and obtain briefing from the Hazardous Materials Group Supervisor or Mass Decontamination Group Supervisor (if activated).
b. Establish the Contamination Reduction Corridor(s).
c. Identify contaminated people and equipment.
d. Supervise the operations of the decontamination element in the process of decontaminating people and equipment.
e. Maintain control of movement of people and equipment within the contamination Reduction Zone.
f. Maintain communications and coordinate operations with the Entry Leader as necessary.
g. Maintain communications and coordinate operations with the Site Access Control Leader and the Safe Refuge Area manager (if activated).
h. Coordinate the transfer of contaminated victims requiring medical attention (after decontamination) to the Medical Group.
i. Ensure procedures are in place for proper handling of personal effects.
j. Coordinate handling, storage, and transfer of contaminants within the Contamination Reduction Zone.
k. Maintain Unit/Activity Log (ICS Form 214).

DECONTAMINATION LANE MANAGER – The Decontamination Lane Manager reports to the Mass Decontamination Leader. The Decontamination Lane Manager is responsible for the operations of the decontamination element providing decontamination as required by the Incident/Event Action Plan.

a. Check in and obtain a briefing from the Mass Decontamination Leader.
b. Establish the ambulatory/non-ambulatory decontamination lane(s) within the Contamination Reduction Zone as needed.
c. Identify contaminated people and equipment.
d. Supervise the operations of the decontamination element in the process of decontaminating victims and equipment.
e. Maintain control of movement of people and equipment within the decontamination lane(s).

f. Maintain communications and coordinate operations with the Decontamination Leader.
g. Coordinate the transfer of contaminated victims requiring medical attention (after decontamination) to the Medical Group.
h. Coordinate handling, storage, and transfer of contaminants and personal effects within the Communication Reduction Zone.
i. Maintain Unit/Activity Log (ICS Form 214).

HANDLER – The Handler reports to the Decontamination Lane Manager. The Handler is responsible for the movement of ambulatory/non-ambulatory victims through the Contamination Reduction Corridor. The Handler assists with the movement of victims within the Contamination Reduction Zone from receipt of victims through the decontamination process. Handlers will deliver decontaminated ambulatory/ non-ambulatory victims to triage personnel. Handlers will go through the appropriate decontamination measures as outlined in the Site Safety and Control Plan (ICS Form 208) prior to exiting the Contamination Reduction Zone (CRZ).

Handlers may be assigned to a variety of functions. Handlers may alternate through the following functions throughout the incident as resource deployment varies. Not all incidents will require all of the handler functions.

HANDLER - Greeter – responsible for directing the movement of ambulatory victims through the Contamination Reduction Corridor.

HANDLER - Doffer – responsible for the removal of clothing and personal belongings of victims.

HANDLER - Bagger – responsible for the accurate tracking of clothing and personal belongings of victims.

HANDLER - Washer – responsible for the effective washing of victims. Responders assigned to this role determine the appropriate level of agitation.

HANDLER - Rinser – responsible for removal of contaminants of the non-ambulatory victims through the decontamination process.

