GUIDE FOR THE ENVIRONMENTAL HEALTH ASSESSMENT FOR DISASTER SHELTERS
During COVID-19

This guide will help you use the Environmental Health Assessment Form for Disaster Shelters.
It defines some of the measures and terms used in the form. Numbers match those in the assessment form.

I. ASSESSING AGENCY DATA

1. Assessing agency/organization name
2. Assessor name/title
3. Assessor phone contact
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 CENSUS DATA

5. Shelter type: "General population" = community/recovery; "Medical" = population with specific medical requirements; "Other" = relief workers base camp, etc.
6. Is the shelter managed by the American Red Cross?
7. If #6 is yes, indicate Red Cross 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 U.S. ZIP Code.
17. Latitude/Longitude of facility location: self-explanatory.
18. Facility contact and title: name and title of responsible contact person, such as a facility manager or designated person in charge.
19. Facility type: self-explanatory.
20. Facility location: self-explanatory.
21. Phone: self-explanatory.
22. Fax: self-explanatory.
23. Email or other contact: note email or describe any other contact means for shelter manager, director, or supervisor (e.g., radio, pager).
24. Current census: estimated number of working and resident persons physically present in shelter at time of assessment..
25. Allowed capacity: maximum number of persons allowed in facility, for use as a shelter, if known.
26. Total number of residents registered with shelter intake staff.
27. Age groupings of residents.
28. Number of staff and volunteers: number of persons working in the facility at the time of assessment.

III. OCCUPANT INTAKE AND PROCESSESING:

29. Ensure materials are clear for people of all reading abilities, including providing graphics for people who cannot read. Provide translated versions in languages that are common in your area. Make necessary accommodations for those with cognitive or intellectual disabilities and those who are deaf, blind, or with low vision.
30. Food workers and health/medical staff should be screened even if shelter operators decide not to do any other screening. Suggested screening includes temperature monitoring (fever is 100.4 F or greater), and screening questions. For CDC guidance on symptom screening, use: https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/screening-clients-respiratory-infection-symptoms.html.
31. Masks are available for people upon entry if they do not have their own. Guidance on when to wear a CFC or facemask is available here: https://www.cdc.gov/coronavirus/2019-ncov/downloads/Guidance-for-Gen-Pop-Disaster-Shelters-COVID19.pdf.

IV. FACILITY

32. Structural damage: note damage to physical structure (e.g., roof, windows, walls, etc).
33. Security/law enforcement available: security guards or police officers available at facility site.
34. Indicate if HVAC system is on site and working.
35. Adequate ventilation: facility well ventilated and free of air hazards (e.g., smoke, fumes, etc.).
36. Adequate space per person in sleeping area (minimums):
    a. evacuation shelters = 60 ft^2 per person;
    b. general shelters = 110 ft^2 per person;
    c. medical shelters = follow local guidelines.
37. 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 appropriate personal protective equipment?
    c. Is facility free of slip, trip, and fall hazards?
38. Free of pest/vector issues: note presence of mosquitoes, fleas, flies, roaches, rodents, bed bugs, etc. Free of evidence of pest behavior (e.g., gnaw marks, urine, droppings, etc.)
39. Electrical grid system operational: self-explanatory.
40. If generator works properly: check for appropriate location, capacity, adequate fuel, and ventilation.
41. If #35 is yes, indicate whether the generator fuel type is natural gas, diesel, solar, etc.
42. Backup power system apart from first generator
43. Backup source type: self-explanatory

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44. Adequate = enough for each person who needs to plug in electrical devices, including medical equipment, for power.

45. Indoor temperature (°F): temperature measurement from a random location inside facility (American Society of Civil Engineers, ASCE, standard for measuring temperatures in buildings). Operative temperatures recommended by American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) = 68.5°F to 75°F in the winter and 75°F to 80.5°F in the summer.

46. Check items (carbon monoxide detector, smoke detector, fire extinguisher, sprinklers, fire alarm) that are present and not expired.

V. FOOD

47. Preparation on site: self-explanatory.

48. Served on site: self-explanatory.

49. Safe food source: source of the food from a licensed contractor or caterer.

50. Adequate supply: three meals a day provided for all shelter residents.

51. Appropriate storage: food stored according to safe storage practices to prevent contamination or spoilage (e.g., dry goods kept dry, nothing stored on floor, refrigerator and freezer temperatures are monitored and documented daily). Refer to local code or U.S. Food Code.

52. Appropriate temperatures = hot food kept above 135°F, cold food kept below 40°F, or as specified in local code or U.S. Food Code. If capable, measure temperatures of food being prepared/served and record in comments section.

