

I. INTRODUCTION

The US Army Corps of Engineers (USACE) provides predictive models of commodity needs based on hurricane winds, track of the storm, population density, and estimated number of residences without power. These models predict people "in need." This fact is very important for determining the amount of commodities that may be required; however, this fact is useless if commodities can't be placed into the victims' hands in a timely manner. The 2004 hurricane season proved that the ability to distribute commodities to the public is the controlling factor to determine supply, not the people "in need" as the models show. To successfully accomplish the commodity distribution mission, we must literally "begin with the end in mind." The successful execution of a distribution plan is essential for success. The plan must have pre-determined locations of points of distribution; layout plans for each point, and must include equipment and manpower requirements.

II. OVERVIEW

The type and quantity of supplies that the public will need in the aftermath of disasters or other crises will vary due to many factors and no one event will be just like another. Experience in emergency response over the years suggests some common necessities that the public will require to meet health, safety, and lifesaving needs. They include potable water (usually bottled), Meals Ready to Eat (MRE) and other supplies. In small-scale disasters and in the initial hours of larger disasters, these commodities are often supplied by state and local governments, donations from industry, and volunteer agencies. When the need for commodities exceeds the state's capability, under a Presidential Declaration, the state can request that FEMA provide the additional requirements. FEMA will provide commodities stored in bulk quantities at regional logistics centers in various locations and, if needed, task ESF#3 (USACE) to purchase additional quantities of water. The FEMA/USACE provided commodities are delivered from the federal staging areas to state logistical staging areas where the state in-turn supplies the local points of distribution.

III. PLANNING FACTORS

- A. The following are general information and common planning factors that, if used by all, will help with coordination and communication during the planning and response process.

NOTE: *As of 2007 FEMA will no longer supply ice to the states for POD operations. FEMA will only provide ice for medical needs. Ice is available through the state upon request. Counties will be responsible for the costs related to ice acquisition and transportation.*

1. *Ice: 8 lbs (1bag) per person per day
40,000 lbs per truckload
20 Pallets per truck, 2000 lbs per pallet, 250 – 8 lbs bags
per pallet, 5000 bags per truck*
2. Water: 3 liters or 1 gal per person (3.79 liters per gal)
8.3lbs per gallon container
18,000 liters or 4,750 gal per truck
20 Pallets per truck, 900 liters per pallet, 237 gal per pallet,
1900 lbs per pallet
3. MREs: 2 MREs per person per day
1 case weighs 22lbs
21,744 MREs per truckload
12 MREs per case, 1812 cases per truck

B. Distribution Point Planning: The following are assumptions used for distribution planning:

Victims will drive through a distribution point and be served without leaving their vehicles.

-Each car represents an average family of 3.

-Each vehicle passing through a distribution point will receive the following:

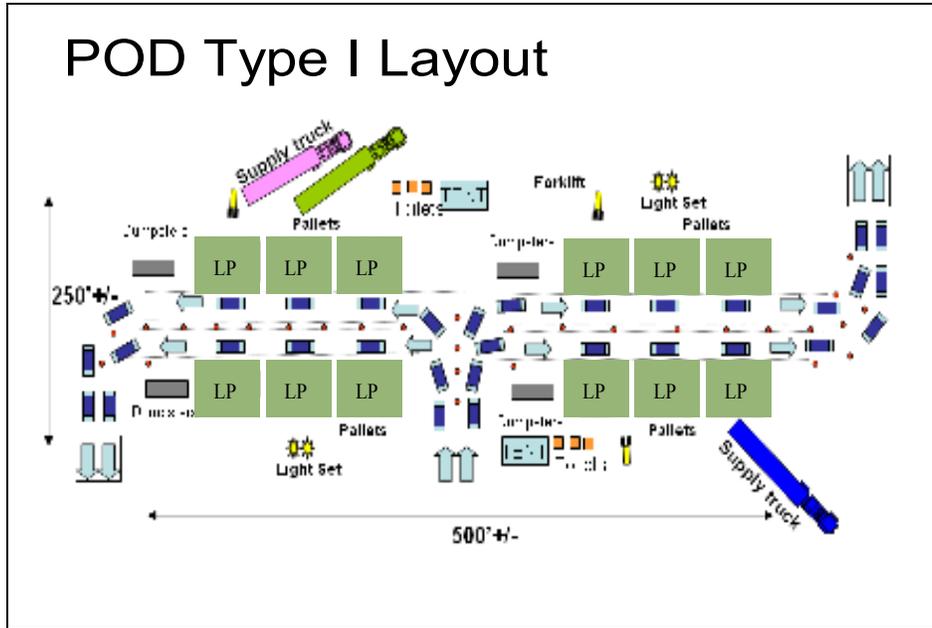
2 or 3 bags of ice based upon availability
1 case of water (9 – 12 liters)