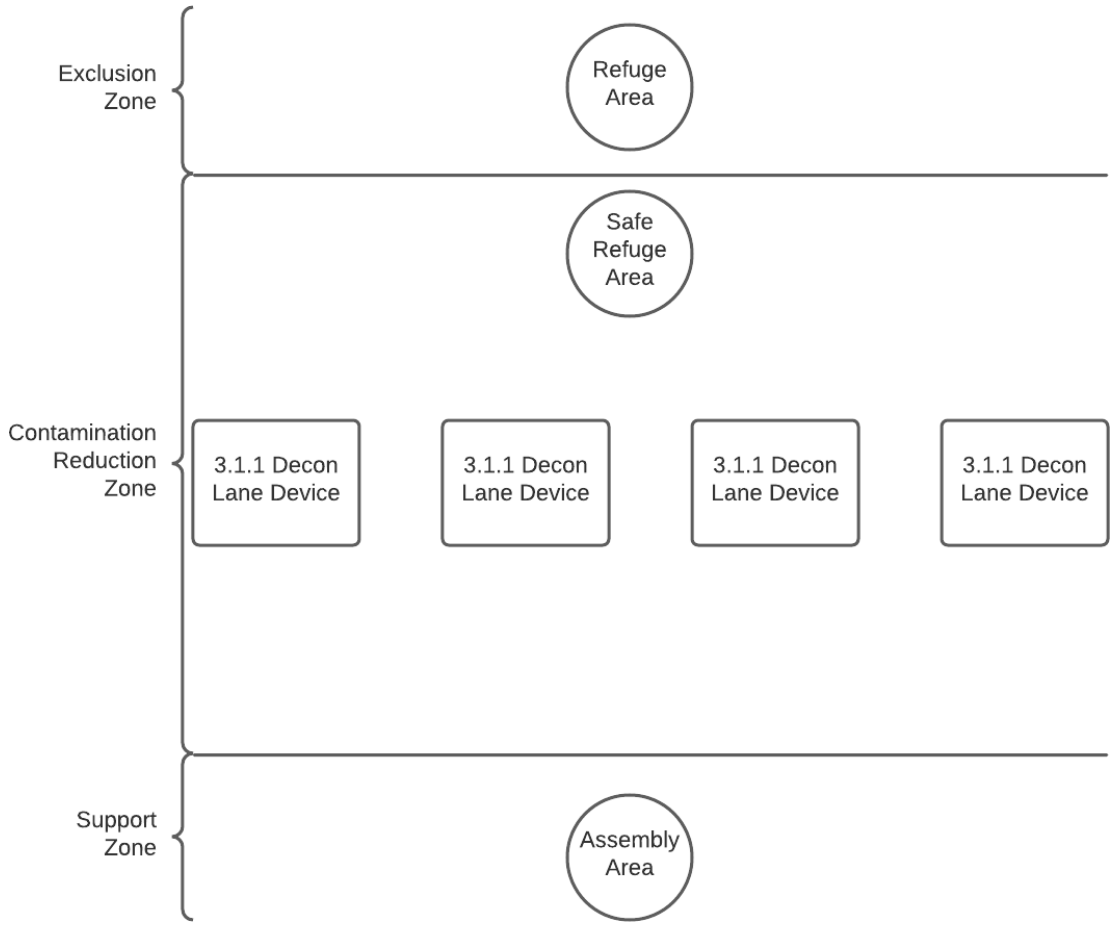
HANDLER - Dryer – responsible for drying victims. This role may be critically important during cold weather conditions.

HANDLER - Dresser – responsible for covering the non-ambulatory victims for modesty. Responders assigned to the dresser role may also assist ambulatory victims with donning modesty clothing.

HANDLER - Victim Transporter – responsible for moving non-ambulatory victims from the decontamination lane and delivering to Triage Unit. Victims may need transport throughout the contamination reduction corridor.

