

## **ANNEX E: ENVIRONMENTAL SURETY**



**Public Health**  
Prevent. Promote. Protect.

*Noble County Health Department  
44069 Marietta Rd  
Caldwell, Ohio 43724*

**For Official Use Only**

**April 2017**

**Review History**

| <b>Date</b> | <b>Reviewed By</b> | <b>Comments</b>  |
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This Plan will be reviewed and revised as needed by the Noble County Board of Health, Health Commissioner, Administrative staff, and regional and local planning partners annually or as required by mandate, law, policy, directive, or order. The Plan may also be revised based on best practices, changes in government, equipment and/or infrastructure.

References to Ohio Revised Code and Ohio Administrative Code are for information purposes only. Legal opinion must be sought through Health Department legal counsel.

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| Health Commissioner  | Date  |
| _____  | _____ |
| Director of Nursing  | Date  |
| _____  | _____ |
| Director of Environmental Health                             | Date  |

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**April 2017**

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## Purpose

The purpose of *Annex E: Environmental Surety* is to provide guidance and outline emergency response roles and responsibilities to be assigned within the Noble County Health Department (NCHD) during a public health emergency or in support of partner agencies during a non-public health incident. This plan should be used in conjunction with the Noble County Health Department All Hazards Emergency Response plan to guide preparedness, response and recovery actions to an environmental threat and/or the public's health and safety.

The primary emergency response roles of the Environmental Health Section of the NCHD are:

- Food Safety
- Safe drinking water supply
- Oversee vector-borne disease control
- Severe weather response (water testing, well disinfectant, food disposal)
- Solid waste management
- Assist with animal control
- Staff safety and PPE
- Inspection of mass care shelters
- Assist epidemiologists and nursing department in investigation of food-borne and water-borne disease outbreak
- Assist ODH and HazMat responders with toxic substance control and clean-up, and radiological response

## Situation and Assumptions

### Situation

The NCHD maintains a *public health specific* Hazard and Vulnerability Analysis (HVA) that outlines potential health hazards. It rates threat, magnitude and the likelihood of occurrence in Noble County.

The most common threats to the environment and public health within Noble County are:

- Severe flooding based on topology
- Severe weather such as storms with high wind, copious rain or snow, extreme temperatures
- Accidental release of toxic/hazardous materials
- Water contamination due to flooding
- Poor food handling practices or contamination by ill workers
- Maybe add something related to Oil and Gas

### Assumptions

- NCHD staff may be primary responders in a foodborne or waterborne disease outbreak or fill a support role to partner agencies/organizations such as the EPA or local HazMat teams.
- With the declaration of a **public health** emergency **related to public health** the Emergency Operations Center (EOC) will be activated.
- The NCHD will activate the Department Operations Center (DOC) to manage the public health response and coordinate with response agencies and partners.
- The environmental health section of the NCHD will be activated as primary responders or support staff during a disaster that has negative environmental implications.
- Given limited available staff at the NCHD, support may be requested through the activation of local and regional MOUs.

## Concept of Operations

### General

During an emergency the primary role of environmental health staff is to provide services essential for protecting and maintaining the well-being of the people affected by the situation, with an emphasis on prevention and control of communicable disease and exposure to hazardous materials. Primary response activities are outlined below.

- Determine if local resources are adequate for efficient response
- Determine potential threats/health risks
- Determine response priorities and recommend actions
- Develop objectives
- Initiate intervention/mitigation strategies
- Develop safety messages for public release in coordination with incident safety officer regarding environmental health concerns related to the incident to include
  - Food and waterborne disease
  - Vector control
  - Drinking water safety
  - Solid waste disposal
  - Water testing
  - Well disinfection
  - Mold clean-up and
  - Report hazardous or toxic chemical releases or spills
- Maintain communications with response partners such as the epidemiologist, EOC, HazMat teams, hospitals, physicians, water testing facilities
- Inspect designated mass shelter facilities prior to use and before re-opening to the public
- Recommend appropriate PPE for staff and responders
- Identify areas with potential contamination

### Worker Safety and Protective Equipment

**PPE Definition:** For the purposes of this plan, Personal Protective Equipment (PPE) is defined as any type of protective clothing or equipment (steel-toed boots, leather gloves, hard hats, mask, respirators etc.) to be used in response to an emergency response and not exclusively the medical PPE that is typically thought of in a public health response.

**Respirator Use:** In the event that respirators are identified as a recommended or required type of PPE to be used in a response, the health department **should will** follow OSHA regulations in developing a respiratory protection program. A respiratory program should include:

1. A written respiratory protection policy with required worksite-specific procedures and elements for required respirator use
2. A medical evaluation to determine the worker's ability to use a respirator
3. A ***Fit Test*** for the employee with the make, model, style, and size of respirator that will be used
4. Effective training for employees who are required to use respirators.

Assuming that a disaster situation poses a threat to the health and safety of environmental health professionals who are participating in response and recovery efforts, the following activities need to be addressed immediately:

1. **Complete an ICS Form 215A Incident Action Plan Safety Analysis, with the following information:**
  - a. Compile a list of all known site hazards that may be encountered during response and recovery activities. Collect, assess and review potential health effects associated with each known site hazard
  - b. Recommend appropriate PPE to be used by response and recovery personnel during response activities
  - c. Confirm response and recovery personnel have received adequate PPE training and fit testing
  - d. Confirm response and recovery personnel have received health and safety training related to conditions in the disaster area.

There are a number of important coordination responsibilities that Noble County environmental health professionals must accomplish to ensure they are properly protected during a disaster situation:

1. Collaborate with governmental and private sector organizations to collect information about existing and potential hazards in the disaster area
2. Conduct a qualitative assessment of potential hazards posed in the disaster area
3. Review guidelines for selecting PPE to use in all phases of response and recovery activities
4. Select appropriate PPE to use in ***all phases*** of response and recovery activities
5. Provide initial and recurring health and safety training for all personnel involved in disaster response and recovery activities
6. Inspect all personal protective equipment for signs of deterioration and replace if necessary
7. Establish an effective means for implementing safety decisions affecting all response personnel in the disaster area
8. **Provide a Safety Briefing to responders using ICS Form 202, Section 7: General Safety Briefing**

### **Foodborne and/or Waterborne Disease Outbreak**

The Noble County Health Department is the lead agency in the county in oversight of food and water safety. The environmental health and nursing departments and the regional epidemiologist work jointly in the management of any disease outbreak. Support provided to the disease investigation team may include:

