

## Earthquakes, Floods, Fires, Oh My!

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## Agenda

- What is Business Continuity/Emergency Preparedness
- Why Do It & Benefit
- How to Start
- Disasters- Earthquake, Fire, Flood, Freeze, Spill
- Things to Think About
- Who & How to Review
- Drills
- Personal Safety
- Summary

## What is Business Continuity & Emergency Preparedness

- **Business Continuity**
  - Is the process of creating systems of prevention and recovery to deal with potential threats to a company.
- **Emergency Preparedness**
  - The steps you take to make sure you are safe before, during, and after an emergency or natural disaster. These plans are important for safety in both natural disasters and man-made disasters.
    - Natural Disasters include floods, blizzards, tornadoes, and earthquakes.
    - Man-made disasters can include explosions, fires, chemical and biological attacks.

## Why Create & What's Benefit

- It is the right thing to do.
- It can save lives.
- It can get your business up and running faster.
- May be required by specific contracts (US government).
- It may give you better rates on your insurance.
- It allows you to look holistically at your business with its vulnerabilities & allows upper management to make informed decisions about resource allocation.



## How To Start

- It is easier to edit than create from scratch.
- Your insurance carrier has a vested interest in *not* paying you money out for losses
  - Ask them for a template
  - Use their technical expertise
  - Get upper management to buy-off
    - If not the COO or CEO, Finance will support your efforts!



## How To Start

- Block off one hour a week on your calendar each week for months.
  - Create a recurring meeting
  - A well done plan with sub-plans will take many months
  - It saves lives and it can save you money
- If you don't have an employee who can "hold you accountable" and keep you moving:
  - Schedule quarterly check-ins with your insurance carrier rep. Set up meetings with them
  - You will need to ask questions anyway
- Good news – You Can Do It!
  - Reserve a room so you won't be disturbed
  - Have someone if possible join you
  - Or have people join you for their sections



## How To Start

- Start with easiest sections.
  - Fill in names and numbers
  - Get administrative help
  - Give it your best guess
- It is easier for people to edit than fill in your sections.
  - Send your stakeholders the pages you have attempted to fill out
    - **Do Not** send them a bunch of blank pages
    - They will find it easier & less intimidating to correct a filled out section
- Do hardest sub-plan first it will make the other plans feel easier.



## How To Know Which Sub-Plans to Create

- Ask your insurance carrier.
  - We used FM Global template
  - We asked if we needed to include volcano or tsunami
- They provided the flood sub-plan template.
  - Found other templates online
- Created earthquake from scratch.



## What We Are Covering

- Created Business Continuity/Emergency Preparedness Plan from scratch for our Central Kitchen location. Included sub-plans:
  - Earthquake
  - Fire
  - Flood
  - Freeze
  - Chemical Spill- not required by FM Global

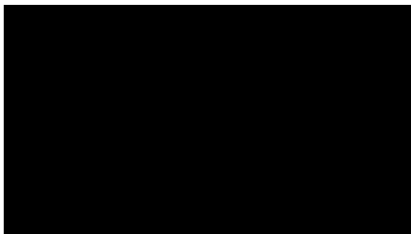


## Tornado, Volcano, Hurricane, Tsunami

- We are not covering these in any detail also not covering active shooter.
- You can find useful and great information to build your plans from:
  - Municipal Governments- especially in areas that are target zones
  - FEMA Ready.Gov
  - Universities
  - Insurance Carrier



## Earthquake



## Earthquake Things To Consider

- We have a production area, warehouse, commissary, small fleet
  - Where to start?
  - Copied sections I needed/liked
- If you have an earthquake you will likely also have a fire emergency.
  - Do you also need to plan for tsunami?
- Have you written your plan for staff who will be traveling out of your facility to different parts of city?
  - What do you need your drivers to do?
  - Different areas of your plant may require different actions in an earthquake (warehouse vs kitchen vs drivers vs in stores)



## Earthquake Things To Consider

- Insurance companies often give discounts for equipment you purchase to mitigate loss (seismic gas shut offs, bracing)
  - Put bollards around to protect against accidentally being bumped by trucks
  - Need a plumber to reset
- Earthquakes will take the entire city or state resources
  - Human life first
  - Getting your business up and running will not be the priority of emergency services



## Fire



## Fire Video 2



## Fire Things to Consider

- If you experience a fire you will also have to deal with "flood".
  - There will be smoke damage as well
- The fire in the picture burned hot enough to affect the structural steel of the building.
  - Plastic burns much hotter than paper
- The amount of water discharged either by your sprinkler systems or fire department will also cause water damage.
  - If you are going to do a table top exercise for fire include also a test/run through your flood plan