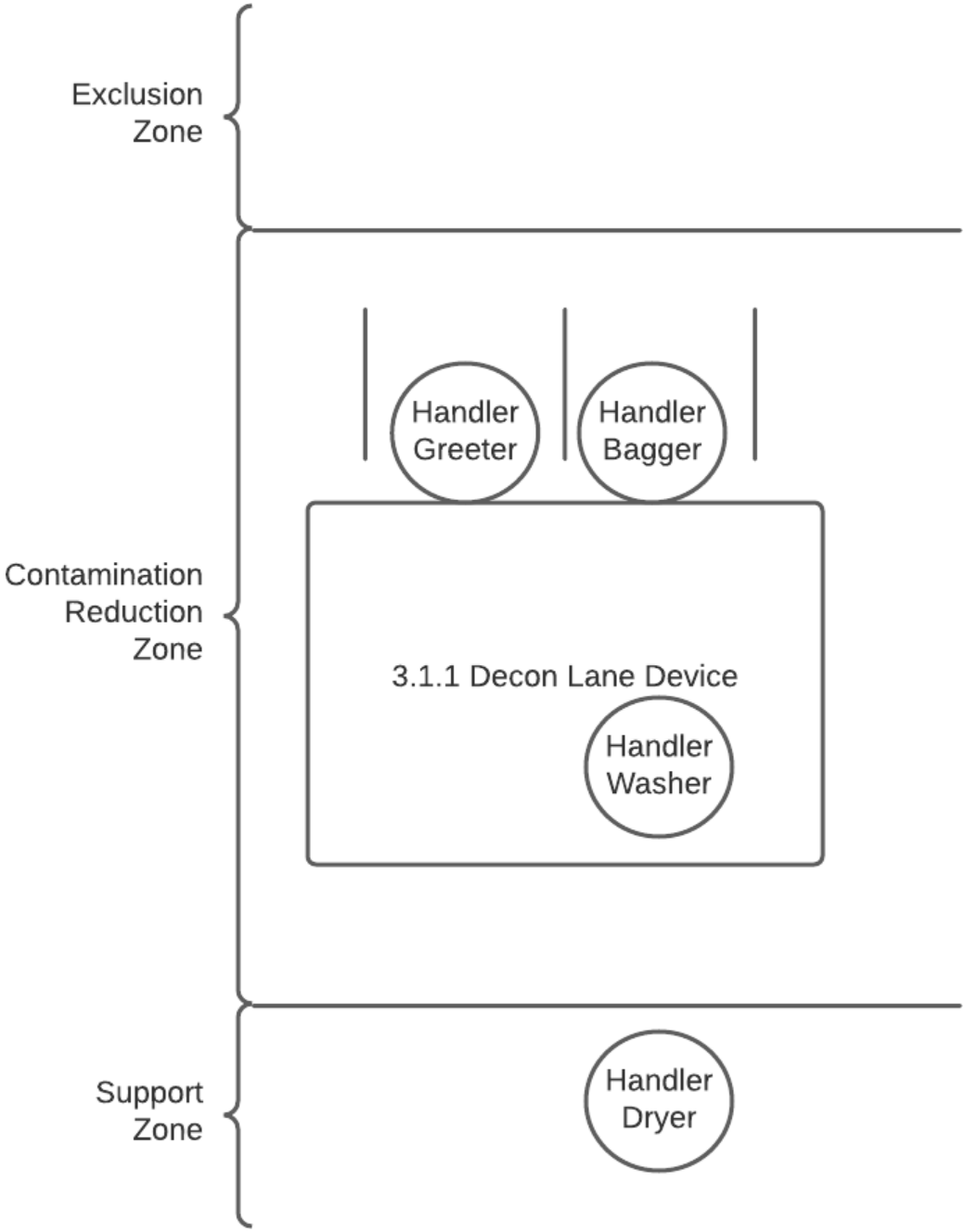
HANDLER - Decontamination Support Personnel – assists in the setup and support of the decontamination lanes.

CONTROL ZONE LAYOUT



Mass Decon Overview: The Mass Decon Layout must include room for the intended size of victims being decontaminated. The size and location of the control zones shall be determined by verified instrument readings or technical reference recommendations. The HazMat Group/Branch shall assist in determining the appropriate location of the control zones.

While in the Exclusion Zone victims can assemble in a refuge area. While in the Contamination Reduction Zone victims can assemble in the safe refuge area. In some incidents victims will have gone through gross decon.



Decon Lane Layout: The Contamination Reduction Zone can be arranged to meet the overall incident objectives and leader's intent of the incident commander. Handlers assigned to Decon Lane Manager fill the functions as needed. Ambulatory and non-ambulatory patients are greeted and moved through the decon lane device.

