

# COMMODITIES PLANNING

# Key Lessons Learned

- **Commodities will be pushed forward before logistical structures are in place.**
- **The critical planning factor for ordering commodities is “distribution” capability, not people without power.**
- **Distribution planning must be a priority with local governments for the commodities mission to be successful.**
- **All levels of government must understand the distribution point concept.**

# Key Planning Factors

- Ice – 1 truck load (40,000 lbs, 8 lbs/per) serves 5000 people
- Water – 1 truck load (18,000 liters, 3+liters/per) serves 5000 people
- MREs – 1 truck load (21,744 ea., 2 ea/per) serves 10,000 people
- Tarps – 1 truck load (4,400 ea.) serves 4000 families with roof damage
- 1 car represents 1 family or 3 people
- Each car is provided the following:
  - **2 or 3 bags if ice**
  - **1 case of water (9-12 liters)**
  - **6 MREs**
  - **1 tarp, if they state they have roof damage**

# Key Planning Factors, Cont'd

- A distribution point (DP) with one supply lane can serve 1,660 cars or 5000 people in one day, (Type III Distribution Point).
- A Type II DP has two lanes
- A Type I DP has four lanes

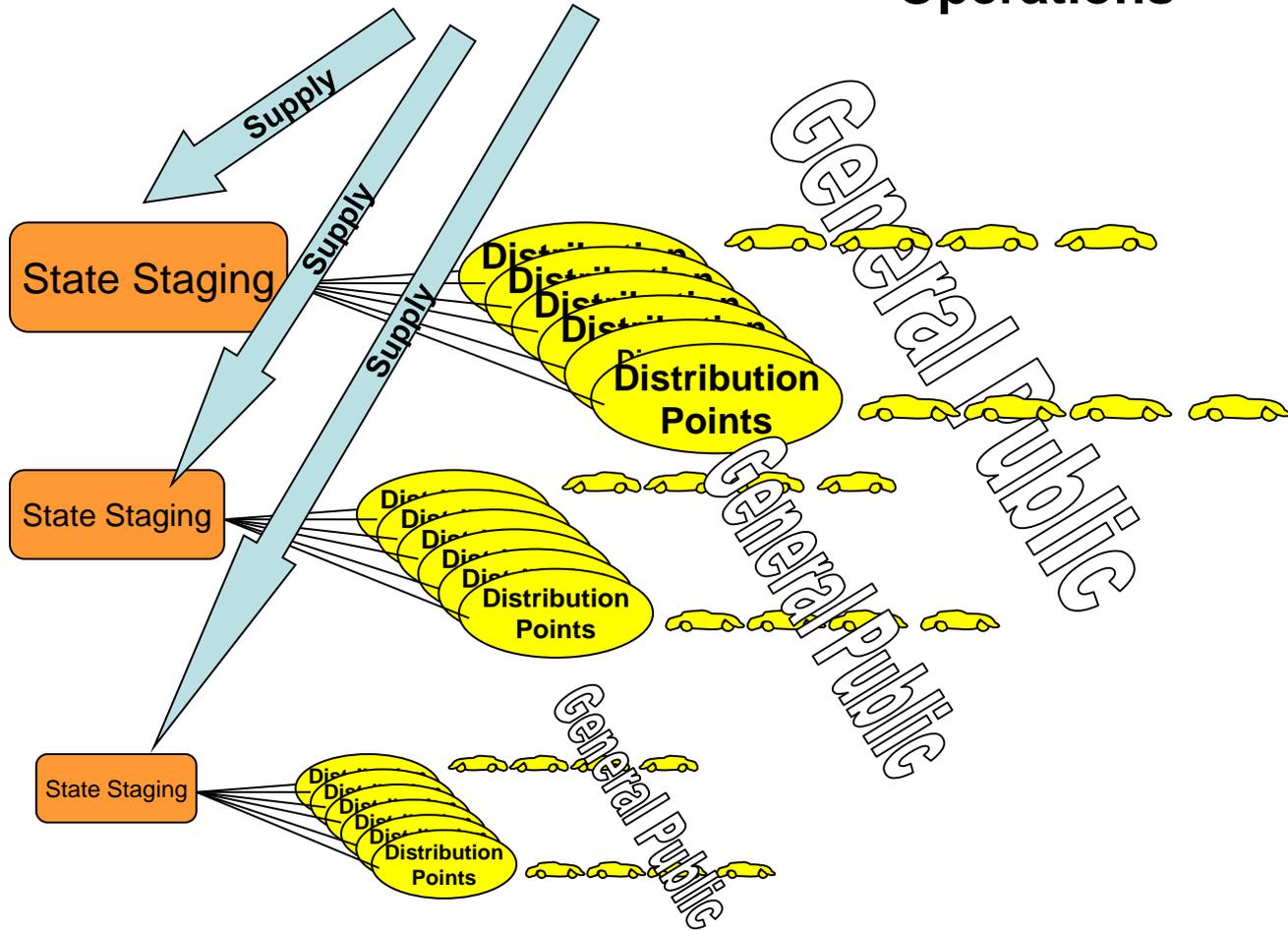
1 Truck Load Ice  
1 Truck Load Water  
½ Truck Load of MREs  
1 Truck Load of Tarps

