



South Waterfront Neighborhood Emergency Team Operations Plan

Overview

The South Waterfront Neighborhood Emergency Team (SoWa NET) is a trained volunteer arm of the Portland Bureau of Emergency Management (PBEM), responsible for providing aid to PBEM and our community.

SoWa NET covers the area from the Ross Island Bridge on the north to, and including, the south side of Bancroft St on the south, and from Interstate 5 on the west to the Willamette River on the east.



SoWa NET Leadership Team

- **Team Team Leader (TL):** Scott Huff
- **Assistant Team Leaders (ATLs):** to be filled
- **Amateur Radio Operators (AROs):** Don Graf, Ed Parker, Barbara Short, Scott Huff, Steve Lipsey

Staging Areas for SoWa NET Operations

- **Primary Staging Area:** Elizabeth Caruthers Park
- **Backup Staging Area:** NE corner, intersection of S Bond Ave and S Bancroft St, near Old Spaghetti Factory
- **BEECN/SoWa NET Cache:** In community garden, NW corner of S Moody Ave and S Gaines St
- **Emergency Radio Communications:** Family Radio Service (FRS) / General Mobile Radio Service (GMRS) channel 5, with channel 17 as back-up

Deployment and Operations

- **Criteria for Deployment**
 - one's ability to deploy, considering oneself and one's family
 - the structural integrity of one's residence building
 - the needs of others within one's own residence building
- **Traditional Deployment**
 - NETs will deploy to their designated staging area. It is assumed that in such an emergency, professional first responders would be able to reach South Waterfront in a matter of minutes.
- **Extreme Emergency Deployment**
 - In an emergency resulting in major structural damage and mass casualties throughout the city in which lines of communication are down and professional first responders will not be available for hours or days, NETs will deploy within their residence buildings first and go to their staging area only after conditions are stabilized within their buildings. The team leader within each building should check in by radio contact with South Waterfront NET TL to understand the need for assistance.
- **Decision to Deploy**
 - NETs may deploy when requested by the PBEM, when requested by a Team Lead, or on their own initiative. Deployment is voluntary. Taking care of oneself and one's family is the top priority. Deployment is based on what will do the greatest good for the greatest number of people in the shortest possible time.
- **Urgent Need Deployment**
 - If notified via FRS/GMRS by SoWa NET Team Lead (TL), Incident Team Lead (ITL), or designated representative of an urgent need for assistance outside one's residence building (e.g., at a nearby school), available NET members may be asked to deploy to that location.

- **Deployment Protocol Outside a Residence Building**
 - Wear appropriate Personal Protective Equipment (PPE), including and PBEM issued items (helmet, vest, ID badge, pack) and proceed to the staging area. If approached by people who want to help but are unaffiliated with the NET, bring them to the staging area to be processed by the spontaneous untrained volunteer (SUV) coordinator.
- **Staging Area Protocol**

The first person to deploy outside their building should first make sure that the staging area is safe to approach. Size-up the area for hazards such as downed power lines, gas leaks, fire, etc. If you are the first to arrive and find that the site is unsafe, mark it as "Site BAD" with a marking crayon, leave your initials, date, and time, and proceed to the backup site. Every NET member will carry paper and a stake/tape/string to leave this message at the site.

If a marking indicates "Site OK", add your initials and the date and time. In making the determination about site safety, assess the staging area for immediate and longer-term use.

On-Site Management Protocol

When NETs arrive at an established staging area they integrate into the existing chain of command.

Under most circumstances, the first to arrive assumes the role of Incident Team Lead (ITL). If a Team Leader (TL or ATL) thereafter arrives, however, he or she may assume the ITL role after appropriate hand-off procedures of briefing and orientation to present status of deployment teams.