APPENDIX 1

MASS DECON TYPING LEVELS:

Decontamination Unit caches are designed as an all-risk platform to respond as needed. Decon Units at each level must at a minimum be capable of performing mass decontamination while addressing all the following concerns:

- Care for ambulatory and non-ambulatory patients
  - An equipment assembly that can allow patients to move through decon supine and/or prone.
- Have systems in place to implement warm water decon
  - A flash heater or equivalent that can render all water associated with decon to a temperature of 77 degrees Fahrenheit or greater.
  - Carry sufficient blankets or equivalent to care for patients post decon.
- Have sufficient equipment to contain the runoff of water used in decon
  - This equipment will collectively contain runoff from the point of contact with all persons going through decon.
- Address the modesty concerns of all persons that go through decon
  - Decon corridors must provide a visual barrier while persons go through decon.
  - MODESTY CLOTHING: Usually lightweight disposable Tyvek® or equal, an array in various sizes; Complete with booties or foot protection.
- Address the personal property concerns of all persons that go through decon
  - PERSONAL PROPERTY TRACKING: Kit to consist of forms, tags, receipts, sealable baggies, labels, etc., to document personal property collected such as jewelry, wallets, pagers, cell phones, and documents personal information of owner.

TYPE I	TYPE II	TYPE III
1000 persons	500 persons	250 persons

- Type 1: Ability to perform Mass Decon on a large scale.
  - Teams will be able to perform:
    - Mass Decon for 1000 persons or more as per agency requirements.
    - Carry sufficient quantities of equipment listed above to accomplish the goals above.

Type 2: Ability to perform Mass Decon on a medium scale.

- Teams will be able to perform:
  - Mass Decon for 500 persons.
  - Carry sufficient quantities of equipment listed above to accomplish the goals above.

- Type 3: Ability to perform Mass Decon on a small scale.
  - Teams will be able to perform:
    - Mass Decon for 250 persons.
    - Carry sufficient quantities of equipment listed above to accomplish the goals above.

Recommended Capability Chart:

Type 1	Type 2	Type 3
1000 Persons	500 Persons	250 Persons
12 Lanes	6 Lanes	3 Lanes

MASS DECON RESPONSE EXPECTATIONS

It is the general expectation that agencies who choose to outfit any of the three minimum equipment caches will respond with two **(2)** members to operate the vehicle and safely deploy the cache of equipment. These two members will join with additional staffing to operate the described number of lanes of the mass decon system.

A Type 1, Type 2, or Type 3 Mass Decontamination Unit is not intended to be deployed as a stand-alone resource. They require that a Typed HazMat Team and a Task Force of resources that are capable of pumping, be deployed with them as part of a Task Force to be effective. The Task Force can be composed of units from a single agency or multiple agencies. The typed HazMat Team that responds shall be appropriate for the hazards encountered. CAL OES typed HazMat resources will safely respond to Unknown Chemicals/WMDs, Unknown Chemicals, or Known Chemicals. Matching the appropriate Typed HazMat team to the Mass Decon Unit is essential for responder safety.

STAFFING

Additional staffing requests are needed beyond the (2) personnel assigned and will be based on situational awareness and overall incident objectives. For example, non-ambulatory patients contaminated with a persistent chemical will require a significantly larger staffing component than ambulatory patients contaminated by a soluble liquid. Incident commanders shall adjust resource deployment based on the needs of the incident.

The primary difference between Mass Decontamination cache types is the total number of patients that they can provide decontamination for. All Decontamination cache types are expected to be able to perform decontamination for WMD incidents involving chemical, biological, or radiological materials. All Mass Decontamination types have a minimum staffing of two (2) personnel that are familiar with the equipment they are bringing. They will be relied on to operate the tents and/or trailers that they bring to the incident. The Typed HazMat Team will provide various overhead positions to support the decontamination operation. They also bring personnel that are trained to be able to safely handle the chemicals involved and provide decontamination method recommendations. The intent is that they guide the other personnel assigned to the Decon Unit. The Typed Haz Mat Team also brings numerous detection capabilities to assist with validating that the decontamination methods in place are effective. The detection capabilities can also be deployed to monitor the worksite and keep personnel working in the area safe.