1. Implement surveillance and investigation within 3 hours
2. Assist in establishing a case definition
3. Assist with contact tracing, monitoring and management
4. Implement disease containment and/or mitigation such as medical countermeasure distribution and/or food embargo/restrictions, boil water order etc.
5. Assist with specimen collection and transportation to ODH labs (or other as appropriate)
6. Share event information with partners through situation reports and Incident action Plan (IAP)



Below are immediate actions to be implemented by environmental staff during an incident that includes a foodborne or waterborne incident:

### **Food Safety Response Activities**

1. Contact licensed food service facilities and assess the status of each one
2. Assure compliance with food preparation and service regulations at mass feeding sites
3. Confirm that licensed food service establishments provide hand-washing and service material cleaning, refrigeration, and safe water sources to include those that dispense drinks

Provide Technical assistance and consultation to owners/managers of food establishments regarding

1. General food safety
2. Salvaging and protecting perishable foods
3. Sorting and proper disposal of foods which may have been contaminated or damaged

### **Water Safety Response Activities**

1. Ensure that an adequate supply of safe potable water is available to the general public
2. Contact water system operators and purveyors to determine if water service and/or quality have been, or may become affected by the event
3. Confirm contract labs are able to operate and conduct appropriate analyses
4. Assist water system operators and/or purveyors as requested
5. Assist in locating and distribution of potable water supplies
6. Assist municipal water staff in the delivery of emergency water supplies
7. Prepare information for the public on
  - a. Individual water needs
  - b. Rationing
  - c. Storage
  - d. Disinfection
8. Post information to the public regarding water needs, rationing, storage and disinfection on the county website

### **Vector Control**

Environmental health practitioners deal with vector control issues daily. With the threat of terrorism, practitioners must also prepare for possible biologic attacks in which animal and insect vectors could be used to deliver disease-causing organisms.<sup>1</sup>

Some causes for naturally occurring vector borne disease as a result of a disaster:

1. Disruptions to sewage systems
2. Disruptions to solid waste collection
3. Animal control issues
4. Storm debris that may include animal carcasses and food wastes
5. Flooding and standing water where mosquitos breed
6. Weather conditions such as humidity

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<sup>1</sup> CDC, Environmental Health Services, Vector Control [www.cdc.gov/niosh/topics/outdoor/default.html](http://www.cdc.gov/niosh/topics/outdoor/default.html)  
March 10, 2013

Response activities to prevent or mitigate vector related disease:

1. Identify situations that may promote vector infestation (e.g., mosquitoes, flies, ticks, and/or rodents)
2. Recommend/implement vector control measures
3. Coordinate with local refuse haulers to reinstate refuse collection and special pick-up schedules
4. Coordinate the placement and maintenance of commercial chemical toilets and hand-washing stations
5. Provide technical assistance regarding the construction of alternate human waste disposal units such as latrines

**Vectorborne Diseases That May Be Weaponized:**

**Anthrax:** Humans can become infected with anthrax by handling products from infected animals or by breathing in anthrax spores from infected animal products (like wool, for example). People also can become infected with gastrointestinal anthrax by eating undercooked meat from infected animals.

**Brucellosis:** The most common way to be infected is by eating or drinking unpasteurized/raw dairy products. When sheep, goats, cows, or camels are infected, their milk becomes contaminated with the bacteria. If the milk from infected animals is not pasteurized, the infection will be transmitted to people who consume the milk and/or cheese products.

**Plague:** People most commonly acquire plague when they are bitten by a flea that is infected with the plague bacteria. People can also become infected from direct contact with infected tissues or fluids while handling an animal that is sick with or that has died from plague. Finally, people can become infected from inhaling respiratory droplets after close contact with cats and humans with pneumonic plague.

**Tularemia:** People can get tularemia many different ways:

1. Being bitten by an infected tick, deerfly or other insect
2. Handling infected animal carcasses
3. Eating or drinking contaminated food or water
4. Breathing in the bacteria, *F. tularensis*

Tularemia is not known to be spread from person to person. People who have tularemia do not need to be isolated. People who have been exposed to the tularemia bacteria should be treated as soon as possible. The disease can be fatal if it is not treated with the right antibiotics.

**Viral Hemorrhagic fever (VHF):** Viruses associated with most VHFs are zoonotic. This means that these viruses naturally reside in an animal reservoir host or arthropod vector. They are totally dependent on their hosts for replication and overall survival. For the most part, rodents and arthropods are the main reservoirs for viruses causing VHFs. The multimammate rat, cotton rat, deer mouse, house mouse, and other field rodents are examples of reservoir hosts. Arthropod ticks and mosquitoes serve as vectors for some of the illnesses. However, the hosts of some viruses remain unknown -- Ebola and Marburg viruses are well-known examples.

## **Public Health Response to a Chemical Incident**

A chemical incident may be an act of terrorism culminating with the intentional release of a chemical agent as described in the CHEMPACK section below by a specific group, normally with political agenda in mind. However, a chemical incident may be the result of an accidental release of an industrial or a transportation accident involving hazardous materials. Public Health is not normally the Primary responder in a chemical incident, but will provide critical support through subject matter expertise to response activities.

### **Objectives**

1. Detect an event through environmental monitoring
2. Contact law enforcement and hazmat experts
3. Quickly implement public health support activities
4. Identify and protect the population(s) at risk
5. Anticipate surge in public health and medical services
6. Provide guidance to healthcare providers regarding PPE for staff and recommended medical countermeasures
7. Support/assist decontamination processes
8. Track exposure and initiate follow-up activities utilizing epidemiological practices

### **Response**

The Health Commissioner will work with Emergency Operations Center, Ohio Department of Health, regional epidemiologists and regional coordination center to:

1. Assure epidemiologic capacity to investigate a chemical event
2. Collaborate with investigation efforts of local, state and /or federal law enforcement officials
3. Activate risk communication plan(s) to provide information on the nature of the emergency and protective action messages across various media
4. Mobilize necessary local health department staff and volunteers to respond to the public health emergency
5. Activate local, regional and state partnerships to support responses activities such as triage, alternate care centers, medical countermeasure dispensing, request and activation of Strategic National Stockpile (SNS), mortuary assistance, and mental health support
6. Facilitate access to community services for special needs populations during a crisis
7. Protect the health and safety of residents, staff and volunteers in the case of a chemical event by supporting decontamination and enforcing worker safety procedures

### **Initial Activities**

1. Send staff to man EOC ESF#8 desk
2. Convene subject matter experts
3. Assess medical and public health implications and needs
4. Assist in the establishment of a registry for potentially exposed individuals using standard epidemiological principles
5. Assist with request for additional CHEMPACK material from the Strategic National Stockpile
6. Coordinate public health and medical information

### **Recovery**

The Health Commissioner will continue to work in consultation with other response organizations as needed to:

1. Continue with response activities as needed.
2. Conduct environmental health remediation and monitoring as necessary
3. Continue public health surveillance and monitoring of illness and death
4. Evaluate and assess response and remediation for a chemical event
5. Oversee proper documentation of expenditures for state and federal reimbursement

### **CHEM PAK**

Due to the rapid action of nerve agents, CHEMPACK assets are positioned in such a manner that the contents maybe distributed to the scene within one hour of deployment

The CHEMPACK should only be used when the number of people affected by the nerve agent is greater than 50 victims and will overwhelm the nerve agent antidote resources of the local EMS agencies and hospitals.