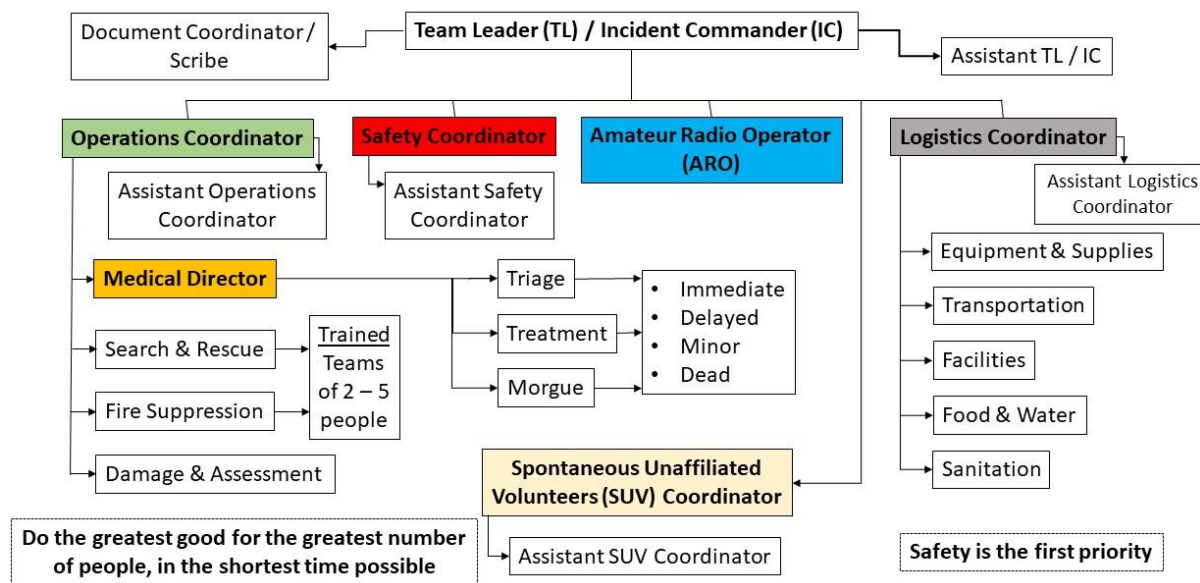
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Appendix 1 Emergency Response Organization

Members of SoWa NET live in SoWA residence buildings and are in the process of developing disaster preparedness groups in each of them. With the help of NET members, Affiliated Trained Volunteers (ATVs), are being trained to prepare themselves to survive a disaster and to assist their neighbors. Additionally, it is anticipated that others, referred to as Spontaneous Untrained Volunteers (SUVs), will help during a disaster. A goal of SoWa NET is to have NET members and/or ATVs in every residence building to provide leadership for disaster preparedness, response, and recovery.

Emergency Response Organizational Chart



The roles listed below will be filled by more than one person over the time of deployment.

Incident Team Lead (ITL):

1. Assesses on-site safety risks and determines the safest area in which to operate.
2. Assigns operational roles and tasks as team members arrive.
3. Assigns at least one ITL Scribe who will assist the ITL in checking NET members in and out, recording which NETs are assigned to which deployment teams, tracking the location to which each team is deployed, and maintaining other records as may be requested by the IC.
4. Develops a basic mission sequence:
 - a. Assign NETs to deployment teams as they become available
 - b. Direct teams to make an initial damage assessment of a quadrant of the South Waterfront.

- c. Direct deployment teams to keep damage assessment forms for the ARO to use to report South Waterfront incident data to the City of Portland.
- d. Direct teams to perform triage at sites identified for this purpose.
- e. Develop a plan of action that considers all relevant damage, injuries and available personnel and material resources.
- f. Update action plans as teams report in by assigning team members specific roles and tasks or reassigning teams to high priority sites.
- g. If needed, arrange for a field medical treatment area, preferably in a local building or parking garage if safe space is available.

Operations Chief (OC): Reports to the ITL and takes responsibility for assigning and directing field teams to complete tasks requested by the ITL. On a small team, the ITL may also serve as OC.

Amateur Radio Operator (ARO): Establishes UHF/VHF radio communications with others through Portland Bureau of Emergency Management's (PBEM's) Emergency Coordination Center (ECC). The ITL will approve the content of all messages sent from SoWa to the ECC or elsewhere.