Additional resources will be required for staffing and pumping. Engine companies are needed to support the operation. They will be utilized to staff the decontamination lanes and help guide ambulatory patients through the process. Engine companies will also be needed to provide decontamination to non-ambulatory patients. Members assigned to this task will be required to perform First Responded Operational (FRO) level skills.

The total staffing required will by nature be incident driven and determined by the Incident Commander. The Mass Decon Branch Director or Mass Decon Group Supervisor may assist in this calculation. Many factors will determine the total staffing required to accomplish the incident objective. For example, a durable chemical may require additional Handlers to perform the Washer function. Non ambulatory patients will greatly increase the necessary staffing of the mass decon group. Incident Commanders must take the totality of circumstances into account when determining the total staffing level. The mass decon of 1000 victims could take as many two strike teams of engines to accomplish if four Handlers are required for each lane of a twelve lane Type 1 deployment.

APPENDIX 2

MASS DECON TYPING SUB GOALS:

It is expected that in most cases patients will go through traditional gross decon prior to the need for secondary decon with soap and warm water. In no case should a patient's care be delayed while secondary mass decon equipment is assembled.

Codify existing equipment statewide for the purpose of interagency mutual aid in the event of Mass Decon needs. This Minimum Equipment List (MEL) and capability exists in agencies across the state. This typing program supports the existing equipment and allows for the deployment of units across jurisdictional lines. This typing program is designed to be attainable and sustainable over time.

- Identify minimum standards for equipment
- Identify minimum quantities of equipment
- Identify minimum capability for each Type

MASS DECON TYPING GOAL:

Create a tiered Mass Decon Typing system that uses a Minimum Equipment List to match the appropriate needs of an agency with the capabilities of a thoroughly equipped Mass Decon cache. The tiered Decon units will deploy and operate as support to local FRO/Decon trained fire department members.

Goals of patient decontamination

- Achieve an improvement in patient's acute health outcomes by reducing morbidity and mortality.
- Achieve an improvement in patient's long-term health outcomes by preventing delayed morbidity.
- Protect the health and functioning of the health care system by preventing secondary contamination of responders, receivers, and infrastructure.
- Assure the best health outcome for the most patients. This might result in a departure from the current paradigm by allowing for decontamination to a less than complete level but aims to provide everyone with timely decontamination so that:
    - Those patients requiring supportive or definitive medical care receive it at the appropriate time; and
    - The majority of minimally exposed patients may be able to bypass medical evaluation, preserving medical resources for those with the most urgent needs.

- Provide secondary decon using an appropriate decontamination method for patients that require additional decontamination.

Mass Decontamination Principles:

1. Time is critical to save the most lives.
   a) The immediate removal of clothing outside the contaminated area for patients who have been visibly contaminated or who have been suspected of having been contaminated and
   b) Processing the victims through a high-volume, low-pressure water shower (~50 to 60 psi) is a priority. This may aid in the removal of 80-90% of physical contamination in almost all cases.
2. Provide effective mass casualty decontamination. Other activities, such as setting up commercial decontamination tents, tarps, additional decontamination equipment, and/or creating a soap-water solution should be accomplished when time permits.
3. Conduct decontamination triage prior to administering a high-volume, low-pressure water shower.
4. When the contamination involves chemical vapors, biological or radiological material, using gentle friction (such as rubbing with hands, cotton flannel or microfiber cloth, or sponges) is recommended to aid in removal of contamination. Rubbing should start with the head and proceed down the body to the feet. Extra care should be taken to prevent the spread of contamination to the mouth, nose, and eyes (such as holding one's breath to avoid inhalation/close contact with mucosa and closing one's eyes while wiping the face and head). The key to successful mass casualty decontamination is to use the fastest approach that will cause the least harm and do the most good for the majority of the people. Coordination of initial assessment and ongoing observation procedures is critical to ensure that the health needs of victims continue to be met as the incident evolves.