CHEMPACK contains large quantities of atropine, pralidoxime (2-PAM), and diazepam (Valium) and vials of sterile water. They are required to be stored in a secured, temperature-controlled site with electrical power and a dedicated telephone line.

Pre-designated hospitals and EMS units have access to CHEMPACK. Hospital and EMS CHEMPACK assets contain medications to initiate the treatment of 1000 patients. The primary difference between the hospital and EMS CHEMPACK is that the EMS CHEMPACK contains significantly more pre-filled auto-injectors, including Mark I kits, and diazepam in addition to the multi-dose vials of these medications. EMS CHEMPACK sets are contained in smaller boxes to facilitate ease in portability and wider distribution in the field.

Nerve agents that are mostly likely to be used as WMDs include Sarin (GB), Soman (GD), Tabun (GA), and VX. The signs and symptoms are similar, although the antidote doses required for treatment of an organophosphate exposure are typically higher than that for a nerve agent. Nerve agents are toxic and are not available to the general public. Organophosphates are in pesticides and are easily bought and sold to the public.

During a nerve agent release, it is highly unlikely that you or the EMS providers will be able to identify the agent. The appropriate actions for all emergency care providers will hinge upon the rapid recognition of signs and symptoms. SLUDGEM is the mnemonic used to describe the symptoms caused by nerve agents and organophosphates. There will be excessive secretions in the form of salivation, excessive tearing, urination, diarrhea, and vomiting as well as abdominal cramping, muscle twitching, and pinpoint pupils. The onset of symptoms and progression to death will vary depending on the amount and route of exposure.

**S**-Salivation

**L**-Lacrimation (tearing)

**U**-Urination

**D**-Defecation

**G**-Gastrointestinal upset

**E**-Emesis

**M**-Muscle twitching/Miosis

## **Public Health Response to a Biological Incident**

The purpose of the biological incident section of this plan is to establish methods and procedures to be used during emergency planning in regards to a public health emergency as a result of a naturally occurring public health threat or biological terrorism (bioterrorism).

The deliberate release of a biological agent may be either overt or covert. *Overt* is the announced or open spread of a biological agent and would cause immediate concern, triggering rapid efforts to identify the agent and to initiate appropriate response. *Covert* is the hidden use of a biological agent, which more than likely will delay recognition and response time. Either scenario may result in large scale impacts that will quickly overwhelm the public health and medical communities. Detection, response and control of a naturally occurring or an intentional disease outbreak will most likely to occur locally, however it will be necessary to collaborate with other community partners and the state to effectively coordinate all response efforts.

### **Objectives**

1. Detect any event through disease surveillance and environmental monitoring
2. Identify and protect the population(s) at risk
3. Determine the source of the outbreak
4. Quickly frame the public health and law enforcement implications
5. Control and contain any possible epidemic (including guidance to healthcare providers)
6. Augment and surge public health and medical services
7. Track and defeat any potential resurgence or additional outbreaks
8. Assess the extent of biological contamination and decontaminate as necessary

### **Response**

The Health Commissioner will work with Emergency Operations Center, the Regional Coordination Center, the Ohio Department of Health and the Regional Epidemiologists to:

1. Assure epidemiologic capacity to investigate a biological threat using objective tests to confirm the diagnosis
2. Coordinate the investigation with local, state and /or federal law enforcement officials
3. Activate risk communication plan(s) and provide information on the nature of the emergency and protective action messages across various media for the public to implement and adhere to
4. Mobilize necessary local health department staff and volunteers to respond to the public health emergency
5. Mobilize local, regional and state partnerships to set up and execute appropriate necessary responses (mass care clinics, mass vaccination, request and activation of Strategic National Stockpile (SNS), mass mortuary assistance, mental health support, etc.
6. Facilitate access to community, mental health, social services, and other necessary services for special needs population during a crisis.
7. Protect health and ensure safety of residents, staff and volunteers in the case of a biological event by ensuring infection control and worker safety precautions are being adhered to, as well as overseeing the enforcement of laws and regulations such as quarantine and/or isolation

### **Initial Activities**

1. Send representatives to serve as members of the EOC ESF#8 desk
2. Convene subject matter experts
3. Assess medical and public health status and needs
4. Assist in the establishment of a registry for potentially exposed individuals using standard epidemiological principles
5. Evaluate and fill requests for deployment of the Strategic National Stockpile
6. Coordinate public health and medical information

**NOTE:** Refer to **other** Annex A: Direction and Control of the Noble County All Hazards Emergency Response plan for specific operational guidance.

### **Recovery**

The Health Commissioner will continue to work in consultation with other response organizations as needed to:

1. Continue with response activities as needed.
2. Conduct environmental health remediation and monitoring as necessary
3. Continue public health surveillance and monitoring of illness and death
4. Evaluate and assess response and remediation for a biological event
5. Assist staff with completing required documentation of expenditures for state and federal reimbursement purpose.

### **Infectious Disease Control Manual:**

Hard copy located in nursing department, may be viewed on the web at:

<http://www.odh.ohio.gov/healthresources/infectiousdiseasemanual.aspx>

**See Annex C1: Epidemiological Response Plan:** *Ohio reportable Infectious Disease (Know your ABC's), Noble County Health Department All Hazards Emergency Response Plan*

### **Food Borne Reports and Information**

Utilize established EPI plan for investigation and reporting.

### **Initiation of Disease Investigation Procedure, Noble County Health Department**

Investigation of a potential disease outbreak will begin within ***three hours*** of notification.

### **Noble County Health Department Actions**

**Normal business hours-** The ID Nurse or Nursing director shall take the call and record all pertinent information, contact the Regional Epidemiologist immediately and begin investigation of the report using the Regional EPI plan as a guidance tool.