53. Hand-washing facilities available: fixed or portable, as long as they work.

54. Safe food handling: food preparers are using gloves, avoiding cross contamination, using appropriate utensils (e.g., single-use), etc. Refer to local code.

55. Dishwashing facilities available: place to wash, rinse, and sanitize kitchen utensils and cooking equipment.

56. Clean kitchen area: self-explanatory.

57. Enough clean masks should be available for each food worker at the beginning of each shift and for replacement as needed. It may not be practical for workers to wear a single cloth mask for the full work shift (e.g., 8 or more hours) if they become wet or dirty. https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html

58. Roster should include names, shifts worked, contact information, and test results, if available, to public health staff for review. This information should be maintained for at least 14 days.

59. Meal times staggered to allow individuals or families to maintain at least 6 feet of distance between them and should be cleaned between each use with EPA approved products.

VI. DRINKING WATER AND ICE

60. Adequate water supply = 1–2 gallons/per person/per day drinking water, 3–5 gallons/per person/per day for all uses

61. Check all that apply. Safe water from an approved source. Safe sources include municipal, well, bottled, and on site storage.

62. Presence of residual free chlorine: measure and record. Measurement should be within 0.5–2.5 ppm.

63. Adequate ice supply = enough to maintain cold food temperatures.

64. Water system operational: self-explanatory.

65. Safe ice from an approved source. Examples include temporary container, bagged ice, and on site ice machine.

66. Hot water available: self-explanatory.

VII. HEALTH/MEDICAL (Review patient complaint records and talk to providers)

67. Total number of residents currently seeking medical attention for an acute illness.

68. Total number of residents who self-report as being pregnant at the time of intake.

69. Note any reports of injuries or outbreaks of violence among residents, workers, or visitors.

70. Note any reported respiratory illness(es) (e.g., flu).

71. Note any reported symptoms of gastrointestinal illness such as: nausea, abdominal pain, diarrhea, vomiting.

72. Note any other reported illness(es).

73. If #64 is yes, indicate symptoms presented by resident.

74. If medical care services are available, list type of care available in comments section.

75. If first aid kits are available on site, list location of kits in comments section.

76. If automated external defibrillators (AEDs) are available on site, list location of AEDs in comments section.

77. Mental health services available: self-explanatory.

78. Temperature-regulated storage for residents' personal medication (e.g., insulin, vaccines).

79. Provide type of test for each illness, if applicable. Self-explanatory.

80. Provide type of test for each illness, if applicable. Self-explanatory.

81. Types of personal protective equipment (PPE) may include surgical facemask/respirator (NIOSH approved), gloves, face shield, surgical gown. A dedicated area should be provided for donning and doffing PPE. Guidance on when to use PPE can be found here: https://www.cdc.gov/coronavirus/2019-ncov/downloads/Guidance-for-Gen-Pop-Disaster-Shelters-COVID19.pdf. Calculator available to determine burn rate of PPE: https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html.

82. Provide type of PPE available, if applicable. Self-explanatory.

83. Markings may include signs, barriers, cones, and other ways to discourage access and clearly designate the space only for people who are ill.

84. Hard, non-porous barriers are encouraged for easier cleaning and disinfecting.

85. These facilities should be for the exclusive use of occupants of the isolation area.

86. Isolation area occupants should not leave and staff should minimize leaving isolation area to reduce risk of disease transmission. Staff delivering meals should wear appropriate PPE: https://www.cdc.gov/coronavirus/2019-ncov/downloads/Guidance-for-Gen-Pop-Disaster-Shelters-COVID19.pdf

87. Hand hygiene supplies may include soap, handwashing stations, hand sanitizer (containing at least 60% alcohol), and paper towels.

88. Staff should be properly trained on PPE and donning and doffing. List of EPA-approved cleaning and disinfection products should be used: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19.

89. Self-explanatory.

VIII. SANITATION (Augment with off site or portable facilities, as needed.)

90. Adequate laundry services, provided with separate areas for soiled and clean laundry.

91. Adequate number of working toilets = minimum 1 per 20 persons.

92. Indoor toilets include connected to municipal water/sewer.

93. Outdoor toilets include portable toilets.

94. Adequate number of working showers/bathing facilities = 1 per 15 persons.

95. Adequate number of working hand-washing stations = 1 per 15 persons.

96. Hand-washing supplies available: clean water, soap, and paper towels; if water is unavailable, hand sanitizers (at least 60% alcohol).