Mass Decon Response Expectations:

The following chart represents reasonable expectations for incident objective completion based on the lanes described and staffing provided in this document. This formula stays consistent with each Typing level. The recommended minimum wash time is taken from the Edgewood Chemical Biological Center guidance:

A three (3) minute wash time per patient equals 4.2 hours (250 minutes) to complete the objective.
Recommended minimum thirty (30) second wash time per patient equals forty-two (42) minutes to complete the objective.

APPENDIX 3

MASS DECON MINIMUM EQUIPMENT LIST

1.1 Rescuer Related Tools & PPE

The following tools and PPE are designed to be stored and transported in such a manner that it is available for the staffing required based on the lanes in operation. Responding agencies will be required to equip their members with appropriate PPE based on the mission at hand. Examples of this additional PPE could include Respiratory Protection and communication equipment. This list of PPE will allow responders to staff the appropriate number of lanes and perform FRO level decon at scale.

Inv. #:	Item Name and Description	Type I Required Minimum	Type II Required Minimum	Type III Required Minimum
1.1.1	**SUIT, LIMITED USE, Splash Protective Suit, NFPA 1992**: With at least bond or sealed seams (not simple stitch or surged); Liquid tight zipper.	40	20	10
1.1.2	**CHEMICAL RESISTANT TAPE:** Roll of chemical resistant tape to be used with 1.1.1 if needed.	2	2	1
1.1.3	**REPLACEMENT GLOVES, Liquid Splash Protective:** Compliant to NFPA Standard 1992.	24	12	6
1.1.4	**BOOTS, CHEMICAL RESISTANT:** For use with Liquid Protective garments.	24	12	6
1.1.5	**BOOTIE, OUTER PROTECTIVE:** Disposable chemical protective bootie slip-over that covers entirely a General Work Safety Boot for use in low threat level contamination environments.	24	12	6
1.2.1	**RADIO, PORTABLE, Walkie** Talkie style, with carrying case, and appropriate support hardware to be worn on person.	2	2	2
1.2.2	**RADIO, PORTABLE, Headphone Set or Remote Speaker Mic:** Complete with RSM, boom mic, ear mic, bone mic, or throat mic, and necessary attachable hardware to walkie talkie.	2	2	2
1.2.3	**RADIO, PORTABLE, Interchangeable battery:** Two batteries assigned per unit, the second set for back-up.	2	2	2

1.3.1	**CLOTHING REMOVAL TOOLS**: Such as scissors, shears, etc.	12	6	3
1.3.2	**DRY DECON TOOL:** A wiping tool designed for dry decon. Some products come in wipe form.	Recommend 6	Recommend 4	Recommend 2

2.1 Patient Related Tools & Equipment

Inv. #:	Item Name and Description	Type I Required Minimum	Type II Required Minimum	Type III Required Minimum
2.1.1	**PERSONAL PROPERTY TRACKING**: Kit to consist of forms, tags, receipts, sealable baggies, labels, etc., to document personal property collected such as jewelry, wallets, pagers, cell phones, and documents personal information of owner.	1000 Kits	500 Kits	250 Kits
2.1.2	**BLANKETS, DISPOSABLE:** Lightweight, disposable, paper or space blanket type. Often included in 2.1.1. kits.	1000	500	250
2.2.1	**CLOTHING, MODESTY:** Usually light weight disposable, an array in various sizes; Complete with booties or foot protection. Often included in 2.1.1 kits.	1000	500	250
2.2.2	**TOWELS, ABSORBENT, DRYING:** Commercial laundry towels, cotton, approximately 20“x 40”. Often included in 2.1.1.	1000	500	250
2.2.3	**CADAVER BAGS:** Non-transparent.	Recommend 15	Recommend 10	Recommend 5

3.1 Mass Decon Tools

The following mass decon tools are recommended to accomplish the stated goals and number of persons outlined in the beginning of this document. Agencies will need to determine the appropriate number of systems based on their predicted capabilities and expected deployment of personnel.