## Fire Things to Consider

- Remember to perform regular checks of your fire suppression systems
  - Weekly visual inspections
  - Annual or bi-annual test of system (use test mode)
  - Remember to bring it back on line
- Consider your contracts. Do you have companies who can remediate flood water and dry out your building
  - How will you repair or replace damaged dry wall and/or equipment



## Floods Things To Consider

- Do you have spare parts, what are you essential equipment you need to get back up and running again?
  - Do you have older equipment with hard to find parts?
  - Consider having critical spare parts on hand

- Myself and my employee were not flood experts.
  - Asked my insurance carrier to fill in sections

**Provide a high-level description of the flood hazard(s) and likely scenario(s) including the following:**

- Source(s) of flooding: **Willamette River**
- Likely weather event(s) that will trigger flood: **Heavy precipitation**
- Likely advanced warning time for each event: **24-48 hours**
- Depth of water if expected to affect site ingress and egress: **2.6 ft inside buildings, 3+ feet outside of buildings severely limiting ingress/egress**
- Depth of water expected in key buildings: **2.6 feet during 500 yr. event (Flood level of 38.8 ft)**
- Length of time water will remain in the facility for each event: **Less than 3 days**
- Description of critical areas likely to be flooded: **The entire facility**
- Anticipated business impact: **No production**



## Freeze Things To Consider

- If your site is affected, the whole city will likely be affected.
- Remember diesel can act up in cold weather.
- People may be stranded at work -plan for their comfort.
  - Potable water



## Freeze Things To Consider

- Don't forget about your roof
  - What equipment do you have up there that could be affected
  - Protect workers who have to get on roof
- Buy shovels, salt, supplies in the fall or spring. Don't wait!
  - Replace any supplies you used up or use Outlook for calendar reminder a month or few week



## Spill Things To Consider

- Remember to update your Safety Data Sheets when you get new ones or if you change chemical vendors
- Consider putting location of large quantities of chemicals, drains, and spill containment materials on a map
  - This will help you determine where to keep drain covers, supplies
- May not be required by your insurance carrier go ahead and do it
  - Protect your staff
  - Protect the environment



## Things to Think About- Communication

- If a disaster is city or state wide, cell phones will be blocked up
  - Texting will work- many municipalities have text aps that emergency information will go out
  - Webpages
- Assign definitive roles and have backups
  - Incident Commander- on the phone with corporate
  - Roll Call Officer- accounts for your staff and any visitors
  - Liaison with Emergency Services- texting, using computer, calling
  - Maintenance & Rescue- must have two rescuers to be a team



## Things to Think About- Communication

- Don't forget your visitors.
  - Take the book that they check in with
- Assign people (primary and backups) to grab key pieces of equipment:
  - Emergency kit
  - Shut off key
  - Radios
  - Business Continuity Plan
  - Visitor log
- Radios
  - Are they charged?
  - Where are they located?
  - Do you have enough?
  - Are there radio/cell phone dead zones in your facility?



## Things to Think About- IT

- Where are your servers backed up?
  - Best if in different state that is not subject to same natural disasters
  - What floor are your servers kept on?
- Where are your current servers located?
  - Hurricane Allison
    - Servers were in the basement
    - So were the research animals



## Things to Think About-Emergency Generator & Suppliers

- Emergency generators but the switch we would need to install cost \$250,000
  - Monthly fee we would pay to have a generator on hand did not guarantee a generator
  - Consider looking at alternate spaces
  - Being able to shift production to other facilities
- Does your business have any single sources for key elements in your processes or business?
  - Consider adding secondary suppliers or agreements to eliminate single source of your most critical parts.
  - Consider having them located in different parts of the country



## Things to Think About – Suppliers’ Business Continuity

- How are your vendors’ emergency or business continuity plans?
  - How will your suppliers handle an interruption to their business?
  - How long will it take them to be able to supply you with their products?
  - Freeze/winter storm that prevents shipping from their area to yours?
    - Natural disasters that affect routes of shipping to you
  - Are they located in states with natural disasters or likely targets of man made disasters?
    - Have you checked the last time they updated their emergency plans?
    - How will they notify you of any business interruptions on their end?

## Things to Think About- Supplies

- If you wait to stock up on supplies during an emergency they will be sold out.
  - Salt or de-icer before winter
  - Ply wood will be sold out when the hurricane or storm warning is issued
  - Potable water for shift stuck at work
  - Spare parts of essential pieces of equipment
  - Consider flood barricades for around your most critical areas of operation or low parts of your facility or equipment



## Things to Think About- Keys & Kits

- Where is key to external rooms for shut off (gas, water, etc)
  - Do multiple people know how to shut gas off?
  - Ours was all the way in maintenance shop -not with emergency kit
- Roster
  - How often is an updated list of active employees printed off & where is it kept?
    - Once a quarter replaced in emergency kit