**After hours-**The staff member receiving the notification of a suspect/confirmed case will contact the Administrator, Health Commissioner, Nursing Director, and Regional EPI immediately to notify them of the situation.

The staff member receiving the notice (phone, email, letter, direct contact) will utilize standard information gathering procedures, collecting the contact(s) name, address, two call back numbers and details of the situation. The level of urgency will be determined based on signs/symptoms and the knowledge and experience of the report taker. If in doubt contact the Administrator and/or Health Commissioner and the regional epidemiologist Amy Murphy to assist with decision making.

The Health Commissioner/Administrator or designee will determine if partial or full activation of the Incident Command System is necessary.

### **Evaluate the Noble County Health Department Infectious Disease Surveillance (IDS) System**

Assigned staff will analyze response to infectious disease reports yearly in order to evaluate and improve the IDS System within the Noble County Health Department. When issues are discovered the planning team will discuss them and develop strategies to address and improve them. See Table 1: Noble County primary EPI team roster.

## **Public Health Response to a Radiological Incident**

### **Objectives of Population Monitoring**

- Assist in the identification of individuals whose health is in immediate danger and/or may need immediate care or decontamination
- Assist in the identification of those who may need medical treatment related to contamination or exposure, further evaluation, or short-term health monitoring
- Recommend, and to the extent possible, facilitate practical steps to minimize risk of future health consequences
- Register potentially affected populations for long-term health monitoring.

### **Roles and Responsibilities**

1. Send representatives to serve in the EOC
2. Convene subject matter experts
3. Assess public health status and needs
4. Assist in establishing a registry for potentially exposed individuals using standard epidemiological principles
5. Assist in performing dose reconstructions and long-term monitoring of populations
6. Evaluate and facilitate requests for deployment of the Strategic National Stockpile
7. Coordinate public health information

### **Identify and Prioritize Affected Population**

In the event of a terrorist attack, many people in the affected area will likely request an assessment and treatment from hospitals, clinics, private physicians and/or public health authorities. Those who were not exposed or contaminated may request evaluation to confirm their condition or seek reassurance.

Every effort should be made to keep those who do not need immediate medical attention from overburdening local hospitals. This may be accomplished by identifying the time-period and location where members of the public may have been exposed. This information should then be communicated to members of the public to help alleviate their concerns.

The highest priority is those who have life-threatening injuries which may or may not be related to the radiation incident and are in need of immediate medical care (e.g., heart attack or a pre-existing critical condition).



The triage process should identify and prioritize people with external contamination and a subset of those individuals with potential for internal contamination monitoring and medical follow-up, if needed.

The following capabilities should be made available within the first 24 to 48 hours:

- a) Make radiation dose projections (external irradiation and plume predictions).
- b) Assess the risk of exposure by time and location.
- c) Identify victims within range, location, and proximity to the incident.
- d) Identify potential acute symptoms (nausea, vomiting, etc.).
- e) Provide radiation survey equipment to detect the evidence of external beta, gamma, or alpha contamination as applicable, and following up with decontamination.
- f) Perform periodic blood tests (CBC with differential white cell count) for direct exposure assessment if large, whole-body doses are suspected.

The prioritization scheme to identify individuals for monitoring can be based on

- a) Radiation dose projections, if available (external irradiation and plume predictions).
- b) Specific times and locations where people may have had a higher probability of being exposed or contaminated.

Presentation of clinical symptoms consistent with acute radiation syndrome, especially if this is correlated with relevant times and locations specified above.

Special Populations: Identify and prioritize populations in the community that have special needs after a radiation incident. These may include:

- a) Children (Note: Families should remain together; be cognizant of minor children without custodial adult present, e.g., school children.)
- b) Elderly people
- c) Pregnant women
- d) Immune-compromised individuals
- e) Disabled persons requiring the use of wheelchairs
- f) Emergency responders, transient or migrant workers, commuters
- g) Homeless people
- h) Institutionalized individuals whom you may or may not be able to evacuate or relocate.

There are three classifications of victims to a radiological event.

1. Those critically injured, which will be provided care by EMS and Hospital personnel
2. People who self-evacuate, using any means of transportation—

These people generally go home or to a place where they feel safe. Guidance should be given to this population through the media (television and radio) on what to do and how to perform their own decontamination. Explain that, like dirt, most contamination washes off with soap and water. They should act as if they were going home in clothes covered with mud and did not want to track it into their homes. Undressing at the doorway or in their garage would be desired. Provide instructions for them to

- Avoid unnecessary hand-to-face contact to minimize potential spread of contamination (avoid smoking, chewing gum, etc., until after decontamination).
- Remove clothing and place it in a sealed plastic bag.



- Gently blow nose and clean out eyes and ears.
  - Shower thoroughly with warm (not scalding hot) water and soap, allowing the water to run away from the face.
  - Change into uncontaminated clothing.
  - Wash out tub or shower.
  - Wash car if they drove home from the area of contamination.
  - Tune in to television or radio for further instructions from public health and emergency response officials.
3. People who stay on the scene to be monitored or who cannot leave the scene because they have no transportation or have no place to go (in need of shelter)

These people need immediate instructions on what to do while waiting to be helped.

These instructions may include;

- Avoid touching suspected contaminated surfaces.
- Keep hands away from face (especially mouth) and do not smoke, eat, or drink until your hands and face are washed.
- Carefully remove outer clothing and place in plastic bags (provided).
- Wash hands and face if water is available, or wipe hands and face with moist towels (provided).

Although decontamination with soap and water or showering is the best method of external decontamination, individuals can take several practical steps by themselves without any washing to markedly minimize the levels of external contamination and the likelihood of internal contamination. For example, plastic garbage bags can be provided to people, along with instructions to carefully remove their coats or outer garments and bag them (especially if they have visible dust). Moist towels or disposable wipes can be provided so that people can wash their faces and hands while they wait or as they leave to go home. If possible, clean outer garments can be given to them for warmth. This method may be preferred to outdoor showering at this stage, especially when temperatures are cold or the number of people is large.

### **Radiation Survey Methodology**

If a large population must be surveyed, performing a screening survey of only the head, face, shoulders, and hands is acceptable, rather than performing a more detailed survey, because these are the most likely locations of contamination.

Hand-held survey meters such as GM pancake probes are suitable for either detailed or spot surveys because they are portable, versatile, rugged, easy-to-use, and rather ubiquitous in the radiation protection community. They can also detect alpha contamination, although not with the same efficiency. Portal beta/gamma radiation monitors can also be used at this stage, although they are usually limited in number and require more skilled operators. Walk-through portal monitors may be best employed during later stages of monitoring, such as in community reception centers or in entrances to critical structures (such as hospitals, public buildings, POD sites and bus terminals).