Inv. #:	Item Name and Description	Type I Required Minimum	Type II Required Minimum	Type III Required Minimum
3.1.1	**DECON LANE DEVICE:** Portable, inflatable, or expandable type. Some products come as a tent. Some products are custom built trailers. Any combination that meets the required lanes will suffice. Must carry sufficient systems to accomplish the described number of lanes.	12 Lanes	6 Lanes	3 Lanes

3.1.2	**SHELTER TENT ANCHOR SYSTEM:** A system that protects the shelter from collapsing in windy conditions. Only required if recommended by the manufacturer.	1 Per 3.1.1	1 Per 3.1.1	1 Per 3.1.1
3.2.1	**NON AMBULATORY PATIENT MOVEMENT DEVICE:** Some type of device that allows non ambulatory patients to move through the Decon process. An example of this device is a patient roller that spans the Decon area. Can be included in 3.1.1.	4 Per Team	2 Per Team	1 Per Team
3.2.2	**COLLAPSIBLE STRETCHER:** A collapsible stretcher that can allow non ambulatory patients to move through decon.	12 Per Team	6 Per Team	3 Per Team
3.3.1	**FAN SYSTEM:** A misting system that can provide the movement of air and a misting ability during extreme weather conditions.	Recommend only	Recommend only	Recommend only
3.3.2	**GROUND COVER:** Large Tarp used for ground cover. Usually 12' x 18' in size. Rolled plastic of similar size may be used.	12 Per Team	6 Per Team	3 Per Team
3.3.3	**LIGHTS:** Lighting system that is sufficient to provide lighting in the Mass Decon Contamination Reduction Zone and Support Zone if needed.	Recommend only	Recommend only	Recommend only
3.3.4	**BARRIER TAPE:** Sufficient Barrier Tape to mark off hazard zones, and direct patients and rescuers.	8 Rolls	4 Rolls	2 Roll

4.1 Containment

Inv. #:	Item Name and Description	Type I Required Minimum	Type II Required Minimum	Type III Required Minimum
4.1.1	**TRAFFIC DELINEATORS, Ordinary:** high visibility fluorescent in nature. Of a height that can be used to create lanes as needed. Typically, between 36" and 42" in height.	24	12	6
4.1.2	**TRAFFIC CONES, Ordinary:** Minimum 18" in height, high visibility fluorescent in nature.	24	12	6
4.2.1	**BUCKETS:** Ordinary plastic, 5-gallon capacity, with or without lids	12	6	3
4.2.2	**BAGS, HEAVY DUTY YARD, Large:** Approximately 32" wide x 48" long,	20	12	6

	3 mil thick, 42-gallon capacity, with tie straps or loc-ties.			
4.2.3	**BAGS, HEAVY DUTY YARD, medium:** Approximately 28" wide x 36" long, 3 mil thick, 33-gallon capacity, with tie straps or loc-ties.	1000	500	250
4.2.4	**DEBRIS COLLECTION UNIT:** 35-to-65-gallon capacity, light duty and light weight polyethylene drums, or collapsible mylar drum liners; Suitable for collection of debris and soiled clothing only.	1 Per Team	1 Per Team	1 Per Team
4.2.5	**DRUM, LINER, 55 to 95 Gallon**: Heavy duty polyethylene	6 rolls of 100	3 rolls of 100	2 rolls of 100
4.2.6	**TRANSFER PUMP:** Mechanical or electric pump meant for the transfer of water associated with decon from catchment areas into additional containment bladders.	1 Per Team	1 Per Team	1 Per Team
4.3.1	**CONTAINMENT BASIN:** Sufficient system to contain runoff based on expected GPM flow.	1 Per 3.1.1	1 Per 3.1.1	1 Per 3.1.1