} Serves 5000 People = One Type III DP

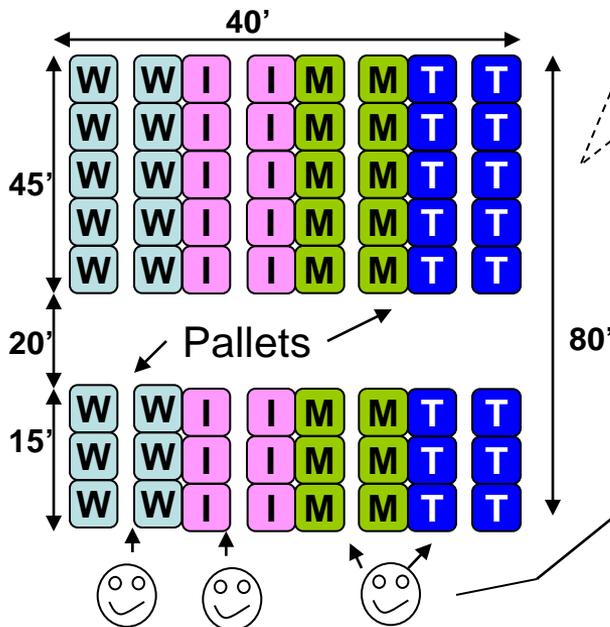
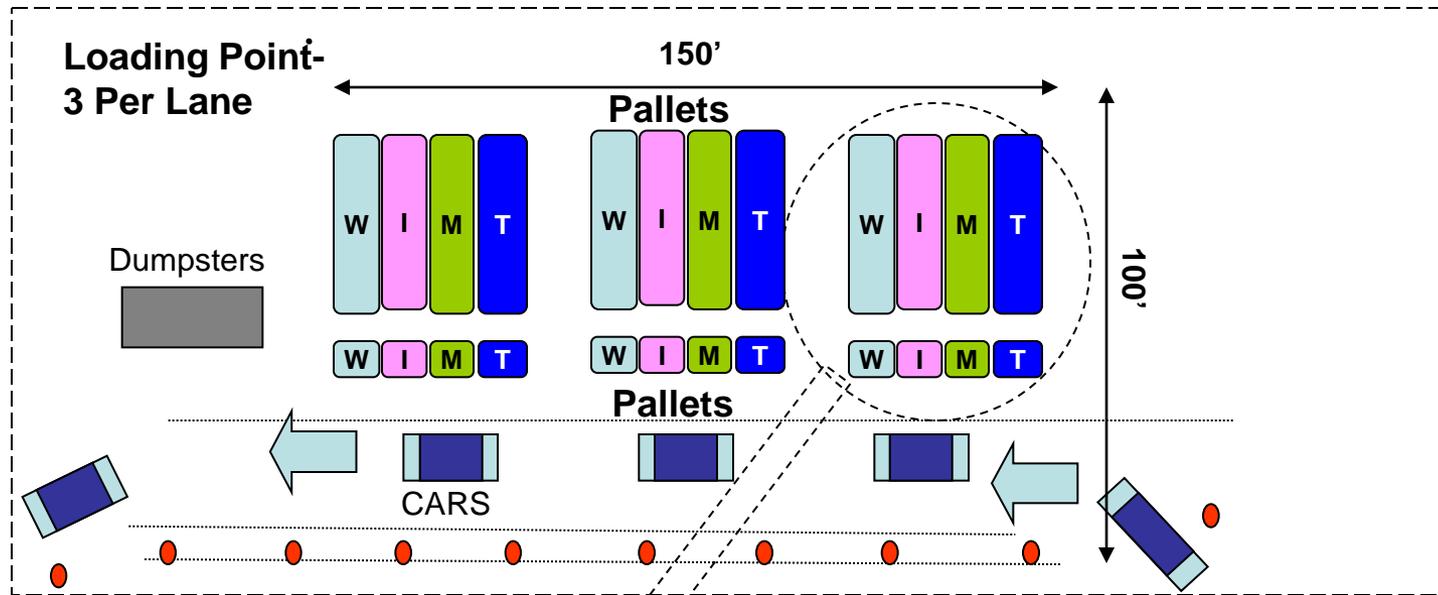
IF 50 TRUCK LOADS OF ICE AND WATER ARE ORDERED PER DAY  
HOW MANY TYPE III DP'S ARE NEEDED?