If possible, every ARO will have an ARO Scribe to assist in keeping records of the incident and content of various NET Forms. New damage assessment forms may be provided by PBEM for message handling.

Basic Earthquake Emergency Communication Node (BEECN) radio operators: Within a day or two of the emergency event, the BEECN site shall be established and BEECN radio operators assigned to communicate with Fire Station 4 and/or other BEECN radio operators.

Spontaneous Untrained Volunteer Coordinator (SUVC) will be selected by the ITL. The SUVC will set up a check-in area at the outer boundary of the SoWa NET staging area and will ask SUVs to sign the waiver form, interview SUVs to determine what skills they have, provide them with an ID and lanyard if available, brief them on safety, and explain how to assist NET team and other tasks as determined by the ITL.

Record Keepers (Scribes): Maintains all paper records and ensures availability of forms to the NET team members, including but not limited to check in, shift change and assignment forms. If possible, the ITL will assign a command center scribe and another scribe to assist the ARO.

Security Lead: TBD, but in charge of organizing security of Operations and Medical tents, especially at times when they are unoccupied.

Team Members*: Report to the staging area in person or by radio and undertake tasks as assigned.

Affiliated Trained Volunteers (ATVs): ATVs are individuals in a community who have special

skills (e.g., medical, engineering, organizational) and have volunteered to be of assistance to the NET. Each ATV will be associated with a NET member in his or her building who will be responsible for alerting them when the NET deploys. ATVs should be given a vest and an ID on a lanyard and be prepared for deployment when the need arises.

*In a dire emergency like a major earthquake, after which traditional lines of communication with the ECC will be unavailable and the ECC is unable to direct deployment, SoWa NET members will observe the following steps for self-deployment:

1. They will determine their own safety and the safety of their family.
2. As soon as possible, each building's incident team leader (BILT) will check in with SoWa NET Radio Control (SoWa NET RC) on Channel 5 (backup Ch 17, 18, or 19 - see Appendix 2). Each BILT will maintain an open Channel 5 (or backup channel) connection to SoWa NET RC.
3. Each BILT should have a second FRS/GMRS radio for communication inside their building.
4. Team members within buildings will activate their FRS/GMRS radio for communication within that building.
5. Team members will put on their personal protective equipment (PPE).
6. They will deploy inside their own buildings in accordance with plans developed by residents of each building for emergency responses.

Appendix 2 Communications

Communications within buildings and between buildings in SoWa will be primarily by FRS/GMRS radios, although “runners” delivering information on foot, bicycle, or other means may be necessary.

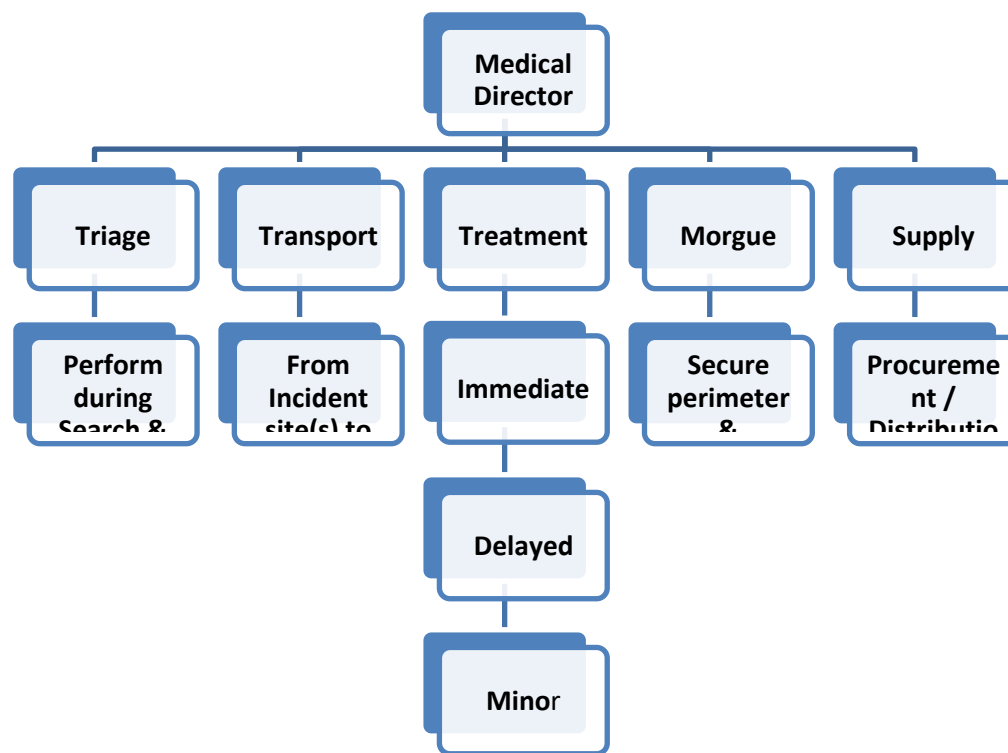
Communication from SoWa NET’s Incident Team Leader (ITL) to Portland’s Emergency Coordination Center (ECC) will be by “ham” radio with Amateur Radio Operators (AROs) passing the ITL’s messages to a Subnet Control (SC) “ham” operator, who in turn will pass the message on to the ECC.