### **Clothing Services**

Distribution of large caches of clothing may be necessary. Such clothing is needed for people who are asked to remove and bag their contaminated outer garments as they are going to homes or shelters. This will also help significantly reduce the extent of cross-contamination as these individuals leave the incident scene.

1. People going home are the easiest to clothe, as durability of that clothing is secondary.
  - a. In such circumstances, hospital scrubs, paper clothing, sweat suits, and t-shirts, with perhaps blankets for warmth, can be provided.
2. People going to shelters need more durable robust clothing. Large retailers in the community can be asked to provide clothing, including children's clothing, shoes (or flip-flops or sandals), or other clothing needs.

### **Transportation Services**

Transportation services may be used in the first few hours after an incident for individuals who have a place to go (e.g., their own homes) but have no means of transportation.

Cross-contamination of the buses or other vehicles used for this transportation is a secondary issue. Vehicles do not have to be decontaminated between loads of passengers. They will be decontaminated later, prior to their return to normal service.

### **Washing Facilities**

It is important to establish facilities for thorough washing at or near community shelters and reception centers. Many fire departments have plans for deploying portable decontamination facilities in the first few hours after a radiation incident. However, in mass casualty incidents, it may not be possible to process a large number of people quickly enough by using portable decontamination facilities. A number of services can be provided in the first few hours to assist people in reducing their dose and decreasing the likelihood of internal contamination.

These services include the provision of proper instructions and basic supplies, such as plastic bags for containing their outer garments and moist towels and wet wipes for cleaning their faces and hands.

In the first few hours, it may be necessary to help the most heavily contaminated individuals get to washing facilities. The goals at this stage are to get a person out of contaminated clothing immediately and to get the radioactive material off the body as soon as possible.

- a) Replacement clothing must be nearby.
- b) People who are able to shower themselves should use plain soap and warm water.
- c) Cold water or water from hydrants should not be used unless there are no other options available and definitive provision is made to dry and warm individuals directly after a short wash.
- d) After showering, people should be re-monitored and, if necessary, they should take a second shower.
- e) If this simple decontamination fails, the individuals should be designated for further assessment for possible internal contamination.
- f) Sports arenas and high school gymnasiums may provide suitable showering facilities.
- g) If such facilities are difficult to locate in the affected area, consider transporting people or using a nearby hotel, especially if outdoor weather conditions are not favorable.
- h) Staff members can escort people to rooms where showers can be quickly used with minimal impact on the hotel.
- i) People may be instructed to wait in hotel rooms until suitable clothing arrives. Allowing them to use the telephone and television in the room will assist in keeping them calm.

- j) At no time should an individual's identification, jewelry, money, or credit cards be collected. People can try to wash these things as they wash themselves, or the items can be bagged.
- k) All contaminated clothing collected before the washing process should be bagged and tagged for further study.

### **Victim Registry**

A critical function that should start as early as possible is the registry of the affected and possibly affected populations.

1. Initially, the most basic and critical information to collect from each person is his or her name, address, telephone number, and contact information.
2. If time permits, other information can be recorded; including the person's location at time of the incident and radiation readings, but this is not essential and should not become a bottleneck in the registration process.
3. Additional information can be collected later as individuals are processed to send home or when they report to community reception centers.
4. This registry information will be used to contact individuals for follow-up monitoring if needed.

### **Collection of Biological Samples**

- Typically, it is not practical for local or state responders to engage in the collection of bioassay samples in the first few hours after an incident.
- Bioassay samples, however, do provide a powerful diagnostic tool for assessment of intern contamination (urine) and for detection of acute radiation syndrome (blood) in cases where relatively high radiation doses are expected.
- Federal resources will be able to assist in the collection and analysis of urine bioassays, but these resources will not be available in the first few hours.
- Local hospitals laboratories should be prepared to analyze blood samples (CBC with differential white cell count)

### **Worker Protection**

Responders who are engaged in the initial screening of people at the scene should wear personal protective equipment including respiratory protection as designated by the Site Safety Officer.

Subsequent population monitoring activities should take place at locations that are not contaminated or are minimally impacted by contamination and where no known airborne or respiratory hazards exist (for example, community reception centers)

At these locations, it is highly recommended that local responders conducting population monitoring activities be provided and wear, on a voluntary basis, filtering face-piece respirators certified by NIOSH, preferably N-95 respirators.

The use of these respirators will prevent the inhalation of radioactive particles or other hazardous particles or fibers that may become airborne in the process of removing contaminated clothing from affected individuals or performing similar actions.

The lack of immediate availability of these respirators should NOT prevent or hinder population monitoring activities. OSHA permits the voluntary use of respiratory protection. It allows responders conducting population monitoring to add a measure of personal safety according to their own assessment of the situation. Implementing voluntary use of filtering face-piece respirators may also prove to be an

effective legal and economic incentive for employers, because the use of these respirators does not require a respiratory protection program.

Frequent changes of vinyl examination gloves are also recommended for responders who physically assist people in removing potentially contaminated clothing.

### **External Screening Area**

If contaminated, send to decontamination area/center

If not contaminated enter and process

- a) Register utilizing 1 page NAPH form
- b) Provide education and handouts
- c) Provide medical countermeasure (if available and prudent)
- d) Coordinate counseling services

### **Prepare For and Receive SNS/KI**

- a) Utilize SNS Medical Countermeasure Dispensing (MCM) plans as needed

### **Just in time Radiation Training** <http://www.bt.cdc.gov/radiation/justintime.asp>

This is a video showing how to deal with potentially exposed public.

### **Public Health Response to a Nuclear Incident**

Noble County contains very few resources to handle an incident of this type and therefore will not be the Lead Agency its role will be to assistance the local EMA and ODH in response activities.

A nuclear/radiological incident may result from a deliberate act or an accident and may involve multiple materials or industrial practices, including:

- Commercial nuclear facilities
- Federal nuclear weapons facilities
- Radioactive material used in industry or that may be technologically enhanced or naturally occurring radioactive material.
- Transportation incidents involving nuclear/radioactive material
- Domestic nuclear weapons accidents
- Foreign incidents involving nuclear or radioactive materials

Radiological incidents may not be immediately recognized as such until the radioactive material is detected or health effects of radiation exposure are manifested in the population and identified by the public health and/or medical community. An act of nuclear or radiological terrorism, particularly an act directed against a large population center within the United States, can have major consequences that may overwhelm the capabilities of many local, tribal, and/or State governments to respond, and may seriously challenge existing Federal response capabilities.