97. Toilet supplies available: toilet paper, feminine hygiene supplies, and diapers/pads for children and adults.

98. Professional cleaning service or dedicated staff to clean sleeping, dining, kitchen, childcare, and toilet area.

99. Cleaning process/schedule: self-explanatory.

100. Sewage system is operational. Ensure that portable toilets have service contracts in place.

101. Hand-washing stations are easily accessible throughout the shelter to encourage frequent use, including: restrooms, kitchen/dining, children's, animal, medical, and isolation area(s).

102. All hand sanitizer should contain at least 60% alcohol.

103. Hand-washing stations must be accessible for all individuals with disabilities and access and functional needs (AFNs).

104. List N cleaning products approved by EPA: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

105. High-touch areas can include handrails, doorknobs, countertops, etc.

IX. WASTE MANAGEMENT

106. Adequate collection receptacles = minimum one 30-gallon covered container for every 10 persons.

107. Sharps disposal container available on site: If yes, list location of container in comments section. Appropriate disposal and labeling in approved, secured containers.

108. Separation of medical/infectious waste from general refuse.

109. Timely removal of waste = collected regularly; once per week minimum, more if needed.

110. Check all types of waste generated at facility (e.g., solid, medical).

X. CHILDCARE AREA

111. Clean diaper-changing facilities: self-explanatory. Provide disinfectant and one-time use liner (if available) for each infant diaper changing.

112. Hand-washing facilities available: for adults and children, with paper towels, soap, and clean water.

113. Safe toys: should adhere to applicable age group standards and be cleaned regularly. No toys with choking hazards, sharp objects, etc.

114. Clean food/bottle preparation area: self-explanatory.

115. Recommended maximum child/caregiver ratios, by age group, according to childcare.gov:

Age	Ratio
birth–12 months	(3:1)
13-24 months	(5:1)
25–35 months	(6:1)
3–5 years	(10:1)
6–12 years	(12:1)

116. Special attention should be given to toys, play mats, surfaces, and other fomites.

XI. SLEEPING AREA

117. Cots/beds/mats/cribs should be placed at least 6 feet apart from other families and head to toe alignment.

118. Are cribs available for infants?

119. Bedding for each cot, bed, or mat.

120. Clean bedding available or laundry facility present to wash bedding.

121. Adequate spacing = minimum 2.5 ft between cots/beds/mats.

122. Cots/beds/mats/cribs should have temporary barriers with a hard, non-porous surface and between them.

123. Cots/beds/mats/cribs should be disinfected between use of different residents

XII. COMPANION ANIMALS

124. Service animals present: animals in facility. A service animal is trained to perform tasks for a person who has a disability, according to the Americans with Disabilities Act (ADA) (https://adata.org/publication/service-animals-booklet).

125. Pets present: pets do not include reptiles (except turtles), amphibians, fish, insects/arachnids, farm animals (including horses), and animals kept for racing purposes. Permissible pets: dogs, cats, birds, rabbits (according to FEMA's Disaster Assistance Policy). Review state policy.

126. Other animals: animals such as livestock (horses, chickens, cows, etc.)

127. Animal care available: animals have clean, fresh water and food.

128. Designated animal holding area: animals located away from people and separately housed.

129. Designated outdoor area for animals to relieve themselves.

130. All people should wash their hands with soap and water for 20 seconds, or if unavailable use hand sanitizer containing 60% alcohol, upon entry and exit to the areas and in between handling animals from different households

131. Separate animals from people and animals from other households by at least 6 feet at all times, including during pet registration and exercise.

132. Provide a separate area of the shelter for companion animals that had contact with a person with known or suspected COVID-19 and companion animals that show signs of illness. Guidance around exposed animals: https://www.avma.org/resources-tools/animal-health-and-welfare/covid-19/interim-recommendations-intake-companion-animals-households-humans-COVID-19-are-present

133. Protocols are in place to limit the number of people in the animal areas.

134. Use PPE when interacting with animals. Guidance can be found here: https://www.avma.org/resources-tools/animal-health-and-welfare/covid-19/interim-recommendations-intake-companion-animals-households-humans-COVID-19-are-present

XIII. OTHER CONSIDERATIONS

135. Easily accessible for all occupants, including those in wheelchairs or on crutches. ADA regulations provide guidance on access and functional needs.

136. Designated outdoor smoking areas: space is marked, maintained, and away from general shelter population.

XIV. GENERAL COMMENTS

Add any general comments or additional notes about any sections.

XV. IMMEDIATE NEEDS SHEET

List any identified critical needs or items, and the respective item numbers.

137. Return to top of form and indicate if shelter needs further attention for any immediate needs.