Messages from the ECC to the ITL will follow the same path, but in reverse.

The following channels radio channels are specified.

- Between buildings: Channel 5 is specified by PBEM. Channels 17, 18, and 19 are specified by SoWa NET as backups should Channel 5 be too busy.
- Inside buildings (subject to updating as more buildings come on line) the following channels are specified by SoWa NET.
 - Atwater - 2
 - Mirabella - 3 and 4
 - John Ross - 4
 - Meriwether - 6
 - Ardea - 7
 - still to be specified: Dylan, Ella, Emery, Gray’s Landing, Griffis, Matisse, Osprey, Willamette Tower, others to be named
- Each residence building is a neighborhood with its own unique population and priorities. The following is a suggested plan, to be modified as appropriate.
 - Organize into floor response teams for immediate search and rescue operations. Each team will have a team lead with an FRS radio.
 - Select a NET member (or other person) to become building incident team leader will depend on who is present and able to serve.

Appendix 3 Medical Operations



Medical Director and additional medically-trained persons supervise/participate in the following:

- Establish a suitable site for medical triage and treatment. If following an earthquake, avoid liquefactive soils, overhead power lines, and potentially collapsing structures. The site might be a secure building.
- Erect triage/treatment facility (tents, cots, tables, etc.) in coordination with Operations Coordinator and Safety Coordinator.
- Establish a site for a morgue facility, either in each building or in coordination with other buildings or the entire NET area.
- Assign volunteers to collect medical supply bags from closets.
- Triage the injured, providing treatment or pronouncing deceased as needed.
- Give assignments to medically trained persons after they complete Form 2A Personnel Check-In.
- Document and identify (with name tags) all those seeking care at the triage/treatment site, including deceased, using Form 5 A Victim Treatment Area Record and 5B Individual Treatment Record.
- Oversee care provided.

- Provide care, first to those with breathing issues, then bleeding issues, then fractures.
- Consider the need to contact and communicate with OHSU Staging at Duniway Park, SW Terwilliger & Sheridan, e.g., for patient referrals.
- Give assignments to Spontaneous Untrained Volunteers (SUVs) after they complete Form 2B Spontaneous Volunteer Intake.
- Assign a scribe/note taker to the medical team to assist with forms 2B, 5A, 5B.
- Assign someone as security for guarding medical supplies and the morgue.
- Triage the injured, identifying with colored tape or labels as
 - 1) those needing emergency evacuations,
 - 2) those needing urgent care that can be provided by the medical team, and
 - 3) those with minor injuries that can be treated later by the medical team.
- Organize medical supplies, sanitation facilities, water supplies, and food resources with the Logistics Coordinator, and anticipate potential for additional supplies.
- Assign SUVs to set up and maintain hand wash and sanitation stations near the triage site.
- Assign SUVs as runners for errands, e.g., transporting water, cups, containers, food, blankets, etc.
- Assign SUVs to provide comfort to the injured, helping with emotional needs, and keeping triage clear of onlookers.
- Assign SUVs for observation of the injured, watching for symptoms and reporting these to triage personnel.
- Formulate and communicate specific duty rotations of personnel for deployment in 4 to 8 hour periods.
- Anticipate, and monitor for, potential “burn out” of personnel.