Federal Staging

# Concept of Operations



# LOADING POINT



3 Persons Per Loading Point

- 1 for Water
- 1 for Ice
- 1 for MRE's and Tarps

Water

Ice

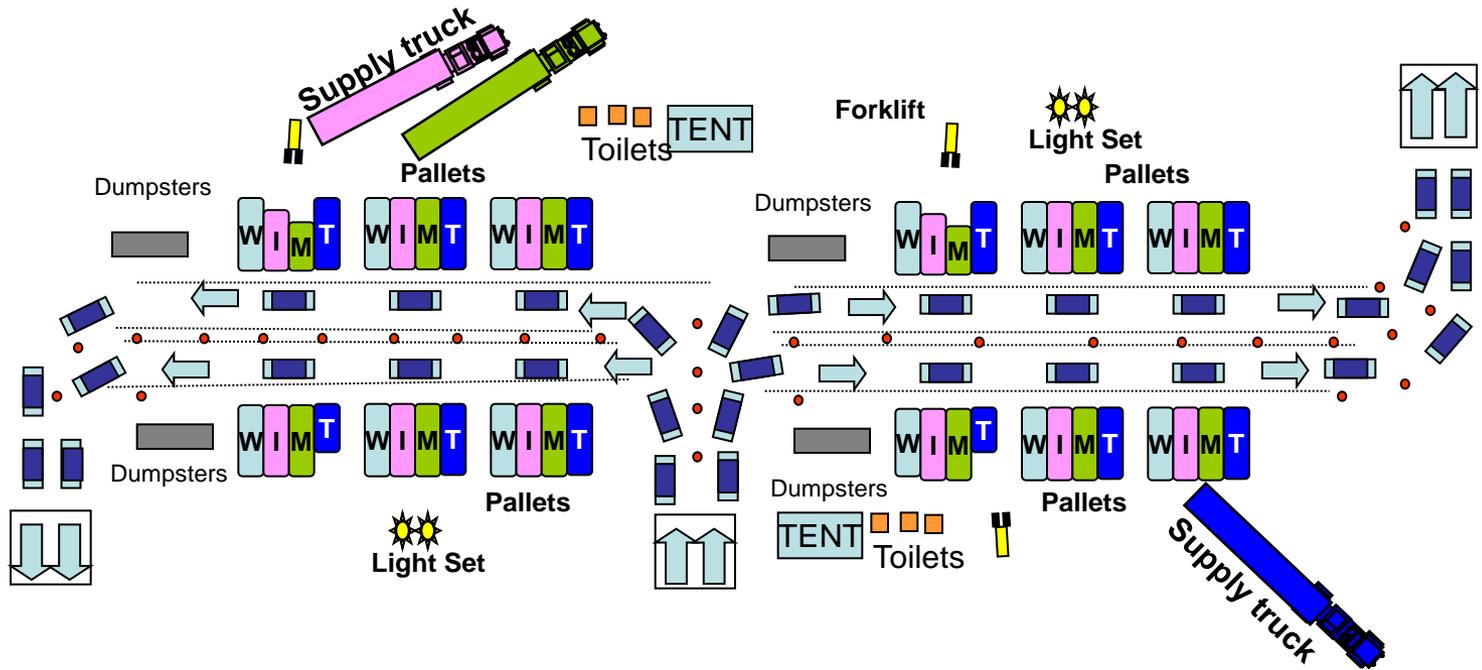
MRE

Tarp

Figure 2

# TYPE I - DISTRIBUTION POINT

Serves 20,000 persons per day  
 12 Loading Points - 560 vehicles per hour



Note: Individual vehicles drive through and Ice & water is loaded into their trunks. Recommend One case water, 2 or 3 bags of ice per vehicle and 6 MRE's.

Supply trucks for Ice, Water, MRE's and Tarps are to be off-loaded promptly and returned for re-supply.

