Beth Israel Lahey Health
Beth Israel Deaconess Medical Center

A Multidiscipline Approach to 96 Hour Sustainability

TAP TO GO BACK TO KIOSK MENU

Declan Carbery, Manager, Emergency Management

The Problem

During any natural disaster, hospitals are one of the most critical facilities within a community. Because hospitals are so critical to the public's well-being, they do not have the luxury of being able to close if, for whatever reason, it is unable to maintain operations. Evacuations of hospitals, like those that occurred during Hurricane Sandy, put a tremendous strain on an already resource-strapped system. Also, due to larger and more intense storms becoming more frequent, hospitals must develop plans that allow the institution to support critical functions for a goal of up to 96-hours before making the critical, resource-intensive, and dangerous decision to evacuate.

At Beth Israel Deaconess Medical Center, Emergency Management and a team of departments have all been working towards putting mitigation strategies into place that will increase BIDMC's chance of sustaining critical services during a natural disaster. This means that BIDMC may have to sustain critical functions without community support, such as deliveries of medical supplies, pharmaceuticals, fuel, food, and even drinking water. Steps have also been taken to prevent flood waters from damaging critical equipment, such as the emergency generators.

The Goal

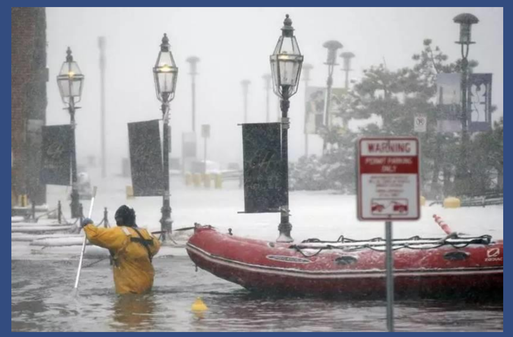
Our collective goal is to be as prepared as possible to sustain critical functions of BIDMC throughout a disaster in which community support is extremely limited. This requires maintenance of critical stockpiles, development of plans and standard operating procedures related to functioning with limited resources, and annual drills in which we test our vendor Memorandum of Understandings and actions taken by various departments.

New Mitigation Strategies In Place

- Creation of 6 Critical Infrastructure Binders for the Command Centers
- Development of the Severe Weather Plan
- Improved Planned Utility Shutdown Planning Process
- Facility's Campus Hardening Program
- Annual 96 hour drill
- Over 20 vendors with Memorandum of Understanding agreements to deliver supplies upon request in or right before a disaster
- Stockpiles of essential supplies (Pharmaceuticals, PPE, Water, Food, Lighting Sources, etc.)

Multidepartment Collaboration

- Emergency Management
- Facilities
- Maintenance
- Environmental Services
- Food Services
- Materials Mgmt. / Distribution
- Blood Bank
- Research Operations
- Patient Transport / Linen
- Environmental Health & Safety
- Respiratory Therapy
- Pharmacy



A Boston firefighter wades through floodwaters from Boston Harbor on Long Warf during winter storm flooding in January of 2018. Photo from Boston Globe

For more information, contact:
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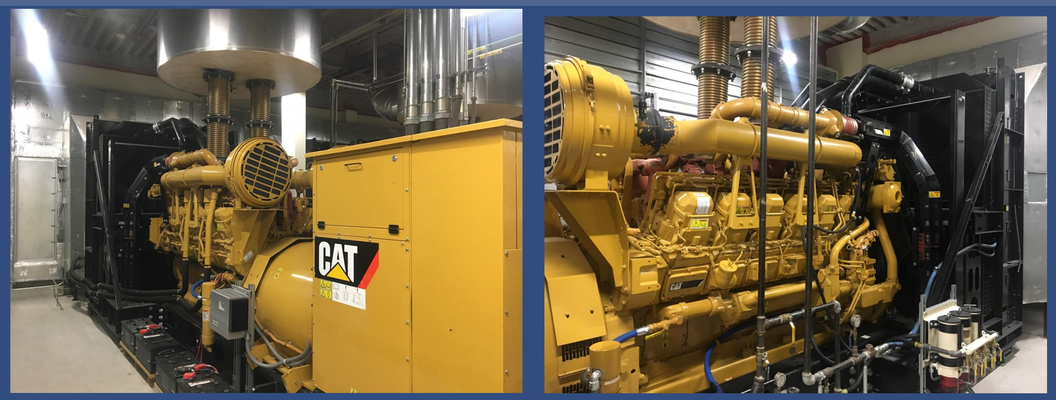
Example Matrix: Generator Fuel Consumption

Generator Numbers	FUEL TANK CAPACITY (90%)	FUEL BURNED After 24hr	FUEL BURNED After 48hr	FUEL BURNED After 72hr	FUEL BURNED After 96hr	GALLONS REMAINING IN TANK After 96hr
E 1,2,3,5,6	22,500gal	4,300gal	8,450gal	12,680gal	16,900gal	5600gal
E-11	2,700gal	820gal	1,635gal	2,450gal	3,265gal	-560gal
W-1 & W-2	7,200gal	1,680gal	3,360gal	5,040gal	6,720gal	480gal
W-10 & W-11	5,400gal	720gal	1,440gal	2,160gal	2,880gal	2,520gal

Note: This is without any load shedding and assuming the fuel tank is only at 90% capacity, meaning these generators may be able to sustain for longer than shown.



East Campus Generators

Example Matrix: Food

Categories	24 Hours	48 Hours	72 Hours	96 Hours
Misc. Juices (9936)	9536	9086	8636	8186
Misc. Soda (7440)	6890	6340	5790	5240
Breakfast Hot (2000)	1500	1000	500	0
Breakfast Cold (4000)	3500	3000	2500	2000
Lunch Hot (2000)	1500	1000	500	0
Lunch Cold (4000)	3500	3000	2500	2000
Dinner Hot (2000)	1500	1000	500	0
Dinner Cold (4000)	3500	3000	2500	2000

Note: This is assuming 450 patients in house, 550 staff, totaling 1,000 people to feed for 96 hours

Next Steps

- Improve stockpiles of critical supplies (water, masks, pharmaceuticals, etc.)
- Create SOP for utilization of the East Campus Flood Gates
- Continue Facility's Campus Hardening Program

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