Suggested Organization of Medical Response

APPENDIX 4 Sanitation

Introduction

Sanitation will be a major health issue following an emergency, such as an earthquake, flood, or volcanic eruption. It is important that we prepare for it as best we can. Preparation is needed on four levels.

- State, city, county, and/or METRO
- Various NETs including the SoWa NET
- Each residential building in SoWa
- Residents living in each building.

The following are recommendations for South Waterfront.+

South Waterfront Living Units and Population

How many people will be affected by such an emergency? The South Waterfront Community Relations office reports the following.

- SoWa currently has 792 condominiums and 2166 apartments. When the parcels bordered by S Bond, Lowell, Lane, and the river are developed, 1200 additional apartments will be added, for a total of 4158 living units.
- SoWa's current resident population is approximately 3885. When build-out is completed, this will rise to about 5925. The area's non-resident working population is roughly 3000.

What issues will we face?

For planning purposes, we assume that we may face the following issues for days, weeks, or months.

- There will be no running water, hence there will be no working wastewater system.
 - Until notified otherwise, do not drain sinks or flush toilets!
 - Similarly, nothing should be put in trash chutes!
- There will be no electricity, and therefore, no elevator service.
- There will be no fuel deliveries, thus emergency generators will not operate.
 - Without generators, dewatering pumps at the bottom of garages will not run and water levels will rise, so vehicles may need to be moved outside, although this will depend on road conditions.
 - After a major earthquake, it is likely that roads will be impassable due to liquefaction of the soil under the pavement, so vehicles should be left in garages to avoid creating a traffic nightmare.
 - During a flood for which there is adequate warning and during which power is lost (or may be lost), vehicles should be moved to higher

locations away from South Waterfront. If there is not adequate warning and water is rising in garages, do not risk your lives by trying to move your vehicles.

- During a volcanic eruption during which power is not lost, it may be best to leave vehicles in garages. If power is lost, vehicles should be moved to higher locations.
- Roads and bridges will be impassable, hence there will be no trash pickup.
- Human waste, i.e., pee and poo, will need to be handled, transported, and temporarily stored until permanent disposition can be arranged.
- Residents in each apartment and condominium building will need to develop a plan suited for that building to deal with human waste (along with regular trash).

Handwashing

Access to handwashing stations will be key to hygiene and prevention of disease. This could be done with non-potable water treated in some fashion, such as adding bleach to water withdrawn from the Willamette River. These could vary from DIY-built systems to commercial built systems, such as those pictured here.



An issue that must be resolved is whether it is possible to purify Willamette River water after a major earthquake, through chlorination and filtration. Opinions vary as to whether this is possible. If the answer is yes, we could make plans for a pump and hoses to bring water from the Willamette River to Elizabeth Caruthers Park. Doing so would involve considerable expense and present storage issues. More guidance from city, county, and state health professionals is needed.

Human waste handling in individual units

Pee and poo happen and will continue to happen after an emergency. Residents must, therefore, make plans for how to handle both in their units. Possibilities include the following.

- The “two bucket” system with one bucket for pee and one bucket for poo as described here: <https://www.phlush.org/wp-content/uploads/2014/03/Twin-Bucket-Leaflet-in-pdf.pdf>
- The “Go Anywhere Toilet Kit” as described here: <http://www.cleanwaste.com/go-anywhere-toilet-kit>

The “two bucket” system has the advantage of separating pee and poo so that they may be transported and disposed of separately. This helps since the volume of pee is greater than the volume of poo a person produces each day, and the method of disposal can be different, at least in an emergency. Something like bark chips will need to be added to poo buckets to help with odor issues.