## Maximum Loads per Day – Type I

Water	4
Ice	4
MRE	2
Tarp	2

Figure 3

## 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			



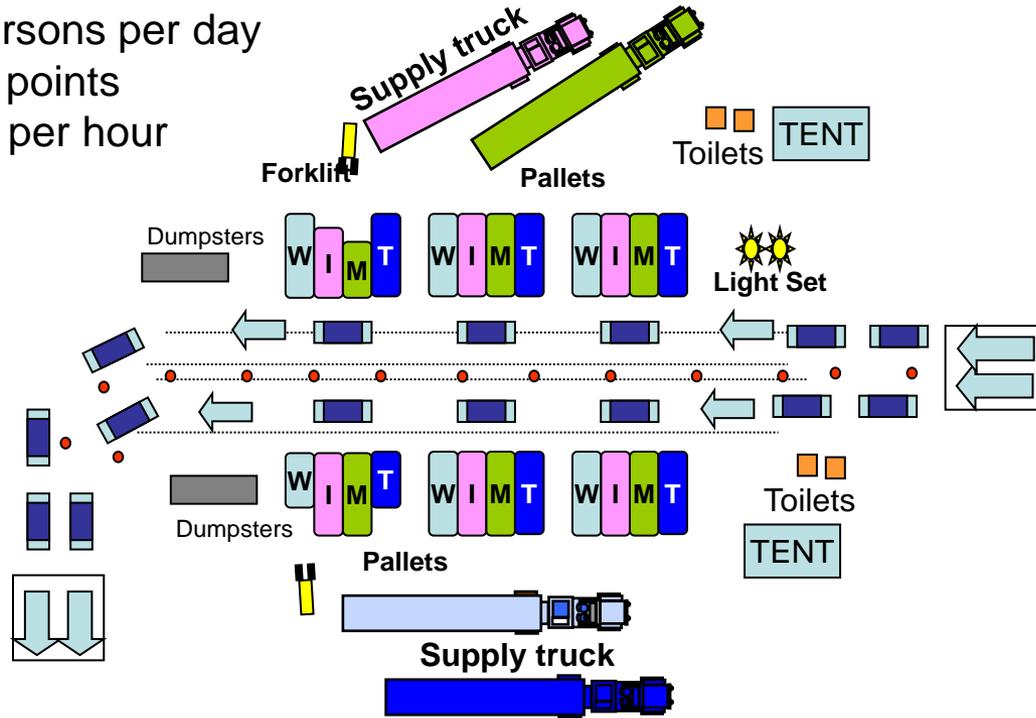
Figure 4

# TYPE II - DISTRIBUTION POINT

Serves 10,000 persons per day

6 Loading points

280 vehicles per hour



Note: Individual vehicles drive through and Ice & water is loaded into their trunks. Recommend One case water, 2 or 3 bags of ice per vehicle and 6 MRE's

Supply trucks for Ice, Water, MRE's and Tarps are to be off-loaded promptly and returned for re-supply.