5.1 Water requirements

Inv. #:	Item Name and Description	Type I Required Minimum	Type II Required Minimum	Type III Required Minimum
5.1.1	**BRUSHES, LONG HANDLE, STIFF BRISTLE:** Toilet type: approximately 16" long, with stiff bristles	12	6	3
5.1.2	**BRUSHES, SHORT HANDLE, SOFT BRISTLE:** Carpenter type, synthetic bristles	12	6	3
5.1.3	**BRUSHES, LONG HANDLE, SOFT BRISTLE:** Soft bristled wand type brush, with fixed or adjustable handle to 3 feet minimum. May come with garden hose connection to supply a flow of water at brush end. Can be used in lieu of 5.1.1.	12	6	3
5.1.4	**SPONGE, SET:** Approximate size 3 to 5 inches wide by 4 to 6 inches long x 2-4 inches deep.	12	6	3
5.2.2	**TOWELS, ABSORBENT, DISPOSABLE:** Paper towels, usually in rolls.	4 Rolls	2 Rolls	1 Rolls
5.3.1	**SOAP, SOFT, Hypoallergenic, Liquid:** In dispense containers.	12 Gallons	6 Gallons	3 Gallons
5.3.2	**CHEMICAL DECON:** A commercially available decon product specific to CWAs	Recommend	Recommend	Recommend

	and other hazards. Some products come in wipe form; some products come as a multi-part solution.			
5.4.1	**ADAPTORS, 2 ½ to 1 ½ and 1 ½" to Garden Hose Reducer(s):** Appropriate hose adapters that match fire service hose with standard thread garden hose. Item 5.4.2 may have this feature-built in.	4	2	1
5.4.2	**MANIFOLD FIRE HOSE, HEAVY DUTY:** All metal construction or plastic construction (steel / bronze) with one 1 ½" female fire hose inlet swivel coupling, and four three to six brass ¾" garden hose discharge ball gates valves.; Tested to 250 psi; Mountable on a sturdy platform.	4 of 5.4.2 OR 5.4.3	2 of 5.4.2 OR 5.4.3	1 of 5.4.2 OR 5.4.3
5.4.3	**MANIFOLD FOR GARDEN HOSE:** All metal or plastic construction with one ¾" garden hose inlet swivel coupling, and three to six ¾" garden hose discharge valves.			
5.4.4	**HOSE, GARDEN:** May be approximately 12' to 24' lengths.	8	4	2
5.4.5	**HOSE, GARDEN, SHUT-OFF, In Line:** Separate detachable and replaceable ¼ - turn valve. Might be attached to and included with the car wash applicator, 5.1.4.	12	6	3
5.4.6	**APPLICATOR, NOZZLE, Garden Hose Adjustable:** Wash / Spray Nozzles	12	6	3
5.4.7	**WRENCH, HYDRANT, UNIVERSAL:**	1 Per Team	1 Per Team	1 Per Team
5.5.1	**APPLICATOR, PRESSURE, Garden Sprayer:** Hand Pressurized pump sprayer.	1 Per Team	1 Per Team	1 Per Team
5.6.1	**FLASH HEATER:** Portable heater designed to raise water used in Secondary Mass decon to greater than 77 degrees Fahrenheit.	1 Per Team	1 Per Team	1 Per Team
5.6.2	**FLASH HEATER FUEL**: Sufficient Fuel for the Flash Heater component to operate for a twelve-hour operational period.	1 Per 5.6.1	1 Per 5.6.1	1 Per 5.6.1
5.6.3	**WATER PUMP:** A pump capable of moving sufficient water for the number of tents, manifolds, and water systems needed based on the number of patients expected. A Fire Pumping Apparatus can fulfill this requirement.	1 Per Team	1 Per Team	1 Per Team