The “go anywhere toilet kit” system has the advantage of having just one container (bag) to transport and dispose of. Additionally, these can be used in an existing toilet, which may be easier for people depending on issues like age, infirmity, and mobility.

Human waste handling in each residential building

Pee and poo, separately or not, will need to be stored temporarily in the unit (or on its balcony if one exists) until they can be transported to the ground floor. If collected separately, pee may be able to be disposed of in trenches that will need to be dug, but poo and go anywhere toilet bags will need to be transported to the ground floor. Buckets for poo and go anywhere toilet bags will need to be lined with plastic bags, preferably heavy duty contractor bags. Given that a 5-gallon bucket full of pee weighs over 40 pounds, transporting less-than-full buckets may be necessary.

If elevators are not operating, moving the waste downstairs will have to be done via the stairs, which will present a significant challenge. This might be done one bucket or bag at a time, or it might be done for several units at a time using an evacuation chair or evacuation sled (described under ‘Decedent’ plan elsewhere in this document). This will not be something that every resident will be able to handle due to issues like age, infirmity, and mobility. Each building will need a team of volunteers to help move pee and poo downstairs and outside the building.

Human waste handling throughout SoWa

With the “two bucket” system, disposal of pee will depend on the nature and severity of the disaster. Buckets could be emptied into trenches dug nearby, into the river if trenches are not an option, or into catch basins connected to storm drains if it appears that underground piping has not been severely damaged.

Bags from poo buckets and holding go-anywhere-toilet-kits will need to be stored in a location easily accessed by haulers once they are able to reach us. This will likely be along streets, but in a location separated from trash and recycling materials which will also need to be stored until

collected. Guidance from the city, county, and/or Metro will be needed on this issue. It should not be up to individual NETs to make this decision.

Other issues for SoWa NET to consider

- If the “two bucket” system will be used by some residents in some buildings, locations for pee disposal trenches will need to be identified.
- In addition to human waste, we will still have trash and recycling materials to handle. As mentioned above, storage sites should be easily accessible, probably along streets.
- How will recycling, such as glass, aluminum, and cardboard, be handled? Will it be temporarily commingled with regular trash?
- How will we address the potential advantage of separating compostable material from dry trash and storing and disposing of it separately, as is done already in at least one SoWa condominium tower? Will it be temporarily commingled with regular trash?
- How will human waste (and trash and recycling) be collected from each building and transported to temporary storage locations? This could be the responsibility of each building, but it might be better to have a SoWa-wide plan. (The Meriwether has a small tractor that it uses to pull trash bins out of the garage which is below ground. It has a flat nearby where trash bags could be stored for eventual transportation. Perhaps the SoWa Neighborhood Association could obtain a small tractor-trailer combination to move. This could also be used to transport the deceased. (See ‘Decedent’ plan elsewhere in this document.)
- Education: Each residential building will need to be involved with educating occupants on the means for collecting and storing human waste. They will also be responsible for determining what help they might provide to their residents to help bring trash and human waste down the stairs until elevators are restored.
- Although it will be up to each person to determine whether or not they will be able to collect pee separately from poo, it should be stressed that if we are in this predicament for a long time it will be beneficial to the community to collect as much as possible of our liquid waste separately from our solid waste.
- SoWa NET could consider appointing a “sanitation czar” along with a deputy and each building could do the same. Building czars would coordinate with the SoWa NET czar. These people will be responsible for the ongoing handling of sanitation issues

APPENDIX 5 Decedents

Introduction

Following a major earthquake, many services, such as Medical Examiner and mortuaries, and infrastructure, such as elevators, roads, and bridges, may be unavailable for weeks or months. During this time, it is likely that people will die, whether due to the earthquake or from natural causes. Decedents will need to be handled, transported, and temporarily stored until permanent disposition can be arranged.