6 MREs

1 truckload of ice and water will serve 1,660 vehicles or about 5000 people

1 truckload of MREs will serve 3,624 vehicles or about 10,000 people

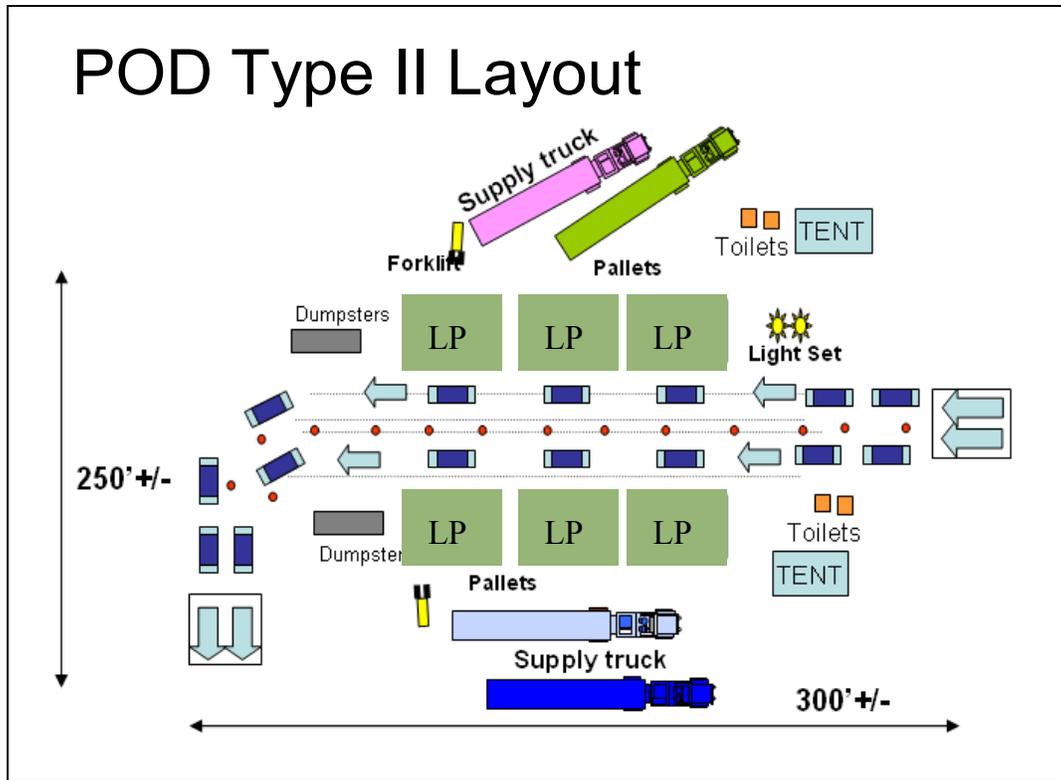
Points of distribution should be open to the public for 12 hours per day; however, this is at the discretion of the county.



Type I Distribution Point Resources Required

| Type I Distribution Point | | | | | |
|---------------------------|--------------------|-----|-------|------------------|--------|
| Manpower | | | | Equipment | |
| Type | | Day | Night | Type | Number |
| Local Responsibility | Manager | 1 | 0 | Forklifts | 3 |
| | Team Leader | 2 | 1 | Pallet Jacks | 3 |
| | Forklift Operator | 2 | 3 | Power Light Sets | 2 |
| | Labor | 57 | 4 | Toilets | 6 |
| | Loading Point | 36 | | Tents | 2 |
| | Back-up Loading PT | 18 | | Dumpsters | 4 |
| | Pallet Jacks Labor | 3 | | Traffic Cones | 30 |
| Totals | | 70 | 9 | Two-way radios | 4 |
| Others | Law Enforcement | 4 | 1 | | |
| | Community Rel. | 4 | 0 | | |
| Grand Total | | 78 | 10 | | |

Figure 4



Type II Distribution Point Resources Required

| Type II Distribution Point | | | | | |
|----------------------------|--------------------|-----------|----------|------------------|--------|
| Manpower | | | | Equipment | |
| Type | | Day | Night | Type | Number |
| Local Responsibility | Team Leader | 1 | 0 | Forklifts | 2 |
| | Forklift Operator | 1 | 2 | Pallet Jacks | 2 |
| | Labor | 28 | 3 | Power Light Sets | 1 |
| | Loading PT | 18 | | Toilets | 4 |
| | Back-up Loading PT | 9 | | Tents | 2 |
| | Pallet Jacks Labor | 1 | | Dumpsters | 2 |
| | Totals | 30 | 5 | Traffic Cones | 15 |
| Others | Law Enforcement | 2 | 1 | Two-way radios | 0 |
| | Community Rel. | 2 | 0 | | |
| Grand Total | | 34 | 6 | | |

Figure 6

V. PLANNING METHODS

This section will discuss methods to determine the location and number of points of distribution (POD), provide suggestions for supplying manpower and equipment resources, and discuss points of distribution operations.