## Maximum Loads per Day – Type II

Water 2

Ice 2

MRE 1

Tarp 1

Figure 5

## Type II Distribution Point Resources Required

Type II Distribution Point						
Manpower				Equipment		
Type		Day	Night	Type	Number	
<b>Local Responsibility</b>	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
	<b>Totals</b>		30	5	Traffic Cones	15
<b>Others</b>	Law Enforcement		2	1	Two-way radios	0
	Community Rel.		2	0		
<b>Grand Total</b>		34	6			



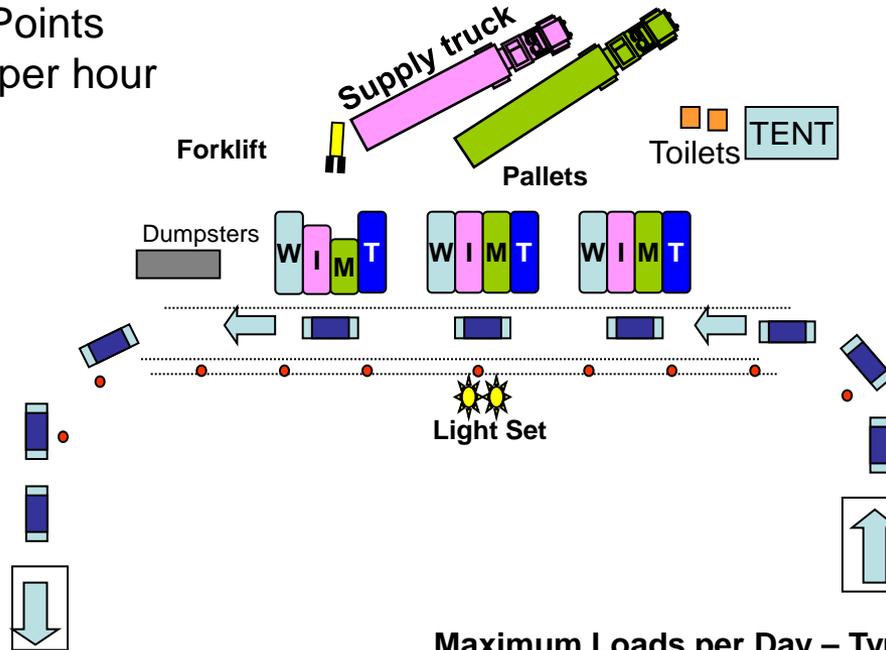
Figure 6

## TYPE III - DISTRIBUTION POINT

Serves 5,000 persons per day

3 loading Points

140 vehicles per hour



Note: Individual vehicles drive through and Ice & water is loaded into their trunks. Recommend One case water, 2 or 3 bags of ice per vehicle and 6 MRE's

Supply trucks for Ice, Water, MRE's and Tarps are to be off-loaded promptly and returned for re-supply.