Decedent Care Kit

PBEM's Guidelines, Section 600.25, suggest that, as an option, some teams choose to keep a kit of supplies appropriate for care of human remains. The following supplies are recommended for a decedent care kit (care for five decedents):

- Durable supplies storage tub (qty. 1)
- Nitrile gloves (100 pair)
- Face masks for decedents (paper and cloth) (qty. 20)
- ID labels for ankles (qty. 20)
- "White envelope" body bag (qty. 4)
- Black zipper body bag (heavy duty) (qty. 1)
- Plastic prep apron (qty. 4)
- Absorbent pad (qty. 1)
- Heavy duty shipping tape (38 yard roll)
- Personal belongings bags (qty. 5)
- Deceased info sheets (qty. 10)
- Gallon ziplock bags to protect info sheets (qty. 10)
- Markers (qty. 3)
- Pens (qty. 5)

Given the size of residential facilities in SoWa, it is recommended that each apartment and condominium building obtain their own decedent handling supplies in quantities appropriate for 1-2 percent of their resident population.

Decedent Transport

Transportation of decedents in multi-story buildings could be by means of an evacuation chair or evacuation sled such as those shown below. These could also be used to transport living residents (along with supplies and/or waste materials). Both are intended for use on stairs as will be needed when elevators are not working.



Decedent Handling and Storage

Handling, storing, and processing the dead is highly regulated and care must be given to abide by local laws and codes. Even if the Medical Examiner's office is not able to collect bodies for an extended period, it should be consulted. This may be through the NET's Amateur Radio Operators (AROs) if phone or internet communications are unavailable.

Until collection by the Medical Examiner's office is possible, bodies will need to be protected and stored. This will include, but not be limited to, the following.

- Logging information about where and when each body was found, along with name (if known), identifying features (for unknown), and ...
- Enclosing the body in an 'envelope' to protect the body and those handling it. Enclosures could be commercially-available body bags or envelopes, or DIY ones made with heavy duty plastic bags and tape. (Note: commercial bags and envelopes can be expensive and have a limited shelf life, even if protected from heat, sun, etc.)
- Including a copy of the logging information, sealed in a clear, waterproof envelope like a sealable freezer bag, inside the body enclosure.
- Storing the bagged body in as cool a place as possible. If that is outside of a building, storing the body in trenches should be considered since the ground may be cooler than the air. This will require logging the location of each decedent and protecting the body from animals.
- Precautions, e.g., PPE and hand-washing facilities, for those handling the decedents.

This short video provides unofficial guidance: https://www.youtube.com/watch?v=qq6_xujk-fl

Pet Decedent Handling and Storage

In addition to humans, it is likely that pets will die as well. They, too, will need to be handled, transported, and temporarily stored in an appropriate location.

Appendix 6 Neighborhood Resources

This section lists potential resources in the neighborhood that may be useful during NET operations. Unless otherwise noted, team members should *not* assume the team has any special access to these resources.

Emergency Response Sites

- Fire Station 4, 511 SW College St at SW 5th Ave
- Police Station: Central Precinct, 1111 SW 2nd Ave

Commercial and Institutional Sites

- Oregon Health & Sciences University (OHSU)
 - Center for Health & Healing Building 1: 3303 SW Bond Ave. Medical clinics for patients (most of whom are ambulatory) plus a pharmacy.
 - Center for Health & Healing Building 2: 3485 S Bond Ave. Primarily day use, but with some overnight patients, plus a pharmacy.
 - Gary & Christine Rood Family Pavilion: 3401 S Bond Ave. Houses families of inpatients at the OHSU hospital.

Parks, Open Areas, Sheltered Areas:

- Elizabeth Caruthers Park, bounded by S Bond Ave/Moody Ave/Curry St/Gaines St.
- Greenway, along the west bank of the Willamette River, between S Lane St & Zidell Marine.