An act or threat of nuclear or radiological terrorism will trigger concurrent activation of the Terrorism Law Enforcement and Investigation Annex. A nuclear or radiological incident may require concurrent implementation of the NCP to address radiological, as well as chemical or biological, releases into the environment. An incident involving the potential release of radioactivity may require implementation of protective measures, such as evacuation and shelter-in-place. State, tribal, and local governments have primary responsibility for implementing protective measures for the public.

**Public Health Response to an Explosive Incident**

Response to an explosion will typically be handled by law enforcement and Fire, however there may be environmental concerns related to the situation, and close contact with the EOC may be required. Be aware that explosives are used to disseminate other Chemical, Biological and Radiological agents on occasion.

Table 1: LHD EPI Roster

| Last Name  | First Name | LHD       | Title         | Credentials | Email  | Office Phone | ICS 100 | ICS 200 | ICS 300 | ICS 400 | ICS 700 | ICS 800 |
|------------|------------|-----------|---------------|-------------|--|--------------|---------|---------|---------|---------|---------|---------|
| Murphy     | Amy        | Noble Co. | Regional EPI  | RN          | <a href="mailto:amy.murphy@noblecohd.org">amy.murphy@noblecohd.org</a>               | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Ray        | Shawn      | Noble Co. | HC            | MPH, RS     | <a href="mailto:shawn.ray@noblecohd.org">shawn.ray@noblecohd.org</a>                 | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Watson     | Madeline   | Noble Co. | DON           | RN          | <a href="mailto:madeline.watson@noblecohd.org">madeline.watson@noblecohd.org</a>     | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Rayner     | Shari      | Noble Co. | Asst. DON     | RN          | <a href="mailto:shari.rayner@noblecohd.org">shari.rayner@noblecohd.org</a>           | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Williamson | Jolene     | Noble Co. | HMG Leader    | RN          | <a href="mailto:jolene.williamson@noblecohd.org">jolene.williamson@noblecohd.org</a> | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Feldner    | Angie      | Noble Co. | Clinic Leader | RN          | <a href="mailto:angie.feldner@noblecohd.org">angie.feldner@noblecohd.org</a>         | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Haas       | Susan      | Noble Co. | BCCP Leader   | RN          | <a href="mailto:susan.haas@noblecohd.org">susan.haas@noblecohd.org</a>               | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Moore      | Kirby      | Noble Co. | DEH           | RS          | <a href="mailto:kirby.moore@noblecohd.org">kirby.moore@noblecohd.org</a>             | 740-732-4958 | X       | X       | X       | X       | X       | X       |
| Johnson    | Mark       | Noble Co. | PHEP Coord    |             | <a href="mailto:mark.johnson@noblecohd.org">mark.johnson@noblecohd.org</a>           | 740-732-4958 | X       | X       | X       | X       | X       | X       |

**Blank**

**Authorities**

| <b>Section</b> | <b>Ohio Revised Code (ORC)</b> | <b>Chapter</b> | <b>Ohio Administrative Code (OAC)</b> |
|----------------|--------------------------------|----------------|---------------------------------------|
|                |                                |                |                                       |
|                |                                |                |                                       |
|                |                                |                |                                       |
|                |                                |                |                                       |
|                |                                |                |                                       |
|                |                                |                |                                       |



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**Attachment 1: Foodborne Disease Report Individual Case History**

Interviewer Initials: \_\_\_\_\_ Date Of Interview: \_\_\_\_\_ I.D. No: \_\_\_\_\_

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

| Symptoms        | Yes | No | Don't Know |
|-----------------|-----|----|------------|
| Cramps          |     |    |            |
| Diarrhea        |     |    |            |
| Bloody Diarrhea |     |    |            |
| Nausea          |     |    |            |
| Vomiting        |     |    |            |
| Headache        |     |    |            |
| Body Aches      |     |    |            |
| Chills          |     |    |            |
| Fever           |     |    |            |

Other (specify) \_\_\_\_\_

When did you eat the suspect meal? Date: \_\_\_\_\_ Time: \_\_\_\_\_ am/pm (circle one)

When did the first symptom begin? Date: \_\_\_\_\_ Time: \_\_\_\_\_ am/pm (circle one)  
Incubation period: \_\_\_\_\_ hours

When did you start to feel better? Date: \_\_\_\_\_ Time: \_\_\_\_\_ am/pm (circle one)  
Duration: \_\_\_\_\_ hours  
Place of eating suspect meal: \_\_\_\_\_

Was a physician consulted? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, name: \_\_\_\_\_ Telephone \_\_\_\_\_

Were you hospitalized? Yes \_\_\_\_\_ No \_\_\_\_\_

Number of persons in household who did NOT eat suspect meal: \_\_\_\_\_  
Of these, number who became ill with similar symptoms after the case: \_\_\_\_\_

Date(s) and hour(s) of onset: \_\_\_\_\_  
Determine if case is willing to submit a specimen for culture.  Yes  No  
Does the case have any leftover food for culture?  Yes  No

Remarks:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Foodborne Disease Report Individual Case History**

| Day/Date Prior to onset  | Meal      | Ate at Home | Ate Outside home | Outside Location | Foods Eaten |
|--|-----------|-------------|------------------|------------------|-------------|
| 1<br><br>____/____/____  | Breakfast |             |                  |                  |             |
|  | Lunch     |             |                  |                  |             |
|  | Dinner    |             |                  |                  |             |
|  | Snacks    |             |                  |                  |             |
| 2<br><br>____/____/____  | Breakfast |             |                  |                  |             |
|  | Lunch     |             |                  |                  |             |
|  | Dinner    |             |                  |                  |             |
|  | Snacks    |             |                  |                  |             |
| 3<br><br>____/____/____  | Breakfast |             |                  |                  |             |
|  | Lunch     |             |                  |                  |             |
|  | Dinner    |             |                  |                  |             |
|  | Snacks    |             |                  |                  |             |
| 4<br><br>____/____/____  | Breakfast |             |                  |                  |             |
|  | Lunch     |             |                  |                  |             |
|  | Dinner    |             |                  |                  |             |
|  | Snacks    |             |                  |                  |             |
| Preferred or Usual food sources outside the home: List by name restaurant(including fast food, carry-out, home delivery, etc.) which the patient generally prefers or most likely selects: |           |             |                  |                  |             |
|  |           |             |                  |                  |             |
|  |           |             |                  |                  |             |
|  |           |             |                  |                  |             |

**Ohio Reportable Infectious Disease (Know Your ABCs)**

[Ohio Reportable Infectious Diseases](#) is contained in **Annex C1: EPI Response Plan**, Noble County Health Department All Hazards Response Plan