### Maximum Loads per Day – Type III

Water	1
Ice	1
MRE	1/2
Tarp	1/2

Figure 7

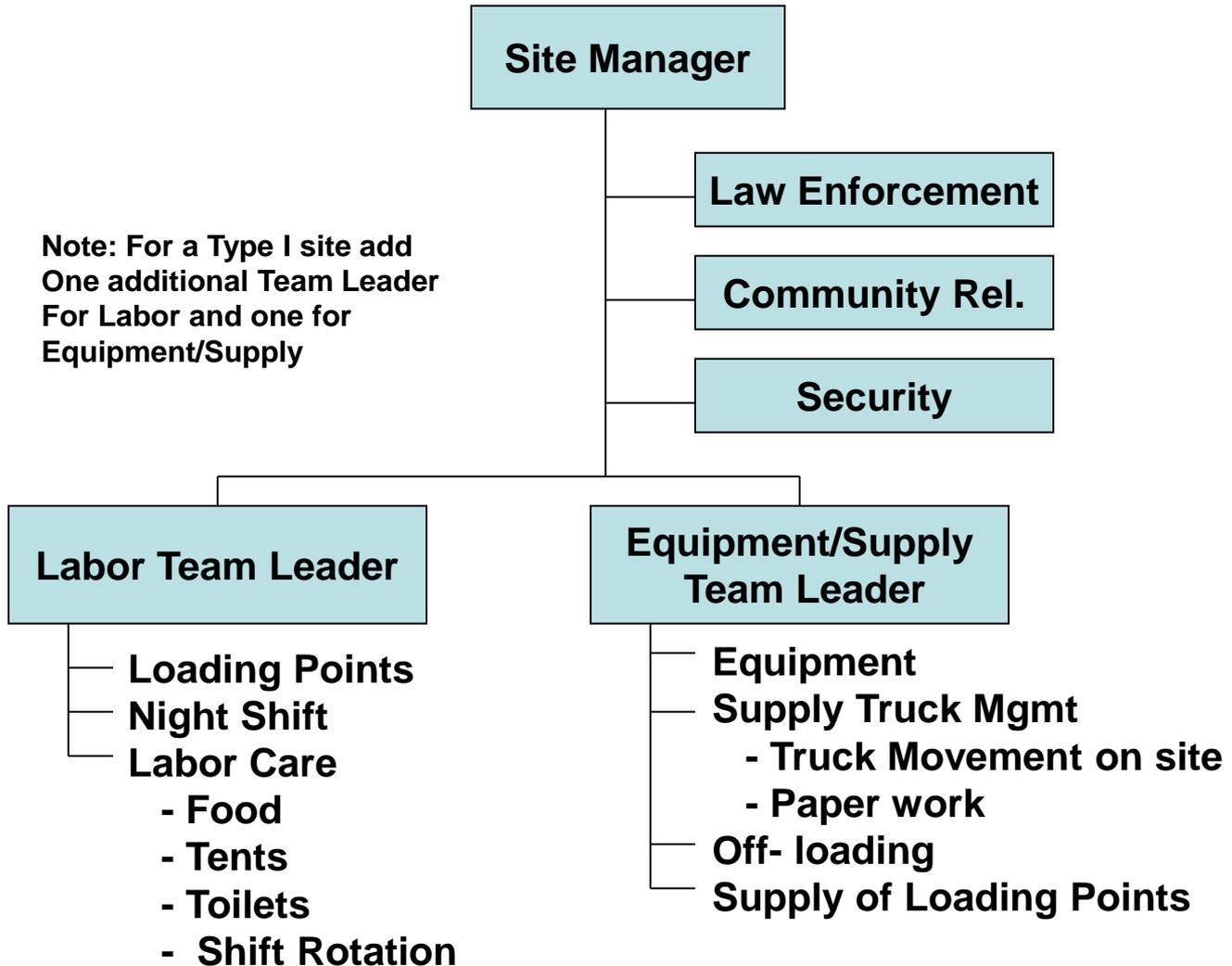
## Type III Distribution Point Resources Required

Type III Distribution Point						
Manpower				Equipment		
Type		Day	Night	Type	Number	
Local Responsibility	Team Leader		1	0	Forklifts	1
	Forklift Operator		1	1	Pallet Jacks	1
	Labor		14	2	Power Light Sets	1
	Loading PT	9			Toilets	2
	Back-up Loading PT	4			Tents	1
	Pallet Jacks Labor	1			Dumpsters	1
	Totals		16	3	Traffic Cones	10
Others	Law Enforcement		2	1	Two-way radios	0
	Community Rel.		1	0		
Grand Total		19	4			



Figure 8

# ORGANIZATION CHART – TYPE II AND III DISTRIBUTION POINT SITE MANAGEMENT



Enter # of people without power 400,000

(Equals number of customers x 3)

# of people requiring commodities 160,000

# of Type III Dist. Points Req'd 32

# Pre-Planning Model

	Type III Dist. Point		Equipment	
Manpower	Day	Night		
Local Req.			Forklifts	32
Forklift Oper	32	32	Pallet Jacks	32
Laborers	480	64	Traff Cones	320
<b>Total</b>	<b>512</b>	<b>96</b>	Light Sets	32
Law Enf	64	32	Toilets	64
Comun Rel	32	0	Tents	32
<b>Grand Total</b>	<b>608</b>	<b>128</b>	Dumpsters	32

Tarps	
Loads	Each
36	160,000

Number of truck loads required per day for 24 days	Days	Water		ICE		MRES	
		Loads	K Gal	Loads	K Pounds	Loads	Each
	1	32	152.0	32	1280	16	347,904
	2	29	139.0	29	1170	15	326,160
	3	27	125.9	27	1061	13	288,263
<b>72 Hour Planning Total &gt;</b>		<b>88</b>		<b>88</b>		<b>44</b>	
	4	24	112.9	24	951	12	258,443
	5	21	99.9	21	841	11	228,623
	6	18	86.9	18	731	9.1	198,802
	7	16	73.8	16	622	7.8	168,982
60% Power back on-line >	<b>8</b>	13	60.8	13	512	6.4	139,162
	9	12	55.1	12	464	5.8	126,115
	10	10	49.4	10	416	5.2	113,069
	11	9.2	43.7	9.2	368	-	-
	12	8.0	38.0	8.0	320	-	-
	13	6.8	32.3	6.8	272	-	-
	14	5.6	26.6	5.6	224	-	-
	15	4.4	20.9	4.4	176	-	-
90% Power back on-line >	<b>16</b>	3.2	15.2	3.2	128	-	-
	17	2.8	13.3	2.8	112	-	-
	18	2.4	11.4	2.4	96	-	-
	19	2.0	9.5	2.0	80	-	-
	20	1.6	7.6	1.6	64	-	-
	21	1.2	5.7	1.2	48	-	-
	22	0.8	3.8	0.8	32	-	-
	23	0.4	1.9	0.4	16	-	-
	24	0.0	0.0	0.0	0	-	-
<b>Total Loads</b>		<b>249.6</b>	<b>1185.6</b>	<b>249.6</b>	<b>9984</b>	<b>101</b>	<b>2,195,523</b>

Enter Number of Type III Dist. Points to be used

25

## Post-Ordering Model

- 1 Type II = 2 Type III
- 1 Type I = 4 Type III

Number of truck loads required per day for 24 days	Days	Water		ICE		MREs		Tars	
		Loads	K Gal	Loads	K #	Loads	Each	Loads	Each
	1	25	118.8	25	1000	13	271,800		
	2	23	108.6	23	914	11	248,503		
	3	21	98.4	21	829	10	225,206		
<b>Initial Order (72 Hour Planning Total) &gt;</b>		<b>69</b>		<b>69</b>		<b>34</b>		<b>28</b>	<b>125,000</b>
	4	19	88.2	19	743	9	201,909		
	5	16	78.0	16	657	8	178,611		
	6	14	67.9	14	571	7.1	155,314		
<b>Next Order (next 72 Hour Planning Total) &gt;</b>		<b>49</b>		<b>49</b>		<b>25</b>			
	7	12	57.7	12	486	6.1	132,017		
60% Power back on-line >	<b>8</b>	10	47.5	10	400	5.0	108,720		
	9	9	43.0	9	363	4.5	98,528		
	10	8	38.6	8	325	4.1	88,335		
	11	7.2	34.1	7.2	288	-	-		
	12	6.3	29.7	6.3	250	-	-		
	13	5.3	25.2	5.3	213	-	-		
	14	4.4	20.8	4.4	175	-	-		
	15	3.4	16.3	3.4	138	-	-		
90% Power back on-line >	<b>16</b>	2.5	11.9	2.5	100	-	-		
	17	2.2	10.4	2.2	88	-	-		
	18	1.9	8.9	1.9	75	-	-		
	19	1.6	7.4	1.6	63	-	-		
	20	1.3	5.9	1.3	50	-	-		
	21	0.9	4.5	0.9	38	-	-		
	22	0.6	3.0	0.6	25	-	-		
	23	0.3	1.5	0.3	13	-	-		
	24	0.0	0.0	0.0	0	-	-		
<b>Total Loads</b>		<b>195.0</b>	<b>926.3</b>	<b>195.0</b>	<b>7800</b>	<b>79</b>	<b>1,708,943</b>	<b>28</b>	<b>125,000</b>

**QUESTIONS**