A. Determining the Location and Number of POD:

1. The number of PODs can be determined mathematically. The Excel model shown in Figure 9 will calculate the number of PODs required when the total number of people without commercial power is entered. The model uses a 40% factor to calculate the estimated number of people that will visit a POD. This figure is an estimated average percentage based on past experience. The model also considers only Type III PODs, which consist of a one-lane operation. A Type III POD provides for 5000 people and can handle one truckload of ice and water per day along with MREs and tarps. Therefore, for every truckload of ice or water ordered, there should be a corresponding POD or lane for off-loading.
2. Another method for determining the number and location of PODs is through Geographical Information Systems (GIS). GIS can produce a dot density map that provides a visual dot for a selected density of population. To determine the location of PODs, a dot density map should be produced based on a density of one dot for every 12,500 people (40% of 12,500 = 5000, the number of people served by a Type III POD). The location of the dot will provide a general start for locating a POD; however, as stated before, consider all tribes, municipalities, and/or major communities having at least one POD.
3. The pre-planning of POD locations is critical to the public. This allows the locations of the PODs to be known to the public prior to an event before communications are impacted. This also allows for route clearing priorities and route mapping to be performed during the pre-planning process in lieu of the response process.
4. Resources for PODs:
 - a. POD operations, including manpower and equipment, are a local responsibility. A partnership between the community and response planners is essential for the establishment of a successful distribution system that serves the public in their time of need. The most challenging resource to provide is manpower. Most local governments depend on the National Guard, volunteer fire departments, church groups and other volunteer agencies for manpower. All of these sources are viable; however, close coordination is needed to assure local governments are not using a

specific resource in multiple locations. One good example of using a local resource is the use of local churches in the disaster area. Some churches have very large parking areas that work well for a Type III POD and the church can work with their congregation to establish a ministry to man and operate the POD. This example uses people from the community to help people in the community. The Excel model in Figure 9 provides a total roll up of personnel and equipment for all the PODs required.

- b. Each POD requires an equipment package, as shown in Figures 4, 6, and 8. If the disaster receives a Presidential Declaration, then the costs for renting this equipment will qualify for Federal reimbursement. It is recommended that the planning agent, city, county, or tribal agency provide the equipment to the PODs located within their area of responsibility. Planning agents should work with local vendors and have agreements in place to provide the required equipment. The rates, hourly, daily, or weekly, should be discussed with the State Emergency Management office and FEMA to get guidance on best practices. This suggested method of supplying equipment helps prevent duplication and allows for easier reimbursement.

B. POD Operations:

The successful operation of a POD requires a POD Team Leader or manager that understands the purpose, functions, and requirements of a POD. A successful Team Leader or manager must have the skills to motivate people, organize shifts, assure the right equipment is available, keep records on equipment usage, gather/record information on deliveries, arrange for future deliveries based on usage, and act as the primary POC for the POD with the local emergency management agency. Contract/delivery forms that require signing by the delivery driver, must be collected and maintained until local, state, or Federal officials collect them.

KEY CHECKLIST ITEMS FOR POD OPERATIONS:

- Adequate Manpower (Consider backups for each position)
- Equipment (Forklift and pallet jack a must)
- Site Layout, good traffic flow
- Room for delivery trucks (18 wheelers without disrupting operations)
- Qualified Forklift Operator
- Security (Help with the general public)
- Traffic Control (Police at main intersections)
- Signs identifying the site as "Commodities Distribution Point"
- Request a Community Relations person to help handout information to the public
- Always keep safety first
- Provide a notebook for securing delivery charts and receipts
- Communications (Team Leader or manager will require communications)
- Train an assistant for night operations
- Ask for technical help through your Emergency Manager if assistance is needed

EXAMPLE OF COMMODITIES WORKSHEET

Enter # of people without power (Equals number of customers x 3)

of people requiring commodities

of Type III Dist. Points Req

| Type III Dist. | | Point | Equipment | |
|----------------|-----|-------|--------------|--|
| Manpower | Day | Night | | |
| Local Req. | | | Forklifts | |
| Forklift Oper | | | Pallet Jacks | |
| Laborers | | | Traff Cones | |
| Total | | | Light Sets | |
| Law Enf | | | Toilets | |
| Comm Rel | | | Tents | |
| Grand Total | | | Dumpsters | |

| Number of truck loads required per day for 24 days | Days | Water | | ICE | | MREs | | Tarps | |
|--|------|-------|-------|-------|----------|-------|------|-------|------|
| | | Loads | K Gal | Loads | K Pounds | Loads | Each | Loads | Each |
| | 1 | | | | | | | | |
| | 2 | | | | | | | | |
| | 3 | | | | | | | | |
| 72 Hour Planning Total > | 4 | | | | | | | | |
| | 5 | | | | | | | | |
| | 6 | | | | | | | | |
| | 7 | | | | | | | | |
| 60% Power back on-line > | 8 | | | | | | | | |
| | 9 | | | | | | | | |
| | 10 | | | | | | | | |
| | 11 | | | | | | | | |
| | 12 | | | | | | | | |
| | 13 | | | | | | | | |
| | 14 | | | | | | | | |
| | 15 | | | | | | | | |
| 90% Power back on-line > | 16 | | | | | | | | |
| | 17 | | | | | | | | |
| | 18 | | | | | | | | |
| | 19 | | | | | | | | |
| | 20 | | | | | | | | |
| | 21 | | | | | | | | |
| | 22 | | | | | | | | |
| | 23 | | | | | | | | |
| | 24 | | | | | | | | |
| Total Loads | | | | | | | | | |