For Rapid Assessment of Shelter Conditions During Disaster



I. ASSESSING AGENCY DATA

|  |   |
|--|---|
| <sup>1</sup> Agency /Organization Name _____ | <sup>90</sup> Immediate Needs Identified: <input type="checkbox"/><br>Yes <input type="checkbox"/> No |
| <sup>2</sup> Assessor Name/Title _____       |   |
| <sup>3</sup> Phone _____ - _____ - _____     | <sup>4</sup> Email or Other Contact _____   |

II. FACILITY TYPE, NAME AND CENSUS DATA

<sup>5</sup>Shelter Type  Community/Recovery  Special Needs  Other \_\_\_\_\_ <sup>6</sup>ARC Facility  Yes  No  Unk/NA <sup>7</sup>ARC Code \_\_\_\_\_

<sup>8</sup>Date Shelter Opened \_\_\_/\_\_\_/\_\_\_ (mm/dd/yr) <sup>9</sup>Date Assessed \_\_\_/\_\_\_/\_\_\_ (mm/dd/yr) <sup>10</sup>Time Assessed \_\_\_:\_\_\_  am  pm

<sup>11</sup>Reason for Assessment  Preoperational  Initial  Routine  Other \_\_\_\_\_

<sup>12</sup>Location Name and Description \_\_\_\_\_

<sup>13</sup>Street Address \_\_\_\_\_

<sup>14</sup>City / County \_\_\_\_\_ <sup>15</sup>State \_\_\_ <sup>16</sup>Zip Code \_\_\_\_\_

<sup>17</sup>Latitude/Longitude \_\_\_\_\_/\_\_\_\_\_

<sup>18</sup>Facility Contact / Title \_\_\_\_\_ <sup>19</sup>Facility Type  School  Arena/Convention center  Other \_\_\_\_\_

<sup>20</sup>Phone \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ <sup>21</sup>Fax \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ <sup>22</sup>E-mail or Other Contact \_\_\_\_\_

<sup>23</sup>Current Census \_\_\_\_\_ <sup>24</sup>Estimated Capacity \_\_\_\_\_ <sup>25</sup>Number of Residents \_\_\_\_\_

<sup>26</sup>Number of Staff / Volunteers \_\_\_\_\_

| <b>III. FACILITY</b>   |   | <b>VIII. SOLID WASTE GENERATED</b>  |   |
|--|---|---|---|
| <sup>27</sup> Structural damage                                  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>66</sup> Adequate number of collection receptacles   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>28</sup> Security / law enforcement available               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>67</sup> Appropriate separation  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>29</sup> Water system operational                           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>68</sup> Appropriate disposal  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>30</sup> Hot water available                                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>69</sup> Appropriate storage   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>31</sup> HVAC system operational                            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>70</sup> Timely removal  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>32</sup> Adequate ventilation                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>71</sup> Types <input type="checkbox"/> Solid <input type="checkbox"/> Hazardous <input type="checkbox"/> Medical <input type="checkbox"/> | Unk/NA  |
| <sup>33</sup> Adequate space per person                          | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <b>IX. CHILDCARE AREA</b>   |   |
| <sup>34</sup> Free of injury /occupational hazards               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>72</sup> Clean diaper-changing facilities  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>35</sup> Free of pest / vector issues                       | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>73</sup> Hand-washing facilities available   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>36</sup> Acceptable level of cleanliness                    | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>74</sup> Adequate toy hygiene  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>37</sup> Electrical grid system operational                 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>75</sup> Safe toys   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>38</sup> Generator in use, <sup>39</sup> If yes, Type _____ | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>76</sup> Clean food/bottle preparation area  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>40</sup> Indoor temperature _____ °F                        | Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA                          | <sup>77</sup> Adequate child/caregiver ratio  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <b>IV. FOOD</b>  |   | <sup>78</sup> Acceptable level of cleanliness   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |

**Noble County Health Department**  
**Surety**  
**All Hazards Emergency Response Plan**

*Annex E: Environmental*

|   |   |   |   |
|---|---|---|---|
| <sup>41</sup> Preparation on site               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <b>X. SLEEPING AREA</b>   |   |
| <sup>42</sup> Served on site                    | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>79</sup> Adequate number of cots/beds/mats                             | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>43</sup> Safe food source                  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>80</sup> Adequate supply of bedding                                    | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>44</sup> Adequate supply                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>81</sup> Bedding changed regularly                                     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>45</sup> Appropriate storage               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>82</sup> Adequate spacing  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>46</sup> Appropriate temperatures          | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>83</sup> Acceptable level of cleanliness                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>47</sup> Hand-washing facilities available | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <b>XI. COMPANION ANIMALS</b>  |   |
| <sup>48</sup> Safe food handling                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>84</sup> Companion animals present                                     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>49</sup> Dishwashing facilities available  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>85</sup> Animal care available   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>50</sup> Clean kitchen area                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>86</sup> Designated animal area  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <b>V. DRINKING WATER AND ICE</b>                |   | <sup>87</sup> Acceptable level of cleanliness                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>51</sup> Adequate water supply             | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <b>XII. OTHER CONSIDERATIONS</b>  |   |
| <sup>52</sup> Adequate ice supply               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>88</sup> Handicap accessibility  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>53</sup> Safe water source                 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <sup>89</sup> Designated smoking areas                                      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA |
| <sup>54</sup> Safe ice source                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/><br>Unk/NA | <b>XIII. COMMENTS</b> <i>(List Critical Needs on Immediate Needs Sheet)</i> |   |

| <b>VI. HEALTH / MEDICAL</b>                                  |  |  |
|--|--|--|
| <sup>55</sup> Reported outbreaks, unusual illness / injuries | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>56</sup> Medical care services on site                  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>57</sup> Counseling services available                  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <b>VII. SANITATION</b>                                       |  |  |
| <sup>58</sup> Adequate laundry services                      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>59</sup> Adequate number of toilets                     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>60</sup> Adequate number of showers                     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>61</sup> Adequate number of hand-washing stations       | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>62</sup> Hand-washing supplies available                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>63</sup> Toilet supplies available                      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>64</sup> Acceptable level of cleanliness                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk/NA   |  |
| <sup>65</sup> Sewage system type                             | <input type="checkbox"/> Community <input type="checkbox"/> On site <input type="checkbox"/> Portable<br><input type="checkbox"/> Unk/NA |  |

**Environmental Health Shelter Assessment Form Instruction Sheet**

**I. ASSESSING AGENCY DATA**

1. Assessing Agency/Organization Name: self-explanatory.
2. Assessor Name/Title: self-explanatory.
3. Assessor Phone contact: self-explanatory.
4. Email or Other Contact: Note email or describe any other means of communication for assessor (e.g., radio, pager).