## Things to Think About- Emergency Kit

- Who checks it? How often?
  - Consider zip tie to deter people from raiding it
  - Not recommended having it in locked location
- Consider what you need in your emergency kit
  - Portable first aid kit
  - AED
  - Weather alert radio (crank version)
- Items to consider: head lamps, small flood lights (rechargeable)



## Things to Think About- Kit Tasks



- Assign specific people/job function the tasks of performing preparatory tasks.
  - Charging lights every six months
  - Ensuring radios are charged and functioning
  - Do not store batteries in mega phone
    - They may corrode and damage mega phone
  - Replacing employee roster every quarter
  - Replacing spent supplies (ply wood, de-icer, first aid kit in emergency kit (kits on walls typically checked))



## Things To Think About- Other Stuff

- Rally points
  - Many rally points are in the parking lot where emergency services will be trying to park
  - Will need different rally points for different disasters (tornado interior, fire exterior)
- Does your plan cover cities, states, countries that may have different disasters that your employees may encounter?
  - Have you trained them for these? CANADIAN, OPEN



## Things To Think About- Other Stuff

- If you lease your buildings you need to get your landlord to either pay for or approve any structural changes or upgrades.
- Who remembers BP's oil hazard in 2010?
  - Was it effective?
- Your plan is only as good as it's last update.



## Things To Think About- Other Stuff

- First thing to change are personnel and numbers.
- Put it on the calendar to look at your plan once or twice a year.
- This may be obvious but remember you will need two hard copies:
  - One to be kept on site
  - One to be kept at another location such as corporate offices
  - Your insurance carrier or broker should have a copy too



## Trained On Site Emergency Responders

- If your facility is remote or under card reader access that would delay emergency services consider training:
  - Spill response team (HAZWOPER)
  - Emergency Medical Technicians (Medical)
  - Fire Brigade
- I worked in a closed production facility that ran 24 hour shifts, 7 days a week. There were 48 emergency responders over all 3 shifts.
  - Required a lot of over sight
  - Required a lot of recurring training
  - Required a lot of equipment



## Who & How To Review

- The writer of the plan(s) are rarely the end user. Typically EHS or Risk Managers write the plan.
- Before you finalize the plan walk end users, both management and line staff including maintenance, through the plan
  - Schedule several meetings to go over the plan
  - Your plant managers and maintenance should have been providing you information along the way
    - We sent them pages that we needed filled out
    - Bring tasty snacks
- Used FM Global as our reviewers
  - This makes them happy!
  - This gives you free experts reviewing your work

## What Happens When You Finish

### ➤ You never really finish

- But the revisions should be easier and short
- Drills are a great way to test your plan
  - Pick drills that allow you to test multiple sub-plans
  - Earthquake you can also test fire



## Drills

- During drill make some of the key personnel such as incident commander "unavailable".
  - Back up personnel must be trained as thoroughly as those with primary responsibilities.
- Your role is to evaluate the drill and to provide information on disaster scenario.
- Drills are a great way to see where your break downs are.
  - People forget to grab key pieces of equipment.
  - Rosters aren't updated.
  - Drills aren't punitive, they help you refine your plan and find gaps

## Drills

- Remember to run drills on all of the shifts that you run or go over.
  - Managers must go over key pieces of information for staff who must stay in their areas or who are out during the drill
- Provide a timely summary and make changes to the plan or processes based on the drills.
  - Consider doing a debriefing as part of your drill
- We do well what we have practiced.

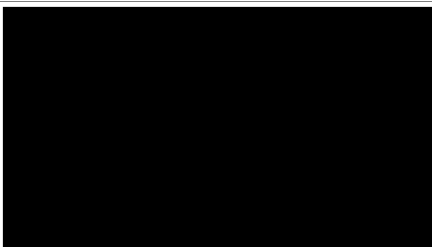


## Personal Safety

- What floor is your bedroom on? Kids' bedrooms?
  - Do you have two ways out
- How to get out if on top floor
  - Jumping or throwing "your spouse" out the window may not be an option
  - What if you have a newborn?
- How to get pets out?
- If you test the ladder alone
  - Tell your neighbors



## Tornado Video



## Summary

- When picking a drill to perform pick one that incorporates two or more sub-plans.
  - You will likely have to tweak your plan after drills
- Flight or fight is great for fleeing and fighting saber tooth tigers but not for thinking clearly.
  - Practice, Practice, Practice
  - Assign specific people to grab emergency kit, plan, radios, and other necessary equipment
- Don't forget to buy supplies before you need them, check on them regularly, and replenish them the same or next day after you use them.
- Check with your landlord prior to making any changes to structure of leased buildings or land.

## Two Final Thoughts

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➤ Business Continuity/Emergency Preparedness is one of those activities that takes a lot of time that you hope you never use.

➤ The journey of a thousand miles begins with one step.



## Questions

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