Markets and Restaurants:

- Al Hawr Restaurant: 3500 S River Pkwy. 971-254-9785
- Bambuza Vietnam Bistro: 3682 S Bond Ave. 503-206-6330
- Cha Cha Cha: 3135 S Moody Ave. 503-224-0100
- Daily Café: at CHH 1, 3355 S Bond Ave. 503-224-9691
- Dolce Vita Bistro: 3550 S Bond Ave. 503-688-6530
- Ecrú Modern Stationer: 3139 S Moody Ave. 503-477-4049
- Greenleaf Juicing Company: 3151 S Moody Ave. 503-477-6406
- Lilia Comedor: 3159 S Moody Ave.
- Little Big Burger: 3704 S Bond Ave. 503-265-8021
- Old Spaghetti Factory: 715 S Bancroft St. 503-225-5375
- Ovation Coffee and Tea: 3730 S Bond Ave. 971-865-2114
- Oracle Coffee Company: 3875 S Bond Ave. 971-339-9002
- Subway: 3626 S Bond Ave. 503-295-1188
- The Growler Guys: 3739 S Bond Ave. 503-208-2523
- Urbana Market: 3550 S River Pkwy. 503-224-0101
- Vesta's Table: at CHH 2, 3485 South Bond Ave.

Professional Offices:

- South Waterfront Dental: 3580 S River Pkwy, 503-841-5658
- South Waterfront Eyecare: 3615 S River Pkwy, 971-229-0820

Appendix 7 Potential Hazards

- **Ross Island Bridge:** In the event of a Cascadia Subduction Zone earthquake of predicted magnitude, it is most likely that the Ross Island Bridge will fail, possibly collapsing and cutting off access to the neighborhood from the north.
- **Zidell Yards:** 3121 S Moody Ave. (503-228-8691) The Ross Island Bridge bisects the 32-acre Zidell property. A bridge collapse endangers the office building and any operations within range of falling bridge components. Zidell previously built seagoing barges at this site, using heavy equipment that may topple. Hazardous materials may be present.
- **3030 Building:** The two-story brick building at 3030 S Moody Ave. lies virtually under the Ross Island Bridge. Although it is mere feet outside this NET boundary, it is a hazard of which we should be aware.
- **Emery Apartments:** 3155 S Moody Ave. (855-861-9457) The Emery is built on Zidell-owned property on the West side of SW Moody, with its northernmost wall practically touching the Ross Island Bridge. Damage to the bridge would imperil the Emery.
- **Portland Aerial Tram:** located at OHSU Commons at the northeast corner of the Center for Health & Healing. The tram links the South Waterfront with the OHSU complex on Marquam Hill. Damage to the aerial tram could imperil those below, including those on I-5, and strand hundreds of OHSU staff, patients and visitors.
- **Former gas station** on S Macadam, corner of Gaines St.: This property includes a parking area at the side and rear of the service bay, which is suspended over a sloping lot by several concrete pillars of indeterminate age. A seismic event may cause the pillars and thus the parking area to collapse onto S Moody Ave.
- **Matrix Integrated Auto Repair:** 4000 S Macadam Ave. (503-443-1141) Auto repair shop. Hazardous materials are likely.
- **Liquefiable soils:** Much of the neighborhood sits on a deposit of soils prone to liquefaction. While newer buildings should be able, with some damage, to withstand a substantial seismic event, the area is susceptible to failures of roads and utilities.
- **Interstate 5:** The freeway is the western boundary of this NET area. The freeway may not be usable for some time after a major earthquake.

Appendix 8 Known Population Centers

Schools:

- Healthy Starts Children's Center at OHSU: 3325 S Moody Ave. 971-230-2342
- Montessori Children's House: 3636 S Bond Ave. 503-360-1179
- The Cottonwood School of Civics and Science: 640 S Bancroft St. 503-244-1697

Facilities with special needs residents:

- OHSU Center for Health & Healing Building 2: 3485 S Bond Ave. Primarily day use, but with some overnight patients.
- OHSU Rood Family Pavilion: Includes a Ronald McDonald House for OHSU patients and families.
- Mirabella Portland: 3550 S Bond Ave. (503-688-6400) is a 30-story continuous care retirement community with independent, assisted living, skilled nursing, and memory care areas.
- Gray's Landing: 650 S Lowell St. houses a substantial population of elderly, veterans, and people with disabilities.