**II. FACILITY TYPE, NAME and DATA**

5. Shelter Type. “Community/Recovery”: general public. “Special Needs”: population with specific medical requirements. “Other”: relief workers base camp, etc.:
6. ARC Facility: Is the shelter managed by the American Red Cross?
7. If #6 is yes, indicate ARC Facility code.
8. Date Shelter Opened: self-explanatory.
9. Date Assessed: self-explanatory.
10. Time Assessed: self-explanatory.
11. Reason for Assessment. “Preoperational”: before opening. “Initial”: first assessment after opening. “Routine”: assessments occurring on a regular basis (e.g., daily, weekly). “Other”: occurrence such as an outbreak or a complaint.
12. Location Name and Description. Example: “Rockville Elementary School - brown building next to the police station.”
13. Street Address: self-explanatory.
14. City/County: self-explanatory.
15. State: two-letter Postal Code abbreviation.
16. Zip Code: five-digit US Zip Code.
17. Latitude/Longitude of facility location: self-explanatory.
18. Facility Contact/Title: name of responsible contact person, such as a facility manager or designated person in charge, and his or her title.
19. Facility Type: self-explanatory.
20. Phone: self-explanatory.
21. Fax: self-explanatory.
22. Email or Other Contact: note email or describe any other contact means for shelter manager, director, or supervisor (e.g., radio, pager).
23. Current Census: estimated number of persons, including workers, in shelter at the time of inspection.
24. Estimated Capacity: maximum number of persons allowed in facility, for use as a shelter, if known.
25. Number of Residents: number of permanent or registered residents at the time of assessment.
26. Number of Staff/Volunteers: number of persons working in the facility at the time of assessment.

**III. FACILITY**

27. Structural damage: note damage to physical structure (e.g., roof, windows, walls, etc.).
28. Security/law enforcement available: security guards or police officers available at facility site.

**For Official Use Only**



***Surety***

**All Hazards Emergency Response Plan**

29. Water system operational: self-explanatory.
30. Hot water available: self-explanatory.
31. HVAC system operational: self-explanatory.
32. Adequate ventilation: facility well-ventilated and free of air hazards such as smoke, fumes, etc.
33. Adequate space per person in sleeping area:
  - a. evacuation shelters, 20 ft.<sup>2</sup> per person;
  - b. general shelters, 40 ft.<sup>2</sup> per person;
  - c. special needs shelters, 60–100 ft.<sup>2</sup> per person.
34. Free of injury/occupational hazards: With regard to general safety, some examples include:
  - a. Is the facility free of frayed or exposed electrical wires, carbon monoxide hazards, hazardous materials, etc.?
  - b. Are on-duty staff and members wearing PPE?
35. Free of pest/vector issues: note presence of mosquitoes, fleas, flies, roaches, rodents, etc.
36. Acceptable level of cleanliness: self-explanatory.
37. Electrical grid system operational: self-explanatory.
38. If generator in use: check for appropriate location, capacity, adequate fuel and ventilation.
39. If #38 is yes, indicate whether the generator fuel type is gas, diesel, solar, etc.
40. Indoor temperature (°F): temperature measurement from a random location inside facility (ASCE standard for temperatures in buildings).

**IV. FOOD**

41. Preparation on site: self-explanatory.
42. Served on site: self-explanatory.
43. Safe food source: source of the food from a licensed contractor or caterer.
44. Adequate supply: self-explanatory.
45. Appropriate storage: food stored according to safe storage practices to prevent contamination or spoilage – refer to local code or US Food Code.
46. Appropriate temperatures: hot food kept above 135 °F; cold food kept below 40 °F. Or refer to local code or US Food Code.
47. Hand-washing facilities available: fixed or portable, as long as they are operational.
48. Safe food handling: food preparers are using gloves, avoiding cross contamination, using appropriate utensils, etc. – refer to local code.
49. Dishwashing facilities available: place to wash, rinse and sanitize kitchen utensils and cooking equipment.
50. Clean kitchen area: self-explanatory.

**V. DRINKING WATER AND ICE**

51. Adequate water supply: drinking water in the range of 1–2 gallons/per person/per day, for all uses 3-5 gallons/per person/per day.
52. Adequate ice supply: ice supply sufficient to maintain cold food temperatures.
53. Safe water from an approved source.
54. Safe ice from an approved source.

*Surety*

**All Hazards Emergency Response Plan**

**VI. HEALTH/MEDICAL**

- 55. Outbreaks, unusual illness/injuries: note any reports of illness/injuries or outbreaks of violence among residents, workers, or visitors.
- 56. Medical care services available: If yes, list type of care available in comments section.
- 57. Counseling services available: If yes, list type of mental/social services available in comments section.

**VII. SANITATION**

- 58. Adequate laundry services: provided with separate areas for soiled and clean laundry.
- 59. Adequate number of operational toilets: minimum 1 per 20 persons or as specified by sex.
- 60. Adequate number of operational showers/bathing facilities: 1 per 15 persons.
- 61. Adequate number of operational hand-washing stations: 1 per 15 persons.
- 62. Hand-washing supplies available: water, soap, and paper towels; if water is unavailable, hand sanitizers (at least 60% alcohol).
- 63. Toilet supplies available: toilet paper, feminine hygiene supplies, and diapers/pads for children and adults.
- 64. Acceptable level of cleanliness: self-explanatory.
- 65. Sewage system type: self-explanatory.

**VIII. SOLID WASTE GENERATED**

- 66. Adequate collection receptacles: minimum 1 (30-gal) container for every 10 persons.
- 67. Appropriate separation between medical/infectious waste and general refuse.
- 68. Appropriate disposal and labeling in approved containers.
- 69. Appropriate storage and separation from common areas.
- 70. Timely removal of waste – collected regularly.
- 71. Check all types of waste generated at facility (e.g., solid, hazardous, medical).

**IX. CHILDCARE AREA**

- 72. Clean diaper-changing facilities: self-explanatory.
- 73. Hand-washing facilities available: for adults and children with paper towels, soap, and water.
- 74. Adequate toy hygiene: toys cleaned with a nontoxic, approved disinfectant. Refer to local code.
- 75. Safe toys: should adhere to applicable age group standards.
- 76. Clean food/bottle preparation area: self-explanatory.
- 77. Adequate child/caregiver supervision ratio: